



MEETING OF THE

REGIONAL TRANSIT TECHNICAL ADVISORY COMMITTEE

Wednesday, August 30, 2017
10:00 a.m. – 12:10 p.m.

SCAG Los Angeles Main Office

818 W. 7th Street, 12th Floor
Policy Committee Room A
Los Angeles, California 90017
(213) 236-1800

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If members of the public wish to review the attachments or have any questions on any of the agenda items, please contact Matt Gleason at (213) 236-1832 or gleason@scag.ca.gov.

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**REGIONAL TRANSIT TECHNICAL ADVISORY COMMITTEE
AGENDA**

Wednesday, August 30, 2017

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The Regional Transit Technical Advisory Committee may consider and act upon TIME PG# any of the items listed on the agenda regardless of whether they are listed as information or action items.

1.0 CALL TO ORDER

(Gary Hewitt, OCTA, Regional Transit TAC Chair)

2.0 PUBLIC COMMENT PERIOD - Members of the public desiring to speak on items on the agenda, or items not on the agenda, but within the purview of the Regional Transit Technical Advisory Committee, must fill out and present a speaker's card to the assistant prior to speaking. Comments will be limited to three minutes. The chair may limit the total time for all comments to twenty (20) minutes.

3.0 RECEIVE AND FILE

3.1	<u>Minutes of the May 31, 2017 Regional Transit TAC Meeting</u>	1	4
3.2	<u>Draft Transit Ridership Decline Factsheet</u>	-	10
3.3	<u>Senate Bill 1 Planning Grants</u>	-	14

**REGIONAL TRANSIT TECHNICAL ADVISORY COMMITTEE
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4.0 INFORMATION ITEMS

4.1	<u>LACoMotion Initiative Conference</u> <i>(To be determined)</i>	5	17
4.1	<u>Public-Private-Partnerships for Innovative Transportation Solutions</u> <i>(Christopher Cochran / Heather Sobush, Pinellas Suncoast Transit Authority)</i>	20	19
4.2	<u>Bus Rapid Transit and Changing Neighborhoods in Los Angeles, California</u> <i>(Anne Brown, University of California, Los Angeles)</i>	30	27
4.3	<u>Climate Change Adaptation Assessment</u> <i>(Beth Rodehorst, ICF International)</i>	30	*
4.4	<u>FAST ACT Requirements Regarding Private Sector Providers of Transportation</u> <i>(Steve Fox, SCAG)</i>	20	56
4.5	<u>Metropolitan Planning Agreements</u> <i>(Philip Law, SCAG)</i>	15	65

**REGIONAL TRANSIT TECHNICAL ADVISORY COMMITTEE
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5.0 STAFF REPORT 10

6.0 ADJOURNMENT

The next Regional Transit Technical Advisory Committee meeting is tentatively scheduled for Wednesday, November 29, 2017.

*Attachment under separate cover



Regional Transit Technical Advisory Committee (RTTAC)
of the
Southern California Association of Governments

May 31, 2017

Minutes

THE FOLLOWING MINUTES ARE A SUMMARY OF ACTIONS TAKEN BY THE REGIONAL TRANSIT TECHNICAL ADVISORY COMMITTEE (RTTAC). AN AUDIO RECORDING OF THE MEETING IS AVAILABLE FOR LISTENING IN SCAG'S OFFICE.

The Regional Transit Technical Advisory Committee held its meeting at SCAG's Downtown Los Angeles Office. The meeting was called to order by Chair Gary Hewitt.

Members Present:

Gary Hewitt (Chair)	Orange County Transportation Authority
Josh Landis	Foothill Transit
Conan Cheung	LACMTA
Medford Auguste	LACMTA
Lori Huddleston	LACMTA
Joe Forgiarini	Riverside Transit Agency
John Uργο	Alameda-Contra Costa Transit District
Rory Vaughn	Metrolink
Rawan Aljamal	Caltrans District 7

Video Conference:

Kevin Kane	Victor Valley Transit Authority
Victor Cuate	Omnitrans
Don Walker	Omnitrans
Martin Erickson	Ventura County Transportation Commission
Heather Miller	Ventura County Transportation Commission
Claire Johnson-Winegar	Gold Coast Transit District
Carlos Lopez	Antelope Valley Transportation Authority
Norm Hickling	Antelope Valley Transportation Authority
Martha Masters	Riverside County Transportation Commission
Monica Morales	Riverside County Transportation Commission

Teleconference:

Michael Manville	University of California, Los Angeles
Joyce Rooney (Vice Chair)	Redondo Beach Transit
Randy Lam	LACMTA

SCAG Staff:

Philip Law	Joseph Briglio
Matthew Gleason	Frank Wen
Marco Anderson	Mariana Pulido

1.0 CALL TO ORDER

Gary Hewitt, OCTA, called the meeting to order at 10:04 a.m.

2.0 PUBLIC COMMENT PERIOD

No members of the public requested to comment.

3.0 RECEIVE AND FILE

3.1 Minutes of the March 29, 2017 Regional Transit TAC Meeting

Gary Hewitt, OCTA, requested an amendment to the Minutes item 4.2 to replace “mobility innovation programs” with “transportation demand management”.

4.0 INFORMATION ITEMS

4.1 Understanding Transit Trends in the SCAG Region

Mike Manville, Assistant Professor, UCLA Institute of Transportation Studies, reported on the SCAG Region Transit Ridership Trends Study. Mr. Manville stated that transit ridership has fallen across the SCAG region. He noted several factors could have contributed to the decline including lower gas prices, fare increases and the rise of ridesharing companies. It was noted LA Metro and OCTA represent 75% of lost SCAG transit rides and 53% of Metro losses were on 12 bus lines. Mr. Manville noted one challenge in tracking transit ridership is only a relatively small group use transit and they can be difficult to observe. The different factors that could affect transit ridership were reviewed and it was noted gas prices, which has in the past correlated with transit ridership, were rising in 2007 while per capita transit ridership continued its decline. Service cuts were examined and while there were service cuts in the study period, in the aggregate, service levels are rising while ridership continues to decline.

Mr. Manville next examined the emergence of ridesharing companies such as Uber and Lyft noting that while much of the data is inaccessible to the public, it appears ridesharing displaces more taxi trips than transit trips. Additionally, ridesharing companies began to emerge in 2011-2012 while per capita ridership decline began in 2007. It was noted that a longer term trend affecting transit ridership is the growth in vehicle ownership. Further, vehicle ownership is growing particularly fast among the foreign born, a group which traditionally made up the core of transit riders. From 2000 to 2015 the share of households with no vehicles has declined nearly 50% and for the Mexican foreign born it has declined 66%. Since 2000 immigrants have become more likely to have vehicles and less likely to ride transit. Additionally, newer immigrants are much more likely to drive and their travel behaviors are more similar to the native born.

Mr. Manville reviewed AB 60 which permitted undocumented residents to obtain a driver’s license. He noted that while this has increased the number of licensed drivers, it took effect in 2015 and declines in transit ridership began in 2007. It was noted if the trend in vehicle availability continues particularly among the foreign born then it may signal that transit’s core market is shrinking. He stated

next steps in the study will examine gentrification and suburbanization's effect as well as rider safety.

Joyce Rooney, Redondo Beach Transit, asked if the bus lines that experienced significant loss of ridership have a particular direction of travel, for example, east to west. Mr. Manville responded that the loss of bus ridership did not follow any particular pattern of travel as ridership loss was seen across different directions of travel. That greater loss was seen on bus lines converging on downtown Los Angeles.

Conan Chung, LACMTA, noted that some bus lines near the Expo Line travelling Venice Blvd., Wilshire Blvd. and some Big Blue bus lines have seen a decline in ridership that represent a shift from ridership on bus to the Expo Line.

Monica Morales, RCTC, asked if there is a determination that the core transit market is shrinking, what tools would be used to measure it. Mr. Manville responded that the larger question is still being explored and noted if rider safety for example is known to contribute to ridership decline then the transit operator can address those concerns with increased security and attention to the rider experience. If the cause is a societal trend then transit operators would be required to react to it rather than directly shape its aspects.

4.2 AC Transit Flex Program

John Urgo, Alameda-Contra Costa Transit District, reported on their transit flex program. Mr. Urgo stated the flex transit program is designed to improve service in low density and low demand areas and as way to respond to changing customer expectations as well as enhance access and equity. He stated low performing routes were targeted by creating flex zones. Mr. Urgo noted the flex program allows transit riders to schedule a ride using a cell phone application or online and trips can be booked as little as 30-minutes in advance. Once a transit ride is requested the rider is informed of the estimated time of arrival noting a 10-minute pickup window. The rider is to wait at the pick-up bus stop and the bus will arrive within the designated 10-minute window. Other passengers will get picked up and dropped off along the way. The rider is dropped at one of the routes' bus stops or the BART station for continued travel to the East Bay and San Francisco. For the return trip busses depart the BART station on a fixed schedule.

Mr. Urgo noted the flex program is viewed as cost neutral as 26-foot cutaway busses have replaced 30-foot busses on some routes. He stated the digital divide was addressed by allowing riders to schedule a ride through a call center in addition to the cell phone application or online. Also, the current fare payment system was retained so those who are unbanked can use the service. It was noted considerable advertising and community outreach was an important part of the effort so riders, businesses and the community were made aware of the changes and new service model. Additionally, there was a free fare period to help riders transition. Further, the buses are wheelchair accessible and operated by trained operators. It was reported that ridership is growing since the service was introduced with 68% return

customers. However, productivity remains low as it has yet to achieve 5-7 passengers per revenue hour. Mr. Urgo stated lessons learned include setting realistic goals, costs are reduced with the use of smaller buses and technology leads to greater efficiency and integration.

Conan Cheung, LACMTA, asked why fixed routes were chosen and pick-ups provided only at designated stops. Mr. Urgo responded that retaining a fixed route travel pattern maintains service efficiency.

Matt Gleason, SCAG staff, asked if there is compliance to the Federal Transit Administration's requirement to provide Americans with Disabilities Act Paratransit service. Mr. Urgo responded that the paratransit service will be retained.

Rory Vaughn, Metrolink, asked if the service provides the rider with a predictable arrival time as this may be an important feature for those connecting with rail as part of their daily commute. Mr. Urgo responded that arrival times are provided to riders and the busses have a scheduled arrival time at the BART station which is coordinated so riders can catch their connecting rail trip.

Conan Cheung, LACMTA, asked since more data is being received on rider destinations if modifications to current routes are identified. Mr. Urgo responded that additional data is being generated on rider origin and destination patterns and it confirms that current routes are the most optimal. Additionally, with greater efficiency headways have been reduced from 45 to 30 minutes.

4.3 RTA First and Last Mile Mobility Plan

Joe Forgiarini, Riverside Transit Agency, reported on RTA's First and Last Mile Mobility Plan Study. Mr. Forgiarini stated the goal of the study is to develop recommendations to enhance first/last mile access to transit in the county. He noted the steps taken include an existing conditions survey, identifying station typologies, create a toolkit of best practices, develop recommendations and build partnerships. He noted the existing conditions survey indicated that nearly two-thirds of respondents noted problems walking, cycling or accessing transit indicating issues such as missing sidewalks, personal safety, automobile traffic and difficult to cross streets. Mr. Forgiarini reported an early step was to identify the different types of environments throughout the county such as urban core, suburban, core district, rural, commercial district and industrial business park.

He noted that a toolkit of best practices was developed including high visibility crosswalks, complete sidewalk network, enhanced bike lanes and bike parking and increased lighting. Mr. Forgiarini reviewed the study recommendations noting different improvements are suggested based on the needs of the different study areas. For example, the addition of bike lanes, additional bike stations and crossing improvements were noted for the Urban Core study area. Recommendations in the suburban areas include wayfinding signs, a connection to a multi-use path and crossing improvements. Sidewalk improvements, bike lanes, and increased lighting were indicated in the commercial, rural and industrial park study areas. Further,

Mobility Hubs can be an important part of the strategic plan as it plans for the relationships between different mobility modes such as bike, pedestrian, electric vehicles, ridesharing services and others.

Medford August, LACMTA, asked if the mobility hubs would have parking for private vehicles as an enticement to ride transit. Mr. Forgarini responded that private vehicles are well accommodated in the county and Metrolink stations, for example, tend to accommodate current demand for parking.

Philip Law, SCAG staff, asked how recommendations were received by local cities and if they are planning to implement them. Mr. Forgarini stated that RTA is careful when partnering with cities as their ability to respond to capital improvements can be dependent upon available funding and other priorities.

4.4 Transit Asset Management Draft Regional Targets

Philip Law, SCAG staff, provided an update on Transit Asset Management (TAM) Draft Regional Targets. Mr. Law noted that initial targets from transit operators were due January 1, 2017 and the asset categories to inventory include; equipment, rolling stock, infrastructure and facilities. It was noted that initial TAM targets have been received from most operators in the region. He stated the first TAM targets are to be submitted by operators October 2018 and operators are not required to report how they are performing in relation to established targets until October 2019.

Mr. Law noted that the goal is to finalize initial regional targets and present them to the Transportation Committee at the July 6th meeting. He reviewed the initial regional targets received. It was noted that two options were made available for rolling stock. Option A lists all modes combined and Option B provides an option to list assets individually.

Randy Lam, LACMTA, stated that he supports Option B where assets are listed individually to provide greater transparency.

4.5 Climate Change Adaptation Assessment

Matt Gleason, SCAG staff, provided an update on Climate Change Adaptation Assessment. Mr. Gleason stated that a consultant has been engaged by SCAG to develop a toolbox of resources that regional transit providers can use to evaluate exposure and vulnerability to the consequences of climate change and to evaluate feasible adaptation measures. The causes of climate change were reviewed and it was noted that concentrations of greenhouse gases can lead to atmospheric warming as is currently seen in increases in sea surface temperature, ocean heat content, temperatures over oceans, humidity as well as increased temperature over land.

Mr. Gleason stated mitigation and adaptation are key strategies to respond to climate change. Mitigation seeks to reduce emissions and adaptation seeks to make assets and systems more resilient to the impacts of climate change. An example

was provided of a London bus with its roof painted white which reflects heat back to the atmosphere and keeps the inside coach cooler serving both goals of mitigation and adaptation. It was noted the effects of climate change regionally can include coast line loss, a rise in sea levels, increased storm surges interspersed with more frequent drought. Increased drought will prompt more wildfires and high heat days. Additionally, as impacts will be felt locally local agencies can assess their vulnerability to climate change and plan for more resilient systems when considering long-range as well as capital planning. Mr. Gleason noted that the effort seeks to produce a decision assisting resource for public transportation providers in the region that will help agencies incorporate planning for adaptation into asset management, long-range and capital planning efforts. Additionally guidance from the RTTAC will be sought as the process continues.

5.0 STAFF REPORT

Philip Law reported that Foothill Transit has completed a triennial review and there were questions about the metropolitan planning agreements between SCAG and the operators. SCAG provided a response letter to Foothill Transit and if other operators receive questions they are encouraged to contact SCAG staff.

6.0 ADJOURNMENT

Gary Hewitt adjourned the meeting at 12:06 p.m.

