



# Amendment to the 2021 Regional Plan

October 13, 2023

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# Amendment to the 2021 Regional Plan

## 1. Introduction

On December 10, 2021, the Board of Directors approved the 2021 Regional Plan, which details interdependent strategies including transportation policies and programs, infrastructure investments, and technological advancements to achieve regional goals for transportation, the environment, and equity. One of the pricing strategies included in the plan is a regional road usage charge (RUC), which is a direct user fee where drivers pay to use the roadway network, whether the vehicle is powered by gas, electricity, or hydrogen, based on distance traveled or other factors.

On September 23, 2022, the Board directed staff to prepare,

*“a focused amendment of the 2021 Regional Plan without the regional road usage charge and a supplemental California Environmental Quality Act analysis for Board consideration within one year...”*

Under federal metropolitan transportation planning regulations, a regional transportation plan amendment requires an opportunity for public review and comment, demonstration of fiscal constraint, and an air quality conformity determination.

The amendment removes the regional RUC from the 2021 Regional Plan, updates the financial strategies necessary to demonstrate that it will have sufficient revenues to pay for the planned transportation improvements, and documents federal Air Quality Planning and Transportation Conformity. This amendment also analyzes consistency with state targets to reduce greenhouse gas (GHG) emissions consistent with Senate Bill 375 (SB 375).

## 2. Project Modifications

The amendment is focused on the removal of the regional RUC from the 2021 Regional Plan and provides updated revenue assumptions. There are no other changes to the transportation projects, programs, or policies identified in the 2021 Regional Plan.

Separate from the regional RUC, the 2021 Regional Plan also assumes revenues resulting from a state-administered RUC. SANDAG will continue to coordinate with the state and other metropolitan planning organizations (MPOs) on the state’s RUC pilot program.

Attachment A, Errata to the 2021 Regional Plan, includes the revisions to the 2021 Regional Plan resulting from removal of the regional RUC.

**Model and Input Corrections:** After adoption of the 2021 Regional Plan, staff observed low traffic counts and employment at some large employment location sites and made minor corrections resulting in slight changes to regional employment figures. Staff also fixed a software bug resulting in more accurate traffic volumes on SR 11. A full discussion of the activity-based modeling inputs is included in Attachment B.

### 3. Revenue Assumptions<sup>1</sup>

Federal law requires that an MPO identify revenues to cover the improvements included in its regional transportation plan. The funding strategy for the 2021 Regional Plan considered all reasonably anticipated revenues to be received through 2050 necessary to cover the identified cost of \$163 billion. State and local revenue from fuel taxes have declined with the increase in vehicle fuel efficiency. Therefore, the 2021 Regional Plan concluded that new sources of funding beyond the fuel tax would be needed for full implementation. The regional RUC was only one of several potential revenue sources included in the 2021 Regional Plan.

The amendment includes the following updated revenue assumptions:

- (1) **Removal of the Regional RUC:** Removal of the regional RUC reduces anticipated revenues by \$14.2 billion over the life of the 2021 Regional Plan.
- (2) **Delay timing of future local sales tax revenue:** The 2021 Regional Plan assumes a one-half-cent sales tax measure following the 2022 election. In 2022, a proposed citizen initiative for a half-cent sales tax measure to help fund the 2021 Regional Plan failed to qualify for the November 2022 ballot. The amendment assumes the citizen initiative will be circulated for the 2024 ballot and postpones the revenue generated from the new measure and potential financing opportunities to begin following the 2024 presidential election, rather than the 2022 midterm election. A second assumed half-cent sales tax measure in 2028 has not been changed with the amendment.
- (3) **Update to TransNet Revenue:** The TransNet program is a voter-approved half-cent sales tax for transportation purposes in the San Diego region. It was approved by voters in 2004 and was estimated to generate \$13 billion for regional transportation improvements for the remaining years of the measure (2021–2050). On April 22, 2022, the Board approved updated TransNet program revenues based on actual sales tax revenue collections for FY 2022, which are higher than previously anticipated sales tax revenues for FY 2023. The growth rate is applied to the higher base, generating an additional \$2 billion through 2050. Those additional revenues have been included in the updated revenue assumptions.
- (4) **Federal and State Funding:** The revenue assumptions for the 2021 Regional Plan were developed prior to the Infrastructure Investment and Jobs Act (IIJA), also known as the Bipartisan Infrastructure Law (BIL), being signed into law by President Biden in November 2021. The law authorized \$1.2 trillion for transportation and infrastructure spending with \$550 billion of that figure going toward “new” investments and programs. The historic level of infrastructure investment from the federal and state government in the early phase years of the 2021 Regional Plan was unknown and underestimated. The federal and state discretionary programs near-term estimates have been updated to assume historical leveraging rates of local TransNet revenue.

