



**SANTA CRUZ METROPOLITAN TRANSIT DISTRICT (METRO)  
CAPITAL PROJECTS STANDING COMMITTEE AGENDA  
REGULAR MEETING  
JUNE 14, 2019 – 1:00PM  
METRO ADMIN OFFICES  
110 VERNON STREET  
SANTA CRUZ, CA 95060**

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The committee may take action on each item on the agenda. The action may consist of the recommended action, a related action or no action. Staff recommendations are subject to action and/or change by the Board of Directors.

**COMMITTEE ROSTER**

Director Ed Bottorff  
Director Cynthia Mathews  
Director Bruce McPherson

City of Capitola  
City of Santa Cruz  
County of Santa Cruz

Alex Clifford  
Julie Sherman

METRO CEO/General Manager  
METRO General Counsel

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**MEETING TIME: 1:00PM**

NOTE: THE COMMITTEE CHAIR MAY TAKE ITEMS OUT OF ORDER

- 1 CALL TO ORDER**
- 2 ROLL CALL**
- 3 ADDITIONS OR DELETIONS FROM AGENDA/ADDITIONAL DOCUMENTATION TO SUPPORT EXISTING AGENDA ITEMS**

**4 ORAL AND WRITTEN COMMUNICATIONS TO THE CAPITAL PROJECTS STANDING COMMITTEE**

This time is set aside for Directors and members of the general public to address any item not on the Agenda, but which is within the matter jurisdiction of the Committee. Each member of the public appearing at a Committee meeting shall be limited to three minutes in his or her presentation, unless the Chair, at his or her discretion, permits further remarks to be made. Any person addressing the Committee may submit written statements, petitions or other documents to complement his or her presentation. When addressing the Committee, the individual may, but is not required to, provide his/her name and address in an audible tone for the record.

**5 ORAL PARACRUZ FACILITY UPDATE**

Daniel Zaragoza, Operations Manager: Paratransit Division

**6 REVIEW AND RECOMMEND APPROVAL TO THE BOARD OF THE SCCRTC RAIL CORRIDOR ALTERNATIVE ANALYSIS STUDY SCOPE OF WORK**

Barrow Emerson, Planning and Development Director

**7 RECEIVE AND RECOMMEND APPROVAL OF THE 10 YEAR (FISCAL YEAR 2020-29) STRATEGIC BUSINESS PLAN**

Barrow Emerson, Planning and Development Director

**8 ANNUAL PROGRESS IN THE EVOLUTION OF THE FLEET TO ZERO EMISSIONS BUSES**

Barrow Emerson, Planning and Development Director

**9 ORAL PACIFIC STATION UPDATE**

Alex Clifford, CEO/General Manager

**10 ADJOURNMENT**

Pursuant to Section 54954.2(a)(1) of the Government Code of the State of California, this agenda was posted at least 72 hours in advance of the scheduled meeting at a public place freely accessible to the public 24 hours a day. The agenda packet and materials related to an item on this Agenda submitted after distribution of the agenda packet are available for public inspection in the Santa Cruz METRO Administrative Office (110 Vernon Street, Santa Cruz) during normal business hours. Such documents are also available on the Santa Cruz METRO website at [www.scmtd.com](http://www.scmtd.com) subject to staff's ability to post the document before the meeting.

VERBAL PRESENTATION ONLY

PARACRUZ FACILITY UPDATE

Daniel Zaragoza  
Operations Manager, Paratransit Division

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**DATE:** June 14, 2019  
**TO:** Capital Projects Standing Committee  
**FROM:** Barrow Emerson, Planning & Development  
Director

**SUBJECT: REVIEW AND RECOMMEND APPROVAL TO THE BOARD OF THE  
SCCRTC RAIL CORRIDOR ALTERNATIVE ANALYSIS STUDY  
SCOPE OF WORK**

## **I. RECOMMENDED ACTION**

**That the Capital Projects Standing Committee receive a presentation on the SCCRTC's Alternatives Analysis for the Santa Cruz County Rail Corridor and forward the scope of work to the METRO Board for approval**

## **II. SUMMARY**

- The Unified Corridor Investment Study (UCIS), an analysis of potential multi-modal transportation investments in State Route 1 (SR 1), Soquel Avenue/Soquel Drive/Freedom Boulevard, and the Santa Cruz Branch Rail Line Rail Corridor, concluded with direction from the Santa Cruz County Regional Transportation Commission (RTC) to perform an alternatives analysis (AA) to determine the most appropriate mode of high-capacity public transit to be planned for the Rail Corridor.
- The Santa Cruz Metropolitan Transit District (METRO) staff participated in the development of public transit networks for the UCIS and has continued to work with RTC staff to develop the scope of work for analysis in the AA.
- Key points for METRO in the AA include:
  - Determining whether Santa Cruz County has the financial capacity to fund both the capital and operational aspects of additional public transit services and facilities without negatively impacting the funding of the current bus system.
  - Analyzing in detail the operating characteristics of various high-capacity public transit alternatives to determine whether they are viable solutions to meet regional transportation and environmental goals.
- METRO and RTC staff have created a scope of work for the AA (Attachment A) and RTC will release a Request for Proposals (RFP) for the study this summer.

### **III. DISCUSSION/BACKGROUND**

The RTC conducted the UCIS, an analysis of potential multimodal transportation investments in the SR 1, Soquel Avenue/Soquel Drive/Freedom Boulevard, and the Santa Cruz Branch Rail Line Rail Corridor corridors.

At the conclusion of the UCIS in January 2019, the RTC directed staff to conduct an AA to determine which mode of high capacity public transit was the most appropriate to meet mobility and environmental goals of the County.

In March 2019, RTC and METRO staff began meeting weekly to construct a scope of work and an RFP for the AA. Discussions at these meetings contributed to a scope of work that includes the following analyses:

- Value engineering that determines an optimized version of each mode for analysis
- Patronage forecasting
- Capital and operating cost estimates
- Capital and operations funding capacity for public transit in the County in the mid to long-term future

The objective of the AA is to identify multimodal transportation investments that provide the most cost effective use of the Rail Corridor while best serving the community's mobility needs. RTC's Rail Corridor may provide an opportunity to provide cost effective, efficient and environmentally sound high-capacity public transportation options in the County.

#### Next Steps

An RFP and Scope of Work for the AA will be released this summer.

### **IV. FINANCIAL CONSIDERATIONS/IMPACT**

As this is a study of future transportation infrastructure and service opportunities for Santa Cruz County, there is no immediate financial impact for METRO. In the long term, transportation improvements and services proposed in the AA could require an increased commitment of METRO services and equipment, the funding sources for which are yet undetermined.

### **V. ALTERNATIVES CONSIDERED**

METRO could not participate in the RTC AA process. As METRO is the County high-capacity public transit provider and has a vested interest in planning that will affect its future commitment of resources, staff does not recommend this alternative.

**VI. ATTACHMENTS**

**Attachment A:** AA Scope of Work/RFP

Prepared by: Barrow Emerson, Planning & Development Director

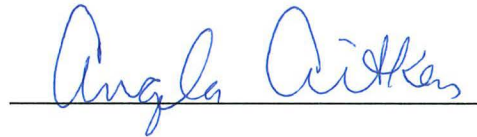
**VII. APPROVALS**

Barrow Emerson  
Planning & Development Director



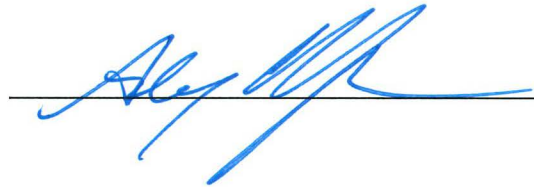
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Approved as to fiscal impact:  
Angela Aitken, Chief Financial Officer



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Alex Clifford, CEO/General Manager



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# Attachment A

## Alternatives Analysis for High Capacity Public Transit on Rail Right of Way

The Regional Transportation Commission (RTC) intends to engage the services of a consultant to produce an Alternatives Analysis and Business Plan for High Capacity Public Transit on the Rail Right-of-Way. Acquisition of the rail line in 2012 provides a unique opportunity for Santa Cruz County to consider a dedicated transit facility that runs the length of the county. The outcome from the 2019 Unified Corridor Investment Study was to reserve the Santa Cruz Branch Rail Line (SCBRL) for high-capacity public transit adjacent to a bicycle and pedestrian trail. The Alternatives Analysis will evaluate public transit investment options that provide an integrated transit network for Santa Cruz County utilizing all or part of the length of the rail right-of-way, between Pajaro Station and Shaffer Road, as a dedicated transit facility, adjacent to the proposed Monterey Bay Sanctuary Scenic Trail (MBSST). Proposed future intercounty and interregional connections to the Bay Area, Monterey, Gilroy and beyond will be considered. A performance-based planning approach will be utilized to assess various public transit options for the rail right of way including sustainability benefits and economic vitality. Transit alternatives will be compared to define a viable project that will provide the greatest benefit to the Santa Cruz County residents, businesses and visitors.

The overall project objectives include:

- Identify, evaluate and compare a range of high-capacity public transit service options for the Santa Cruz Branch Rail Line for 2035 that can coexist with a bicycle and pedestrian trail within the rail right-of-way
- Serve potential customers between Watsonville and Santa Cruz
- Evaluate an integrated transit network for Santa Cruz County utilizing all or parts of the SCBRL as a dedicated contiguous transit facility
- Evaluate proposed future interregional connections to the San Francisco Bay Area, Monterey, Gilroy and beyond
- Provide information including ridership forecasts, travel time, capital and operating/maintenance costs, revenue projections and funding/financing options as well as other performance measures
- Provide information on station/boarding locations, passing sidings/lanes and maintenance facilities for transit vehicles
- Evaluate system controls and safety, including positive train control for rail and other systems that would be needed for other services, especially with respect to at-grade crossings, at the coexistence of a bicycle and pedestrian trail within close proximity of transit vehicles.
- Provide governance options for transit service
- Involve the community, partner agencies, the RTC and METRO in the decision-making process to identify a preferred alternative and next steps
- Identify opportunities to maximize transit-oriented land development to justify transit investment
- Develop a strategic business plan for the selected alternative, including a prototypical cash flow analysis of environmental clearance, right-of-way, design, construction, operations, and maintenance.

The project area includes the Santa Cruz Branch Rail Line from the Pajaro Station outside the City of Watsonville to Shaffer Rd on the west side of Santa Cruz as well

# Attachment A

as the area encompassed by Santa Cruz METRO's local bus service in order to evaluate an integrated transit network for Santa Cruz County. See **Exhibit 1** for map of the rail corridor showing the proximity to the urban areas of Santa Cruz County including residential and commercial areas as well as parks and beaches. The rail right of way passes within 1 mile of half of the County's population and can provide access to 44 schools and 92 parks.

A travel demand model using the TransCAD platform was developed for Santa Cruz County. The Santa Cruz County travel demand model will be available to the consultant that is awarded the project after a model user agreement has been submitted.

RTC staff and Santa Cruz Metropolitan Transit District (METRO) staff will be working together with the consultants on this project. RTC staff, METRO staff and consultants along with input from the Commission, RTC committees, METRO Board and committees, stakeholders, and public will establish the project goals, performance measures, and project alternatives to consider for implementation on this corridor. The public has shown substantial interest in the rail right of way and how best to utilize this facility. A stakeholder/public outreach strategy that engages the various communities of this county is critical to this study. The RTC will consider moving towards environmental review of the preferred alternative that follows the Alternatives Analysis. One purpose of performing this analysis is to provide a reasonably narrow project definition of the preferred transit project for future environmental review, based on the work performed in this planning study.

The hired consultant will perform the following scope of work.

## **SCOPE OF SERVICES**

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### **Task 1: Project Management and Coordination**

#### ***Task 1.1: Project Kick Off Meeting***

Consultant will participate in a project kick-off meeting with the project team to review the details of the scope of work, project schedule and deliverables. This meeting shall take place in Santa Cruz. The goals of the study, performance measures, projects and alternatives to be analyzed, transportation modeling tools and any other methodologies that will be needed to perform an alternatives analysis will be discussed. The project team will also discuss previously completed studies relevant to this project. Initial value engineering and service planning (Task 6) for Bus Rapid Transit, based on an initial plan provided by METRO, shall be performed as early as possible in the project schedule.

**Deliverable 1.1.1:** Initial project schedule, meeting agenda and minutes.

#### ***Task 1.2: Biweekly Check-Ins and Written Progress Reports***

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Consultant will hold conference calls every 2 weeks with Regional Transportation Commission (RTC) and METRO staff to present progress and status of tasks. Written progress reports will be submitted monthly to the RTC contract manager with each invoice. Each report should be sufficiently detailed for the contract manager to determine if the consultant is performing to expectations and is on schedule, percentage of budget spent and achievement of overall study objectives. Reports will also contain a summary of obstacles and issues, recommended solution or course of action, and a timeline for resolution. Additional conference calls with RTC and METRO staff will be scheduled as needed to address timely issues in an effort to maintain the project schedule.

**Deliverable 1.2.1:** Biweekly meeting agendas and conference calls

**Deliverable 1.2.2:** Monthly schedule updates

**Deliverable 1.2.3:** Written progress reports with each invoice

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## **Task 2: Review Relevant Studies and Develop Outreach Plan**

### ***Task 2.1: Review Previous Studies Relevant to Project***

Consultant shall review previous rail, transit and other relevant studies including the Unified Corridor Investment Study (2019), the State Rail Plan (2018), Santa Cruz Branch Rail Line Rail Transit Feasibility Study (2015), the 2040 Santa Cruz County Regional Transportation Plan, AMBAG 2040 Sustainable Communities Strategy/Metropolitan Transportation Plan, the 2019 METRO Onboard Transit Study, Watsonville Transit Planning Study (2011), the Santa Cruz Metro Short Range Transit Plan (2014), METRO 10-Year Strategic Business Plan (2019), METRO Long Range Bus Replacement Plan (2019), Zero Emissions Bus Implementation Plan (2019), 2019 METRO On-Board Transit Survey, Major Transportation Investment Study (1999), Santa Cruz Branch Rail Line Bridge Inspection Reports, and Santa Cruz Branch Rail Line Culvert Inspection Report, Around the Bay Rail Study (1998), Transportation Agency for Monterey County (TAMC) studies on rail service including the Monterey Bay Rail Network Integration Study (ongoing) and the Coast Rail Corridor Service Implementation Plan (ongoing). Alternatives Analysis from other regions shall also be reviewed including the Transportation Agency for Monterey County (TAMC) Alternatives Analysis for Caltrain Extension to Monterey County (2009), TAMC Alternatives Analysis for the Monterey Peninsula Fixed Guideway Corridor Study (2012).

**Deliverables 2.1.1:** List of studies reviewed

### ***Task 2.2: Coordinate with TAMC on the Monterey Bay Rail Network Integration Study***

Consultant shall coordinate with Transportation Agency for Monterey County (TAMC) and their consultants on the Monterey Bay Rail Network Integration Study (ongoing) and the Coast Rail Corridor Service Implementation Plan (ongoing). Regardless of the

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high-capacity public transit alternative, coordination on transit service planning with TAMC will allow for consideration of transit interregional connections at Pajaro Station for connectivity to Monterey, the San Francisco Bay Area, and the proposed high-speed rail line at Gilroy and beyond.

**Deliverables 2.2.1:** Meeting agendas for coordination with TAMC and consultants

## ***Task 2.3: Transit Systems in Similar Communities***

Identify rail and bus rapid transit systems in areas similar to Santa Cruz County.

**Deliverables 2.2.2:** Memorandum on other rail and bus rapid transit systems for comparison

## ***Task 2.4: Develop Public and Stakeholder Outreach Plan***

Consultant shall develop a public involvement plan that provides multiple, diverse opportunities for members of the public to participate in the development of the study. Both traditional and nontraditional outreach methods and technologies will be identified to solicit input at key milestones. RTC and METRO staff will develop a stakeholder list with assistance from the consultant that includes partner agencies, community organizations, developers, and business leaders. Community Workshops should target areas adjacent to the rail line and potential station locations and should utilize a combination of presentation, discussion, and interactive exercises. Outreach will include direct solicitation to organizations who serve traditionally underrepresented, hard-to-reach groups. Milestone Outreach Plan dates shall be integrated into the Task 1 schedule deliverables.

**Deliverables 2.4.1:** Memorandum containing Public and Stakeholder Outreach Plan

**Deliverables 2.4.2:** Final Stakeholder list

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## **Task 3: Identify Goals, Performance Measures, and Data Needs**

### ***Task 3.1: Develop Goals, Criteria and Performance Measures***

Consultant will draft goals, criteria and performance measures for the alternatives analysis. The criteria will be used to determine which of the initial alternatives will be evaluated in the final list. The performance measures will be used to assess the final list of alternatives and to determine the preferred alternative. Performance measures will be based on regional, state and federal planning goals as well as requirements for transportation funding programs, including Federal Transit Administration Small Starts and New Starts, the Transit Intercity Rail Program (TIRCP) and State Rail Assistance Program (SRA). Performance measures will assure consistency with best practices and technical feasibility and will consider input from the public, stakeholders, RTC Advisory Committees, and the RTC.

At a minimum, the consultant will develop performance measures that evaluate:

- Transit ridership

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- Transit travel time
- Vehicle miles traveled and associated greenhouse gas emissions
- Service to disadvantaged communities
- Technical Feasibility
- Safety
- Funding options, both public and private
- Project Development and Capital Construction Cost
- Cost/Benefit
- Operations and Maintenance Costs
- Cost/rider
- Impacts to local traffic at grade crossings
- Impacts to the Monterey Bay Sanctuary Scenic Trail (rail trail)

**Deliverable 3.1.1:** Memorandum with draft goals, criteria and performance measures

## ***Task 3.2: Data Availability & Needs***

After development of goals, the initial screening criteria and performance measures, consultant will identify any data requirements that are needed to perform this study including analysis of how the different transit service alternatives will achieve the goals. Consultant will identify existing data from RTC, METRO, AMBAG, Caltrans, U.S. 2010 Census and American Community Survey and any other sources that would be beneficial for this study. Any data collection efforts to support this analysis will also be identified.

**Deliverable 3.2.1:** Develop a list of data needs and any data collection efforts needed

## ***Task 3.3: Research and Develop Methodologies for Analysis***

The Santa Cruz County travel demand model (SCCModel) will be used by consultant to provide information for the performance measure analysis. The Santa Cruz County Travel Demand Model (SCCModel) is a 4-step travel demand model using the TransCAD platform designed to forecast future travel patterns on both roadway and transit routes throughout Santa Cruz County (SCC). The model can be used to assess how changes in population, employment, demographics and transportation infrastructure affect travel patterns within the county. The model currently has a base year of 2015 and a horizon year for 2035. Data for the SCCModel comes from a multitude of sources including the 2010 Census data, the American Community Survey data, and the Association of Monterey Bay Area Governments (AMBAG) travel demand model. Data used for estimation, calibration and validation of the SCCModel includes the 2012 California Household Travel Survey (CHTS), the 2012 Transit On-Board Survey and traffic count data collected by Caltrans and others.

