December 12, 2019

Ms. Susan Bransen
Executive Director
California Transportation Commission
1120 North Street
Mail Station 52, Room 2233
Sacramento, CA 95814

RE: **2020 Regional Transportation Improvement Program Submittal**

Dear Ms. Bransen:

The Orange County Transportation Authority (OCTA) is pleased to submit the Regional Transportation Improvement Program (RTIP) for the 2020 State Transportation Improvement Program (STIP). OCTA is proposing to utilize $203.645 million in STIP funds to support seven high priority projects in Orange County during the five-year 2020 STIP program period, from fiscal years 2020-21 through 2024-25. The STIP will be utilized in combination with OCTA Measure M2 (M2) funds to reduce congestion and make significant improvements to the state highway system.

OCTA is proposing the following 2020 STIP program of projects:

- Interstate 5 (I-5) improvement from Interstate 405 (I-405) to Yale Avenue ($95.338 million),
- State Route 55 (SR-55) improvements from I-405 to I-5 ($80.000 million),
- State Route 74 Ortega Highway improvements ($8.540 million),
- Replacement planting for the I-5 Improvement Project from State Route 73 to El Toro Road ($6.000 million),
- I-5 managed lane(s) from Avenida Pico to San Diego County line ($5.500 million),
- Planning, programming, and monitoring ($5.267 million),
- Interstate 605 Katella Avenue interchange ($3.000 million).

In order to submit this revised program of projects, which moved a significant amount of funding into later years, OCTA will use other funding to support three projects: the I-5 improvements from Alicia Parkway to El Toro Road ($69.911 million), the design phase of the I-5 improvements from I-405 to SR-55 ($12.628 million), and the State Route 57 Truck Climbing Lane Phase II – Lambert Road to County Line ($4.050 million). If there is available funding, OCTA is also requesting an

advancement of $20.4 million from future shares in order to deliver this program of projects through the STIP.

The proposed 2020 RTIP is consistent with the Southern California Association of Government's (SCAG) 2016-2040 Regional Transportation Plan/Sustainable Communities Strategy and is also consistent with SCAG's 2020 SoCal Connect Draft Plan. To the best of OCTA's knowledge, at this time, the projects identified for funding in the proposed 2020 Regional Transportation Improvement Program (RTIP) are not anticipated to be impacted by implementation of the Safer Affordable Fuel-Efficient Vehicles Rule Part One – One National Program which became effective on November 26, 2019.

Please find the details for OCTA's submittal in the attached template that includes the required submittal information, or online at https://www.octa.net/Projects-and-Programs/Funding-Programs/State-Funding/State-Transportation-Improvement-Program/.

These proposed STIP projects are part of OCTA's Next 10 Delivery Plan, which accelerates the M2 freeway, streets and roads, transit, and environmental projects through the year 2026. OCTA is committed to a multimodal approach to providing transportation options. These STIP projects will complement the freeway component while other fund sources, including M2, are being utilized for transit activities, such as the OC Streetcar and OC Flex micro-transit demonstration project, as well as active transportation activities, such as OC Loop and the 54 projects being delivered in the Bicycle Corridor Improvement Program. If you have any questions regarding OCTA's 2020 STIP RTIP submittal, please contact Kia Mortazavi, Executive Director, Planning, at (714) 560-5741.

Sincerely,

Darrell E. Johnson
Chief Executive Officer

DEJ:bk
Attachments

c: Bruce De Terra, Caltrans Headquarters
Ryan Chamberlain, Caltrans District 12
Naresh Amatya, SCAG

2020
ORANGE COUNTY REGIONAL TRANSPORTATION IMPROVEMENT PROGRAM
DECEMBER 2019

OCTA

2020 REGIONAL TRANSPORTATION IMPROVEMENT PROGRAM (2020 RTIP)

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A. Overview and Schedule

Section 1. Executive Summary

The Orange County Transportation Authority (OCTA) is pleased to submit the Regional Transportation Improvement Program (RTIP) for the 2020 State Transportation Improvement Program (STIP). OCTA is proposing to utilize $203.645 million in STIP funds to support seven high priority projects in Orange County during the five-year 2020 STIP program period, from fiscal years (FY) 2020-21 through 2024-25. The STIP will be utilized in combination with OCTA Measure M2 funds to reduce congestion and make significant improvements to the state highway system and is consistent with the 2020 STIP guidelines, adopted by the California Transportation Commission (CTC) on August 15, 2019.

Adjustments to Existing Projects

- Interstate 5 (I-5) Improvements from Interstate 405 (I-405) to Yale Avenue (Segment 1) (Construction Phase) ($95.338 million in STIP)
    - Remove STIP funding in plans specifications and estimates phase
    - Add STIP in Construction
    - Update funding and split project
- State Route 55 (SR-55) Improvements from I-405 to I-5 ($80 million in STIP)
    - Advance STIP from FY2021-22 to FY2020-21
- I-5 Improvements from State Route 73 (SR-73) to El Toro Road (replacement planting/landscaping) ($6 million in STIP)
    - Delay STIP from FY2022-23 to FY2024-25
- Planning, Programming, and Monitoring (PPM) ($5.267 million in STIP)
    - Add additional STIP Funding

New Projects

OCTA is requesting to add three new projects:

- State Route 74 (SR-74) Ortega Highway Improvements – Calle Entradero to City/County Line ($8.540 million in STIP)
- I-5 Improvements from Avenida Pico to San Diego County Line ($5.5 million in STIP)
- Interstate 605 (I-605) Katella Avenue Interchange ($3 million in STIP)

Removal of Existing Project or Project Phases

- I-5 Improvements from Alicia Parkway to El Toro Road (Segment 3)
    - Remove STIP Funds
    - Will seek $69.911 million in Local Measure M2 funds
- State Route 57 (SR-57) Truck Climbing Lane Phase II – Lambert Road to County Line
    - Remove $4.05 million in STIP funding
    - Project will be placed on hold

Section 2. General Information

Insert contact information in the text fields below.