These changes would result in a net decrease in revenues from \$173 billion identified in the 2021 Regional Plan to \$165 billion. This revenue would still be sufficient to fund the anticipated \$163 billion of planned transportation improvements included in the 2021 Regional Plan. No changes to projects listed in the 2021 Regional Plan result from the Amendment. These revenue changes are identified in Tables 3.1 and 3.2 below.

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<sup>1</sup> All funds are in 2020\$ unless otherwise noted.

Table 3.1: Amendment Revenue Assumptions

Amendment Revenue Assumptions	
Changes since Regional Plan Approval	Impact (\$ in millions)
Removal of Regional RUC	(\$14,229)
Delay Future Local Revenues for Transportation to start in 2025	(\$1,896)
Update TransNet Revenue based on April 2022 board-approved estimates	\$1,914
Update near-term State Discretionary Programs estimates to incorporate historic levels of transportation investment (2022-2030)	\$2,454
Update near-term Federal Discretionary Programs estimates to incorporate historic levels of transportation investment (2022-2030)	\$3,896
<b>Total</b>	<b>(\$7,861)</b>

Table 3.2: Comparison of Revenues and Costs

Comparison of Revenues and Costs			
	2021 Regional Plan	Amendment	Difference
Total Revenue Sources	\$172,820	\$164,959	(\$7,861)
Total Costs	\$162,538	\$162,538	\$0
Difference (Rev-Costs)	\$10,282	\$2,421	-

## 4. SB 375 and the Sustainable Communities Strategy

Under the Sustainable Communities Act, the California Air Resources Board (CARB) sets regional targets for GHG emissions reductions from passenger vehicle use. CARB has set targets for 2035 for each of the 18 MPO regions. SANDAG’s target is a 19% reduction in per capita passenger vehicle GHG emissions relative to 2005 as part of the 2021 Regional Plan.<sup>2</sup>

The amendment removes the regional RUC of 3.3 cents per mile starting in 2030. The resulting decrease in the cost to operate an automobile, results in an increase in single occupancy drivers that would cause an increase in vehicle miles traveled (VMT) and an increase in GHG emissions and air pollutants from tailpipe emissions compared to the 2021 Regional Plan. The amendment results in an increase of 1.3 million VMT per day in 2035. This results in a 18.6% per capita reduction in GHG emissions in 2035 relative to 2005 levels, which is rounded to the nearest whole number of 19% consistent with CARB guidelines.<sup>3</sup>

<sup>2</sup> In addition to the GHG reduction target, CARB will analyze whether the strategies and commitments in this amendment support the Sustainable Community Strategy’s stated GHG emission reductions and whether there are any risks to not achieving those strategies and commitments. Final SCS Program and Evaluation Guidelines, p. 51.

<sup>3</sup> “MPOs that rely on a combination of modeled and off-model methods to estimate per capita GHG emission reductions from its RTP/SCS should round to the nearest integer percent” (Final SCS Program and Evaluation Guidelines, Appendices, p. 28).

Table 4.1: Comparison of SB 375 Results

Comparison of SB 375 Results			
	2021 Regional Plan <sup>1</sup>	Amendment	Difference <sup>2</sup> (Amendment – Plan)
<b>Year 2035</b>			
Population	3,620,348	3,620,348	0
SB 375 VMT	80,166,669	81,418,476	1,251,807
SB 375 VMT/Person	22.1	22.5	0.4
GHG Per Capita Reduction from 2005	-20.4%	-18.6	1.8

Notes: <sup>1</sup> 2021 Regional Plan with transportation model and input corrections as discussed above.