There are two documents that provide detailed information about the SCCModel, the SCC Model Development Report and the SCC Model User Guide. The Model Development Report provides information on the main input data sources, descriptions of the model components and methodologies, and model calibration and

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validation results. The SCC Model User Guide provides detailed instructions of how to run the model, and information on the input and output files. These documents are available on the SCCRTC website (<http://sccrtc.org/about/opportunities/rfp/>). The base year for the model was updated to 2015 for the Unified Corridor Study and may be updated to 2018/2019 for the County of Santa Cruz General Plan. Information on the UCS update can be found in Appendix D of the Final Unified Corridor Investment Study (<https://sccrtc.org/projects/multi-modal/unified-corridor-study/>). The RTC expects that consultants will review these materials prior to submitting a proposal.

Additional methodologies and/or postprocessing analysis will also be needed to consider the various performance measures. The consultant will research and develop/utilize methodologies that can be used to forecast the impacts of the transit projects of interest on the performance measures. Consideration should be given to the following in developing the ridership projections, cost estimates, and funding options:

- Fare elasticity analysis
- Station/boarding locations and travel sheds (with and without proposed intercity rail connections to Monterey, Salinas, and Gilroy)
- Number of Transfers
- Trip origins and destinations/trip lengths
- Frequency and span of service
- Station access: pedestrian shed and first mile/last mile services including bus feeders
- Best mix of one-way and two-way transit on the rail right of way based on value engineering of the capital cost of improvements to the ROW, impacts to the proposed MBSST, and resulting cost/rider
- Weekday and Weekend projections
- Existing and proposed future interregional service
- Compatibility with the MBSST
- Compatibility with local road crossings
- Various vehicle types
- Siding/passing locations
- Maintenance facility locations
- Transit-oriented development
- Condition and service life of existing infrastructure (bridges, culverts, ballast, track, ties, switches, and signals)

**Deliverable 3.3.1:** Provide tools and document in detail the methods developed to evaluate the transit projects and their effects on the performance measures. Documentation should be in sufficient detail that the analysis can be repeated, and the assumptions and data inputs are clearly understood.

**Deliverable 3.3.2:** Develop a table listing the methods that will be used to forecast the impacts of each transit alternative on each of the performance measures.

## **Task 3.4: Collect and Compile Data**

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Based on the data assessment in Task 3.2, consultant will collect and compile transportation data required for the Alternatives Analysis.

Data collection could include but is not limited to:

- Any data on existing conditions, to be used in analysis for comparison to performance measure forecasts
- Acquire actual travel time and travel time reliability data for existing transit
- Compile injury and collision data by mode within project area
- Map origins and destinations of transportation disadvantaged populations within project area

**Deliverable 3.4.1:** Provide data that was collected and/or compiled for use in alternatives analysis in a format that is readily utilized. Include source of data and description of how data will be used in the analysis.

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## **TASK 4 Assess METRO Funding Through 2045**

Consultant will assess METRO capital and operating funding capacity through 2045 by consulting the AMBAG MTP/SCS, the SCCRTC RTP, and the UCS and reviewing Federal and State funding opportunities that are realistically available to METRO.

**Deliverable 4.1:** Forecast of METRO Capital and Operating Funds through 2045

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## **TASK 5 Develop and Evaluate Initial Alternatives**

### ***Task 5.1: Develop Initial Transit Alternatives***

Consultant will develop along with RTC and METRO staff and input from the public, community organizations, stakeholders, RTC advisory committees, METRO, and the RTC a set of initial high-capacity public transit alternatives for the rail right of way. Some of the initial alternatives are expected to be eliminated so the analysis can focus on a reasonable set of alternatives with greater community interest, financial feasibility, and potential for addressing current and future transportation needs. Initial high-capacity networks for analysis along the rail right-of-way should include, at a minimum various configurations of passenger rail and bus rapid transit.

**Deliverable 5.1.1:** Memorandum from consultant providing draft and final initial alternatives with detailed descriptions including maps of routes and potential stations/stops for each transit alternative.

### ***Task 5.2: Goals, Screening Criteria, Performance Measures, and Initial Alternatives*** ***Input – Partner Agencies***

Consultant will present the draft goals, initial screening criteria, performance measures and initial alternatives at a partner agency meeting to solicit input. Graphical representations including maps and charts will be used to communicate the

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initial alternatives. Consultant will work with the project team to develop the agenda and materials, including graphical representations such as maps, charts, figures, pictures, and drawings, necessary to effectively communicate the initial alternatives for the partner agency meeting. Outreach will also be performed based on the Outreach Plan (Task 2.3)

**Deliverable 5.2.1:** Partner agency meeting agenda and minutes

**Deliverable 5.2.2:** Graphical representations (maps, charts, etc) of goals, initial screening criteria, performance measures, and initial alternatives.

**Deliverable 5.2.3:** Powerpoint and oral presentation of the draft goals, initial screening criteria, performance measures and initial alternatives designed and prepared by consultant for partner agency meeting.

## ***Task 5.3: Goals, Screening Criteria, Performance Measures, and Initial Alternatives Input – Public***

Consultant will present the draft goals, initial screening criteria, performance measures and initial alternatives at two public workshops (north and south county) to solicit input. Graphical representations including maps and charts will be used to communicate the initial alternatives. Public outreach will also be performed based on the Public Outreach Plan (Task 2.3) including eNews letters, social media, online ads and newspaper ads. RTC and METRO staff will provide public workshop noticing and reserve the workshop locations.

**Deliverable 5.3.1:** Public Workshop meeting agendas

**Deliverable 5.3.2:** Revised graphical representations (maps, charts, etc) of goals, initial screening criteria, performance measures, and initial alternatives based on partner agency input.

**Deliverable 5.3.3:** Two Public Workshops with powerpoint and oral presentation of the draft goals, initial screening criteria, performance measures and initial alternatives designed and prepared by consultant.

**Deliverable 5.3.4:** Revised list of Goals, Criteria, and Performance Measures, based on partner agency and public input received.

**Deliverable 5.3.5:** Revised PowerPoint to Reflect Partner Agency and Public Input for use at RTC Meeting.

## ***Task 5.4: Goals, Screening Criteria, Performance Measures, and Initial Alternatives Input - RTC and METRO Meetings***



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Consultant will present the draft goals, performance measures and initial alternatives at an RTC meeting and a METRO meeting to solicit input. Graphical representations including maps and charts will be used to communicate the initial alternatives.

**Deliverable 5.4.1:** RTC and METRO Meeting Presentation

**Deliverable 5.4.2:** Revised list of Goals, Criteria, and Performance Measures, and Initial Alternatives based on RTC and METRO Meeting input received.

## ***Task 5.5: Screen Initial List of Alternatives based on Goals and Criteria and Develop Final List of Alternatives to Evaluate***

Consultant will develop the draft final list of alternatives based on the criteria identified in Task 5.1 with input from RTC and METRO staff.

**Deliverable 5.5.1:** Memorandum of final list of alternatives to be analyzed with a narrative discussing the opportunities and constraints of each alternative and why each was either rejected or will be included in the more detailed analysis.

## ***Task 5.6: Present Final List of Alternatives to Evaluate – METRO and RTC Meetings***

Consultant will present the draft final list of alternatives at a METRO meeting and RTC meeting to be evaluated in more detail with the approved performance measures. Graphical representations including maps and charts will be used to communicate the initial alternatives.

**Deliverable 5.6.1:** Powerpoint and oral presentation of the final alternatives designed and prepared by consultant for both RTC and METRO meetings.

**Deliverable 5.6.2:** Public Hearing at the RTC meeting to solicit public input on final list of alternatives to evaluate.

**Deliverable 5.6.3:** Final list of alternatives to evaluate, based on RTC, METRO, Advisory Committees, public, and partner agency input.

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## **Task 6 Conduct Value Engineering including Service Planning to Refine and Further Define Alternatives**

### ***Task 6.1: Develop Detailed Descriptions of Final List of Alternatives Utilizing Value Engineering***

Performance measure results for the alternatives can vary depending on the service plans, station locations, route structure, number of transfers, passing siding locations, etc. Consultants will utilize value engineering to refine/define the various alternatives with the greatest benefit in terms of travel time and ridership relative to

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both capital and operations and maintenance cost of service. Consultants will work with the project team to assess range of value engineering to perform.

Consultant will build on the Unified Corridor Investment Study and The Passenger Rail Feasibility Study to identify capital, operational and maintenance costs on the final list of alternatives.

Potential examples of alternatives to consider through value engineering include development of one-way or two-way BRT on the rail corridor with consideration for passing sidings or signal-controlled access points to segments with one-way operations; integration of BRT on the rail corridor with service planning for the “bus on shoulders” service on Highway 1; BRT service between Santa Cruz and Watsonville utilizing the rail right of way where beneficial; METRO local service redesign integrated with BRT or passenger rail on the rail corridor; and, rail service with consideration of various vehicle types with and without freight.

**Deliverable 6.1.1:** Document capital, operational, and maintenance costs for transit alternatives.

**Deliverable 6.1.2:** Provide memo with draft and final results of value engineering for various alternatives based on travel time, ridership and capital and operations & maintenance cost estimates.

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## ***Task 7 Conduct Performance Measure Analysis of Final List of Alternatives and Recommend Locally Preferred Alternative***

### ***Task 7.1: Perform Analysis of Final List of Alternatives***

The consultant will evaluate the transit alternatives building on the previous work of the Unified Corridor Investment Study and Passenger Rail Feasibility Study. Performance measures identified in Task 3 will be calculated for the final set of alternatives. Consultant will work with the project team regularly for input on the alternatives analysis. The consultant will document the tools, methods, and data sources used to complete the alternatives analysis.

**Deliverable 7.1.1:** Results of alternatives analysis including a matrix comparing the results of the performance measures analysis with a narrative discussing the opportunities and constraints of each alternative. Graphical representation of the alternative analysis results will be designed and prepared by consultant including Geographic Information System (GIS) maps, charts and a “performance dashboard”.

**Deliverable 7.1.2:** Documentation of the technical analysis completed for the alternatives analysis including methods, tools, data sources and assumptions.

### ***Task 7.2: Develop Revenue Projections and Funding Plan***

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Consultant will build on the Unified Corridor Investment Study, The Passenger Rail Feasibility Study and the 2040 Santa Cruz County Regional Transportation Plan to identify local, state, federal, and private “reasonably available” funding sources to implement the final list of alternatives.

**Deliverable 7.2.1:** Document potential revenue from various sources with an assessment of level of confidence for obtaining each type of funding for each of the final alternatives. Develop plans for how each alternative transit service could potentially be funded.

## ***Task 7.3: Alternatives Analysis Results – Partner Agency Meeting***

Consultant will present findings of the alternative analysis results at a partner agency meeting to solicit input on selecting the preferred alternative. The graphical representations of the alternatives analysis including maps, charts and a “performance dashboard” will be used to communicate the analysis results. Consultant will work with the project team to develop the agenda for the partner agency meeting.

**Deliverable 7.3.1:** Alternatives Analysis partner agency meeting agenda and minutes

**Deliverable 7.3.2:** PowerPoint and oral presentation of the results of the alternatives analysis designed and prepared by consultant for partner agency meeting.

## ***Task 7.4: Alternatives Analysis Results – Public Input***

Consultant will present findings of the alternative analysis results at two public workshops and solicit input from the public on selecting the preferred alternative. Graphical representations of the alternatives analysis including charts and a “performance dashboard” will be used to communicate the analysis results. Public outreach will also be performed based on the Public Outreach Plan (Task 2.3) including eNews letters, social media, online ads and newspaper ads. RTC and METRO staff will perform all outreach associated with public workshop noticing and logistics.

**Deliverable 7.4.1:** Powerpoint and oral presentation of the results of the alternatives analysis designed and prepared by consultant for two public workshops.

**Deliverable 7.4.2:** Graphical representations (maps, charts, dashboard) of analysis of alternatives suitable for two public workshops.

**Deliverable 7.4.2:** Public Outreach based on the Outreach Plan

## ***Task 7.5: Alternative Analysis Results - RTC and METRO meetings***

Consultant will present findings of the alternatives analysis results at a METRO meeting and RTC meeting to solicit input on selecting the preferred alternative. The

# Attachment A

graphical representations of the alternatives analysis including maps, charts and a “performance dashboard” will be used to communicate the analysis results.

**Deliverable 7.5.1:** Powerpoint and oral presentation with graphical presentations on performance measure results of the final alternatives designed and prepared by consultant for both RTC and METRO meetings.

**Deliverable 7.5.2:** Public Hearing at the RTC meeting to solicit public input on performance measure results of final list of alternatives.

## ***Task 7.6 Develop Locally Preferred Alternative***

In consultation with partners, public, and decision makers, the consultants and RTC staff will recommend a transit project that best achieves corridor goals, referred to as the preferred alternative. The consultant will analyze the preferred alternative and how it performs in advancing the performance measures. The consultant will document the methods and tools used to complete the analysis and the results of the analysis. Comments will be solicited from the public, partner agencies, RTC Committees, METRO and RTC.

**Deliverables 7.6.1:** Recommendation of locally preferred alternative including detailed documentation, maps, charts and a performance “dashboard”.

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## **Task 8: Alternatives Analysis Report**

### ***Task 8.1: Preparation of Administrative Draft***

Consultant shall prepare an administrative draft of report that clearly documents the alternatives analysis and how the locally preferred alternative integrates with the regional rail network. Consultant shall submit administrative draft document to RTC and METRO staff. The report should include a detailed description of the analysis completed including any assumptions and limitations to the analysis. Methodologies used for evaluating the alternatives will need to be rigorously documented.

**Deliverable 8.1.1:** Administrative Draft of Alternatives Analysis for High-Capacity Public Transit on the Santa Cruz Branch Rail Line inclusive of the Rail Network Integration Study

### ***Task 8.2: Draft Report and Presentation for RTC, Public and Partner Agency***

Consultant shall address comments received on administrative draft from RTC staff and prepare draft report. RTC staff will solicit comments on the draft document from advisory Committees. Consultant will present the findings of the final alternative analysis results and the draft report of the Alternatives Analysis at a partner agency meeting to solicit input. Consultant will present the findings of the final alternative results and the draft report for the Alternatives Analysis for High-Capacity Public

# Attachment A

Transit on the Santa Cruz Branch Rail Line to the RTC and METRO. Consultant will consider comments received and make revisions as directed by RTC and METRO.

**Deliverable 8.2.1:** Draft of Alternatives Analysis for High-Capacity Public Transit on the Santa Cruz Branch Rail Line with Recommendation on Locally Preferred Alternative inclusive of the Rail Network Integration Study

**Deliverable 8.2.2:** Compiled list of comments from public, partner agency, advisory committees, METRO, and RTC

**Deliverable 8.2.3:** Meeting agenda, PowerPoint, and oral presentation of draft report at partner agency meeting and meeting minutes

**Deliverable 8.2.4:** PowerPoint and oral presentation of draft report at RTC and METRO meetings

**Deliverable 8.2.5:** Public Hearing at the RTC meeting to solicit public input on locally preferred alternative and draft report.

## ***Task 8.3: Final Report***

Complete the final report inclusive of how the locally preferred alternative integrates with the regional rail network. Final report will consider comments received from RTC and METRO, RTC Committees, stakeholders, public and RTC and METRO staff on draft document. Include credit of the financial contribution of the Caltrans grant program and Measure D on the cover of the report. Recommend "Next Steps" for implementation.

**Deliverable 8.3.1:** Final Report of Alternatives Analysis for High-Capacity Public Transit on the Santa Cruz Branch Rail Line inclusive of the Rail Network Integration Study

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## **TASK 9 Business Plan for Locally Preferred Alternative**

### ***Task 9.1 Develop a Business Plan for the Locally Preferred Alternative***

Develop a 25-year Business Plan (Horizon year of 2045) for implementation of the Locally Preferred Alternative that includes at a minimum the services provided, governance options, operating plan, marketing strategy and financial plan.

**Deliverables 9.1.1:** Business Plan for the Locally Preferred Alternative of High Capacity Public Transit on the SCBRL

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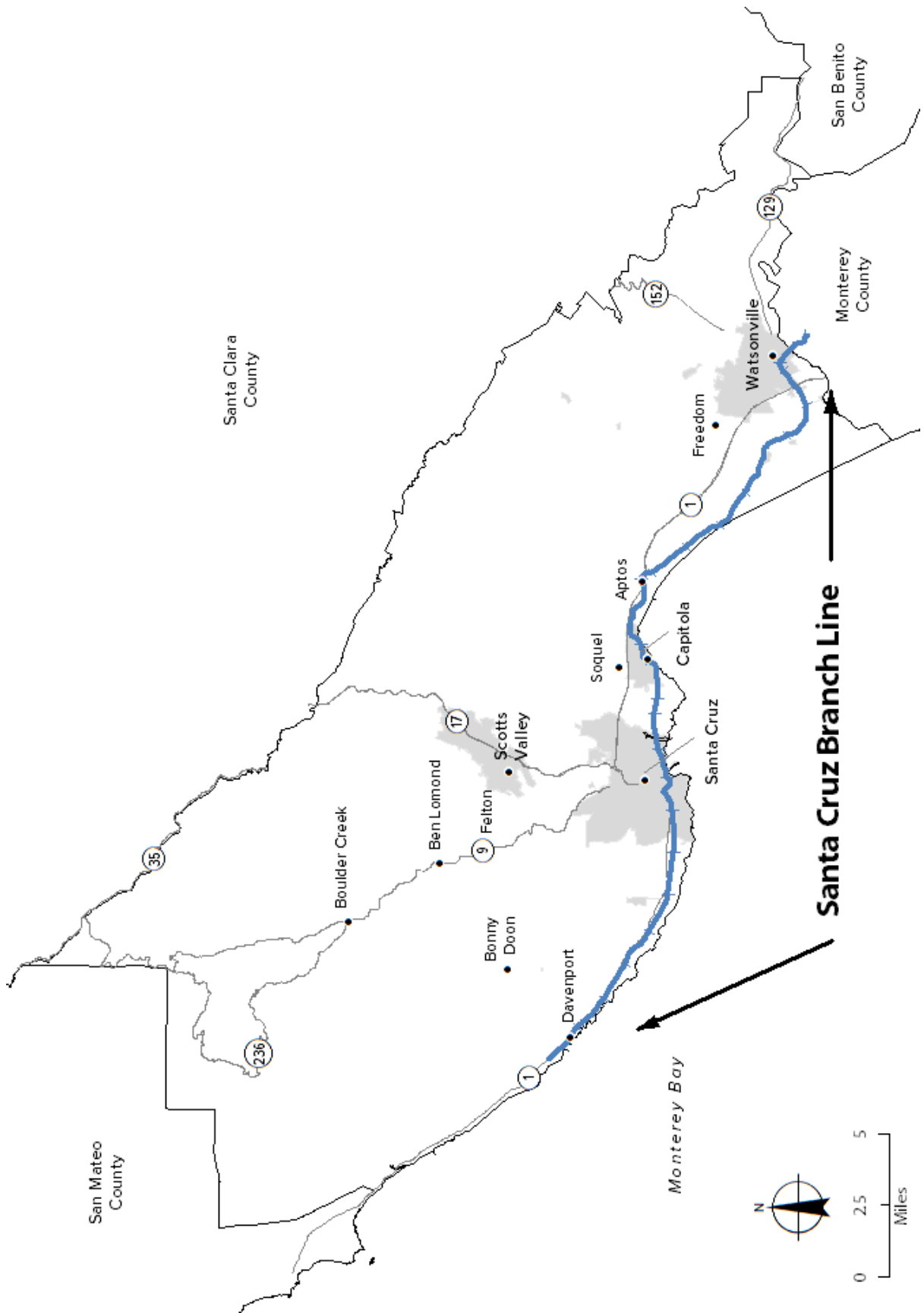
## **Summary of Consultant Presentations to Public, Stakeholders, RTC and METRO Board**