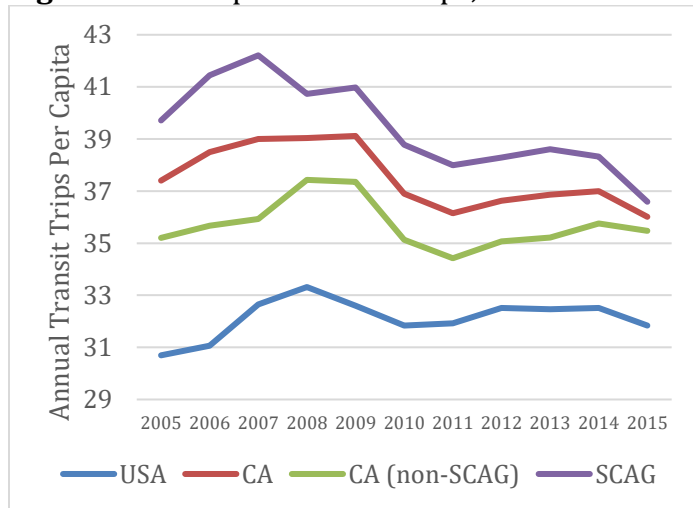
DECLINING DEMAND FOR PUBLIC TRANSPORTATION

Preliminary Findings – Subject to Change or Refinement

In the SCAG region from 2005 to 2015, fixed route transit trips per capita fell by 8% despite a 4% increase in service. SCAG and the UCLA Institute for Transportation Studies are working together to ascertain why. The declines in ridership, affecting transit providers across Southern California, are alarming because they are occurring:

On per capita basis and at a faster rate than both the state and nation as a whole.

Figure 1. Per Capita Transit Trips, 2005-2015

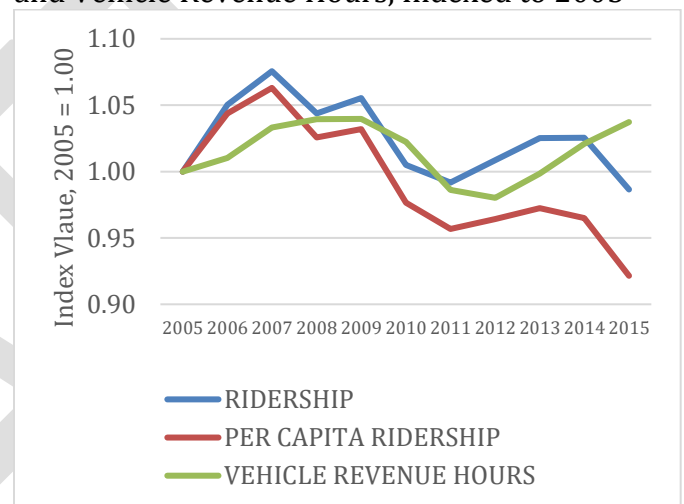


Source: National Transit Database, CA Department of Finance, US Census

Even as transit service levels are increasing.

Historically, service provided has closely tracked ridership, but this relationship appears to have weakened, particularly after 2013.

Figure 2. SCAG Ridership, Per Capita Ridership, and Vehicle Revenue Hours, Indexed to 2005



Source: National Transit Database

In geographic areas where transit has historically been the most productive. Los Angeles, Orange, and San Bernardino Counties together account for 95% of transit trips in the region, and all experienced losses in both ridership and productivity, even as they increased overall transit service.

Figure 3. SCAG Counties Transit Trips and Vehicle Revenue Hours (VRH)

County	Share of Total Trips, 2015	Change in Total Trips (millions), 2005-2015	% Change in Trips Per Capita, 2005-2015	% Change in VRH, 2005-2015	% Change in Productivity (Trips/VRH), 2005-2015
Imperial	0.1%	0.4	65.5%	35.7%	33.6%
Los Angeles	84.4%	-7.6	-4.5%	0.7%	-1.9%
LA - Bus	68.3%	-43.6	-11.5%	-2.7%	-6.0%
LA - Rail	16.0%	36.0	43.6%	64.1%	-9.5%
Orange	8.3%	-10.6	-20.9%	1.5%	-17.0%
Riverside	2.0%	3.4	8.2%	22.9%	7.6%
San Bernardino	2.3%	-0.1	-9.9%	9.3%	-8.9%
Ventura	0.8%	1.3	22.6%	50.7%	-13.0%

Source: National Transit Database

Notes: Excludes Metrolink; Imperial County comparisons are for 2008-2015 as no service was provided in 2005

Preliminary data for 2016 and 2017 suggest the declines are continuing.

Although notably, Metro Light Rail saw increased ridership due to the openings of the Foothill and Expo line extensions in early 2016.

Figure 4. SCAG Counties Large Operators, Ridership 2015-2017

	Fiscal Year (FY) Ridership (millions)			Fiscal Year-to-Year % Change	
	FY15	FY16*	FY17*	FY15-16	FY16-17
Rail					
Metro Heavy Rail	47.5	46.0	45.6	-3.2%	-0.8%
Metro Light Rail	62.8	62.1	67.8	-1.1%	9.1%
Metrolink	14.0	13.8	10.7	-1.6%	-22.2%
Bus					
Metro Bus	343.0	320.9	290.2	-6.4%	-9.6%
OCTA	47.0	43.3	39.9	-8.0%	-7.8%
Long Beach Transit	28.1	26.3	25.1	-6.4%	-4.6%
LADOT	23.6	21.2	19.5	-10.0%	-8.4%
Big Blue Bus	18.7	16.6	13.3	-11.6%	-19.6%
Foothill Transit	14.6	13.6	13.6	-6.9%	-0.2%
Omnitrans	13.9	12.4	11.2	-11.1%	-9.4%
Riverside Transit Agency	9.2	8.8	8.3	-4.6%	-5.6%
SunLine Transit Agency	4.7	4.4	4.2	-6.8%	-4.8%
Gold Coast Transit	3.9	3.8	3.6	-2.8%	-4.9%
Imperial County (ICTC)	0.9	0.8	0.8	-2.8%	-7.1%

Source: National Transit Database, Annual (2015) and Unaudited Monthly (2016-2017)

*Note: Unaudited monthly data are preliminary and subject to change with the formal release of NTD annual data. The 2016 annual data are expected to be released at the end of 2017.

Inset:

The past 15 years were a time of great instability for transit agencies in Southern California.	
2002-2007	Dramatic increases in fuel prices and transit demand
2008-2011	Steep declines in demand and service provided during/after the Great Recession
2012-2013	Renewed growth in transit service levels and trips taken
2014-2015	Continued transit service growth, but decline in per capita trips

WHY IS TRANSIT DEMAND FALLING?

Historically, the strongest market for transit has been among low income immigrants living in Los Angeles and Orange Counties with limited access to vehicles. These residents appear to be obtaining more vehicles and taking fewer transit trips. However, the reasons are not entirely clear.

Transit riders make up a very small segment of the population, and there is no annual data source that tracks them over time. However, small changes in their travel behavior can lead to large changes in transit ridership.

- According to the 2009 National Household Travel Survey, only 4% of all trips in the SCAG region were by transit. Census data for 2015 show only 4.2% of all commuters took transit to work.
- Those with low-income, that are foreign-born, and have no access to vehicles, are more likely than others to ride transit, but even within these groups, most people are not transit riders.

Figure 5. Share of Workers Commuting by Transit

Year	Poor Workers	Foreign Born Workers	Poor Foreign Born Workers	Workers With No Vehicles in Household
2000	14.3%	8.6%	19.0%	34.6%
2010	11.3%	6.8%	14.2%	25.3%
2015	10.0%	5.7%	11.0%	24.9%

Source: US Census Integrated Public Use Microdata Series (IPUMS)

Poor workers are defined as those whose income falls below the Federal Poverty Level

Vehicle ownership rates are increasing, particularly among those most likely to take transit.

- Since 2000, the share of households in the SCAG region without vehicles decreased by 46%, and the share of households with a vehicle deficit (less vehicles than working adults) declined by 16%. These trends are occurring in many different kinds of households, but are pronounced among immigrants from Mexico and Central America.

Figure 6. Vehicle Ownership and Commute Behavior of Mexican Foreign-Born Households (HHs)

Year	Share of HHs w/Vehicle Deficit	Share of HHs w/No Vehicles	Share of HHs w/Transit Commuters
2000	67%	15.7%	11.3%
2010	55%	7.0%	8.7%
2015	48%	5.4%	6.2%
% Change, 2000-2015	-28.4%	-65.6%	-45.1%

Source: US Census Integrated Public Use Microdata Series (IPUMS)

Other factors may also be at work, but the relationship is unclear.

- Low fuel prices, increased driver licensing, and the rise of Transportation Network Companies (TNCs) such as Uber and Lyft, have also been suggested as causes. However, per capita ridership

began falling before the widespread adoption of TNCs (Uber LA officially launched in 2012) and before the implementation of Assembly Bill 60 in 2015, which directed the Department of Motor Vehicles to issue a California driver license to any eligible resident, regardless of immigration status. Further, per capita ridership began falling while fuel prices were rising.

- The most common primary reason that former Metro riders reported for leaving was concerns about safety/comfort. However, this does not show up with former riders of OCTA and other smaller providers (Big Blue Bus, Montebello).

NEXT STEPS

- A line-by-line analysis suggests Metro's central city routes are losing the most riders. SCAG and UCLA will examine the potential impact of changing residential location patterns among working class and immigrant households.
- The team will also explore ways to analyze riders' perception of security, and how that may affect transit ridership.
- A final report is expected by December 2017.

REPORT

DATE: August 30, 2017

TO: Regional Transit Technical Advisory Committee (RTTAC)

FROM: Philip Law, Transit/Rail Manager, 213-236-1841, law@scag.ca.gov

SUBJECT: Senate Bill 1 – Local Planning Grants

DISCUSSION:

Senate Bill (SB) 1, The Road Repair & Accountability Act of 2017, was signed into law on April 28, 2017. SB 1 allocates some of its funding towards competitive local planning grants to support regional sustainable communities strategies and help achieve the State's greenhouse gas reductions targets. There are two grant programs and transit agencies are eligible to apply for both grants, either as primary applicants or as sub-applicants.

Caltrans is moving quickly to make the grant funding available and has developed final draft guidelines for public review and comment by August 31, 2017 (<http://www.dot.ca.gov/hq/tpp/grants.html>). Two workshops are planned to receive input on the final draft guidelines, see attached flyer. The second workshop on Sep. 6 will be held at Caltrans District 7 headquarters in Los Angeles.

SB 1 provides \$25 million annually for **transportation planning grants** to encourage local and regional planning that further state goals, including the goals and best practices cited in the regional transportation plan guidelines adopted by the California Transportation Commission. These grants may fund a broad range of planning activities, including studies to improve transit ridership (“advancing mode shift”), preserve transit facilities and optimize transit infrastructure, and evaluate accessibility and connectivity of the multimodal transportation network.

An additional \$20 million over three years is available for **climate change adaptation planning grants** to local and regional agencies. Eligible activities include climate vulnerability assessments, resilience planning, and transportation infrastructure adaptation plans.

The anticipated schedule is as follows:

Early September 2017 – Release final Grant Guides and call for applications

October 20, 2017 – Grant applications due

November 2017 – Application evaluation period

December 2017 – Management approval and release grant announcements

February 1, 2018 – Non-MPO/RTPA final due date for contract packages

May 1, 2018 – MPO/RTPA final due date for programming funds in Overall Work Programs (OWPs) and OWP Agreements.

REPORT

Attachment: SB 1 Workshops Flyer



SENATE BILL 1 PLANNING GRANTS WORKSHOPS



Caltrans released the final draft grant guides for the new Senate Bill 1 planning grants on August 2, 2017, with a public comment period ending on August 31, 2017. Immediately following the comment period, Caltrans is holding two workshops to provide the public and stakeholders a final opportunity to weigh-in and pose technical questions regarding the final draft grant guides, including:

- **\$25 million annually for Transportation Planning Grants** to encourage local and regional planning that further state goals, including, but not limited to, the goals and best practices cited in the regional transportation plan guidelines adopted by the California Transportation Commission.
- **\$20 million over 3 years for Adaptation Planning Grants** to local and regional agencies for climate change adaptation planning.

In addition to public input, Caltrans is partnering with other State Agencies to ensure that the State's priorities are addressed in these important transportation planning programs. State Agencies will be present to answer questions related to their subject matter of expertise. It is envisioned that these planning grants will provide much needed funding to support regional sustainable communities strategies and ultimately achieve the State's greenhouse gas reductions targets of 40 and 80 percent below 1990 levels by 2030 and 2050, respectively.

More workshop information will be posted online as details become available at:

<http://www.dot.ca.gov/hq/tpp/grants.html>.

Sacramento

Friday, September 1
12:00 – 2:00 pm

Attend in person at:

Caltrans Basement Board Room
1120 N Street

Sacramento, CA 95814

Webcast live at:

http://ctmedia.dot.ca.gov/webcast/live/live_event.asp

Southern California

Wednesday, September 6
10:30 am -12:30 pm

Caltrans District 7 Building
100 S Main Street, Room 01.037
Los Angeles, CA 90012

Showing Angelenos and the world what comes next in the Heart of the Arts District

- >> 5 days of immersive demos, exhibitions, experiments.
- >> A thought-leadership conference, including mayors, transportation ministers, industry leaders and innovators from around the world.
- >> The world's first mobility event to activate an entire urban neighborhood of a major global city.
- >> 175,000 square feet of cutting-edge mobility technologies.
- >> 15,000 new mobility leaders and Angelenos

Wednesday - Friday, Nov. 15-17, 2017

LA CoMotion participation reserved for those leading the urban mobility revolution.

Saturday - Sunday, Nov. 18 - 19, 2017

LA CoMotion open to general public.