- **Regional Agency Name**
  Orange County Transportation Authority

- **Agency website links for Regional Transportation Improvement Program (RTIP) and Regional Transportation Plan (RTP).**

  Regional Agency Website Link: www.octa.net

  RTIP document link: http://www.octa.net/Projects-and-Programs/Funding-Programs/State-Funding/State-Transportation-Improvement-Program/

  RTP link: www.octa.net/lrtp/

- **Regional Agency Executive Director/Chief Executive Officer Contact Information**

Name	Darrell Johnson
Title	Chief Executive Officer
Email	djohnson@octa.net
Telephone	(714) 560-5343

- **RTIP Manager Staff Contact Information**

Name	Adriann Cardoso	Title	Department Manager, Capital Programming
Address	550 South Main Street, P.O. Box 14184		
City/State	Orange, CA		
Zip Code	92863-1584		
Email	acardoso@octa.net		
Telephone	(714) 560-5915	Fax	714-560-5794

- **California Transportation Commission (CTC) Staff Contact Information**

Name	Susan Bransen	Title	Executive Director
Address	1120 N Street		
City/State	Sacramento, CA		
Zip Code	95814		
Email	susan.bransen@catc.ca.gov		
Telephone	916-654-4245	Fax	916-653-2134

Section 3. Background of Regional Transportation Improvement Program (RTIP)

A. What is the Regional Transportation Improvement Program?

The Regional Transportation Improvement Program (RTIP) is a program of highway, local road, transit and active transportation projects that a region plans to fund with State and Federal revenue programmed by the California Transportation Commission in the State Transportation Improvement Program (STIP). The RTIP is developed biennially by the regions and is due to the

Commission by December 15 of every odd numbered year. The program of projects in the RTIP is a subset of projects in the Regional Transportation Plan (RTP), a federally mandated master transportation plan which guides a region's transportation investments over a 20 to 25 year period. The RTP is based on all reasonably anticipated funding, including federal, state and local sources. Updated every 4 to 5 years, the RTP is developed through an extensive public participation process in the region and reflects the unique mobility, sustainability, and air quality needs of each region.

B. Regional Agency's Historical and Current Approach to developing the RTIP

OCTA is responsible for the development and programming of the STIP, which is submitted to the CTC for approval and adoption. OCTA dedicates STIP funds for use on projects of countywide significance, consistent with the OCTA Board of Directors (Board) adoption of the Capital Programming Policies, which includes Measure M2 freeway, commuter rail and fixed-guideway projects and planning/programming activities, and complementary activities which seek an equitable balance between freeways and transit capital and are consistent with state goals.

Projects were selected and proposed for funding based on OCTA's consideration of prior 2018 STIP projects, prior Board-approved funding commitments, project readiness, statewide goals for transportation, emission reduction per SB 375 (Chapter 728, Statutes 20080, and AB 32 (Chapter 488, Statutes 2006), freight mobility, consistency with STIP guidelines and performance measures. Projects are also consistent with the SCAG 2016-2040 RTP/Sustainable Communities Strategy (SCS) and the draft Connect SoCal (2020-2045 RTP/SCS plan). OCTA further collaborated with Caltrans and local agencies to develop the OCTA 2020 RTIP submittal. The OCTA Regional Planning and Highways Committee and the OCTA Board reviewed and approved the proposed projects on September 5, 2019 and September 23, 2019 respectively.

Section 4. Completion of Prior RTIP Projects (Required per Section 68)

Provide narrative on projects completed between the adoption of the RTIP and the adoption of the previous RTIP in text field below as is required per Section 68 of the STIP Guidelines.

There were no RTIP projects completed between the Adoption of the 2018 STIP and the Submittal of the 2020 STIP.

Insert project information for completed projects in table below.

Project Name and Location	Description	Summary of Improvements/Benefits
N/A	N/A	N/A

Section 5. RTIP Outreach and Participation

Insert dates below – Regional agencies can add rows to the schedule – Rows included below should remain for consistency.

A. RTIP Development and Approval Schedule

Action	Date
CTC adopts Fund Estimate and Guidelines	August 14, 2019
Caltrans identifies State Highway Needs	September 15, 2019
Regional Agency adopts 2020 RTIP	September 23, 2019
Caltrans submits draft ITIP	October 1, 2019
CTC ITIP Hearing, North	October 8, 2019
CTC ITIP Hearing, South	October 15, 2019
Regions submit RTIP to CTC (postmark by)	December 15, 2020
Caltrans submits ITIP to CTC	December 15, 2020
CTC STIP Hearing, South	January 30, 2021
CTC STIP Hearing, North	February 6, 2021
CTC publishes staff recommendations	February 28, 2021
CTC Adopts 2020 STIP	March 25-26, 2021

B. Public Participation/Project Selection Process

Provide narrative on your agency's public participation process and project selection process for your RTIP in the text field below.

- August 5, 2019 – 2020 STIP Overview presented to Regional Planning and Highways Committee
- August 12 – 2020 STIP Overview presented to OCTA Board of Directors
- September 5, 2019 – 2020 STIP Proposal presented to Regional Planning and Highways Committee
- September 23, 2019 – 2020 STIP Proposal presented to OCTA Board of Directors

C. Consultation with Caltrans District (Required per Section 17)

Insert the Caltrans District Number in the text field below.
Caltrans District: 12

Provide narrative on consultation with Caltrans District staff in the text field below as is required per Section 17 of the STIP Guidelines.

- April 25, 2019 – OCTA Staff met with Caltrans District 12 to discuss 2020 STIP
- July 26, 2019 – OCTA Staff met and presented revised 2020 STIP with Caltrans District 12
- July 26, 2019 to July 31, 2019 – OCTA and Caltrans Staff discussed modifications to 2020 STIP

B. 2020 STIP Regional Funding Request

Section 6. 2020 STIP Regional Share and Request for Programming

A. 2020 Regional Fund Share Per 2020 STIP Fund Estimate

Insert your agency's target share per the STIP Fund Estimate in the text field below.

