AGENDA
Transit Committee Meeting

Committee Members
Tim Shaw, Chairman
Al Murray, Vice Chairman
Andrew Do
Steve Jones
Miguel Pulido
Tom Tait
Gregory T. Winterbottom

Orange County Transportation Authority Headquarters
550 South Main Street, Board Room – Conf. Room 07
Orange, California
Thursday, March 9, 2017 at 9:00 a.m.

Any person with a disability who requires a modification or accommodation in order to participate in this meeting should contact the OCTA Clerk of the Board, telephone (714) 560-5676, no less than two (2) business days prior to this meeting to enable OCTA to make reasonable arrangements to assure accessibility to this meeting.

Agenda descriptions are intended to give members of the public a general summary of items of business to be transacted or discussed. The posting of the recommended actions does not indicate what action will be taken. The Committee may take any action which it deems to be appropriate on the agenda item and is not limited in any way by the notice of the recommended action.

All documents relative to the items referenced in this agenda are available for public inspection at www.octa.net or through the Clerk of the Board's office at the OCTA Headquarters, 600 South Main Street, Orange, California.

Call to Order

Pledge of Allegiance
Director Do

1. Public Comments

Special Calendar

2. Statewide and Regional Transit Ridership Trends
Kurt Brotcke/Kia Mortazavi

Juan Matute, Associate Director for Research and Administration at the University of California Los Angeles, will present statewide and regional transit ridership trends.

Consent Calendar (Items 3 through 8)

All items on the Consent Calendar are to be approved in one motion unless a Committee Member or a member of the public requests separate action or discussion on a specific item.

3. Approval of Minutes

Approval of the minutes of the Transit Committee meeting of February 9, 2017.

4. Grant Award for the 2017 and 2018 Angels Express Service

Ric Teano/Lance M. Larson

Overview

On March 16, 2017, the Mobile Source Air Pollution Reduction Review Committee of the South Coast Air Quality Management District is expected to award the Orange County Transportation Authority $503,272 in grant funds to support the direct operating costs of the Angels Express service for the 2017 and 2018 baseball seasons. Authorization is requested to accept the award and execute grant-related agreements.

Recommendations

A. Authorize the Chief Executive Officer or designee to accept the grant award and execute grant-related agreements with the Mobile Source Air Pollution Reduction Review Committee to support the Angels Express service.

B. Authorize the Chief Executive Officer or designee to execute agreements with the Southern California Regional Rail Authority to provide special rail service for the Angels Express.

5. Sole Source Agreement for Warranty and Non-Warranty Cummins Engine Services

Cliff Thorne/Beth McCormick

Overview

The Orange County Transportation Authority operates a fleet of fixed-route compressed natural gas buses equipped with the Cummins 8.9 Liter ISL-G engine. With the purchase of new buses and the repowering of buses with new engines, approximately 94 percent of the engines in the fleet will be under warranty over the next five years. As a result, an agreement is needed for expenses associated with warranty and non-warranty repairs that are not to be covered such as travel time, mileage, parts, and labor. Since there is only one manufacturer with engines certified by the State of California for use in transit buses, a sole source agreement is required.

5. (Continued)

Recommendation

Authorize the Chief Executive Officer to negotiate and execute Purchase Order No. C-6-1605 between the Orange County Transportation Authority and Cummins Pacific, LLC, in the amount of $750,000, for warranty and non-warranty engine services, effective May 1, 2017 through April 30, 2022.

6. Sole Source Agreement for the Construction of a Liquid Hydrogen Fuel Station at the Santa Ana Bus Base
George Olivo/Jim Beil

Overview

The Orange County Transportation Authority has been awarded grant funds for the purchase of ten hydrogen buses, construction of a liquid hydrogen fuel station, and modifications to facilities. The grant application was submitted in partnership with the bus and hydrogen fuel station manufacturers. A sole source agreement is required for the construction of a liquid hydrogen fuel station at the Santa Ana Bus Base.

Recommendations

A. Authorize the Chief Executive Officer to negotiate and execute sole source Agreement No. C-7-1577 between the Orange County Transportation Authority and Linde LLC, in the amount of $4,777,732, for the construction of a liquid hydrogen fuel station at the Santa Ana Bus Base.

B. Amend the Orange County Transportation Authority's Fiscal Year 2016-17 Adopted Budget, in the amount of $4,777,732, to accommodate the construction of a liquid hydrogen fuel station at the Santa Ana Bus Base.

7. Agreement for Pacific Electric Right-of-Way Weed Abatement and Debris Removal Services
Gerald Ray Smith, Jr./Jim Beil

Overview

On November 8, 2016, the Orange County Transportation Authority issued an invitation for bids for a five-year contract to a qualified property maintenance contractor to provide weed abatement and debris removal services for the Pacific Electric right-of-way. Board of Directors' approval is requested for the selection of a contractor to perform the required work.

7. (Continued)

Recommendations

A. Find RPW Services, Inc., the apparent low bidder, as non-responsive for failure to execute the bid form.

B. Authorize the Chief Executive Officer to negotiate and execute Agreement No. C-6-1504 between the Orange County Transportation Authority and Pest Options, Inc., the lowest responsive, responsible bidder, in the amount of $215,830.80, for a five-year term, for the Pacific Electric right-of-way weed abatement and debris removal services.

8. Consultant Selection for Quality Assurance Management Support for the OC Streetcar Project
Mary Shavalier/Jim Beil

Overview

On November 11, 2016, the Orange County Transportation Authority issued a request for proposals for consultant services for quality assurance management support for the OC Streetcar project. Proposals were received in accordance with the Orange County Transportation Authority's procurement procedures for professional and technical services. Board of Directors' approval is requested to select the firm to perform the required services.

Recommendations

A. Approve the selection of Kal Krishnan Consulting Services, Inc., as the firm to provide quality assurance management support for the OC Streetcar project.

B. Authorize the Chief Executive Officer to negotiate and execute Agreement No. C-6-1537 between the Orange County Transportation Authority and Kal Krishnan Consulting Services, Inc., in the amount of $429,403, to provide quality assurance management support for the OC Streetcar project, from contract execution through December 31, 2020.

Regular Calendar

9. Transit Master Plan - State of OC Transit
Gary Hewitt/Kia Mortazavi

Overview

The Transit Master Plan will develop an integrated bus, rail, and paratransit plan for Orange County. This plan will identify future potential transit corridor studies and recommended changes to existing transit service. The State of OC Transit Report presents early findings and draft vision and goals for the transit system.

Recommendation

Direct staff to return to the Board of Directors in May 2017, with the draft Transit Master Plan Investment Framework.

Discussion Items

10. Orange County Transportation Authority Paratransit Services Overview
Beth McCormick

The Orange County Transportation Authority provides paratransit services for seniors and persons with disabilities. In a workshop setting, staff will present information about OCTA paratransit services as well as paratransit requirements under the Americans with Disabilities Act.

11. Chief Executive Officer's Report

12. Committee Members' Reports

13. Closed Session

There are no Closed Session items scheduled.

14. Adjournment

The next regularly scheduled meeting of this Committee will be held at **9:00 a.m. on Thursday, April 13, 2017,** at the Orange County Transportation Authority Headquarters, 550 South Main Street, Board Room - Conference Room 07, Orange, California.

STATEWIDE AND REGIONAL TRANSIT RIDERSHIP TRENDS

SCAG Public Transit Patronage Trends

9 March 2017
OCTA Transit Committee

SCAG - Southern California Association of Governments, OCTA - Orange County Transportation Authority, UCLA - University of California Los Angeles

UCLA

ITS INSTITUTE OF TRANSPORTATION STUDIES

Two Major UCLA ITS Transit Research Projects

California
STATEWIDE TRANSIT
STRATEGIC PLAN

Clients: Caltrans, CalSTA
Completion: December, 2017

SCAG™
INNOVATING FOR A BETTER TOMORROW

Public Transit Patronage Trends Study

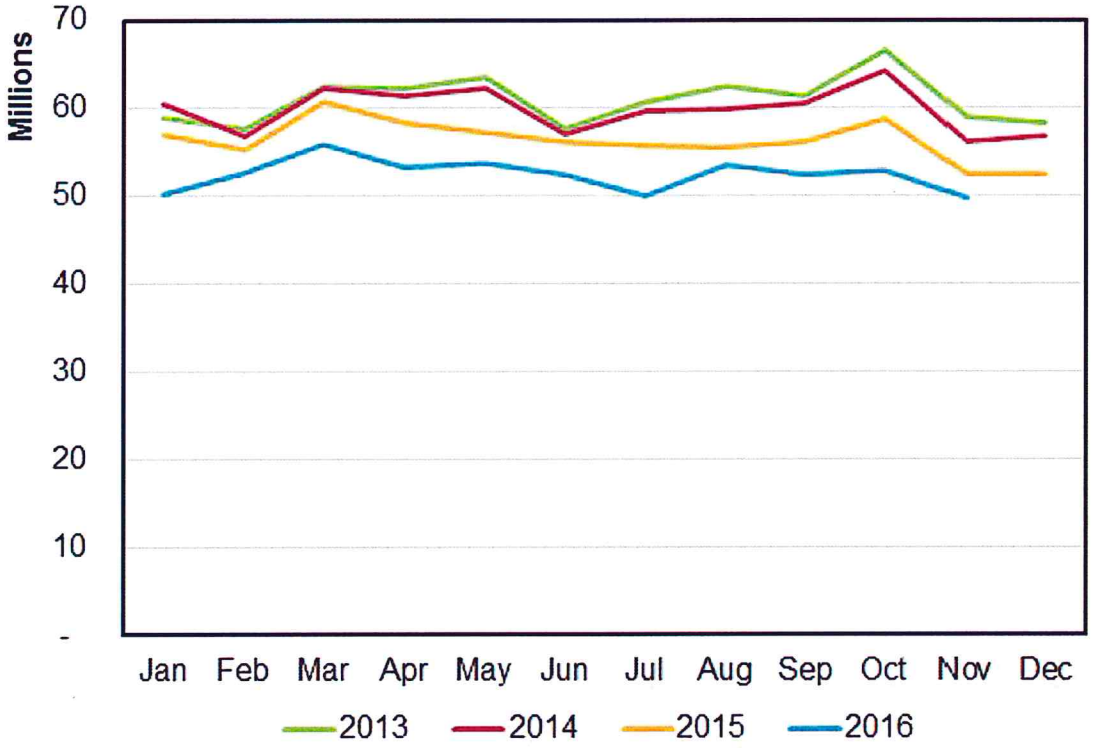
Clients: SCAG, Metro
Completion: November, 2017

Caltrans - California Department of Transportation
CalSTA - California State Transportation Agency

UCLA

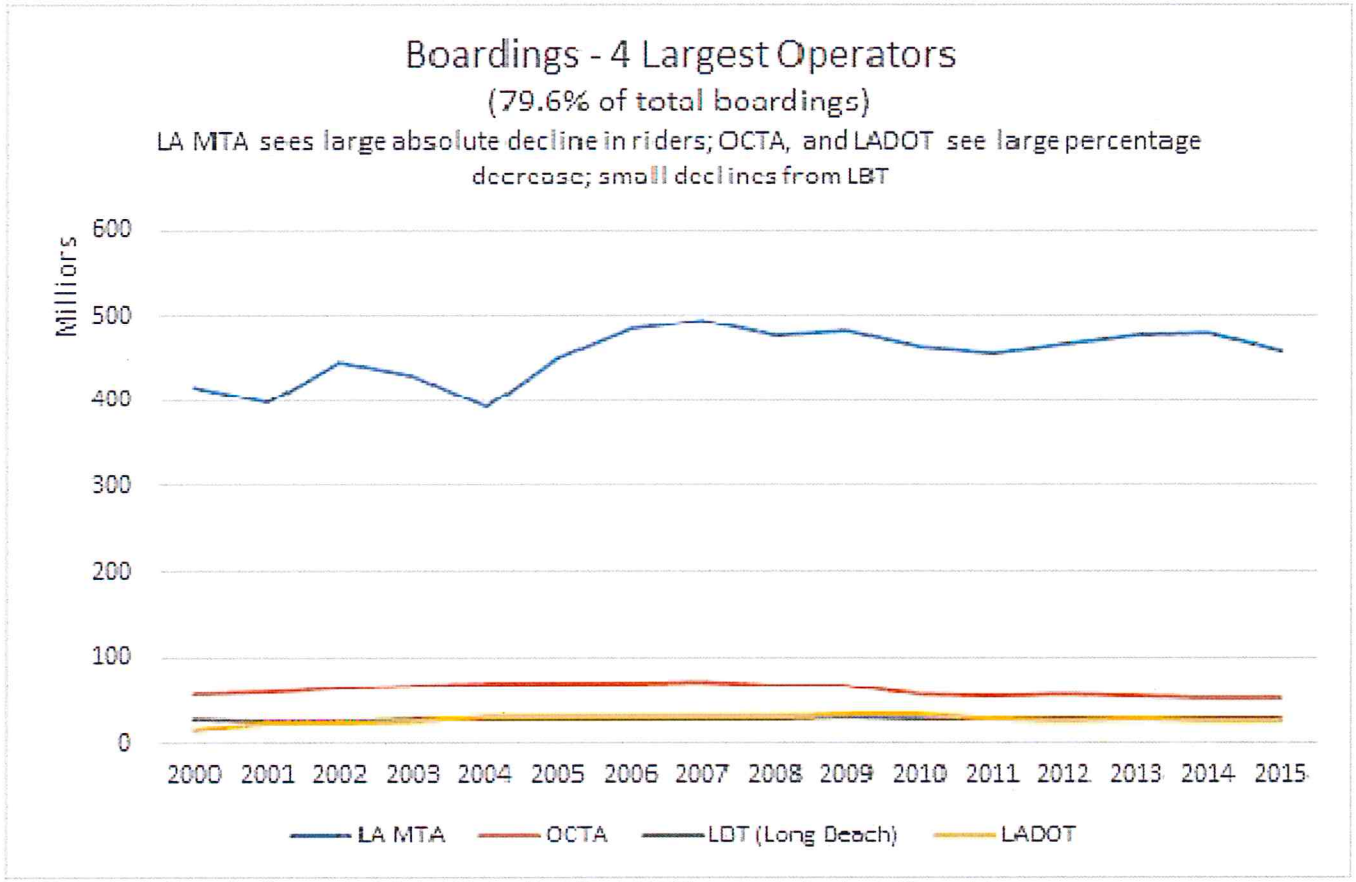
ITS
INSTITUTE OF TRANSPORTATION STUDIES

Transit boardings eroding in SCAG region in recent years

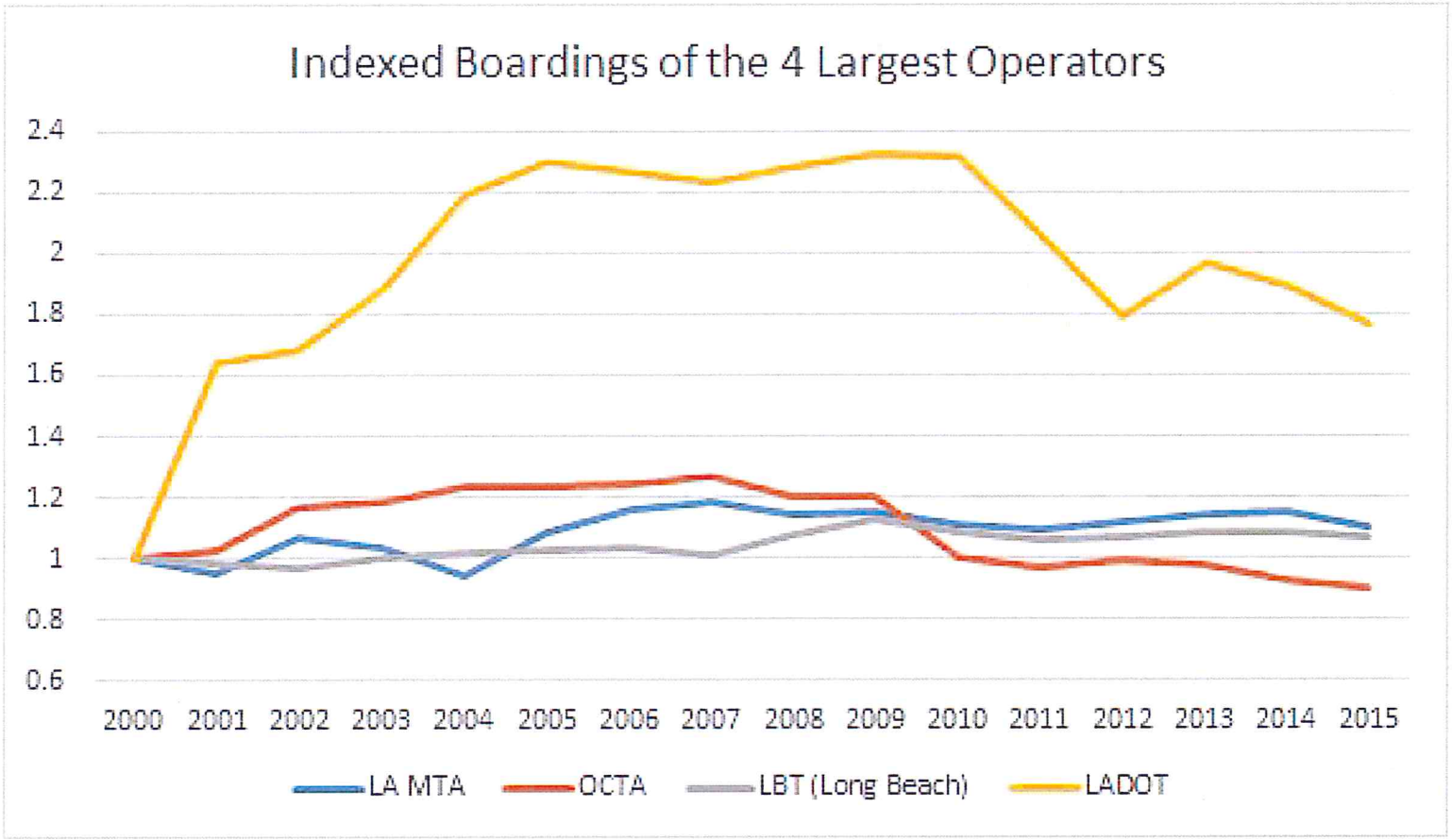


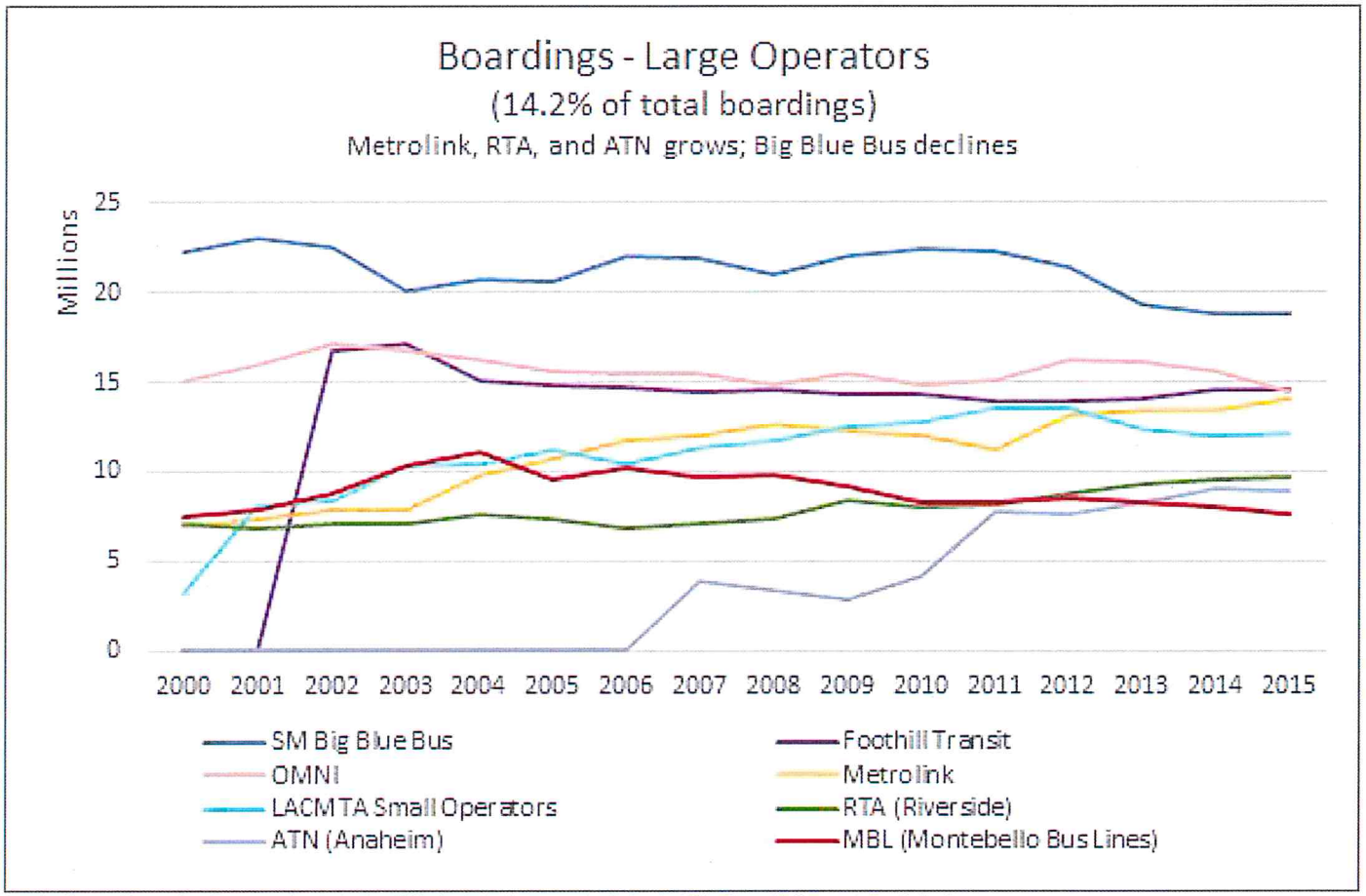
	Change in Jan - Nov Ridership	
Area	**2016 vs 2015**	**2016 vs 2013**
Statewide	-4.62%	-6.57%
MTC	-0.51%	3.63%
SCAG	-7.45%	-14.20%
SACOG	-5.78%	-10.89%
SANDAG	-6.08%	0.94%
Other Areas	-5.49%	-7.63%

MTC - Metropolitan Transportation Commission
SACOG - Sacramento Area Council of Governments
SANDAG - San Diego Association of Governments



LA MTA - Los Angeles Metropolitan Transportation Authority, LBT - Long Beach Transit. LA DOT - Los Angeles Department of Transportation


Indexed Boardings of the 4 Largest Operators
2.4
2.2
2
1.8
1.6
1.4
1.2
1
0.8
0.6
2000 2001 2002 2003 2004 2005 2006 2007 2008 2009 2010 2011 2012 2013 2014 2015
LA MTA
OCTA
LBT (Long Beach)
LADOT

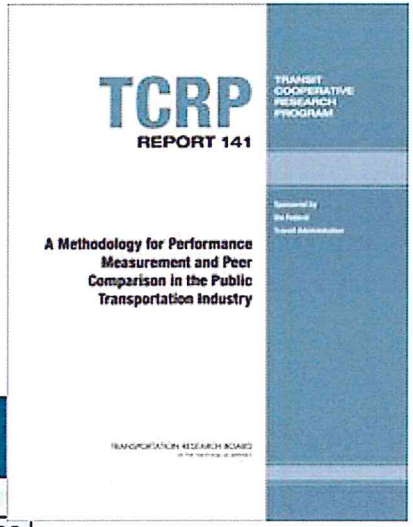


SM - Santa Monica, LACMTA - Los Angeles County Metropolitan Transportation Authority, ATN - Anaheim Transportation Network, RTA - Riverside Transportation Authority

FDOT **FTIS** FLORIDA TRANSIT INFORMATION SYSTEM

Urban iNTD

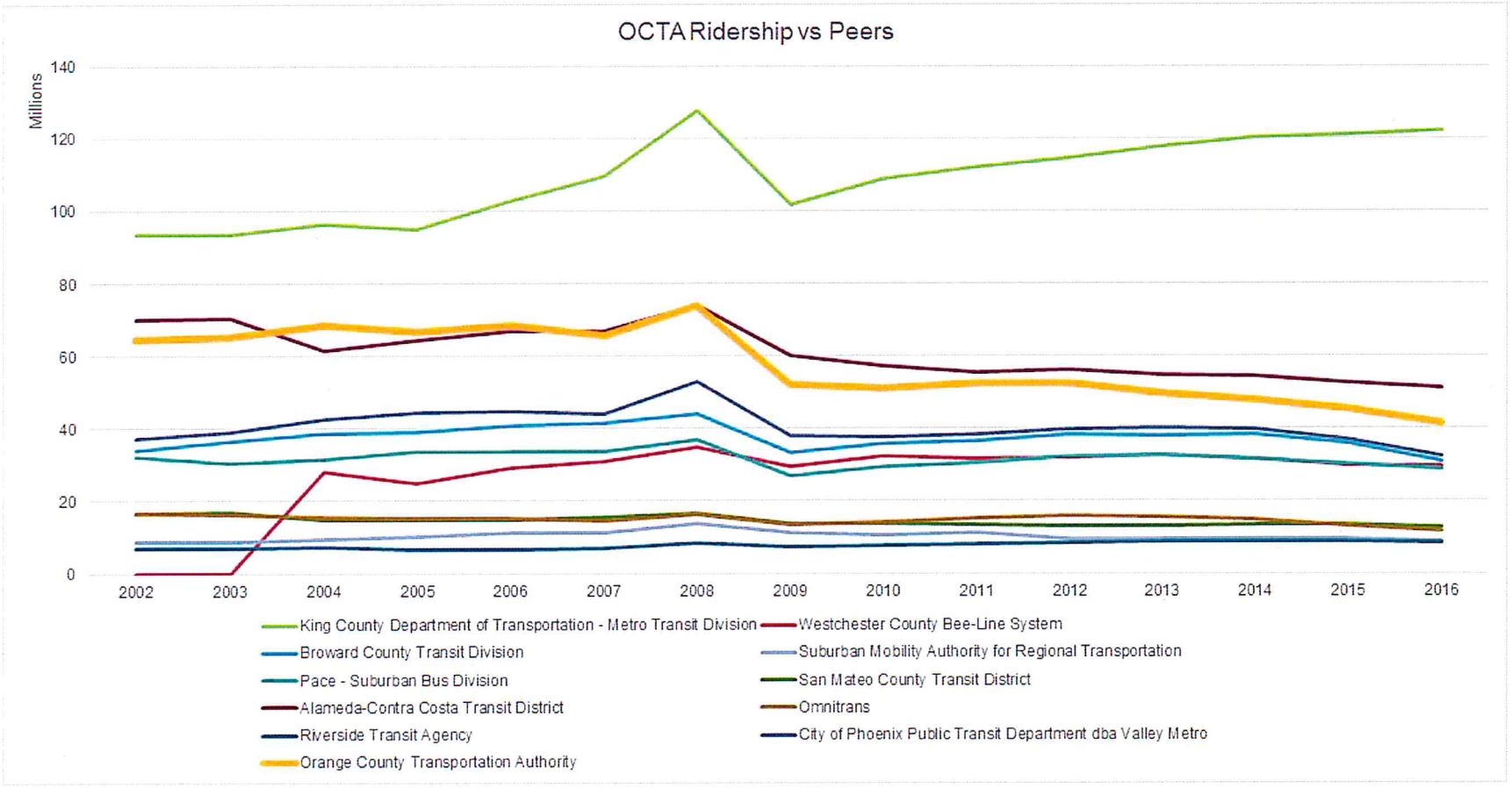
Urban Integrated National Transit Database