<sup>2</sup> May not add up due to rounding.

## 5. Network Performance

The amendment makes no changes in the transportation network in the 2021 Regional Plan. Revisions to the primary and supporting performance measures for 2035 and 2050 resulting from removal of the regional RUC in the amendment are provided in Tables 5.1 and 5.2.

Table 5.1: Performance of Revenue-Constrained Transportation Network Regionwide: Primary Measures

Performance of Revenue-Constrained Transportation Network Regionwide						
Performance Measure	2021 Regional Plan <sup>1</sup>		Amendment		Difference <sup>2</sup>	
	2035	2050	2035	2050	2035	2050
<b>Percentage of residents that can access retail within 15 minutes</b>						
Walk	73.9%	74.8%	73.9%	74.8%	0.0%	0.0%
Bike	97.1%	97.6%	97.1%	97.6%	0.0%	0.0%
Transit	66.5%	67.4%	66.5%	67.4%	0.0%	0.0%
<b>Percentage of residents that can access parks within 15 minutes</b>						
Walk	53.4%	53.5%	53.4%	53.5%	0.0%	0.0%
Bike	95.2%	95.7%	95.2%	95.7%	0.0%	0.0%
Transit	44.5	45.4	44.5	45.4	0.0%	0.0%
<b>Percentage of residents that can access Tier 1 employment centers</b>						
Within 30 minutes by Transit	31.1%	35.9%	31.1%	35.9%	0.0%	0.1%
Within 45 minutes by Transit	51.8%	58.4%	51.7%	58.3%	0.0%	-0.1%
<b>Percentage of residents that can access Tier 2 employment centers</b>						
Within 30 minutes by Transit	57.2%	59.5%	57.1%	59.5%	0.0%	0.0%
Within 45 minutes by Transit	77.4%	79.6%	77.3%	79.6%	0.0%	0.0%
<b>Percentage of residents that can access any employment center (Tier 1–4)</b>						
Within 30 minutes by Transit	84.7%	85.6%	84.7%	85.6%	0.0%	0.0%
Within 45 minutes by Transit	85.7%	86.7%	85.7%	86.7%	0.0%	0.0%
<b>Percentage of residents that can access higher education institutions</b>						
Within 30 minutes by Transit	54.1%	55.8%	54.0%	55.7%	-0.1%	0.0%
Within 45 minutes by Transit	78.5%	80.4%	78.5%	80.4%	0.0%	0.0%
<b>On-road CO<sub>2</sub> emissions (change from 2005 levels)<sup>3</sup></b>						
Total Tons	38,216	39,116	38,761	39,617	544	501
Per Capita	21.1	20.9	21.4	21.2	0.3	0.3
<b>Vehicle Miles Traveled</b>						
All Vehicle Classes Regionwide	85,868,724	88,735,779	87,131,224	89,846,864	1,262,499	1,111,085
Per Capita	24.0	24.0	24.4	24.3	0.4	0.3

Notes: <sup>1</sup> 2021 Regional Plan with transportation model and input corrections as discussed above.

<sup>2</sup> May not add up due to rounding.

<sup>3</sup> Change in on-road CO<sub>2</sub> emissions from 2005 values (EMFAC 2014). Negative values indicate emission reductions. These measures quantify changes in total tons and pounds per capita and are used to calculate the percent reduction per capita required in SB 375.