# Attachment A

- Four Public Workshops - 2 workshops for Goals, Criteria, Performance Measures and Initial Alternatives (Task 5.3), public hearing at RTC meeting on Input and Approval on Final Alternatives to be analyzed (5.6), and 2 workshops for Alternatives Analysis Results and input on preferred scenario (Task 7.4)
- Two Stakeholder Meetings – Input on Goals, Performance Measures, Initial Alternatives and Alternatives to be Analyzed (Task 5.3), Alternatives Analysis Results and Input on Preferred Alternative (Task 7.3)
- Three METRO Board Meetings – Input on Goals, Performance Measures and Initial Alternatives (Task 5.4), Input on Final Alternatives to be Analyzed (Task 5.6), Input on Analysis Results and Preferred Alternative (Task 7.5), Input on Final Draft Report and Preferred Alternative (Task 8.2)
- Four RTC Commission Meetings – Input and Approval on Goals, Performance Measures and Initial Alternatives (Task 5.4), Input and Approval on Final Alternatives to be Analyzed (Task 5.6), Input and Approval on Analysis Results and Input on Preferred Alternative (Task 7.5), Input and Approval on Final Draft Report and Preferred Alternative (Task 8.2)

# Attachment A

Exhibit A



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**DATE:** June 14, 2019  
**TO:** Capital Projects Standing Committee  
**FROM:** Barrow Emerson, Planning & Development Director  
**SUBJECT: RECEIVE AND RECOMMEND APPROVAL OF THE 10-YEAR (FISCAL YEAR 2020-29) STRATEGIC BUSINESS PLAN**

## **I. RECOMMENDED ACTION**

**That the Capital Projects Standing Committee receive an update on the 10-Year Strategic Business Plan and recommend approval of the Plan to the full Board, including;**

- A. Approval of modifications to the initial list of Key Tactical Initiatives in support of the Strategic Priorities;**
- B. Approval of implementation plans for the Key Tactical Initiatives; and,**
- C. Approval of a new Strategic Plan Elements section for all future Standing Committee and Board staff reports**

## **II. SUMMARY**

- At the October 17, 2018 Santa Cruz Metropolitan Transit District (METRO) Board Strategic Business Plan initial work session, the Board of Directors (Board) and management team established a preliminary set of Strategic Priorities (Attachment A).
- On January 25, 2019, the METRO Board adopted the Strategic Priorities and a METRO staff proposal for Key Tactical Initiatives, pending minor modifications to the wording of two initiatives, in support of the Priorities. Attachment B shows modifications to the version presented to the Board on January 25, 2019.
- The Strategic Priorities and Key Tactical Initiatives are intended to prioritize the use of METRO's financial and staff resources in the coming years.
- Following adoption of the Strategic Priorities and Key Tactical Initiatives, at the January 25<sup>th</sup> Board meeting, the management team developed a 5-Year Implementation Plan (Attachment C) for the Key Tactical Initiatives within the context of the 5-Year financial outlook, for the Board's consideration.
- On April 19, 2019 the Capital Projects Standing Committee approved forwarding the 10-Year Strategic Business Plan to the Board for their approval.

- At its April 26, 2019 meeting, the Board directed the plan return to the Capital Projects Standing Committee to address minor wording changes to items 2.d, 6.a and 6.b.

### III. DISCUSSION/BACKGROUND

At the October 17, 2018 METRO Board Strategic Business Plan initial work session, the Board and management team established a preliminary set of seven strategic priorities (see Attachment A).

These seven Strategic Priorities were developed within the context of the existing METRO Mission Statement:

*“To provide a public transportation service that enhances personal mobility and creates a sustainable transportation option in Santa Cruz County through a cost-effective, reliable, accessible, safe, clean and courteous transit service.”*

Among issues discussed at the October 17<sup>th</sup> work session were a number of specific key ongoing tactical initiatives identified by the METRO management team, including timeframes and cost contexts where appropriate. These Key Tactical Initiatives have been assigned to one or more of the seven draft Strategic Priorities (see Attachment B).

A primary theme from the October 17<sup>th</sup> work session was that, for at least the last four years, METRO has been in a survival mode, staving off a financial structural deficit, which could have undermined its ability to continue to provide public transportation services to the County.

The management team forecasts a period of relative consolidation or maintaining of service levels, while reinvesting in the “bricks of the business”, improving the quality, promotion and public awareness of the current services, prior to growing the system significantly. As METRO hopefully moves beyond this “fix” stage and towards a “build” phase, it is important that it be clear on its mission and focus its limited financial and staff resources on only its core business initiatives.

On January 25<sup>th</sup>, the METRO Board adopted the seven strategic priorities and a list of key initiatives, pending minor modification to the wording of two initiatives. Attachment B is an updated version of the Key Tactical Initiatives. Following this direction, the METRO management team has developed a 5-Year Implementation Plan (Attachment C) for the Key Initiatives.

Resources needed for the individual Initiatives were identified in two ways:

1. Staff oriented tasks - Staff oriented tasks are shaded blue and assigned to the appropriate department in order to allow managers to understand the extent

to which their department is involved in helping METRO achieve its business initiatives over the next 5 years.

2. Projects requiring funding consideration - Projects requiring funding are shaded either orange (Operating) or green (Capital) with the costs being taken from:
  - METRO's 10-Year Unfunded Capital Projects List (Attachment D)
  - Service expansion priorities taken from the Planning Department Annual Service Planning Update [August 24, 2018 Board Item #12-10 (Attachment E)].

Dollar values included in Attachment C are not formal estimates and are general order-of-magnitude costs for planning purposes only.

#### METRO Service Planning Priorities and Standards

Among the Key Initiatives in the Strategic Business Plan is METRO's planning for future system growth when financially feasible (see Initiative 3.a in Attachment C – "Increase Service Levels on Existing Routes"; including Span and Frequency). The August 28, 2018 Annual Service Planning Update to the Board (Attachment E) identified initial priorities for service expansion opportunities:

- Route 35 – Evening frequency improvements in the San Lorenzo Valley.
- Watsonville Circulator implementation, which will operate using METRO's first awarded electric bus.
- Routes 66 and/or 68 - Improved frequency and/or span of service in the Live Oak corridor between Capitola Mall and downtown Santa Cruz, an area with strong transit-oriented demographics.

As part of METRO's ongoing service planning analysis, the Planning Department monitors service levels relative to the 2012-adopted METRO Service Standards, which outline desired levels of service by type of service and time of day (see Attachment F). METRO's Service Standards are reflective of industry standards for similar types of service and urban/rural profiles. Each of our five service categories have their own standards for frequency by time of day.

In most cases, particularly since the 2016 major service reduction, METRO is not able to fully achieve these Service Standards.

- Weekday Peaks – During weekday peaks METRO only achieves its service standards on local routes 4, 55, 75 and 79.

- Weekday Base (off-peak) – In the mid-day, METRO does somewhat better in meeting its service standards with the 91X and a majority of UCSC and local routes meeting the standard,
- Weekday Evenings – This service standard is generally not achieved. In most cases it is that the frequency does not extend long enough into evenings, making it difficult for METRO to meet the wide span of service needs required by the riding public.
- Weekends – With the exception of routes 16, 66, 68 and 71 METRO routes do not meet the service standards.

One of the financial difficulties in achieving a significant service level increase is the amount of Bus Operator resources required. With any service expansion, the amount of Operator resources required must include enough Operators to provide the additional service all week, often more hours than a single Operator can perform in his/her five-day work week. In addition, for every added Bus Operator, an additional 30% of an Operator for “Extra Board” support is required to cover time off and absenteeism. The approximate annual cost for an Operator and operation of their bus is \$130,000.

#### METRO Committee and Board Staff Report Reformatting

One of the outcomes of METRO’s development of its first Strategic Business Plan is a recommendation that going forward all future METRO Committee and Board staff reports include a section titled “Strategic Plan Elements” to note the item’s relation to achieving the Strategic Business Plan priorities.

#### Next Steps

At its April 26, 2019 meeting, the Board directed the plan return to the Capital Projects Standing Committee to address minor wording changes.

The 5-Year Implementation Plan will be used by the management team to organize staff resource allocation and prioritize future budget proposals.

Pending approval, it is the intent of staff to return to the METRO Board annually for review and updates to this rolling, 10-Year Strategic Business Plan.

#### **IV. FINANCIAL CONSIDERATIONS/IMPACT**

Although the 10-Year Strategic Business Plan does not direct specific budget related items in the near term, it does identify key tactical initiatives METRO staff will endeavor to implement within this timeframe. Specific financial considerations/impacts will be identified as individual initiatives move forward.

## **V. ALTERNATIVES CONSIDERED**

The 10-Year Strategic Business Plan and its Strategic Priorities are intended to provide context and direction to the METRO Board and staff when considering new initiatives. The clarity and focus provided by the seven Strategic Priorities will support efficient decision making processes at METRO.

Not pursuing development of a Strategic Business Plan is not recommended.

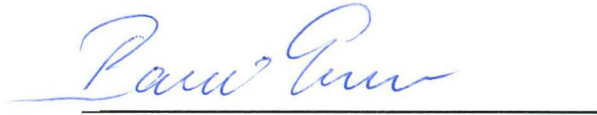
## **VI. ATTACHMENTS**

- Attachment A:** Seven Strategic Priorities
- Attachment B:** Modified Key Tactical Initiatives
- Attachment C:** 5-Year Implementation Plan
- Attachment D:** Unfunded Capital List
- Attachment E:** August 24, 2018 Board Item #12-10
- Attachment F:** Service Standards

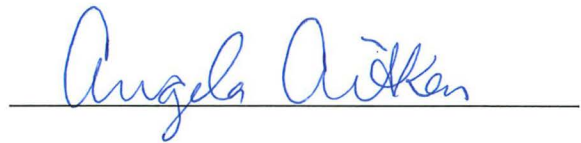
Prepared by: Barrow Emerson, Planning & Development Director

**VII. APPROVALS**

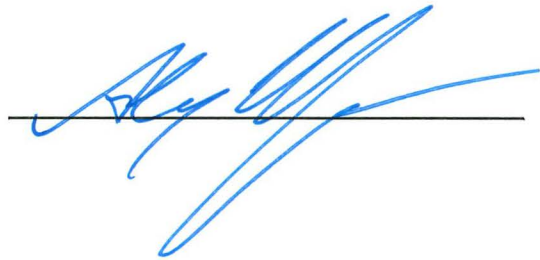
Barrow Emerson,  
Planning & Development Director



Approved as to fiscal impact:  
Angela Aitken, CFO



Alex Clifford, CEO/General Manager



## Santa Cruz METRO

### Strategic Business Plan Priorities

1. Safety First Culture
2. Financial Responsibility, Stability, Stewardship, Accountability
3. Service Quality and Delivery
4. Internal and External Technology
5. Employee Engagement: Attract, Retain, Develop
6. State of Good Repair
7. Strategic Alliances and Community Outreach

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# Attachment B

## Key Tactical Initiatives in support of the Santa Cruz METRO 10-Year Strategic Business Plan Priorities

The following Key Tactical Initiatives are assumed as 10-year priorities for implementation and are the primary candidates for commitment of financial and staff resources. These are generally issues with either significant annual operating costs and/or large one-time capital costs.

### 1. Safety First Culture

- a. Implement policies, procedures, and security and safety training agency-wide in order to:
  - i. Reduce workers compensation claims
  - ii. Reduce accidents claims
- b. Secure METRO facilities as required by law.
- c. Enhance security force.
- d. Continuously monitor workplace injuries and actively engage the Safety & Risk Department in retraining following incidents.
- e. Regularly review all facilities for safe working conditions.
- f. Complete the installation of surveillance equipment on the remainder of the fleet.

### 2. Financial Responsibility: Stability, Stewardship, Accountability

- a. Adopt balanced budgets without the use of reserves.
- b. Develop balanced 5-year budget plans.
- c. Enforce the Reserve Policy and funding levels of the “buckets” to provide a buffer against any impacts of revenue levels, including ebbs and flows of the economy or changes in funding levels from revenue providers.
  - i. Establish a reserve “bucket” for METRO UAL [CalPERS] and OPEB [retiree medical]
- d. Within the context of an available budget, reinvest in capital, operational and technological improvements the “bricks” of the company to support cost-effective, efficient and quality customer service.
- e. Implement a Fare Restructure during 2019 which could increase revenue by \$500,000 - \$1.5 million and provides improved customer fare payment amenities.
- f. Manage future labor costs so as to maintain the capacity to provide at least the current service level, while providing employees with a market competitive

# Attachment B

compensation that allows METRO to attract, develop and retain quality employees, while minimizing the impacting on the integrity of long term budgets.

- g. When applicable, use carryover funds from a previous fiscal year only for one-time expenditures, rather than for recurring costs.
  - i. Following the annual audit (August – October of each year), present to the Board Finance, Budget and Audit Standing Committee a recommendation for appropriation of any carryover funds, if available, from the previous fiscal year.
  - ii. If recurring surplus revenues are identified, engage the Service Planning Review Committee (SPRC) early to develop a priority list of service needs and then present such service needs to the Board Finance, Budget and audit Standing Committee (January - March each year).
- h. Continue to develop strategies to reduce absenteeism and unscheduled overtime.
- i. Complete purchase and installation of a new Financial Information System (FIS) by June-December 2021.
- j. Strive to leverage local funds with state and federal grants.

### 3. Service Quality and Delivery

- a. Within financial capacity, increase service levels on existing routes, including daily span of service and frequency.
- b. In the allocation of fixed-route services, over time, increase the percentage of resources committed ridership generating services versus coverage-oriented services.
- c. Within financial capacity beyond the current annual cost of \$4 million, increase the Highway 17 Express service level to provide a more attractive alternative to driving alone.
- ~~d. Maintain appropriate customer service and marketing services to achieve excellence in customer service. Within financial capacity, increase the level of Customer Service staffing and marketing services to achieve excellence in Customer Service to attract new riders and meet the needs of exiting ones.~~
- e.d. Within financial capacity, pursue initiatives which initiatives, which contribute to general community mobility rather than exclusively mass transit solutions.
  - i. Monitor information and, within financial capacity, pursue implementation of alternative service models, such as Transportation

# Attachment B

Network Companies (TNCs), Microtransit, other on-demand services, and autonomous vehicles; particularly where they may be cost effective.

~~f.e.~~ In order to increase reliability and reduce unscheduled overtime (\$2 million annually), increase the percentage of extra board operators in support of scheduled shift assignments.

~~g.f.~~ In response to Countywide decisions made relative to the Unified Corridor Investment Study, develop implementation plans and operating cost estimates for services in the following corridors: ~~Soquel/Freedom~~ Bus Rapid Transit (BRT) Lite services, Highway 1 Bus ~~On~~ Shoulders service, and mass transit in Rail Corridor.

#### 4. Internal and external technology;

##### a. External (Customer facing)

- i. Automatic Vehicle Location (AVL) is scheduled to be implemented during 2019. AVL is also a valuable internal tool to support efficient bus-scheduling by providing comprehensive data about on-time performance and average travel times on all segments of the system.
- ii. A Highway 17 Express mobile ticketing pilot project will be implemented in 2019 to determine its attractiveness to users of this service. Pending results of this pilot, consideration will be given to implementing a mobile ticketing system-wide ~~system wide~~.
- iii. Pending the effectiveness of the mobile ticketing pilot project, implement an account-based fare payment ~~system which improves customer convenience by allowing purchasing and reloading of~~ system that improves customer convenience by allowing purchasing and reloading of passes on-line.

##### b. Internal

- ~~i.~~ Investigate upgrade or replacement of the current fare collection and reporting system as it is not dependable and prone to error, resulting in excessive staff time spent maintaining equipment and reconciling data.
- ~~ii.~~ Investigate upgrade or replacement of the current scheduling and payroll system as it is not supported by modern operating systems.
- ~~iii.~~ Automatic Passenger Counting (APC) is ~~an~~ a tool which would allow METRO to have complete system wide data of passenger ons/off by location, which allows for more effective service and stop planning, and removes the need for manual random field surveys which provide less data and are cost-inefficient to conduct.

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~~iii~~.iv. Develop new data tools for Key Performance Indicators (KPI) and Dashboards by continuing progress on the creation of the data warehouse.

~~iv~~.v. Implement a new Financial Information System (FIS).

1. ~~An e~~ Early CY2019 milestone will be the development of the scope of work for an FIS consultant to be hired to help review the existing systems and processes and to help develop the specifications and scope of work for a competitive bid for a new FIS system.

## 5. Employee Engagement; Attract, Retain, Develop

### a. Staffing levels

- i. Although the scheduled level of ParaCruz service is appropriate to support the fixed route network, the difficulty in maintaining a full staff of ~~drivers operators~~ impacts METRO's ability to achieve the on-time performance target of 90% for the ParaCruz system.the effective delivery of this service. Continue to identify creative and innovative methods to recruit employees.
- ii. Difficulty in attracting fixed-route operators puts a stress on existing staff and increases operating costs through unscheduled overtime. Continue to identify creative and innovative methods to recruit employees.
- iii. As many support functions at METRO are staffed at minimal levels, ~~it~~ investigate typical staffing level ratios for comparable functions at peer agencies.

b. Attracting employees is often difficult because of the high local cost of living in Santa Cruz County. Recent Classification and Compensation studies may help address this situation.

c. The ability to retain employees involves the opportunity to enhance one's career path with advancement opportunities which can be difficult at a small agency.

d. Developing employee's skills, knowledge and abilities requires training which can be costly and time consuming, another difficulty at a small and minimally staffed agency.

~~d-e.~~ Maintain appropriate staffing levels relative to technology improvements.

## 6. State of Good Repair

- a. METRO's highest priority is to identify funds to replace the 5362 fixed-route buses that have reached or surpassed the end of their useful life.