Orange County 2020 STIP Total Target: $6.960 million

Orange County 2020 STIP Maximum: $48.111 million

Orange County 2020 STIP Total: $176.285 million (2018 STIP prior), $6.96 million (New 2020 STIP Capacity), and $20.4 million (over STIP target) totals $203.645 million

B. Summary of Requested Programming

Project Name and Location	Project Description	Requested RIP Amount
I-5 Improvements from I-405 to Yale Avenue (Segment 1) (Construction Phase)	Add one mixed flow lane northbound from truck bypass on-ramp to SR 55; add one mixed flow lane southbound from SR 55 to truck bypass.	$95,338,000
SR-55 Improvements from I-405 to I-5	Add 1 MF and 1 HOV land each direction and fix chokepoints from I-405 to I-5; add 1 auxiliary lane each direction between select on/off ramp and non-capacity operational improvements through project limits.	$80,000,000
SR-74 Ortega Highway Improvements – Calle Entradero to City/County Line	In San Juan Capistrano from Calle Entradero to city/county line. Widen from 2 lanes to 4 lanes.	$8,540,000
I-5 Improvements from SR-73 to El Toro Road (replacement planting/landscaping)	Replacement planting/landscaping	$6,000,000
I-5 Improvements from Avenida Pico to San Diego County Line	I-5 Managed Lane Extension from Avenida Pico to San Diego County line	$5,500,000
Planning, Programming, and Monitoring	Planning, Programming, and Monitoring	$5,267,000
I-605 Katella Avenue Interchange	Improve the local interchange to improve freeway access, traffic operations, enhance safety, and improve pedestrian and bicycle facilities within project limits.	$3,000,000

Section 7. Overview of Other Funding Included with Delivery of Regional Improvement Program (RIP) Projects

Provide narrative on other funding included with the delivery of projects included in your RTIP. Discuss if project's other funds will require Commission approval for non-proportional spending allowing for the expenditure of STIP funds before other funds (sometimes referred to as sequential spending). Insert information in the table below.

Federal STBG/CMAQ - $160.26 million

Local Measure M2 - $145.813 million

Proposed SB-1 Local Partnership Program Formula Funds - $44.791 million

Approved SB-1 Local Partnership Program Formula Funds - $9.388 million

SHOPP - $46.8 million

Unfunded Need - $70 million

None of the funds will require CTC approval for non-proportional spending allowing for the expenditure of STIP funds before other funds. See Chart below for details on funding distribution.

Funding Plan for 2020 STIP-Recommended Projects										
	STIP Funding						Other Funding			
2020 STIP (In Thousands)	2020-21	2021-22	2022-23	2023-24	2024-25	Total STIP	STBG/ CMAQ	M2	Other[1]	Total Project Cost
I-5 Improvements from I-405 to Yale Avenue- Segment 1 (Con)					95,338	95,338	55,884	27,417	44,791	223,430
SR-55 Improvement Project from I-405 to I-5	80,000					80,000	103,805	110,327	121,800	415,932
SR-74 Ortega Highway Improvements - Calle Entradero to City/County Line (PS&E)					8,540	8,540				8,540
I-5 Improvements from SR-73 to El Toro Road (replacement planting/landscaping)					6,000	6,000		6,245		12,245
I-5 Improvements from Avenida Pico to San Diego County Line (ENV)		-		5,500		5,500	571			6,071
Planning, Programming, and Monitoring		1,848	1,848	515	1,056	5,267				5,267
I-605 Katella Interchange (PS&E)	3,000	-				3,000		1,824		4,824
2020 STIP subtotal	**83,000**	**1,848**	**1,848**	**6,015**	**110,934**	**203,645**	**160,260**	**145,813**	**166,591**	**676,309**

1. Other funds include $44.791 million in pending SB 1 (Chapter 5, Statutes 2017) Local Partnership Program (LPP) formula , $46.8 million in State Highway Operations and Protection Program, $75 million in unfunded need, and $9.388 million in approved LPP funds.

Section 8. Interregional Transportation Improvement Program (ITIP) Funding

The purpose of the Interregional Transportation Improvement Program (ITIP) is to improve interregional mobility for people and goods in the State of California. As an interregional program, the ITIP is focused on increasing the throughput for highway and rail corridors of strategic importance outside the urbanized areas of the state. A sound transportation network between and connecting urbanized areas ports and borders is vital to the state's economic vitality. The ITIP is prepared in accordance with Government Code Section 14526, Streets and Highways Code Section 164 and the STIP Guidelines. The ITIP is a five-year program managed by Caltrans and funded with 25% of new STIP revenues in each cycle. Developed in cooperation with regional transportation planning agencies to ensure an integrated transportation program, the ITIP promotes the goal of improving interregional mobility and connectivity across California.

If requesting ITIP funding, provide narrative on your request in the text field below. Or state that no ITIP funding was requested.

OCTA submitted a proposal for ITIP funding for the Orange Olive Wye Connection project for $16 million. However, due to the extremely limited capacity in the ITIP program Caltrans indicated that this project could not be considered for funding at this time.

Section 9. Projects Planned Within Multi-Modal Corridors (per Sections 11 and 20e)

Caltrans and regional transportation agencies prepare corridor plans to identify multi-modal transportation projects that will meet state, regional, and local goals and benefit corridors around the state. Provide a description of the project's impact on other projects planned or underway within the corridor as required per Section 20 of the STIP Guidelines.

STIP Project	Projects within the Corridor	Status	Notes
SR-55 from I-405 to I-5 Con Start: 6/21 Con Complete: 6/25	I-5 from SR-55 to SR-57	Con Start: 11/18 Con Complete: 4/21	No impact. Project on a perpendicular freeway. No construction overlap.
	SHOPP 2834A - I-5 Repaving	Con Start: 2/25/22	Perpendicular project. Will monitor any impacts
	SHOPP 3402B – SR-55 Pavement rehabilitation and other amenities	Con Start: 12/4/24	Coordination with Caltrans in Progress.
	SHOPP 5040D – I-405 Pavement rehabilitation and other amenities	Con Start: 2/3/25	Perpendicular project. Will monitor any impacts
I-5 Improvements from SR-73 to El Toro Road (replacement Planting/landscaping)	I-5 SR-73 to El Toro (Segment 1,2, and 3)	Con Start: 11/18 Con Complete: 2/25	Segment 4 of the project. Construction will start near completion of the highway improvement project.

