

Statement of Qualifications for Professional Services: Community Planning - Public Transit Long Range and Strategic Planning

APRIL 24, 2024

For The County of Hawai'i

JARRETT WALKER + ASSOCIATES

April 24, 2024

Victor Kandle, Administrator
cc, Sarah Yeckley, Trainer
Mass Transit Agency, County of Hawai'i

Dear Victor Kandle:

We are delighted to present you with our response to the Notice of Professional Services under the category of work Community Planning (Public Transit Long Range and Strategic Planning).

Jarrett Walker + Associates was founded in 2011 by Jarrett Walker, the author of *Human Transit*, who has been a consulting expert in public transit planning and policy since 1993.

Today, JWA is a leader in transit network planning, policy development, stakeholder involvement, and expert advice. We are based in Portland, Oregon with an office in Arlington, Virginia, but we work worldwide, with experience in Europe, Australia, New Zealand, and Russia as well as across the US and Canada.

Our mission is to foster clear conversations about transit, leading to confident decisions.

At JWA, we are facilitators as well as planners. We specialize in helping communities understand transit choices and their consequences. A full JWA-led planning process integrates technical transit planning with many types of engagement and builds ideas in conversation rather than in the solitary work of experts.

Since its founding in 2011, JWA has:

- Led transit network design studies for transit agencies in more than 25 regions throughout North America and in Ireland, Iceland, New Zealand, and Russia, with numerous successful implementations. In the US we do more major network design studies than any other firm.
- Led rural transit planning for small communities in California, Arizona, Montana, Oregon and Tennessee.
- Facilitated transit conversations at the regional scale using innovative stakeholder workshops and trainings.
- Advised the San Francisco, Las Vegas, Vancouver (BC) and Oakland (CA) transit agencies on service branding.
- Provided a wide range of executive trainings, public lectures, and other events worldwide.

Jarrett Walker + Associates is a Limited Liability Corporation (C Corp) incorporated in Oregon in December 2011. As of April 2024, the firm has a staff of 17. Four of the professional staff work in our Arlington, Virginia office and the remaining staff are in Portland, Oregon. The firm is jointly owned by Jarrett Walker and seven senior employees: Michelle Poyourow, Daniel Costantino, Scudder Wagg, Evan Landman, Gavin Pritchard, Ricky Angueira and Álvaro Caviedes. There are no outside owners or investors.

Best Regards,

A handwritten signature in black ink, appearing to be 'Jarrett Walker', with a stylized flourish at the end.

Jarrett Walker
Founder & President

jarrett@jarrettwalker.com
(503) 208 4249

Staff Resumes

Jarrett Walker

Founder and Principal Consultant

JARRETT WALKER + ASSOCIATES



Jarrett Walker is an international consultant in public transport planning and policy. His clients include transit authorities, cities, developers, and non-profits – anyone who wants to make better use of public transit as a tool to support resilient communities, individual liberty, and social inclusion.

In over 30 years of transit consulting, Jarrett has worked on more than 200 public transit planning projects across North America, Europe, Australia, and New Zealand. He has led network design projects in more than 50 cities, many of which have been implemented successfully.

His expertise includes network integration, service branding, demand-responsive service, and innovative public outreach. He works at all altitudes, from visionary urbanism to operational detail.

He is also known for his work educating stakeholders about the choices that public transit requires, building clear public consultation processes, and helping organizations form coherent and implementable transit goals. In addition to his book *Human Transit*, he writes the popular blog HumanTransit.org, whose “Basics” section is a useful collection of articles explaining key concepts and issues. He is a frequent keynote speaker and commentator on public transport topics.

Education and Past Employment

He holds a Ph.D. from Stanford University (1996) and a BA from Pomona College (1984). He was previously a Partner at Nelson/Nygaard (1993-2005) and a Senior Consultant MR Cagney in Australia (2005-10). He founded Jarrett Walker & Associates in 2011. He serves as lead planner for most of the firm’s major network design projects.

Transit Network Design Studies

Jarrett has led bus network design tasks for major cities and large suburban areas. These are just some of the more recent.

- ▶ Dublin, Ireland (2017-2019)*
- ▶ San Jose, California (VTA) (2016-18)*
- ▶ Dallas (DART) (2018-22)*
- ▶ Cleveland (GCRTA) (2021)*
- ▶ Miami (MDT) (2020-21)
- ▶ Atlanta (MARTA) (2020-23, ongoing)
- ▶ Cork, Galway, and Limerick, Ireland (2020-22)
- ▶ Moscow, Russia (2016)*
- ▶ Richmond, Virginia (GRTC) (2015-2018)*
- ▶ Houston (METRO) (2013-2015)*
- ▶ Many smaller cities and rural areas.

Public Transit Network Analysis and Visioning

In addition to the implemented redesigns above, Jarrett has led the planning on many other major studies to analyze transit networks and help stakeholders understand their options.

- ▶ Chicago (CTA) (2020-22)
- ▶ Philadelphia (SEPTA) (2017)
- ▶ Reykjavik, Iceland (2016)
- ▶ Edmonton, Alberta (2013-2014)
- ▶ San Francisco (SFMTA) (2021-22)
- ▶ Portland (TriMet) (2022)

* Indicates networks that have been implemented.

Jarrett Walker

Founder and Principal Consultant

JARRETT WALKER + ASSOCIATES

Long-Range Planning

Jarrett has been the lead planner for long-range planning processes in many urban areas, including:

- ▶ Tucson, Arizona (2019-20)
- ▶ Canberra, Australia (2008)
- ▶ Wake County, North Carolina (2014-15)
- ▶ Vancouver, Canada (2005-6 and 2011)
- ▶ Indianapolis, Indiana (2013-16)

These projects have synthesized short-term political and financial challenges with the long-term challenges of growth. All have included recommendations regarding new ways for transit agencies to work together with municipalities to achieve common goals.

Public Transit Policy Development and Transit Conversations

Jarrett Walker is a recognized innovator in the area of public transit policy. His work increases the transparency of public transit, by helping stakeholders and citizens understand the real choices involved in transit planning. This high-level policy development work has been an important part of his contribution on projects in Toronto, Vancouver, Houston, and Canberra, among other cities.

Jarrett and other JWA staff have invented tools to facilitate conversations about choices and trade-offs, for use with stakeholders and decision-makers. He has also developed a process for helping transit agency Boards and committees provide clear, quantitative direction about their public transport goals, including the trade-off between ridership and coverage goals.