# Attachment B

- i. ~~The bus~~ replacement program is funded to a level of \$3M annually. This will allow METRO to almost eliminate buses beyond their useful life by 2023. However, as existing newer buses start to reach the end of their useful life and California Air Resources Board (CARB) requirements to introduce electric buses begin in 2026, this financial challenge will reappear and will require ongoing financial resources. The electric bus requirements will also require a significant investment in charging infrastructure.
  - ii. Integrate Zero Emissions Buses (ZEBs) into the METRO fleet consistent with Board policy and comply with the impending CARB Regulation. Once the Regulation is adopted, return to the METRO Board with appropriate revisions to the METRO ZEB 2040 Plan that will make it compliant with CARB's Regulation.
  - iii. To the greatest extent possible:
    1. Provide METRO sufficient time to test its initial new ZEBs before committing to additional purchases, subject to thresholds in the impending CARB Regulation.
    2. Subject to the thresholds in the impending CARB Regulation, avoid purchasing additional ZEBs until battery energy density improves sufficiently for the "end of life" range of the ZEB to run on all METRO routes (nearly 300-mile daily range).
  - iv. Design and construct the yard ZEB recharging infrastructure before the first ZEBs arrive in the second quarter of 2019.
- b. ~~Pacific Station is in need of significant rehabilitation in the near term at a cost of \$5.8 million. METRO will either refurbish the existing building or pursue a redevelopment partnership with the City of Santa Cruz. Discussions with the City about the potential for a major redevelopment have identified an estimated \$9 million shortfall to implement. Pacific Station is in need of significant rehabilitation in the near term for which METRO has approximately \$2 million available. Discussions with the City of Santa Cruz about the potential for a major redevelopment have resulted in an estimated \$10 million shortfall to implement. Subject to the results of studies currently underway, the current condition of the structure may require METRO to invest more than \$2 million in rehabilitation funds in the near future.~~
- c. There is a need for a METRO-owned ParaCruz facility, as the current lease arrangement is financially inefficient (\$180,000 annual lease through 2021) and the landlord may not renew the lease after 2021.

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- d. Create a strategy for addressing METRO's 10-year Unfunded Capital Projects List for all equipment and facilities, which currently has a price tag approaching \$200M including buses. Items include:
  - i. Capital maintenance and upgrades of our four Transit Centers,
  - ii. Operations, maintenance, administrative facilities, and bus stops, and,
  - iii. Vehicle state-of-good-repair, and technology improvements.Some expenses associated with ongoing maintenance are treated as an operating expense.
- e. In response to Countywide decisions made relative to the Unified Corridor Investment Study, METRO may need to explore funding for facilities and equipment in the Soquel/Freedom (BRT Lite), Highway 1 (Bus On Shoulders), and service to or on the Rail Corridor.
- f. [Provide facilities that support METRO operations. \[FTA 5339a\]](#)
- g. [Provide non-revenue vehicles that support METRO operations. \[FTA 5339a\]](#)
- h. [Create a strategy to replace ParaCruz vehicles that have ~~past~~passed their useful life.](#)
- e.

## 7. Strategic Alliances ~~a~~And Community Outreach

- a. Over half of METRO ridership is UCSC students, faculty, and staff with the University providing METRO almost \$4.5 million annually, which supported the retention of eight operators in 2016. This alliance is an important strategic and financial issue as UCSC continues to grow and draw riders from origins further from the campus than in prior years.
- b. Cabrillo College has been a financial partner for three school years, funding eight operators at an annual cost of approximately \$950,000, as a result of a student-approved and funded bus pass program in 2016 and again in 2017, which is always subject to reconsideration by students. METRO will continue to work to meet Cabrillo needs, including improved access to its Watsonville campus.
- c. Maintain and enhance \$500,000 annual partnership with the Santa Clara County Valley Transportation Authority (VTA), AMTRAK, the Capital Corridor Joint Powers Authority (JPA), the San Joaquin JPA, and the San Joaquin Regional Rail commission (ACE) in support of the Highway 17 Express service.
- d. Enhance relationships with the Association of Monterey Bay Area Governments (AMBAG), the Santa Cruz County Regional Transportation Commission (RTC), and Caltrans who are partner transportation planning agencies involved in legislation, policy, and funding advocacy.

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- e. Continue to participate in and support the Santa Cruz Chamber of Commerce and the Monterey Bay Economic Partnership (MBEP).
- f. Within the upcoming requirement to have an ~~all-electric~~~~all-electric~~ bus fleet by 2040, METRO will explore a business relationship with Monterey Bay Community Power and PG&E.
- g. With the recent history of strong public support in Santa Cruz County for transportation funding, METRO will analyze the financial capacity and public appetite for revenue enhancing measures to address capital needs and allow for an increased level of transit service, especially focusing on frequency and span of service.
- h. Work with local jurisdictions to influence their land use strategies to encourage more transit oriented development patterns and road networks which can be efficiently serviced by public transit. Densification of nodes along existing bus trunk lines should be encouraged.
- i. Establish a Marketing, Customer Service & Communications function to promote services, retain customers and attract new ridership. Once the Marketing, Customer Service and Communications Director is aboard, pursue:
  - i. Developing communication tools and social media to educate the public on the benefits of public transportation.
  - ii. Educating the riding and non-riding residents of Santa Cruz County about how METRO uses the resources they have granted METRO and the air quality/sustainability/GHG reductions to the region.
  - iii. Promoting, when appropriate, alternative service models as discussed in Items 3.e.
- j. Legislation
  - i. Provide ongoing education via the Headways, media press releases, and other mediums on legislative issues vital to METRO.
  - ii. Support favorable electricity rate legislation/regulation for transit properties operating ~~of~~-ZEBs.
  - iii. Continue ongoing work with the CTA via the Executive and Legislative Committees.
  - iv. Continue to assert METRO's legislative agenda through APTA Committees, the Bus Coalition, and the services of the federal advocate to support various initiatives, including:
    - 1. Increased federal formula funding including increasing the Small Transit Intensive Cities (STIC) funds to 3%.
    - 2. Federal transit reauthorization funded by stable and recurring funding sources ~~and~~ that grow formula funds to transit agencies, and.

# Attachment B

3. Stabilizing the Highway Trust Fund - e.g., ~~increase~~ the federal gas ~~tax-tax~~.



Strategic Plan Outlook					
	FY 20	FY 21	FY 22	FY 23	FY 24
<b>Initiatives</b>					
<b>1. SAFETY FIRST CULTURE</b>					
a. Implement policies, procedures, and security and safety training agency wide.	All Staff	All Staff	All Staff	All Staff	All Staff
b. Secure METRO facilities as required by law.	-	-	\$150,000	-	-
c. Enhance security force.	\$40,000	\$40,000	\$40,000	\$40,000	\$40,000
d. Continuously monitor workplace injuries and actively engage the Safety & Risk Department in retraining following incidents	All Staff	All Staff	All Staff	All Staff	All Staff
e. Regularly review of all facilities for safe working conditions.	Safety/Security	Safety/Security	Safety/Security	Safety/Security	Safety/Security
f. Complete the installation of surveillance equipment on the remainder of the fleet.	\$375,000	-	-	-	-
<b>2. FINANCIAL RESPONSIBILITY: STABILITY, STEWARDSHIP, ACCOUNTABILITY</b>					
a. Adopt balanced budgets without the use of reserves.	Finance	Finance	Finance	Finance	Finance
b. Develop balanced 5-year budget plans.	Finance	Finance	Finance	Finance	Finance
c. Enforce the Reserve policy and funding levels of the "buckets"	Finance	Finance	Finance	Finance	Finance
i. Establish a reserve "bucket" for METRO UAL[CalPERS] and OPEB[Retiree Medical]	Finance	Finance	Finance	Finance	Finance
d. Within the context of available budget, reinvest in capital, operational and technological improvements to support cost-effective, efficient and quality customer service.	CEO/CFO	CEO/CFO	CEO/CFO	CEO/CFO	CEO/CFO
e. Implement a Fare Restructure during 2019 [Potential Additional Revenue]	-	+\$500K-\$1M	+\$500K-\$1M	+\$500K-\$1M	+\$500K-\$1M
f. Manage future labor costs so as to maintain the capacity to provide at least the current service level while providing employees with a market competitive compensation that allows METRO to attract, develop and retain quality employees; while minimizing the impact on long term budgets.	CEO/CFO	CEO/CFO	CEO/CFO	CEO/CFO	CEO/CFO
g. When applicable, use carryover funds from a previous fiscal year only for one-time expenditures rather than for recurring costs.	Finance	Finance	Finance	Finance	Finance
i. Following the annual audit (August – October each year), present to the Board Finance Committee a recommendation for appropriation of any carryover funds, if available, from the previous fiscal year.	Finance	Finance	Finance	Finance	Finance

Strategic Plan Outlook					
Initiatives	FY 20	FY 21	FY 22	FY 23	FY 24
ii. If recurring surplus revenues are identified, engage the Service Planning Review Committee (SPRC).	Finance	Finance	Finance	Finance	Finance
h. Continue to develop strategies to reduce absenteeism and unscheduled overtime.	HR	HR	HR	HR	HR
i. Complete purchase and installation of a new Financial Information System (FIS) by June 2021.	-	\$125,000	\$125,000	-	-
j. Strive to leverage local funds with state and federal grants.	Grants	Grants	Grants	Grants	Grants
<b>3. SERVICE QUALITY AND DELIVERY</b>					
a. Increase service levels on existing routes including span and frequency.	-	\$125,000	\$250,000	\$375,000	\$375,000
b. In the allocation of fixed-route services, over time, increase resources committed to ridership instead of coverage.	Planning	Planning	Planning	Planning	Planning
c. Increase the Highway 17 Express service level.	-	-	\$125,000	\$125,000	\$125,000
d. Maintain appropriate customer service and marketing services to achieve excellence in customer service.	Marketing/Customer Service	Marketing/Customer Service	Marketing/Customer Service	Marketing/Customer Service	Marketing/Customer Service
e. Pursue initiatives which contribute to general community mobility rather than exclusively mass transit solutions. i. Monitor information and, pursue implementation of alternative service models, particularly where they may be cost effective.	-	\$200,000	\$200,000	\$200,000	\$200,000
f. Increase the percentage of extra board operators in support of scheduled shift assignments.	-	\$500,000	\$500,000	\$500,000	\$500,000
g. Develop implementation plans and operating cost estimates for services in the following corridors; Soquel/Freedom Bus Rapid Transit (BRT) Lite services, Highway 1 Bus On Shoulders service, and mass transit in Rail Corridor.	Planning	Planning	Planning	Planning	Planning
<b>4. INTERNAL AND EXTERNAL TECHNOLOGY</b>					
<b>a. INTERNAL (Customer facing)</b>					
i. Automatic Vehicle Location (AVL)	IT	IT	IT	IT	IT
ii. A Highway 17 Express mobile ticketing. Pending results of this pilot consideration will be given to implementing mobile ticketing system wide.	Planning	Planning	-	-	-
iii. Pending the effectiveness of the mobile ticketing pilot project, implement an account based fare payment system.	-	Planning	\$1,500,000	Planning	Planning

Strategic Plan Outlook					
	FY 20	FY 21	FY 22	FY 23	FY 24
<b>Initiatives</b>					
<b>b. INTERNAL</b>					
i. Investigate upgrade or replacement of the current fare collection and reporting system.	Planning/IT	Planning/IT	\$250,000	-	-
ii. Investigate upgrade or replacement of the scheduling and payroll system.	Planning/IT	Planning/IT	Planning/IT	Planning/IT	Planning/IT
iii. Automatic Passenger Counting (APC)	\$650,000	-	-	-	-
iv. Develop new data tools for Key Performance Indicators (KPI) and Dashboards by continuing progress on creation of the data warehouse	Finance/Planning/IT	Finance/Planning/IT	Finance/Planning/IT	Finance/Planning/IT	Finance/Planning/IT
v. Implement new Financial Information System (FIS).	IT/Finance	IT/Finance	IT/Finance	IT/Finance	IT/Finance
<b>5. EMPLOYEE ENGAGEMENT; ATTRACT, RETAIN, DEVELOP</b>					
<b>a. Staffing levels</b>					
i. Continue to identify creative and innovative methods to recruit Paracruz employees to in order to achieve on-time performance targets.	HR	HR	HR	HR	HR
ii. Continue to identify creative and innovative methods to recruit Fixed Route employees.	HR	HR	HR	HR	HR
iii. Investigate typical staffing level ratios for comparable support functions at peer agencies	HR	HR	HR	HR	HR
b. Attracting employees is often difficult because of the high local cost of living in Santa Cruz County. Recent Classification and Compensation studies may help address this situation.	HR	HR	HR	HR	HR
c. The ability to retain employees involves the opportunity to enhance ones career path with advancement opportunities which can be difficult at a small agency.	HR	HR	HR	HR	HR
d. Developing employee's skills, knowledge and abilities requires training which can be costly and time consuming, another difficulty at a small and minimally staffed agency.	HR	HR	HR	HR	HR
e. Maintain appropriate staffing levels relative to technology improvements.	HR	HR	HR	HR	HR
<b>6. STATE OF GOOD REPAIR</b>					
A. METRO's highest priority is to identify funds to replace the 53 fixed-route buses that have reached or surpassed the end of their useful life.	Grants	Grants	Grants	Grants	Grants
A.i. Bus replacement program is funded to a level of \$3M annually.	\$3,000,000	\$3,000,000	\$3,000,000	\$3,000,000	\$3,000,000
A.ii. Integrate Zero Emissions Buses (ZEBs) into the METRO fleet consistent with Board policy and comply with CARB Regulations.	Procurement/Planning	Procurement/Planning	Procurement/Planning	Procurement/Planning	Procurement/Planning

Strategic Plan Outlook					
	FY 20	FY 21	FY 22	FY 23	FY 24
<b>Initiatives</b>					
A.iii. To the greatest extent possible:					
A.iii.a Provide METRO sufficient time to test its initial new ZEBs before committing to additional purchases.	Procurement/Planning	Procurement/Planning	Procurement/Planning	Procurement/Planning	Procurement/Planning
A.iii.b Avoid purchasing additional ZEBs until battery energy density improves sufficient for the "end of life" range of the ZEB to run on all METRO routes.	Procurement/Planning	Procurement/Planning	Procurement/Planning	Procurement/Planning	Procurement/Planning
A.iv. Design and construct the yard ZEB recharging infrastructure before the first ZEBs arrive in the second quarter of 2019	\$1,858,000	TBD	TBD	TBD	TBD
B. Pacific Station is in need of significant rehabilitation in the near term at a cost of \$5.8 million. METRO will either refurbish the existing building or pursue a redevelopment partnership with the City of Santa Cruz. Discussions with the City about the potential for a major redevelopment have identified an estimated \$9 million shortfall to implement.	\$1,000,000	\$1,000,000	\$1,000,000	\$1,000,000	-
C. METRO owned ParaCruz facility.	-	\$12,000,000	-	-	-
D. Create a strategy for addressing METRO's 10-year Unfunded Capital Projects List for all equipment and facilities.	Grants	Grants	Grants	Grants	Grants
E. In response to Countywide decisions made relative to the Unified Corridor Investment Study, METRO may need to explore funding for facilities and equipment in the Soquel/Freedom (BRT Lite), Highway 1 (Bus On Shoulders), and service to or on the Rail Corridor.	Planning	Planning	Planning	Planning	Planning
F. Provide facilities that support METRO operations. [FTA 5339a]	Facilities	Facilities	Facilities	Facilities	Facilities
G. Provide non-revenue vehicles that support METRO operations. [FTA 5339a]	Fleet	Fleet	Fleet	Fleet	Fleet
H. Replace ParaCruz vehicles that have passed useful life.	Grants	Grants	Grants	Grants	Grants
<b>7. STRATEGIC ALLIANCES AND COMMUNITY OUTREACH</b>					
a. Work with UCSC to fund operating cost growth overtime.	Planning	Planning	Planning	Planning	Planning
b. Work with Cabrillo to fund operating cost growth overtime.	Planning (Under Contract)	Planning (Under Contract)	Planning (Extension)	Planning (Extension)	Planning (Extension)
c. Maintain and enhance \$500,000 annual partnership with agencies that are involved in Highway 17 Express service.	Finance	Finance	Finance	Finance	Finance

# Attachment C

Strategic Plan Outlook					
	FY 20	FY 21	FY 22	FY 23	FY 24
<b>Initiatives</b>					
d. Enhance relationships with the Association of Monterey Bay Area Governments (AMBAG), the Santa Cruz County Regional Transportation Commission (RTC), and Caltrans who are partner transportation planning agencies involved in legislation, policy, and funding advocacy.	Planning	Planning	Planning	Planning	Planning
e. Continue to participate in and support the Santa Cruz Chamber of Commerce and the Monterey Bay Economic Partnership (MBEP).	Planning	Planning	Planning	Planning	Planning
f. Within the upcoming requirement to have an all electric bus fleet by 2040 METRO will explore a business relationship with Monterey Bay Community Power and PG&E.	Procurement/Grants	Procurement/Grants	Procurement/Grants	Procurement/Grants	Procurement/Grants
g. METRO will analyze the financial capacity and public appetite for revenue enhancing measures to address capital needs and allow for an increased level of transit service, especially focusing on frequency and span of service.	Executive/Planning	Executive/Planning	Executive/Planning	Executive/Planning	Executive/Planning
h. Work with local jurisdictions to influence their land use strategies to encourage more transit oriented development patterns and road networks which can be efficiently serviced by public transit.	Planning	Planning	Planning	Planning	Planning
i. Establish a Marketing, Customer Service & Communications function to promote services, retain customers and attract new ridership. Once the Marketing Director is onboard, pursue:	Marketing	Marketing	Marketing	Marketing	Marketing
i. Developing communication tools and social media to educate the public on the benefits of public transportation.	Marketing	Marketing	Marketing	Marketing	Marketing
ii. Educating the riding and non-riding residents of Santa Cruz County about how METRO uses the resources they have granted METRO along with environmental benefits for the region.	Marketing	Marketing	Marketing	Marketing	Marketing
iii. Promoting, when appropriate, alternative service models as discussed in Items 3.e.	Marketing	Marketing	Marketing	Marketing	Marketing
<b>j. LEGISLATION</b>					
i. Provide ongoing education via the Headways, media press releases, and other mediums on legislative issues vital to METRO.	Marketing/Planning	Marketing/Planning	Marketing/Planning	Marketing/Planning	Marketing/Planning
ii. Support favorable electricity rate legislation/regulation for transit properties operating of ZEBs.	Procurement/Grants	Procurement/Grants	Procurement/Grants	Procurement/Grants	Procurement/Grants
iii. Continue ongoing work with the CTA via the Executive and Legislative Committees	Executive/Grants	Executive/Grants	Executive/Grants	Executive/Grants	Executive/Grants

Strategic Plan Outlook					
Initiatives	FY 20	FY 21	FY 22	FY 23	FY 24
iv. Continue to assert METRO's legislative agenda to support various initiatives including: <ol style="list-style-type: none"> <li>1. Increased federal formula funding including increasing the Small Transit Intensive Cities (STIC) funds to 3%,</li> <li>2. Federal transit reauthorization funded by stable and recurring funding sources and that grow formula funds to transit agencies, and</li> <li>3. Stabilizing the Highway Trust Fund - e.g. Increase the federal gas tax.</li> </ol>	Executive/Grants	Executive/Grants	Executive/Grants	Executive/Grants	Executive/Grants
	\$40,000	\$865,000	\$1,115,000	\$1,240,000	\$1,240,000
<b>Total Operating</b>	\$5,025,000	\$16,125,000	\$6,225,000	\$3,200,000	\$3,200,000
<b>Total Capital</b>	-	\$500,000-\$1M	\$500,000-\$1M	\$500,000-\$1M	\$500,000-\$1M
<b>Total Revenue</b>					