Con Start: 11/24 Con Complete: 12/28			
I-5 Improvements from I-405 to Yale Avenue (Segment 1) Con Start: 2/25 Con Complete: 7/28	I-5 SR-55 to SR-57	Con Start: 11/18 Con Complete: 4/21	No impact, project farther north. No construction overlap.
	I-5 Yale Ave to SR-55 (Segment 2	Con Start: TBD Con Complete: TBD	Segment 2 of the project. Construction would be concurrent
	SHOPP 4846 – SR-133 New Auxiliary Lane	Con Start: 3/31/22	Perpendicular project and Should be complete before STIP project begins. Will monitor
SR-74 Ortega Highway Improvements – Calle Entradero to City/County Line Con Start: 8/23 Con Complete: 1/27	None	N/A	N/A
I-5 Improvements from Avenida Pico to San Diego County Line Con Start 1/28 Con Complete: 1/31	I-5 SR-73 to El Toro (Segment 1,2, and 3)	Con Start: 11/18 Con Complete: 2/25	No impact, project farther north. No construction overlap.
	SHOPP 2530N – I-5 Pavement rehabilitation	Con Start: 4/1/22	Project should be complete before STIP project starts
I-605 Katella Interchange Con Start: 8/24 Con Complete: 8/26	I-405 from SR-73 to I-605	Con Start: 11/16 Con Complete: 5/23	No impact. No construction overlap.

C. Relationship of RTIP to RTP/SCS/APS and Benefits of RTIP

Section 10. Regional Level Performance Evaluation (per Section 19A of the guidelines)

Provide an evaluation of system performance and how your RTIP furthers the goals of the region's RTP, and if applicable, your Sustainable Communities Strategy as required per Section 19A of the STIP Guidelines. Each region that is a Metropolitan Planning Organization (MPO) or within an MPO shall include an evaluation of overall (RTP level) performance using, as a baseline, the region's existing monitored data. To the extent relevant data and tools area available, the performance measures listed in Table B1 below may be reported.

Regions outside a MPO shall include any of the measures listed in Table B1 (below) that the region currently monitors. A region outside a MPO (or a small MPO) may request, and Caltrans shall provide, data on these measures relative to the state transportation system in that region.

As an alternative, a region outside a MPO (or a small MPO) may use the Performance Monitoring Indicators identified in the Rural Counties Task Force's Rural and Small Urban Transportation Planning study dated June 3, 2015. These include: Total Accident Cost, Total Transit Operating Cost per Revenue Mile, Total Distressed Lane Miles, and Land Use Efficiency (total developed land in acres per population).

The evaluation of overall performance shall include a qualitative or quantitative assessment of how effective the RTIP or the ITIP is in addressing or achieving the goals, objectives and standards which correspond to the relevant horizon years within the region's RTP or Caltrans ITSP that covers the 5-year STIP period. Caltrans' evaluation of the ITIP shall also address ITIP consistency with the RTPs.

In addition, each region with an adopted Sustainable Communities Strategy (SCS) or Alternate Planning Scenario (APS) shall include a discussion of how the RTIP relates to its SCS or APS. This will include a quantitative or qualitative assessment of how the RTIP will facilitate implementation of the SCS or APS and also identify any challenges the region is facing in implementing its SCS or APS. In a region served by a multi-county transportation planning organization, the report shall address the portion of the SCS or APS relevant to that region. As part of this discussion, each region shall identify any proposed or current STIP projects that are exempt from SB 375.

A. Regional Level Performance Indicators and Measures

2016 RTP/SCS Goals

1. Align the plan investments and policies with improving regional economic development and competitiveness.

2. Maximize mobility and accessibility for all people and goods in the region.

3. Ensure travel safety and reliability for all people and goods in the region.

4. Preserve and ensure a sustainable regional transportation system.

5. Maximize the productivity of our transportation system.

6. Protect the environment and health of our residents by improving air quality and encouraging active transportation (e.g., bicycling and walking).

7. Actively encourage and create incentives for energy efficiency, where possible.

8. Encourage land use and growth patterns that facilitate transit and active transportation.

9. Maximize the security of the regional transportation system through improved system monitoring, rapid recovery planning, and coordination with other security agencies.

The tables below summarize the consistency between projects in the RTIP and the 2016 RTP/SCS Goals and Performance Outcomes. The project benefits listed in the tables come from the benefit-cost analysis conducted for each project. Because the purpose of the table is to demonstrate consistency with the RTP/SCS Goals and Performance Outcomes, not all project benefits are listed in the table. BCA ratios for all projects are over 1.0. All projects are located in high traffic regional facilities that serve the general public including low income and minority communities, consistent with the 2016 RTP/SCS Environmental Justice performance Measures. In addition, all projects are included in the 2016 RTP/SCS project lists further demonstrates consistency of the RTIP with the RTP.

2020 RTIP Projects and 2016 RTP/SCS Goals and Performance Outcomes: Consistency by Project			
2016 RTP/SCS Goal Corresponding Performance Measures	**SR-55 OC Central Corridor Improvement from I-405 to I-5**	**I-5 Improvements from I-405 to Yale Avenue (Segment 1)**	**SR-74 Ortega Hwy Improvements from Calle Entradero to City/County Line**
Location Efficiency *To measure progress in meeting 2016 RTP/SCS Goal 8*	$75.4 million Average Annual Travel Time Savings	$69.8 million Average Annual Travel Time Savings	$6.5 million Average Annual Travel Time Savings
Mobility and Accessibility *To measure progress in meeting 2016 RTP/SCS Goals 2, 5 and 8.*	9,884,873 Average Annual Person Hours of Time Saved	7,531,569 Average Annual Person-Hours of Time Saved	572,887 Average Annual Person Hours of Time Saved
Safety and Health *To measure progress in meeting 2016 RTP/SCS Goals 3, 6 and 9.*	$25.7 million 20-Year Accident Cost Savings	$22.5 million 20-Year Accident Cost Savings	$1.8 million 20-Year Emissions Cost Savings
Environmental Quality *To measure progress in meeting 2016 RTP/SCS Goals 6 and 7.*	732,596 CO2 Emissions Saved (tons)	674,463 CO2 Emissions Saved (tons)	27,412 CO2 Emissions Saved (tons)
Economic Opportunity *To measure progress in meeting 2016 RTP/SCS Goals 1 and 5.*	1,888 Jobs Created	2,164 Jobs Created	463 Jobs Created
Investment Effectiveness *To measure progress in meeting 2016 RTP/SCS Goal 1.*	Benefit/ Cost Ratio 9.6	Benefit/ Cost Ratio 6.8	Benefit/ Cost Ratio 2.0
Transportation System Sustainability *To measure progress in meeting 2016 RTP/SCS Goal 4.*	The STIP does not impact asset conditions in this cycle	The STIP does not impact asset conditions in this cycle	The STIP does not impact asset conditions in this cycle
Environmental Justice *To measure progress in meeting 2016 RTP/SCS Goal 6.*	Meets federal requirements. No unaddressed disproportionately high and adverse effects for low income or minority communities.	Meets federal requirements. No unaddressed disproportionately high and adverse effects for low income or minority communities.	Meets federal requirements. No unaddressed disproportionately high and adverse effects for low income or minority communities.