Contact us:

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- >> Mobility Industry Leaders
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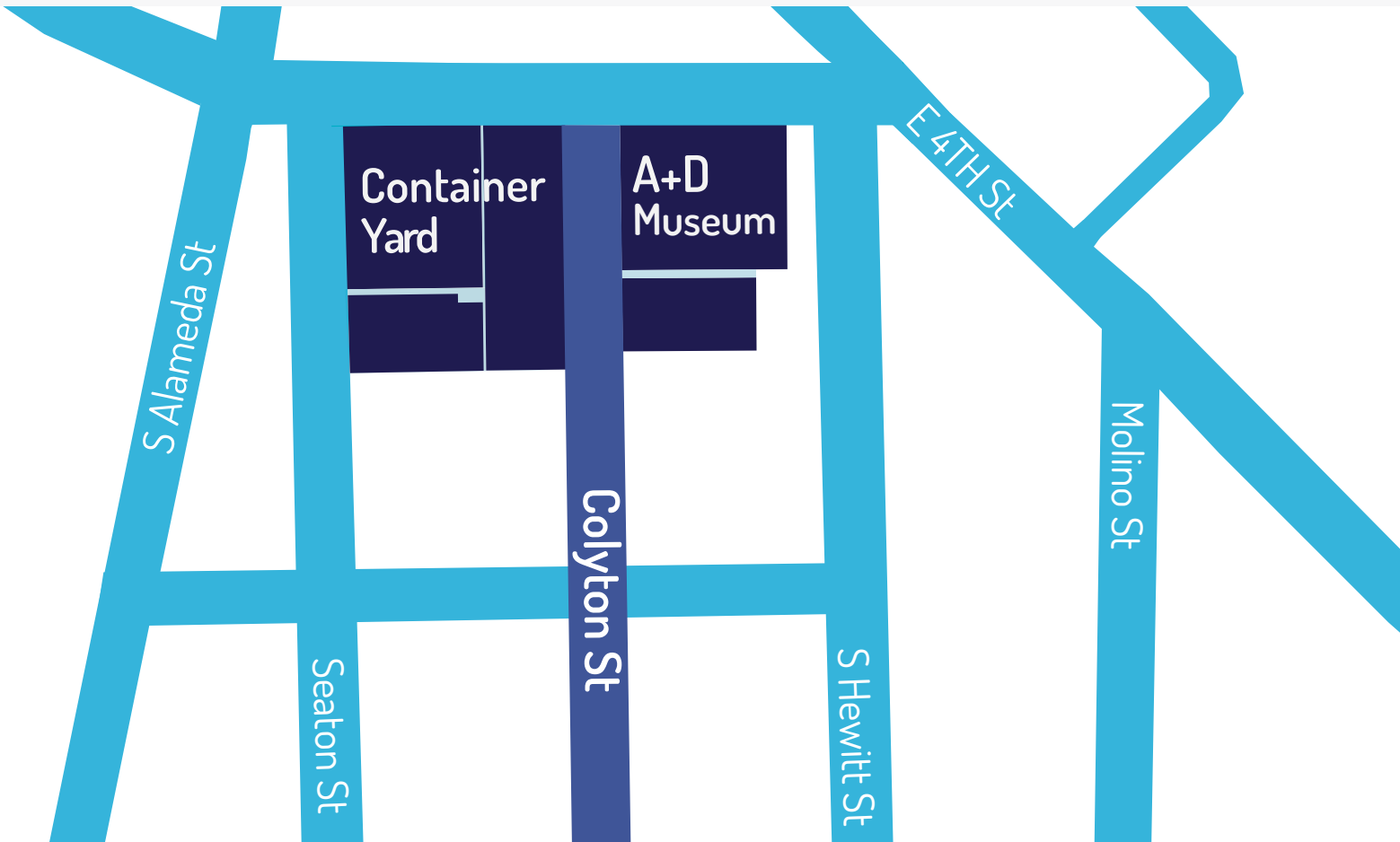
Institutional Partners



Lead Partners



Placing the Community at the center of LA CoMotion



“Los Angeles is making bold and historic investments in transportation infrastructure that will transform how people connect with the people and places they love...we welcome the energy and innovative ideas that L^ACoMotion will bring to our city and region.”

Eric Garcetti, Mayor of Los Angeles



Public-Private-Partnerships for Innovative Transportation Solutions

**SOUTHERN CALIFORNIA ASSOCIATION OF GOVERNMENTS
Regional Transit Technical Advisory Committee**

August 30, 2017

Pinellas Suncoast Transit Authority (PSTA)
St. Petersburg, Florida



Overview

- Direct Connect Program
- TD Late Shift/Daytime Urgent Program
- FTA MOD Sandbox

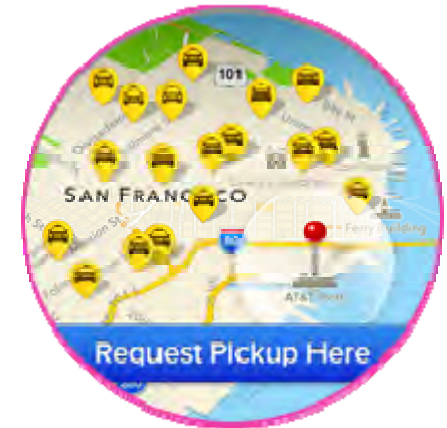


Care Ride, LLC

Transportation Service



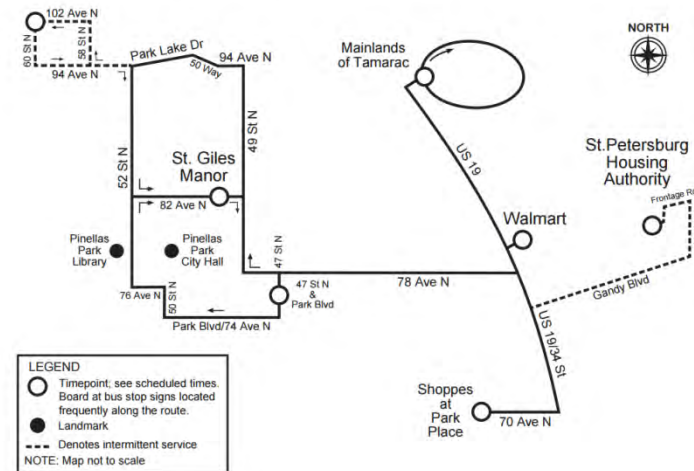
Federal Transit Administration



Direct Connect Background

- Referendum loss in November 2014
- Development of Performance Monitoring and Staff Recommendations
- University of Florida, Gainesville model
- Local leadership and political support

Route 444 – Lowest Performing



Direct Connect 2017

- Uber, United Taxi, Wheelchair Transport Services
- PSTA pays first \$5
- Ridership
 - 11 Months
 - 570 Rides
 - Since Expansion
 - Over 2000 rides
- Effective Marketing and Outreach



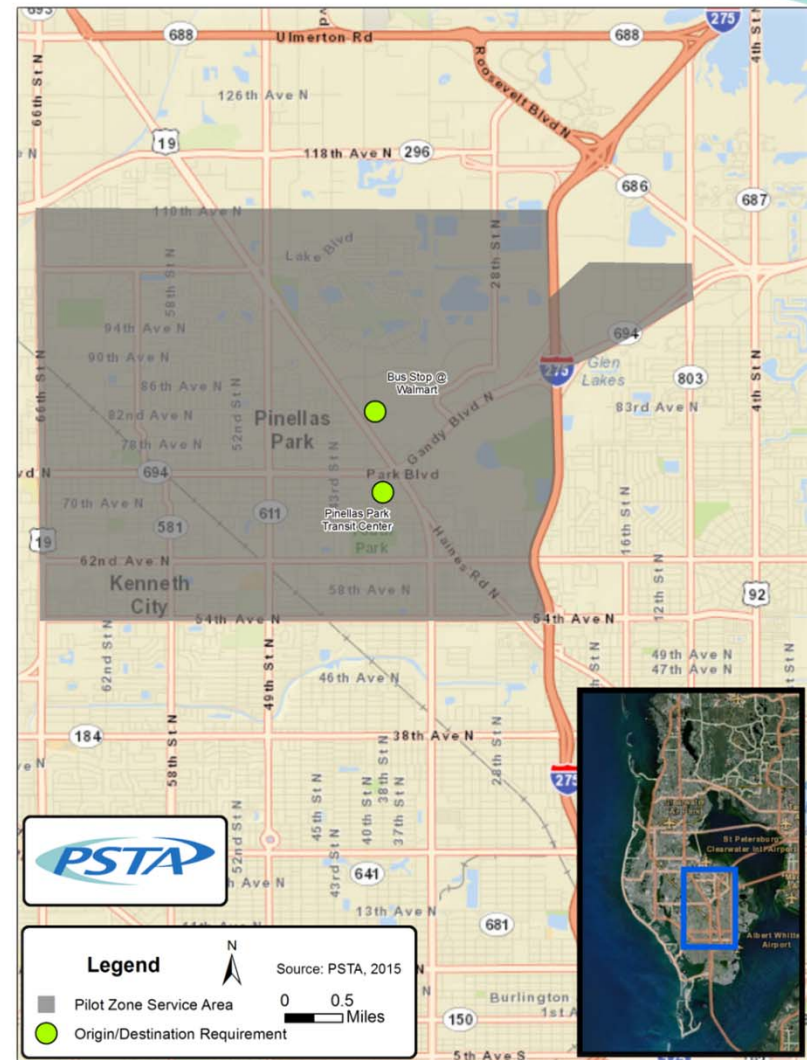
Outcomes

Successes

- First Ever Program
- Groundbreaking Partnerships
- National Recognition
- Demonstration of Expandable Model

Challenges

- Data
- Technology
- Demographics



New Technology and Partnerships

Research → better business practice



Research Role:

- Proof of Concept (R&D)
- Demonstrations
- Deployment
- Technical Assistance, Technology Transfer, & Standards (TTS)
- Evaluation



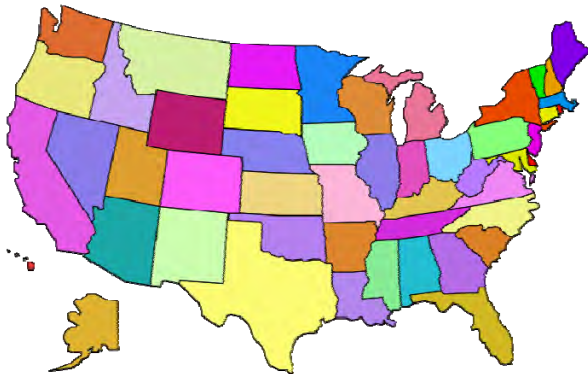
The screenshot shows the GoIn website interface for creating a ride. The user is 'Jane Doe' with a wallet balance of \$62 and a 'WheelChair' mobility requirement. The ride is for 'Jane Doe' from '1 Tropicana Dr, St. Petersburg' to '1530 4th St N, St. Petersburg'. The interface shows three options for 'Shortest Arrival':

Duration	Service	Price
6 mins	CareRide	\$15.50
7 mins	Lyft WAV	\$15.27
8 mins	United Taxi	\$14.32



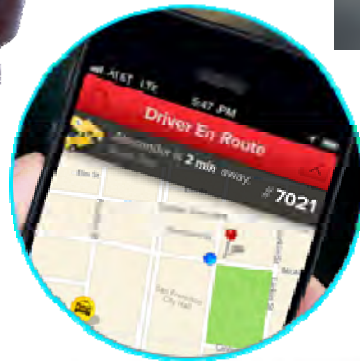
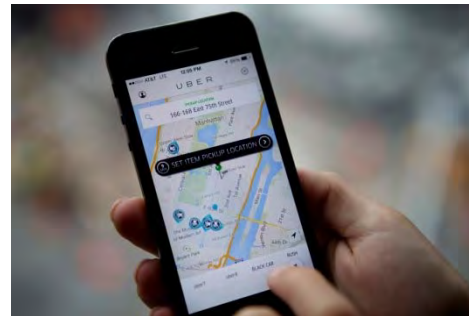
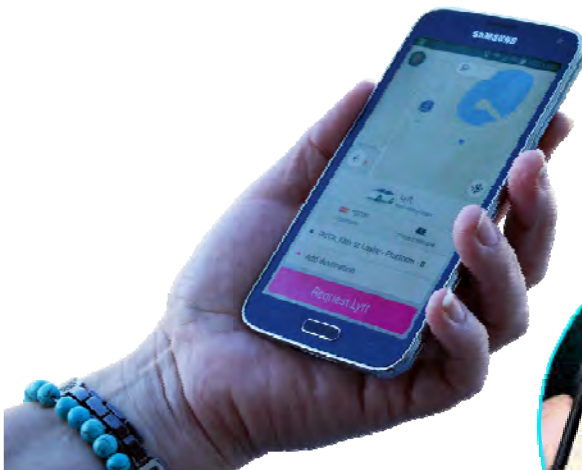
Policy and Other Challenges

- Issues at Federal, State and Local levels
- ADA Equitable Service
- Background Checks & Vehicle Maintenance
- Not everyone likes Disruption



PSTA – Mobility Management

- Using TNC's to serve suburban areas
- Data capture and reporting
- TNC's complementing fixed route service
- Contributing to the Mobility On-Demand System concept



Rubber Tires, Residents, and Gentrification in Los Angeles

Anne Brown, PhD Candidate, University of California, Los Angeles
Emerging Scholars Award for Excellence in Research and Public Policy

Examining the Los Angeles Orange Line, this study offers new evidence that bus rapid transit, like rail, may gentrify neighborhoods. Neighborhoods with lower median household incomes, lower median rents, and higher proportions of renter-occupied housing experienced elevated levels of gentrification compared to other neighborhoods. In light of this, policy makers should prioritize preserving affordable housing to protect incumbent residents from displacement through rising housing costs around accessible transit lines. Many thanks to Evelyn Blumenberg and the California Air Resources Board for advising early stages of this research project.

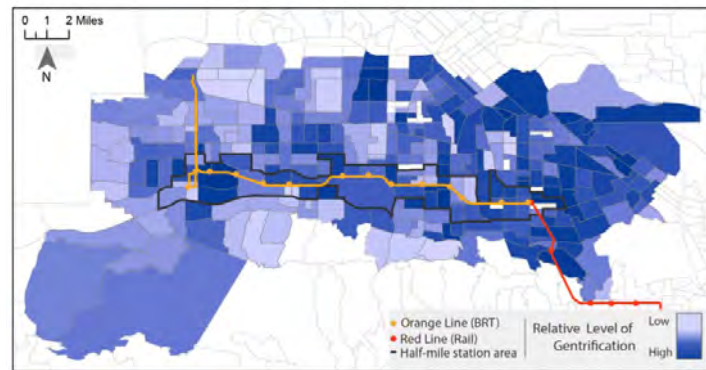
Bus Rapid Transit (BRT), mass transit that has been equated to rail-like service on rubber tires, operates across the globe and has proven an effective, efficient, and lower-cost option compared to rail transit. While new BRT lines are built each year in the United States, almost no research exists on its potential neighborhood-level effects. This study asks, do BRT investments change or gentrify neighborhoods? An improved understanding of whether and how BRT affects adjacent neighborhoods is important for policy makers, who may adopt proactive measures to protect incumbent households from potential displacement due to rising housing costs.

Key Findings:

- ◆ Between 2000 and 2013, median home value and rent skyrocketed nearly 44% and 36% respectively in tracts within a half-mile from Orange Line stations.
- ◆ Median household income rose around Orange Line stations but fell in neighborhoods two and five miles from stations.
- ◆ Economic preconditions rather than racial/ethnic makeup are better predictors of neighborhood change and gentrification.

For more information contact Anne Brown at aebrown0316@ucla.edu

Levels of gentrification around the Orange Line



Implications for Policy

The changes over time observed in Orange Line-adjacent neighborhoods demonstrate that BRT has the potential to gentrify surrounding neighborhoods. Multi-pronged housing strategies offer policies such as rent control, just-cause eviction controls, and cooperative housing to maintain affordable housing around transit. Cities may also leverage developer incentives or enable conditional use permits to increase or protect affordable housing. While previous studies find a strong correlation between transit-adjacent investment and level of government support, this study demonstrates both that neighborhood change is not ubiquitous, and that planners cannot assume that neighborhoods will remain static in the absence of government support or investment.

Rubber Tires for Residents

Bus Rapid Transit and Changing Neighborhoods in Los Angeles, California

Anne E. Brown

Bus rapid transit (BRT), mass transit that provides rail-like service on rubber tires, is gaining popularity in the United States as a lower-cost alternative to rail. Despite its growing popularity and previous research that links rail transit-oriented development to gentrification, the effects of domestic BRT on surrounding neighborhoods remains largely unexplored. This paper fills that gap by exploring neighborhood change around the Los Angeles, California, Orange Line, the most heavily patronized BRT line in the United States between 2000 and 2013. This study found that neighborhoods within a ½-mi radius of Orange Line stations changed more than those located 2 and 5 mi from stations. While neighborhood racial-ethnic compositions remained relatively static, rising median home values, rents, and increasing educational attainment of residents suggest economic transitions and gentrification within Orange Line-adjacent communities. In addition, neighborhoods with lower median rents, lower median household incomes, and higher proportions of renter-occupied housing in 2000 were more likely to exhibit higher degrees of change by 2013 than were other areas. Together, these findings suggest that economic preconditions rather than racial-ethnic makeup are better predictors of neighborhood change and markers of neighborhoods' potential to gentrify. In addition, these findings demonstrate that transit-oriented gentrification is not modally linked; rather, domestic BRT, like rail, has the potential to change neighborhoods and may do so even without coordinated government investment. Therefore, policy makers must protect and provide affordable housing stock around BRT lines to safeguard incumbent residents from being displaced because of rising housing costs associated with gentrification.