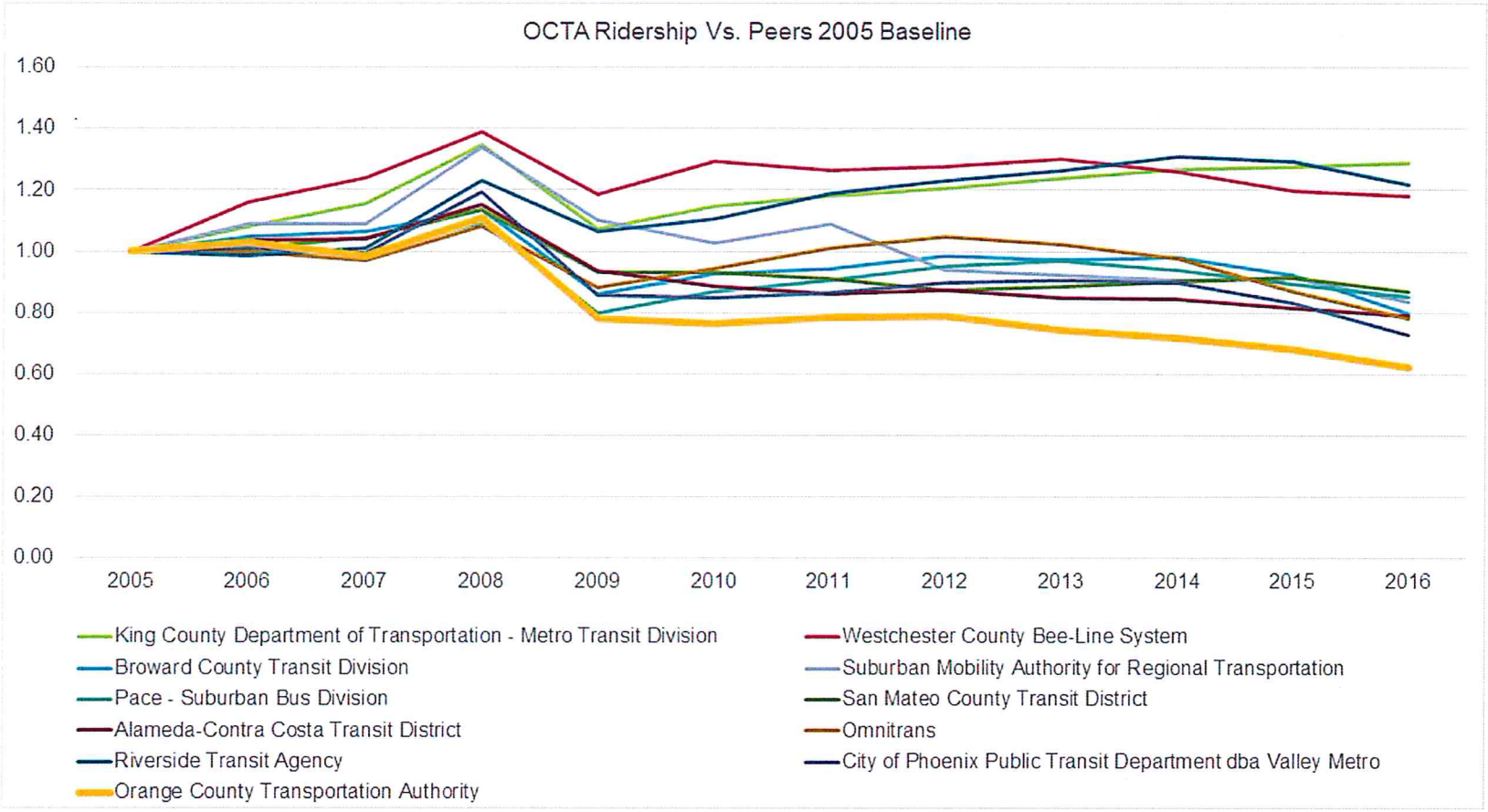


NTD ID	Agency Name	Location	State	Total Likeness Score
9036	Orange County Transportation Authority	Orange	CA	
2206	Nassau Inter County Express	Garden City	NY	0.59
5113	Pace - Suburban Bus Division	Arlington Heights	IL	0.63
9014	Alameda-Contra Costa Transit District	Oakland	CA	0.82
9009	San Mateo County Transit District	San Carlos	CA	0.93
2076	Westchester County Bee-Line System	Mount Vernon	NY	0.97
4029	Broward County Transit Division	Plantation	FL	1.08
5031	Suburban Mobility Authority for Regional Transportation	Detroit	MI	1.08
9029	Omnitrans	San Bernardino	CA	1.1
1	King County Department of Transportation - Metro Transit	Seattle	WA	1.13
9031	Riverside Transit Agency	Riverside	CA	1.13
9032	City of Phoenix Public Transit Department dba Valley Met	Phoenix	AZ	1.13

UCLA

ITS INSTITUTE OF TRANSPORTATION STUDIES


OCTA Ridership vs Peers
Millions
140
120
100
80
60
40
20
0
2002
2003
2004
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
2015
2016
King County Department of Transportation - Metro Transit Division
Westchester County Bee-Line System
Broward County Transit Division
Suburban Mobility Authority for Regional Transportation
Pace - Suburban Bus Division
San Mateo County Transit District
Alameda-Contra Costa Transit District
Omnitrans
Riverside Transit Agency
City of Phoenix Public Transit Department dba Valley Metro
Orange County Transportation Authority


OCTA Ridership Vs. Peers 2005 Baseline
1.60
1.40
1.20
1.00
0.80
0.60
0.40
0.20
0.00
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
2015
2016
King County Department of Transportation - Metro Transit Division
Broward County Transit Division
Pace - Suburban Bus Division
Alameda-Contra Costa Transit District
Riverside Transit Agency
Orange County Transportation Authority
Westchester County Bee-Line System
Suburban Mobility Authority for Regional Transportation
San Mateo County Transit District
Omnitrans
City of Phoenix Public Transit Department dba Valley Metro

Potential Explanations for Falling Transit Ridership

- Declining immigration
- Economic recovery (less poverty)
- Suburbanization of poverty
- Gentrification/displacement
- Falling gas prices
- Investments in auto travel
- Structural changes in used car finance
- Transit service disruptions
- Increasing transit fares
- Transit service cuts
- New high-cost transit investments

MINUTES

Transit Committee Meeting

Committee Members Present
Tim Shaw, Chairman
Al Murray, Vice Chairman
Andrew Do
Steve Jones
Miguel Pulido
Greg Winterbottom

Staff Present
Darrell Johnson, Chief Executive Officer
Ken Phipps, Deputy Chief Executive Officer
Laurena Weinert, Clerk of the Board
Mary K. Burton, Deputy Clerk of the Board
James Donich, General Counsel
OCTA Staff and members of the General Public

Committee Members Absent
Tom Tait

Call to Order

The February 9, 2017 regular meeting of the Transit Committee was called to order by Committee Chairman Shaw at 9:00 a.m.

Pledge of Allegiance

Committee Vice Chairman Murray led in the Pledge of Allegiance.

1. Public Comments

No public comments were received.

Special Calendar

2. Committee Meeting 2017 Schedule

Committee Chairman Shaw led a discussion regarding the 2017 meeting schedule for the Transit Committee. Darrell Johnson, Chief Executive Officer (CEO), noted that the schedule included a second meeting of the Transit Committee in the months of April and September.

A motion was made by Director Do, seconded by Committee Vice Chairman Murray, and declared passed by those present, to approve the Transit Committee Meeting 2017 schedule.

Director Pulido was not present to vote on this item.

3. Roles and Responsibilities of the Transit Committee

Mr. Johnson, CEO, presented the roles and responsibilities for the Transit Committee and noted that an additional item was added for mobile ticketing applications and other on-demand service delivery models.

A motion was made by Committee Vice Chairman Murray, seconded by Director Do, and approved by those present, to approve the Roles and Responsibilities of the Transit Committee.

Director Pulido was not present to vote on this item.

Consent Calendar (Items 4 through 7)

4. Approval of Minutes

A motion was made by Committee Vice Chairman Murray, seconded by Committee Chairman Shaw, and declared passed by those present, to approve minutes of the January 12, 2017 meeting.

Director Pulido was not present to vote on this item.

5. Low Carbon Transit Operations Program Recommendations for Fiscal Year 2016-17 Funds

A motion was made by Committee Vice Chairman Murray, seconded by Committee Chairman Shaw, and declared passed by those present, to:

A. Approve the use of fiscal year 2016-17 Low Carbon Transit Operations Program funding, currently estimated to be $1.7 million, for a fare adjustment program and for the purchase and installation of three-position bike racks on buses and spares, both intended to increase bus system ridership.

B. Approve Resolution 2017-002, consistent with the Low Carbon Transit Operations Program Guidelines.

C. Authorize staff to make all necessary amendments to the Federal Transportation Improvement Program, as well as execute any necessary agreements to facilitate the above recommendations.

Director Pulido was not present to vote on this item.

6. Cooperative Agreement to Accept Grant Funding for the Hydrogen Fuel Cell Electric Bus Project

A motion was made by Committee Vice Chairman Murray, seconded by Committee Chairman Shaw, and declared passed by those present, to:

A. Authorize the Chief Executive Officer to negotiate and execute Cooperative Agreement No. C-7-1538 between the Orange County Transportation Authority and the Center for Transportation and the Environment, in the amount of $13,241,092, to provide for the purchase of ten hydrogen fuel cell electric buses, construction of a liquid hydrogen station, and modification of maintenance facilities.

B. Amend the Orange County Transportation Authority's Fiscal Year 2016-17 Adopted Budget, in the amount of $13,241,092, to accommodate the hydrogen fuel cell electric bus project and available grant funding from the California Air Resources Board and the South Coast Air Quality Management District.

Director Pulido was not present to vote on this item.

7. Amendment to Agreement for Additional Consulting Services to Develop Specifications for an Account-Based, Open Payment Fare Collection System

A motion was made by Committee Vice Chairman Murray, seconded by Committee Chairman Shaw, and declared passed by those present, to authorize the Chief Executive Officer to negotiate and execute Amendment No. 4 to Agreement No. C-2-2095 between the Orange County Transportation Authority and Four Nines Technologies, in the amount of $50,000, for additional consulting services for the account-based, open payment fare collection system, and extend the contract term of the agreement through December 31, 2017. The amendment will increase the maximum obligation of the agreement to a total contract value of $294,500.

Director Pulido was not present to vote on this item.

Regular Calendar

8. Transit Division Performance Measurements Report for the Second Quarter of Fiscal Year 2016-17

Beth McCormick, General Manager of Transit, gave a PowerPoint presentation that included:

- Safety,
- Courtesy,
- Reliability: On-Time Performance and Miles Between Road Calls,
- Ridership and Productivity,
- Farebox Recovery Ratio,
- Operating Cost per Revenue Vehicle Hour, and
- Performance by Route.

Committee Chairman Shaw expressed his concerns about the contracted service for on-time performance falling short and asked Juan Antonio Lopez, Regional Vice President of First Transit, to address the Committee.

Mr. Lopez indicated that First Transit has hired a new General Manager, Phil DeLisle. Mr. DeLisle's focus is to improve engagement with the drivers by improving training and regional support and by continuing conversations with the drivers at 30, 60, and 90 day levels. First Transit has a total of 370 drivers and their goal is to have 380 drivers to be fully staffed.

Following the discussion on this item, no action was taken on this receive and file information item.

9. Central Harbor Boulevard Transit Corridor Study Update

Kia Mortazavi, Executive Director of Planning, reported that staff would be presenting the 12 alternatives that have been developed, draft evaluation criteria, outreach plans, and schedules.

Eric Carlson, Senior Transportation Analyst for Transit and Non-Motorized Planning, gave a PowerPoint presentation and reported that the study was conducted to analyze and develop options to improve transit service on Harbor Boulevard between the Fullerton Transportation Center and Westminster Boulevard. The study also evaluated transit connections on Katella Avenue between Harbor Boulevard and the Anaheim Regional Transportation Intermodal Center.

9. (Continued)

Director Pulido inquired about the density figures reflected on Slide 5 of the PowerPoint and asked staff to remove the figures from the City of Santa Ana and provide the Committee Members with the comparison between those two numbers (i.e., the Santa Ana density versus the County density without Santa Ana being part of the total number).

Director Do asked about addressing the congestion on Harbor Boulevard and asked if staff incorporated the possible use by visitors in the presentation materials.

Kia Mortazavi, Executive Director of Planning, responded that part of the goals in the executive summary points out that staff will review the 27 million visitors, and the commuters in the corridor.

Director Do wants staff to take into consideration removing the Santa Ana figures and the transitory population, so that the report would represent more accurate figures and then incorporate these figures into future reports.

Director Jones expressed his concern if OCTA will be ahead of the new development in the City of Garden Grove.

Mr. Johnson, CEO, acknowledged that there is a land use component within the evaluation criteria. Staff will take into account future land use, planning, and development within the focus of Measure M and the Federal Transit Administration (FTA) funds. Orange County Transportation Authority (OCTA) will look to their partners in the cities to update their General Plan, and give OCTA specific development plans.

A motion was made by Director Jones, seconded by Director Pulido, and declared passed by those present, to receive and file as an information item.

10. Overview of Options for OC Streetcar Operations and Maintenance

Mr. Johnson, CEO, reported that OCTA is making significant progress on the OC Streetcar, and staff is developing the operations and maintenance (O&M) plans for future operations. He reported that Jim Beil, Executive Director of Capital Programs, and Beth McCormick, General Manager of Transit, would present an overview of the options for the (O&M) and how it will be incorporated into the (FTA) process.

10. (Continued)

Mr. Beil reported that the OC Streetcar would be achieving a 90 percent final design milestone in April. Board approval for the submittal of the full-funding grant agreement application to the FTA is also planned for April and requires submittal of the OCTA O&M Plan.

Mr. Beil gave a PowerPoint presentation and highlighted the O&M characteristics (i.e., days of week, operating hours, and daily hours of service) along with the organization options (i.e., in-house operations, operations and maintenance contractor, management by private contractor, and in-house operations/maintenance contractor).

Ms. McCormick continued the slide presentation and highlighted the different types of services and responsibilities provided by in-house, prime contractors, and specialized contractors. She stated how the services would be coordinated between the operations staff and the maintenance contract.

Mr. Beil stated that staff would be seeking Board approval to evaluate the models using the following key considerations:

- Annual operating costs,
- Flexibility and responsibilities of work assignments,
- Quality of service,
- Organizational impacts, and
- Qualifications of personnel.

A motion was made by Committee Vice Chairman Murray, seconded by Director Pulido, and declared passed by those present, to direct staff to return to the Board of Directors with an evaluation of the OC Streetcar operations and maintenance organization plan based upon the key considerations.

Discussion Items

11. Mobile Ticketing & On-Demand Service

Mr. Johnson, CEO, provided opening comments and introduced Lloyd Sullivan, Manager of Information Systems, who gave a PowerPoint presentation on mobile ticketing and on-demand service.

Mr. Sullivan also reported that he participated in a round-table discussion where he rode on an electric autonomous shuttle.

11. (Continued)

Mr. Sullivan showed a video of the "RideTap" application which can be used by customers as an option to extend their trips.

Committee Vice Chairman Murray inquired about cyber security and reported that he was elected as the Chair of the Association of California Cities Orange County (ACC-OC) Infrastructure and Technology Committee and said that he would like Mr. Sullivan to present this exciting service at a future ACC-OC meeting.

Director Pulido asked Mr. Sullivan if he had access to Mr. Brauer, in order to find out what the future impacts might be. Director Pulido believes that this type of technology (i.e., autonomous vehicles) could increase ridership and could be used on freeways. Mr. Sullivan replied yes, the amount of data created by the self-driving vehicles is one gigabyte per second. The vehicles can interact with other vehicles, and coordinate all types of issues with the street signals.

12. Chief Executive Officer's Report

Mr. Johnson, CEO, reported on the following:

- OCTA will be hosting two outreach events at the Main Place Mall on Friday, February 10th and Saturday, February 11th to introduce the new Express Route 53X service.

- There has been coordination with the states to assemble high-priority transportation and infrastructure projects and deliver to the Trump Administration. OCTA submitted four projects and were informed that out of 25 transportation projects forwarded by Governor Brown to the National Governor's Association, OCTA has two projects on the list: the Interstate 405 Express Lanes and the OC Streetcar project.

12. (Continued)

- He presented information on the financial and operational success of the 91 Express Lanes as well as how OCTA is financing the Interstate 405 Express Lanes at the California Foundation on the Environment and Economy Convention. He noted that during the convention, there was a lot of discussion about autonomous vehicles and what the State Department of Transportation, the Transportation Research Board, and Federal Highways are doing relative to this.

13. Committee Members' Reports

Committee Chairman Shaw reported that he is thankful to be the Transit Committee Chairman and is looking forward to a great year - especially the OC Streetcar project and the OC Bus 360° program that will provide options for Orange County residents.

14. Closed Session

There were no Closed Session items scheduled.

15. Adjournment

The meeting adjourned at 10:35 a.m.

The next regularly scheduled meeting of this Committee will be held at **9:00 a.m. on Thursday, March 9, 2017**, at the Orange County Transportation Authority Headquarters, 550 South Main Street, Board Room - Conference Room 07, Orange, California.

ATTEST

Mary K. Burton
Deputy Clerk of the Board

Tim Shaw
Committee Chairman

OCTA

March 9, 2017

To: Transit Committee

From: Darrell Johnson, Chief Executive Officer

Subject: Grant Award for the 2017 and 2018 Angels Express Service

Overview

On March 16, 2017, the Mobile Source Air Pollution Reduction Review Committee of the South Coast Air Quality Management District is expected to award the Orange County Transportation Authority $503,272 in grant funds to support the direct operating costs of the Angels Express service for the 2017 and 2018 baseball seasons. Authorization is requested to accept the award and execute grant-related agreements.

Recommendation

A. Authorize the Chief Executive Officer or designee to accept the grant award and execute grant-related agreements with the Mobile Source Air Pollution Reduction Review Committee to support the Angels Express service.

B. Authorize the Chief Executive Officer or designee to execute agreements with the Southern California Regional Rail Authority to provide special rail service for the Angels Express.

Background

Signed into law in September 1990, AB 2766 (Chapter 1705, Statutes of 1990) authorized a $4.00 per vehicle surcharge on annual motor vehicle registration fees to fund programs that reduce motor vehicle air pollution. AB 2766 mandated that 30 cents of every dollar collected be deposited into a discretionary account managed by the South Coast Air Quality Management District (SCAQMD). To determine which projects to fund, AB 2766 created the Mobile Source Air Pollution Reduction Review Committee (MSRC) to establish criteria, evaluate proposed projects, and make final funding recommendations to the SCAQMD Governing Board.

Periodically, the MSRC makes available grant funds on a competitive basis to reduce automobile trips and promote transit usage as a means of reducing emissions within the South Coast Air Basin, which spans all of Orange County and the urban portions of Los Angeles, Riverside, and San Bernardino counties.

On March 3, 2017, the MSRC announced the two-year Major Event Center Transportation grant program, which made available $5 million to fund the direct operating costs of transit services that specifically serve major event center venues located within the South Coast Air Basin. The purpose of the grant program is to promote event-specific transit service to mitigate traffic congestion and reduce automobile trips at major events.

Discussion

On March 16, 2017, the MSRC Board is expected to award the Orange County Transportation Authority (OCTA) $503,272 to support the direct operating cost of providing the Angels Express Service for both the 2017 and 2018 baseball seasons. OCTA will partner with the Angels Baseball and the Southern California Regional Rail Authority to provide express Metrolink rail service to serve all weekday evening home games that start at 7:07 PM. A total of 110 Angel weekday home games is anticipated to be served during the two seasons. The 2017 service will begin on March 30, 2017, and operate through September 29, 2017, for the Los Angeles Angels of Anaheim (Angels) baseball season. A total of 54 games will be served during the 2017 season, including two preseason games with the Los Angeles Dodgers.

With over 42,000 boardings last year, the service continues to be popular in providing baseball fans with a convenient and attractive alternative to the automobile for travel to and from home games at the Angel Stadium of Anaheim. The service will utilize regular Metrolink trains to operate along the Orange County Line, originating from Laguna Niguel/Mission Viejo in the south, and from Los Angeles Union Station in the north, to the Anaheim Station. A special Metrolink train will depart Anaheim and return fans to stations north en route to Los Angeles after the game. To satisfy the anticipated demand and in response to customer feedback, the Angels Express is also offering special limited service for 15 Friday home games along the Inland Empire-Orange County line from Riverside Downtown to Orange, with a transfer at Orange to the Anaheim Station. Taken together, passengers will be able to board the Angels Express trains at any of the Metrolink stations listed as follows, en route to Angel Stadium of Anaheim. A map of the routes and stations is presented in Attachment A.

Northbound to Anaheim	Southbound to Anaheim	Westbound to Anaheim
• Laguna Niguel/Mission Viejo	• Los Angeles Union Station	• Riverside/Downtown
• Irvine	• Norwalk/Santa Fe Springs	• Riverside/La Sierra
• Tustin	• Buena Park	• North Main Corona
• Santa Ana	• Fullerton	• West Corona
• Orange	• Anaheim	• Anaheim Canyon
• Anaheim		• Orange*
		• Anaheim

**Transfer station*

To maximize ridership, OCTA, Metrolink, and the Angels will once again work in partnership to promote the service and provide special incentives. These efforts include a discounted $7.00 round trip fare, $6.00 for seniors/disabled, and a special $4.00 youth pass for children ages 6 to 18. Passengers ages 5 and under ride free. Other elements of the partnership include signage at the Angel Stadium and the Big A freeway sign, program and concourse ads, Angel's print at home ticket ads and ticket envelope ads, web banners, email blasts to season seat holders, and social media posts. A micro web page on the Angels.com website will also offer a 50 percent discount off select Angel game tickets for those who ride the Angels Express. In addition, the joint marketing campaign will target both current OCTA customers as well as those who are not current or frequent transit users. The campaign will also include radio, web, and other electronic media, on-board and exterior bus advertisements, as well as outreach activities supported by OCTA, Metrolink, and the Angels.

The MSRC Major Event Center Transportation Grant program requires a local match of cash or in-kind services that is equal to or greater than the MSRC funding request amount. These express services have been tailored to meet the funding limitations of the grant program and provide a local match contribution that consists solely of in-kind services. The in-kind local match contribution, estimated at $504,000 for the 2017 and 2018 seasons combined, will be provided in the form of OCTA staff time, marketing costs, fare and admission discounts, and farebox revenue as allowed by the grant program.

To ensure all the air quality grant funds are used to reduce harmful emissions, the MSRC grant can only fund those train trips operated with cleaner Tier 2 emissions-rated locomotives for the 2017 season. The tier rating number refers to locomotives that conform to emissions standards applicable to those originally manufactured on or after January 1, 2005. These Tier 2 locomotives are approximately two times cleaner in terms of both particulate matter (PM) and oxides of nitrogen (NOx) when compared to the Tier 0 locomotives that make up the remainder of the Metrolink fleet. Of particular importance is the

reduction of diesel PM which is classified by the California Air Resources Board as a toxic air contaminant and known carcinogen, while NOx is an ozone pre-cursor that forms the primary element in smog.

To further ensure the air quality benefits of the grant program, the MSRC grant can only support trips operated by Tier 4 locomotives for the 2018 season. Tier 4 locomotives are the cleanest diesel locomotives in the nation, and are approximately eight times cleaner in terms of NOx emissions and 18 times cleaner in terms of PM when compared to Tier 0 locomotives. Metrolink anticipates upgrading their locomotive fleet to Tier 4 locomotives in the summer of 2017 in time for the 2018 baseball season.

As Metrolink member agencies, the Los Angeles County Metropolitan Transportation Authority (LACMTA) and Riverside County Transportation Commission (RCTC) are also participating in the 2017 and 2018 Angels Express Service and have agreed to pay their share of operating costs that cannot be covered by the grant. The Orange County line is funded by OCTA and LACMTA at 70 percent and 30 percent, respectively, and the Inland Empire-Orange County Line is funded 65 percent by OCTA and 35 percent by RCTC.

Summary

On March 16, 2017, the MSRC of the SCAQMD is expected to award OCTA $503,272 in grant funds to support the direct operating costs of providing the Angels Express service for the 2017 and 2018 baseball seasons. Authorization is requested to accept the grant awards and execute grant funding agreements.

Attachments

A. Special Metrolink Service to Angels Home Games

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Approved by:

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ATTACHMENT A

Special Metrolink Service to Angels Home Games

OCTA

March 9, 2017

To: Transit Committee

From: Darrell Johnson, Chief Executive Officer

Subject: Sole Source Agreement for Warranty and Non-Warranty Cummins Engine Services

Overview

The Orange County Transportation Authority operates a fleet of fixed-route compressed natural gas buses equipped with the Cummins 8.9 Liter ISL-G engine. With the purchase of new buses and the repowering of buses with new engines, approximately 94 percent of the engines in the fleet will be under warranty over the next five years. As a result, an agreement is needed for expenses associated with warranty and non-warranty repairs that are not to be covered such as travel time, mileage, parts, and labor. Since there is only one manufacturer with engines certified by the State of California for use in transit buses, a sole source agreement is required.

Recommendation

Authorize the Chief Executive Officer to negotiate and execute Purchase Order No. C-6-1605 between the Orange County Transportation Authority and Cummins Pacific, LLC, in the amount of $750,000, for warranty and non-warranty engine services, effective May 1, 2017 through April 30, 2022.

Discussion

The Orange County Transportation Authority (OCTA) purchased 299 New Flyer of America, Inc. (New Flyer) 40-foot compressed natural gas (CNG)-powered buses that were delivered in 2007 and 2008. The engines in these buses have either been replaced or are in the process of being replaced with Cummins 8.9 Liter ISL-G engines which will be under warranty. In 2013, OCTA purchased 20 New Flyer 60-foot CNG-powered buses which included a two-year base warranty, plus a three-year extended warranty on the engines. In 2014, OCTA ordered 157 New Flyer 40-foot CNG-powered buses that are equipped with Cummins 8.9 Liter ISL-G engines. These buses will be covered under

warranty as well. In 2016, 16 New Flyer 60-foot CNG-powered buses were delivered with a two-year base warranty on the engines.

Under the two-year base engine warranty, Cummins Pacific, LLC (Cummins) will pay for defective parts and labor, as well as associated parts needed to complete the repair. Incidentals covered include towing, mileage, mechanic travel, and lodging. The purchase order will cover items that may need to be replaced as part of the normal repair but are not covered under the base warranty, such as lubricants and non-warranty parts. Under the extended warranty period, incidentals such as towing, mileage, mechanic travel, and lodging are not covered. The purchase order will also cover these costs.

This purchase order will provide on-call response with fully-equipped (parts and diagnostic equipment) service trucks and personnel to perform the work needed on OCTA property. In most cases, buses are repaired the same day, minimizing downtime. Additionally, OCTA has the option to send buses via tow-truck to Cummins in Downey to expedite major repairs.

Staff is recommending award of a purchase order for warranty and non-warranty related services for a five-year period through April 30, 2022.

Procurement Approach

This procurement was handled in accordance with OCTA Board of Directors (Board)-approved procurement policies and procedures for a sole source procurement.

Cummins is the only direct supplier for servicing and repairing Cummins engines in California. Any Cummins authorized dealer would have difficulty competing on the pricing and availability of Cummins parts with Cummins. Therefore, a sole source procurement is utilized.

The purchase order (PO) is a time and expense contract on an as-needed basis with no guaranteed usage for OCTA's requirements of non-warranty Cummins engine services, which covers the labor at $138 per hour and non-warranty parts at 25 percent off of Cummins List Price, as well as incidental costs for items under extended warranty period. This PO also covers normal repair not covered under the base warranty such as lubricants. Cummins' proposal was reviewed by staff from the Contracts Administration and Materials Management department (CAMM) and the Transit Division to ensure compliance with the contract terms and conditions, as well as the technical requirements.

In accordance with OCTA procurement policies and procedures, a sole source procurement over $50,000 requires OCTA's Internal Audit Department (IA) to conduct a price review. IA compared the pricing with other agencies, noting that the proposed hourly labor rate is consistent with the rate that Cummins charges other agencies. As recommended by IA, CAMM will use the audit findings as the basis of negotiations with Cummins for the additional engine down charge and mileage rate.

Fiscal Impact

The project was approved in the OCTA Fiscal Year 2016-17 Budget, Transit Division, Maintenance Department, Accounts 2162-7613-D2108-2QK, and 2168-7613-D2108-2RY, and is funded through the Local Transportation Fund.

Summary

Based on the information provided, staff recommends the Board authorize the Chief Executive Officer to negotiate and execute Purchase Order No. C-6-1605 with Cummins Pacific, LLC, in the amount of $750,000, for warranty and non-warranty Cummins engine services, effective May 1, 2017 through April 30, 2022.

Attachment

None.