Table 5.2: Performance of Revenue-Constrained Transportation Network: Supporting Measures

Performance of Revenue-Constrained Transportation Network Regionwide							
Supporting Performance Measures		2021 Regional Plan <sup>1</sup>		Amendment		Difference <sup>2</sup>	
		2035	2050	2035	2050	2035	2050
<b>Mode Share</b>							
Work Trips (peak period)	Bike & walk	6.5%	8.2%	6.4%	8.1%	-0.1%	-0.1%
	Carpool	15.0%	16.0%	15.2%	16.1%	0.1%	0.1%
	Drive alone	66.6%	62.4%	66.9%	62.7%	0.2%	0.3%
	Other (TNC, MicroMobility, Taxi, School bus)	0.5%	0.6%	0.5%	0.6%	0.0%	0.0%
	Transit	11.3%	12.8%	11.1%	12.5%	-0.2%	-0.3%
Work Trips (all day)	Bike & walk	7.0%	8.7%	6.9%	8.6%	-0.1%	-0.1%
	Carpool	14.6%	15.6%	14.7%	15.7%	0.1%	0.1%
	Drive alone	66.4%	62.1%	66.8%	62.5%	0.3%	0.3%
	Other (TNC, MicroMobility, Taxi, School bus)	0.5%	0.6%	0.5%	0.6%	0.0%	0.0%
	Transit	11.4%	12.9%	11.1%	12.6%	-0.3%	-0.3%
All Trips	Bike & walk	11.8%	13.5%	11.7%	13.4%	-0.1%	-0.1%
	Carpool	40.5%	40.3%	40.6%	40.5%	0.1%	0.1%
	Drive alone	40.9%	38.9%	41.1%	38.9%	0.1%	0.1%
	Other (TNC, MicroMobility, Taxi, School bus)	2.1%	2.3%	2.1%	2.2%	0.0%	0.0%
	Transit	4.7%	5.1%	4.5%	5.0%	-0.1%	-0.1%

**Performance of Revenue-Constrained Transportation Network Regionwide**

Supporting Performance Measures		2021 Regional Plan <sup>1</sup>		Amendment		Difference <sup>2</sup>	
		2035	2050	2035	2050	2035	2050
<b>Number/percent of people within 0.5 miles of a commuter rail, light rail, or next gen Rapid (Tier 1/Tier 2/Tier 3) transit stop</b>							
Commuter Rail (Tier 1)	Number	119,876	262,471	119,876	262,471	0	0.
	Percent	3.4%	7.1%	3.4%	7.1%	0.0%	0.0%
Light Rail (Tier 2)	Number	322,632	463,122	322,632	463,122	0.	0
	Percent	9.0%	12.5%	9.0%	12.5%	0.0%	0.0%
Next Gen Rapid (Tier 3)	Number	1,089,142	1,199,095	1,089,142	1,199,095	0	0
	Percent	30.5%	32.4%	30.5%	32.4%	0.0%	0.0%
Access to any of the tiers (1-3)	Number	1,173,585	1,293,654	1,173,585	1,293,654	0	0
	Percent	32.8%	35.0%	32.8%	35.0%	0.0%	0.0%
<b>Number/percent of jobs within 0.5 miles of a commuter rail, light rail, or next gen Rapid (Tier 1/Tier 2/Tier 3) transit stop</b>							
Commuter Rail (Tier 1)	Number	135,518	232,588	135,518	232,588	0	0
	Percent	7.1%	11.1%	7.1%	11.1%	0.0%	0.0%
Light Rail (Tier 2)	Number	289,270	370,838	289,270	370,838	0	0
	Percent	15.0%	17.8%	15.0%	17.8%	0.0%	0.0%
Next Gen Rapid (Tier 3)	Number	814,628	923,202	814,628	923,202	0	0
	Percent	42.4%	44.2%	42.4%	44.2%	0.0%	0.0%
Access to any of the tiers (1-3)	Number	887,095	1,007,181	887,095	1,007,181	0	0
	Percent	46.1%	48.3%	46.1%	48.3%	0.0%	0.0%