Bus rapid transit (BRT), mass transit that has been equated to rail-like service on rubber tires, operates across the globe and has proven an effective, efficient, and lower-cost option to rail transit. Although BRT has operated successfully in South America since the 1970s, it was not constructed in the United States until 1999. Since then, 11 American cities have built BRT systems on dedicated rights-of-way, and others are considering it as a more financially feasible alternative to rail. However, despite BRT's growing popularity, a limited body of literature has examined BRT's effects internationally (1–3), and even fewer have examined domestic BRT's effects on home values (4) and potential to leverage investment dollars (5).

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DOI: 10.3141/2539-01

Understanding the effects of domestic BRT is vital given its increasing presence in the United States and findings that rail transit-oriented development may spur gentrification (6–9), which may displace residents (6, 10). This paper sought to fill that gap to gain better understanding of domestic BRT's effects on surrounding neighborhoods. An improved understanding of whether and how BRT affects adjacent neighborhoods and their residents is important in helping to inform policy makers, who may adopt proactive measures to protect incumbent households from potential displacement because of the rising housing costs often associated with gentrification.

This paper examined the neighborhood effects of the Orange Line in Los Angeles, California, a BRT line operated by the Los Angeles County Metropolitan Transportation Authority (Metro) since 2005. The Orange Line is both one of the most heavily invested and most heavily patronized BRT line in the United States (5). The paper first reviews markers of gentrification and evidence of rail as a stimulus of transit-oriented gentrification. The effects of rail, as a separate but similar form of mass transit, may yield lessons of the potential for BRT to gentrify neighborhoods. U.S. Census and American Community Survey (ACS) data between 2000 and 2013 were used to discern whether Orange Line station areas changed more than did nonadjacent neighborhoods. A constructed gentrification index was likewise used to measure overall levels of gentrification occurring in each neighborhood. Finally, ordinary least squares regression was employed to understand the preexisting socioeconomic characteristics associated with elevated rates of subsequent neighborhood change.

Overall, analysis revealed that neighborhoods within half a mile of Orange Line stations changed more between 2000 and 2013 than less proximate neighborhoods. Orange Line-adjacent areas experienced greater increases in educational attainment, home values, and median rents than did areas farther from stations, a finding suggesting that Orange Line stations are gentrifying. Although economic indicators suggest gentrification, neighborhood racial-ethnic compositions remained relatively static over the study period. Neighborhoods that had lower rates of educational attainment, lower income, lower median rent, and a higher proportion of renter-occupied housing in 2000 were all significantly more likely to experience elevated levels of neighborhood change than were other neighborhoods. Together, these findings suggest that (a) domestic BRT has the potential to gentrify neighborhoods; (b) economic preconditions, rather than racial-ethnic composition independent of economic factors, may act as predictors of neighborhood change and indicators of neighborhoods' potential to gentrify; and (c) transit has the potential to gentrify neighborhoods even absent coordinated government investment, developer incentives, or changes in zoning.

TRANSIT INVESTMENT AND GENTRIFICATION

What Is Gentrification?

Gentrification is an extensively studied phenomenon that has been defined and redefined over several decades (11). Gentrification may yield both positive and negative outcomes (6); may or may not be accompanied by residential displacement (12); and encompasses economic factors, demographic forces, or a combination of the two (6). Pollack et al. defined gentrification as the “pattern of neighborhood change marked by rising housing costs and incomes” (13, p. 3), while Dominie named gentrification as a “process of change . . . [that] occurs specifically in low-income neighborhoods” (8, p. 42). Freeman (12) and Chapple (6) both established that gentrification occurs in central-city neighborhoods that experience housing value appreciation, increasing educational attainment, and rising household incomes over the regional average. This paper adapted both the Freeman and Chapple definitions of gentrification and applied them to transit-adjacent rather than central-city neighborhoods. Therefore, this paper defines “gentrification” as a process of neighborhood change that results in economic and demographic transitions in transit-oriented neighborhoods.

Do Transit-Oriented Developments Gentrify Neighborhoods?

Research into domestic transit-oriented gentrification and transit-oriented displacement has thus far focused primarily on rail as an agent of neighborhood change (6–9, 14). The heavy focus on rail is partly the result of limited bus-oriented development and BRT systems within the United States. Before BRT, local bus investments proved unsuccessful in generating sufficient returns on investment to motivate development and thus were less concerning from a gentrification standpoint (15). Cervero and Duncan found that even rapid bus systems, such as Metro Rapid in Los Angeles, do not stimulate development (16). However, BRT’s fusion of bus and rail service quality may create new prospects for bus-oriented development. Indeed, many cities have already seen levels of investment in transit-oriented development along their BRT corridors that are moderate (Las Vegas, Nevada; Eugene, Oregon; Boston, Massachusetts; Pittsburgh, Pennsylvania; and Los Angeles) to high (Cleveland, Ohio, and Kansas City, Missouri). (5). This paper reviews both domestic rail and international BRT cases that together may inform expectations of domestic BRT’s potential to shape neighborhoods.

While not all rail-adjacent areas gentrify (14, 17), they may be “particularly susceptible to gentrification” because of the improved access and mobility that rail provides (6). In addition, Chapple found that gentrifying neighborhoods are “nearly twice as likely to be located within one-half mile of transit than any other kind of neighborhood” (6, p. 5). Gentrification around transit stations is more likely to occur when neighborhoods have a high proportion of low-income renters (7, 13), lower-than-average incomes (18), lower educational attainment, and more zero-car households (7). Although indicators of wealth and neighborhood affordability may change in gentrifying neighborhoods, the racial–ethnic profile of a neighborhood may not. Pollack et al. found that transit investments do not inherently change a neighborhood’s ethnic composition: while some wealthy residents may replace poorer residents, overall ethnic composition remains similar (13). New, albeit wealthier, households may be moving into ethnically similar neighborhoods; therefore, while average incomes may rise, neighborhood ethnic compositions are less likely to alter (18).

Gentrification in transit-adjacent areas becomes more likely if (a) the costs of driving increase in either time or money (thus mak-

ing transit a more attractive alternative to the car), (b) transit becomes more desirable or socially acceptable through demographic or cultural changes, (c) transit reduces travel time or increases accessibility, or (d) an organization (state, landowner, etc.) commits to rehabilitating a local area on relatively large scale (7). In some gentrifying neighborhoods, lower-income renters and transit users are priced out of transit-rich neighborhoods and replaced by higher-income residents less likely to commute by transit (13). Therefore, gentrification around transit is concerning not only from an equity perspective but from a transit agency perspective; protecting lower-income housing around transit preserves transit ridership by enabling proximate living.

Previous studies of transit-oriented gentrification around Los Angeles rail lines provides excellent context for neighborhood change around the Orange Line. Between 1990 and 2010, 70% of heavy rail (Red and Purple) stations (7) and 60% of light-rail transit (Gold, Blue, and Expo) stations gentrified (9). At the same time, areas within a ½-mi radius of rail stations added high-income households, lost transit riders (8), increased educational attainment faster, had higher proportions of above-median rental costs, and were home to a higher proportion of above-median income households than other Los Angeles neighborhoods (7).

BRT’s Potential for Development and Gentrification

Understanding BRT’s effects on property values and land use is important to consider when neighborhood change along the Orange Line corridor is being discussed. While some planners and officials question BRT’s potential to spur urban development, citing negative bus stigma and a public perception of nonpermanence (19, p. 3; 20), Currie argued that BRT may incentivize development and land investment in a manner similar to that of rail (21, p. 1). In fact, Hook et al. found that BRT may leverage more development per dollar invested, if not in absolute terms, compared with light rail or streetcars (5). In addition, BRT in Curitiba, Brazil; Brisbane, Australia; Pittsburgh; and Ottawa, Ontario, Canada, have all seen increases in adjacent land value similar to those experienced along rail transit projects (22, p. 1). Much of the BRT literature is international, a situation that corresponds to the prevalence of BRT throughout the world. International research has repeatedly found that BRT raises residential land and building values in cities from Seoul, South Korea (23), to Bogotá, Colombia (24), and that proximity is particularly predictive of heightened property values (2, 3). Mulley noted that, while BRT “accessibility improvements do add to house values,” the increase is not dramatic and that accessibility to stations varies greatly along a line (1, p. 1721). Information on domestic BRT effects on surrounding housing values remains scarce, although some evidence indicates that domestic BRT lines may have effects similar to those of international lines. A 2010 study of Pittsburgh’s East Busway, one of the oldest BRT systems in the country, finds positive and decreasing marginal effects of the busway on property values (4).

Metro Orange Line: Beginning of BRT in Los Angeles

The Orange Line, in the San Fernando Valley in north Los Angeles, runs 14 mi east–west and consists of 14 original stations, each about 1 mi from the next. This study excludes four stations newly opened in 2012 because insufficient time has passed to examine change around the stations. Orange Line stations are located primarily at

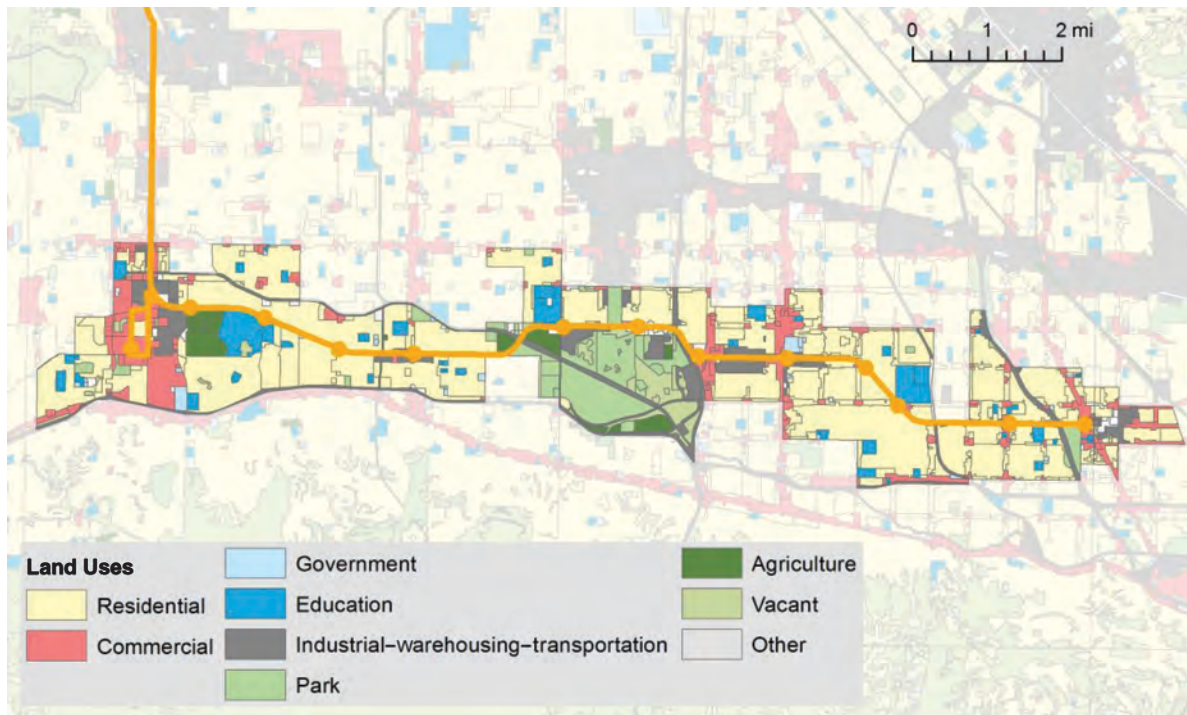


FIGURE 1 Land uses in area within 1/2 mi of station.

activity centers, major north–south arterials, and residential centers. Figure 1 illustrates the variation in land uses along the Orange Line, highlighting land uses within the 1/2-mi study area. While the majority of the line passes through residential areas, pockets of commercial activity are located along the line. The highest concentration of commercial activity surrounds the Warner Center station, which served as the line’s western terminus until 2012, when four additional stations extended the route north. As of April 2014, the line carried more than 29,000 people on an average weekday. In addition, eight of the 14 original stations offer free or paid onsite parking. Onboard surveys revealed riders most heavily patronize the Orange Line for commuting, although people also ride the Orange Line for shopping, errands, and school trips (25).

DATA AND METHODOLOGY

This study sought to answer three questions: First, did Orange Line–adjacent communities change more than less proximate neighborhoods? Second, do observed changes suggest that neighborhoods

around the Orange Line are gentrifying? And third, what preexisting neighborhood characteristics are associated with elevated levels of subsequent change? This study adds to the relative paucity of literature examining effects of domestic BRT on surrounding neighborhoods. Previous gentrification studies have sought to understand divergent attitudes between neighborhood newcomers and those planning to depart the neighborhood (26). Because this study did not have access to such fine-grained survey data, it relied instead on U.S. Census Bureau and ACS data to calculate changes over time across a number of indicator variables and to construct a gentrification index to measure relative levels of gentrification. On the basis of gentrification literature, this study examined four categories of variables: demographics, economics, transportation, and housing (Table 1). Variables were selected on the basis of their prominence or near ubiquity in the gentrification literature. In addition to housing and economic variables, which are some of the most commonly used markers of gentrification, three mode choice variables that reflect changing-neighborhood travel were examined as proxies for changing demographics. Transportation variables

TABLE 1 Study Variables

Demographic	Economic	Mode Choice	Housing
Total population	Median income	Commute mode, drive alone	Median rent
Percentage of population, Asian	Percentage of households, no vehicles	Commute mode, carpool	Median home value
Percentage of population, African-American	Percentage of households, two or more vehicles	Commute mode, transit	Percentage of housing owner-occupied
Percentage of population, Hispanic			Percentage of housing renter-occupied
Percentage of population, white			Total occupied housing units
Percentage of population with bachelor’s degree or higher			

are often included in measuring gentrification, including vehicle ownership, which is closely correlated to household income, and commute mode (6, 8).

Data

This study used data covering 2000 to 2013 at the census tract level. Census tracts provide the smallest geographic unit possible for analysis across periods without introducing unreasonably high margins of error, which are especially concerning to researchers when sample data from the ACS are used. This paper refers to tracts interchangeably as neighborhoods although it recognizes that perceived neighborhood boundaries may not align with tract boundaries. Although the Orange Line was not completed until 2005, plans for the line were finalized in 2001. Therefore, 2000 decennial Census Bureau records provided baseline data for preproject neighborhood characteristics unaffected by either project plans or execution. Data for 2013 originated from the 2013 ACS 5-year sample, which provided the most current data available at the census tract level and thus allowed for the greatest time lapse between Orange Line construction and today. While sufficient time might have passed to observe slowly changing land use patterns or neighborhood characteristics, which often occur slowly over a longer period (27), other studies have observed changes in property values over a similar, or shorter, period (1, 4). Therefore, the study period should have been adequate to capture neighborhood changes if they were occurring.