As Mayor, I really valued the clear thinking about transit decision-making that Jarrett brought to Edmonton City Council. His way of coaxing us out of our own received wisdom and challenging us to think more critically about the trade-offs was very helpful in raising the level of debate about our transit service. Jarrett has made many of the choices ahead a lot easier to comprehend.

Mayor Don Iveson,
City of Edmonton, Canada

Publications

Book: Human Transit: How Clearer Thinking about Public Transit Can Enrich Our Communities and Our Lives. 2011 (first edition), 2024 (revised edition).

Scholarly Papers:

- ▶ 2008 “Purpose-driven public transport: creating a clear conversation about public transport goals.” Journal of Transport Geography, 16 (6): 436-432.
- ▶ 2018 “To Predict with Confidence, Plan for Freedom,” Journal of Public Transportation, 21 (1): 119-127

Many articles on public transport topics in news publications, including the Washington Post, The Atlantic, the Sydney Morning Herald, the Atlanta Journal-Constitution, and The Times (Ireland).

Daniel Costantino

Principal Associate

JARRETT WALKER + ASSOCIATES



Daniel Costantino is a JWA principal, project manager, and transit network designer. His 15+ year career has focused on how to plan and design coherent networks that improve people's lives.

Daniel assists clients in understanding and interpreting transit system performance, redesigning transit networks, and managing the public and policy-maker conversations that are integral to the success of transit plans. His clients have included local transit agencies, city and state governments, and private companies in the US and abroad.

Daniel is a native speaker and writer of English and French. He can also read and carry out working-level conversations in Spanish.

Education

Master of Urban and Regional Planning, Portland State University, Portland, OR, 2009

Bachelor of Arts (First-Class Honours), Geography, McGill University, Montréal, QC, 2005

Positions Held

2016 – present: Senior Associate (2016-2017) and Principal Associate (2018-present)
Jarrett Walker + Associates (Portland, OR)

2010 – 2015: Planner, Ecology and Environment, Inc. (E & E)
(Portland, OR and Casablanca, Morocco)

2009 – 2010: GIS Technician, Transportation Modeling Division, Metro (Portland, OR)

2006 – 2007: Transportation Analyst, KFH Group (Bethesda, MD)

Public Transit Planning and Network Design

Daniel has worked on a variety of transit network design, planning, evaluation, and mapping efforts.

- ▶ **Dublin, Ireland (2017-2019):** Led the consultant team redesigning a bus network with over 3 million annual revenue hours of service. Led the evaluation of transit demand, needs, and network performance. Managed the redesign process and developed materials for three public consultations with 10,000+ responses each. Worked with the National Transport Authority (NTA), Dublin Bus, and local authorities. As of early 2024, five of eleven phases of the plan have been implemented, and bus patronage in 2023 was about 17% higher than in 2019.
- ▶ **Madison, WI (2020-2022):** Led the consultant team redesigning the Metro Transit network. Evaluated existing service, and developed a public conversation around contrasting network alternatives. Helped define alignments for new BRT lines. Final Plan and Title VI Service Equity Analysis based on access outcomes for marginalized populations. Final Plan unanimously adopted by City Council, and implemented in June 2023.
- ▶ **Monterey County, CA (2020-2022):** Managed the redesign of Monterey-Salinas Transit (MST)'s countywide network. Managed a team including experts on operations, paratransit, financial planning and public involvement. Evaluated existing service, developed a Draft and Final plan for three financial scenarios, and provided advice during implementation planning. Better Bus Network implemented in December 2022. MST ridership increased 10% faster than national averages from November 2022 to November 2023
- ▶ **Santa Cruz County, CA (2023-Present):** Assisting Santa Cruz METRO in a comprehensive review of their existing transit network, leading to a multi-phase bus network redesign and expansion plan. Scope includes managing multiple rounds of network design and analysis, public outreach, and conversations with the agency's Board of Directors. Phase 1 of Reimagine METRO will be fully implemented in March 2024.

Daniel Costantino

Principal Associate

JARRETT WALKER + ASSOCIATES

- ▶ Seattle, WA (2022-2023): Assisted the consultant team on whole-network electrification for King County Metro. Analyzed potential impacts of BEB electrification on the operability of planned services in 2030, and developed an approach to weigh the trade-offs of capital vs. service investments to maintain service levels.
- ▶ Anchorage, AK (2023-Present): Consultant project manager for a potential relocation of the Downtown Transit Center. Study includes assessing operational requirements, evaluating potential sites, developing draft concepts for future operations, two rounds of public outreach, and decision support for policymakers.
- ▶ Limerick, Ireland (2022-Present): Consultant project manager for BusConnects Limerick, a bus network redesign that will lead to a 70% increase in service in this city of 100,000. Led the assessment of existing conditions, managed the network design process, presented proposals to the public and policymakers.
- ▶ Tucson, AZ (2018-2020): Developed a Long-Range Regional Transit Plan. Assessed existing service, developed medium- and long-term scenarios to expand the frequent network and improve evening and weekend service. Assessed how plans would fit with BRT and streetcar projects.
- ▶ Kansas City, MO (2019-2021): Led the consultant team redesigning the RideKC network. Final plan revised with adjustments for pandemic-era service cuts in late 2020. Plan partially implemented in 2022.
- ▶ Grants Pass, OR (2016-17): Managed development of a long-range Transit Master Plan in a city of 40,000, including network design in a very constrained budgetary environment.
- ▶ Tigard, OR (2016): Examined relocation options for a suburban transit center. Developed and presented three alternatives, reconciling the requirements of future light rail, mixed-use developments, and bus connections.
- ▶ Seattle, WA (2016): Analyzed potential changes to bus service in response to conversion of the Downtown Seattle Transit Tunnel to light rail-only operations.

Stakeholder Engagement and Outreach

Daniel regularly leads and facilitates workshops engaging stakeholders and agency staff, including:

- ▶ Stakeholder Workshops and Board Meetings (2016-ongoing): Helping policy-makers and stakeholders learn the basics of transit planning and the specific challenges and solutions available for their network, as part of JWA-led planning efforts in multiple cities.
- ▶ Core Design Retreats (2016-ongoing): Leading and assisting in multi-day network design workshops with transit agencies and their key partners.