2020 RTIP Projects and 2016 RTP/SCS Goals and Performance Outcomes: Consistency by Project (continued)		
2016 RTP/SCS Goal Corresponding Performance Measures	**I-5 Improvements from Avenida Pico to San Diego County Line**	**I-605 Katella Avenue Interchange Improvements**
Location Efficiency *To measure progress in meeting 2016 RTP/SCS Goal 8*	$ 21.7 million Average Annual Travel Time Savings	$5.1 million Average Annual Travel Time Savings
Mobility and Accessibility *To measure progress in meeting 2016 RTP/SCS Goals 2, 5 and 8.*	3,124,386 Average Annual Person-Hours of Time Saved	554,096 Average Annual Person-Hours of Time Saved
Safety and Health *To measure progress in meeting 2016 RTP/SCS Goals 3, 6 and 9.*	$53.2 million 20-Year Accident Cost Savings	$0.2 million 20-Year Accident Cost Savings
Environmental Quality *To measure progress in meeting 2016 RTP/SCS Goals 6 and 7.*	143,346 CO2 Emissions Saved (tons)	47,637 CO2 Emissions Saved (tons)
Economic Opportunity *To measure progress in meeting 2016 RTP/SCS Goals 1 and 5.*	2,418 Jobs Created	329 Jobs Created
Investment Effectiveness *To measure progress in meeting 2016 RTP/SCS Goal 1.*	Benefit/ Cost Ratio 2.8	Benefit/ Cost Ratio 3.1
Transportation System Sustainability *To measure progress in meeting 2016 RTP/SCS Goal 4.*	The STIP does not impact asset conditions in this cycle	The STIP does not impact asset conditions in this cycle
Environmental Justice *To measure progress in meeting 2016 RTP/SCS Goal 6.*	Meets federal requirements. No unaddressed disproportionately high and adverse effects for low income or minority communities.	Meets federal requirements. No unaddressed disproportionately high and adverse effects for low income or minority communities.

B. Regional Level Performance Indicators and Measures (per Appendix B of the STIP Guidelines).

2020 STIP-RTIP SCAG Regional Level Performance Evaluation

Pursuant to the State Transportation Improvement Program (STIP) guidelines recently adopted by the California Transportation Commission (Commission), the Southern California Association of Governments (SCAG) is pleased to submit the requested regional performance evaluation for SCAG region's 2020 STIP.

SCAG is the largest Metropolitan Planning Organization (MPO) in the country and the region is home to approximately 19 million Californians. SCAG region's STIP includes several, often partial projects included in SCAG's 2016 Regional Transportation Plan (RTP)/Sustainable Communities Strategies (SCS). The RTP/SCS meets the GHG targets established by the California Air Resources Board (CARB) pursuant to Senate Bill 375 (SB 375) specific to the SCAG region. Given these projects are drawn from the conforming RTP/SCS, it is reasonable to affirm that these STIP projects move the region towards the successful implementation of the RTP/SCS. Please note the following related to the 2020 STIP-RTIP:

- The STIP-RTIP does not include system wide preservation investments. As such, it does not impact asset conditions on the State Highway System (SHS), local roads, or transit assets. However, life-cycle costs are considered in the analysis for the capital projects proposed by these STIP-RTIP Submittals.

- This STIP-RTIP does not include land use strategies and only modest transit and active transportation investments. Therefore, mode shift impacts are negligible.

- The STIP-RTIP includes several highway projects, several involving pricing on High Occupancy Toll (HOT) lanes. These projects work best in tandem with SCAG's RTP/SCS Travel Demand Management (TDM) strategies. As such, TDM strategies are included in the analysis.

- The STIP-RTIP does not include smart land use strategies or other broad-based pricing strategies (mileage based user charges) included in the RTP/SCS. Therefore, impacts on several measures in the STIP guidelines are not considered (e.g., percent of housing and jobs within 0.5 miles of transit stops with frequent transit service).

The STIP guidelines list a number of measures to report, depending on available data and tools. A brief summary of the analysis results for the applicable measures is provided below.

Section 11. Regional and Statewide Benefits of RTIP

Provide qualitative narrative on the Regional and Statewide benefits of RTIP in text field below.