# Attachment D

## 10 year unfunded capital projects summary

Category	5-yr need	10-yr need
Construction	\$ 22,708	\$ 152,008
Vehicle State of Good Repair (SGR)	\$ 13,260	\$ 46,235
Facilities Maintenance	\$ 3,980	\$ 6,405
Information Technology (IT)	\$ 4,759	\$ 4,759
<b>Total</b>	<b>\$ 44,707</b>	<b>\$ 209,407</b>

UNFUNDED CAPITAL PROJECTS (000s)

#	Project	Description	Cost (000s)	Construction												
				20	21	22	23	24	25	26	27	28	29			
1	ZEB Charging Infrastructure at JKS	JKS yard-charging infrastructure for 10 buses	\$ 858	\$ 858												
2	ZEB Fast-charging Infrastructure at WTC	Fast-charging infrastructure at Watsonville Transit Center	\$ 1,000	\$ 1,000												
3	Roof Reconstruction, Golf Club	Reconstruct built-up roof on first-half of Maintenance Building	\$ 175	\$ 175												
4	ParaCruz Operating Facility (Mobility Management Center)	Property Acquisition, Design, Right-of-Way and construction for new ParaCruz Operating Facility	\$ 12,000	\$ 12,000												
5	Pacific Station Renovation	Renovation or mixed-use project with City	\$ 6,000	\$ 6,000												
6	ADA Access Bus Stops	Remedial ADA Access at all bus stops: pending COA and bus stop audit	\$ -	\$ -												
7	ADA Access at all Facilities	Remedial ADA Access at all facilities. Needs to be identified in future Accessibility Study	\$ -	\$ -												
8	Vernon Street Bus Stop	Move (Route 4) bus stop to lower Admin parking lot. Install base and concrete to bus stop pad and maneuvering apron. Necessary precursor to securing maintenance facility.	\$ 600	\$ 300	\$ 300											
9	Solar Panels	Energy cost reduction through installation of roof-mounted solar panels at the Judy K. Souza Operations Facility, Golf Club, and Vernon	\$ 2,000	\$ 2,000												
10	Cavallaro Transit Center roof replacement and solar panels	Shingle roof and solar panels	\$ 75	\$ 75												
11	Maintenance Facility Wing 2 (to accommodate articulated buses)	Property Acquisition (including 1231 River St), Design, Right-of-Way and Construction for second wing of Maintenance Facility	\$ 15,850											\$ 15,850		
12	Soquel/Freedom Traffic Signal Priority/Pre-Emption for Buses	Enable coach operators to actuate traffic signals to prolong green or change red lights to improve transit running time	\$ 2,000	\$ 2,000										\$ 2,000		
13	Watsonville Park and Ride Lot	South County P&R to support Hwy 1 commuters (200 spaces)	\$ 10,000	\$ 10,000										\$ 10,000		
14	Cavallaro Transit Center Parking Structure	3-Story Parking Structure to support Hwy 17 Express commuters and City activities	\$ 26,400	\$ 26,400										\$ 26,400		



# Attachment D

UNFUNDED CAPITAL PROJECTS (000s)											
Construction		20	21	22	23	24	25	26	27	28	29
#	Project	Description	Cost (000s)								
15	Remove Diesel Tank	Remove tank after replacement of last diesel bus fleet. On hold, as more diesel buses may be added to the fleet.	\$ 50							\$ 50	
16	South County Ops. & Maint. Facility	Auxiliary Operating (including ParaCruz) & Maintenance Facility in Watsonville.	\$ 50,000								\$ 50,000
17	New Watsonville Transit Center	Replacement of current transit center	\$ 25,000								\$ 25,000
		<b>Unfunded Capital Costs thru 2029</b>	<b>\$152,008</b>	<b>\$ 1,858</b>	<b>\$ 20,475</b>	<b>\$ 375</b>	<b>\$ -</b>	<b>\$ 54,250</b>	<b>\$ -</b>	<b>\$ 50</b>	<b>\$ 75,000</b>
		Unfunded Capital Costs thru 2024	\$ 22,708								

UNFUNDED CAPITAL PROJECTS (000s)												
Vehicle SGR		18	19	20	21	22	23	24	25	26	27	28
#	Project	Description	Cost (000s)									
1	Bus Replacements 2022	Replace (1) bus	\$ 700									
2	ParaCruz Replacements	3 new vehicles per year FY21-29	\$ 2,635	\$ 340	\$ 255	\$ 255	\$ 255	\$ 255	\$ 255	\$ 255	\$ 255	\$ 255
3	Bus Replacements 2023		\$ -									
4	Bus Replacements 2024	Bus Replacements Replace (16) buses	\$ 11,200				\$ 11,200					
5	Bus Replacements 2025	Bus Replacements Replace (6) buses (incl 4 artics)	\$ 4,200					\$ 4,200				
6	Bus Replacements 2026	Bus Replacements Replace (25) buses (incl 5 ZEB)	\$ 19,000						\$ 19,000			
7	Bus Replacements 2027	Bus Replacements Replace (3) buses (1 ZEB; 2CNG)	\$ 2,400							\$ 2,400		
8	Bus Replacements 2028	Bus Replacements Replace (4) buses (1 ZEB; 3 CNG)	\$ 3,100								\$ 3,100	
9	Bus Replacements 2029	Bus Replacements Replace (3) buses (3 ZEB)	\$ 3,000									\$ 3,000
10	Non-revenue Vehicle Replacements	Non-revenue trucks and cars	\$ -									
		<b>Unfunded Capital Costs thru 2029</b>	<b>\$ 46,235</b>	<b>\$ 340</b>	<b>\$ 255</b>	<b>\$ 955</b>	<b>\$ 11,455</b>	<b>\$ 4,455</b>	<b>\$ 19,255</b>	<b>\$ 2,655</b>	<b>\$ 3,355</b>	<b>\$ 3,255</b>
		Rolling Stock Replacements	\$ 46,235	\$ 340	\$ 255	\$ 955	\$ 11,455	\$ 4,455	\$ 19,255	\$ 2,655	\$ 3,355	\$ 3,255
		Unfunded Capital Costs thru 2024	\$ 13,260									

UNFUNDED CAPITAL PROJECTS (000s)

Facilities Maintenance		20	21	22	23	24	25	26	27	28	29	30
#	Project	Description	Cost (000s)									
1	Gate Control - bus entries at JKS	Security gates and gate controller for upper entry to bus yard	\$ 100	\$ 100								
2	Scissor Lift		\$ 20	\$ 20								
3	Capital upgrade of existing transit facilities	Capital upgrade of bus stops, parking lots, transit centers, buildings	\$ 750	\$ 75	\$ 75	\$ 75	\$ 75	\$ 75	\$ 75	\$ 75	\$ 75	\$ 75
4	Custodial Equipment Replacement	Vacuums, Buffers, Scrubbers	\$ 200	\$ 20	\$ 20	\$ 20	\$ 20	\$ 20	\$ 20	\$ 20	\$ 20	\$ 20
5	Landscaping/Irrigation	Re-landscape & irrigate all sites	\$ 240	\$ 30	\$ 30	\$ 30	\$ 30	\$ 30	\$ 30	\$ 30	\$ 30	\$ 30
6	Custodial Vehicles	Custodian support vehicle replacement (2 of 2)	\$ 30	\$ 30								
7	Bird Abatement	All Facilities	\$ 10	\$ 10								
8	Maintenance Facility - Replace Roof	Replace entire roof - poor construction and leaks throughout	\$ 353	\$ 353								
9	Furniture	All Facilities	\$ 150	\$ 50	\$ 50	\$ 50	\$ 50	\$ 50	\$ 50	\$ 50	\$ 50	\$ 50
10	Fueling and Wash Facility - Awning Install	Construction phase - Awning at front of fueling island	\$ 250	\$ 250								
11	Traffic/CHP Monitors at Dispatch		\$ 2	\$ 2								
12	Fuel and Wash Facility - rust removal and repaint	Remove rust and repaint bus fuel and wash facility and equipment	\$ 125	\$ 125								
13	Emergency Operations Centers	Purchase of equipment for EOC at OPS and Admin	\$ -									
14	Bus Washer	Refrub N/S Wash System purchased 2008 & upgrade water recycling system	\$ 100	\$ 100								
15	Maintenance parking lot drainage	French drain or other solution to ensure water doesn't drain to Rayne building	\$ 50	\$ 50								
16	Upgrade HVAC Systems for Vernon	Heating Ventilation Air Conditioning	\$ 50	\$ 50								
17	Administration Remodel	Office remodel of 110 Vernon St.: move/add office space and upgrade HVAC	\$ 1,000	\$ 1,000								
18	Portable Bus Lifts	1 set of 6 artic lifts, \$100k; 2 sets of 4 standard lifts, \$150k. Estimates include labor.	\$ 250	\$ 100	\$ 150							
19	Exterior/Interior Painting	Exterior: Vernon; Interior: Golf Club	\$ 245	\$ 125	\$ 120							
20	Medium Duty Trash Truck	Safer and more efficient bus stop trash cleanup	\$ 150	\$ 150								
21	Shop bay door drainage	French drain or other solution for shop bay door drainage	\$ 200	\$ 200	\$ 200							
22	Parts Washers (3)	Replace the JRI units purchased 2010	\$ 80	\$ 80	\$ 80							

# Attachment D

Facilities Maintenance		UNFUNDED CAPITAL PROJECTS (000s)												
		20	21	22	23	24	25	26	27	28	29			
#	Project	Description	Cost (000s)											
23	Parallelogram Lift Replacement		\$ 200											
24	Roof Replacement, Fueling Station	Replace Roof (20 yr replacement cycle)	\$ 150											
25	In-ground Bus Lifts	Remove and replace in-ground lifts	\$ 1,700											
		<b>Unfunded Capital Costs thru 2029</b>	<b>\$ 6,405</b>	<b>\$ 1,265</b>	<b>\$ 1,450</b>	<b>\$ 495</b>	<b>\$ 395</b>	<b>\$ 115</b>	<b>\$ 115</b>	<b>\$ 265</b>	<b>\$ 115</b>	<b>\$ 115</b>	<b>\$ 1,700</b>	<b>\$ 1,815</b>
		Unfunded Capital Costs thru 2024	\$ 3,980											

# Attachment D

		UNFUNDED CAPITAL PROJECTS (000s)											
		IT											
#	Project	Description	Cost (000s)	20	21	22	23	24	25	26	27	28	29
1	Surveillance systems on buses	Phase 2 (remaining buses). Retrofit 25 buses each in FY20 and FY21	\$ 750	\$ 375	\$ 375								
2	Bus APC	Automatic Passenger Counter (APC) systems on all METRO buses.	\$ 650	\$ 650									
3	Backup (to Kite Hill) Repeater Site	2-way Radio Equipment to allow JKS to function as an emergency radio repeater site	\$ 25	\$ 25									
4	Eligibility Coordinator ID Card Printer		\$ 6	\$ 6									
5	Financial Management Software	Financial, Payroll, Timekeeping Software. \$30k (in FY19) is for consultant to draft scope; \$125k for 1st module in FY21; module 2 in FY22	\$ 250		\$ 125	\$ 125							
6	Backup system	Backup system to meet growing disaster recovery needs	\$ 20			\$ 20							
7	Account-based Fare Collection Upgrade	Account-based fare collection upgrade to replace GFI system (excluding fareboxes and vaults)	\$ 1,500			\$ 1,500							
8	MaintStar Expansion Software and Mobile Equipment	Asset and Maintenance Managing software and equipment with onsite training and installation. Work field orders.	\$ 150			\$ 150							
9	ITS	Public WiFi equipment on all facilities and routes beginning w/UCSCs and Express buses. Bus AVL implementation may negate the need for this.	\$ 1,000			\$ 1,000							
10	Camera security system for ParaCruz facility	Camera security system for ParaCruz facility	\$ 150			\$ 150							
11	ParaCruz MDC replacements	ParaCruz MDC replacements. (may be replaced as part of potential Trapeze > Ecolane replacement	\$ 8			\$ 8							
12	ParaCruz Dispatching and Scheduling Software		\$ -										
13	TVMs - replacements and additional	TVM Upgrades and/or replacements	\$ 250			\$ 250							
			<b>\$ 4,759</b>	<b>\$ 1,056</b>	<b>\$ 500</b>	<b>\$ 3,203</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>
			\$ 4,759										

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# Attachment E

*Santa Cruz Metropolitan  
Transit District*



**DATE:** August 24, 2018  
**TO:** Board of Directors  
**FROM:** Barrow Emerson, Planning & Development Director  
**SUBJECT: ACCEPT AND FILE METRO PLANNING DEPARTMENT ANNUAL STATUS REPORT**

## I. RECOMMENDED ACTION

**This report is for informational purposes only. No action is required.**

## II. SUMMARY

- It has been one year since the last Santa Cruz Metropolitan Transit District (METRO) Planning Department Annual update.
- Transit industry standards suggest there is a minimum level of per trip ridership (10-15 boardings per trip), which is considered effective and not all of METRO routes achieve this level. At the same time, there are services without necessary capacity to meet demand levels comfortably.
- The METRO Planning Department has identified priorities for additional service (specific routes and increased daily span of service) when, or if, additional recurring operating funds were to become available.
- The Planning Department has established specific routes and geographic areas that will be the focus of service planning activities for the next four quarterly service changes, including consideration of limited reallocation of resources from low performing routes to ones in need of additional capacity and/or span of service.
- In addition to ongoing service modifications, the Planning Department has a number of other significant initiatives it is managing during the next fiscal year, as identified in this report.
- Staff requests the Board accept and file this Service Planning Update.

## III. DISCUSSION/BACKGROUND

### Current Route Performance

Quarterly, including on this August 24<sup>th</sup> Board meeting agenda, the Planning Department provides the Board with a ridership report, including an analysis of route performance as expressed by the average boardings per trip on each route. (See Attachment A)

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In the transit industry, a rule of thumb is that there needs to be an average of approximately 10-15 boardings per trip for a service to be considered effective, depending on the type of service (rural, local, regional, intercity). In general, most METRO routes perform well, which suggests that generally the level of service is correct, relative to demand and financial capacity to provide service.

METRO has a small number of routes that don't achieve these transit industry standards. There are also some routes that, although they have reasonable overall boardings per trip averages, have segments with extremely limited boardings, which suggest possible realignments or truncation of the route(s). Among these are:

- Routes 33 and 34, which are school oriented trips in the San Lorenzo Valley with extremely low ridership. Today's Board agenda includes an item recommending elimination of these routes due to extremely low ridership over recent years.
- Route 79, which although it has a somewhat acceptable level of boardings per trip for a local lifeline service, has a loop segment to Pajaro that has had almost no boardings. The Route 79 alignment was modified to eliminate the Pajaro loop and add service in central Watsonville starting on June 14, 2018 and ridership will be monitored closely over the coming year.

Conversely, as shown in Exhibit A, in terms of average boardings per trip, there are three non-UCSC routes (69A, 69W, 71) that have average boardings per trip of around 30, which gets close to the seated capacity of a bus.

The five UCSC oriented routes are all strong performers, with METRO and the University constantly working together to address overcrowding and route schedule issues, which are complicated as class start times change by day of the week.

Now that the performance of METRO's routes has generally stabilized, the Planning Department sees opportunities to recommend consideration of the reallocation of trips from low performers to services in need of additional capacity.

## Opportunities for Fixed-Route Service Expansion

Given METRO's limited budget growth opportunities, service enhancements are limited at this time. As part of the FY19 METRO annual budget, an additional bus operator FTE was added. However, this position, along with others, is being held in abeyance pending the outcome of Proposition 6, the November 6, 2018 ballot measure proposing repeal of SB-1. This bus operator FTE has been identified as being used to address the limited evening frequency of Route 35 in the San Lorenzo Valley area.

## Priorities for Additional Service

As is standard transit industry practice, the Planning Department maintains a prioritized list of service needs, sometimes referred to as "unmet needs", so that if at anytime there is additional recurrent operating funds available for the introduction of



# Attachment E

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additional effective service, the priorities are clear. Currently, the Planning Department sees the following needs as the most important:

- Route 35/35A evening frequency – As this San Lorenzo Valley (SLV) route alternately serves two legs beyond Boulder Creek, the limited evening frequency makes for extremely poor level of service on these legs.
- There are also areas of the County that have population densities and demographics which suggest that additional services could generate additional ridership
  1. Span of service across the system - There are routes where service starts too late in the morning or ends too early in the evening, both weekdays and weekends, to meet work trip needs, particularly for those in the service industry; these limited spans also do not meet the general mobility needs of County residents. Route 68 is a prime example of this issue with weekday service ending before 7pm and weekend service span lasting only from late morning until approximately 5pm.
  2. Frequency - The additional Bus Operator, added at the Board's direction for FY18 using Measure D funds, was used to address Route 71 weekend overcrowding and has eased overcrowding on these services. In addition to the Route 35/35A noted above, there are other routes whose lack of frequency makes spontaneous use impractical. For example, Route 3, in addition to having limited span of service, has frequency of two hours at times on weekdays and all day on weekends. Another issue is reduced evening frequency on routes such as Route 66 and 69.
- Rural routes with limited daily trips.

## Fiscal Year (FY) 2019 Service Planning Activities

As shown in the recently adopted 5-year budget, METRO has stabilized its fixed-route service level at a financially sustainable level for the near term. Within this context of limited expansion capacity, METRO will still work to improve services where possible, through re-allocation of resources from poor performing services to those in need of additional capacity, to avoid adding additional operating costs.

METRO service changes occur four times a year; through the Fall, Winter, Spring, and Summer Bids.

- Fall 2018
  - Pending Board approval of an extension of the Articulated Bus Pilot Project agenda item on today's agenda, Fall 2018 will see the return of these buses for the 2018-19 school year, which would again be funded by UCSC. There are no other significant service changes for Fall 2018 as METRO is awaiting the resolution of Proposition 6, the SB-1 repeal ballot measure.

# Attachment E

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Following are the focus areas for service planning efforts over the next year:

- Winter 2018-19
  - Pending the outcome of the public hearing on the elimination of Routes 33 and 34 on today's agenda, these services would be eliminated for the Winter service change.
  - As part of METRO's partnership with Cabrillo College, staff is working on route modifications for route(s) in Watsonville to provide service closer to the Watsonville campus for later evening classes.
- Spring/Summer 2019
  - If Proposition 6 is not successful in November 2018 and SB-1 is not repealed, METRO will look to enhance Route 35/35A evening frequency in the San Lorenzo Valley. As part of planning for this improvement, there are other issues related to San Lorenzo Valley/Scotts Valley service that staff will consider opportunities to address including:
    - Service on Scotts Valley Drive is in only one direction (outbound from Santa Cruz).
    - Opportunities related to the repopulation of the former "Borland" campus by UCSC and other increases in employment, housing, and commercial properties in the area.
- Summer/Fall 2019
  - Watsonville Circulator –METRO received a 2016 Low Carbon Transit Operations Program (LCTOP) grant from the State for an electric bus to operate as a Watsonville Circulator, intended to link common origins and destinations around Watsonville at a convenient frequency. Outreach for planning of this initiative will start soon with possible service launch in Fall 2019, pending delivery of the new electric bus.
  - The Monterey Bay Air Resources District awarded METRO with \$200,000 in funding for the initial year of operation of this service.
  - METRO has also received LCTOP grants in 2017 and 2018 for a total of almost \$620,000 allowing METRO to purchase a second electric bus for Watsonville services.