Complex Project Management

Daniel has managed multi-year projects involving complex combinations of clients, partners and subcontractors and achieved successful outcomes. Prior to his time at JWA, these included:

- ▶ Ville Verte Mohammed VI (2010-2014), and Université Mohammed VI Polytechnique (2012-2015): Managed sustainability advice and LEED ND certification for a 2,000+ acre green city plan, and assisted in advice and LEED for New Construction (LEED NC) certification of the largest building in the first development phase. Worked for a state-owned firm's sustainability division providing assistance to a Project Owner in a different division. Coordinated with separately contracted Owner's Representative to provide direction to French, Spanish and Moroccan designers.

Manuel Soto

Principal Associate

JARRETT WALKER + ASSOCIATES



Manuel is a transit planner and multimodal mobility specialist with more than 20 years of experience in route design, operations planning, and restructuring of public transit networks and campus shuttle services. He has wide ranging expertise developing transit service plans and comprehensive operational analyses, assessing performance of transit services, conducting data collection and public engagement processes, analyzing travel markets and latent demand, and evaluating equity impacts and benefits of proposed service changes.

Manuel has helped public and private sector clients across the United States with cost-efficient and effective implementation of all types of transit services including bus rapid transit, commuter express, and arterial fixed-route bus operations, as well as on-demand and flex-route shuttle services providing local circulation and first/last mile connections.

Manuel has also conducted parking and mobility plans for major employers, hospital and university campuses, mixed-used developments, and downtown districts. He has worked on the implementation of transportation demand management (TDM) programs to effect changes in travel behavior, promote use of alternative transportation modes, and reductions in vehicle trips, vehicle miles traveled, greenhouse gas emissions, and parking demand. Manuel is adept at translating strategic thinking into implementable actions and plans that deliver results.

Education

M.A. Urban Planning, University of California, Los Angeles, 2001

Urban Economics Diploma, Universidad Católica de Chile, Santiago, 1992

Architecture Degree, Universidad Católica de Chile, Santiago, 1992

Positions Held

- | | |
|-----------------|--|
| 2024 – present: | Principal Associate, Jarrett Walker + Associates (Seattle) |
| 2022 – 2024: | Principal Planner, Toole Design Group (Seattle) |
| 2017 – 2022: | Senior Consultant, Walker Consultants (Seattle) |
| 2012 – 2017: | President and Owner, Mobility and Walkability Consulting (Seattle) |
| 2007 – 2012: | Senior Associate, Nelson\Nygaard Consulting Associates (Seattle) |

Transit Network Plans

Manuel has managed and worked as lead analyst on more than a dozen transit network redesigns, working with large urban networks such as Los Angeles Metro, mid-size systems like New Orleans RTA, and small systems such as Clallam Transit; analyzing route and system performance, assessing transit markets, and redesigning networks to improve service equity, access to jobs and opportunities, and operational efficiency.

- ▶ Los Angeles, California (2001-2006)
- ▶ San Bernardino, California (2002-2003)
- ▶ Long Beach, California (2003-2004)
- ▶ Baltimore, Maryland (2005-2006)
- ▶ Kansas City, Missouri (2010-2011)
- ▶ Honolulu City/County, Hawai'i (2010-2011)
- ▶ New Orleans, Louisiana (2011-2012)
- ▶ Salem-Keizer, Oregon (2013-2014)
- ▶ Richland-Kennewick, Washington (2015- 2016)
- ▶ Port Angeles, Washington (2020-2021)

Manuel Soto

Principal Associate

JARRETT WALKER + ASSOCIATES

Transit Service Implementation

Manuel has worked in about a dozen implementations of service, leading the design of individual routes and networks and planning of service operations, but also the selection and procurement of vehicles and implementation of technology systems, such as fare collection, tracking of vehicle location and ridership activity, and user interface and information systems. Service implementations have included arterial rapid bus, commuter express, local circulation, and on-demand services, and required extensive coordination with regional transit agencies, local transit operators, public works departments and community partners.

- ▶ Metro Rapid Bus Program, Los Angeles (2001-2006)
- ▶ Microsoft's Connector Bus Program, Seattle (2007-2016)
- ▶ Columbia Gorge Express Bus, Portland (2016-2017)
- ▶ Fresno County Rural Microtransit (2018-2020)
- ▶ Monmouth-Independence Trolley (2021-present)

Shuttle and First/Last Mile Service Planning

Manuel has managed and worked as lead analyst on many shuttle-service planning and redesign projects, working for public transit agencies, downtown districts, medical centers and higher-education institutions, and Fortune 500 corporations such as Amazon, Boeing, and Nike; redesigning routes and networks to increase access to/from regional transit hubs, commuter rail and subway stations, and remote parking, but also to provide more effective circulation and internal mobility within communities lacking direct access to transit.

- ▶ Downtown Chicago Rush Hour Shuttles (2005)
- ▶ Los Angeles DOT Community DASH (2006)
- ▶ Seattle Children's Hospital (2009)
- ▶ Emory University Shuttles, Atlanta (2020)

Campus Mobility Planning

Manuel has led development of several campus mobility strategies, working with medical centers, university campuses, and large private corporations to reduce drive alone commuting and increase use of transit options and active transportation travel. Strategies have included reductions in centrally located parking, daily pricing of parking, subsidy of transit passes and bike-sharing options, and development of new bicycle infrastructure (both secured parking and protected bike lanes) and safer and more comfortable pedestrian environments.

- ▶ California-Pacific Medical Center, San Francisco (2014-2018)
- ▶ Tacoma General Hospital (2018-2020)
- ▶ University of Iowa, Iowa City (2019-2020)
- ▶ Texas A&M University (2020-2021)
- ▶ Clemson University (2020-2021)
- ▶ Whole Foods Market Global Office, Austin (2019-2020)

Leadership, Policy, and Research

Manuel is the current president of the Puget Sound Section of the American Planning Association's Washington Chapter. He has been Planning Commissioner in the City of Sammamish, WA where he lives, and Board Director of Feet First, the only advocacy organization in Washington State seeking to improve the safety of pedestrians and promoting walking as a mode of transportation. Manuel led research on the Nondriver Population for the Washington State's Legislature (2022) that demonstrated the impacts of lack of access to opportunity of nondrivers (about 1/3 of the population), because of lack of transportation options, services, and infrastructure.