Data were adjusted to be consistent across the two periods; for example, all dollar values were converted to 2013 dollars. In addition, the Census Bureau records household vehicle ownership for four distinct variables: owning zero, one, two, or three or more vehicles. Because gentrification literature typically measures only the proportion of households with no cars or two or more cars per household, households owning two vehicles and households owning three or more vehicles were aggregated into a single variable reflecting the percentage of households owning two or more vehicles (6–8).

Geography

One study and two control areas were first constructed by using the ArcGIS Network Analyst tool. This tool measures distances along a road network rather than straight-line Euclidean distances. This method has significant advantages over using Euclidean distance buffers, as it accounts for natural and manmade barriers, such as highways, which may impede access (28). In addition, network buffers are less likely to overestimate station service areas than are Euclidean buffers (29).

Three areas were defined by using the Network Analyst tool. First, a ½-mi study area, which this paper terms the station area, was created. All census tracts that intersected with the ½-mi network area were included in the study area. A ½-mi distance was selected as a well-established appropriate distance of analysis (7, 8, 30, 31). One-half mile “corresponds to the distance over which someone from the edge of the circle can reach a station within 10 minutes walking at 3 mph” (31) and includes “the spatial extent of most TOD [transit-oriented development] planning” (31). Intersections, rather than alternative selection methods such as tract centroids, were used to ensure an adequate station area sample size.

The ½-mi station area was compared with two control areas of variable distances: 2 and 5 mi. The two-distance analysis protects against possible spillover effects, that is, the potential that the Orange Line effects extended beyond the ½-mi boundary. Tracts that intersected the 2- and 5-mi networks were selected as part of the 2- and 5-mi control areas, respectively. Importantly, tracts within the ½-mi station area were excluded from these areas to avoid conflating changes occurring around the stations with those occurring within the control areas. Figure 2 shows both the three distinct areas and the translation of network distance into census tracts analyzed in this paper.

On the basis of previous BRT and gentrification literature, this paper hypothesizes that census tracts within a ½-mi radius of Orange Line stations changed more between 2000 and 2013 than did tracts farther from stations. If the hypothesis is correct, neighborhood change may be attributed to the Orange Line.

Methodology

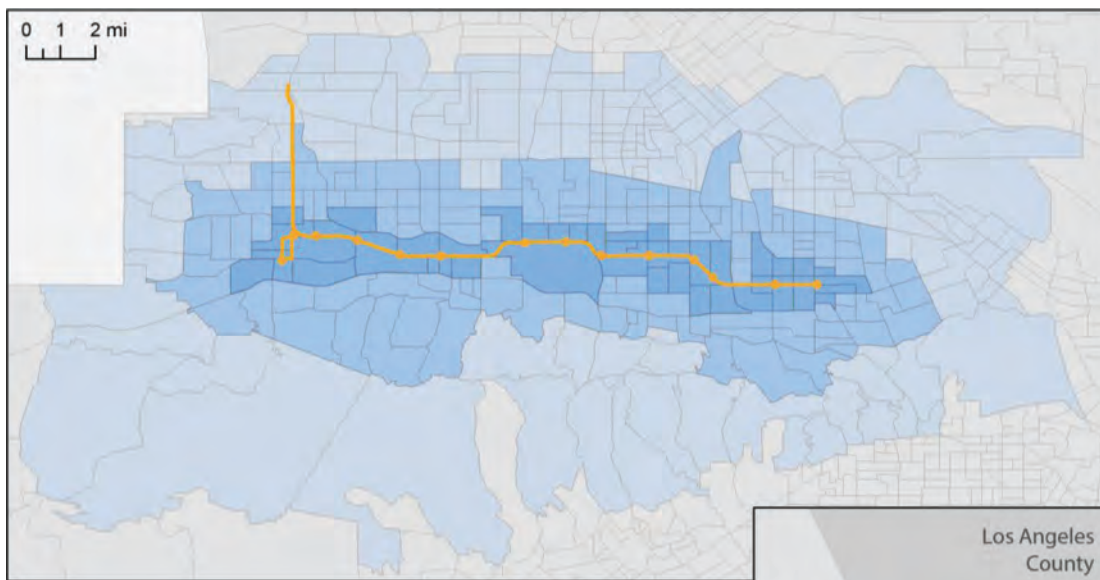
Tract level data were assembled from the 2000 decennial census and the 2013 ACS. Because tract boundaries are redrawn with each decennial census to reflect population changes, 2000 tracts were adjusted to 2010 boundaries by using weights from the longitudinal tract database (32). Percentage changes between the years were calculated for 17 variables across both station and control areas. Two-tailed *t*-tests were then used to determine whether changes in station and control areas were statistically significant across the years. Particular attention was given to whether the ½-mi station area changed more or differently than the 2- and 5-mi control areas.

After change across individual variables was assessed, a gentrification index was created to aggregate the changes and to determine relative levels of gentrification across tracts. Levels of change were first converted to raster format by using a geographic information system, which allows for a more continuous distribution of change across space; even more importantly, rasters may be weighted and summed to create a unified index to create a composite measure of neighborhood change. Five measures were included in the index; these variables were selected and weights gleaned from the gentrification literature. Table 2 lists the five variables and the weighting assigned to each. The housing and economic variables were given equal weight, while race–ethnicity variables were assigned a lower weight given findings that gentrification may not be associated with changes in neighborhoods’ racial–ethnic composition (13). While the gentrification index does not create a threshold number to prove that gentrification occurred, it is a good measure of relative change across census tracts and therefore highlights which neighborhoods are changing faster than others. High index scores indicate higher levels of aggregate neighborhood change, while lower scores reflect lower levels of change.

Finally, an ordinary least squares model was employed with the constructed index value, representing composite level of neighborhood change, as the dependent variable. This model tested census data from 2000 to determine (a) possible links between existing neighborhood conditions and higher rates of subsequent neighborhood change and (b) the strength of the relationship between independent variables and neighborhood change. A selection of independent variables from the 2000 census data that are prominent within gentrification are listed in Table 2.



(a)



(b)

Network Distance
■ 1/2-mi transit shed
■ 2-mi transit shed
■ 5-mi transit shed

Census Tracts
■ Tracts within 1/2 mi
■ Tracts within 2 mi
■ Tracts within 5 mi

FIGURE 2 Orange Line area: (a) stations and (b) control areas.

TABLE 2 Index Variables and Weights and Independent Variables Used in Ordinary Least Squares Regression

Variable	Weight
Index, Change 2000–2013	
Median household income	1.0
Median home value	1.0
Median rent	1.0
Bachelor's degree or higher (%)	1.0
White (%)	0.5
Regression, Census 2000	
Median household income	na
Median home value	na
Median rent	na
White (%)	na
African-American (%)	na
Hispanic (%)	na
Renter-occupied housing (%)	na
Bachelor's degree or higher (%)	na

NOTE: na = not applicable.

FINDINGS

How Did Neighborhoods Change Between 2000 and 2013?

Table 3 reports changes between 2000 and 2013 across the station area (½-mi) and the two control areas (2- and 5-mi). In addition, to contextualize these areas within greater countywide trends, it shows overall trends for Los Angeles County. Overall, Orange Line–adjacent neighborhoods, i.e., those within a ½-mi radius of a station, changed more than either of the two study areas or the county at large. Furthermore, for some variables, the two study areas act as a gradient of change, with lowest levels of change occurring in the 5-mi area, moderate levels of change in the 2-mi area, and highest levels of change in the station area. This gradient suggests that, at a local level, areas immediately surrounding Orange Line stations are changing more than those farther away and that the Line's effects diminish with distance. Changes in median household income were not statistically significant in any of the study areas or Los Angeles County. However, other changes reflective of economic trends suggest a degree of gentrification around the Orange Line.

Home values and median rents within a ½-mi radius of Orange Line stations increased more than they did in areas farther from stations or across the county. While median home values and rent increased dramatically across the county and control areas, median home values and rents skyrocketed nearly 44% and 36%, respectively, in tracts within a ½-mi radius of Orange Line stations. In

TABLE 3 Changes over Time

Demographic	2000 ^a			
	½-mi Area	2-mi Area	5-mi Area	Los Angeles County
Socioeconomic				
Total population	190,191	486,744	1,079,011	9,519,338
Bachelor's degree or higher (%)	21.9	24.9	24.8	20.6
Median household income (\$)	55,184	65,175	72,608	62,575
Households with 0 vehicles (%)	11.0	9.1	8.6	12.6
Households with 2+ vehicles (%)	43.8	49.7	54.7	50.5
Race or ethnicity				
White (%)	62.9	64.5	62.4	48.7
African-American (%)	5.6	4.1	3.7	9.8
Asian (%)	6.0	8.1	9.4	11.9
Hispanic (%)	36.3	34.9	37.0	44.6
Housing				
Total occupied housing units	75,294	184,415	381,987	3,133,774
Owner-occupied (%)	36	45	52	48
Renter-occupied (%)	64	55	48	52
Median home value (\$)	303,699	360,246	372,959	317,341
Median rent (\$)	1,038	1,153	1,229	1,077
Commute^d				
Car–drive alone (%)	64	66	66	63
Car–carpool (%)	12	12	13	13
Transit (%)	6	5	4	6
Number of tracts	50	127	281	2,381

NOTE: Boldface changes represent statistically significant change ($p < .05$) between 2000 and 2013. All dollars are adjusted to 2013 dollars. Numbers may not sum to 100% due to rounding, omitted categories (commute mode), or overlapping race and ethnicity categories.

^aSource: 2000 U.S. Census.

^bSource: 2008–2013 5-year American Community Survey.

^cValues recorded as percentages in 2000 and 2013 are calculated as percentage point change between 2000 and 2013; numeric and dollar values represented as the percentage change between 2000 and 2013.

^dAs percentage of labor force > 16 years.

2000, median home values and rents within a ½-mi radius of Orange Line stations were lower compared with those in the other areas; while they remained slightly lower in 2013, the value and cost gap had closed significantly. In addition, while home values and median rents were lower in the ½-mi station area than in Los Angeles County in 2000, by 2013, each cost measure eclipsed county medians. Together, these economic indicators suggest disproportionately rising costs in the immediate station area, which further suggest that gentrification—accelerated change—is occurring. A larger increase in occupied housing in the station area than in control areas likewise suggests increased investment and demand to living proximate to the Orange Line.

Changes in racial–ethnic compositions were overall less dramatic than those in the cost of housing. Within the ½-mi station area, the percentages of residents identifying as white, African-American, and Asian increased at higher rates than they did in control areas. While the study areas experienced lower growth among those residents identifying as Hispanic, no proportional loss occurred in the Hispanic population. The increases across these four racial–ethnic groups were offset by a decline in residents identifying as other races–ethnicities. Overall low rates of racial–ethnic change are consistent with the findings of Pollack et al. that gentrifying neighborhoods do not always alter in their racial–ethnic composition (13).

Although their racial–ethnic compositions were not changing dramatically, other indicators suggest that the socioeconomic character of Orange Line neighborhoods was changing more than were the surrounding neighborhoods. Orange Line neighborhoods experienced a

13% increase in population holding a bachelor’s degree or higher, well over the proportional increases seen in the other areas. Educational attainment is often a better indicator of social class than is income and thus is particularly telling in the demographic transitions of the area (12). A caveat here is that these data, because they are cross-sectional rather than longitudinal, do not distinguish between, on one hand, new higher-educated residents replacing former less-educated residents and, on the other hand, incumbent residents who are becoming more highly educated. Additional studies of these two possibilities would be needed to determine which scenario is occurring around the Orange Line. However, coupled with other socioeconomic changes occurring in the neighborhoods, these demographic changes suggest a succession of residents rather than gradual change in current residents. While changes in median income are not statistically significant across the years for any area, the direction of the change is likewise telling. Median household income within a ½-mi radius of Orange Line stations increased but fell in all other areas, including Los Angeles County as a whole. Like rising housing costs, these socioeconomic indicators suggest that Orange Line station areas were changing in a manner distinct from neighborhoods farther from stations. These trends are consistent with patterns of transit-oriented gentrification around rail (6–9).

Figure 3 shows the geographic variation in overall neighborhood change around the Orange Line within a 5-mi network radius. The map displays gentrification index values from high (dark color) to low (light color) levels of relative gentrification. The map highlights how the eastern and western termini of the line experienced some

2013 ^b				Percentage or Percentage Point Change, 2000–2013 ^c			
½-mi Area	2-mi Area	5-mi Area	Los Angeles County	½-mi Area	2-mi Area	5-mi Area	Los Angeles County
202,007	520,437	1,140,970	9,893,786	6.2	6.9	5.7	3.9
35.1	34.1	33.0	27.8	13.2	9.2	8.2	7.3
58,123	62,743	67,254	60,706	5.3	-3.7	-7.4	-3.0
9.2	7.6	7.1	9.7	-1.8	-1.5	-1.5	-2.8
47.6	54.3	58.6	55.2	3.8	4.7	3.9	4.7
65.4	64.9	64.3	53.3	2.5	0.4	1.9	4.6
6.3	4.0	3.6	8.4	0.7	-0.1	-0.1	-1.4
8.2	9.8	11.1	13.9	2.2	1.7	1.8	1.9
37.5	38.2	41.0	47.9	1.1	3.3	4.1	3.4
79,301	188,800	388,606	3,230,514	5.3	2.4	1.7	3.1
34	45	51	47	-1.5	-0.4	-1.5	-1.0
66	55	49	53	1.5	0.4	1.5	1.0
436,633	463,223	446,243	414,584	43.8	28.6	19.6	30.6
1,366	1,428	1,513	1,361	31.6	23.9	23.1	26.3
72	73	73	72	7.7	7.5	7.3	9.4
9	9	11	11	-2.8	-2.8	-2.2	-2.9
8	6	6	7	2.2	1.5	1.4	1.2
50	127	281	2,381	50	127	281	2,381

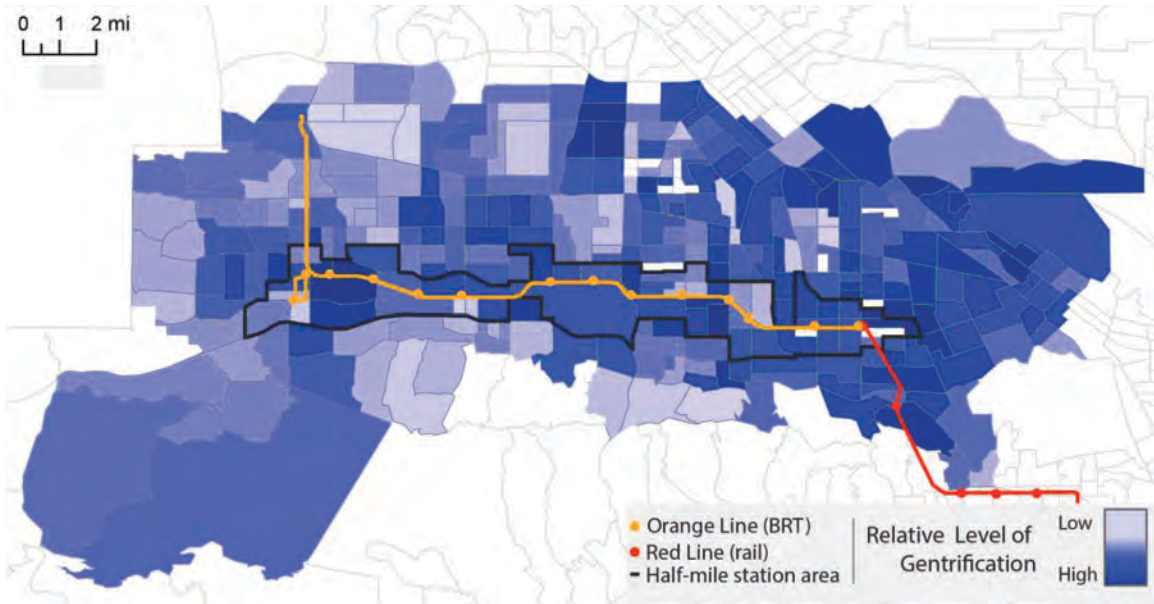


FIGURE 3 Relative levels of gentrification around Orange Line.

of the highest levels of change. The eastern terminus is located in North Hollywood, which has seen investment associated with the Metro Red (rail) Line. In the west lies Warner Center, a major job hub in the Los Angeles region. These patterns are consistent with previous findings of investment and activity along the Orange Line. Chatman et al. found “increases in resident worker population densities along most of the corridor, and pockets of increased employment density, most notably near the western terminus of the Orange Line” between 2002 and 2008 (33, p. 51). However, they found no firm evidence to attribute these changes solely to the Orange Line. In addition, any investments along the line had been slower than those in other transit-oriented (rail) areas throughout the county. While Metro took an active role in developing rail-adjacent areas, the zoning and land use policies around the Orange Line remained static (33).