## Other Planning Department Initiatives

In addition to the basic ongoing service modifications, the Planning Department is developing the following significant planning initiatives:

# Attachment E

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- Fare Restructure – Per Board action on March 23, 2018, METRO chose to postpone continued analysis of a Fare Restructure project until the end of 2018 to see the result of the November 6, 2018 ballot measure Proposition 6, the SB-1 repeal effort, which could seriously damage METRO's financial position. Following the November 2018 election, staff will initiate a discussion with the Board related to fare structure and opportunities for fare payment technology improvements and then work with the Board Finance, Budget and Audit Standing Committee in the first quarter of 2019 to explore fare restructuring recommendations.
- On-board survey – In October 2018, METRO will be conducting an on-board survey and ridecheck, METRO's first since 2012, to enhance its understanding of our riders, their demographics, travel patterns, satisfaction with METRO services, and preferences in the use of various technologies including fare payment methods.
- Strategic Business Plan – METRO staff, with external facilitator support, will conduct a Board retreat in October to kickoff a 10-year strategic business plan process for the agency that will address issues including establishment of midterm (10 year) priorities, a review of agency missions/goals/objectives, and analysis of financial capacity, risk, and opportunities.
- Pacific Station long-term planning – METRO, in conjunction with the City of Santa Cruz, has engaged two separate consultant teams to investigate issues related to the future of Pacific Station. The two studies, a downtown transit operations analysis and a Pacific Station conceptual layout exercise, are both underway and should have results this fall, which should inform future planning for METRO's downtown transit center.
- Microtransit and Transportation Network Companies (TNC) – Many transit districts are starting to consider microtransit, a service that offers flexible routing and/or flexible scheduling of non-fixed route vehicles. Microtransit uses instant exchange of information, enabling real-time matching of demand (trip) and supply (driven vehicle), which can extend the accessibility of the transit system. Possible pick-up/drop-off stops are usually pre-defined to allow better routes' optimization. Conceptually, microtransit fits somewhere between private individual transportation (cars or taxicabs) and public mass transit (bus). Some transit agencies are developing relationships with TNCs, such as Uber and Lyft, to supplement their fixed-route and paratransit services. Staff will investigate opportunities for METRO to use these types of services and will return to the Board in 2019 with a status report.
- Hwy 1 Bus On Shoulders – Per another item on today's Board agenda, METRO, in conjunction with Monterey-Salinas Transit, has completed an initial feasibility study of Bus On Shoulders opportunities on SR 1. Going forward, METRO will coordinate with the Santa Cruz County Regional Transportation Commission (RTC) and Caltrans to attempt to institute this project in conjunction with the RTC Auxiliary Lanes project.

# Attachment E

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- Ongoing coordination with UCSC and Cabrillo – In spite of the failure of the UCSC student transportation fee ballot measure in May 2018, UCSC and METRO will extended their contractual arrangement, pending approval by the Board of another item today, for bus services through the 2018-19 school year. METRO and Cabrillo have executed a three-year (2018-19 through 2020-21 school year) contract (plus an option for two additional years) to extend the two-year initial student bus pass program. METRO will continue to coordinate with Cabrillo to provide the optimum bus service to meet student needs.
- Transportation Demand Management (TDM) – Staff is working with the City of Santa Cruz on concepts for a downtown employee bus pass as part of a TDM program.
- Marketing – Staff will promote growing initiatives, including the employer/employee commute tax benefit program.
- Unified Corridor Study – Staff will continue to participate in this critically important planning analysis, led by the RTC, on the future transportation uses of State Route 1, the Soquel/Freedom corridor, and the rail right-of-way.
- Automatic Vehicle Location (AVL) and Automatic Passenger Counter(APC) – METRO has received grant funding from the State of California to implement an AVL system. The Planning and Information Technology (IT) Departments will coordinate to introduce this technology to improve operational efficiency, data gathering and analysis, and provide a customer facing Predictive Arrival and Departure System (PADS).

## IV. FINANCIAL CONSIDERATIONS/IMPACT

There is no financial impact related to this status report

## V. ALTERNATIVES CONSIDERED

There are no alternatives to consider.

## VI. ATTACHMENTS

**Attachment A:** Quarterly Average Ridership by Route

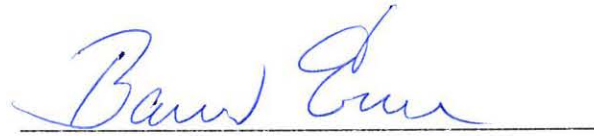
Prepared by: Barrow Emerson, Planning & Development Director

# Attachment E

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## VII. APPROVALS

Barrow Emerson,  
Planning and Development Director



A handwritten signature in blue ink, appearing to read "Barrow Emerson", is written over a horizontal line.

Approved as to fiscal impact:  
Angela Aitken, CFO



A handwritten signature in blue ink, reading "okay for AA", is written over a horizontal line.

Alex Clifford, CEO/General Manager



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# Attachment E

## Quarterly Average Ridership by Route Report

April 1, 2018 - June 30, 2018		Average Weekday Ridership per Trip				Average Weekend Ridership per Trip					
Route	Corridor	Riders	UCSC Riders	Cabrillo Riders	Discount Fares and Passes	Regular Passes	Riders	UCSC Riders	Cabrillo Riders	Discount Fares and Passes	Regular Passes
<b>UCSC</b>											
10	UCSC via High St.	49	47	0	1	1	54	50	0	2	1
15	UCSC via Laurel West	60	57	0	1	1					
16	UCSC via Laurel East	63	60	0	1	1	75	70	0	1	1
16ST	UCSC via Laurel East Supp.						80	77	0	1	1
19	UCSC via Lower Bay	52	48	0	2	1	61	56	0	2	1
20	UCSC via West Side	55	47	1	2	3	68	61	1	2	2
20D	UCSC via West Side Supp.	40	39	0	0	0					
22	UCSC/Coastal Science Campus	41	41	0	0	0					
<b>Intercity</b>											
35/35A	Santa Cruz/Scotts Valley/SLV	16	1	1	4	5	21	1	1	6	5
69A	Capitola Road/Watsonville	28	2	2	9	5	24	2	1	7	3
69W	Cap. Road/Cabrillo/Watsonville	30	2	6	7	5	26	2	2	7	4
71	Santa Cruz to Watsonville	30	2	5	8	6	26	1	2	8	4
91X	Santa Cruz/Watsonville Express	16	1	7	3	2					
<b>Rural</b>											
33	Lompico SLV/Felton Faire	6	0	0	0	4					
34	South Felton	1	0	0	0	0					
40	Davenport/North Coast	20	0	0	2	8					
41	Bonny Doon	11	3	1	1	2					
42	Davenport/Bonny Doon	15	3	1	2	3	14	2	1	4	2
<b>Local</b>											
3	Mission/Beach	10	2	1	3	2	10	4	0	3	1
4	Harvey West/Emeline	17	1	1	8	5					
55	Rio Del Mar	14	0	6	4	2	9	0	1	4	2
66	Live Oak via 17th	15	2	1	4	3	13	2	1	5	2
68	Like Oak via Broadway/Portola	13	2	1	4	2	11	2	1	4	1
72	Watsonville Hospital/Pinto Lake	15	0	1	5	2	9	0	0	4	1
74S	PVHS/Watsonville Hospital	15	0	0	1	2					
75	Green Valley Road	17	0	1	7	2	15	0	1	7	2
79	Pajaro/East Lake	6	0	1	2	1	5	0	0	2	1
<b>Highway 17</b>											
Hwy 17	Hwy 17 Express	16	-	-	1	6	22	-	-	2	2
<b>System-wide Avg. Riders per Trip</b>		<b>25</b>	<b>13</b>	<b>1</b>	<b>3</b>	<b>3</b>	<b>30</b>	<b>18</b>	<b>1</b>	<b>4</b>	<b>2</b>

25 Calendar School Days of SJU  
 40 Calendar School Days of Cabrillo  
 53 Calendar School Days of UCSC

# Attachment F

## Headway Standard

Routes	Weekday Peak	Weekday Base	Weekday Night	Weekend
Rural	30	60	90	30
Intercity	15	30	60	60
Local	60	60	60	60
UCSC	10	30	30	30
Highway 17 Express	20	60	60	60

Note: Peak hours are 7:00am - 9:00am and 2:00pm - 7:00pm.  
Night service hours are 8:00pm - 12:00am. Not all routes in a route group will operate at all times of a day

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**DATE:** June 14, 2019  
**TO:** Capital Projects Standing Committee  
**FROM:** Barrow Emerson, Planning & Development Director  
**SUBJECT: ANNUAL PROGRESS IN THE EVOLUTION OF THE FLEET TO ZERO EMISSIONS BUSES**

## **I. RECOMMENDED ACTION**

**That the Capital Projects Standing Committee receive and refer to the full Board a presentation on the progress in the evolution of the fleet to zero emission buses (ZEBs), including:**

- A) METRO's road map for implementation of a ZEB charging infrastructure; and,**
- B) The calendar year 2019 ZEB infrastructure-related grant application strategy.**

## **II. SUMMARY**

- At its September 25, 2015 meeting, the Santa Cruz Metropolitan Transit District (METRO) Board of Directors (Board) adopted its first Electric Bus Implementation Strategy authorizing METRO to pursue grant funding to deploy electric buses.
- At its May 19, 2017 meeting, the METRO Board adopted a resolution to set a goal for achieving a fully zero-emission fleet by 2040 and to support a fleet management plan which phases out the purchase of Compressed Natural Gas (CNG) buses by 2030.
- Between 2016 and 2018 METRO received grants sufficient to fund three zero emission over-the-road coaches and four zero emission fixed route buses.
- At its April 27, 2018 meeting, the METRO Board endorsed the CEO's proposal to discontinue applying for Zero Emission Bus (ZEB) grants until battery technology and bus range improves and until METRO can gain operating and maintenance experience with the zero emission buses that will start arriving in 2020.
- Following the adoption of the California Air Resources Board (CARB) Innovative Clean Transit (ICT) Regulation in December 2018 and the award of four electric buses that will arrive in 2020, METRO has created a road map (Attachment A) for the implementation of ZEB charging infrastructure to support a phased approach to adding ZEBs to the METRO fleet.
- Based on its road map for a charging infrastructure, METRO has developed a grant application strategy (Attachment B) for calendar year 2019 for ZEB related items.
- At its April 26, 2019 meeting, the Board received a presentation on METRO's Long Range Bus Replacement Plan, which assumes the procurement of ZEBs in line with the CARB ICT Rule, with all buses purchased from 2029 on to be ZEBs.

### III. DISCUSSION/BACKGROUND

At its September 25, 2015 meeting, the Board authorized METRO to begin pursuing grant funding to deploy electric buses and adopted its first Electric Bus Implementation Strategy, which documented a favorable technological, regulatory, operating and financial environment for ZEB deployment, and proposes a timeline to implement ZEBs incrementally, beginning with the first acquisition in 2016.

Subsequent to this, METRO was awarded a 2016 Federal Transit Administration (FTA) Low-No Emissions grant for its first three electric buses for use on the Highway 17 Express service. The buses originally selected were not able to achieve “over the hill” operating requirements due to limited battery life. The FTA has given METRO permission to put these procurements on hold until 2020-21 when the market can hopefully provide a ZEB that will meet METRO’s operating requirements.

At its May 19, 2017 meeting, the Board adopted a resolution setting a goal of 2040 to attain a 100% ZEB fleet and phasing out the purchase of Compressed Natural Gas (CNG) buses after 2030. The resolution also states Board support for the FY2017 - FY2040 Fleet Management Plan (Attachment C), which outlines METRO’s detailed vehicle-specific plan for transitioning the fleet to all ZEBs.

Between 2016 and 2018, METRO was awarded state funding to procure four additional ZEBs: two through the Low Carbon Emission Operations Program (LCTOP) and two through the State Transportation Improvement Program. These Proterra ZEBs will arrive at METRO in early 2020.

As a result of the poor performance of a BYD prototype over-the-road-coach that was intended to be purchased using a 2016 federal LoNo award, at its April 27, 2018 meeting, the METRO Board endorsed the CEO’s proposal to discontinue applying for Zero Emission Bus (ZEB) grants until the battery technology and bus range improves or until CARB issues its Regulation and mandates ZEB purchases.

On December 14, 2018, CARB adopted its Innovative Clean Transit (ICT) Regulation which requires all transit agencies designated as a small transit agency to transition their bus fleet to all ZEBs beginning in 2026. Starting in 2026, small transit agencies must purchase ZEBs for 25% of all bus purchases, and 100% of all bus purchases must be ZEBs starting in 2029 (Zero Emission Buses or Battery Electric Buses).

ZEB battery capacity is not currently developed to a point where METRO can operate a ZEB all day on any of its routes. This limitation would create a costly and inefficient allocation of buses or the need to purchase and install expensive in-route (opportunity) charging infrastructure. Therefore, METRO has decided to limit additional ZEB procurements beyond its initial funded buses until such time as ZEB battery capacities meet its requirements (battery energy density), or CARB ICT mandates kick in.

The adoption of the new CARB Regulation and the imminent delivery of four ZEBs, has led to METRO creating a detailed roadmap (Attachment A) for implementation of a charging infrastructure required to support the operation of these new ZEBs in 2020.

With the charging infrastructure requirements clearly identified and existing funding allocated, METRO has also established its 2019 grant application strategy (Attachment B) to fund remaining ZEB charging infrastructure needs.

At its April 26, 2019 meeting, the Board received a presentation on METRO's Long Range Bus Replacement Plan, which assumes the procurement of ZEBs in line with the CARB ICT Regulation, with all buses purchased from 2029 on to be ZEBs.

#### **IV. FINANCIAL CONSIDERATIONS/IMPACT**

Implementation of the ZEB charging infrastructure program involves a number of facilities and a staged implementation plan. Additionally, METRO will use its FY19 LCTOP allocation of \$646,496 to fund the implementation of initial charging ports for up to ten buses at the Judy K. Souza Operations Facility (JKS). METRO will aggressively pursue appropriate grants to assist in the funding of these requirements as well as using available local funding resources, when required, to match federal and state funding programs.

#### **V. ALTERNATIVES CONSIDERED**

With the pending arrival of METRO's first electric buses in 2020, there is not an alternative to implementing a ZEB charging infrastructure. There are no recommended alternatives at this time.

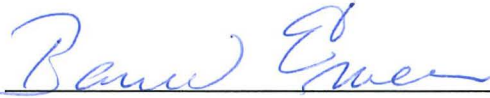
#### **VI. ATTACHMENTS**

- Attachment A:** METRO Phased Road Map to Implement a Charging Infrastructure for Electric Bus Operations
- Attachment B:** 2019 Zero-Emission Bus Infrastructure Grant Application Strategy
- Attachment C:** METRO Fleet Management Plan FY2017 – FY2040

Prepared by: Barrow Emerson, Planning and Development Director

**VII. APPROVALS**

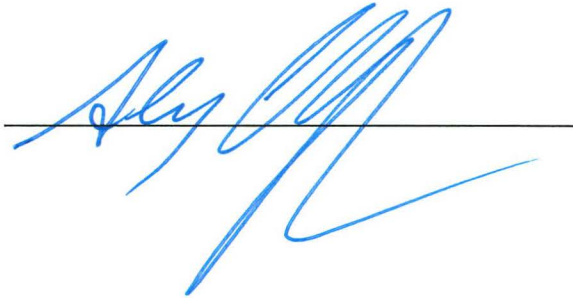
Barrow Emerson,  
Planning and Development Director



Approved as to fiscal impact:  
Angela Aitken, CFO



Alex Clifford, CEO/General Manager





# Attachment A

## Phase 2: Emergency Backup Power Generator at JKS – Schedule: TBD

Activities

Cost

- Equip/Install/Technical Specification \$500,000 (estimate)

## Phase 3: Battery Storage (real estate/equipment) at JKS – Schedule: TBD

- Research ongoing
- May not need stand-alone battery storage with Charge Point system

Activities	Cost
Right of Way	
Design	
Equipment/Install	
Construction Support	
Construction	
<b>Total cost</b>	<b>\$2,000,000 (estimate)</b>

Funding Sources:

TBD

## Phase 4: 100 buses - Charge Point Fleet-wide Charging System Canopy at JKS Schedule: TBD

- METRO requires charge management software to control bus charging and achieve the most cost efficient fueling of all of its buses
- Currently Charge Point is the only vendor who provides this; however, their software cannot control other manufacturer’s equipment, only receive its data
- Research ongoing for multi-charger manufacturer. Charge management system needed to support mixed-manufacturer bus fleet (does not exist today)
- First funding opportunity 2020 grant application cycle

Cost:

\$5,000,000 (estimate)

Funding Sources:

TBD

# Attachment A

NOTE: Large (\$9M) solar only canopy scenario unlikely because METRO's Operations facility (JKS) limited lot size would not generate enough energy per day and would impede other possible projects with a greater return on investment.

## **Phase 5: Opportunity/Fast Charging Infrastructure at Watsonville Transit Center – Schedule Fall 2020 (if awarded)**

- FTA Low-No \$1M Application submitted 5/14/19, award Late Summer 2019
  - Watsonville Transit Center - Overhead pantograph charger
  - Share with MST, San Benito?

<b>Activities</b>	<b>Cost</b>
<b>On-Route Charger and Warranty</b>	\$525,000
<b>Construction to Install On-Route Charger</b>	\$414,000
<b>Charge Management System</b>	\$6,000
<b>Project Management &amp; Technical Assistance</b>	\$55,000
<b>Total cost</b>	\$1,000,000 (estimate)

Funding Sources: Low-No Grant or METRO Reserves

## **Phase 6: Opportunity/Fast Charging Infrastructure at Pacific Station**

- Scope, Budget, Funding Source and Schedule: TBD
- Research ongoing, including consideration of new Pacific Station

Funding Sources: Electrify America?