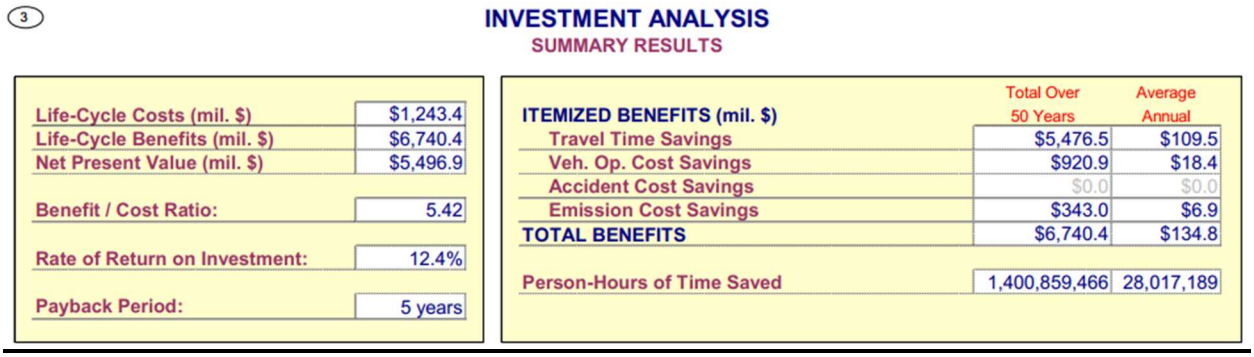
Investment Effectiveness

The 2020 STIP benefit/cost (B/C) analysis for the SCAG region utilizes the Cal-B/C model to calculate regional network benefits. It calculates and aggregates scenario benefits after

travel impacts are evaluated using a regional travel demand model. The benefit/cost ratio compares the incremental benefits with the incremental costs of transportation investments. The benefits are divided into several categories, including:

- Savings resulting from reduced travel delay;
- Air quality improvements; and
- Reductions in vehicle operating costs

For these categories, SCAG's travel demand model results are used to estimate the benefits of the 2020 STIP *Build* planning scenario compared with the *No Build* planning scenario. Model data for the 2020 STIP were summarized to facilitate analysis. Consistent with the overall STIP performance evaluation, benefits associated with SCAG's 2016 RTP/SCS TDM strategies are reflected in the analysis. Most of these benefits are a function of changes in Vehicle Miles Traveled (VMT) and Vehicle Hours Traveled (VHT). Costs included in the analysis reflect estimates of lifecycle costs including capital and ongoing operations and maintenance costs. The 2020 STIP provides a regional network-level benefit/cost ratio of 5.42. Benefits and costs are estimated over the planning period of fifty years.



③

INVESTMENT ANALYSIS

SUMMARY RESULTS

Life-Cycle Costs (mil. $)	$1,243.4
Life-Cycle Benefits (mil. $)	$6,740.4
Net Present Value (mil. $)	$5,496.9
Benefit / Cost Ratio:	5.42
Rate of Return on Investment:	12.4%
Payback Period:	5 years

ITEMIZED BENEFITS (mil. $)	Total Over 50 Years	Average Annual
Travel Time Savings	$5,476.5	$109.5
Veh. Op. Cost Savings	$920.9	$18.4
Accident Cost Savings	$0.0	$0.0
Emission Cost Savings	$343.0	$6.9
TOTAL BENEFITS	$6,740.4	$134.8
Person-Hours of Time Saved	1,400,859,466	28,017,189

Please note that a regional travel demand model may not be as sensitive to individual project level impacts. As such, this analysis is not necessarily comparable to the project-level assessments as the regional evaluation accounts for the complementary or duplicative benefits of combinations of projects with the scenarios modeled externally using SCAG's regional travel demand model.

VMT per Capita

Impacts are projected to increase VMT per capita by 0.005 miles or 0.02 percent per day (compared to the 2040 no build scenario as previously discussed)

Percent of congested VMT at or below 35 mph

Impacts are projected to reduce congested VMT by 1.9 percent.

Commute mode share (travel to work or school)

Impacts are expected to maintain the percentage of drive alone trips to work and increase in drive alone trips to colleges or universities by 0.01 percent.

Asset Conditions (State Highway and Local Streets)

Based on the 2018 California Asset Management Plan, 14.4 percent of the State Highway System (SHS) lane miles are in poor conditions. The average Pavement Condition Index (PCI) for the region's local roads is 69 based on the 2018 Statewide Local Streets and Roads Needs Assessment. The STIP does not impact asset conditions in this cycle.

Percent of transit assets that have surpassed the FTA useful life period

Not applicable

Highway Buffer Index (the extra time cushion that most travelers add to their average travel time when planning trips to ensure on-time arrival)

The full implementation of the region's STIP projects (including all projects from the SCAG region) will improve travel time reliability since HOT lane implementations have been shown to improve overall travel time reliability. However, it is not possible to estimate these impacts with current tools.

Fatalities

Not applicable.

Percent of housing and jobs within 0.5 miles of transit stops with frequent transit service

The full implementation of the region's STIP projects will increase housing within 0.5 miles by 1.02 percent and jobs access within 0.5 miles by 0.7 percent.

Mean commute travel time (to work or school)

Impacts are projected to reduce mean work commute travel time by 0.08 minutes for automobiles and decreased mean work commute time by 0.33 minutes for transit. Impacts are also projected to decrees mean school commute travel times by 0.02 minutes for automobiles and by 0.17 minutes for transit.

Change in acres of agricultural land

Not applicable

GHG Impacts

CO2 emissions/capita are projected to be reduced by 0.01 pounds per capita daily.

Table B2 summarizes the performance measures results as suggested by the RTP guidelines. Note that the table compares future conditions, as opposed to comparing to current condition, without the STIP-RTIP against future conditions with the STIP-RTIP. This allows for isolating the impacts of the STIP-RTIP without taking credit for other developments, such as improved fuel efficiencies or smart land use strategies.

D. Performance and Effectiveness of RTIP

Section 12. Evaluation of Cost Effectiveness of RTIP (Required per Section 19)

Per Section 19B and Appendix B of the STIP Guidelines, regions shall, if appropriate and to the extent necessary data and tools are available, use the performance measures in Table B2 or B2a below to evaluate cost-effectiveness of projects proposed in the STIP on a regional level.