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Approved by:

Beth McCormick
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Virginia Abadessa
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March 9, 2017

To: Transit Committee

From: Darrell Johnson, Chief Executive Officer

Subject: Sole Source Agreement for the Construction of a Liquid Hydrogen Fuel Station at the Santa Ana Bus Base

Overview

The Orange County Transportation Authority has been awarded grant funds for the purchase of ten hydrogen buses, construction of a liquid hydrogen fuel station, and modifications to facilities. The grant application was submitted in partnership with the bus and hydrogen fuel station manufacturers. A sole source agreement is required for the construction of a liquid hydrogen fuel station at the Santa Ana Bus Base.

Recommendations

A. Authorize the Chief Executive Officer to negotiate and execute sole source Agreement No. C-7-1577 between the Orange County Transportation Authority and Linde LLC, in the amount of $4,777,732, for the construction of a liquid hydrogen fuel station at the Santa Ana Bus Base.

B. Amend the Orange County Transportation Authority's Fiscal Year 2016-17 Adopted Budget, in the amount of $4,777,732, to accommodate the construction of a liquid hydrogen fuel station at the Santa Ana Bus Base.

Discussion

On February 13, 2017, the Orange County Transportation Authority (OCTA) Board of Directors (Board) authorized the Chief Executive Officer to negotiate and execute an agreement with the Center for Transportation and the Environment (CTE) to accept $13,241,092, in grant funds from the California Air Resources Board (ARB) and the South Coast Air Quality Management District. OCTA partnered with CTE, the Alameda Contra Costa Transit District, New Flyer of America, and Linde LLC (Linde) to submit a grant application that would provide OCTA with ten hydrogen fuel cell buses, a liquid hydrogen fueling

station, and modifications to facilities for the detection and emergency evacuation of hydrogen gas.

Linde was chosen as the fuel station provider due to having a hydrogen fueling system that delivers constant pressure which allows consecutive buses to be fueled in about five to six minutes without diminishing performance, which is similar to the fueling time of a bus with compressed natural gas. Other hydrogen fueling systems use a cascade system to build pressure which results in the first few buses being fueled in six minutes, with remaining buses being fueled much slower, taking up to 20 minutes each or longer based on the number of buses being fueled. Moreover, the ARB solicitation provided that projects with identified vendors that would ensure vehicles and infrastructure will be built in advance of ARB's grant completion deadline would be scored higher.

Grant Funding for the hydrogen bus project is contingent upon utilizing the vendors identified in the grant application. Therefore, a sole source agreement with Linde is necessary to construct the hydrogen fuel station.

Under the terms of the firm's fixed-price agreement, OCTA will be responsible for bringing utilities and communication lines to the equipment site. These costs are funded by the ARB grant. Linde will be required to provide all necessary equipment and labor for the construction of the station at the Santa Ana Bus Base, including the production of site and station design plans, equipment drawings, connection of the utilities and communication lines, and training. Linde will also be responsible for installing the dispensing equipment at the existing fuel island and for the installation of hydrogen detection equipment at the fuel island.

Payment milestones are as follows:

Milestone	**Payment Amount**	**Completion Date**
Completion of site and station design plans	$1,620,000	5/22/2017
Completion of equipment drawings	$463,000	8/21/2017
Equipment manufactured and shipped	$926,000	6/25/2018
Fueling equipment installed	$1,160,000	10/29/2018
Completion of training and station commissioning	$608,732	12/31/2018
Total	**$4,777,732**	

Linde will also provide ongoing operations and maintenance of the station, as well as provide the liquid hydrogen. Staff will return to the Board at a later date for approval to execute the two agreements.

Compliance with the California Environmental Quality Act (CEQA) is required as part of the California ARB grant solicitation for Zero-Emission Truck and Bus Pilot Commercial Deployment Projects. OCTA determined the Hydrogen Fuel Cell Bus Pilot Program project was exempt from CEQA since the purchase and operation of the zero emissions hydrogen fuel buses and associated infrastructure consists of the installation of small new equipment and facilities within a small structure, is a minor alteration of an existing public facility, and involves a negligible or no expansion of the current use. The proposed project will not result in a direct or reasonably foreseeable indirect physical change in the environment. On January 15, 2016, OCTA filed a Notice of Exemption pursuant to CEQA with the Orange County Clerk-Recorder's Office.

Procurement Approach

The procurement was handled in accordance with OCTA's Board-approved policies and procedures for a sole source procurement.

OCTA is one of the grant recipient of the award for purchase of ten hydrogen buses, construction of a hydrogen fuel station, and modification to facilities. Linde was chosen as the provider to construct the fuel station, and is one of the members of the Fuel Cell Electric Bus Commercialization Consortium. In order to maintain the grant eligibility, OCTA will be required to use Linde to build the fuel station.

The grant funding is a fixed amount of $4,777,732, and includes the hydrogen station construction, gas detection, commissioning, and one-year routine maintenance.

OCTA's procurement policy requires that sole source procurements over $50,000 be reviewed by OCTA's Internal Audit Department. However, since this is grant award and the price of the construction was already established as a part of the award, a cost analysis is not needed. As a part of the project, staff has requested a detailed cost breakdown.

Fiscal Impact

The project was not included in OCTA's Fiscal Year 2016-17 Budget. Funds have been added to Account 1722-9022-D2157-0MO, Hydrogen Fuel Station. The expenditure is offset by the ARB grant revenue in Account 0030-6053-D2157-YHS, approved by the Board on February 13, 2017.

Summary

Based on the information provided, staff recommends award of Agreement No. C-7-1577 to Linde LLC, in the amount of $4,777,732, for the construction of a liquid hydrogen fuel station at the Santa Ana Bus Base.

Attachment

None.

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March 9, 2017

To: Transit Committee

From: Darrell Johnson, Chief Executive Officer

Subject: Agreement for Pacific Electric Right-of-Way Weed Abatement and Debris Removal Services

Overview

On November 8, 2016, the Orange County Transportation Authority issued an invitation for bids for a five-year contract to a qualified property maintenance contractor to provide weed abatement and debris removal services for the Pacific Electric right-of-way. Board of Directors' approval is requested for the selection of a contractor to perform the required work.

Recommendations

A. Find RPW Services, Inc., the apparent low bidder, as non-responsive for failure to execute the bid form.

B. Authorize the Chief Executive Officer to negotiate and execute Agreement No. C-6-1504 between the Orange County Transportation Authority and Pest Options, Inc., the lowest responsive, responsible bidder, in the amount of $215,830.80, for a five-year term, for the Pacific Electric right-of-way weed abatement and debris removal services.

Discussion

The Orange County Transportation Authority (OCTA) owns and maintains the former Pacific Electric (PE) right-of-way (ROW) rail corridor made up of two distinct properties known as PEROW NO.1 (PE1) and PEROW NO. 2 (PE2). Both segments contain no active railroad track and do not currently have active transportation uses.

The PE1 segment is 100 feet wide by seven miles long, beginning in the City of Santa Ana at Fifth Street and Raitt Street, and runs northwest to Beach Boulevard in the City of Stanton. The PE1 section from Euclid Street to Nelson Street and a section from Brookhurst Street to Gilbert Street are owned

and maintained by the City of Garden Grove. A total of 18 arterial roads cross the PE1 segment, and landscape areas front some of the arterial roads.

The PE2 segment is 100 feet wide by five miles long, begins at Beach Boulevard in the City of Stanton and runs northwest to the Orange – Los Angeles County Line in the City of Cypress. A total of 13 arterial roads cross the PE2 segment, and landscape areas front some of these arterial roads.

OCTA contracts out necessary weed abatement and debris removal services in order to comply with local standards regarding weed abatement, fire prevention, nuisance liability standards, and overall upkeep of the property. The contractor is responsible for maintaining these properties under the direction and supervision of OCTA's senior rail maintenance ROW administrator.

The maintenance contractor will be responsible for weed abatement, vegetation control, herbicide application, and clean-up and removal of debris and trash on the PEROW. Weed abatement and vegetation control are performed in accordance with Orange County's California Health and Safety Codes and municipal code requirements. The purpose of these services is to prevent fire hazards posed by vegetative growth and accumulation of combustible materials. Except as noted below, vegetation and weeds must be regulated to the code requirements.

The maintenance contractor will collect and remove all debris and trash, and remove and dispose of vegetation and refuse at specified dump sites within Orange County. The debris can range from, but is not limited to, broken concrete, asphalt, construction debris, scrap metal, furniture, appliances, automobile parts, shopping carts, tires, trees, dead vegetation, dead animals, and bagged or loose trash. Individual items will be handled in accordance with the Occupational Safety and Health Administration guidelines.

Procurement Approach

The procurement was handled in accordance with OCTA's Board of Directors-approved procedures for public works projects. These procedures, which conform to both federal and state requirements, require that contracts are awarded to the lowest responsive, responsible bidder after a sealed bidding process.

Invitation for Bids (IFB) 6-1504 was released on November 8, 2016, through OCTA's CAMM NET system. The project was advertised on November 8 and 14, 2016, in a newspaper of general circulation. A pre-bid conference was held on November 15, 2016, and was attended by two firms. Three addenda were issued to provide the pre-bid conference registration sheets and handle administrative issues related to the IFB. On December 5, 2016, three bids were received and publicly opened.

All bids were reviewed by staff from the Contracts Administration and Materials Management, Rail Programs, and Facilities Engineering Departments to ensure compliance with the contract terms and conditions, and technical specifications. The list of bidders and bid amounts is presented below:

Firm and Location	Bid Amount
RPW Services, Inc. Fullerton, California	$201,151.20
Pest Options, Inc. Anaheim, California	$215,830.80
PUB Construction, Inc. Diamond Bar, California	$271,740.00

The apparent low bidder, RPW Services, Inc., was found non-responsive for failure to sign the bid form as required by the bid instructions. As such, award is being recommended to Pest Options, Inc., as the lowest responsive, responsible bidder.

The project manager's estimate for the project was $249,296. The recommended firm's bid is 13.4 percent below the project manager's estimate and is considered by staff to be fair and reasonable.

State law requires award to the lowest responsive, responsible bidder. As such, staff recommends award to Pest Options, Inc., the lowest responsive, responsible bidder, in the amount of $215,830.80, for the PEROW weed abatement and debris removal services.

Fiscal Impact

The project was approved in OCTA's Fiscal Year 2017-18 Budget, Capital Programs Division, accounts 1722-7517-D2601-AR7 and 0093-7517-T1000-ASA, and is funded through local transportation and commuter urban rail endowment funds.

Summary

Based on the information provided, staff is seeking Board of Directors' approval for the Chief Executive Officer to negotiate and execute Agreement No. C-6-1504 with Pest Options, Inc., the lowest responsive, responsible bidder, in the amount of $215,830.80, for a five-year term, for Pacific Electric right-of-way weed abatement and debris removal services.

Attachments

A. Right-of-Way Locations and Acreage
B. Pacific Electric Right-of-Way

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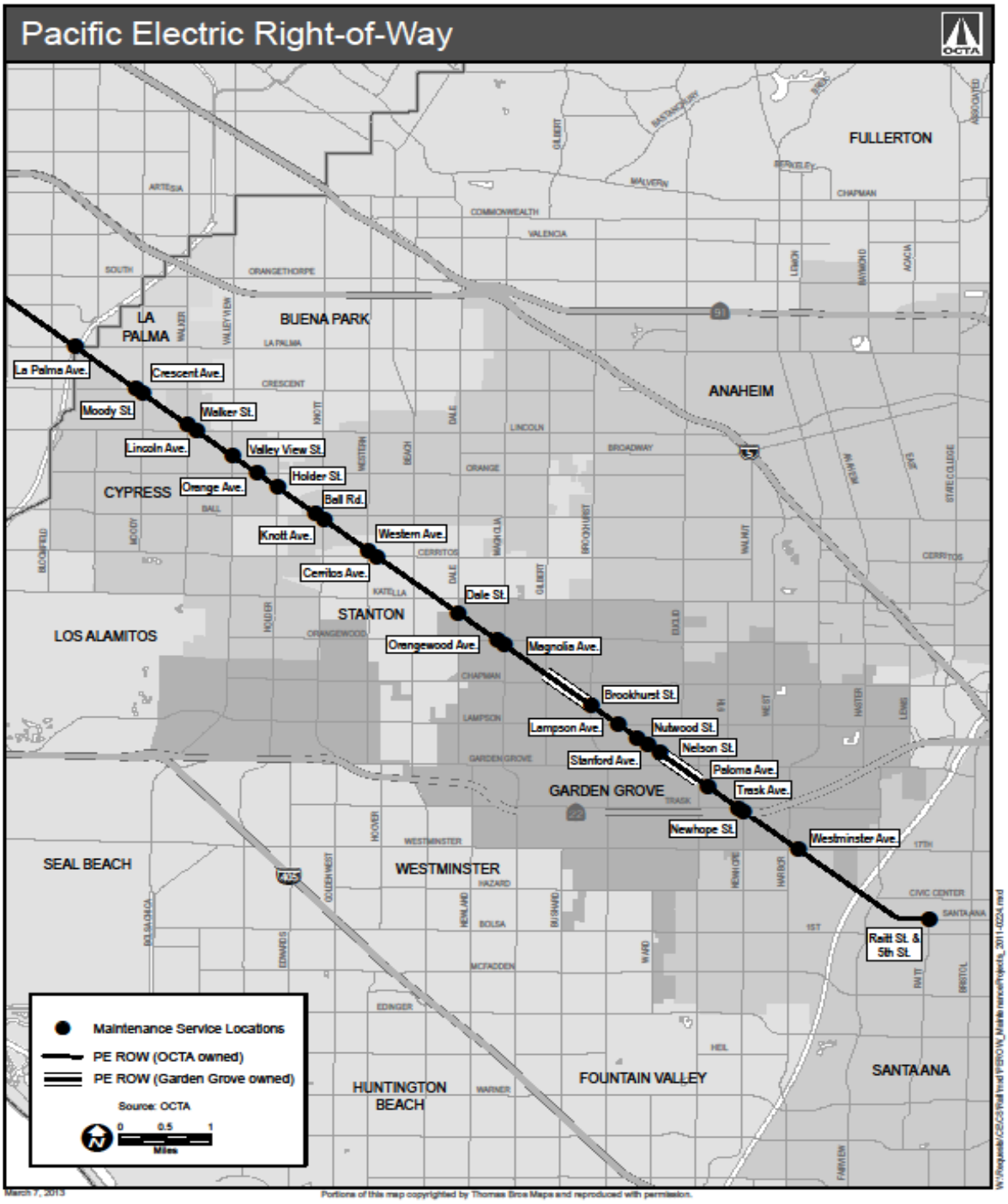
ATTACHMENT A

RIGHT-OF-WAY LOCATIONS AND ACREAGE

PEROW NO. 1	APPROXIMATE ACREAGE
Dale to Orangewood Garden Grove	6.3
Orangewood to Magnolia Garden Grove	0.5
Magnolia to Gilbert Garden Grove	3.4
Brookhurst to Lampson Garden Grove	3.9
Lampson to Nutwood Garden Grove	2.5
Euclid to Paloma Garden Grove	1.4
Paloma to Trask Garden Grove	4.5
Westminster to Fairview Santa Ana	11.8
5th to Fairview Santa Ana	1.0
Raitt to 5th Santa Ana	4.9
Total Approximate Acreage	**40.2**

PEROW NO. 2	APPROXIMATE ACREAGE
Del Amo to Crescent Cypress/La Palma	8.7
Crescent to Moody Cypress	0.6
Moody to Walker Cypress	6.3
Walker to Lincoln Cypress	0.2
Lincoln to Valley View Cypress	5.3
Valley View to Holder Cypress	1.7
Orange to Holder Cypress	3.1
Holder to Ball Buena Park/Anaheim	5.6
Knott to Western Anaheim/Stanton	7.0
Western to Cerritos Stanton	0.9
Cerritos to Beach Stanton	7.5
Total Approximate Acreage	**46.9**

ATTACHMENT B



March 9, 2017

To: Transit Committee

From: Darrell Johnson, Chief Executive Officer

Subject: Consultant Selection for Quality Assurance Management Support for the OC Streetcar Project

Overview

On November 11, 2016, the Orange County Transportation Authority issued a request for proposals for consultant services for quality assurance management support for the OC Streetcar project. Proposals were received in accordance with the Orange County Transportation Authority's procurement procedures for professional and technical services. Board of Directors' approval is requested to select the firm to perform the required services.

Recommendations

A. Approve the selection of Kal Krishnan Consulting Services, Inc., as the firm to provide quality assurance management support for the OC Streetcar project.

B. Authorize the Chief Executive Officer to negotiate and execute Agreement No. C-6-1537 between the Orange County Transportation Authority and Kal Krishnan Consulting Services, Inc., in the amount of $429,403, to provide quality assurance management support for the OC Streetcar project, from contract execution through December 31, 2020.

Discussion

The Orange County Transportation Authority (OCTA), in coordination with the Federal Transit Administration (FTA) and the cities of Garden Grove and Santa Ana, is the lead agency to design, construct, operate, and maintain a 4.15-mile streetcar system connecting the Santa Ana Regional Transportation Center, through downtown Santa Ana to Harbor Boulevard and Westminster Avenue in the City of Garden Grove. The OC Streetcar project (Project) is currently in the engineering phase of the FTA New Starts

funding program. Design work has been underway since February 2016, with 60 percent design plans completed in December 2016.

One of the requirements associated with the federal New Starts Program funding is including a quality assurance manager (QAM) position of the Project team. The role of the QAM is to oversee the quality management program of the Project to ensure it complies with the FTA Quality Management System requirements. The QAM role will be filled by the quality assurance management consultant. The specific responsibilities of the consultant include overseeing quality audits, inspections of the design, construction, construction management, and vehicle activities, and ensuring that all required corrective actions are undertaken. The selected consultant's period of performance is expected to extend through December 2020.

Procurement Approach

The procurement was handled in accordance with OCTA's Board of Directors-approved procedures for professional and technical services. Various factors are considered in an award for professional and technical services. Award is recommended to the firm offering the most comprehensive overall proposal considering such factors as staffing and project organization, prior experience with similar projects, approach to work plan, as well as cost and price.

On November 11, 2016, a request for proposals (RFP) was issued electronically on CAMM NET. The Project was advertised in a newspaper of general circulation on November 10 and 14, 2016. A pre-proposal conference took place on November 17, 2016, with eight attendees representing six firms. Addendum No. 1 was issued to provide a copy of the pre-proposal registration sheet and presentation. Addendum No. 2 was issued to respond to questions related to the RFP.

On December 14, 2016, six proposals were received. An evaluation committee consisting of OCTA staff from Contracts Administration and Materials Management, Rail Programs, Highway Programs, the Health, Safety, and Environmental Compliance departments, and the Transit Division met to review all proposals received. The proposals were evaluated based on the following evaluation criteria and weights:

- Qualifications of the Firm 15 percent
- Staffing and Project Organization 40 percent
- Work Plan 25 percent
- Cost and Price 20 percent

Several factors were considered in developing the criteria weights. Staffing and project organization was weighted highest at 40 percent, as potentially there will be only one key consultant staff, and the proposed QAM's experience and expertise is required for the success of the Project. Likewise, staff assigned a high level of importance to the work plan weighted at 25 percent, as the technical approach to the Project is critical to the successful performance of the Project. As a professional and technical services procurement, cost is an evaluated factor, and must be considered to ensure OCTA receives value for the services provided. The final criterion of qualifications of the firm evaluated the firm's experience in performing work of a similar scope and size.

On January 4, 2017, the evaluation committee reviewed and discussed all proposals received based on the evaluation criteria and short-listed the two most qualified firms to be interviewed. The two firms are listed below in alphabetical order:

Firm and Location

Kal Krishnan Consulting Services, Inc. (KKCS)
Anaheim, California

PQM, Inc. (PQM)
Huntington Beach, California

On January 18, 2017, the evaluation committee interviewed the two firms. The interviews consisted of a presentation to demonstrate the overall qualifications of each firm, proposed QAM's qualifications and relevant experience, and the firms' understanding of the requirements and scope of the Project, and approach to the work plan. Questions were asked relative to the proposed QAM's approach to orient the firm to the Project; actions to oversee audits conducted by Project consultants and contractors; communication regarding findings and corrective actions to management; and improvements to quality processes and procedures implemented on relative transportation projects. Finally, each firm was asked clarification questions specific to the proposal.

After considering the presentations and responses to questions asked during the interviews, the evaluation committee adjusted the preliminary scores for both firms, which changed the overall ranking of the firms. As a result, KKCS is the top-ranked firm with the highest cumulative score. Based on the evaluation of written proposals and interviews, staff recommends KKCS as the firm to provide quality assurance management support for the Project. The firm ranked highest among proposing firms because of its extensive experience with FTA in providing both oversight and quality assurance work, the proposed staff's

experience with all areas of quality assurance supporting complex projects, a detailed work plan that addressed all requirements of the scope of work, and an excellent interview with focused responses to interview questions.

The two short-listed firms submitted comprehensive proposals and conducted detailed interviews. Brief summaries of the evaluation results follow.

Qualifications of the Firm

The two short-listed firms are established firms with relevant experience and resources. Both firms demonstrated experience with FTA quality assurance work and provided quality references.

KKCS is a national full-service project/program management firm with a local office in the City of Anaheim. KKCS has over 15 years of experience serving as project management oversight consultant for the FTA ensuring scope, cost, schedule, quality, and safety objectives are met on FTA-funded projects nationwide. The experience has allowed the firm to develop a comprehensive understanding of FTA operational procedures and quality assurance and quality control plan requirements. Examples of projects where KKCS has completed quality assurance management reviews include the South 200th Link Extension project for Sound Transit, the Green Line extension project for the Massachusetts Bay Transportation Authority, and the Perris Valley Line project for the Riverside County Transportation Commission.

PQM, based in Huntington Beach, is a quality management consulting firm. The firm has experience in providing quality assurance support and audits on FTA-funded projects for the San Diego Association of Governments (SANDAG) for the Mid-Coast Trolley project and quality management support for the Los Angeles County Metropolitan Transportation Authority (LA Metro) on the Crenshaw/LAX Transit Corridor project.

Staffing and Project Organization

The two short-listed firms proposed qualified QAMs and support staff with relevant quality assurance management support service experience. Both firms are currently providing support on SANDAG's Mid-Coast Trolley project.

KKCS proposed a certified QAM with over 40 years of progressive experience in quality assurance and quality control. The proposed QAM has spent the past nine years providing quality assurance leadership on major FTA design and construction projects. Experience on recent complex projects includes serving as QAM for the World Trade Center Redevelopment, including the Transportation Hub and Fulton Street Center. Previous experience includes over 22 years with

the Department of Energy developing and overseeing quality policies and procedures to support nuclear regulatory standards. The proposed QAM was key in the interview process, leading the presentation and providing focused responses to interview questions, demonstrating experience in all areas of quality assurance management, and the importance of the relationship of the QAM to the Project and project team.

PQM proposed a certified QAM with over 25 years of experience in providing quality assurance support services. The proposed QAM served as a quality engineer for OCTA's highway delivery program, and oversight and audit for LA Metro on the Crenshaw/LAX Transit Corridor project, including the FTA annual design and construction audits. The interview demonstrated that the proposed QAM had extensive experience in performing the audit function, but did not highlight experience in managing the quality program in its entirety.

Work Plan

Both firms addressed the scope of work; however, KKCS's work plan was more specific and better aligned with the scope of work, demonstrating a detailed understanding of the needs of the Project and the role of the QAM in relation to the Project.

KKCS presented a detailed work plan with a good discussion on budget, quality control, and potential issues. KKCS presented a sound, easy to understand schedule. During the interview the QAM satisfactorily clarified the level of effort associated with the quality program management function; focusing resources on relationship building, program development, and continuous improvement. With a robust program management in place, the auditing that is part of the consultant/quality management function becomes routine.

PQM presented a detailed work plan with a thorough discussion of the FTA's 15 essential quality elements. The work plan presented was focused on the auditing functions that are a part of the consultant/quality management task. Elements of the quality program management task such as FTA reporting support and program development lacked emphasis, which was acknowledged by the firm in the interview.

Cost and Price

Pricing scores are based on a formula which assigns the highest score to the lowest proposed weighted average hourly rate, and scores the remaining average weighted hourly rates based on relation to the lowest proposed average weighted hourly rate. The weighted average hourly rate as calculated for KKCS, though higher than that of PQM, falls within the range of fully burdened rates for

quality assurance management personnel accepted on current OCTA project management consultant contracts and is, therefore, considered fair and reasonable.

Procurement Summary

Based on the evaluation of written proposals, the QAM's qualifications and experience, work plan presentation, and the information obtained during the interviews, the evaluation committee recommends the selection of KKCS as the top-ranked firm to provide quality assurance management support for the Project. KKCS submitted a thorough proposal and delivered a detailed interview that was responsive to all requirements of the RFP.

Fiscal Impact

Funding for the quality assurance management support services can be accommodated in OCTA's Fiscal Year 2016-17 Budget, Capital Programs Division, through a budget transfer from Account 0051-7519-TS010-OJZ to establish a new line item Account 0051-7519-TS010-Z83. The contract is funded with federal and local funds.

Summary

Staff requests Board of Directors' approval for the Chief Executive Officer to negotiate and execute Agreement No. C-6-1537 between the Orange County Transportation Authority and Kal Krishnan Consulting Services, Inc., in the amount of $429,403, to provide quality assurance management support services for the OC Streetcar project, from contract execution through December 31, 2020.

Attachments

A. Review of Proposals, RFP 6-1537 Consultant Services for Quality Assurance Management Support for the OC Streetcar Project
B. Proposal Evaluation Criteria Matrix (Short-listed Firms), RFP 6-1537 Consultant Services for Quality Assurance Management Support for the OC Streetcar Project
C. Contract History for the Past Two Years, RFP 6-1537 Consultant Services for Quality Assurance Management Support for the OC Streetcar Project

Prepared by:

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Review of Proposals
RFP 6-1537 CONSULTANT SERVICES FOR QUALITY ASSURANCE MANAGEMENT SUPPORT FOR THE OC STREETCAR PROJECT

Presented to the Transit Committee - March 9, 2017

6 proposals were received, 2 firms were interviewed, 1 firm is being recommended.

Overall Ranking	Proposal Score	Firm & Location	Sub-Contractors	Evaluation Committee Comments	Weighted Hourly Rate	Total Proposed Price
1	86	Kal Krishnan Consulting Services, Inc. Anaheim, California	None	Highest-ranked firm overall with project/program management experience. Firm has extensive Federal Transit Administration (FTA) experience. Certified quality assurance manager (QAM) with demonstrated experience in all areas of quality assurance management and program development. Detailed and specific work plan aligned with the scope of work. Focused responses to interview questions; good fit to the project team. Proposed competitive price for anticipated 1,960 hours.	$198.68	$429,403
2	80	PQM, Inc. Huntington Beach, California	None	Second-ranked firm specializing in quality management. Firm has extensive experience providing quality management support on FTA-funded projects. Certified QAM experienced in quality assurance support and audit services. Detailed work plan, focused on the audit function. Less detailed responses to interview questions Proposed competitive price for anticipated 1,960 hours.	$162.48	$370,696

Evaluation Panel:	**Proposal Criteria**	**Weight Factors**
Contracts Administration and	Qualifications of the Firm	15 percent
Materials Management (1)	Staffing and Project Organizat	40 percent
Rail Programs (1)	Work Plan	25 percent
Highway Programs (1)	Cost and Price	20 percent
Transit (1)		
Health, Safety and Environmental Compliance (1)		

ATTACHMENT A

ATTACHMENT B

PROPOSAL EVALUATION CRITERIA MATRIX ("SHORT-LISTED FIRMS")

RFP 6-1537 CONSULTANT SERVICES FOR QUALITY ASSURANCE MANAGEMENT SUPPORT FOR THE OC STREETCAR PROJECT

FIRM: Kal Krishnan Consulting Services, Inc.						Weights	Average Score
Evaluator Number	1	2	3	4	5		
Qualifications of Firm	4.0	4.0	5.0	4.5	5.0	3	13.5
Staffing/Project Organization	4.5	4.5	5.0	5.0	5.0	8	38.4
Work Plan	4.5	4.5	4.5	4.5	5.0	5	23.0
Cost and Price	2.8	2.8	2.8	2.8	2.8	4	11.2
Overall Score	81.7	81.7	88.7	87.2	91.2		86

FIRM: PQM, Inc.						Weights	Average Score
Evaluator Number	1	2	3	4	5		
Qualifications of Firm	4.5	4.5	4.5	4.5	4.0	3	13.2
Staffing/Project Organization	4.0	4.0	4.5	4.5	4.5	8	34.4
Work Plan	3.5	4.0	4.0	4.0	3.5	5	19.0
Cost and Price	3.4	3.4	3.4	3.4	3.4	4	13.6
Overall Score	76.6	79.1	83.1	83.1	79.1		80

The range of scores for the non-short listed firms was 50-74

ATTACHMENT C

CONTRACT HISTORY FOR THE PAST TWO YEARS

RFP 6-1537 CONSULTANT SERVICES FOR QUALITY ASSURANCE MANAGEMENT SUPPORT FOR THE OC STREETCAR PROJECT

Prime and Subconsultants	Contract No.	Description	Contract Start Date	Contract End Date	Subconsultant Amount	Total Contract Amount
Kal Krishnan Consulting Services, Inc.		No contracts awarded				
Contract Type:						$ -
Subconsultants:						
					Sub Total	$ -
PQM, Inc.		No contracts awarded				
Contract Type:						$ -
Subconsultants:						
					Sub Total	$ -

March 9, 2017

To: Transit Committee

From: Darrell Johnson, Chief Executive Officer

Subject: Transit Master Plan - State of OC Transit

Overview

The Transit Master Plan will develop an integrated bus, rail, and paratransit plan for Orange County. This plan will identify future potential transit corridor studies and recommended changes to existing transit service. The State of OC Transit Report presents early findings and draft vision and goals for the transit system.