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# Attachment B

## 2019 Zero-Emission Bus Infrastructure Grant Application Strategy

- FY19 LCTOP
  - \$646,496 allocated
  - Partially funds Phase 1 – 10-Bus Charging Station at JKS along River St.
  - Complete 12/31/19
  
- FTA 5339c (Low-No Bus Emission Program)
  - \$1 million application submitted 5/14/19
  - Fast Charger for Watsonville Transit Center
  
- Monterey Bay Air Resources District (MBARD)
  - Applications due 7/1/19
  - Application - \$300,000 for JKS yard-charging infrastructure shortfall
  
- Monterey Bay Community Power (MPCP)
  - \$200,000 available this cycle for master planning and other activities
  
- VW Settlement (one-time allocation): Charging Infrastructure
  - Notice of 2019 Program date - TBD
  - Application - \$200,000 to fund Phase Design Option 1.b Cantilevered chargers
    - No local match required
  
- Other Non-Electric Competitive Bus Program Grant Opportunities
  - FY19 FTA 5310 (Enhanced Mobility of Seniors and Individuals with Disabilities)
    - Application - 5 replacement ParaCruz vans
    - Local Match – 20%
  
  - FTA 5339b (Bus & Bus Facilities Program)
    - FY20 application - ParaCruz Facility
      - Local Match minimum (15%)
      - Charging infrastructure to support small non-revenue vehicles
  
  - Pacific Station – Possible Redevelopment
    - FY20 – FTA BUILD and/or State of California AHSC programs

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**Santa Cruz Metropolitan Transit District  
Fleet Management Plan**

**FY 2017 – FY 2040**

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**June, 2017**

## Introduction

The Fleet Management Plan schedules the logical replacement of revenue vehicles to maintain all buses in a state of good repair. The Federal Transit Administration established 14 years as the benchmark useful life for maintaining a full-size transit bus in a state of good repair. While much of METRO's fleet currently exceeds that age, the forward-looking fleet management plan attempts to schedule bus replacements within 12 to 15 years.

METRO's current fleet consists of 97, 35' and 40' diesel and CNG-fueled buses manufactured by New Flyer Industries and Orion Bus Industries plus one 24' cutaway. The average fleet age in 2017 is 12.5 years; the oldest sub fleet is 19 years, the last set of diesel buses in the yard. METRO currently has a spare ratio of 19.5%, and this long-range plan seeks to maintain a spare ratio at or below that level for the duration.

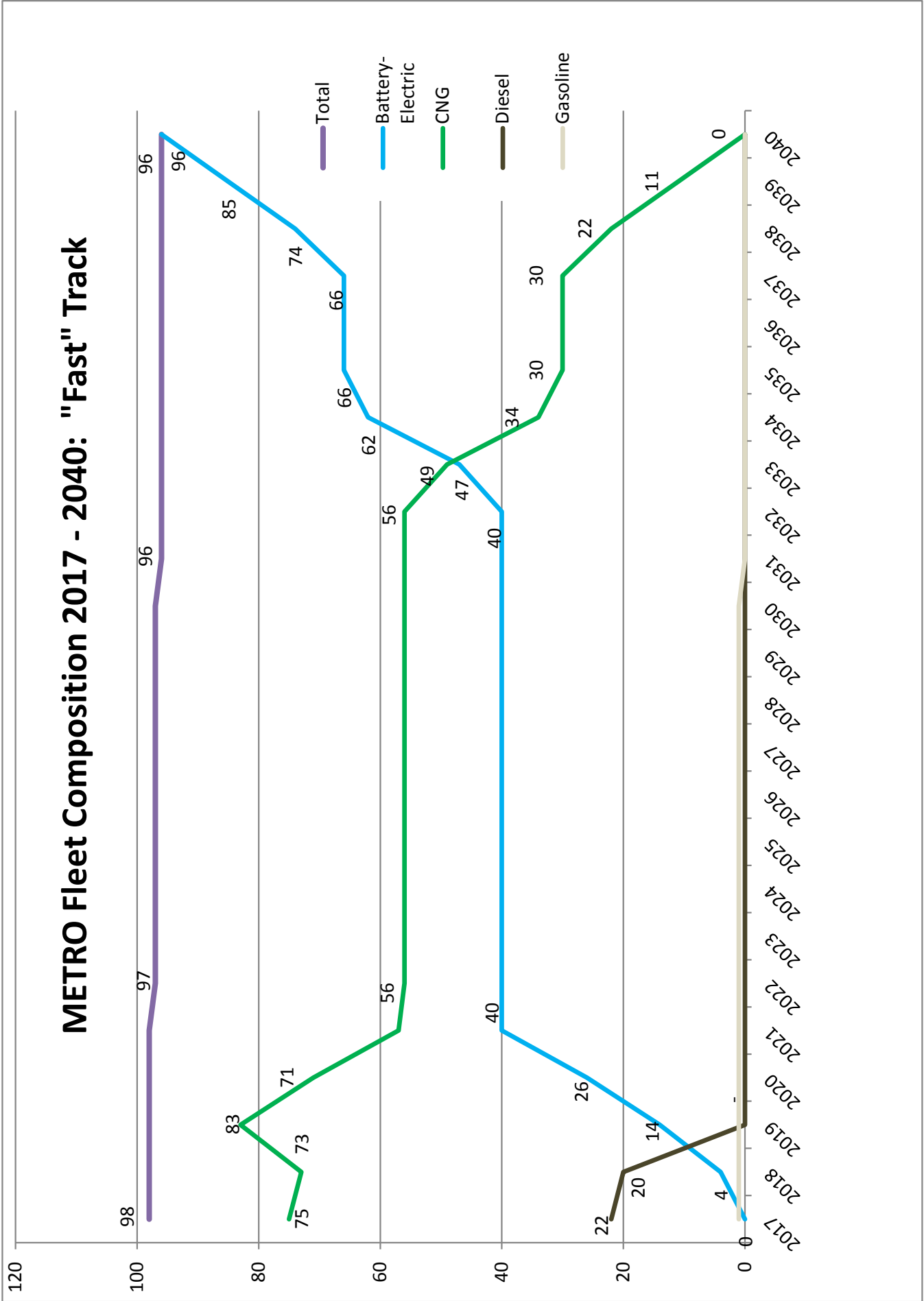
Experience with different manufacturers and different fuel types dictate when a particular sub fleet should be replaced. CNG fueled buses have not demonstrated the reliability of diesel buses, and METRO continues to maintain the diesel buses as essential spares for the CNGs. Regardless of maintenance effort, however, the diesel fleet can operate for only about three more years and will be the next sub fleet replaced.

METRO embarked upon a transition from 100% diesel to alternative fuel for its fixed-route coaches in 2002. The current fleet composition is 75 CNGs, 22 diesels, and one gasoline coach, and METRO is ready to make the next transition into zero-emission, battery-electric buses. This plan shows METRO's first four BYD battery-electric buses arriving in 2018 and then presents a "fast track" and a "slow track" fleet management strategy to reach 100% zero-emission fleet by 2040.

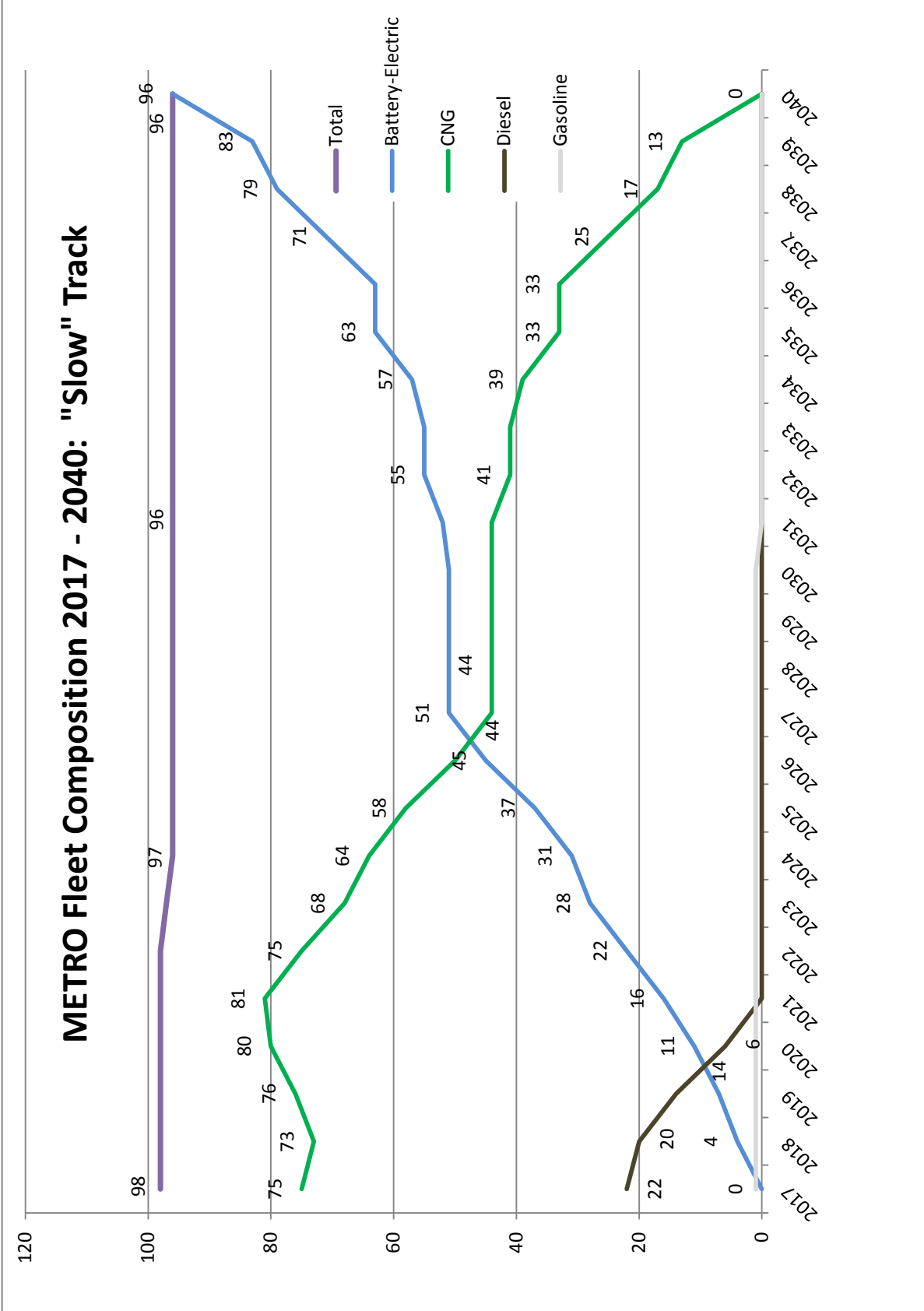
## Fleet Management Plan Contents

- METRO Fleet Composition 2017 – 2040: Fast Track and Slow Track (Line Charts)
- 2018 - 20140 Fleet Management Strategy Fast Track and Slow Track
  - Fleet Mix
  - Additions, Replacements, Disposals and Contingency Fleet by year
  - Spare Ratio by year
  - Fleet composition data table
- The Fixed-Route Vehicle Listing (June 1, 2017)
- Contingency Fleet Procedure.

### METRO Fleet Composition 2017 - 2040: "Fast" Track



**METRO Fleet Composition 2017 - 2040: "Slow" Track**



METRO Fleet Management Strategy - "Fast" Track  
2018 - 2028

Sub Fleet	6-1-17	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
1998 35' New Flyer Diesel	11	(1)	(10)									
1998 40' New Flyer Diesel	11	(1)	(10)									
2006 24' Gasoline	1		(1)									
2002 35' New Flyer diesel/CNG	15		(6)	(9)								
2002 40' New Flyer diesel/CNG	14			(10)	(4)							
2003 Orion H17 CNG	9	(3)		(2)	(4)							
2006 Orion H17 CNG.	2				(2)							
2008 New Flyer H17 CNG	5				(4)	(1)						
2008 40' New Flyer CNG	8							(8)				
2010 New Flyer H17 CNG	5									(5)		
2012 40' New Flyer CNG	11									(3)		(8)
2013 35' New Flyer CNG	6										(6)	
[2018-2030] 35' CNG	32	1	16	9							6	
[2018-2030] 40' CNG	19							8		3		8
[2018-2030] H17 CNG	5									5		
[2018-2030] 24' Gasoline	1		1									
[2018-2030] 35' Battery-Electric	0											
[2018-2030] 40' Battery-Electric	25	1	10	10	4							
[2018-2030] H17 Battery-Electric	15	3		2	10							
[2031-2040] 35' Battery-Electric	27											
[2031-2040] 40' Battery-Electric	54											
[2031-2040] H17 Battery-Electric	15											

Fleet Mix	6-1-17	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
35' count	32	32	32	32	32	32	32	32	32	32	32	32
40' count	44	44	44	44	44	44	44	44	44	44	44	44
H17 count	21	21	21	21	21	20	20	20	20	20	20	20
24' Gasoline count	1	1	1	1	1	1	1	1	1	1	1	1
<b>Active Fleet</b>	<b>98</b>	<b>98</b>	<b>98</b>	<b>98</b>	<b>98</b>	<b>97</b>	<b>97</b>	<b>97</b>	<b>97</b>	<b>97</b>	<b>97</b>	<b>97</b>
+ New		5	27	21	14	0	0	8	0	8	6	8
- Contingency	-	(4)					(4)			-	(1)	(1)
- Disposal		(1)	(27)	(21)	(14)	(1)	4	(8)	-	(8)	(5)	(7)
<b>Active Fleet</b>	<b>98</b>	<b>98</b>	<b>98</b>	<b>98</b>	<b>98</b>	<b>97</b>	<b>97</b>	<b>97</b>	<b>97</b>	<b>97</b>	<b>97</b>	<b>97</b>
Maximum Pullout	82	82	82	82	82	82	82	82	82	82	82	83
Spare Ratio	19.5%	19.5%	19.5%	19.5%	19.5%	18.3%	18.3%	18.3%	18.3%	18.3%	18.3%	16.9%
Contingency Fleet	0	4	4	4	4	4	8	8	8	8	9	10
<b>Total Fleet</b>	<b>98</b>	<b>102</b>	<b>102</b>	<b>102</b>	<b>102</b>	<b>101</b>	<b>105</b>	<b>105</b>	<b>105</b>	<b>105</b>	<b>106</b>	<b>107</b>

	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
Total	98	98	98	98	98	97	97	97	97	97	97	97
Diesel	22	20	-	-	-	-	-	-	-	-	-	-
Gasoline	1	1	1	1	1	1	1	1	1	1	1	1
CNG	75	73	83	71	57	56	56	56	56	56	56	56
Battery-Electric	0	4	14	26	40	40	40	40	40	40	40	40

METRO Fleet Management Strategy - "Fast" Track  
2029 - 2040

Sub Fleet	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040
1998 35' New Flyer Diesel												
1998 40' New Flyer Diesel												
2006 24' Gasoline												
2002 35' New Flyer diesel/CNG												
2002 40' New Flyer diesel/CNG												
2003 Orion H17 CNG												
2006 Orion H17 CNG.												
2008 New Flyer H17 CNG												
2008 40' New Flyer CNG												
2010 New Flyer H17 CNG												
2012 40' New Flyer CNG												
2013 35' New Flyer CNG												
[2018-2030] 35' CNG			-		(7)	(15)	(4)				(3)	(3)
[2018-2030] 40' CNG										(8)	(3)	(8)
[2018-2030] H17 CNG											(5)	-
[2018-2030] 24' Gasoline			(1)									
[2018-2030] 35' Battery-Electric												
[2018-2030] 40' Battery-Electric				(5)	(11)	(7)	(7)					
[2018-2030] H17 Battery-Electric							(10)					
[2031-2040] 35' Battery-Electric					7	10	4				3	3
[2031-2040] 40' Battery-Electric				5	11	12	7			8	3	8
[2031-2040] H17 Battery-Electric				-			10				5	

Fleet Mix	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040
35' count	32	32	32	32	32	27	27	27	27	27	27	27
40' count	44	44	44	44	44	49	49	49	49	49	49	49
H17 count	20	20	20	20	20	20	20	20	20	20	20	20
24' Gasoline count	1	1	0	0	0	0	0	0	0	0	0	0
<b>Active Fleet</b>	<b>97</b>	<b>97</b>	<b>96</b>	<b>96</b>	<b>96</b>	<b>96</b>	<b>96</b>	<b>96</b>	<b>96</b>	<b>96</b>	<b>96</b>	<b>96</b>
+ New	0	0	0	5	18	22	21	0	0	8	11	11
- Contingency												
- Disposal	-	-	(1)	(5)	(18)	(22)	(21)	-	-	(8)	(11)	(11)
<b>Active Fleet</b>	<b>97</b>	<b>97</b>	<b>96</b>	<b>96</b>	<b>96</b>	<b>96</b>	<b>96</b>	<b>96</b>	<b>96</b>	<b>96</b>	<b>96</b>	<b>96</b>
Maximum Pullout	83	83	83	83	83	83	83	83	83	83	83	84
Spare Ratio	16.9%	16.9%	15.7%	15.7%	15.7%	15.7%	15.7%	15.7%	15.7%	15.7%	15.7%	14.3%
Contingency Fleet	10	10	10	10	10	10	10	10	10	10	10	10
<b>Total Fleet</b>	<b>107</b>	<b>107</b>	<b>106</b>	<b>106</b>	<b>106</b>	<b>106</b>	<b>106</b>	<b>106</b>	<b>106</b>	<b>106</b>	<b>106</b>	<b>106</b>

	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040
Total	97	97	96	96	96	96	96	96	96	96	96	96
Diesel	-	-	-	-	-	-	-	-	-	-	-	-
Gasoline	1	1	0	0	0	0	0	0	0	0	0	0
CNG	56	56	56	56	49	34	30	30	30	22	11	0
Battery-Electric	40	40	40	40	47	62	66	66	66	74	85	96



METRO Fleet Management Strategy - "Slow" Track  
2018 - 2028

Sub Fleet	6-1-17	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
1998 35' New Flyer Diesel	11	(1)		(4)	(6)							
1998 40' New Flyer Diesel	11	(1)	(6)	(4)								
2006 24' Gasoline	1		(1)									
2002 35' New Flyer diesel/CNG	15				(2)	(10)	(3)					
2002 40' New Flyer diesel/CNG	14						(7)	(7)				
2003 Orion H17 CNG	9	(3)						(4)	(2)			
2006 Orion H17 CNG.	2								(2)			
2008 New Flyer H17 CNG	5								(5)			
2008 40' New Flyer CNG	8									(8)		
2010 New Flyer H17 CNG	5										(5)	
2012 40' New Flyer CNG	11											(8)
2013 35' New Flyer CNG	6										(6)	
[2018-2030] 35' CNG	20	1		4	3	4	3				5	
[2018-2030] 40' CNG	21		3					7				8
[2018-2030] H17 CNG	3								3			
[2018-2030] 24' Gasoline	1		1									
[2018-2030] 35' Battery-Electric	11				5	6						
[2018-2030] 40' Battery-Electric	22	1	3	4			6			8		
[2018-2030] H17 Battery-Electric	15	3						3	6		6	
[2031-2040] 35' Battery-Electric	32											
[2031-2040] 40' Battery-Electric	32											
[2031-2040] H17 Battery-Electric	12											