Table B2 Evaluation
Cost-Effectiveness Indicators and Measures

Goal	Indicator/Measure	Future Level of Performance (Baseline)		Projected Performance Improvement (2040)	
Congestion Reduction	Reduce Vehicle Miles Traveled/capita	20.78		Decrease in VMT per capita = 0.005 miles per day	
	Reduce Percent of congested VMT (at or below 35 mph)	10.54%		Reduction of 3.0%	
	Change in commute mode share (travel to work or school)	Travel to Work	Travel to School	Travel to Work	Travel to School
	Vehicle Trips Drive Alone	71.86%	8.46%	0.00%	Reduction of 0.01%
	Vehicle Trips 2 Person Carpool	3.69%	8.24%	Reduction of 0.01%	0.00%
	Vehicle Trips 3+ Person Carpool	2.33%	10.26%	Reduction of 0.01%	0.00%
	Auto Passenger Trips	9.54%	40.45%	Reduction of 0.03%	0.00%
	Transit Trips	7.59%	4.81%	Increase of 0.05%	Increase of 0.04%
	Non-Motorized Person Trips	4.98%	27.78%	Reduction of 0.01%	Reduction of 0.02%
Infrastructure Condition	Reduce percent of distressed state highway lane-miles	Not applicable		Not applicable	
	Improve Pavement Condition Index (local streets and roads)	Not applicable		Not applicable	
	Reduce percent of highway bridge lane-miles in need of replacement or rehabilitation (sufficiency rating of 80 or below)	Not applicable		Not applicable	
	Reduce percent of transit assets that have surpassed the FTA useful life period	Not applicable		Not applicable	
System Reliability	Reduce Highway Buffer Index (the time cushion added to the average commute travel times to ensure on-time arrival).	Future conditions cannot be modeled		Improvement cannot be modeled	
Safety	Reduce fatalities and serious injuries per capita (daily)	Not applicable		Not applicable	
	Reduce fatalities and serious injuries per VMT	Not applicable		Not applicable	
Economic Vitality	Increase percent of housing and jobs within 0.5 miles of transit stops with frequent transit service	Household % = 57.66% Jobs % = 66.71%		Household % = Increase of 01.02% Jobs % = Increase of 0.70%	
	Reduce mean commute travel time (to work or school)	Auto Home Based Work = 22.20 mins Auto School = 11.89 mins Transit Home Based Work = 76.40 mins Transit School = 58.46 mins		Auto Home Based Work Reduction = 0.05 mins Auto School Increase = 0.01 mins Transit Home Based Work Increase = 0.03 mins Transit School Increase = 0.05 mins	
Environmental Sustainability	Change in acres of agricultural land	Not applicable		Not applicable	
	CO_2 emissions reduction per capita (daily)	9.73 lbs		Daily Reduction per capita = 0.01 lbs	

SCAG certifies that the proposed 2020 Regional Transportation Improvement Program is consistent with the current approved Regional Transportation Plan and Sustainable Communities Strategies. To the best of SCAG's knowledge, at this time, the projects identified for funding in the proposed 2020 Regional Transportation Improvement Program are not anticipated to be impacted by implementation of the Safer Affordable Fuel-Efficient Vehicles Rule Part One – One National Program which became effective on November 26, 2019.

Per Section 19C and Appendix B of the STIP Guidelines, regions may, if appropriate and to the extent necessary data and tools are available, use the benefits or performance improvements in Table B3 below to evaluate the proposed changes to the built environment.

Table B3
Evaluation – Project Changes or Increased Capacity Benefits

Project Type Or Mode	Changes to Built Environment	Indicator/Measure	Benefits or Performance Improvement at Project Completion
State Highway	New general purpose lane-miles	Miles	18.2
	New HOV/HOT lane-miles	Miles	9.2
	Lane-miles rehabilitated		
	New or upgrade bicycle lane/sidewalk miles		
	Operational improvements	Miles	6.5
	New or reconstructed interchanges		
	New or reconstructed bridges		
Transit or Intercity Rail	Additional transit service miles		
	Additional transit vehicles		
	New rail track miles		
	Rail crossing improvements		
	Station improvements		
Local Streets and Roads	New lane-miles		
	Lane-miles rehabilitated		
	New or upgrade bicycle lane/sidewalk miles		
	Operational improvements		
	New or reconstructed bridges		

Section 13. Project Specific Evaluation (Required per Section 19D)

Each RTIP shall include a project specific benefit evaluation for each new project proposed that estimates its benefits to the regional system from changes to the built environment, including, but limited to the items listed on page 10 of the STIP Guidelines. A project level evaluation shall be submitted for projects for which construction is proposed if:

- The total amount of existing and proposed STIP for right-of-way and/or construction of the project is $15 million or greater, or
- The total project cost is $50 million or greater.

The project level benefit evaluation shall include a Caltrans generated benefit/cost estimate, including life cycle costs for projects proposed in the ITIP. For the RTIP, the regions may choose between the Caltrans estimate and their own estimate (explain why the Caltrans estimate was not used). The project level benefit evaluation must explain how the project is consistent with Executive Order B-30-15 (Climate Change).

The STIP Guidelines state that this evaluation should be included in the PPRs (Section 15 of the RTIP Template).

2020 STIP – New Projects			
	State Route 74 Ortega Highway Improvements – Calle Entradero to City/County Line	**I-5 Improvements from Avenida Pico to San Diego County Line**	**I-605 Katella Avenue Interchange**
Life-Cycle Costs (mil.$)	$59.5	$184.1	$36.8
Life-Cycle Benefits (mil.$)	$117.6	$519.4	$112.7
Net Present Value (mil.$)	$58.1	$335.3	$75.9
Benefit/Cost Ratio	2.0	2.8	3.1

E. Detailed Project Information

Section 14. Overview of Projects Programmed with RIP Funding

Provide summary of projects programmed with RIP funding including maps in the text field below as required per Section 19 of the STIP Guidelines.

I-5 Improvements from I-405 to Yale Avenue (Segment 1)

This project will add one mixed flow lane northbound from truck bypass on-ramp to Yale Avenue; and add one mixed flow lane southbound from Yale Avenue to truck bypass. Additional features of the project include improvements to various interchanges. Auxiliary lanes will be added in some segments and re-established in others within the project limits. The overall project length is approximately 4.5 miles.

Currently, this segment of the I-5 corridor is experiencing congestion and long traffic delays due to demand exceeding capacity, primarily resulting from local, regional, and interregional traffic demand. In addition, forecasted local and regional traffic demand is expected to increase by over 10,000 vehicles per day by the year 2040.

State Route 55 (SR-55) Improvement Project from Interstate 405 (I-405) to Interstate 5 (I-5)

This project will add new high-occupancy vehicle (HOV), general-purpose and auxiliary lanes on SR-55 between the I-405 and the I-5 connectors to increase freeway capacity and reduce congestion in central Orange County areas. The project is located in the cities of Irvine, Santa Ana, and Tustin.