Evan Landman

Principal Associate



JARRETT WALKER + ASSOCIATES

Evan Landman is a principal and project manager who fills a wide range of roles at Jarrett Walker + Associates, including managing major network design studies, leading the firm's technical development, and graphic design and cartography.

In his 10 years with JWA, Evan has led the development of all of JWA's signature spatial analysis, cartography and visualization techniques. Evan has a rare ability to turn columns of data into compelling visual and narrative explanations that help people understand how transit works and the choices it presents.

Education

Bachelor of Arts, Human Geography (Urban Studies), The University of British Columbia, 2012

Major Project Experience

Evan has been engaged in all phases of JWA's major transit planning projects, as a project manager, lead analyst, and planner. Examples include:

- ▶ Akron, OH, Akron METRO Reimagine METRO (2021 - 2023) *
- ▶ Cleveland, OH, RTA System Redesign Study (2019 - 2020)*
- ▶ Portland, OR, TriMet Comprehensive Service Analysis (Forward Together) (2021 - 2023)*
- ▶ Dublin, Ireland, BusConnects network redesign (2017 - 2019)
- ▶ Chicago, CTA Bus Vision Study (2020 - 2021)
- ▶ Vancouver, BC, TransLink Bus Improvement Plan (2017 - 2018)
- ▶ Salem-Keizer, Comprehensive System Analysis (2013-2014)
- ▶ San Jose, CA, Transit Ridership Improvement Program (2015 - 2017)
- ▶ Salt Lake City, UT, UTA Service Choices (2018 - 2020)*
- ▶ Houston, TX, METRO Transit System Reimagining (2013 - 2015)

*Project Manager

Project Management

Evan has successfully managed many projects at JWA, with a wide range of scopes. These range from highly technical studies like JWA's role on PBOT's Rose Lanes initiative in Portland, where JWA developed an innovative set of job access equity measures for a transit priority program, to more conventional network redesign studies or operational assessments for Portland's TriMet, Akron METRO, Cleveland's RTA, UTA in Salt Lake City, among others. Because Evan is both a skilled project manager and the firm's lead analyst and technical expert, he has a unique capacity to understand every part of a project from its most abstract or procedural elements to its most detailed, data-intensive pieces.

Evan Landman

Principal Associate

JARRETT WALKER + ASSOCIATES

JWA's Analysis Leader

JWA's projects rely on Evan's expertise in spatial analysis and map design. Evan has spearheaded the development of critical tools used in JWA's practice working for transit agencies and other clients, including:

- ▶ GTFS-based methods of schedule analysis used in dozens of transit network studies.
- ▶ Access and travel time analysis workflows based on OpenTripPlanner and R5 routing engines that allow direct before and after comparison of network redesign studies without the need to prepare a schedule.
- ▶ Wayfinding and cartography, including the redesign of public-facing transit maps. Evan leads JWA's wayfinding and map design practice.
- ▶ Web-based, interactive transit trip planner and travel time isochrone tools for use in transit agencies public processes.
- ▶ Numerous methods and visualizations used to understand patterns of transit ridership, speed and reliability.

Expertise at Every Step

As JWA's longest-tenured professional staff member, Evan has a unique perspective on the firm's work and ability understand and execute each step of JWA's approach to transit network design. He has played a critical role in all the firm's major projects, leads the development of JWA's analytics and data approach, has managed network design studies for a variety of agencies, and has led many workshops and presentations for client and partner agency staff, stakeholders, Board members and the public.

Proven Transit Analysis Skillset

Evan provides a diverse set of technical capabilities, including:

- ▶ All types of data analysis related to transit planning using the R programming language, including the development of internal software packages used by all JWA analysis staff. R is the data analysis programming tool of choice at JWA, and Evan leads the firm's efforts in improving R-based analysis workflows.
- ▶ Experience developing interactive data visualization dashboards using tools such as Tableau and R Shiny.
- ▶ Proven ability to design, deploy and evaluate complex surveys, including advanced capabilities like text-mining open-ended responses in large datasets.
- ▶ Deep knowledge and understanding of a variety of public and private data sources on demographics, employment, destinations, personal movement and other travel market factors

Gavin Pritchard

Senior Associate

JARRETT WALKER + ASSOCIATES



Gavin Pritchard is an urban planner, transit analyst and cartographer at Jarrett Walker + Associates. Using data analytics and visualizations, map making, and transit planning principles Gavin has assisted various transit agencies in full system redesigns.

Education

Master in Community and Regional Planning (Transportation), University of Texas: Austin, 2015

Bachelor of Science, Community Development (Housing & Land Use), Portland State University, 2010

Transit Network Redesigns

*Lead Analyst | **Deputy Project Manager

Gavin has acted as a Deputy Project Manager, Lead Analyst and Support Analyst on a number of transit network redesigns for large and small cities including:

- ▶ **Albuquerque, New Mexico (2022-present)
- ▶ Atlanta, Georgia (2022-present)
- ▶ *Akron, Ohio (2021-2023)
- ▶ *Dallas, Texas (2019-2022)
- ▶ *Salt Lake City, Utah (2018-2020)
- ▶ Miami, Florida (2018-2020)
- ▶ Eugene, Oregon (2018-2020)
- ▶ Dublin, Ireland (2017-2019)
- ▶ San Jose, California (2016-2018)
- ▶ *Anchorage, Alaska (2015-2016)
- ▶ Richmond, Virginia (2015-2018)

Long Range and Operational Transit Plans

*Lead Analyst

Gavin has contributed as Lead Analyst and Support Analyst on a number of long range transit plans including:

- ▶ Portland, Oregon (2021-present)
- ▶ San Jose, California (2020)
- ▶ Philadelphia, Pennsylvania (2017-2018)
- ▶ *Tucson, Arizona (2018-2020)
- ▶ Chicago, Illinois (2020-2022)
- ▶ *Salem and Canby, Oregon (2017-2018)

Transit Center Site Studies

*Lead Analyst | **Deputy Project Manager

Gavin, as Deputy Project Manager, Lead Analyst and Support Analyst, has supported transit center site studies looking at infrastructure and operational requirements in cities including:

- ▶ **Anchorage, Alaska (2023 - present)
- ▶ *Salem, Oregon (2021)
- ▶ *West Palm Beach, Florida (2018)
- ▶ Tigard, Oregon (2016)
- ▶ Richmond, Virginia (2015-2018)