Recommendation

Direct staff to return to the Board of Directors in May 2017, with the draft Transit Master Plan Investment Framework.

Background

The Orange County Transportation Authority (OCTA) initiated the Transit Master Plan in summer 2016. This process takes a high-level look at long-term transit needs throughout Orange County and will identify a series of corridors suitable for additional transit improvement. These identified priority corridors may then be further studied to recommend appropriate transit capital investment strategies. In addition, the plan will help guide future changes to fixed-route bus service. Projects identified in the plan will inform the OCTA Long-Range Transportation Plan and position OCTA for upcoming transit funding opportunities at the local, state, and federal level.

This report presents initial findings from the State of OC Transit Summary Report, as well as provides draft vision and goals for consideration. Staff will provide regular updates to the Transit Committee (Committee) and the Board of Directors (Board) during the planning process as shown in the graphic below.

Discussion

The Transit Master Plan project team includes representatives from several OCTA divisions and the project consultant. Staff has provided the consultant with data, studies, and policies for the various transit services in and around Orange County. Early visioning meetings were held with 18 stakeholder groups in late 2016, to get their thoughts on the future of transit service. The information gathered was compiled in the State of OC Transit Report, which is described in the following section.

State of OC Transit Report

This report provides an overview of existing transit service in Orange County, including the context in which it operates, the built environment, travel patterns, and demographics. It also summarizes important local and regional plans and policies, describes best practices in the development of rapid-transit corridors, and discusses emerging transportation trends and technologies. Finally, the report includes the transit-related opinions, perceptions, and priorities of a broad range of local stakeholders. A summary of the full report is included as Attachment A. The full report can be downloaded from the project website at www.octa.net/octransitvision.

The key findings from the report are listed below, and further details are provided in Attachment A.

- Three-quarters of existing bus ridership is concentrated on 19 key corridors.
- Bus service is focused on the weekday commuter market.
- Bus routes serve a select number of hubs, destinations, and connection points generally located in central/north County.
- OCTA has begun taking steps to address recent ridership declines.
- Limited funding has constrained ridership growth.
- Land use and demographics present both challenges and opportunities for effective transit service.
- The overall transportation network presents both challenges (disconnected street network in South County) and opportunities (well-connected street grid in central/north County) for effective transit service.
- Long-term transportation trends offer a mixed message (e.g., ease of auto travel, demographic changes, and new technologies).
- Transit use can support greenhouse gas reduction targets.
- The Bravo! lines and future OC Streetcar provide a template for ridership growth.
- Key stakeholder interviews indicate shifting trends, such as the need for travel options and transit services that attract new users.

The report has important background information for the rest of the Transit Master Plan process. Copies will be provided to all stakeholders over the next few months.

Draft Vision and Goals

The project team has also developed a draft vision statement, including goals and objectives for Board consideration. This feedback, will be used to guide the Transit Master Plan process (Attachment B). The draft vision statement is:

> *Provide compelling and competitive transit service that expands transportation choices for current riders, attracts new riders, and supports mobility in Orange County.*

The draft goals areas for transit are enhance, connect, simplify, support, and sustain. Each goal has accompanying objectives that will be used to develop a Transit Investment Framework. The framework document would outline where and when it makes sense to consider additional investments in transit. This includes demand-response services, fixed-route and rapid bus service, bus rapid transit, and fixed-rail. Staff will take Committee and Board input on the vision/goals and will return in May with a draft Transit Investment Framework for consideration.

Next Steps

Staff will return in May with a draft Transit Investment Framework, which will be used to develop transit service recommendations for the study.

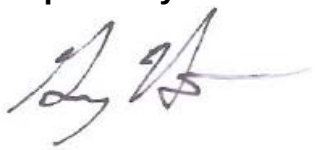
Summary

This report presents findings on the State of OC Transit Summary Report and seeks feedback on the draft vision and goals for the transit system.

Attachments

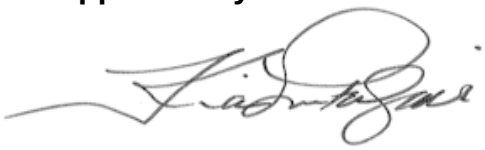
A. OC – State of OC Transit Summary Report – January 2017
B. Draft Vision, Goals, and Objectives – OC Transit Vision

Prepared by:



Gary Hewitt
Project Manager, Transit Planning
(714) 560-5715

Approved by:



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State of OC Transit
SUMMARY REPORT

OCTA

OC TransitVISION

JANUARY 2017

ATTACHMENT A

Prepared for the Orange County Transportation Authority by:

In collaboration with:

CONTENTS

OCTA is developing the OC Transit Vision to define the future of transit in Orange County.

Image Source: Jonathan Riley

1

Context

The Orange County Transportation Authority (OCTA) is the primary provider of public transit service in Orange County. OCTA is developing the OC Transit Vision to define the future of transit in Orange County. The Vision will identify the corridors countywide with the greatest demand and potential and will assess which modes of high-capacity or premium transit, such as streetcar or bus rapid transit (BRT), may be appropriate for each corridor. Finally, the OC Transit Vision will prioritize the most immediately needed projects for near-term development.

The OC Transit Vision process is scheduled to be completed in late 2017. The State of OC Transit Report is an important first step in the process, and the most important findings from that report are included in this Summary Report. This chapter sets the context for the Summary Report by introducing the need for the OC Transit Vision; summarizing OCTA's current service, the history of transit in Orange County, and local and national trends in transit ridership; and introducing transit modes that will be important for the Transit Vision.

WHY A TRANSIT VISION

Service Today

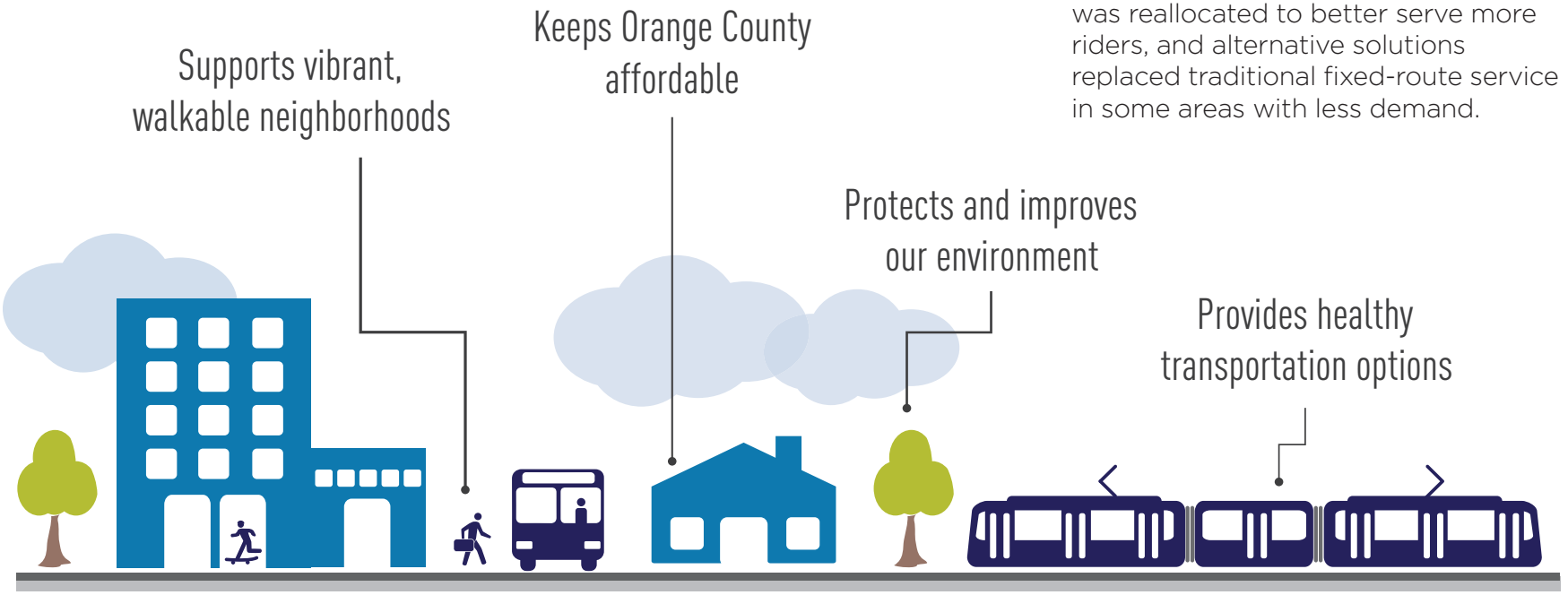
OCTA provides vital transit services across Orange County. OC Bus serves 43 million passengers annually, the most of any Orange County transit provider. Bravo! comprises two rapid bus lines providing higher-quality service than local buses.

The OC Streetcar, which will run from Santa Ana to Garden Grove, is scheduled to open in 2020 as the county's first urban rail line. OCTA also provides special event service, vanpools, and ACCESS service for people with disabilities.

OC Bus 360°

OC Bus 360° is an OCTA initiative to grow bus ridership by taking a fresh look at the service and making changes including technology innovations, promotional efforts, and service changes. The 2016 Bus Service Plan—a critical piece of the effort—was implemented with the goal of providing higher-quality, more frequent, and expanded service in the highest demand corridors. Service from low-demand corridors was reallocated to better serve more riders, and alternative solutions replaced traditional fixed-route service in some areas with less demand.

High-quality transit service...



Addressing Declining Ridership

While funding constraints limit OCTA's ability to address ridership declines, the 2016 Bus Service Plan network restructuring was implemented to increase transit ridership by reallocating bus service to areas where it can be more cost-effective and productive.

OCTA staff continues to work with the board of directors to investigate causes of the decline and to propose creative solutions.

Orange County is experiencing a multiyear decline in transit use: Ridership on OCTA buses has fallen by **37 percent** in the last seven years.

For more on these topics, see **Chapter 2** of the full State of OC Transit Report

Image Source (Right): OCTA

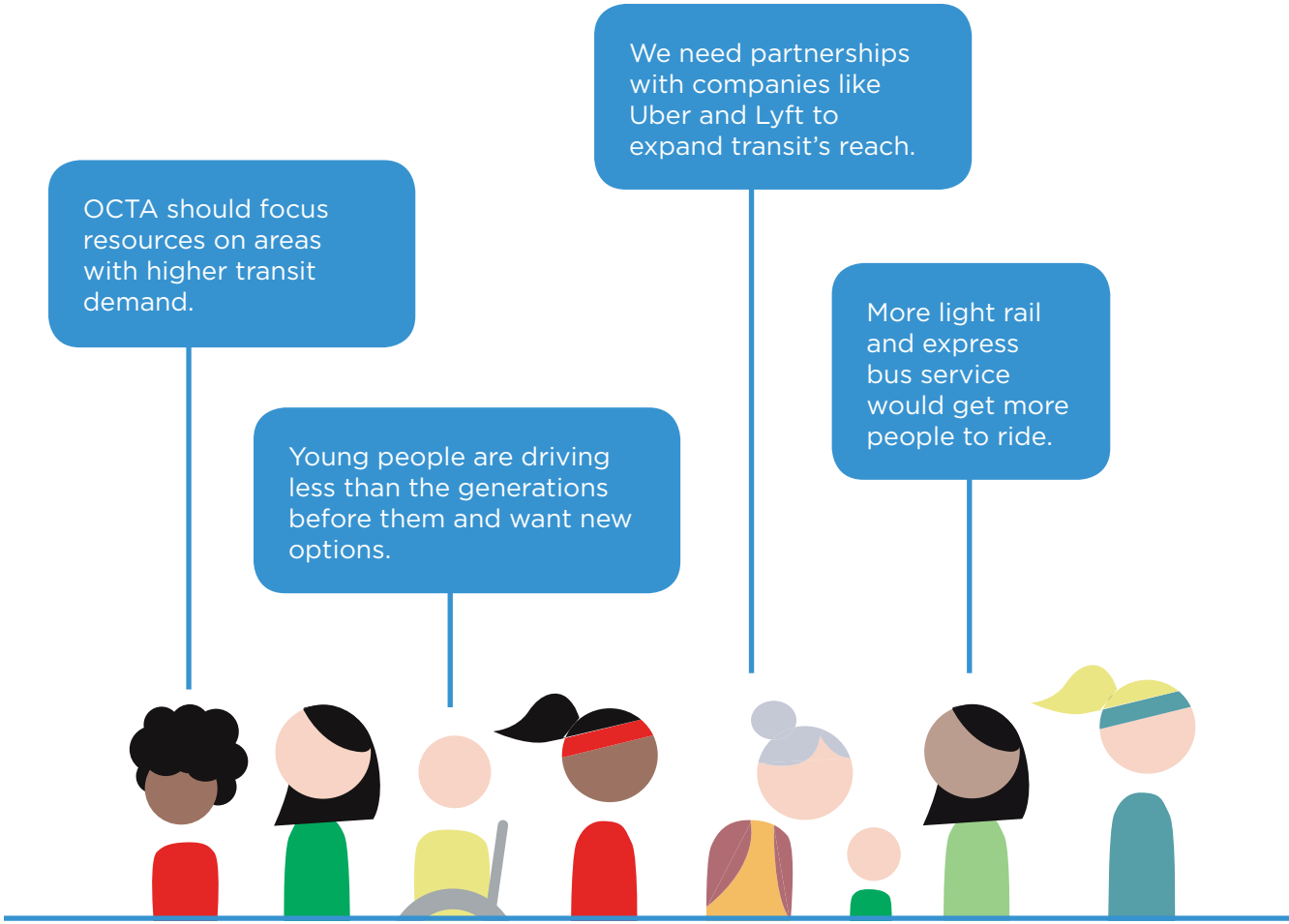
DEFINING THE OC TRANSIT VISION

What the Vision Will Do

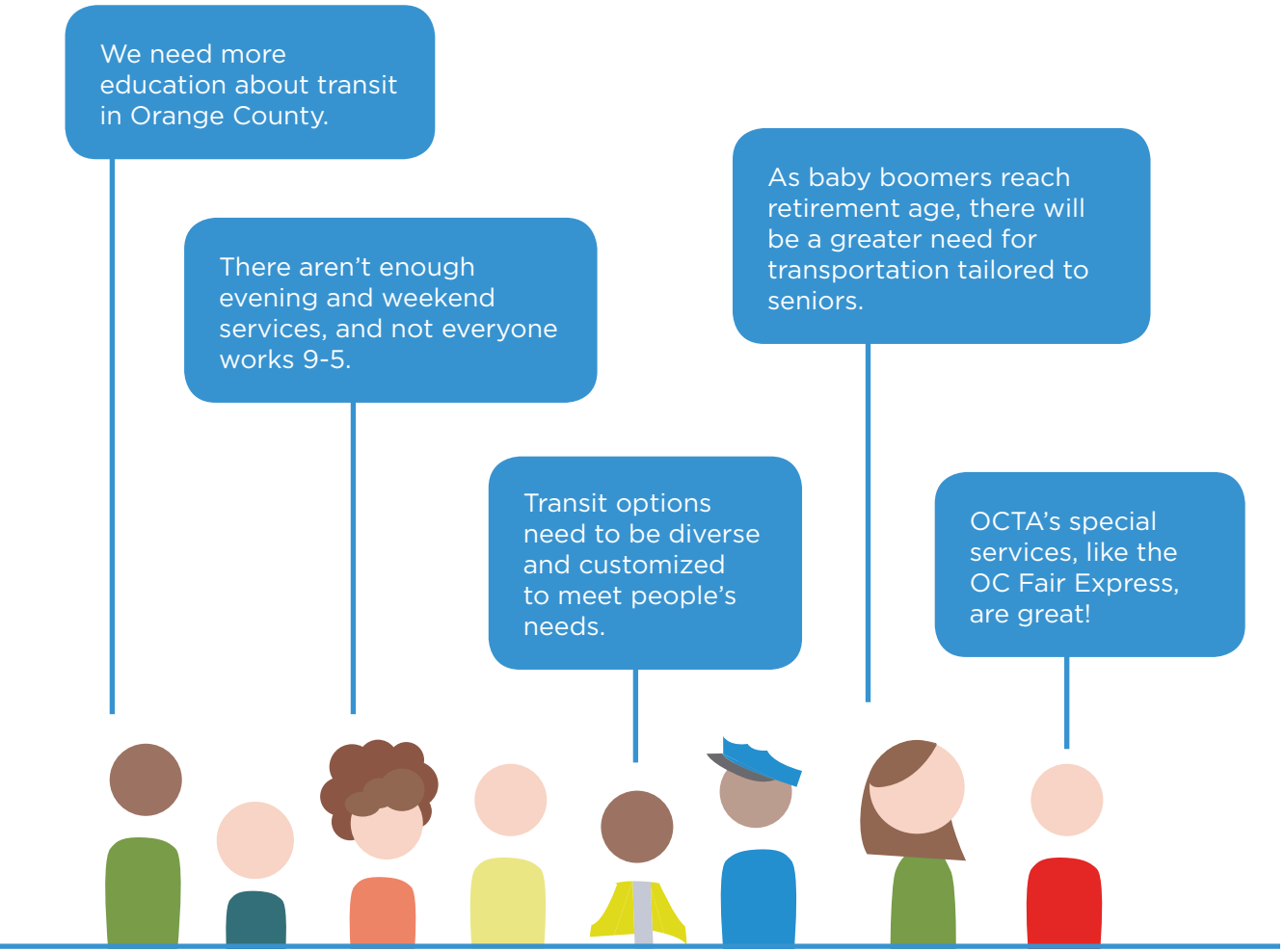
In the coming decades, public transit is expected to have an increasingly important role in Orange County. Changes in demographics, environmental policy, and development will require additional transportation options for residents, employees, and visitors.

To plan for the future, OCTA is developing a Transit Vision, which will be an integrated bus, rail, and paratransit plan. The Transit Vision will establish the 20-year plan for Orange County's transit future, taking a high-level look at long-term transit needs throughout the county as well as important connections to transit projects from other local transit agencies. The Vision also will identify a series of corridors that could lead to smoother, more efficient journeys on public transportation options like bus rapid transit and streetcar.

What People Want from the Vision



Source: Fall 2016 OCTA Stakeholder and Focus Group Meetings



Foundation for the Vision

A review of previous plans and existing policies helps to set a foundation for the OC Transit Vision by establishing the context for current work and identifying recurring themes in regional and local documents:

- The **importance of collaboration** between agencies and the public and between agencies at all levels of government
- The role transit can play in helping to **reduce greenhouse gas emissions**
- The need for a broad range of **convenient travel choices**
- The importance of **integrating transportation with land use planning**
- The likelihood of continuing **constraints on funding**
- The fundamental **reality of geography**, from space constraints in heavily trafficked corridors to dispersed housing and employment patterns
- The need for **multimodal connectivity** within the transportation network

TRANSIT TIMELINE

1904 to 1950

Pacific Electric "Big Red Cars" run from L.A. to Yorba Linda, Fullerton, Santa Ana, and Newport Beach

1959

Disneyland Monorail opens

1972

Orange County Transit District is formed by county voters

1990

Orange County Commuter Amtrak line (today's Metrolink Orange County Line) begins service between San Juan Capistrano and Los Angeles

Original Measure M sales tax is passed by voters, leading to formation of OCTA

1991

Formation of OCTA

87-mile "urban rail" system is proposed, including 47-mile initial network

1994

OCTA Board votes to proceed with studying 28-mile light rail line between Fullerton and Irvine, the "CenterLine"

2000 to 2005

Due to local opposition, further study is discontinued on CenterLine

2006

Measure M2 is approved, including funding for "fixed-guideway" connections to Metrolink

69M
Boardings

OCTA ridership peaks at 69 million annual boardings

2007 to 2008

2008 to 2010

Ridership begins to decline due to recession

2013

OCTA becomes manager of LOSSAN rail corridor between San Luis Obispo and San Diego

OCTA launches Bravo! rapid bus service

2014

Anaheim Regional Transit Intermodal Center (ARTIC) opens

2015 to 2016

OCTA bus service becomes OC Bus and launches real-time arrival information

OC Streetcar receives federal environmental clearance to proceed with additional design and engineering

2016

As part of the OC Bus 360 program, the route network is updated and mobile ticketing is introduced

Harbor Boulevard corridor study begins

2020

OC Streetcar to begin service between Santa Ana Metrolink and Garden Grove

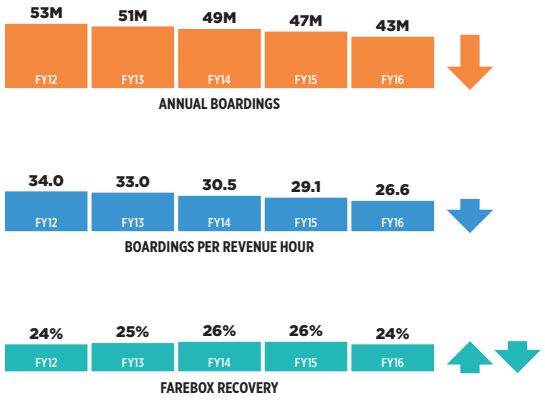
For more on the history of transit in Orange County, see **Chapter 1** of the full State of OC Transit Report.

Source: Images from OCTA, Nelson\Nygaard, and Wikipedia (licensed for reuse)

TRANSIT TRENDS

Recent Ridership Trends

The OC Transit Vision is being developed against the backdrop of a multiyear decline in transit use in Orange County. Since fiscal year 2006-2007, with a peak of more than 69 million annual boardings, ridership on OCTA buses has fallen by 37 percent, to 43.3 million annual boardings in 2015-2016. OCTA has nearly doubled spending on paratransit during the same period, which has limited funding for additional bus service.



Over the past five years, annual OC Bus ridership has **decreased by about 10 million boardings.** System productivity has also decreased from **34 passengers per revenue hour** to **27 passengers per revenue hour.**

Causes of Decline

A variety of additional factors have reduced ridership. Bus fares have increased as much as 60 percent since 2008, while service hours have decreased 14 percent. Rising employment means more people can afford a car, while plummeting gas prices mean people can afford to drive further and more frequently. A new state law allows undocumented immigrants to obtain a driver's license. Most recent transportation capital investments in the county have focused on reducing auto commute time.

Rising Unemployment

Plummeting Gas Prices

Increase in Registered Vehicles

Between 2009 and 2015, the number of registered vehicles in Orange County grew more than **three times faster than the population.**

For more information on transit trends, see **Chapter 4** of the full State of OC Transit Report.

Optimism for the Future

There are also causes for optimism. Nationally, the overall population is driving less, and young people in particular are driving far less. There is a national trend toward transit-friendly urban living after decades of sprawling suburban growth. A diversifying, aging population also bodes well for transit use. Additional freeway and arterial roadway widenings are unlikely, and transit can play a vital role in using the roadway system more efficiently.

Young People Driving Less

Trend Towards Urban Living

Diversifying and Aging Population

Opportunities for Growth

Technological developments such as mapping apps, mobile ticketing, and real-time arrival information make public transit an easier and more attractive option. Car sharing, ride sharing, bike sharing, and autonomous vehicles, on the other hand, present both opportunities for increased connectivity and challenges when they replace transit trips.

Tech Solutions such as Mobile Ticketing

Bike Sharing and Car Sharing

Autonomous Vehicles

WHY DEVELOP A TRANSIT MASTER PLAN?

Transit agencies and cities across the U.S. are developing Transit Master Plans—like OCTA's Transit Vision—to establish how they want their systems and services to grow and change in the next 20 to 25 years.

In 2016, the Nashville Metropolitan Transit Authority's board adopted nMotion, a $6 billion service improvement and capital investment plan to help meet the needs of more than 1 million new residents expected by 2040. In addition to near-term service improvements, the plan calls for expanded rapid transit to new areas and development of comprehensive regional transit coverage.

Seattle's Transit Master Plan, adopted in 2012 and updated in 2015, resulted in an unprecedented level of consensus on Seattle's mobility future, allowing the city to allocate $5 million towards its implementation in 2013-2014, promptly attracting $900,000 in federal support, setting the stage for $2 million in regional partnership funding, and leading to passage of the $930 million Levy to Move Seattle in 2015.

To learn more about these and other transit master plans, see **Chapter 3** of the full State of OC Transit Report.

TRANSIT MODES FOR THE OC TRANSIT VISION

Transit Modes

The capacity and speed of transit are both highly dependent on the transit mode. A transit mode is not the same thing as a transit vehicle. A mode consists of four elements described below.

To learn more about transit modes, see **Chapter 5** of the full State of OC Transit Report.

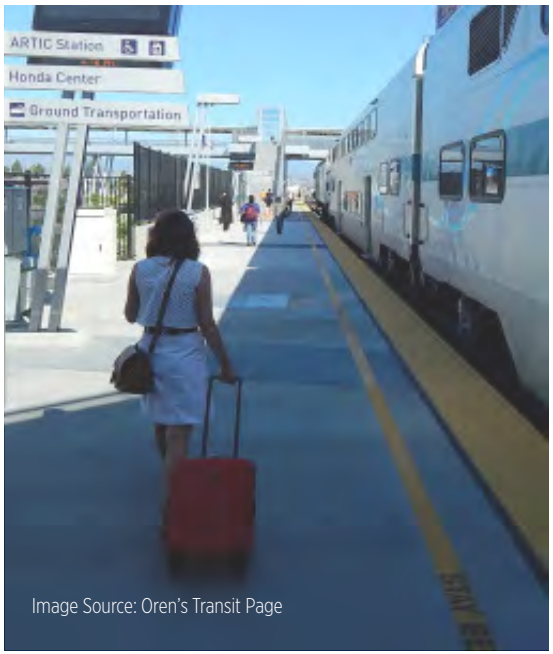


Image Source: Oren's Transit Page

Key Points

The following are critical when considering different transit modes:

- Each element of a transit mode can have a varying impact on performance outcomes such as speed, reliability, capacity, and rider comfort.
- Modes should not be too narrowly defined. Rather, each mode represents a spectrum of characteristics.
- Some characteristics are necessary for (or typical to) certain modes. Others are more-or-less independent of mode.
- Many elements are interdependent, resulting in complex relationships that must be considered carefully in local decision-making processes.

Transit Mode Element	Examples
Right-of-way design and management	Route alignments, dedicated lanes, grade separation, signal priority
Stop design and access requirements	Stop design, stop amenities, real-time vehicle information, prepaid boarding zones
Service model/ operating plan	Vehicle frequency, interlining
Vehicle type	Bus, light rail train, streetcar

TRANSIT MODES

Light Rail

Light rail provides urban rail service that generally operates in an exclusive right-of-way in areas of higher population and employment densities. Light rail vehicles are larger than streetcars (80 to 90 feet long), and are also faster, with top speeds around 65 miles per hour, compared to 45 miles per hour for streetcars. Their greater speed and capacity make them an attractive choice for longer trunk routes, and stations are often a mile or more apart. Cities implementing new light rail lines coordinate land use and development strategies to stimulate economic development, increase density, and improve walkability around new stations.