Performance of Revenue-Constrained Transportation Network Regionwide							
Supporting Performance Measures		2021 Regional Plan <sup>1</sup>		Amendment		Difference <sup>2</sup>	
		2035	2050	2035	2050	2035	2050
<b>Number/percent of people within 0.25 miles of a bike facility (class I and II, cycletrack or bike boulevard)</b>							
	Number	2,747,020	3,015,415	2,747,020	3,015,415	0	0
	Percent	76.9%	81.5%	76.9%	81.5%	0.0%	0.0%
<b>Daily transit boardings</b>							
Region	Commuter Rail (Tier 1)	59,906	196,793	58,220	191,708	-1,686	-5,085
	Light Rail (Tier 2)	346,212	355,767	339,071	349,022	-7,140	-6,744
	Next Gen Rapid (Tier 3)	383,456	405,773	371,965	395,484	-11,490	-10,289
	Local Bus and Express Bus	432,345	446,240	421,887	436,325	-10,458	-9,915
	All transit boardings	1,221,918	1,404,572	1,191,144	1,372,538	-30,774	-32,034
Mohub	Commuter Rail (Tier 1)	55,297	195,307	53,796	190,341	-1,501	-4,966
	Light Rail (Tier 2)	338,834	344,789	331,795	338,252	-7,039	-6,537
	Next Gen Rapid (Tier 3)	332,401	346,626	322,489	337,532	-9,912	-9,094
	Local Bus and Express Bus	338,299	349,399	330,877	342,471	-7,422	-6,928
	All transit boardings	1,064,831	1,236,121	1,038,957	1,208,596	-25,874	-27,525
<b>Physical activity</b>							
	Total time engaged in transportation related physical activity per capita	11.77	13.13	11.66	13.04	-0.11	-0.09
	Percent of the population engaged in 20 min or more of transportation related physical activity	18.5%	20.4%	18.3%	20.3%	-0.2%	-0.1%
<b>Average truck/commercial vehicle travel times to and around regional gateways and distribution hubs (minutes)</b>							
		15.97	16.20	16.03	16.21	0.06	0.01

**Performance of Revenue-Constrained Transportation Network Regionwide**

Supporting Performance Measures		2021 Regional Plan <sup>1</sup>		Amendment		Difference <sup>2</sup>	
		2035	2050	2035	2050	2035	2050
<b>Average Particulate Matter (PM2.5)</b>							
Exposure per person		5.30	5.44	5.36	5.50	0.06	0.06
<b>Truck travel time index</b>							
Highway (SHS)		1.14	1.18	1.15	1.19	0.01	0.01
Arterial		1.20	1.20	1.21	1.20	0.01	0.00
Highway (SHS) + Arterial		1.16	1.19	1.17	1.19	0.01	0.00
<b>Heavy Duty Truck delay by facility type (average daily)</b>							
All day - Heavy Heavy Duty	Highway (SHS)	3,081	4,693	3,213	4,800	133	107
	Arterial	5,545	5,857	5,586	5,868	41	11
AM and PM peak - Heavy Heavy Duty	Highway (SHS)	1,948	2,833	2,024	2,900	76	67
	Arterial	2,461	2,581	2,517	2,607	56	26
All day - Medium Heavy Duty	Highway (SHS)	1,151	1,671	1,209	1,717	58	46
	Arterial	2,958	3,092	2,993	3,121	34	28
AM and PM peak - Medium Heavy Duty	Highway (SHS)	682	952	711	979	28	27
	Arterial	1,188	1,215	1,202	1,235	14	21
All day - Light Heavy Duty	Highway (SHS)	2,639	3,733	2,765	3,837	126	103
	Arterial	7,446	7,854	7,517	7,914	72	60
AM and PM peak - Light Heavy Duty	Highway (SHS)	1,473	2,019	1,529	2,079	56	60
	Arterial	2,807	2,896	2,834	2,941	26	45
Highway (SHS)		6,870	10,098	7,187	10,354	317	257

**Performance of Revenue-Constrained Transportation Network Regionwide**

Supporting Performance Measures		2021 Regional Plan <sup>1</sup>		Amendment		Difference <sup>2</sup>	
		2035	2050	2035	2050	2035	2050
All day - All Heavy Duty (HHD + MHD + LHD)	Arterial	15,949	16,803	16,095	16,902	147	99
AM and PM peak - All Heavy Duty (HHD + MHD + LHD)	Highway (SHS)	4,103	5,804	4,264	5,957	161	154
	Arterial	6,456	6,692	6,553	6,784	96	92
<b>Transportation system use costs</b>							
Percent of Income Consumed by Out-of-Pocket Transportation Costs		10.0%	10.4%	9.5%	10.0%	-0.5%	-0.4%
Change in Percent of Income Consumed by Out-of-Pocket Transportation Costs		2.4%	2.7%	1.9%	2.3%	-0.5%	-0.4%

Notes: <sup>1</sup> 2021 Regional Plan with transportation model and input corrections as discussed above.