Gavin Pritchard

Senior Associate

JARRETT WALKER + ASSOCIATES

Technical Analysis and Scheduling

Gavin has supported additional projects with specialized analysis and research, such as:

- ▶ Aided in the design options and suitability analysis for a proposed Transit Center in Tigard, OR.
- ▶ Developed conceptual bus schedules (20+ routes) for Suffolk, NY network redesign.
- ▶ Developed conceptual bus schedules and blocks for multiple alternatives as part of Transit Master Plan updates in Canby (OR), Wilsonville (OR), Josephine County (OR), and Suffolk (NY).
- ▶ Facilities and routing analysis for West Palm Beach Transit Center concepts, including site selection and operational routing alternatives.
- ▶ Assisted with market analysis for a South Salem Transit Center site selection process. (Salem, OR)
- ▶ Researched TNC, autonomous vehicles, mobile applications, and disruptive technologies for a presentation on Microtransit to the CapMetro board (Austin, TX).

Mapmaking and Wayfinding

Gavin has supported additional projects with specialized analysis and research, such as:

- ▶ Existing and conceptual transit maps for network redesigns.
- ▶ Detailed downtown routing schematics for operational and rider wayfinding.
- ▶ Maintain and update transit schedules and maps for Culver City, CA.

Stakeholder Engagement and Outreach

Gavin has assisted in facilitating stakeholder workshops, the creation of public surveys, and in the preparation of physical and digital outreach materials for public outreach.

- ▶ Provided network design training to Portland State University students.
- ▶ Assisted on multiple Core Design Retreats allowing for collaborative network design workshops with transit agencies and their local agency partners.
- ▶ Assisted with a virtual only public outreach effort for a Salem-Albany Corridor Feasibility Study. Consisting of 2 virtual public meetings and the development of an interactive Online Open House, an interactive project webpage and survey tool.
- ▶ In person outreach sessions for a Long-Range Transit Study in Tucson, AZ. Including materials development and assisting facilitation of multiple public information meetings.
- ▶ Helped to develop a public engagement plan for DART's New Network Redesign project. Developed survey and outreach materials for community outreach efforts. (Dallas, TX)

Álvaro Caviedes

Senior Associate

JARRETT WALKER + ASSOCIATES



Álvaro Caviedes is a transit planner and data analyst at Jarrett Walker + Associates. He brings experience in urban planning, social equity, statistical and spatial analysis, cartography, and research from his work in North and South America. He is also skilled at programming and automation of large analysis tasks. Álvaro holds a dual master's degree in Urban Planning and Civil Engineering. He has also helped JWA creating products and translating documents into Spanish to reach a broader audience.

Education

Master of Urban and Regional Planning, Portland State University, 2017

Master of Science, Civil Engineering, Portland State University, 2017

Bachelor of Science, Civil Engineering, Universidad de los Andes, 2012

Positions Held

2019 – present	Senior Associate, Jarrett Walker + Associates
2018	Data Analysis Intern, Puget Sound Regional Council
2017 – 2018	Consultant, Inter-American Development Bank
2014 – 2017	Research Assistant, Portland State University

Spatial and Transportation Data Analysis

Álvaro is skilled in statistical analysis, data visualization, spatial analysis, and GIS. His experience in JWA includes:

- ▶ Consultant project manager and analyst for the current Canby Transit Master Plan, Canby, Oregon.
- ▶ Assisting consultant team with service planning options for the King County Transit System Electrification Plan (2022-present).
- ▶ Assisting on the Service Planning Redesign for Santa Cruz Metro. Álvaro managed and designed the new public-facing network and route maps for Headways, METRO's schedule magazine, in preparation for the Transit Plan and service growth that was adopted and implemented in December 2023.
- ▶ In Fall 2022, JWA brought CSched to the team to bring the Phase 1 plan into reality by assisting in schedule development and developing a runcut in Hastus. In preparation for the December service change, JWA designed new public-facing network and route maps for Headways, METRO's schedule magazine. Currently, JWA and Santa Cruz Metro are working together on the Phase 2 of the redesign, focusing on service growth on high-demand routes.
- ▶ Transit network design, access analysis and cartography for the Forward Together Analysis for TriMet, in Portland, Oregon. This analysis included an evaluation of different corridor options for one of the main segments in the network in order to identify the best frequency and terminus options for accessibility to opportunities.
- ▶ Corridor analysis to compare several route options, stop spacing and frequency for the VTA service area. Álvaro evaluated access outcomes for different corridor alternatives to understand the trade-offs the agency is facing.

Álvaro Caviedes

Senior Associate

JARRETT WALKER + ASSOCIATES

- ▶ Transit network design, travel-time analysis, demand analysis (to evaluate where are people traveling from and to) and cartography for the Comprehensive Operational Analysis in Monterey-Salinas Transit (2021-2022). Álvaro facilitated community meetings and focus groups on Spanish, and translated reports and surveys for Hispanic residents in the service area. The Transit Plan was successfully adopted and implemented in 2022.
- ▶ Detailed transit performance assessment and access analyses in support of a DART New Bus Network, implemented in 2022. Currently he is co-managing a 5 and 10 year plan that would improve service in the service area. This analysis includes an evaluation of transit flexible options (GoLink) and their integration into the overall transit network. Álvaro also facilitated online community meetings in Spanish.
- ▶ Evaluation of residents' walking distances transit in Chicago, Monterey-Salinas, Portland, Akron and Madison, to identify gaps in coverage and differences in walking distance to frequent service.
- ▶ Evaluation of potential transit priority measures for the City of Portland, Oregon (2019-2020). This analysis includes the evaluation on speed improvements and how this impacts the frequency on which several routes can operate.
- ▶ In depth service analysis, job access analysis and data visualization for the Chicago Transit Authority and the Dallas Area Rapid Transit (2019-present).
- ▶ Data analysis and cartography for a transit network redesign for Miami-Dade County, and creation of public materials in Spanish (2019-2020).
- ▶ Analysis of existing transit services for Sarasota, Florida (2019).
- ▶ Assisting in the development of a displacement risk analysis for the Puget Sound Region in Washington state (2018).
- ▶ Supporting the development of policies to support accessible and equitable public transportation in Cochabamba, Bolivia, and Bogotá, Colombia (2018).
- ▶ Exploring accessibility needs and public transportation gaps for women in several cities in South America (2017).
- ▶ Collaborating in a research to identify risk factors that contribute to pedestrian and bicyclist crash severity in Oregon State Roads.