Fleet Mix	6-1-17	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
35' count	32	32	32	32	32	32	32	32	32	32	31	31
40' count	44	44	44	44	44	44	43	43	43	43	43	43
H17 count	21	21	21	21	21	21	21	20	20	20	21	21
24' Gasoline count	1	1	1	1	1	1	1	1	1	1	1	1
<b>Active Fleet</b>	<b>98</b>	<b>98</b>	<b>98</b>	<b>98</b>	<b>98</b>	<b>98</b>	<b>97</b>	<b>96</b>	<b>96</b>	<b>96</b>	<b>96</b>	<b>96</b>
+ New		5	7	8	8	10	9	10	9	8	11	8
- Contingency	-	(4)					(4)			-	(1)	(3)
- Disposal		(1)	(7)	(8)	(8)	(10)	(6)	(11)	(9)	(8)	(10)	(5)
<b>Active Fleet</b>	<b>98</b>	<b>98</b>	<b>98</b>	<b>98</b>	<b>98</b>	<b>98</b>	<b>97</b>	<b>96</b>	<b>96</b>	<b>96</b>	<b>96</b>	<b>96</b>
Maximum Pullout	82	82	82	82	82	82	82	82	82	82	82	83
Spare Ratio	19.5%	19.5%	19.5%	19.5%	19.5%	19.5%	18.3%	17.1%	17.1%	17.1%	17.1%	15.7%
Contingency Fleet	0	4	4	4	4	4	8	8	8	8	9	12
<b>Total Fleet</b>	<b>98</b>	<b>102</b>	<b>102</b>	<b>102</b>	<b>102</b>	<b>102</b>	<b>105</b>	<b>104</b>	<b>104</b>	<b>104</b>	<b>105</b>	<b>108</b>

	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
Total	98	98	98	98	98	98	97	96	96	96	96	96
Diesel	22	20	14	6	-	-	-	-	-	-	-	-
Gasoline	1	1	1	1	1	1	1	1	1	1	1	1
CNG	75	73	76	80	81	75	68	64	58	50	44	44
Battery-Electric	0	4	7	11	16	22	28	31	37	45	51	51

METRO Fleet Management Strategy - "Slow" Track  
2029 - 2040

Sub Fleet	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040
1998 35' New Flyer Diesel												
1998 40' New Flyer Diesel												
2006 24' Gasoline												
2002 35' New Flyer diesel/CNG												
2002 40' New Flyer diesel/CNG												
2003 Orion H17 CNG												
2006 Orion H17 CNG.												
2008 New Flyer H17 CNG												
2008 40' New Flyer CNG												
2010 New Flyer H17 CNG												
2012 40' New Flyer CNG	(3)											
2013 35' New Flyer CNG												
[2018-2030] 35' CNG	-		-			(2)	(6)		(8)		-	(4)
[2018-2030] 40' CNG	3			(3)						(8)	(4)	(6)
[2018-2030] H17 CNG												(3)
[2018-2030] 24' Gasoline			(1)									
[2018-2030] 35' Battery-Electric								(11)				
[2018-2030] 40' Battery-Electric					(4)	(4)			(3)	-	-	
[2018-2030] H17 Battery-Electric		(3)									(9)	
[2031-2040] 35' Battery-Electric			1			2	6	11	8		-	4
[2031-2040] 40' Battery-Electric				3	4	4	-		3	8	4	6
[2031-2040] H17 Battery-Electric		3									9	3

Fleet Mix	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040
35' count	31	31	32	32	32	32	32	32	32	32	32	32
40' count	43	43	43	43	43	43	43	43	43	43	43	43
H17 count	21	21	21	21	21	21	21	21	21	21	21	21
24' Gasoline count	1	1	0	0	0	0	0	0	0	0	0	0
<b>Active Fleet</b>	96	96	96	96	96	96	96	96	96	96	96	96
+ New	3	3	1	3	4	6	6	11	11	8	13	13
- Contingency												
- Disposal	(3)	(3)	(1)	(3)	(4)	(6)	(6)	(11)	(11)	(8)	(13)	(13)
<b>Active Fleet</b>	96	96	96	96	96	96	96	96	96	96	96	96
Maximum Pullout	83	83	83	83	83	83	83	83	83	83	83	84
Spare Ratio	15.7%	15.7%	15.7%	15.7%	15.7%	15.7%	15.7%	15.7%	15.7%	15.7%	15.7%	14.3%
Contingency Fleet	12	12	12	12	12	12	12	12	12	12	12	12
<b>Total Fleet</b>	108	108	108	108	108	108	108	108	108	108	108	108

	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040
Total	96	96	96	96	96	96	96	96	96	96	96	96
Diesel	-	-	-	-	-	-	-	-	-	-	-	-
Gasoline	1	1	0	0	0	0	0	0	0	0	0	0
CNG	44	44	44	41	41	39	33	33	25	17	13	0
Battery-Electric	51	51	52	55	55	57	63	63	71	79	83	96

**Santa Cruz METRO**  
**Fixed-Route Bus Inventory**  
**May 25, 2017**

Fleet #	Make	Model	Fuel	Age	Miles	Condition	Seats	WC
9801	NEW FLYER	1998	DIESEL	19	724,105	Poor	30	2
9804	NEW FLYER	1998	DIESEL	19	786,198	Poor	30	2
9805	NEW FLYER	1998	DIESEL	19	754,014	Poor	30	2
9806	NEW FLYER	1998	DIESEL	19	694,076	Poor	30	2
9810	NEW FLYER	1998	DIESEL	19	708,254	Poor	30	2
9811	NEW FLYER	1998	DIESEL	19	758,977	Poor	30	2
9813	NEW FLYER	1998	DIESEL	19	775,796	Poor	30	2
9815	NEW FLYER	1998	DIESEL	19	761,649	Poor	30	2
9816	NEW FLYER	1998	DIESEL	19	734,416	Poor	30	2
9817	NEW FLYER	1998	DIESEL	19	732,915	Poor	30	2
9818	NEW FLYER	1998	DIESEL	19	777,086	Poor	30	2
9819	NEW FLYER	1998	DIESEL	19	731,750	Poor	39	2
9820	NEW FLYER	1998	DIESEL	19	621,409	Poor	39	2
9821	NEW FLYER	1998	DIESEL	19	658,691	Poor	39	2
9823	NEW FLYER	1998	DIESEL	19	641,919	Poor	39	2
9824	NEW FLYER	1998	DIESEL	19	771,374	Poor	39	2
9825	NEW FLYER	1998	DIESEL	19	718,131	Poor	39	2
9826	NEW FLYER	1998	DIESEL	19	624,639	Poor	39	2
9827	NEW FLYER	1998	DIESEL	19	661,429	Poor	39	2
9828	NEW FLYER	1998	DIESEL	19	699,777	Poor	39	2
9829	NEW FLYER	1998	DIESEL	19	687,202	Poor	39	2
9830	NEW FLYER	1998	DIESEL	19	687,419	Poor	39	2
	76					714,147		
2210	NEW FLYER	2003	CNG (JD)	14	496,327	Poor	30	2
2211	NEW FLYER	2003	CNG (JD)	14	677,285	Poor	30	2
2212	NEW FLYER	2003	CNG (JD)	14	640,019	Poor	30	2
2213	NEW FLYER	2003	CNG (JD)	14	508,633	Poor	30	2
2214	NEW FLYER	2003	CNG (JD)	14	695,760	Poor	30	2
2215	NEW FLYER	2003	CNG (JD)	14	605,664	Poor	30	2
2216	NEW FLYER	2003	CNG (JD)	14	606,942	Poor	30	2
2217	NEW FLYER	2003	CNG (JD)	14	534,821	Poor	30	2
2218	NEW FLYER	2003	CNG (JD)	14	654,986	Poor	30	2
2219	NEW FLYER	2003	CNG (JD)	14	641,864	Poor	30	2
2220	NEW FLYER	2003	CNG (JD)	14	507,812	Poor	30	2
2221	NEW FLYER	2003	CNG (JD)	14	609,075	Poor	30	2
2222	NEW FLYER	2003	CNG (JD)	14	593,064	Poor	30	2
2223	NEW FLYER	2003	CNG (JD)	14	639,898	Poor	30	2
2224	NEW FLYER	2003	CNG (JD)	14	586,397	Poor	30	2
2225	NEW FLYER	2003	CNG (JD)	14	616,555	Poor	39	2
2226	NEW FLYER	2003	CNG (JD)	14	480,441	Poor	39	2
2227	NEW FLYER	2003	CNG (JD)	14	503,223	Poor	39	2
2228	NEW FLYER	2003	CNG (JD)	14	520,160	Poor	39	2
2229	NEW FLYER	2003	CNG (JD)	14	555,154	Poor	39	2
2230	NEW FLYER	2003	CNG (JD)	14	572,199	Poor	39	2
2231	NEW FLYER	2003	CNG (JD)	14	522,538	Poor	39	2
2232	NEW FLYER	2003	CNG (JD)	14	512,397	Poor	39	2
2233	NEW FLYER	2003	CNG (JD)	14	535,642	Poor	39	2
2234	NEW FLYER	2003	CNG (JD)	14	474,690	Poor	39	2
2235	NEW FLYER	2003	CNG (JD)	14	446,487	Poor	39	2
2236	NEW FLYER	2003	CNG (JD)	14	451,283	Poor	39	2
2237	NEW FLYER	2003	CNG (JD)	14	428,072	Poor	39	2
2238	NEW FLYER	2003	CNG (JD)	14	529,849	Poor	39	2

**Santa Cruz METRO  
Fixed-Route Bus Inventory  
May 25, 2017**

<b>Fleet #</b>	<b>Make</b>	<b>Model</b>	<b>Fuel</b>	<b>Age</b>	<b>Miles</b>	<b>Condition</b>	<b>Seats</b>	<b>WC</b>
2301	ORION	2003	CNG (JD)	14	629,829	Poor	43	2
2303	ORION	2003	CNG (JD)	14	510,272	Poor	43	2
2304	ORION	2003	CNG (JD)	14	573,828	Poor	43	2
2305	ORION	2003	CNG (JD)	14	570,428	Poor	43	2
2306	ORION	2003	CNG (JD)	14	565,487	Poor	43	2
2307	ORION	2003	CNG (JD)	14	540,534	Poor	43	2
2308	ORION	2003	CNG (JD)	14	460,009	Poor	43	2
2310	ORION	2003	CNG (JD)	14	511,617	Poor	43	2
2311	ORION	2003	CNG (JD)	14	461,185	Poor	43	2
2406	FORD/GOSHEN	2003	GAS	14	122,650	Poor	15	1
2601	NEW FLYER	2006	CNG (C)	11	298,254	Fair	39	2
2602	NEW FLYER	2006	CNG (C)	11	308,871	Fair	39	2
2801	NEW FLYER	2008	CNG (C)	9	336,760	Fair	36	2
2802	NEW FLYER	2008	CNG (C)	9	365,310	Fair	36	2
2803	NEW FLYER	2008	CNG (C)	9	367,475	Fair	36	2
2804	NEW FLYER	2008	CNG (C)	9	361,168	Fair	36	2
2805	NEW FLYER	2008	CNG (C)	9	390,552	Fair	36	2
2806	NEW FLYER	2008	CNG (C)	9	316,598	Fair	39	2
2807	NEW FLYER	2008	CNG (C)	9	262,768	Fair	39	2
2808	NEW FLYER	2008	CNG (C)	9	351,736	Fair	39	2
2809	NEW FLYER	2008	CNG (C)	9	311,230	Fair	39	2
2810	NEW FLYER	2008	CNG (C)	9	361,576	Fair	39	2
2811	NEW FLYER	2008	CNG (C)	9	285,990	Fair	39	2
2812	NEW FLYER	2008	CNG (C)	9	326,338	Fair	39	2
2813	NEW FLYER	2008	CNG (C)	9	299,205	Fair	39	2
1001	NEW FLYER	2010	CNG (C)	7	343,183	Excellent	39	2
1002	NEW FLYER	2010	CNG (C)	7	359,360	Excellent	39	2
1003	NEW FLYER	2010	CNG (C)	7	316,049	Excellent	39	2
1004	NEW FLYER	2010	CNG (C)	7	335,250	Excellent	39	2
1005	NEW FLYER	2010	CNG (C)	7	335,486	Excellent	39	2
1201	NEW FLYER	2011	CNG (C)	6	264,597	Excellent	39	2
1202	NEW FLYER	2011	CNG (C)	6	232,350	Excellent	39	2
1203	NEW FLYER	2011	CNG (C)	6	231,226	Excellent	39	2
1204	NEW FLYER	2011	CNG (C)	6	218,963	Excellent	39	2
1205	NEW FLYER	2011	CNG (C)	6	246,362	Excellent	39	2
1206	NEW FLYER	2011	CNG (C)	6	230,670	Excellent	39	2
1207	NEW FLYER	2011	CNG (C)	6	241,129	Excellent	39	2
1208	NEW FLYER	2011	CNG (C)	6	216,832	Excellent	39	2
1209	NEW FLYER	2011	CNG (C)	6	250,227	Excellent	39	2
1210	NEW FLYER	2011	CNG (C)	6	212,448	Excellent	39	2
1211	NEW FLYER	2011	CNG (C)	6	227,999	Excellent	39	2
1301	NEW FLYER	2013	CNG (C)	4	89,746	Excellent	28	2
1302	NEW FLYER	2013	CNG (C)	4	101,829	Excellent	28	2
1303	NEW FLYER	2013	CNG (C)	4	102,648	Excellent	28	2
1304	NEW FLYER	2013	CNG (C)	4	91,675	Excellent	28	2
1305	NEW FLYER	2013	CNG (C)	4	97,058	Excellent	28	2
1306	NEW FLYER	2013	CNG (C)	4	95,994	Excellent	28	2
98			Average	12.5	475,400			



Regulation #: 41-8
Effective Date: 3/4/2016
Amendment Date: 4/28/2016
Computer Title:
Pages: 2

## Contingency Fleet Procedure

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### 1.0 Purpose

The purpose of this procedure shall be to define Maintenance Department responsibilities as applicable to the storage, maintenance and management of the Contingency Fleet.

### 2.0 Procedure

As outlined by the F.T.A., the contingency fleet is made up of coaches that are over 12 years in age and/or have over 500,000 miles of service. The contingency fleet will be as follows: contingency buses will be kept in safe, reliable operating condition, needing only minor interior cleaning. Use of the contingency fleet is outlined below.

- 2.1 Emergency service during natural or man-made disasters.
- 2.2 Service during fuel shortage situations resulting in sudden and unusual increases in demand.
- 2.3 Provision of temporary additions to existing service, to compensate to unplanned service increases and for procurement lead times.
- 2.4 Short-term replacements for active buses when they are taken out of service for major repair or modification campaigns.
- 2.5 Testing of new service without the need to initially procure new equipment.

### 3.0 Maintenance of Contingency Vehicles

When contingency buses are assigned for one of the above reasons, Fleet will perform all required maintenance on these vehicles. When buses are assigned to the contingency fleet, maintenance will be coordinated through fleet maintenance day shifts. Maintenance will coordinate inspections of the ready buses monthly, evaluate the defects, and assign work to be performed.

Approval:	
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#### 4.0 **Ready Bus Criteria**

All ready buses in contingency fleet will be service ready within 4 hours. Each bus will have a working radio and fare box, needing only an interior wipe down, bus wash and safety inspection.

#### 5.0 **Contingency Bus Fleet and Storage**

All contingency buses will be stored at SCMTD maintenance facility at 138 Golf Club Drive Santa Cruz, CA 95060.

#### 6.0 **Introduction of Vehicles into the Contingency Fleet**

When vehicles enter the contingency fleet, preparations are made for storage. Listed below are the items to be performed.

- A. Top-off fluid levels and probe fare box
- B. Record mileage
- C. Check for open work orders
- D. Close and secure all doors and windows
- E. Cover exhaust stack
- F. Disconnect batteries

#### 7.0 **Documenting Contingency Fleet Usage**

Maintenance day shift Supervisor is responsible for maintaining an activity log of contingency bus usage. This log shall contain the following information:

- A. Current list of buses in contingency fleet
- B. Date of use
- C. Bus used
- D. Bus replaced
- E. Reason for use
- F. Mileage out and mileage in/returned to contingency status
- G. Date returned to contingency fleet

-END OF PROCEDURE-



## BEFORE THE BOARD OF DIRECTORS OF THE SANTA CRUZ METROPOLITAN TRANSIT DISTRICT

Resolution No. 17-05-02  
On the Motion of Director: John Leopold  
Duly Seconded by Director: Bruce McPherson  
The Following Resolution is Adopted:

### RESOLUTION OF THE BOARD OF DIRECTORS OF THE SANTA CRUZ METROPOLITAN TRANSIT DISTRICT MAKING A COMMITMENT TO ACHIEVE A FULLY ZERO-EMISSION BUS FLEET BY 2040

**WHEREAS**, the Governor of California enacted the Global Warming Solutions Act of 2006 (AB 32) to mandate reduction in greenhouse gas emissions (GHGs) from all economic sectors including transportation; and

**WHEREAS**, AB 32 charged the California Air Resources Board with directing implementation of the law through statewide agencies including the Environmental Protection Agency, the California Energy Commission and the California Department of Transportation, which collectively have adopted regulations governing the fueling and exhaust emissions of public transit fleets; and

**WHEREAS**, the California Air Resources Board established the California Greenhouse Gas Reduction Fund with revenue from the Cap-and-Trade program to provide financial assistance for projects that reduce GHGs, including the purchase of battery-electric buses; and

**WHEREAS**, the Federal Transit Administration established programs and financial assistance to support the early deployment of zero-emission buses, including battery-electric buses; and

**WHEREAS**, the California Air Resources Board in 2015 drafted an Advanced Clean Transit rule, which may establish targets for acquiring zero-emission buses beginning in 2018 with a goal to achieve fully zero-emission transit fleets by 2040; and

**WHEREAS**, the Santa Cruz Metropolitan Transit District needs to replace 61 diesel and CNG fueled buses and has already received funds from the state and federal Departments of Transportation to purchase battery-electric buses; and

**WHEREAS**, the Santa Cruz Metropolitan Transit District adopted an *Electric Bus Strategic Implementation Plan* in 2015 to pursue grant funding to acquire battery-electric buses; and

**WHEREAS**, in order to further the goals and strategy set forth above, staff recommends that the Board adopt a goal to achieve a fully zero-emission bus fleet by 2040 and to support a Fleet Management Plan, which phases out the purchase of CNG buses by 2030.

**NOW, THEREFORE, BE IT RESOLVED** that the Board of Directors of the Santa Cruz Metropolitan Transit District, in recognition of the need, and the financial support available, to acquire zero-emission replacement buses, hereby adopts a goal to achieve a fully zero-emission bus fleet by 2040 and to support a Fleet Management Plan, which phases out the purchase of CNG buses by 2030.

**PASSED AND ADOPTED** this 19<sup>th</sup> Day of May 2017 by the following vote:

- AYES:** Directors Bottorff, Chase, Dutra, Leopold, Lind, Mathews, McPherson, Rios, Rothwell & Rotkin
- NOES:** None
- ABSTAIN:** None
- ABSENT:** Director Hagen

Approved:  
Jimmy Dutra, Chair

Attest:  
Alex Clifford, CEO/General Manager

Approved as to form:  
Julie A. Sherman, General Counsel



VERBAL PRESENTATION ONLY

PACIFIC STATION UPDATE

Alex Clifford  
CEO/General Manager

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