Rapid Streetcar

Rapid streetcar is not familiar to many Americans, although the term might be used to describe many European “tram” systems. The rapid streetcar can be thought of as a hybrid of streetcar and light rail, and may be appropriate in very specific contexts. The western segment of the OC Streetcar between Santa Ana and Garden Grove, which will operate in an off-street right-of-way with widely spaced stops, fits the definition of rapid streetcar. Rapid streetcar can combine the modestly designed stops of a typical streetcar and willingness to incorporate some single-track segments with a longer alignment and coupled trains.

Streetcar

Streetcar vehicles are small railcars (slightly larger than a 60-foot articulated bus) that typically operate in mixed traffic, without any priority at signals, and make curbside stops. Streetcar lines are relatively short, and services run often and make stops every few blocks. While streetcar service is generally not faster than rapid bus service, streetcars provide a smoother ride than most buses and have been shown to attract adjacent development, which can improve access by bringing destinations closer together.

TRANSIT MODES

Bus Rapid Transit (BRT)

BRT is a high-quality bus service that operates much like light rail and uses dedicated transit lanes. When fully implemented, BRT can decrease travel times, improve corridor safety, and spur economic development. Operational and design elements that set BRT apart from traditional local bus service include enhanced stations with pre-payment and level boarding, dedicated transit lanes, wider stop spacing, traffic signal priority, higher capacity vehicles, specialized branding, and more frequent service.

Rapid Bus (Bravo!)

Rapid Bus is very similar to BRT, but does not operate in dedicated transit lanes. Instead, most service operates in mixed traffic with targeted measures to provide transit priority, such as queue jump lanes (short bus lanes to bypass backups at traffic signals) and signal priority. OCTA operates two Bravo! rapid bus routes on the Harbor Boulevard and Westminster/17th Street corridors.

Express Bus

Express buses make few stops, generally operating from point-to-point rather than along a corridor. Routes are longer than local- or limited-stop bus routes (or streetcar lines), and nonstop segments are often located along freeways or major arterial streets. Stops are curbside or at park-and-ride lots. OCTA operates eight express bus routes.

Local Bus

Local bus routes serve urban and suburban corridors. Most often, local buses share travel lanes with other vehicles and stop as frequently as every block. Close stop spacing makes local bus routes easily accessible to passengers but reduces travel speed. The speed of some local bus services can be improved with transit priority measures or wider stop spacing, such as OCTA's three Xpress routes that have limited stops. However, these routes do not have unique branding or other service quality improvements like those of Rapid Bus or BRT.

Paratransit

Paratransit provides service with specially equipped vehicles for people who are unable to use fixed-route transit services. To comply with the Americans with Disabilities Act, transit providers must offer paratransit services within three-quarters of a mile of any fixed-route service. OCTA's paratransit service is called ACCESS and includes standard curb-to-curb service, which requires trips to be requested in advance; subscription service, which schedules recurring trips, such as a commute trip, without requiring an advance request; and same-day taxi service.

On-Demand

On-demand services vary greatly by community and go by many names, including demand-responsive transit or dial-a-ride. They are characterized by flexible routes served by smaller vehicles that operate according to passenger needs. On-demand services are common in areas of lower transit demand, which are often not easily served by fixed-route transit. Services provided by transportation network companies, such as Uber and Lyft, are offered by the private sector, sometimes in partnership with transit agencies.

Funding constraints have shaped the service that OCTA is able to provide, and reductions in service hours and limited high frequency routes directly impact transit ridership.

Image Source: Jonathan Riley

2

OC Transit Today

This chapter presents important information about OCTA's current service: the mix of services available, the frequency of those services, ridership by stop, and metrics that help to explain how well the system is performing, including in relation to a number of peer systems. Funding constraints have shaped the service that OCTA is able to provide, and reductions in service hours and limited high frequency routes directly impact transit ridership. Another critical piece of the transit system is access to that system, and it can be challenging for people in Orange County to make seamless connections to transit.

SERVICE

Transit Service in Orange County

OC Bus is OCTA's largest and most visible service, providing 65 routes and serving 43 million passengers annually throughout Orange County. OC Bus also provides service to major events and destinations, as well as vanpools and ACCESS service for those with disabilities.

OCTA's **Bravo!** comprises two rapid bus lines, providing service that is faster and more reliable, convenient, and attractive than local bus service. Stops serve only the busiest locations, such as transfer points and major destinations.

Scheduled to open in 2020, the **OC Streetcar** will be Orange County's first urban rail line. It will run more than four miles from the Santa Ana Regional Transportation Center to Garden Grove, intersecting with existing Bravo! routes to form a key transit connection. A feeder connection to the Metrolink rail spine, the streetcar is envisioned as the first segment of what could become a larger streetcar network.

Orange County is served by both **Amtrak Pacific Surfliner** and **Metrolink** regional/commuter rail lines. The LOSSAN rail corridor is a north-south rapid transit spine connecting the county to Los Angeles and San Diego. **LA Metro** operates service connecting to 10 OC Bus routes within Orange County. Agencies in neighboring counties also provide limited connections to Orange County transit services.

More locally, numerous communities offer a variety of circulators, shuttles, and rideshare products.

Image Source: santaanatransitvision.com

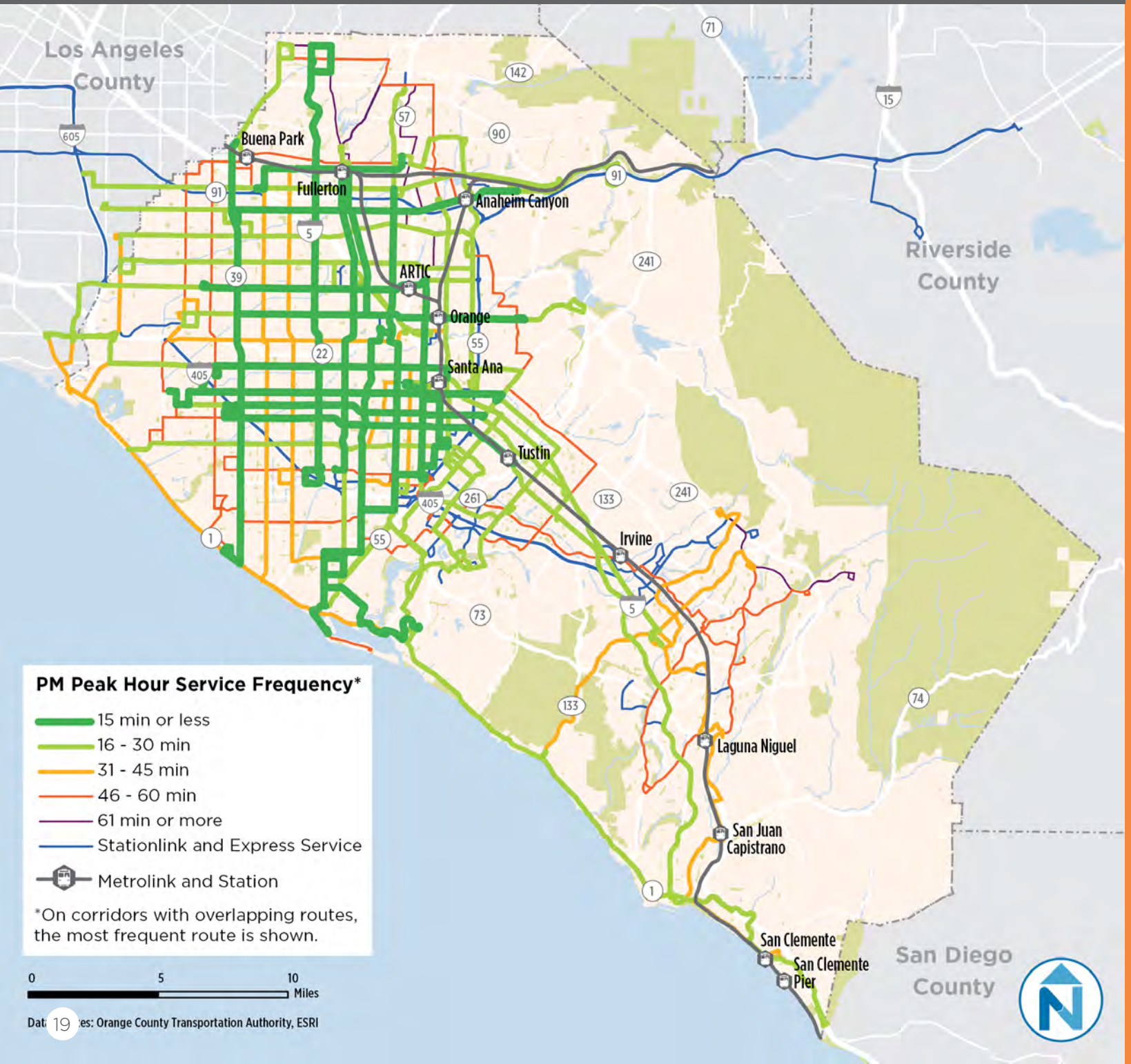
For more on transit service, see **Chapter 2** of the full State of OC Transit Report.

Transit Service and Costs by Mode

Operating Costs, Boardings, and Passenger Miles by Mode (2008 and 2015)*

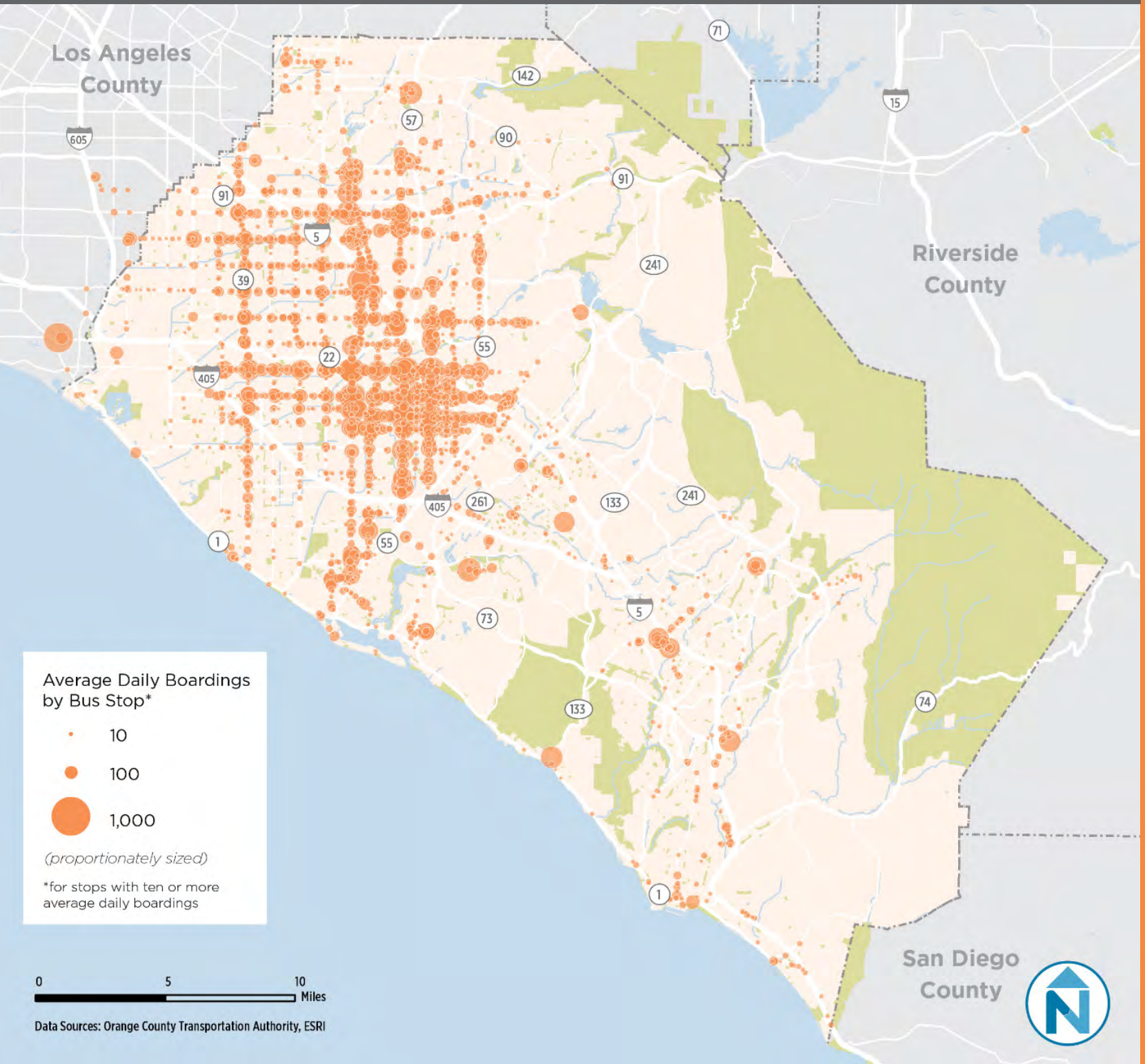
* Percent totals may not equal 100% due to rounding.

WEEKDAY PM PEAK HOUR SERVICE FREQUENCY



- The frequency of transit service directly impacts ridership: people are far more likely to use frequent services (those that operate every 15 minutes or better) than services that arrive less often.
- This is particularly true for people who have a choice about whether to ride transit or drive to their destination.
- The map to the right shows weekday afternoon peak frequency on OCTA routes; corridors on which multiple routes operate show levels of service provided by all routes combined.
- Generally, frequency levels match weekday ridership patterns, and OCTA's high ridership corridors are supported by 15-minute or better service.

WEEKDAY BUS BOARDINGS



- Ridership is notably higher north of State Route 55 and is concentrated heavily in Santa Ana.
- Ridership is highest where corridors intersect. The Harbor Boulevard and Westminster Boulevard corridors served by Bravo! routes stand out as major spines for the system.
- Beach Boulevard, which is west of the highest ridership concentration, also has a strong ridership market.
- In South Orange County, weekday ridership centers around Metrolink stations and transit hubs such as the Laguna Hills Transportation Center, Saddleback College, as well as local high schools.
- Ridership declines overall on Saturday and Sunday but maintains a similar pattern.

PERFORMANCE INDICATORS

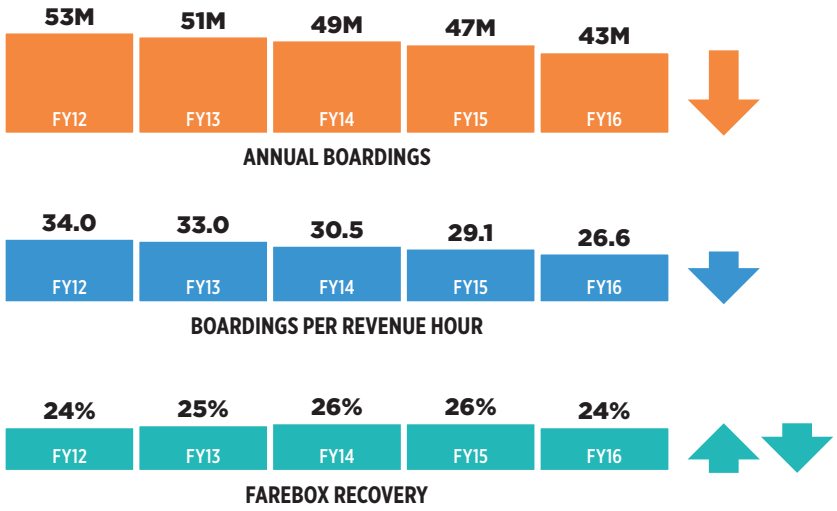
OC Bus Performance

Over the past five years, annual OC Bus ridership has decreased by about 10 million boardings to 43 million annual riders. System productivity has also decreased from 34 to 27 passengers per revenue hour, following the decline in ridership. Bus farebox recovery has been relatively unchanged, varying between 24 percent and 26 percent.

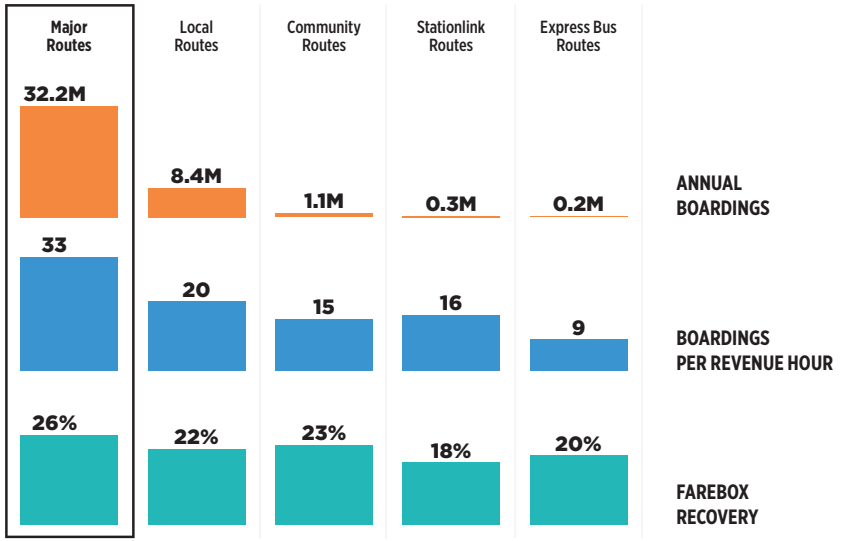
OC Bus operates 65 bus routes, each of which is classified into one of five types of bus service. Each category of service has a different purpose and design characteristics, influencing how the category typically performs. Performance indicators for each category of service in 2016 are shown below.

OCTA's major corridors—routes that operate seven days a week, nearly every 15 minutes or better in peak periods, and serve the densest parts of the OC Bus service area—carry the majority of passengers and are the most productive routes in the system. **As a group, these 19 routes carry more than three-quarters of the annual system ridership.**

Ridership and Farebox Recovery by Year (2012 to 2016)



Ridership and Farebox Recovery by Category of Service (2016)

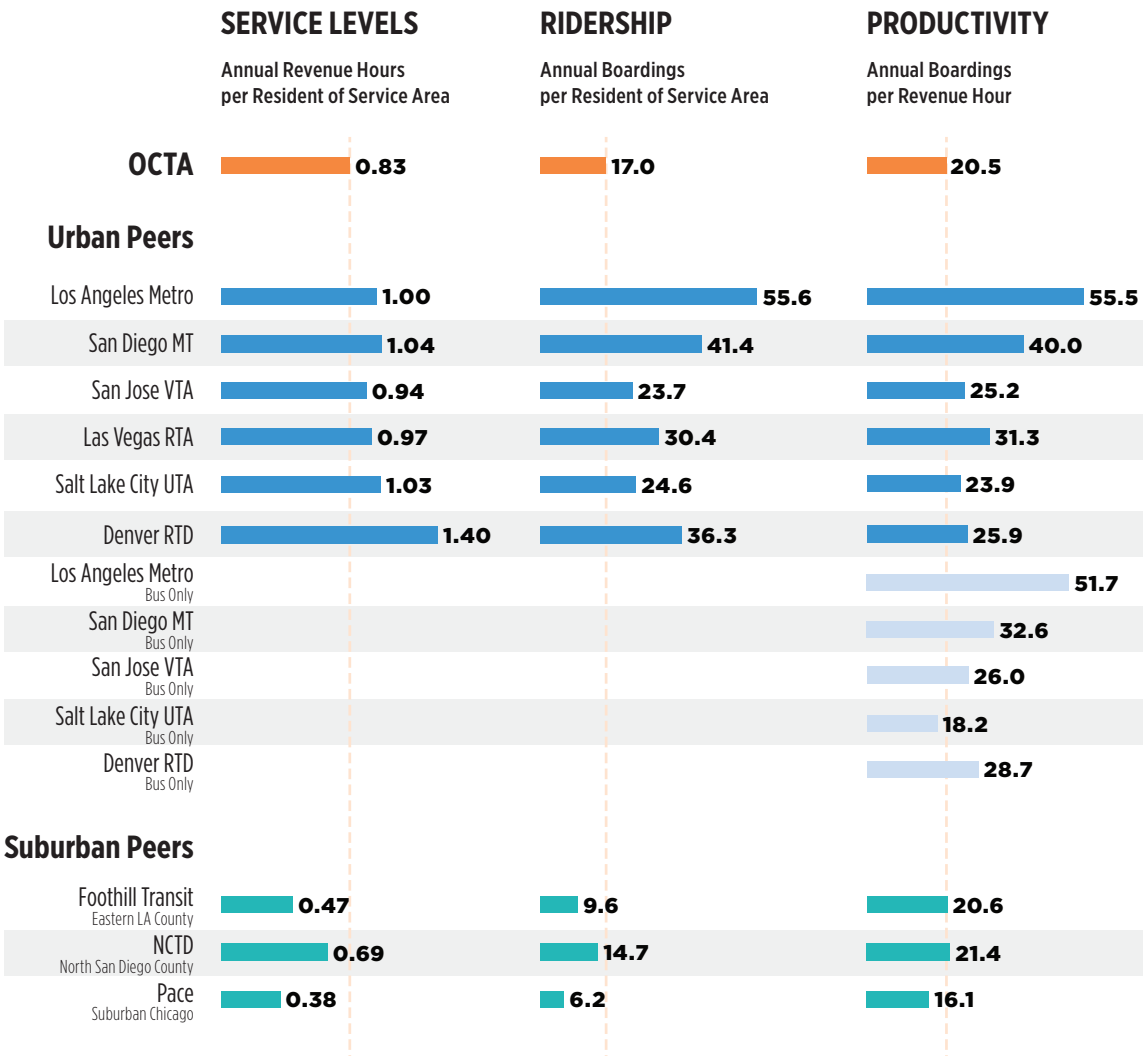


Peer Comparison

The graphic to the left shows how transit service and use in Orange County compares to select peer cities and regions. **In general, OC Bus performs well relative to other large suburban systems. However, Orange County has characteristics of an urban area—and OC Bus underperforms relative to systems in other western cities.**

OCTA falls behind its more urban peers in the southwest (Los Angeles, San Diego, San Jose, Las Vegas, Salt Lake City, and Denver) when it comes to service productivity, which is the number of riders boarding per revenue hour. However, OCTA does keep pace with suburban operators in the San Gabriel Valley, northern San Diego County, and suburban Chicago. In terms of both annual boardings per person living in the service area and amount of service offered (hours per capita), OCTA falls in between its suburban and urban peers.

For more on transit performance, see **Chapter 2** of the full State of OC Transit Report



ACCESS AND CONNECTIONS

Seamlessly connecting between routes and modes is an important element of a successful transit system. In Orange County, these connections largely occur at transit hubs such as Metrolink stations.

Easy and convenient access to stops and stations—the first-/last-mile challenge—is fundamental to the success of any transit system. In OCTA's most recent passenger survey, 81 percent of respondents walked to their stops.

Yet walking to a bus stop in Orange County can be slow, indirect, and unpleasant. A poorly connected street grid often forces people to walk blocks out of their way. Long distances between crosswalks and long waits at signals exacerbate the issue. Uncomfortably close high-speed traffic, poorly designed intersections, and missing sidewalks can make walking disagreeable at best and unsafe at worst.

For more on access and connections, see **Chapter 2** of the full State of OC Transit Report.

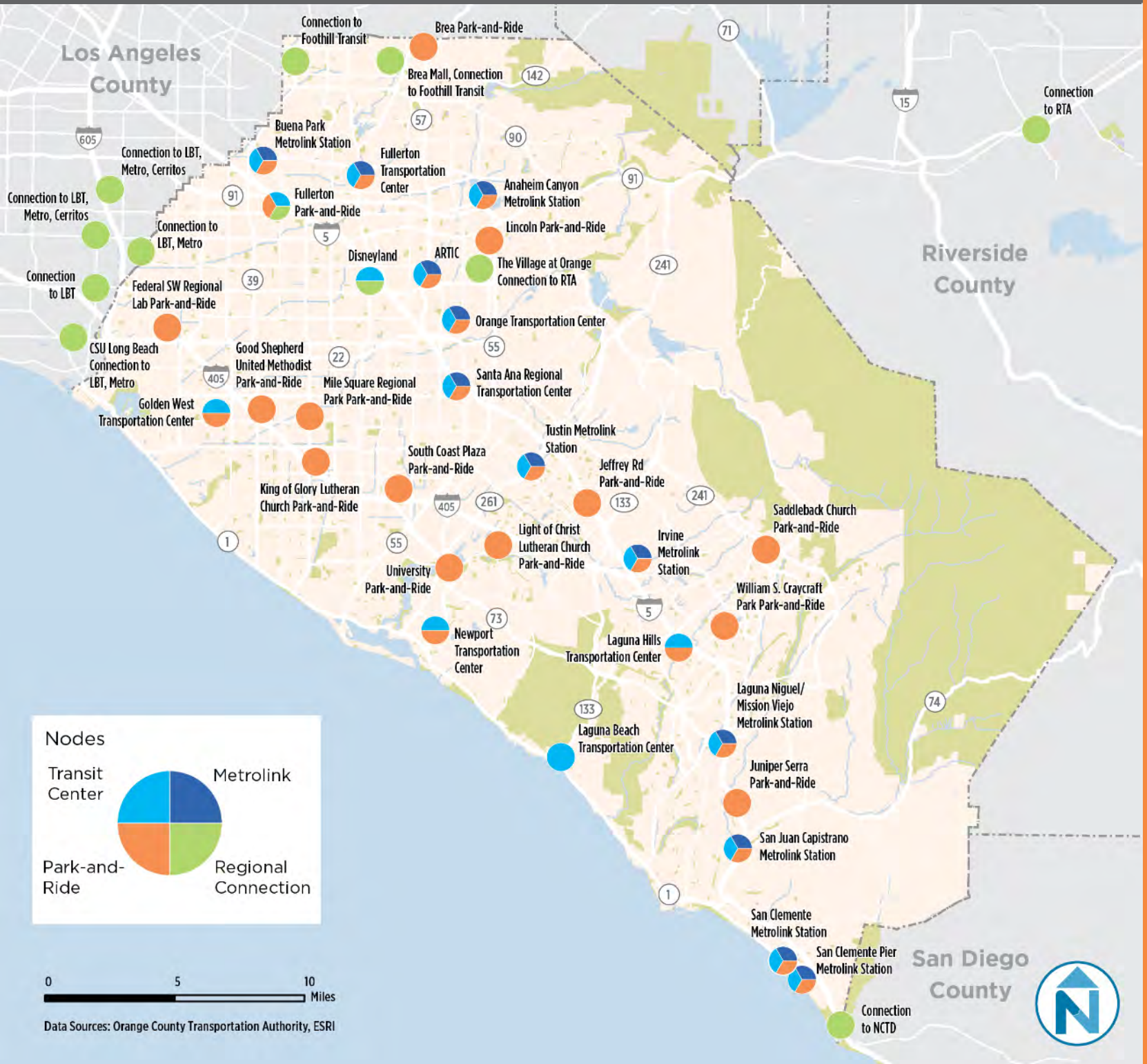
Transit access can be improved in many ways, from direct investments in new crosswalks to long-term land use changes creating a more pedestrian-scaled built environment. Targeted investments in the half-mile around major transit hubs could reap outsized benefits.

The county's bikeway network, created and maintained through a partnership between OCTA and local cities, features more than 1,000 miles of designated bike routes. Facilities vary from sharrows and dedicated bike lanes to off-street bike paths such as the Santa Ana River Trail.

Transit access can be improved in many ways, from direct investments in new crosswalks to long-term land use changes creating a more pedestrian-scaled built environment.

Image Source (Both Images): OCTA

ORANGE COUNTY TRANSIT NODES



- Orange County transit hubs include Metrolink stations, OCTA park-and-rides, and off-street bus transfer centers.
- The hubs serve as major points of connection between transit routes and between transit and other modes of transportation.
- Amenities at Orange County transit hubs include waiting and seating areas, shelters, transit system information, restrooms, bicycle lockers or racks, and vehicle parking.

To understand where transit service is needed both today and in the future, the OC Transit Vision looks at travel patterns and demand for service.

Image Source: OCTA

3

Transit Markets

To understand where transit service is needed both today and in the future, the OC Transit Vision looks at travel patterns and demand for service by considering the following factors:

- Land use and the built environment, including current and future land uses, current and future population and employment density, and other major trip generators (colleges and universities, for example)
- Demographics, including age, income, and auto ownership
- Travel patterns and transit demand, including origins and destinations for all modes as well as an assessment of future transit demand

This chapter introduces the factors that influence demand and the areas of Orange County where transit service is most likely to be needed in the next 20 years.

TRANSIT DEMAND

Transit demand is influenced by population and employment density, land use diversity, urban design, regional destinations, distance to quality transit, and demand management.