Recent Projects & Client References

List of Recent Projects

PSTA Community Bus Plan Update
(May 2023 - present)
Pinellas County, Florida

GoBORO: Greensboro's Long Range Transit Plan
(February 2023 - present)
Greensboro, North Carolina

Santa Cruz METRO - Reimagine METRO
(December 2022 - present)
Santa Cruz, California

GRTC North-South BRT (2022 - 2023)
Richmond, Virginia

Reimagine Transit Implementation Support
(June 2023 - present)
Suffolk County, New York

WATA Transit Strategic Plan (TSP)
(May 2022 - present)
Williamsburg, Virginia

TriMet 'Forward Together' Network Design
(2021 - 2023)
Portland, Oregon

CityBus Transit Maps & Schedule Maintenance
(2021 - present)
Culver City, California

Three Transit Studies for Knoxville Regional TPO
(September 2021 - December 2023)
Knoxville, Tennessee

Regional Transit Vision Plan
(July 2021 - November 2022)
Charlottesville, Virginia

San Francisco Post-Covid Network
(2021 - present)
San Francisco, California

Reimagine METRO (2021 - 2023)
Akron, Ohio

GRTC Regional Transit Plan (2020 - 2022)
Richmond, Virginia

MST Comprehensive Operational Analysis
(November 2020 - November 2022)
Monterey County, CA

South Salem Transit Center Site Selection
(2021 - 2022)
Salem, Oregon

Kingsport Transit Network Update (2020 - 2021)
Kingsport, Tennessee

Salem to Albany Corridor Feasibility Study
(2020 - 2021)
Salem, Oregon

AC Transit System Map (2016, 2020 - 2021)
Oakland, California

TriMet Limited Stop/ Express Bus Study
(2020 - 2021)
Portland, Oregon

Orange County Transit Plan Update
(March 2020 - July 2022)
Orange County, North Carolina

Multimodal Norfolk: Bus Network Redesign
(November 2019 - May 2022)
Norfolk, Virginia

Dallas Bus Network Redesign
(Redesign: 2019 - 2021, 5-Year Plan: 2021 - 2023)
Dallas, Texas

Miami-Dade County Better Bus Project
(2019 - 2020)
Miami, Florida

Reimagine The COMET (Aug 2019 - Nov 2022)
Columbia, South Carolina

Louisville Broadway Corridor Master Plan
(2019 - 2022)
Louisville, Kentucky

Client References

Josephine Community Transit Master Plan Grants Pass, Oregon

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Salem-Keizer Comprehensive System Analysis, Salem CARTS Regional Transit Service Plan, & Salem-to-Albany Corridor Feasibility Study Salem, Oregon

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Kingsport Transit Network Update Kingsport, Tennessee

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Santa Cruz METRO - Reimagine METRO Santa Cruz, California *

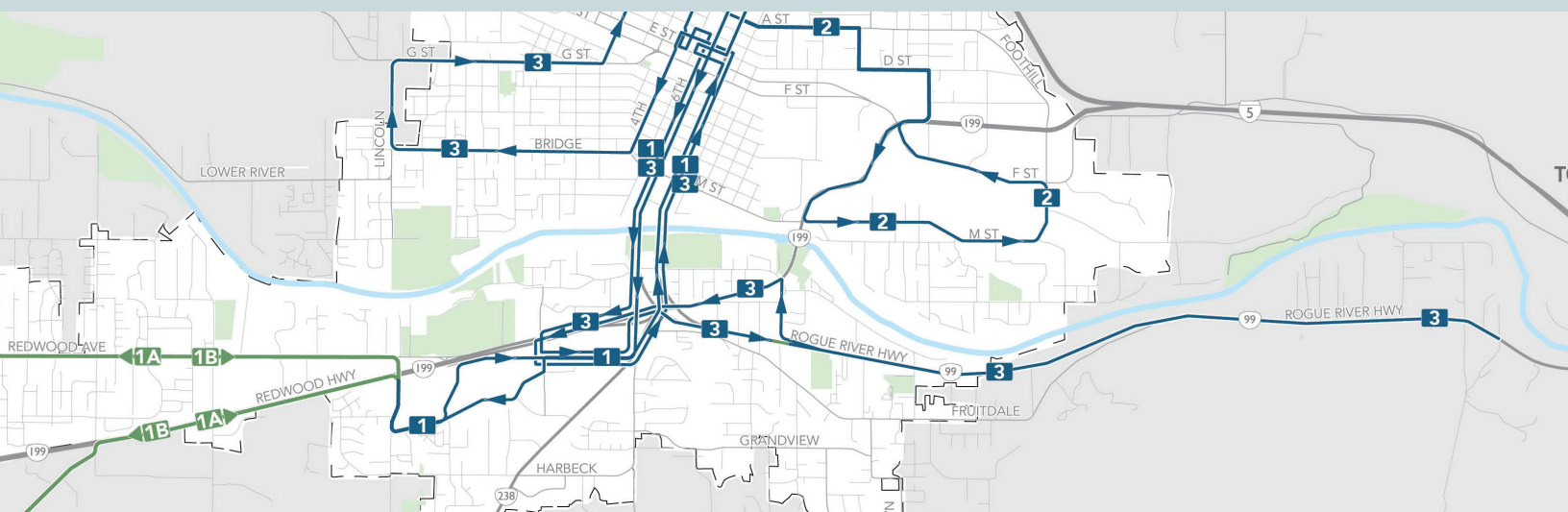
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Monmouth-Independence Trolley: Feasibility Analysis and Service Implementation Monmouth & Independence, Oregon *

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* Current client

Example Projects



Grants Pass, Oregon

Josephine Community Transit Master Plan

Josephine Community Transit (JCT) provides transit service to Grants Pass (pop. 39,000) and unincorporated Josephine County in southern Oregon. Jarrett Walker + Associates (JWA) assisted JCT in 2017 and 2018 in developing a long-range Transit Master Plan.

The Transit Master Plan was designed to help JCT decide how service should change at current resource levels, and with new funding made available by the Keep Oregon Moving legislation passed in 2017.