What Types of Neighborhoods Changed Most?

While neighborhoods within a ½-mi radius of Orange Line stations changed on the whole more than areas farther from the stations, the changes were not uniform. In light of this finding, what existing neighborhood characteristics were most associated with higher levels of neighborhood change between 2000 and 2013? Table 4 shows the results from ordinary least squares regression calculated to answer this question. Overall, the model explains about 14% of the variation observed in neighborhood change. Land use variables were also tested in the model to determine whether areas with higher concentrations of residential or commercial land use made them more likely to gentrify; however, land use mix did not contribute significantly to the model and was therefore excluded from its final version.

Neighborhoods with lower rates of educational attainment, lower income, lower median rent, and higher proportion of renter-occupied housing were all significantly more likely to change than were

other neighborhoods. These findings are consistent with previous literature on gentrification and on gentrification around transit (7, 13, 18). Race–ethnicity was a less significant predictor of increased neighborhood change or gentrification, although areas that had a higher percentage of white residents were associated with higher rates of gentrification. This finding is potentially a reflection of existing race–ethnic balances in these neighborhoods, which are more than 63% white. However, it also suggests that neighborhoods with racial–ethnic minorities are not predisposed, absent confounding economic conditions, to gentrify, a conclusion consistent with work by Pollack et al. (13). Overall, the model results suggest that economic preconditions rather than racial–ethnic makeup are better predictors of neighborhood change and markers of neighborhoods’ potential to gentrify.

TABLE 4 Results from Model

Neighborhood Characteristic	Gentrification Index		
	Coeff.	SE	Sig.
Race or ethnicity			
White	1.41	0.58	**
African-American	-1.01	1.76	NS
Hispanic	0.02	0.37	NS
Bachelor’s degree or higher (%)	-0.66	0.39	*
Median household income (\$ thousands)	-0.01	0.00	**
Housing units–renter-occupied (%)	0.85	0.24	***
Median rent	-0.38	0.16	**
Median home value	0.00	0.00	NS
Constant	0.59	0.54	NS

NOTE: Coeff. = coefficient; SE = standard error; sig. = significance; NS = not significant. R² = .16; adjusted R² = .14; N = 299.
*p < .1; **p < .05; ***p < .01.

DISCUSSION OF RESULTS

The changes over time observed in Orange Line–adjacent neighborhoods demonstrate that transit-oriented gentrification is not modally dependent. Like BRT systems abroad, as well as domestic rail, BRT has the potential to gentrify neighborhoods in the United States. These findings also provide support for the work of Perk et al., one of the limited case studies of domestic BRT effects, which found positive and marginally decreasing effects of BRT on adjacent property values (4). While those authors examined property values and this study assessed home values and median rents, together they reveal that BRT may increase the cost or value of housing around stations.

Rising costs and values are a double-edged sword. On one hand, homeowners may benefit from increased home values if they choose to sell their property or from better schools or local amenities financed through increases in area property taxes. On the other hand, increased home values mean that neighborhoods become less affordable to perspective buyers and reduce housing choice for lower-income households. Rising median rents may be particularly concerning. If rental units are not rent-controlled, rising rents could displace residents if they can no longer afford to pay rent. Even if units are rent-controlled, rents may be increased once a unit is vacated. Although not a direct displacement, such increases could lead to a gradual succession of higher-income renters into a neighborhood and reduce the long-term supply of affordable housing.

Increasing housing costs along the Orange Line have direct housing policy implications. Housing policies to preserve or create a permanent supply of public housing is one of the most commonly cited interventions to protect residential displacement and encourage mixed-income housing around transit (6, 34, 35). By reducing the potential for displacement because of rising housing costs, affordable housing policies will protect the lower-income households that form transit's ridership base. Multipronged housing strategies offer policies such as rent control, just-cause eviction controls, and cooperative housing to maintain affordable housing around transit (35). Cities may also leverage developer incentives or enable conditional use permits to increase or to protect affordable housing.

The Orange Line also provides an interesting case study for examining the role of government in local investment and neighborhood change. Almost no zoning or direct interventions were made to incentivize development around the Orange Line; this decision is in contrast with some rail-oriented neighborhoods that were directly targeted as investment and development areas by Metro (33). Metro's lack of involvement may have stemmed from a modal bias by which bus is not seen as being able to stimulate as much private investment as rail (5). This bias may have been reinforced through earlier Metro Rapid—termed a “BRT-lite” system—investment, which failed to attract high levels of private investment, at least initially (16). In the absence of government intervention, changes occurring around the Orange Line are market driven. While previous studies found a strong correlation between transit-adjacent investment and level of government support, this case demonstrates that neighborhood change may occur even without dramatic changes to zoning or government investment (5). At the same time, neighborhood change and investment is not ubiquitous along transit lines, or even along all transit lines in Los Angeles (17). Therefore, considering how government intervention may shape an area and play a large role in station area development remains important (33). At the same time, planners cannot assume that neighborhoods will remain static in the absence of government support or investment.

CONCLUSION

Transit-oriented gentrification is not limited to rail in the United States. Between 2000 and 2013, neighborhoods surrounding Orange Line BRT stations changed more than did areas farther from the stations. Rising median rents, home values, and educational attainment suggest an economic and demographic transition occurring in Orange Line neighborhoods. Given the more rapid rates of transition within a 1/2-mi radius of Orange Line stations than in areas 2 and 5 mi from stations, this paper concludes that gentrification is occurring around Orange Line. Neighborhoods that had lower median rents, educational attainment levels, and median household incomes in 2000 were more likely than other neighborhoods to experience greater levels of neighborhood change by 2013. While economic factors may be linked to subsequent degrees of change, the same cannot be said for neighborhoods' racial–ethnic composition. This paper finds no evidence that neighborhoods with higher proportions of nonwhite residents are predisposed to gentrification independent of neighborhood economic conditions.

In gentrifying neighborhoods, protection of incumbent residents is important to prevent their displacement because of rising housing costs. Policy makers must work to provide and protect affordable housing options in transit-adjacent neighborhoods. This paper demonstrates that affordable housing is important not only around rail stations but also around BRT stations. Protecting affordable housing around transit will ensure neighborhood economic diversity and protect the availability of affordable housing near transit for those who rely most on transit.

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The Standing Committee on Bus Transit Systems peer-reviewed this paper.

Rubber Tires, Residents, and Gentrification in Los Angeles

August 30, 2017
SCAG RTTAC

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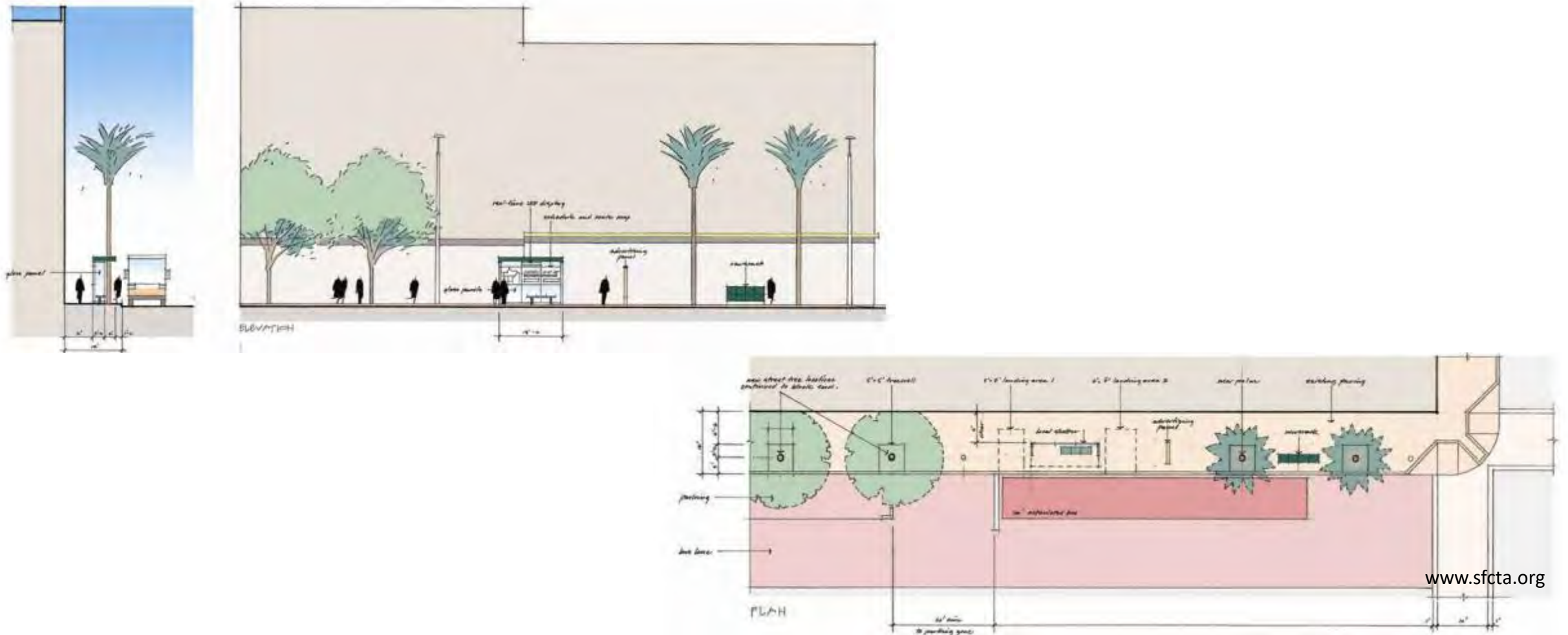


Overview

- Background
- Geography, Data & Methods
- Findings



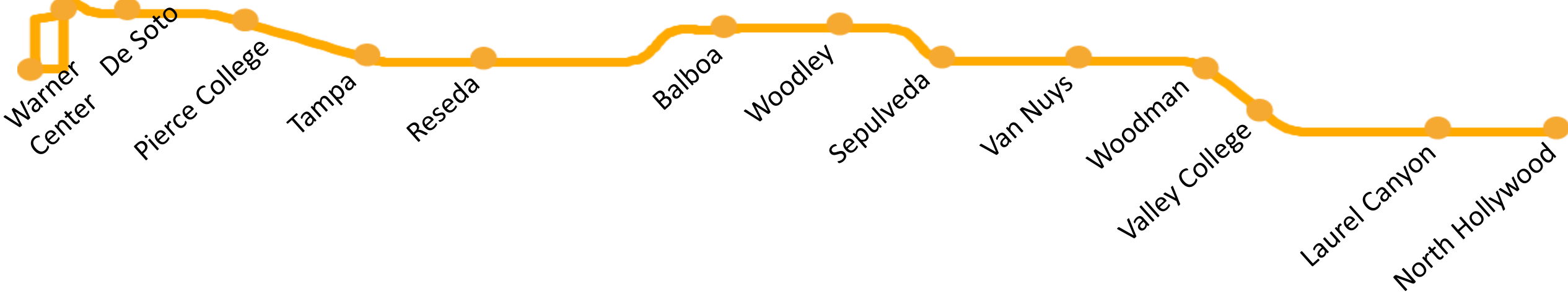
Why Should Policy Makers Care?



This Study

- Does BRT gentrify surrounding neighborhoods?
 - Have neighborhoods more proximate to Orange Line stations changed more than non-adjacent neighborhoods?
 - What pre-existing neighborhood characteristics are associated with higher levels of change?

Los Angeles' Orange Line



Photos L to R: LA Metro, The Transit Coalition, Daily News

Defining Gentrification

- **Gentrification**
 - a process of neighborhood change that results in economic and demographic transitions in neighborhoods.

Chapple, 2009; Freeman, 2005



Data

- 2000 US Census & 2013 American Community Survey
- Selection of variables from literature at census tract level