Orange County evolved around the car, with commercial development located primarily in business parks and residential development located largely in single-family subdivisions. The last few decades have seen a growth in smaller units and multifamily housing as the region's demographics have changed.

Single-family homes still constitute the largest active land use in Orange County, covering 22 percent of the county. Potentially rich transit markets such as multifamily and mixed-use properties tend to be clustered throughout the county, making those centers easier to serve by transit. South County has lower densities and a disconnected street network that does not generate significant transit demand.

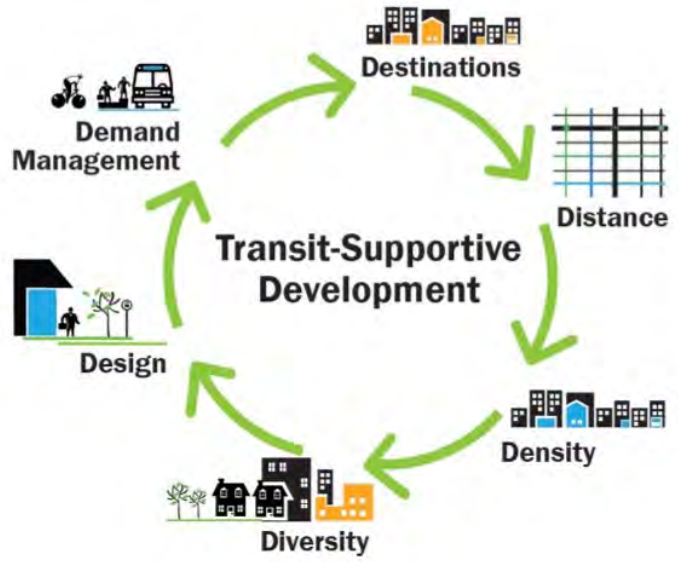
"The Depot at Santiago," located across the street from the Santa Ana Regional Transportation Center, broke ground on 70 units in August 2016.

Image Source: Bassenien Lagoni Architects

Orange County is home to major attractions that draw visitors from all over the world.

Image Source: Noel T. Braymer

Recent OCTA surveys of existing customers and people who do not use transit today found that both groups want better service frequency and faster transit travel times. Current riders also expressed a need for expanded weekend and evening service, while non-riders shared preferences for additional express routes and service closer to major destinations.



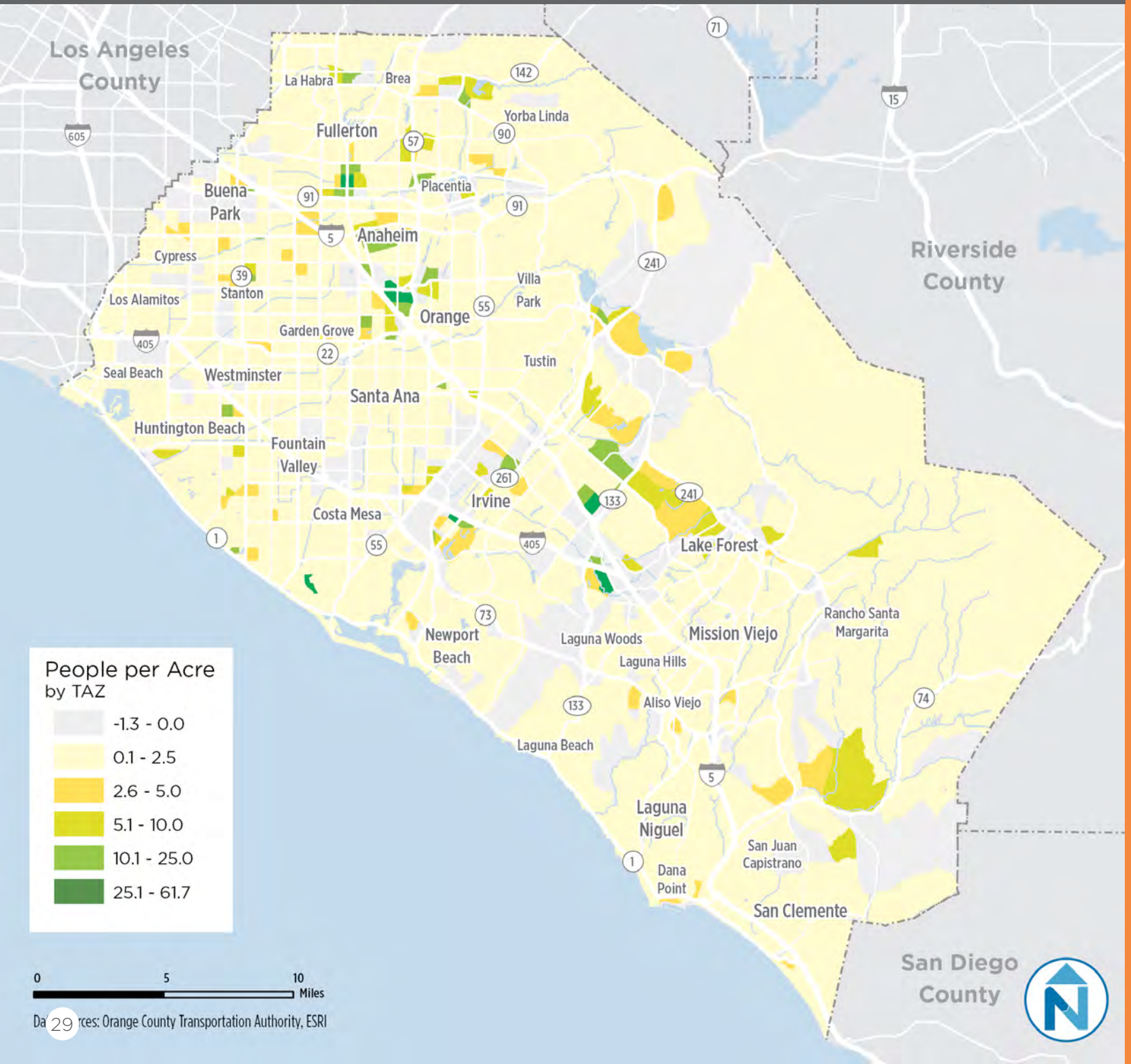
For more on transit demand, see **Chapter 6** of the full State of OC Transit Report.

Pedestrian conditions vary across Orange County. While major streets are challenging to cross throughout the county, North/Central County feature a well-connected street grid providing more direct paths to transit stops and other destinations. Pedestrian connections to transit are very limited in newer areas and much of South County.

Key destinations in Orange County include colleges and universities, high schools, shopping malls, medical facilities, and major attractions such as theme parks, beaches, and sports stadiums.

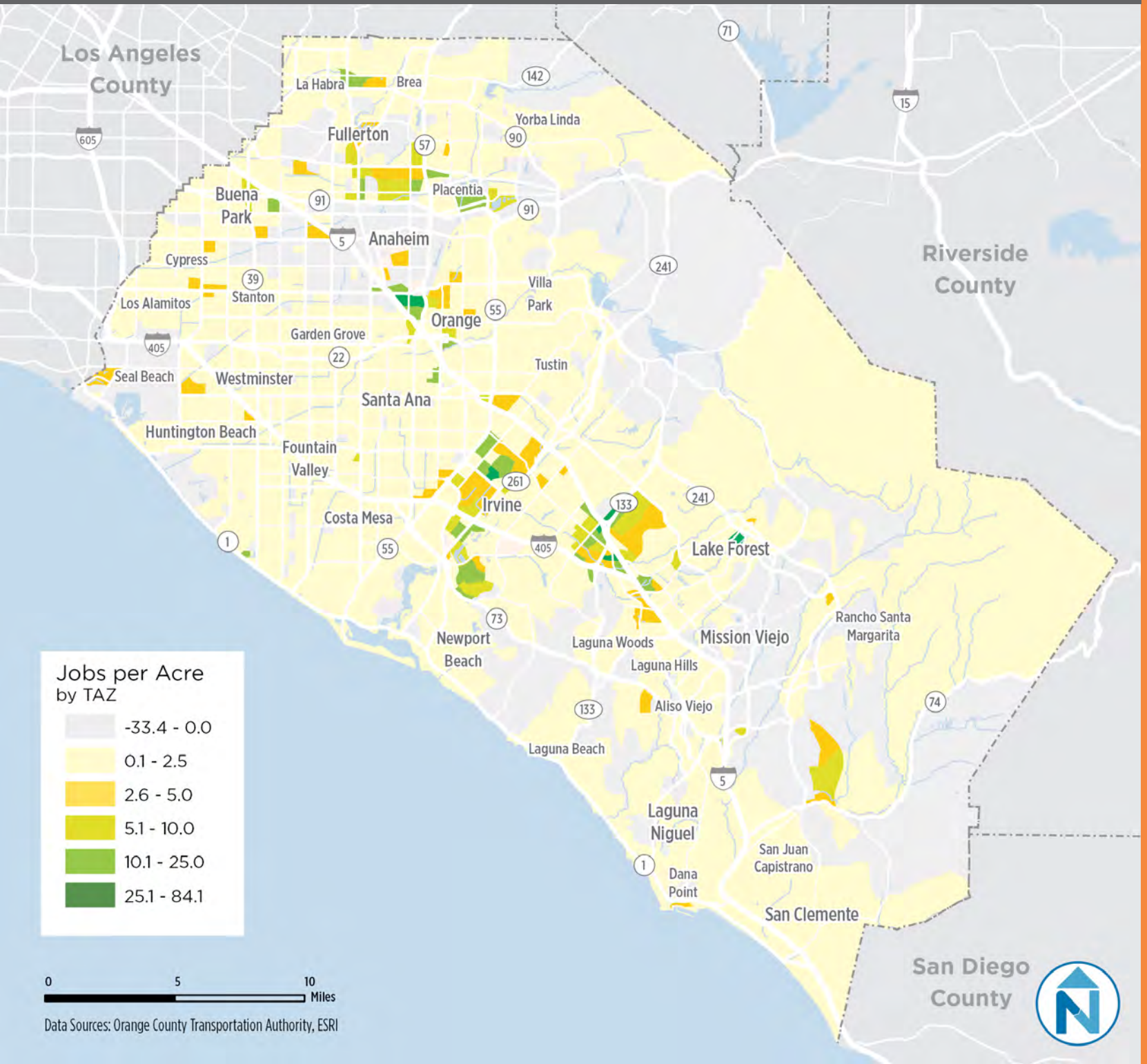
The population of Orange County is just over 3 million people, making it the third most populous county in the state. Over the next two decades Orange County's population is expected to grow to over 3.6 million people, representing an increase of more than 21 percent between 2010 and 2035. Likewise, total jobs are forecasted to reach almost 2 million, an increase of approximately 47 percent between 2010 and 2035.

PROJECTED CHANGE IN POPULATION DENSITY 2010 – 2035



- Neighborhoods with major projected increases in population density are fairly limited. Exceptions include the Platinum Triangle in Anaheim, Laguna Altura and Cypress Village in Irvine, Westside in Costa Mesa, and downtown Fullerton.
- Areas with low existing population density projected to see moderate growth include the western side of State Route 241 north of Lake Forest and the State Route 74 corridor near Rancho Mission Viejo in the southern half of the county.
- As with existing population density, areas with the highest projected population density are found throughout Santa Ana and in Anaheim.

PROJECTED CHANGE IN EMPLOYMENT DENSITY 2010 – 2035



- Even more so than population density, patterns of projected employment density are relatively unchanged from existing patterns.
- Areas with the highest projected employment density include the Irvine Business Complex, downtown Santa Ana, and major areas of activity like Disneyland and large shopping centers.
- Areas with major projected increases in employment density are limited, with the exception of the Platinum Triangle and areas near the Irvine Business Complex, UC Irvine, and the Irvine Spectrum.

WHO RIDES TRANSIT

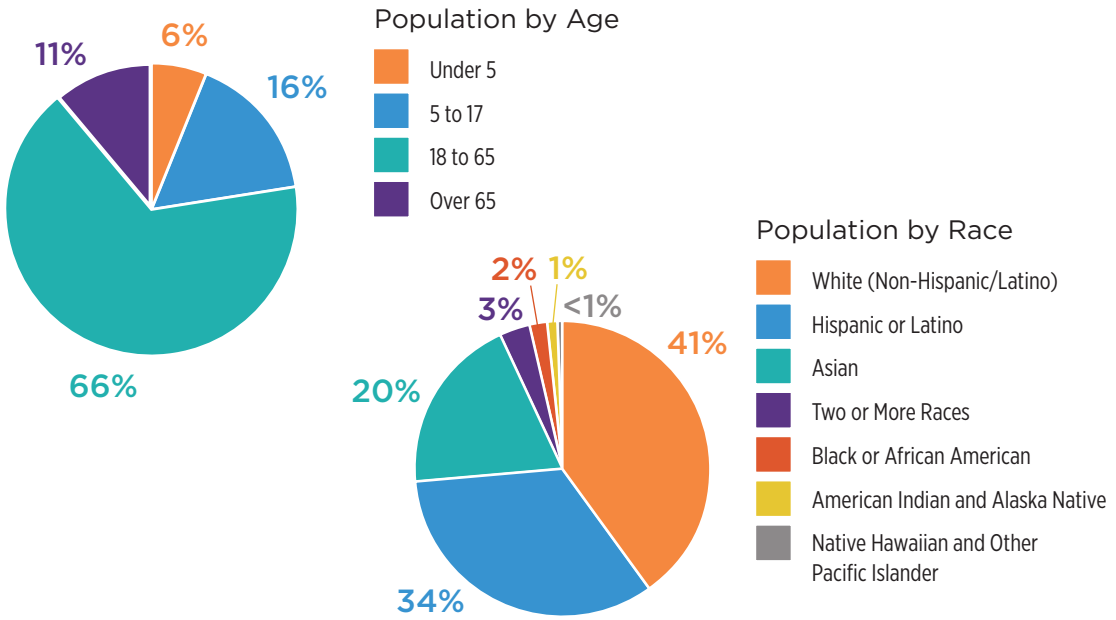
It is impossible to understand transit demand without also understanding who rides transit. Nationally, transit is most heavily used by students and retirees, by people with lower incomes, by those with disabilities, by non-whites and recent immigrants, by larger households, and by those with limited English proficiency. These trends hold especially true in autocentric communities lacking high-quality, high-frequency, all-day transit operating in a walkable environment.

The Transit Vision looks at where there are Orange County concentrations of demographic groups that tend to use transit more frequently. These findings help to inform the analysis of transit markets and will be important factors in identifying priority transit corridors:

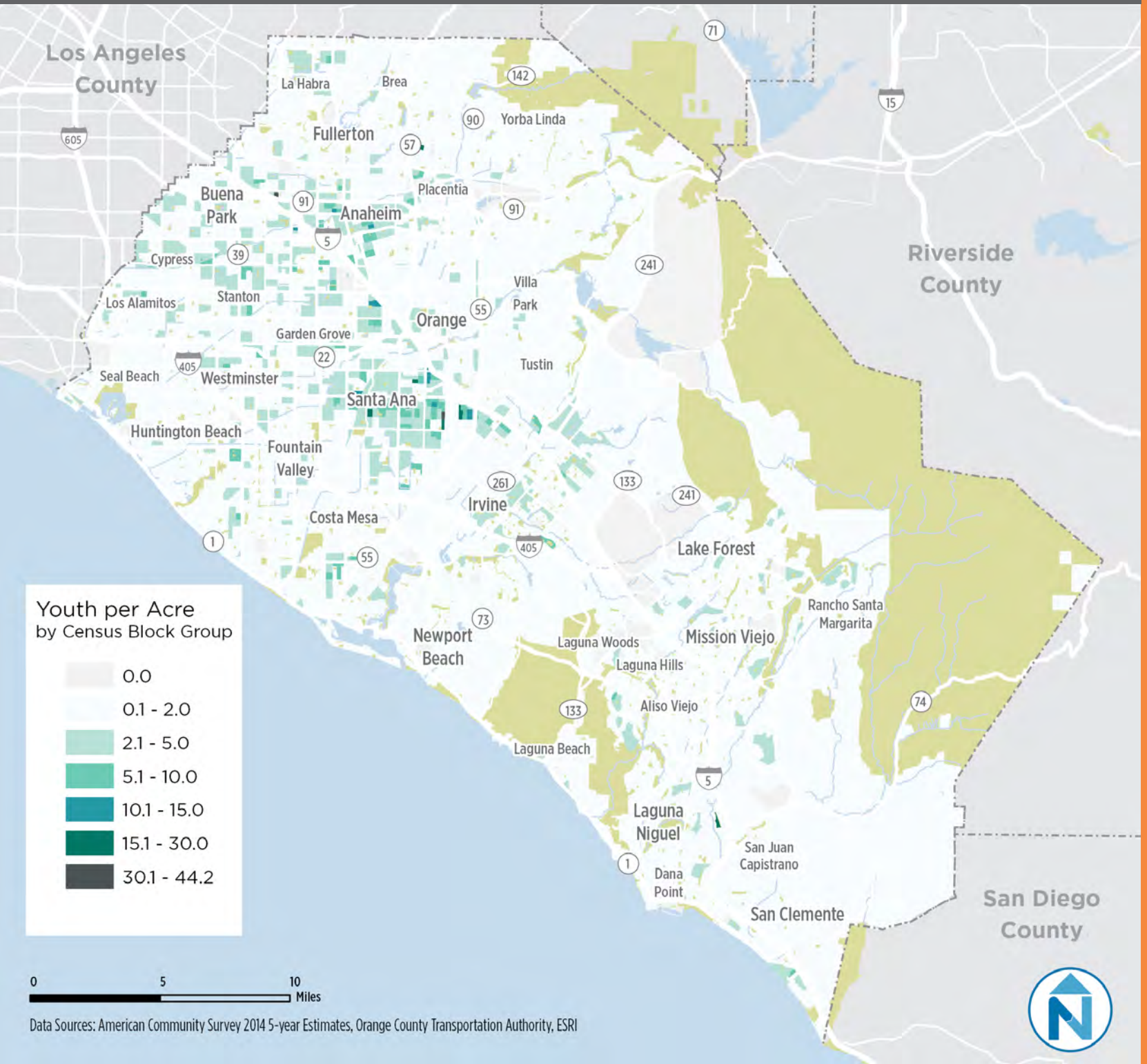
- In Orange County, the largest **senior populations** are found in a few distinct clusters, such as gated retirement communities, while moderate densities are widely dispersed throughout residential parts of the county.
- Areas of the county with the highest density of **low-income households** are found in North/Central County, corresponding to the highest population densities.
- Clusters of people with **disabilities** correlate to areas of the county with higher population density, such as Santa Ana. Overall, most census block groups throughout the county have fewer than two residents with a disability per acre.
- White populations are most prevalent along the coast and in the southern half of the county, while **non-white populations** are far more prevalent in the northern half of the county.
- Areas with the greatest density of **large households** (more than five people) and **limited English proficiency** are consistent with the areas of highest population density, such as central Santa Ana.

For more on who rides transit, see **Chapter 6** of the full State of OC Transit Report.

Demographics of Orange County (2015)



YOUTH AGE 10 – 17



Data Sources: American Community Survey 2014 5-year Estimates, Orange County Transportation Authority, ESRI

- People under 18 are a strong ridership group in many communities. Young people will use transit if it is affordable and meets their educational and recreational transportation needs.
- Today, approximately 22.6 percent of Orange County residents are under the age of 18, which is consistent with state and national percentages.
- The northern half of Orange County, particularly around Santa Ana and Anaheim, has clusters of higher density youth populations.
- In general, areas with higher density youth populations correspond to areas with higher rates of low-income households, households speaking limited English, and large average household size.

TRANSIT PROPENSITY

Overview

Transit propensity is the likelihood that an individual will use transit. It is based on a range of factors, from the quality of available transit to demographics and surrounding land use.

Based on extensive data analysis, the following six factors best predict Orange County locations with a high concentration of people likely to use transit:

- **Per-Capita Income**
- **Intersection Density (Intersections Per Square Mile)**
- **Households Making Less Than $45,000 Per Year**
- **Total Employment (Number of Workers)**
- **Approach Volumes at Intersections (Average Daily Traffic)**
- **Employment Density (Jobs Per Acre)**

For more on transit propensity, see **Chapter 6** of the full State of OC Transit Report.

Volumes and Intersection Density

Approach volumes at intersections are an indicator of major destinations and trip generators nearby. Areas with heavy traffic include those near job concentrations, as well as retail areas and major destinations such as theme parks.

Harbor Boulevard boasts major and diverse destinations and has high volumes of traffic with people trying to reach those destinations.

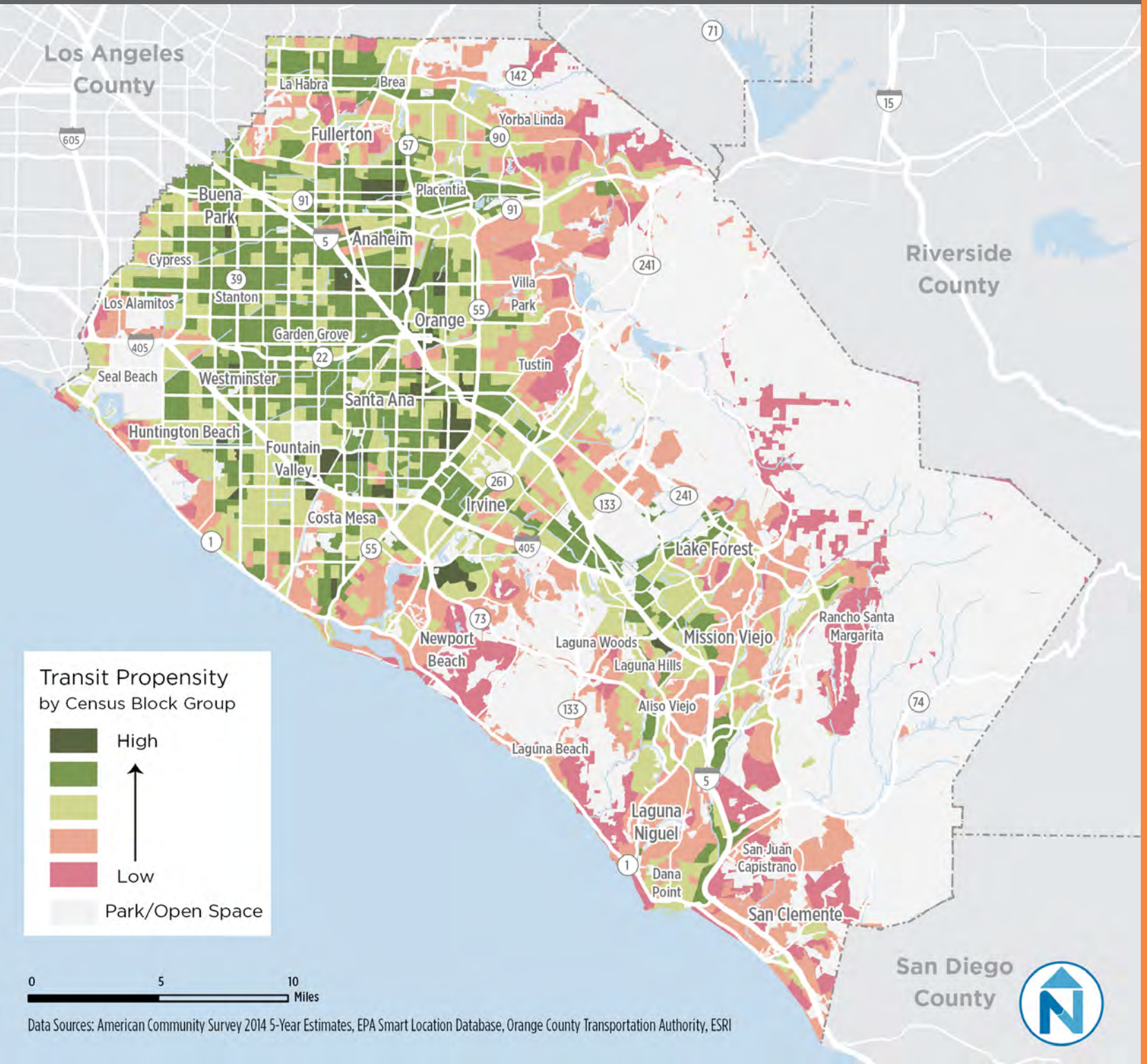
Image Source: CNC Engineering

Intersection density is an indicator of both the connectedness of the street network and the presence of small blocks, which combine to reduce walking distances and foster walkable, transit-friendly neighborhoods.

Intersections in downtown Santa Ana are close to one another, promoting easy walking and good transit access.

Image Source: Voice of OC

TRANSIT PROPENSITY



- In Orange County, most areas of high and medium-high transit propensity are located in the urban core of North/Central County, most notably in Santa Ana and Anaheim. There are, however, areas of relatively high propensity throughout Irvine and south along the I-5 corridor.
- Lower-income individuals and households—those more likely to rely on transit—are highly concentrated in the urban core of North/Central County. The Irvine Business Complex boasts the largest concentration of jobs in Orange County. However, it is located in an especially auto-oriented part of the county, and features white-collar jobs in a suburban office park: it does not currently generate significant transit ridership.
- Wealthier, auto-centric communities along the coast, to the east, and in much of South County demonstrate lower levels of transit propensity.

The State of OC Transit brings together a diverse set of information to inform the OC Transit Vision.

Image Source: Jonathan Riley

4

Key Findings

The State of OC Transit brings together a diverse set of information to inform the OC Transit Vision. This chapter synthesizes the findings from preliminary analyses to shape areas of focus for the development of the Vision. The work that informed these key findings is introduced in the first three chapters of this Summary Report:

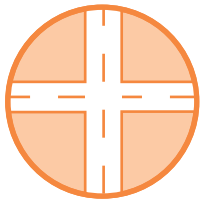
- An analysis of the existing fixed-route transit system in Orange County
- A review of plans and policies that provide context for the OC Transit Vision
- An overview of recent trends in transit
- A review of industry best practices in the design of high-capacity transit service
- A market analysis of current and projected future travel patterns and demand for transit service in Orange County
- Initial findings from interviews with community stakeholders

Image Source: Orange County Register

OVERVIEW

The analyses from the previous chapters point to a number of major findings, including notable issues, opportunities, and challenges that together provide a framework for the OC Transit Vision.

For more on key findings, see **Chapter 8** of the full State of OC Transit Report.



The majority of existing OC Bus ridership is concentrated in a few key corridors.

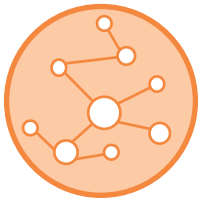
OC Bus service is concentrated during peak periods.

OC Bus service is focused on a select number of hubs, including destinations and connection points.

OCTA has begun taking steps to address recent ridership declines.

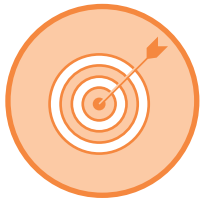
Limited funding has constrained ridership growth.

Land uses and demographics in Orange County present both challenges and opportunities for effective transit service.



The overall transportation network of Orange County can make operating transit service challenging

Long-term trends offer a mixed message.



Increased transit use can support greenhouse gas reduction targets.