After reviewing existing service, demand, and available funding, JWA held a network design workshop in Grants Pass that produced contrasting alternatives for service at existing funding levels.

JWA gathered public input on these alternatives and on priorities for future investment through an online survey that garnered over 650 responses. The number of responses to this survey was greatly increased through a partnership with AllCare Health, the local Medicaid provider with over 20,000 members in Josephine County.

Survey responses revealed that the public generally valued wide coverage more than high frequencies, and that there was a strong interest in adding service on weekends, evenings and to reach more rural communities.

In response to these priorities, the Transit Master Plan includes a program of service changes in six progressive steps, to be implemented one by one as operational funds become available.

Cost

\$89,466

Dates

2016 – 2018

Key Staff

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Reference

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Salem, Oregon

Salem to Albany Corridor Feasibility Study

From 2020 to 2021, Jarrett Walker + Associates led a Corridor Feasibility Study to recommend a new transit route along the Salem to Albany, OR corridor. A long-term goal of the Salem Area Mass Transit District (Cherriots), identified this corridor in their 2016 Coordinated Plan as a high potential need for regional service.

Working with Cherriots and Albany Transit staff, along with representatives from the cities along the corridor (Salem, Albany, Jefferson, Millersburg), JWA developed two service design alternatives to help the public understand the opportunities and a trade-offs presented between a point-to-point express service and all-day intercity service designs.

This project included:

- Existing Conditions mapping and analysis to show the demographics of the service area, existing fixed-route system in Salem and Albany, and regional LEHD commute patterns.
- Presentations to and discussions with the transit boards and general public regarding existing transit conditions and potential changes
- An Online Open House and interactive project webpage helping to broaden public outreach across the full multi-city region.
- Recommended a route design which best met the publics and stakeholders needs and desires.
- A final report detailing a recommended regional route design and potential operating patterns at multiple funding levels.

JWA also worked on the Salem-Keizer Comprehensive System Analysis (2013-2014) and the Salem CARTS Regional Transit Service Plan (2015-2016).

Status

Complete

Cost

\$59,000

Dates

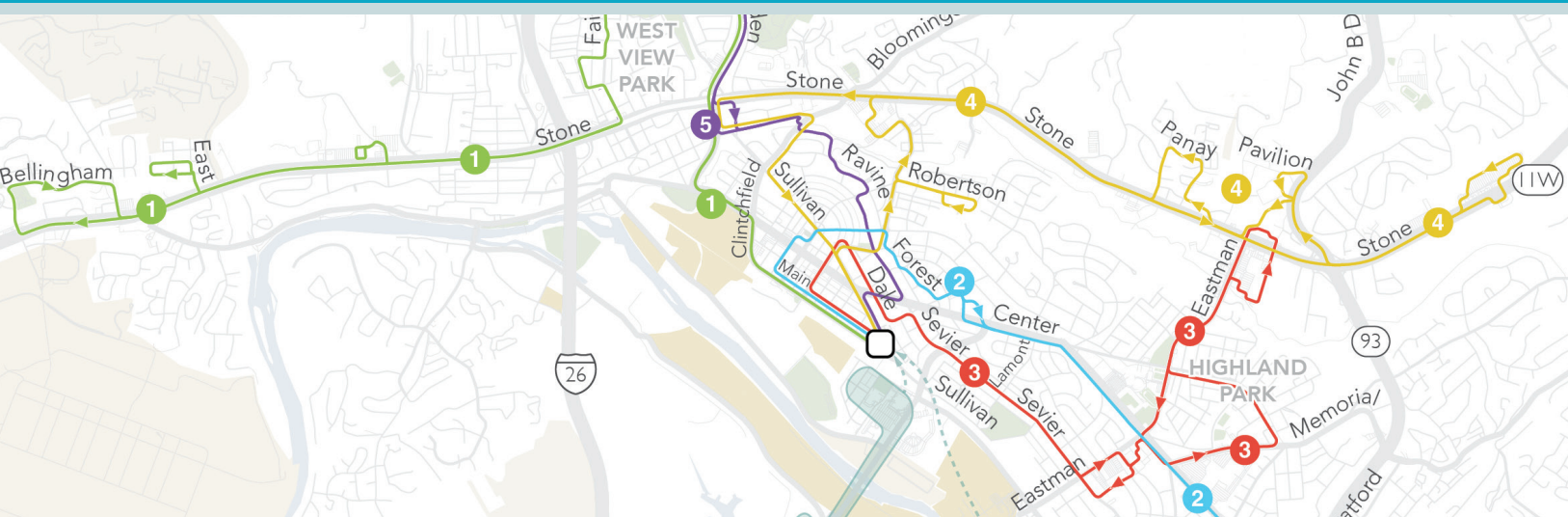
2020 - 2021

Key Staff

Michelle Poyourow, Project Manager
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Álvaro Caviedes, Analyst

Reference

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Kingsport, Tennessee

Kingsport Transit Network Update

From 2020 to 2021, Jarrett Walker + Associates led a Transit Network Update for the transit agency of Kingsport, Tennessee (KATS), which is run by the City. Kingsport is a city of 53,600 people in an area of about 54 square miles.

Together with KATS staff, JWA reviewed the existing network; discussed City's goals for transit in the coming year; and developed a proposed network consisting of five (5) fixed-route services and two demand-responsive zones. Compared to their existing network, the new network would provide more direct routes with fewer deviations while maintaining most of the current coverage.

This project included:

- Existing Conditions mapping and analysis to show the demographics of the service area and ridership patterns of the existing fixed-route system
- Presentations to and discussions with the City Council regarding transit existing conditions and potential changes
- A virtual network design workshop with KATS planners and operational staff to develop changes to the network
- Recommended demand-responsive service models
- A final report detailing the Transit Network Update and the process.