Future traffic demand is anticipated to increase traffic volumes to levels that will increase traffic congestion, increase travel delays, and reduce travel speeds. It is anticipated that without additional major capital improvements, the level of service (LOS) for the majority of the study area in the northbound and southbound directions would be unacceptable during AM and PM peak periods.

State Route 74 (SR-74) Ortega Highway Improvements – Calle Entradero to the City/ County Line

This project will widen SR-74/Ortega Highway from two to four lanes by adding one lane in each direction in the City of San Juan Capistrano from Calle Entradero to the City/ County line.

This is an important project for the region and one of the most heavily utilized local roads in the area. Currently, the existing traffic demand exceeds traffic capacity and operates at a LOS E, and will operate at LOS F in the year 2025.

I-5 Improvements from State Route 73 (SR-73) to El Toro Road (Replacement Planting/Landscaping)

This project will replace planting and add landscaping for the three segments of the I-5 Improvement Project from SR-73 to El Toro Road.

I-5 Improvement from Avenida Pico to the San Diego County Line

The project proposes to add a general-purpose or a managed lane in each direction on the I-5, reestablish existing auxiliary lanes, widen existing undercrossing, and replace existing overcrossings

Planning, Programming, and Monitoring (PPM)

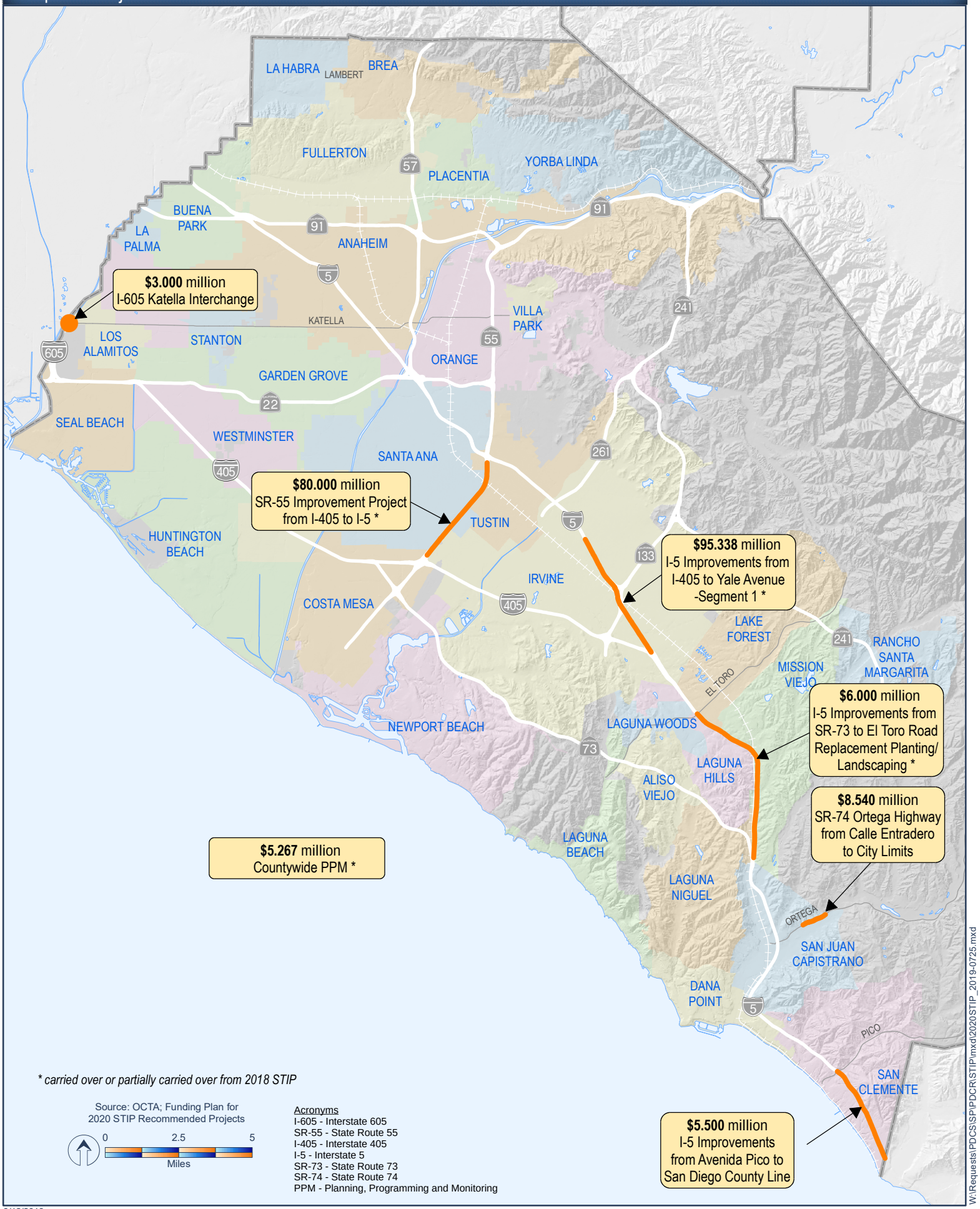
Orange County is impacted by severe congestion on many regional and interregional facilities. Examination of the problem and potential solutions are necessary for the future construction of improvements. STIP funds will be used to develop project study reports and provide environmental clearance for projects, thus creating a shelf of projects for the future.

Interstate 605 (I-605) Katella Avenue Interchange

The I-605 and Katella Avenue Interchange Project will improve freeway access, traffic operations, enhance safety, and improve pedestrian and bicycle facilities.

OCTA 2020 State Transportation Improvement Program

Proposed Projects



** carried over or partially carried over from 2018 STIP*

Source: OCTA; Funding Plan for
2020 STIP Recommended Projects

0 2.5 5
Miles

Acronyms
I-605 - Interstate 605
SR-55 - State Route 55
I-405 - Interstate 405
I-5 - Interstate 5
SR-73 - State Route 73
SR-74 - State Route 74
PPM - Planning, Programming and Monitoring

8/12/2019

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