<sup>2</sup> May not add up due to rounding.

## 6. Air Quality Planning and Transportation Conformity

SANDAG must ensure that the amendment will not cause or contribute to new air quality violations, worsen existing violations, or delay the attainment of any relevant National Ambient Air Quality Standards (NAAQS). This process, known as air quality planning and transportation conformity, is necessary to be eligible for federal funding for future transportation projects.

Currently San Diego County is in a nonattainment area for ozone only. Ozone is measured by its precursors of reactive organic gases (ROG) and nitrogen oxides (NOx). The amendment removes the regional RUC, which increases total VMT and tailpipe emissions of ozone precursors. A regional emissions analysis was performed using EMFAC2017, which is the emission model used for the transportation conformity analysis for the 2021 Regional Plan. Air quality emissions modeling for the 2020 State Implementation Plan (SIP) analysis years and budgets for the 2008 Ozone and 2015 Ozone NAAQS was completed for 2023, 2026, 2029, 2032, 2040 and 2050. Those results are provided in Table 6.1.

Table 6.1: Transportation Conformity Analysis

Amendment Transportation Conformity Analysis for the 2008 and 2015 Eight-Hour Ozone Standards (EMFAC2017 v 1.0.3)						
Year	Average Weekday Vehicle Starts (1,000s)	Average Weekday Vehicle Miles (1,000s)	ROG		NOx	
			SIP Emissions Budget Tons/Day	ROG Emissions Tons/Day	SIP Emissions Budget Tons/Day	NOx Emissions Tons/Day
2023	11,258	85,451	13.6	13.4	19.3	17.3
2026	11,558	85,661	12.1	11.6	17.3	15.0
2029	11,892	86,285	11.0	10.3	15.9	13.5
2032	12,278	87,358	10.0	9.2	15.1	12.6
2040	12,986	88,730	10.0	7.3	15.1	11.6
2050	13,719	90,083	10.0	6.7	15.1	11.9

*Note: The SIP evaluates the ozone precursor pollutants of ROG and NOx as modeled in EMFAC2017 air quality model. Emissions budgets from the 2020 Plan for Attaining the National Ambient Air Quality Standards for Ozone in San Diego County (October 2020) were found adequate for transportation conformity purposes by U.S. EPA, effective October 19, 2021.*

The amendment continues to meet transportation conformity requirements with the removal of the regional RUC. SANDAG initiated conformity consultation for the amendment with the San Diego Region Air Quality Conformity Working Group (CWG) on November 2, 2022. SANDAG concluded conformity consultation on March 1, 2023, and circulated the pre-draft transportation conformity determination for CWG review on April 25, 2023. The Air Quality Planning and Transportation Conformity is included as Attachment B to this amendment.

## **7. Public Review**

SANDAG prepared a [Public Involvement Strategy](#) for development of the amendment based on the Public Involvement Plan for the 2021 Regional Plan. The strategy includes public meetings, social media, visualizations, and other approaches to outreach. On June 13, 2023, SANDAG posted the draft Amendment on the SANDAG website at [sandag.org/regional-plan/2021-regional-plan](https://sandag.org/regional-plan/2021-regional-plan).

On June 23, 2023, SANDAG conducted a public hearing and also discussed the key planning assumptions for the amendment with the Board of Directors. SANDAG also hosted three virtual workshops over the summer to provide the public with the information and tools necessary to understand the issues and policy choices in the amendment. Comments on the amendment were accepted via a dedicated phone line, email address, and online comment tool through August 8, 2023.

A summary of comments received on the amendment, SANDAG's response, as well as copies of the comments themselves are provided in Attachment C – Public Participation.

## **8. Attachments**

Attachment A – Errata to the 2021 Regional Plan

Attachment B – Air Quality Planning and Transportation Conformity

Attachment C – Public Participation