Status

Complete

Cost

\$48,548

Dates

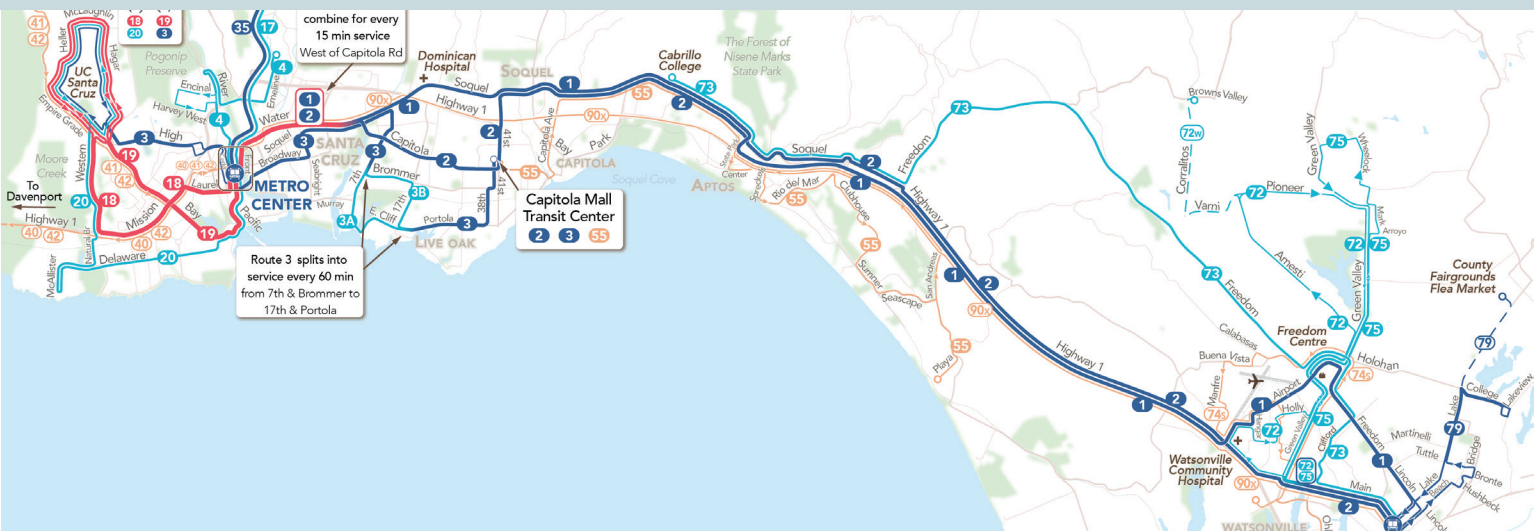
2020-2021

Key Staff

Ricky Angueira, Lead Analyst

Reference

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Santa Cruz, California

Santa Cruz METRO - Reimagine METRO

Santa Cruz County is a community of 270,000 people which includes the cities of Santa Cruz and Watsonville, as well as a 20,000-student campus of the University of California (UCSC). In late 2021, Santa Cruz METRO hired Jarrett Walker + Associates (JWA) to lead the consultant team on Reimagine METRO, a comprehensive network review.

At that time, the agency was beginning to recover from a severe staffing shortage that was preventing it from running as much service as it could afford. METRO is now on track to expand its service by about 10% in December 2023, when it will implement Phase 1 of the redesigned network. This is due to a combination of improved hiring practices, and the JWA-led team's design of a network and runcut that held weekday operator duties constant while increasing service overall.

JWA and AMMA Transit Planning utilized a blend of data-driven methods and public and stakeholder outreach to assess overarching issues with METRO service and the community's priorities for change. Outreach methods included online public surveys, focus groups with English-speaking riders, small group discussions with a wide range of stakeholder organizations, and individual conversations with Spanish-speaking riders at transit stations and on buses.

Key issues identified included the balance of local and regional needs in the Santa Cruz to Watsonville corridor, the extreme complexity and low frequencies of service in Watsonville, overcrowding on routes serving UCSC, and the decline in overall levels of service since the early 2000s. JWA and METRO jointly developed a Phase 1 Network Plan to be implemented in December 2023 that would significantly reduce rider travel times, by:

- Focusing on consistent all-day service patterns connecting many people and jobs.
- Improving the connections between cities across the County (e.g. Watsonville and Santa Cruz).
- Improving frequency of service to the UCSC campus.
- Maintaining coverage to isolated low-income areas and key public service facilities.
- Simplifying service in Watsonville.

In Fall 2022, JWA brought CSched to the team to bring the Phase 1 plan into reality by assisting in schedule development and developing a runcut in Hastus. In preparation for the December service change, JWA designed new public-facing network and route maps for Headways, METRO's schedule magazine. Currently, JWA and Santa Cruz Metro are working together on the Phase 2 of the redesign, focusing on service growth on high-demand routes.

Status

Ongoing. First phase of implementation in Dec 2023.

Cost

\$521,684 (total budget)
\$343,436 (JWA contribution)

Dates

December 2022 - present

Key Staff

Jarrett Walker, Lead Planner
Daniel Costantino, Project Manager
Álvaro Caviedes, Lead Analyst

Reference

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Monmouth & Independence, Oregon

Monmouth-Independence Trolley: Feasibility Analysis and Service Implementation

The cities of Monmouth and Independence wanted to evaluate the feasibility of starting up a new community transit connection between the two cities' downtowns. The vision of the cities was to operate the new service with battery-electric trolley vehicles, to support local mobility, spur economic development, and fill gaps in regional transit service.

Manuel Soto led the analysis of mobility needs, routing alternatives and service delivery options. The analysis included detailed assessments of potential ridership and operating costs, and identifying a funding strategy to implement the service. The cities used the transit planning study to get funding from the state and engaged Manuel Soto (while at Toole Design) to assist with planning and implementation of the trolley service. Manuel led the planning work group charged with finalizing the service concept, implementing stops, and overseeing the contracting of service operations, maintenance, and technology platforms for user interface and monitoring of service.

The trolley service started on April 2023. It operates with hybrid gas-electric trolley replica vehicles, and is available 7 days per week, from early morning to late evening, every 20 minutes. The route connects the Western Oregon University campus in Monmouth with Riverview Park in Independence, a prime public amenity in downtown Independence that overlooks the Willamette River.

In its first year of operation, the service has carried more than 110,000 passengers surpassing all performance expectations. The trolley has attracted all types of users and provided mobility benefits to women and teenagers for their trips to school and social activities. It has become an important community asset, and it has increased community pride and engagement. The pilot is demonstrating that there was a great need for a simple, direct, and easy to use transit system. However, long-term funding is uncertain. JWA is currently working with Toole Design, Monmouth, Independence, and Cherris to secure a sustainable funding mechanism to continue service.

Status

Ongoing

Cost

JWA Budget: \$30,000

Dates

April 2024 - present

Key Staff

Manuel Soto, Project Manager

Reference

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