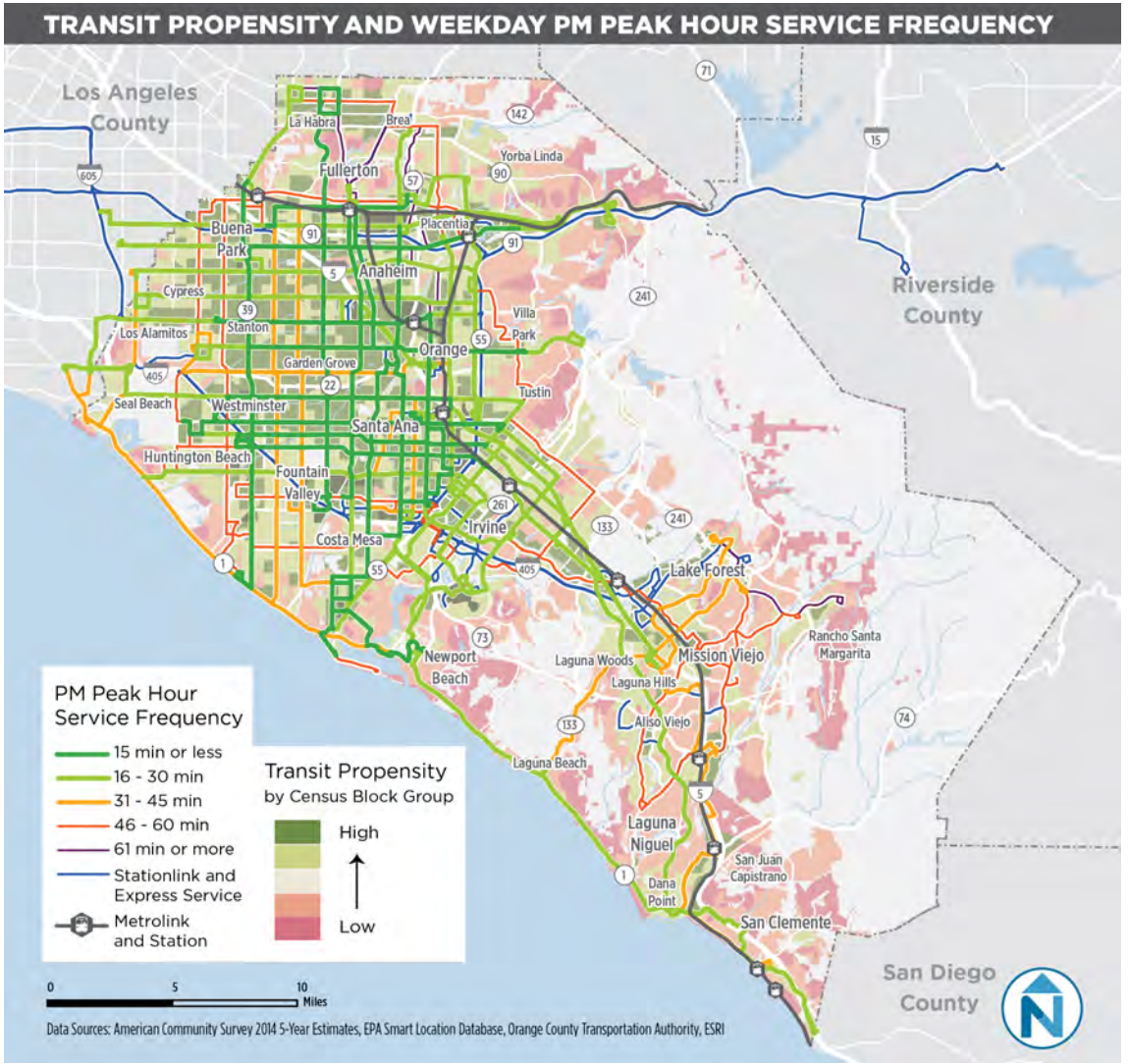
The future OC Streetcar and Bravo! lines provide a template for ridership growth.

KEY FINDINGS

Concentrated Ridership

OC Bus service is heavily concentrated in a few corridors, and even more so after the 2016 Bus Service Plan restructuring. Approximately 75 percent of boardings are on just 19 routes, out of a total of 65 routes in the system. Fully one-quarter of ridership is in just three corridors.

The fact that transit demand is so concentrated in major corridors points the way toward a strategy of targeted investments that will benefit large numbers of people.



Service Concentrated in Peak Periods

OCTA operates most of its service during weekday peak periods. It provides only limited service on weekend mornings and evenings, or to special events such as Angels games.

OCTA is constrained by funding. It must choose wisely when allocating resources, but might consider providing additional service for late-shift workers, to special events, and to facilitate car-free living. At a minimum, OCTA should explore opportunities to extend frequent service by an hour or two after the evening peak.

Image Source: Photomation

KEY FINDINGS

Transit Hub Connectivity

The fixed-route transit system in Orange County is organized around more than 30 major transit hubs.

Expanding first-/last-mile connectivity to these hubs by deploying shuttles and accommodating services such as Uber and Lyft is a cost-effective strategy to expand transit reach and use.

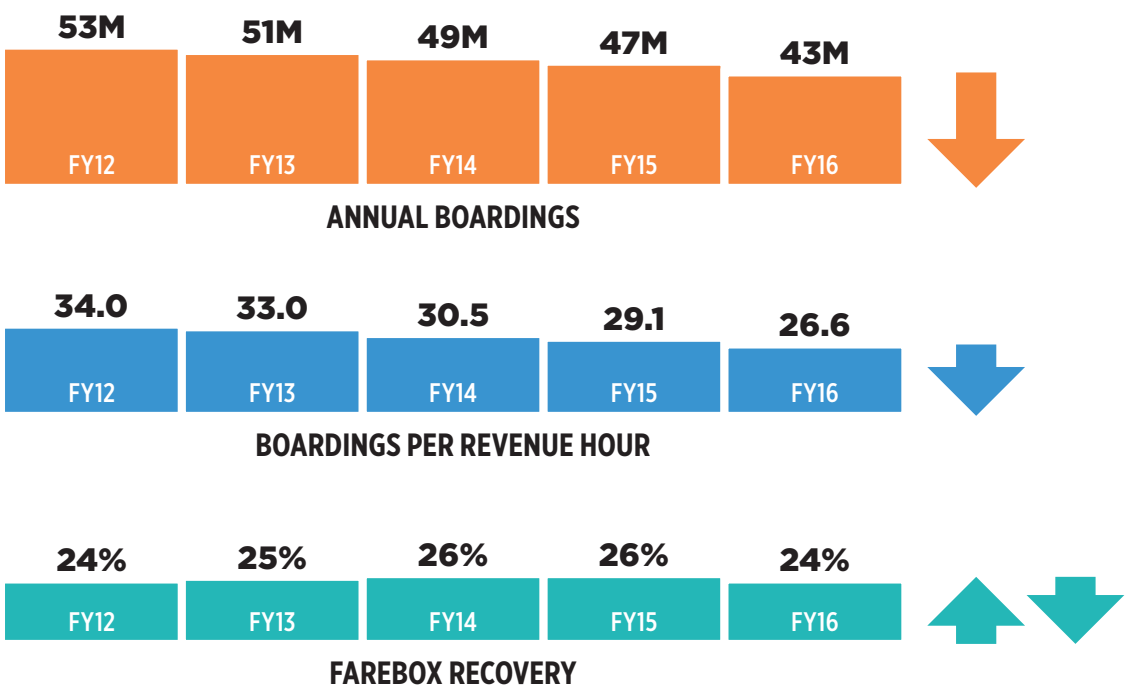
Pedestrian access to transit is a problem throughout Orange County, but targeted investments in the half-mile around major transit hubs could reap outsized benefits.

Addressing Ridership Decline

Ridership is declining in Orange County, and in many communities around the country. While increased service has proven to increase ridership, funding constraints have limited OCTA's ability to add service.

The agency has instead made cost-effective use of existing resources by allocating service to areas of high demand and by exploring alternatives to fixed-route service in areas with lower demand.

OCTA has also sought to better leverage its existing assets by focusing on connectivity, investing in higher-quality service in its highest-demand corridors, and funding the OC Transit Vision and efforts such as the Central Harbor Boulevard study.

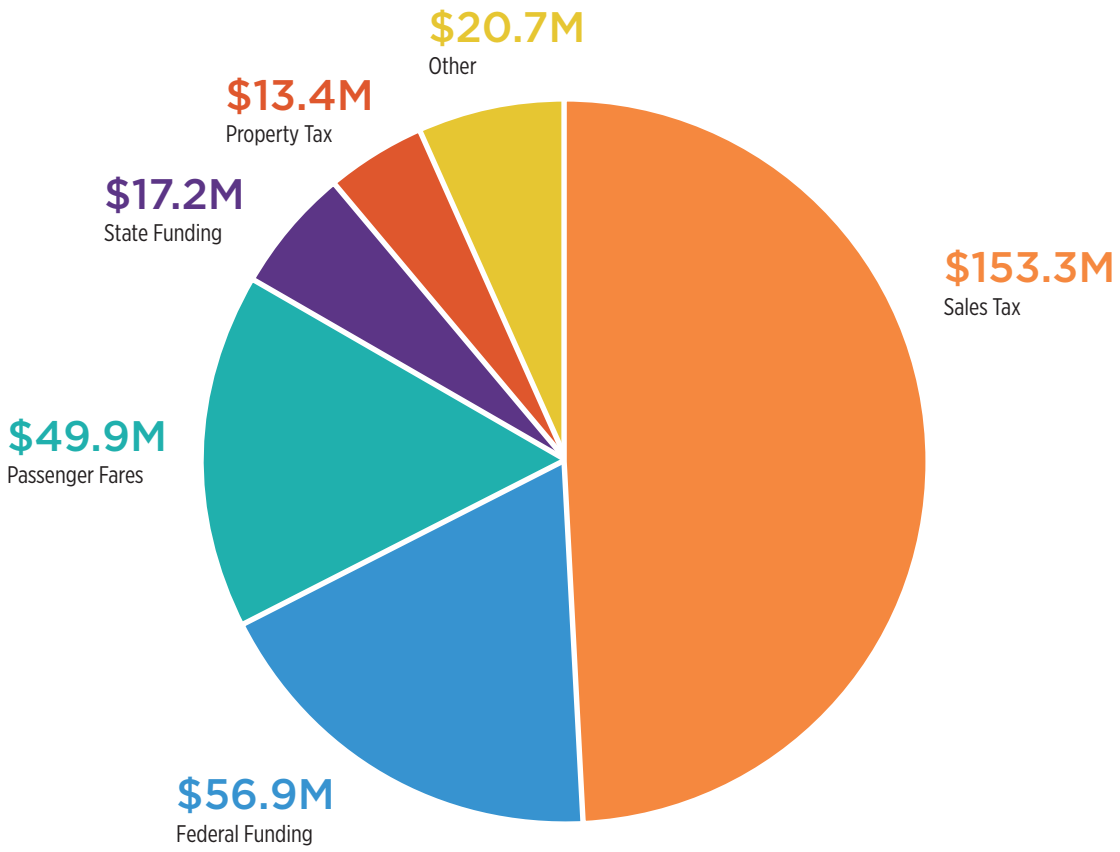


KEY FINDINGS

Funding Constraints

Limited funding has constrained OCTA's ability to grow service and avoid fare increases. Federal funding has remained static, local sales tax has underperformed projections, and OCTA has raised fares to keep pace with increased costs.

Pursuing capital projects and grants that reduce long-term operating costs may be an easier way to improve transit service than securing additional operating revenues.



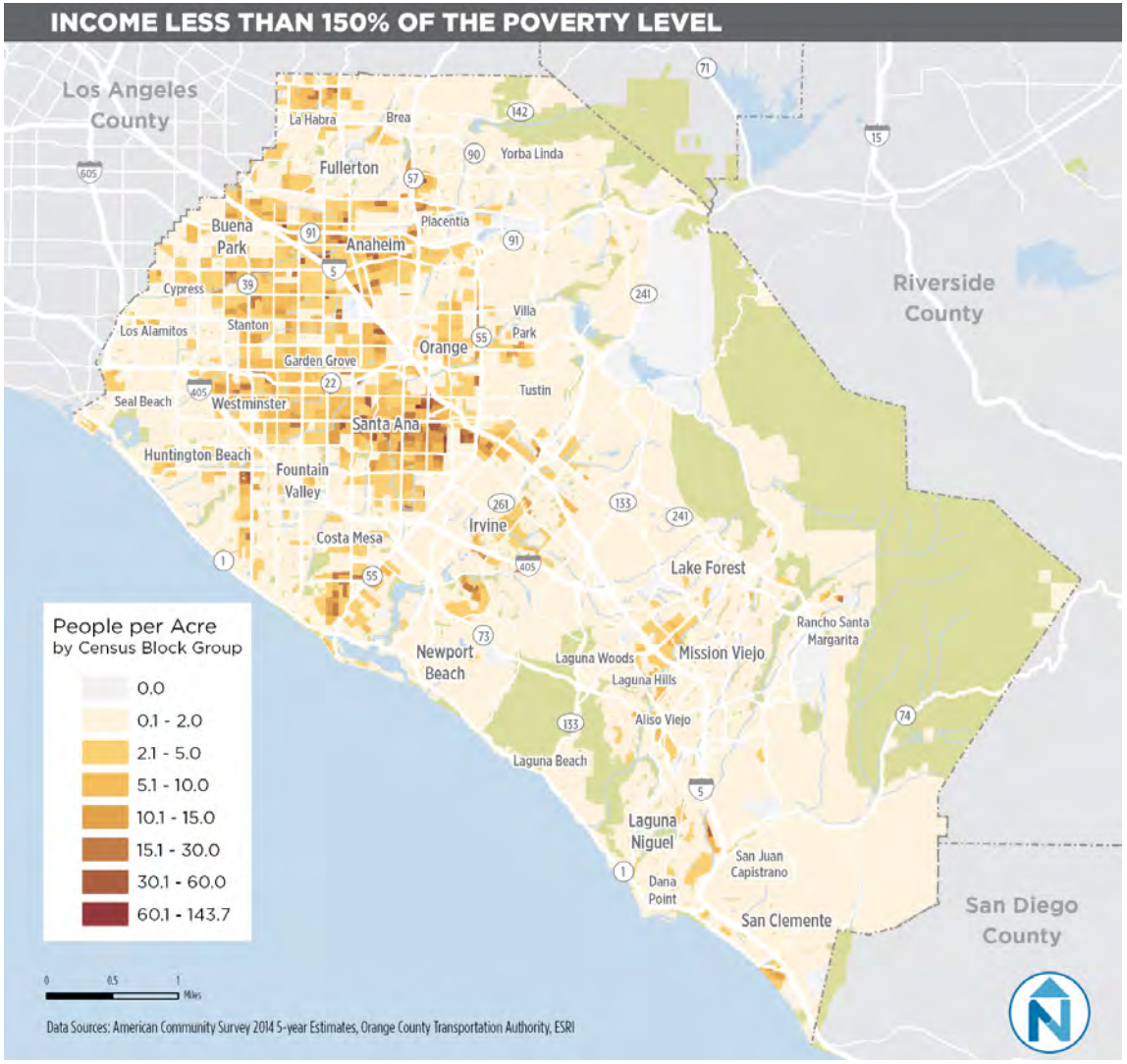
Bus and Paratransit Revenues

Land Use and Demographics

Parts of Orange County are much denser and more racially and economically diverse than stereotypical suburbs; this is particularly true in parts of North/ Central County, which has greater concentrations of lower-income and non-white populations.

There are also an unusually large number of major destinations for a suburban area, from job centers to stadiums, theme parks, and beaches.

An auto-oriented built environment has made it difficult for transit to attract riders. South County in particular features highly-segregated land uses less conducive to transit.



KEY FINDINGS

Transportation Infrastructure

In the northern part of Orange County, pedestrian pathways are relatively direct and buses can run in a straight line, with regular connections to intersecting routes. Even in North County, however, arterials are wide, crosswalks are few and far between, and signal timing is not pedestrian friendly.

Both buses and pedestrians are challenged in South County, where streets tend to be indirect and disconnected. Pedestrians throughout the county are surrounded by cars, parking lots, and sound walls, and may feel both uncomfortable and unsafe.

Long-Term Trends

Whether OCTA ridership will grow over the long-term is an open question.

Cheap gas, funding constraints, and ride-hailing services such as Uber and Lyft present significant challenges.

On the other hand, increasing density, changing land-use patterns, and the preferences of millennials are just a few of many trends pointing to the potential for increased transit use.

Transit agencies such as OCTA will need to learn to adapt, and to remain nimble and flexible in their thinking.

Rising Unemployment

Plummeting Gas Prices

Increase in Registered Vehicles

Technology Solutions

Young People Driving Less

Trend Towards Urban Living

Diversifying and Aging Population

Shared Mobility

Autonomous Vehicles

KEY FINDINGS

Greenhouse Gas Emissions

The transportation sector is responsible for the largest share of California's greenhouse gas emissions, owing largely to high rates of single-occupancy vehicle travel.

Transit must increase ridership to help mitigate statewide emissions. Improving access to transit by active transportation modes such as walking and cycling can help increase ridership and further reduce emissions.

Image Source: Orange County Register

High-Capacity Transit Corridors

OCTA's approach to improving key corridors will prove useful as the OC Transit Vision identifies potential high-capacity and rapid transit corridors:

- The modes selected for a corridor should be based on the specific context of that corridor
- Costs should be scaled to available resources and potential demand
- Investments should be made based on technical merit
- Investments should be made in close coordination with local municipalities

Image Source: OCTA

The State of OC Transit Report is the first step in developing the OC Transit Vision.

Image Source: Arellano Associates

5

Next Steps

The State of OC Transit Report is the first step in developing the OC Transit Vision. Over the next 12 months, the project team will work with the OCTA Board, partner jurisdictions and transit agencies, as well as stakeholders and community members to establish a 20-year vision for transit in Orange County. This chapter describes the elements of the OC Transit Vision.

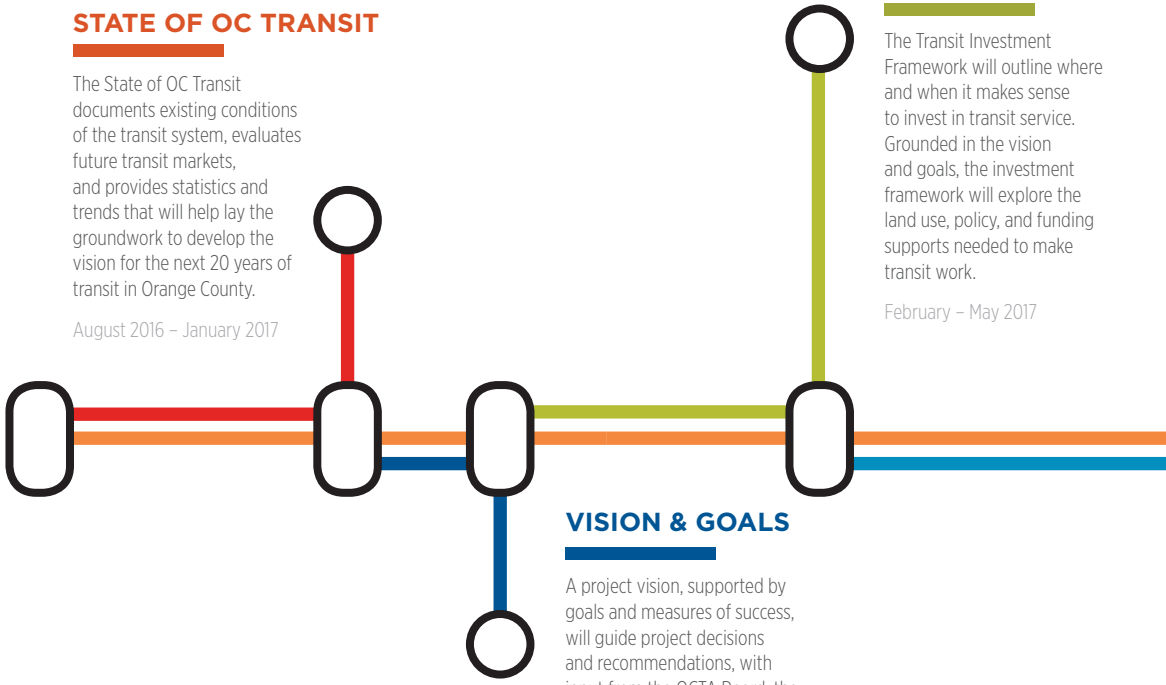
DEVELOPING THE OC TRANSIT VISION

Elements of a Vision

Building on the State of OC Transit Report, the OC Transit Vision will establish **goals and objectives** that will help to define the project's success. These goals will become the backbone of the project's **evaluation framework**, the tool that will help OCTA make decisions about the highest priority corridors and the transit mode appropriate for each.

An important outcome of this OC Transit Vision is to develop recommendations for new **high-capacity transit in high-demand corridors**. This will require careful, comprehensive thinking about transit modes including design of the right-of-way, stops and stations, service, and vehicles.

To support these priority corridors, the Transit Vision will also focus on related elements needed to make transit successful, including **access to transit** and **land uses around transit stops and stations**. This will result in a **transit investment framework** that helps to explain what is needed in a community or jurisdiction to support transit service.



STATE OF OC TRANSIT

The State of OC Transit documents existing conditions of the transit system, evaluates future transit markets, and provides statistics and trends that will help lay the groundwork to develop the vision for the next 20 years of transit in Orange County.

August 2016 – January 2017

INVESTMENT FRAMEWORK

The Transit Investment Framework will outline where and when it makes sense to invest in transit service. Grounded in the vision and goals, the investment framework will explore the land use, policy, and funding supports needed to make transit work.

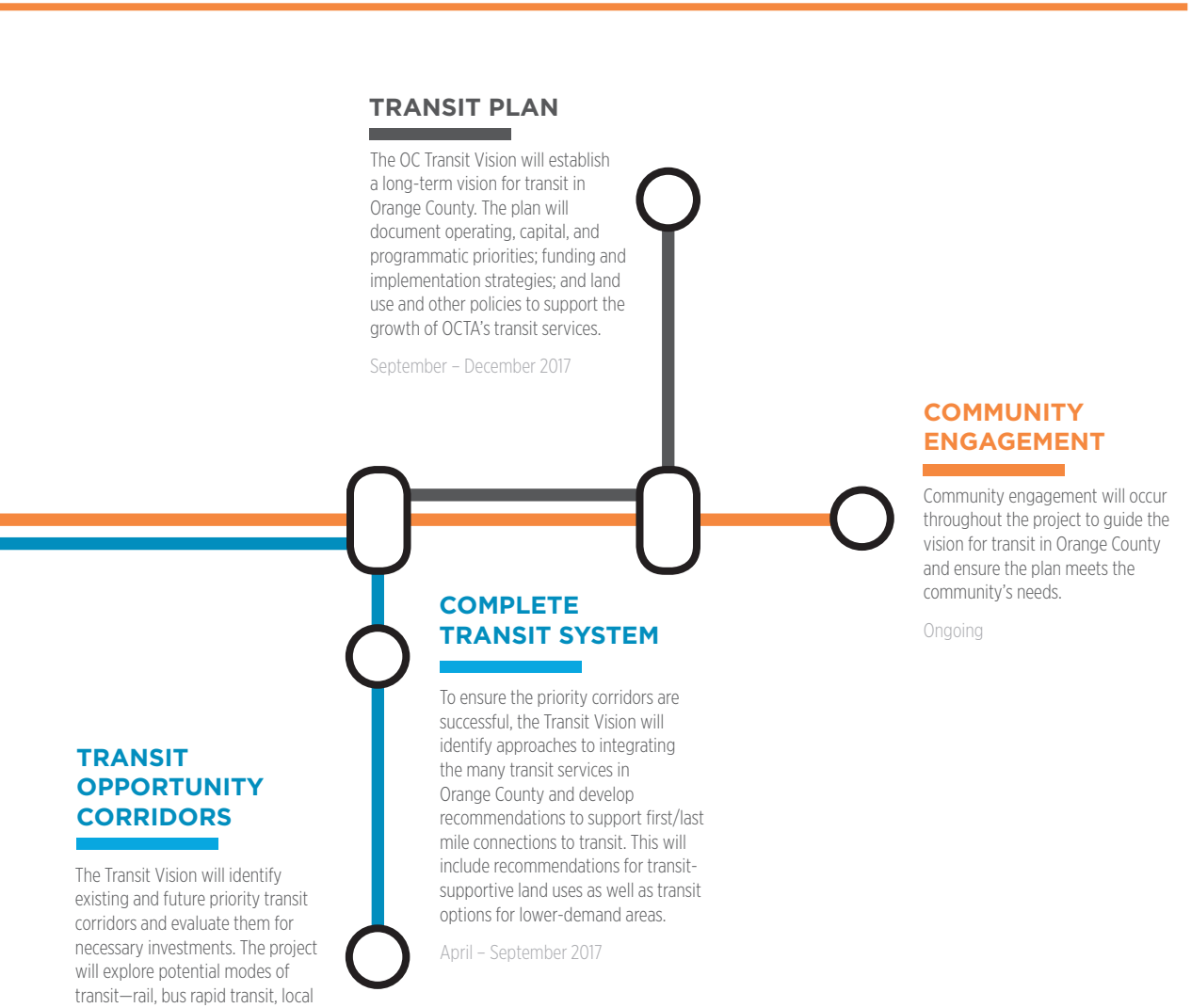
February – May 2017

VISION & GOALS

A project vision, supported by goals and measures of success, will guide project decisions and recommendations, with input from the OCTA Board, the Citizens Advisory Committee, stakeholders, and the community.

November 2016 – February 2017

The Transit Vision will be supported by an **implementation plan** that details the short- and long-term steps that OCTA must take to make the Vision a reality. This will require both realistic and creative thinking about potential **funding options** and a focus on **partnerships**.



TRANSIT PLAN

The OC Transit Vision will establish a long-term vision for transit in Orange County. The plan will document operating, capital, and programmatic priorities; funding and implementation strategies; and land use and other policies to support the growth of OCTA's transit services.

September – December 2017

COMMUNITY ENGAGEMENT

Community engagement will occur throughout the project to guide the vision for transit in Orange County and ensure the plan meets the community's needs.

Ongoing

COMPLETE TRANSIT SYSTEM

To ensure the priority corridors are successful, the Transit Vision will identify approaches to integrating the many transit services in Orange County and develop recommendations to support first/last mile connections to transit. This will include recommendations for transit-supportive land uses as well as transit options for lower-demand areas.

April – September 2017

TRANSIT OPPORTUNITY CORRIDORS

The Transit Vision will identify existing and future priority transit corridors and evaluate them for necessary investments. The project will explore potential modes of transit—rail, bus rapid transit, local bus—for each corridor along with capital projects that can make transit service work better.

April – September 2017

GET INVOLVED

Ideas from stakeholders and the public are essential to create a Transit Vision that serves the needs of residents, employees, and visitors while reflecting the transit potential of Orange County. Throughout the development of the Transit Vision, there will be many opportunities to participate, with focused engagement when transit options are prioritized and transit opportunity corridors are identified. Visit the project website to sign up for updates about future online surveys and public open houses.

Project Website:
octa.net/octransitvision

To learn more about early feedback from stakeholders and focus groups, see **Chapter 7** of the full State of OC Transit Report.

OCTA

OC TransitVISION

DRAFT VISION, GOALS, AND OBJECTIVES

OC TransitVision

VISION

Provide compelling and competitive transit service that expands transportation choices for current riders, attracts new riders, and supports mobility in Orange County.

GOALS

Enhance

Make it more desirable to take transit.

Reliability and Competitiveness

- Provide convenient service that appeals to a broad cross-section of Orange County residents
- Make transit travel times in key corridors competitive with the auto
- Improve the reliability of transit trips
- Provide longer hours of service and more weekend service (span, frequency, and routes)
- Develop a network of high-capacity or premium services such as bus rapid transit, light rail, and streetcar to provide attractive transit service and support local land use

Frequency

- Develop a Frequent Service Network that provides frequent (15-minutes or better), all-day service from early morning to late night in major corridors and to major destinations

Quality

- Improve service quality in the highest-demand transit markets
- Develop services tailored to the needs of specific markets

Affordability

- Provide affordable transit choices for Orange County residents

Facility Design and Passenger Comfort

- Provide a comfortable and safe environment for transit passengers
- Improve access to, and the quality of, transit stops and stations

Connect

Connect Orange County's people and places with effective transit.

Local and Regional Connections

- Expand service to currently unserved areas of Orange County that have sufficient transit demand and to emerging areas to support new development
- Improve connections to major attractions and destinations
- Improve access to jobs and services to improve economic opportunities for Orange County residents
- Improve transit connections with surrounding counties to develop a stronger regional system

Integration

- Integrate transit services with other complementary modes
- Develop new partnerships and improved service models to better serve markets where fixed-route service is impractical

Multimodal Access and First/Last Mile Connections

- Create great places where modes connect to facilitate seamless integration of Orange County's pedestrian, bicycle, and transit networks
- Strengthen multimodal connections and make it safe and easy to access transit
- Enhance partnerships with shared mobility providers
- Participate in efforts to make streets more complete and transit-friendly

DRAFT GOALS AND OBJECTIVES

OC TransitVision

Simplify

Make transit easier to use and more convenient.

Legibility

- Provide service that is easy for people to understand and use
- Make it easier for customers to plan door-to-door trips with a seamless menu of travel options among transit services, operators, and other transportation modes
- Take advantage of new technologies to simplify interactions with customers, including fare payment

Education and Information

- Educate Orange County residents, workers, and visitors about available transit services
- Continue to provide transit and mobility information that is readily available, attractive, and easy to understand
- Make real-time schedule information extensively available

Collaborate

Make Orange County a more attractive place to live, work, and visit by providing transit service that supports community priorities.