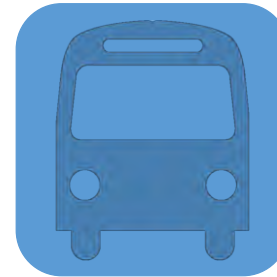
Demographic



Economic



Housing



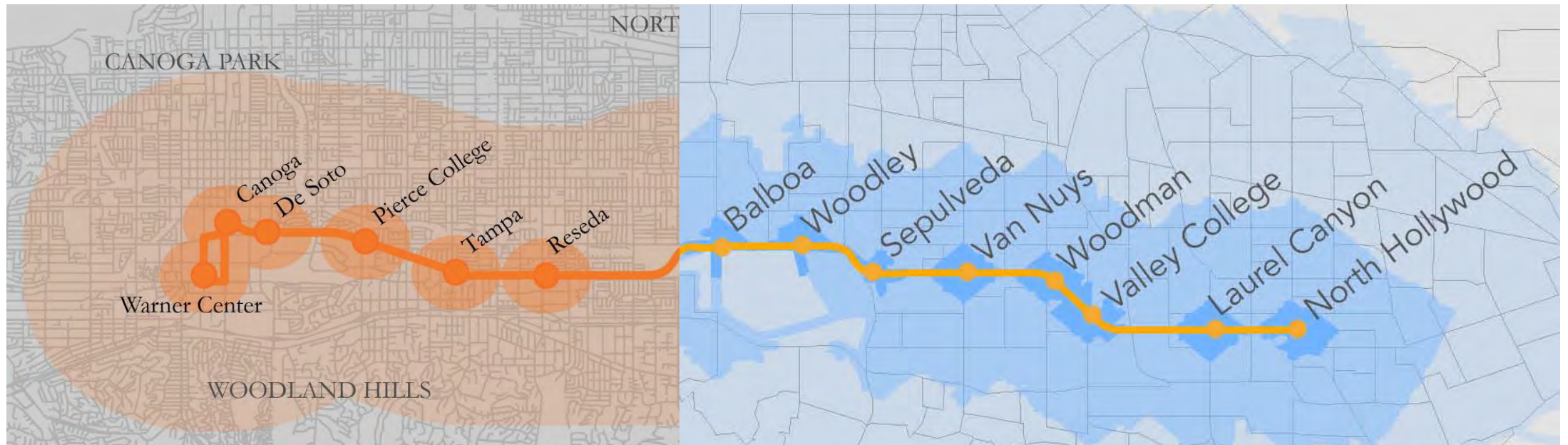
Transportation

Geography

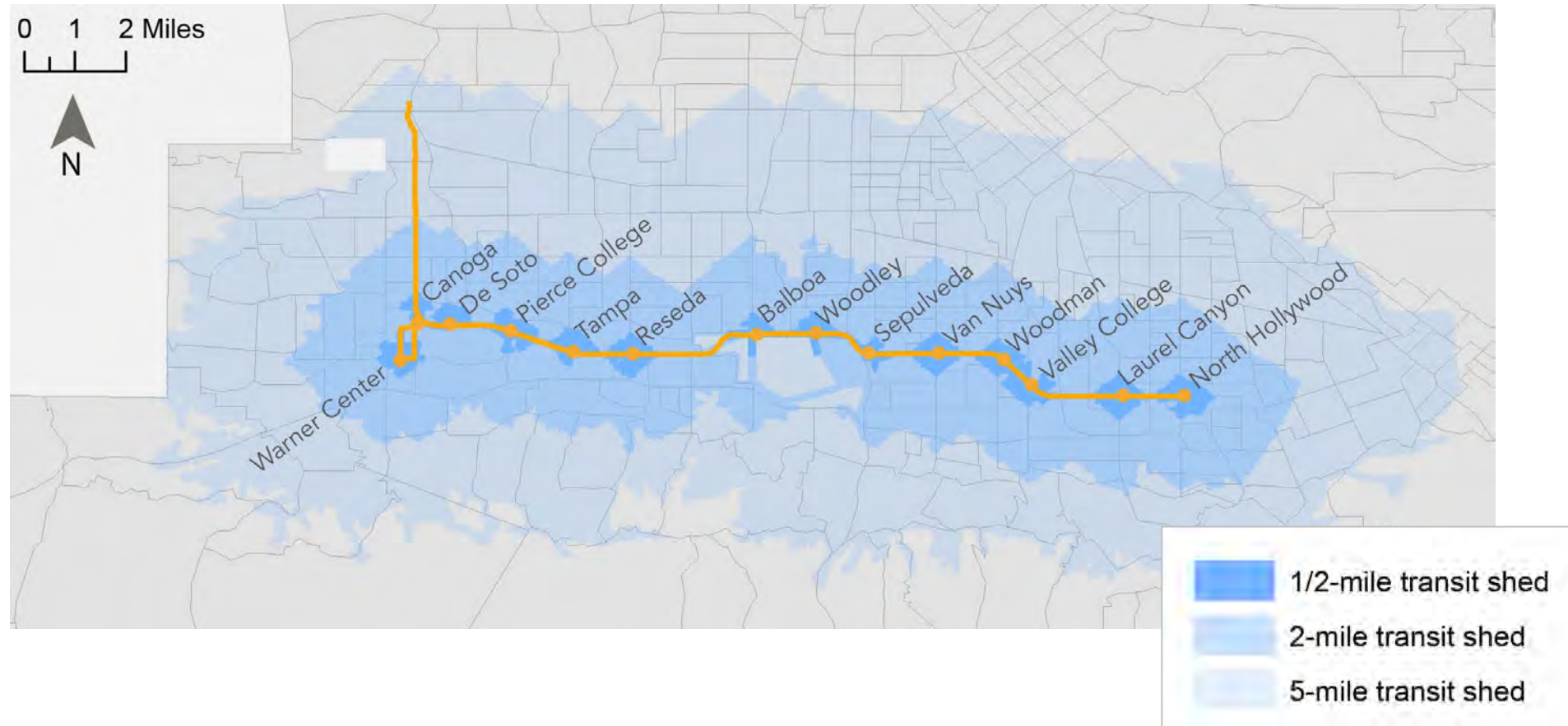
- Comparisons across space
 - Study vs. control areas

Geography

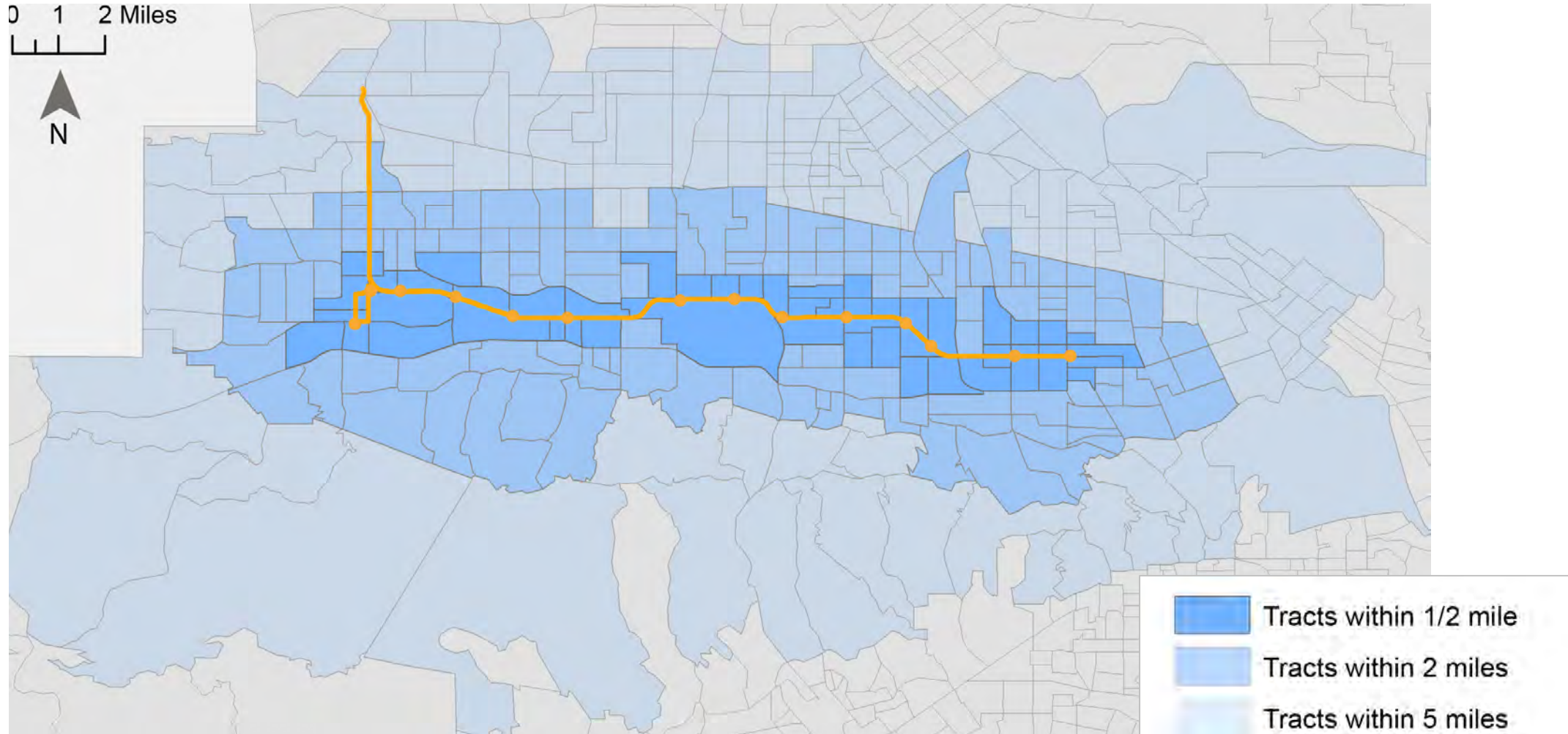
- Euclidean Buffers vs. GIS Network Analyst tool



Geography



Geography



Methodology

- Assess change, 2000-2013
- Build Gentrification index

Index Variables, Change 2000-2013	Weight
Median Household Income	1.0
Median Home Value	1.0
Median Rent	1.0
% with Bachelor's Degree or Higher	1.0
% White	0.5

Methodology

- Assess change, 2000-2013
- Build Gentrification index
- Model
 - Dependent variable: level of composite neighborhood change

Independent Variables, Census 2000

Median Household Income

Median Home Value

Median Rent

% Renter-Occupied Housing

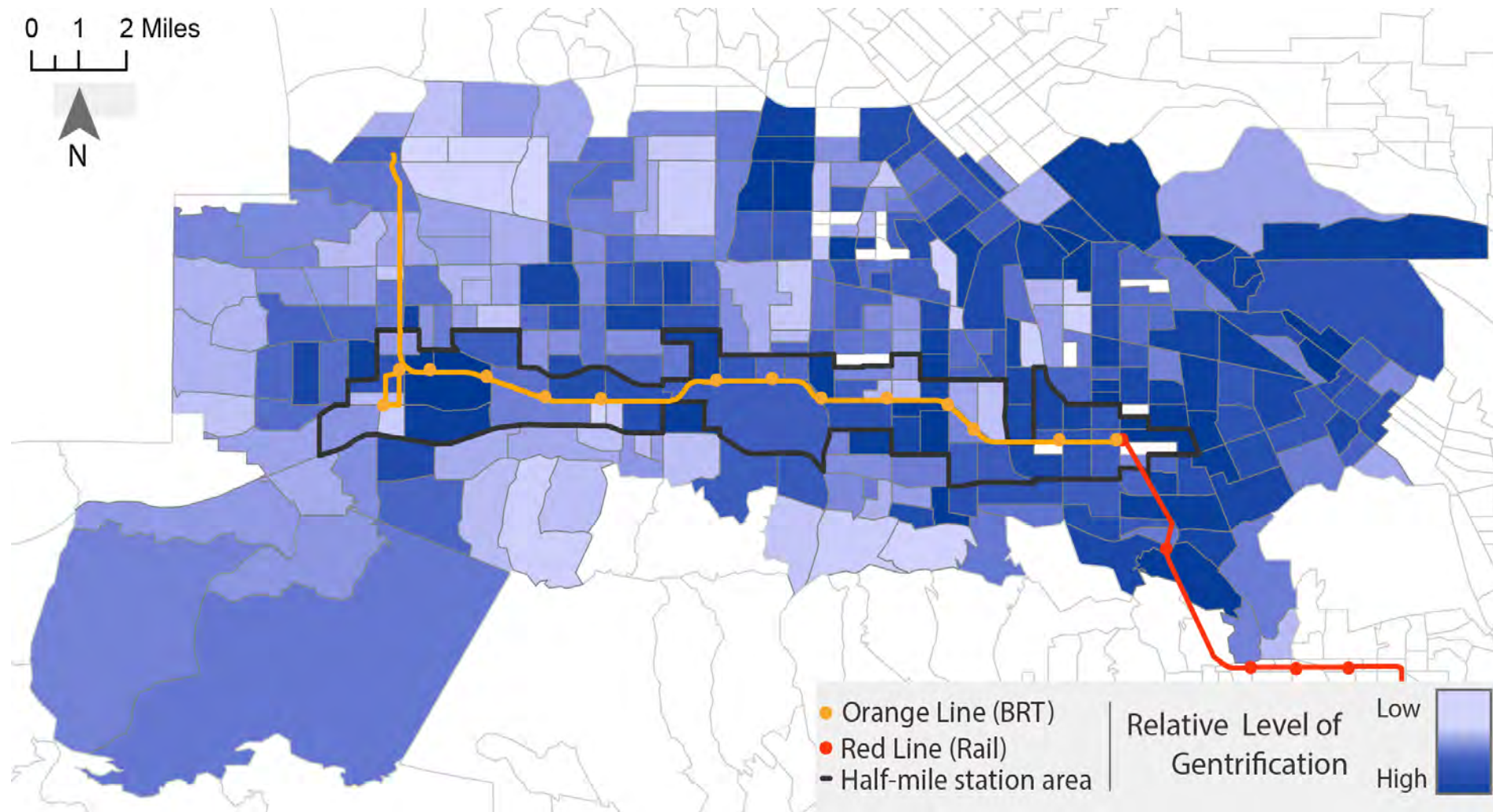
% White

% Black

% Hispanic

% with Bachelor's Degree or Higher

Findings



Findings

HOW DID NEIGHBORHOODS CHANGE?

- Station-adjacent neighborhoods changed more than control areas or LA county
- Racial/ethnic compositions not changing consistently

Socioeconomic

Total Population
% with Bachelor's Degree or Higher

Median Household Income
% Households with 0 Vehicles
% Households with 2+ Vehicles

Race/Ethnicity

White
Black
Asian
Hispanic

Housing

Total Occupied Housing Units
% Owner Occupied
% Renter Occupied

Median Home Value
Median Rent

Commute[^]

% Car Drive Alone
% Car Carpool
% Transit

Number of Tracts

Percent/Percentage Point Change, 2000-2013^{^^}
Half-Mile Two-Mile Five-Mile LA County

	Half-Mile	Two-Mile	Five-Mile	LA County
Total Population	6.2%	6.9%	5.7%	3.9%
% with Bachelor's Degree or Higher	13.2%	9.2%	8.2%	7.3%
Median Household Income	5.3%	-3.7%	-7.4%	-3.0%
% Households with 0 Vehicles	-1.8%	-1.5%	-1.5%	-2.8%
% Households with 2+ Vehicles	3.8%	4.7%	3.9%	4.7%
White	2.5%	0.4%	1.9%	4.6%
Black	0.7%	-0.1%	-0.1%	-1.4%
Asian	2.2%	1.7%	1.8%	1.9%
Hispanic	1.1%	3.3%	4.1%	3.4%
Total Occupied Housing Units	5.3%	2.4%	1.7%	3.1%
% Owner Occupied	-1.5%	-0.4%	-1.5%	-1.0%
% Renter Occupied	1.5%	0.4%	1.5%	1.0%
Median Home Value	43.8%	28.6%	19.6%	30.6%
Median Rent	31.6%	23.9%	23.1%	26.3%
% Car Drive Alone	7.7%	7.5%	7.3%	9.4%
% Car Carpool	-2.8%	-2.8%	-2.2%	-2.9%
% Transit	2.2%	1.5%	1.4%	1.2%
Number of Tracts	50	127	281	2,381

Findings

WHAT TYPES OF NEIGHBORHOODS CHANGED THE MOST?

Race/Ethnicity	
White	+
Black	-
Hispanic	+
% Bachelor's Degree or Higher	-
Median Household Income	-
% Housing Units – Renter Occupied	+
Median Rent	-
Median Home Value	

- Economic preconditions are better predictors of gentrification than are racial/ethnic minority communities absent confounding economic conditions

Policy Implications

- Housing
 - Preserve and create permanent supply of affordable housing
 - Multi-pronged housing policy
- Neighborhood change may occur even without government investment and intervention



Thank you

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REPORT

DATE: August 30, 2017

TO: Regional Transit Technical Advisory Committee (RTTAC)

FROM: Steve Fox, Senior Regional Planner; 213-236-1855; fox@scag.ca.gov

SUBJECT: FAST Act Requirements on Private Sector Providers of Transportation

DISCUSSION:

Implementation of the Fixing America’s Surface Transportation (FAST) Act includes a new Metropolitan Transportation Planning and Programming rule that calls for incorporating intercity private bus operators and vanpools and their facilities in to the metropolitan transportation planning process (23 CFR 450.300(a) and 23 CFR 450.324(f) and (j)). This rule also includes bringing in other private providers of transportation, including employer-based commuting programs such as carpool, vanpool, transit benefit, parking cash-out, shuttle and telework programs, in to the metropolitan planning organization’s (MPO) public participation plan for its planning process, including the opportunity to comment on its draft long-range transportation plan (23 CFR 450.316(a)). The new requirement also mandates that these TDM elements be incorporated in to the MPO’s federal Congestion Management Process (CMP) (23 CFR 450.322(a)).

SCAG staff is seeking input from RTTAC members on collecting and inventorying private sector providers of transportation and their facilities (e.g., Greyhound, Crucero, Megabus, etc.; and county transportation commission vanpool programs) as well as how to report and quantify the extent and benefits of employer-based commuting programs (e.g., VMT reduction). SCAG staff has developed a work plan for this effort leading up to the 2020 RTP/SCS as follows.

1. Literature Review. This task involves conducting research and a literature review on this new federal Metropolitan Transportation Planning and Programming rule. - *June 2017 through July 2017*
2. Identify Private Operators and Facilities. This task will identify private intercity bus operators and their facilities including vanpool providers. It will also include information and statistics on employer-based commuting programs such as carpool, vanpool, transit benefit, parking cash-out, shuttle and telework programs if available. Resources to identify these operators and facilities could include the 2016 California State Transportation Plan, CPUC, county consolidated transportation plans, SCAQMD and our public transit agency partners, including an agenda item and outreach to the RTTAC. These operators and facilities will be categorized and inventoried by size of fleet, daily operations, etc. and recorded in a spreadsheet. – *June 2017 through September 2017*
3. Private Operator Engagement and Participation. This task involves an engagement and participation plan for the private operators (including employer-based commuting programs such as carpool,



vanpool, transit benefit, parking cash-out, shuttle and telework programs). It includes identification of strategies to provide an incentive for the private operators to participate in SCAG's multi-modal planning process. For example, identification of the benefits of public transit connectivity and coordination to their facilities and operating schedules will help entice them to participate in the planning process. This is also true for first/last mile connectivity and facility discussions. This task includes incorporating private operators in to our 2020 RTP/SCS public participation plan, and being given the opportunity to comment on our multi-modal planning process and RTP/SCS. – *October 2017 through December 2018*

4. Qualitative/Quantitative Analysis. This task will report on private operator operational statistics, so long as they are available, including boardings, fleet size, route network miles, passenger miles etc. It will also include information and statistics on employer-based commuting programs such as carpool, vanpool, transit benefit, parking cash-out, shuttle and telework programs if available. This data should be able to become available, at least for large employers, from the SCAQMD. It may also report on the extent to which there may be a significant level (or potential for) transfer connectivity with public transit services. If a reasonable level of private passenger trip data is available, estimates can be made of the extent to which private operators reduce congestion, air pollution and greenhouse gases. – *October 2017 through June 2018*
5. Multi-Modal Investment Strategy. This task will identify current and future multi-modal investments that benefit and enhance private intercity bus, vanpool and other employer-based private operators. These include, for example, improvements to major transit centers/rail stations where incorporating private operators in to the planning process could lead to improved public/private connectivity. This task will also identify gaps in service and connectivity between private and public operators and facilities. – *July 2018 through December 2018*
6. CMP Process and Strategy. Based on the preceding steps, the 2020 RTP/SCS CMP Appendix will incorporate additional travel demand reduction strategies that are not already addressed, and include a discussion of the role and benefits in the SCAG region. – *July 2018 through June 2019*

NEXT STEPS:

SCAG staff will proceed on the work plan outlined above, incorporating input received from RTTAC. SCAG staff would greatly appreciate any input and information RTTAC members could provide in inventorying the assets and benefits of private transportation providers and employer-based commuting programs in their service areas. SCAG staff will update the RTTAC periodically on progress.

ATTACHMENT:

1. Presentation

FAST Act Requirements on Private Sector Providers of Transportation

Regional Transit Technical Advisory Committee

August 30, 2017

Steve Fox, Senior Regional
Planner

New FAST Act Requirements

- New federal Metropolitan Transportation Planning and Programming rule to incorporate intercity private bus operators and vanpools and their facilities in to the metropolitan transportation planning process.
- Includes employer-based commuting programs such as carpool, vanpool, transit benefit, parking cash-out, shuttle and telework programs.



New FAST Act Requirements

- Bring private operators in to public participation process.
- Allow private operators to comment on draft RTP/SCS.
- Incorporate in to federal Congestion management process.



Benefits of New Requirement

- Identification of private operator facilities and routes benefits multi-modal planning.
- Identify opportunities for improved connectivity and identify gaps in service (e.g., downtown L.A. Greyhound terminal).
- Quantify benefits of private sector operators, and their effects on congestion, VMT reduction, criteria pollutants and GHG reduction.
- Quantity benefits of employer-based commuting programs as well.
- First/Last mile analysis at private sector facilities.

Work Plan

- Literature Review
- Identify Private Operators and Facilities
- Private Operator Engagement and Participation
- Qualitative/Quantitative Analysis
- Multi-Modal Investment Strategy
- CMP Process and Strategy

Next Steps

- Adjust work plan as needed based on RTTAC input.
- Solicit information from documents and CTC/transit agency partners.
- Update RTTAC at next meeting.

Thank You

Steve Fox

fox@scag.ca.gov

REPORT

DATE: August 30, 2017

TO: Regional Transit Technical Advisory Committee (RTTAC)

FROM: Philip Law, Transit/Rail Manager, 213-236-1841, law@scag.ca.gov

SUBJECT: Metropolitan Planning Agreements

DISCUSSION:

Staff previously reported to the RTTAC regarding the forthcoming update of the metropolitan planning agreements, or memoranda of understanding (MOUs), between SCAG, the county transportation commissions (CTCs) and transit operators in the region. These agreements are required by the Metropolitan Transportation Planning Final Rule issued by the Federal Highway Administration (FHWA) and Federal Transit Administration (FTA) (see 23 CFR 450.314(a)).

The current agreements were executed in 2007 and they acknowledge the role of the CTCs within the SCAG region for countywide planning and programming. They specify that the CTCs will coordinate with the transit operators in their respective county to ensure that transit projects, plans and programs are recommended to SCAG for inclusion in the Regional Transportation Plan (RTP) and Federal Transportation Improvement Program (FTIP). SCAG maintains the RTTAC as a forum for transit operators and the CTCs to participate in the metropolitan planning process.

Since 2007, there have arisen several new federal requirements that must be incorporated, including the federal rulemaking to implement the performance-based planning provisions from the Moving Ahead for Progress in the 21st Century Act (MAP-21) and the Fixing America's Surface Transportation (FAST) Act. There are also issues that have arisen through the FTA's Triennial Review process and identified in FTA Circulars. This report identifies sections that are proposed to be added to the MOUs to address specific provisions required by FHWA and FTA.

Two proposed sections address the annual listing of projects and the development of the RTP/FTIP financial plan, which are federal requirements put in place just after the 2007 MOUs were first executed. The region currently already fulfills these requirements, however pursuant to the Final Rule they must be explicitly incorporated into the metropolitan planning agreements.

- The Parties will cooperatively develop an annual listing of projects for which funds under 23 U.S.C. or 49 U.S.C. Chapter 53 were obligated in the preceding program year, in accordance with 23 CFR 450.334 and any successors thereto.
- The Parties will cooperatively develop estimates of funds that will be available to support RTP implementation, and reasonable financial principles and information that support revenue and cost

estimates, to be used in the RTP and FTIP financial plan, in accordance with 23 CFR 450.324(f)(11) and any successors thereto.

The next three sections address the new MAP-21 and FAST Act requirements for performance-based planning. The proposed additions incorporate text taken directly from the applicable Final Rules, while providing for flexibility in how the requirements will be implemented.

- The Parties agree to collaborate to implement federal performance reporting and performance-based planning provisions in accordance with 23 CFR 450.306(d)(2)(iii) and any successors thereto, and subject to applicable final rulemaking. The Parties further agree to coordinate to the maximum extent practicable in the selection of performance targets, and will cooperatively develop and share information related to transportation performance data, the selection of performance targets, the reporting of performance targets, and the reporting of performance to be used in tracking progress toward attainment of critical outcomes for the SCAG region, in accordance with 23 CFR 450.314(h)(1) and any successors thereto.
- To aid in the planning process, transit operators will make available to SCAG their Transit Asset Management Plan and any supporting records or documents, performance targets, investment strategies, and annual condition assessment report, upon request of SCAG and in accordance with the RTP/SCS development schedule, in order to fulfill requirements of 49 CFR 625.53 and any successors thereto.
- SCAG will integrate in the metropolitan transportation planning process, directly or by reference, the goals, objectives, performance measures, and targets described in the Transit Asset Management Plans and Public Transportation Agency Safety Plans developed by providers of public transportation, in accordance with 23 CFR 450.306(d)(4) and any successors thereto.

The last section addresses the FTIP public participation process in relation to the Section 5307 program of projects (POP) requirements.

- Transit Operators may choose to rely on SCAG's public participation process associated with the FTIP development to satisfy the requirement for public participation in developing the FTA Section 5307 program of projects (POP). SCAG incorporates in the FTIP document(s) explicit statements reflecting that public notice of public involvement activities and time established for public review and comment on the FTIP will satisfy the POP requirements of the Section 5307 Program.

Next steps involve direct one-on-one coordination with the CTCs and transit operators, including completion of the draft MOUs and confirming the parties to the MOU. SCAG will then circulate the MOUs for a round of comments and ultimately signatures.

Metropolitan Planning Agreements

Regional Transit Technical Advisory Committee

August 30, 2017

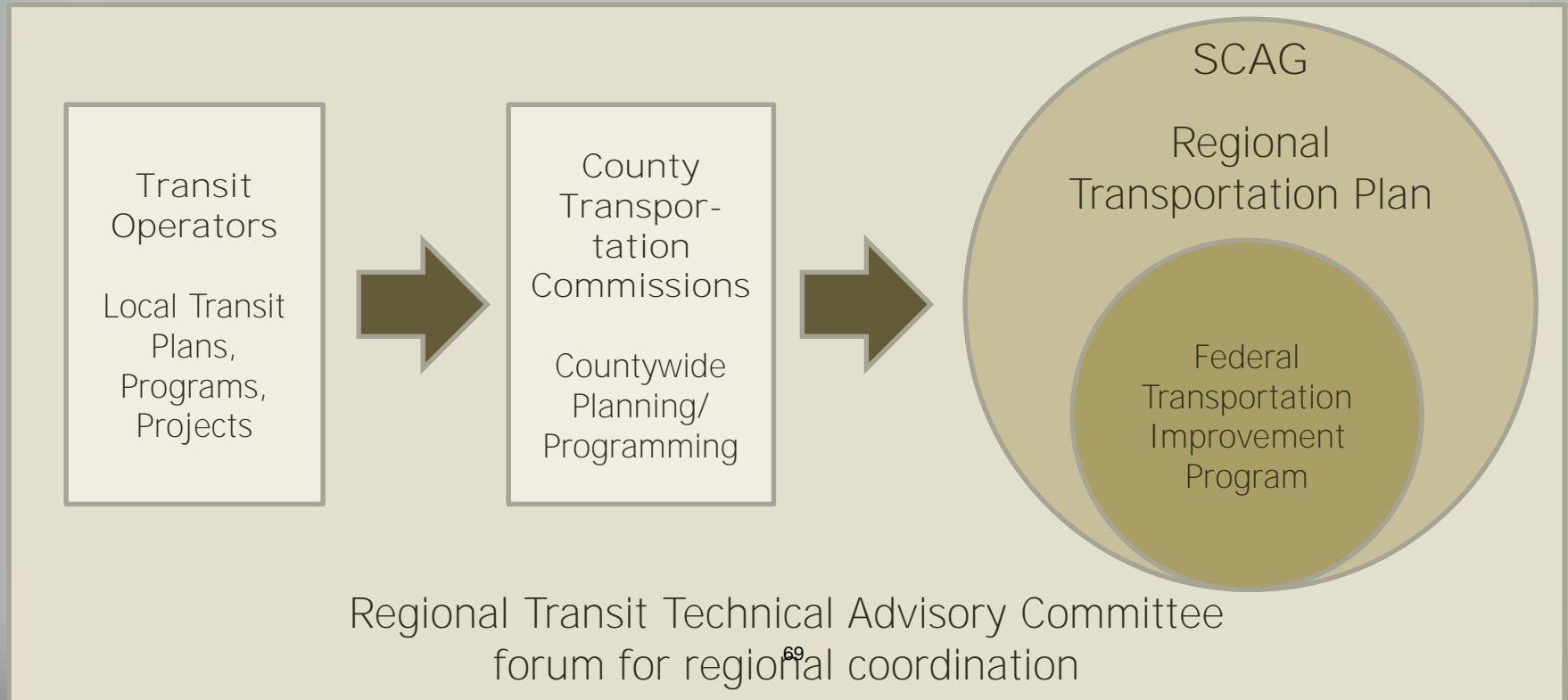
Philip Law, Transit/Rail Manager



Regulatory Basis

- 23 CFR 450.314(a)
- The MPO, States, providers of transportation shall:
 - Cooperatively determine mutual responsibilities for metropolitan transportation planning
 - Identify these responsibilities in written agreements
 - Periodically review and update the agreement

Metropolitan Planning Framework



Planning Provisions To Be Added

- The Parties will cooperatively develop an **annual listing of projects** for which funds under 23 U.S.C. or 49 U.S.C. Chapter 53 were obligated in the preceding program year, (23 CFR 450.334).
- The Parties will cooperatively develop estimates of funds that will be available to support RTP implementation, and reasonable financial principles and information that support **revenue and cost estimates, to be used in the RTP and FTIP financial plan** (23 CFR 450.324(f)(11)).

Performance-Based Planning

- The Parties agree to collaborate to implement federal performance reporting and performance-based planning provisions (23 CFR 450.306(d)(2)(iii)).
- The Parties further agree to coordinate to the maximum extent practicable in the [selection of performance targets](#), and will [cooperatively develop and share information](#) related to transportation performance data, the selection of performance targets, the reporting of performance targets, and the reporting of performance to be used in tracking progress toward attainment of critical outcomes for the SCAG region (23 CFR 450.314(h)(1))

Transit Asset Management

- To aid in the planning process, transit operators will make available to SCAG their Transit Asset Management Plan and any supporting records or documents, performance targets, investment strategies, and annual condition assessment report, upon request of SCAG and in accordance with the RTP/SCS development schedule (49 CFR 625.53).
- SCAG will integrate in the metropolitan transportation planning process, directly or by reference, the goals, objectives, performance measures, and targets described in the Transit Asset Management Plans and Public Transportation Agency Safety Plans developed by providers of public transportation (23 CFR 450.306(d)(4)).

5307 Planning/Program of Projects

- Transit **Operators may choose to rely on SCAG's public participation process** associated with the FTIP development to satisfy the requirement for public participation in developing the FTA Section 5307 program of projects (POP). SCAG incorporates in the FTIP document(s) explicit statements reflecting that public notice of public involvement activities and time established for public review and comment on the FTIP will satisfy the POP requirements of the Section 5307 Program.

Next Steps

- One-on-one coordination with CTCs and operators
- Update and confirm agencies to be included
- Circulate drafts for comments
- Obtain signatures

Thank You