Economy and Development

- Support economic development, including the development patterns envisioned in local, county, and regional plans
- Support the vitality of the county's downtowns, local centers, neighborhoods, and job centers

Environment

- Provide transit services that relieve congestion, improve air quality, and reduce greenhouse gas emissions
- Use transit as a way to enhance healthy, complete communities and compact, livable neighborhoods

Equity

- Use transit to create a transportation system responsive to the needs of people for whom transit is a necessity (e.g., youth, older adults, people with disabilities, low income populations, people without autos)
- Improve the accessibility of transit for older adults and people with disabilities to support their ability to live independent lives
- Develop a sustainable model for paratransit service to provide mobility and independence

Sustain

Create a system that is resilient over the long term.

Ridership and Perception

- Get more people riding transit
- Retain existing customers and make it easier for them to take additional trips using transit
- Improve public perception of transit in Orange County

Productivity

- Focus service in areas where it can be most effective
- Develop cost-effective and productive transit services and programs

Funding

- Develop reliable and predictable revenue streams that grow with Orange County's economy
- Invest public resources in a financially responsible manner
- Identify and pursue opportunities for new funding sources, including leveraging private funds

Performance Monitoring

- Continue to monitor performance measures and adjust service and implementation plans as necessary

Partnerships

- Develop services that achieve a high level of public support
- Strengthen existing partnerships, continue to build partnerships, and work closely with communities and businesses
- Develop new partnerships and service models to better serve markets where traditional fixed-route transit is impractical

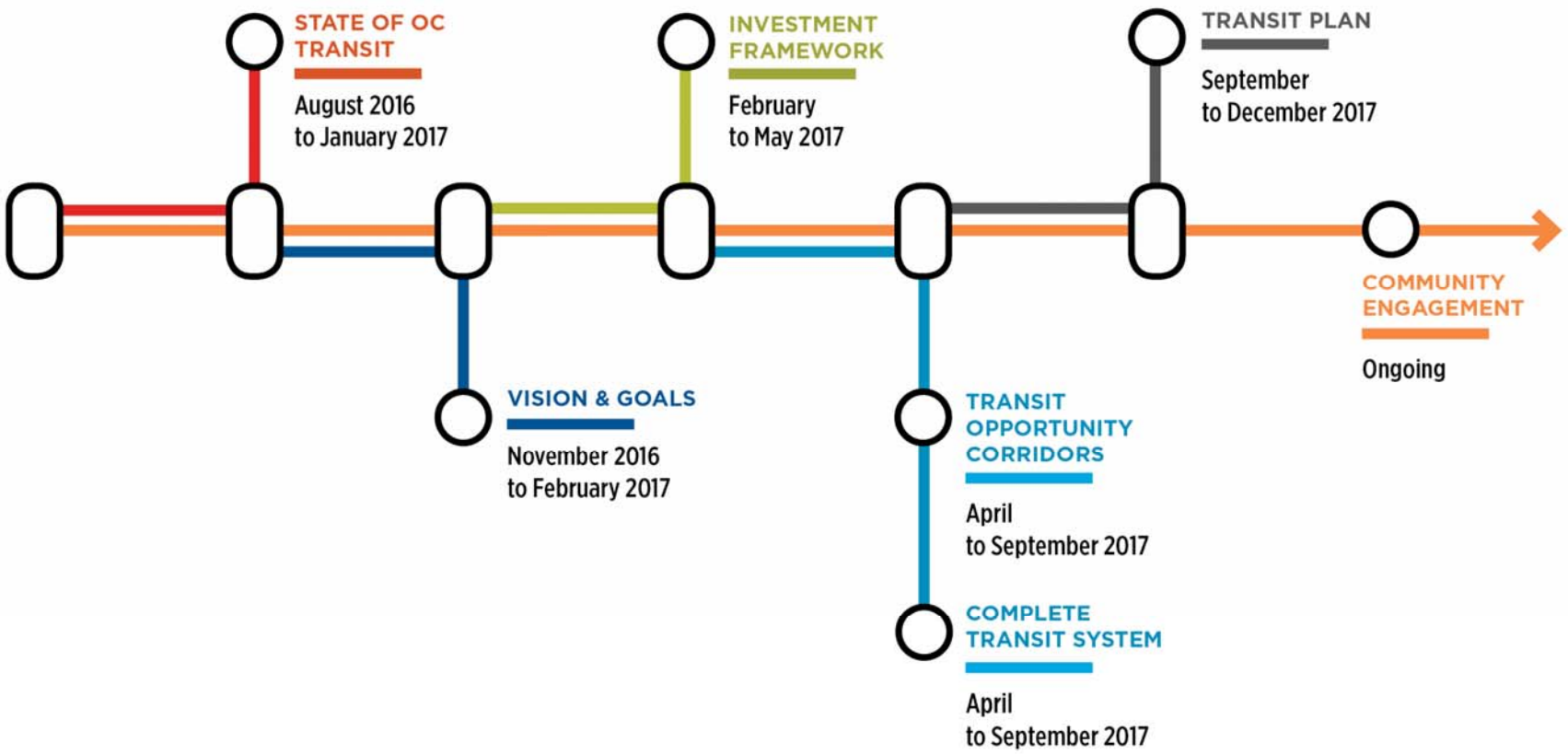
Flexibility

- Plan for investments in a way that allows OCTA to respond and adapt to changes in the environment for transit

Transit Master Plan - State of OC Transit

OC TransitVISION

Process



OC TransitVision

Contents

- History of transit in Orange County
- Description and analysis of existing system
- Summary of relevant plans and policies
- Recent trends in transit
- Best practices in modal selection, transit-supportive design, and funding
- Travel market analysis
- Initial stakeholder themes
- Synthesis of findings

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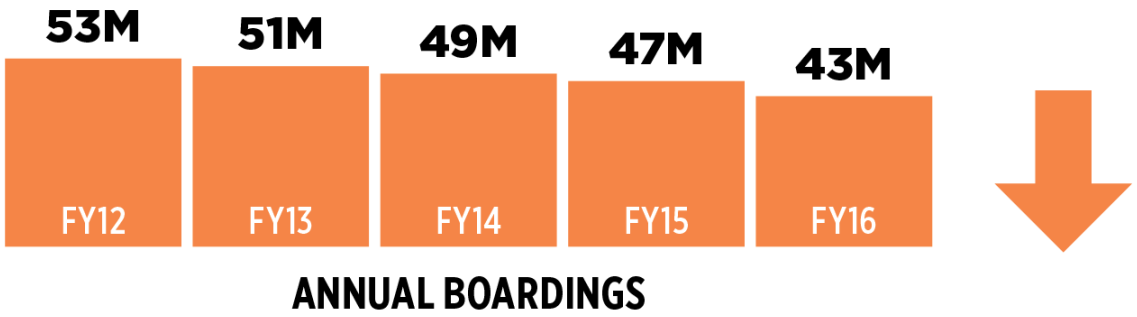
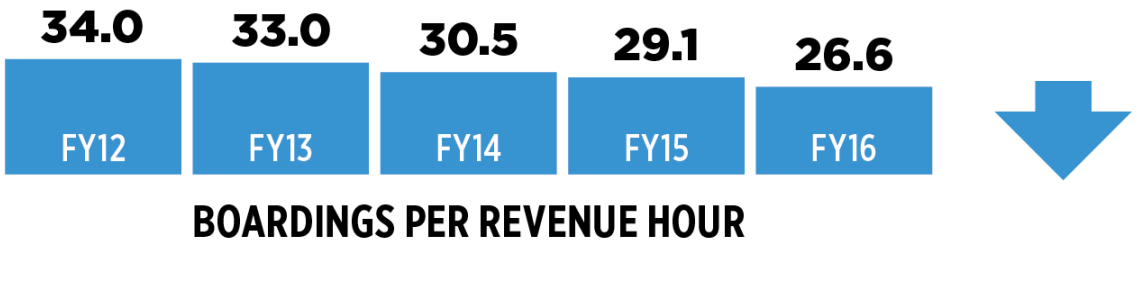
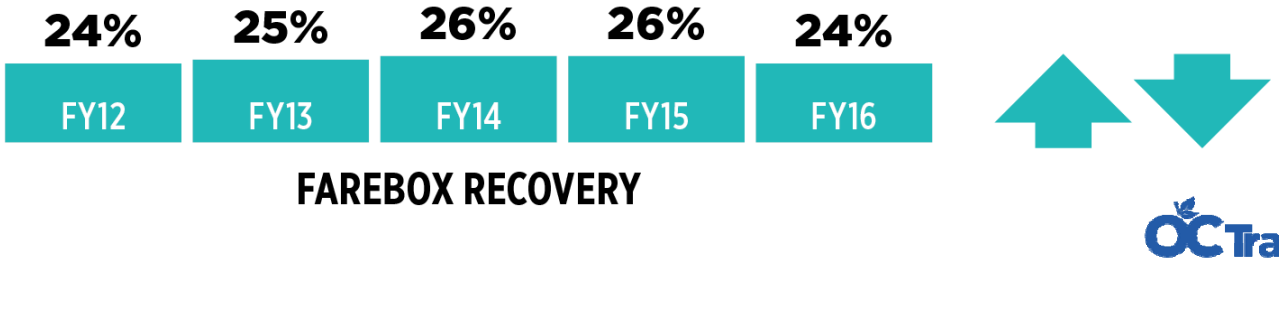
Existing System Analysis



ANNUAL BOARDINGS



BOARDINGS PER REVENUE HOUR



FAREBOX RECOVERY

FY – fiscal year

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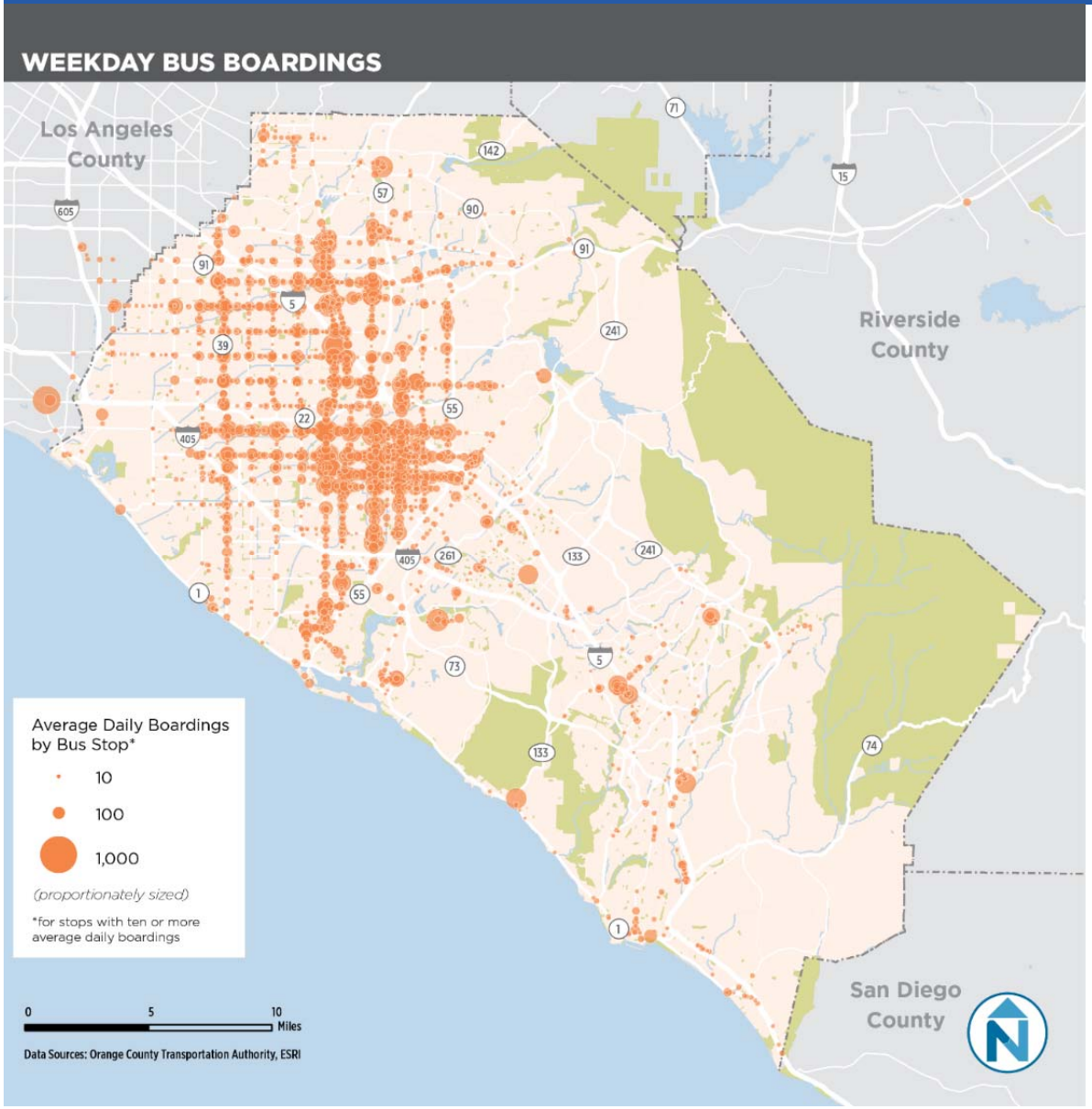
Existing System Analysis



- Existing ridership concentrated in North/Central County, around Santa Ana
- Harbor Boulevard, Bristol Street/ State College Boulevard, and 17th Street/Westminster Avenue corridors are 25 percent of ridership
- Isolated nodes in South County

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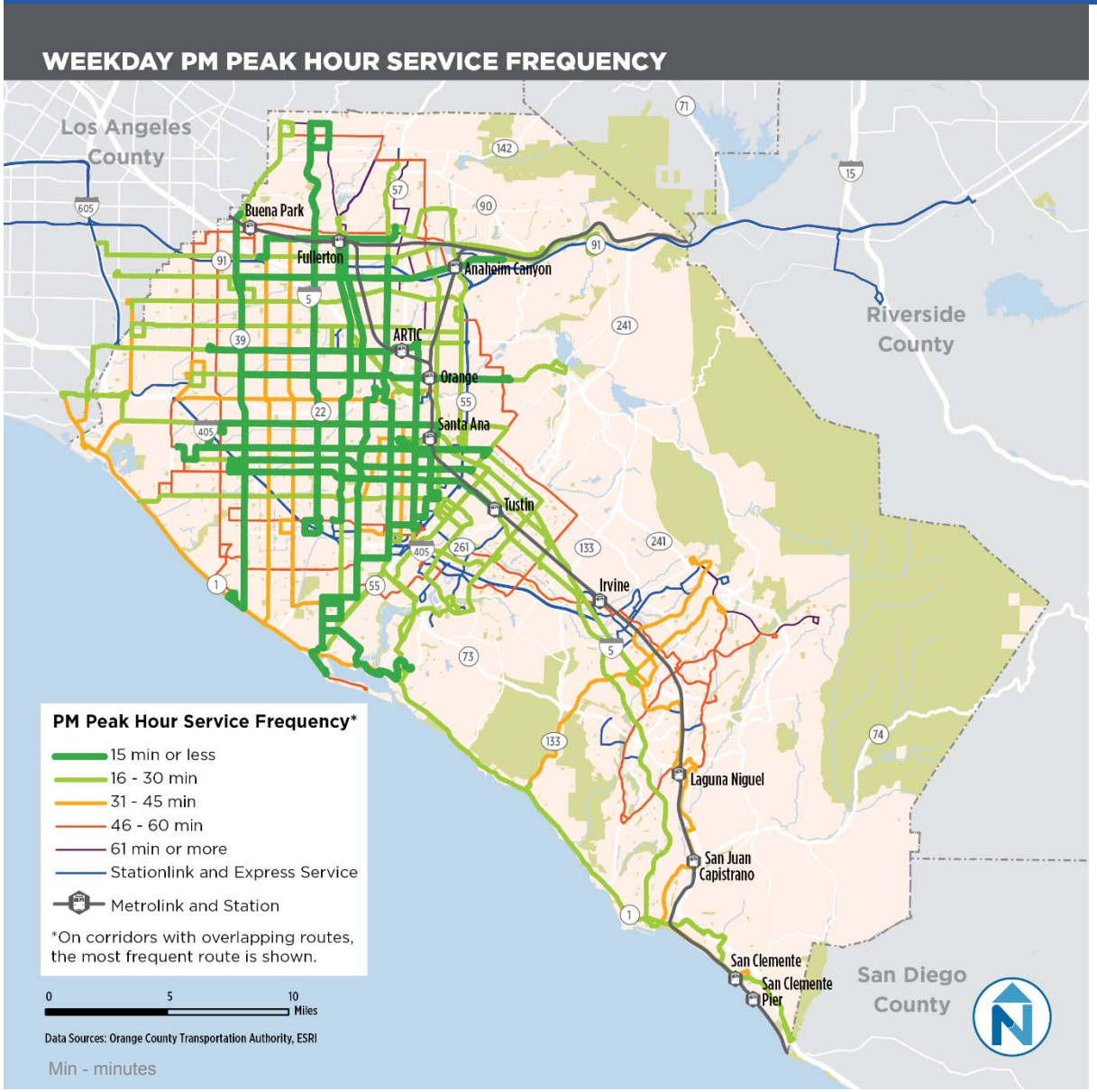
Existing System Analysis



- Ridership is partly a function of service levels, but service levels are largely a function of demand.
- High frequency service is largely in:
  - North County
  - Select major corridors

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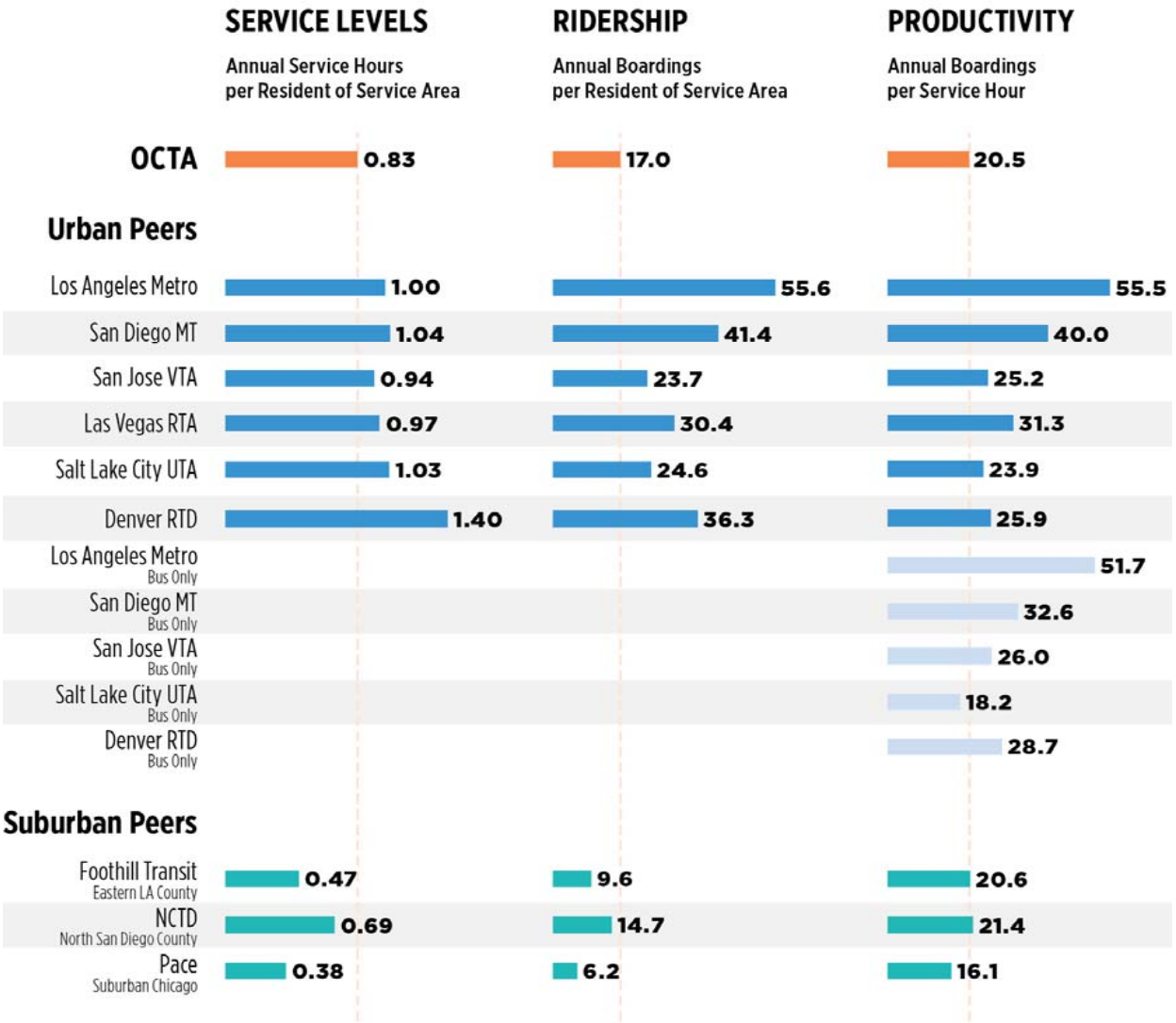
Existing System Analysis



OCTA – Orange County Transportation Authority, MT – Metropolitan Transit, VTA – Valley Transportation Authority, RTA – Riverside Transit Agency, UTA – Utah Transit Authority, RTD – Regional Transportation District, LA – Los Angeles, NCTD - North County Transit District

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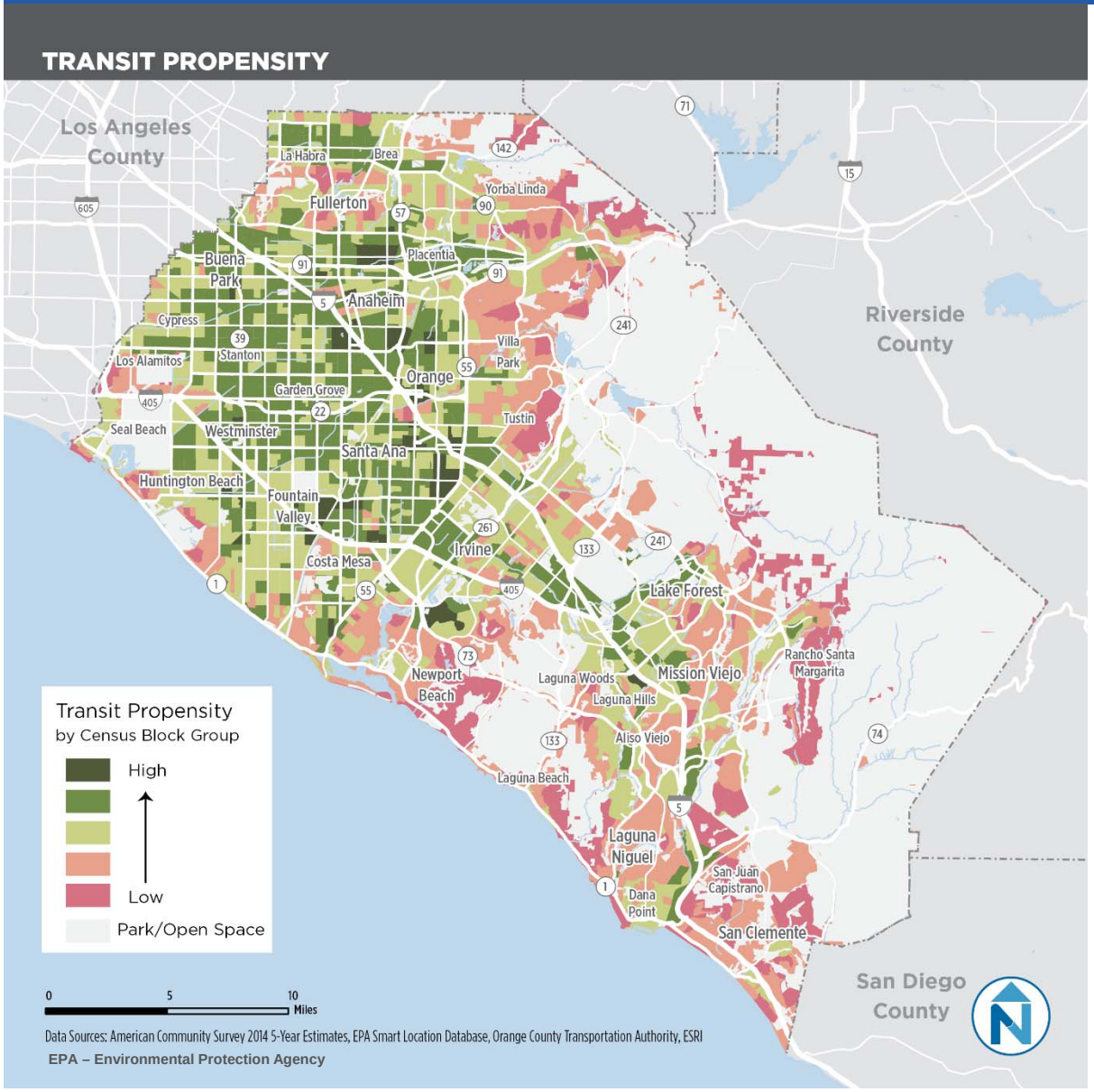
Market Analysis



- Factors identified by OCTA:
  - Per capita income
  - Total low-income households
  - Employment density
  - Total employment
  - Approach volumes at intersections
  - Intersection density (walkability)

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Key Themes

- The majority of existing bus ridership is concentrated in a few key corridors.
- Bus service is focused on the weekday commuter market.
- Bus routes serve a select number of hubs, destinations and connection points.
- OCTA has begun taking steps to address recent ridership declines.
- Limited funding has constrained ridership growth.
- Land use and demographics present both challenges and opportunities for effective transit service.
- The overall transportation network presents both challenges and opportunities for effective transit service.
- Long-term transportation trends offer a mixed message.
- Transit use can support greenhouse gas reduction targets.
- The Bravo! lines and future OC Streetcar provide a template for ridership growth.
- Key stakeholder interviews indicate shifting trends.

OC TransitVision

VISION

OC TransitVISION

Provide compelling and competitive transit service that expands transportation choices for current riders, attracts new riders, and supports mobility in Orange County

GOALS

Enhance

Make it more desirable to take transit.

Connect

Connect Orange County's people and places with effective transit

Simplify

Make transit easier to use and more convenient

Sustain

Create a system that is resilient over the long term

Collaborate

Make Orange County a more attractive place to live, work, and visit by providing transit service that supports community priorities

Next Steps

- Distribute State of OC Transit report to stakeholders.
- Finalize vision and goals.
- Return to the Transit Committee and Board of Directors in April/May with the draft Investment Framework.

State of OC Transit **March 2017** → Investment Framework **May 2017** → Opportunity Corridors **July 2017** → Transit Master Plan **November 2017**

OC TransitVISION

Orange County Transportation Authority Paratransit Services Overview
Board of Directors Presentation Outline

Background
- Paratransit differences from fixed route

OCTA Paratransit
- ACCESS
- ACCESS Plus
- Same Day Taxi
- Special Agency Service

Americans with Disabilities Act (ADA)
- OCTA's requirements as a public transit provider
- ADA eligibility and certification

ACCESS ADA Service Characteristics
- Service area
- Days and hours of operation
- Scheduling/booking trips/subscriptions
- Fares
- Other

ACCESS Plus
- Regional Center of Orange County – largest single ACCESS consumer
- OCTA and RCOC transportation requirements
- Value added with ACCESS Plus

ACCESS Service Delivery Model
- In-house versus contracted services / functions

ACCESS Rider Profile
- Types of disabilities
- Age
- Frequency of travel
- Trip purpose
- Pickup and drop-off locations

ACCESS Fleet Mix
- OCTA buses – use by time of day
- Taxis – use by time of day

Same Day Taxi

- Hours of operation
- Service delivery model
- Fares and subsidies
- Pickup and drop-off locations
- Vehicle use by time of day

Special Agency Service

- Number customers
- Agencies served
- Service delivery model
- Subsidies

Comparison of Services

- Against ADA criteria
- Ridership
- Revenue vehicle hours
- Costs and productivity
- Average vehicles by time of day – OCTA buses
- Average vehicles by time of day – taxis
- Annual operating, capital and total costs

Challenges

- Rising demand
- Other county demand
- Longer trip lengths
- Rising costs

Ridership Projections (2015-2035)

Conclusions and Next Steps