



VEHICLE MILES TRAVELED (VMT) MITIGATION BANK VOLUNTARY PILOT PROGRAM

Public Works Department

Transportation Board Meeting
November 6, 2024

SUMMARY

- City of Riverside Presentation
 - VMT Background & Exemptions, Current Approach
- Kimley-Horn & Associates (KHA) Presentation
 - Voluntary VMT Mitigation Bank Pilot Program

SENATE BILL (SB) 743 BACKGROUND

- Historically, automobile delay (Level of Service) was the transportation metric used when evaluating traffic impacts.
- Senate Bill (SB) 743 adoption of a new transportation metric – Vehicle Miles Traveled (VMT) by 7/1/20.
- **Phase I** (Establish CEQA VMT thresholds & exemptions)
 - City adopted VMT methodology as part of its Traffic Impact Analysis Guidelines on June 16, 2020.
- **Phase II** – Establish VMT Mitigation Program (*we are here now*)



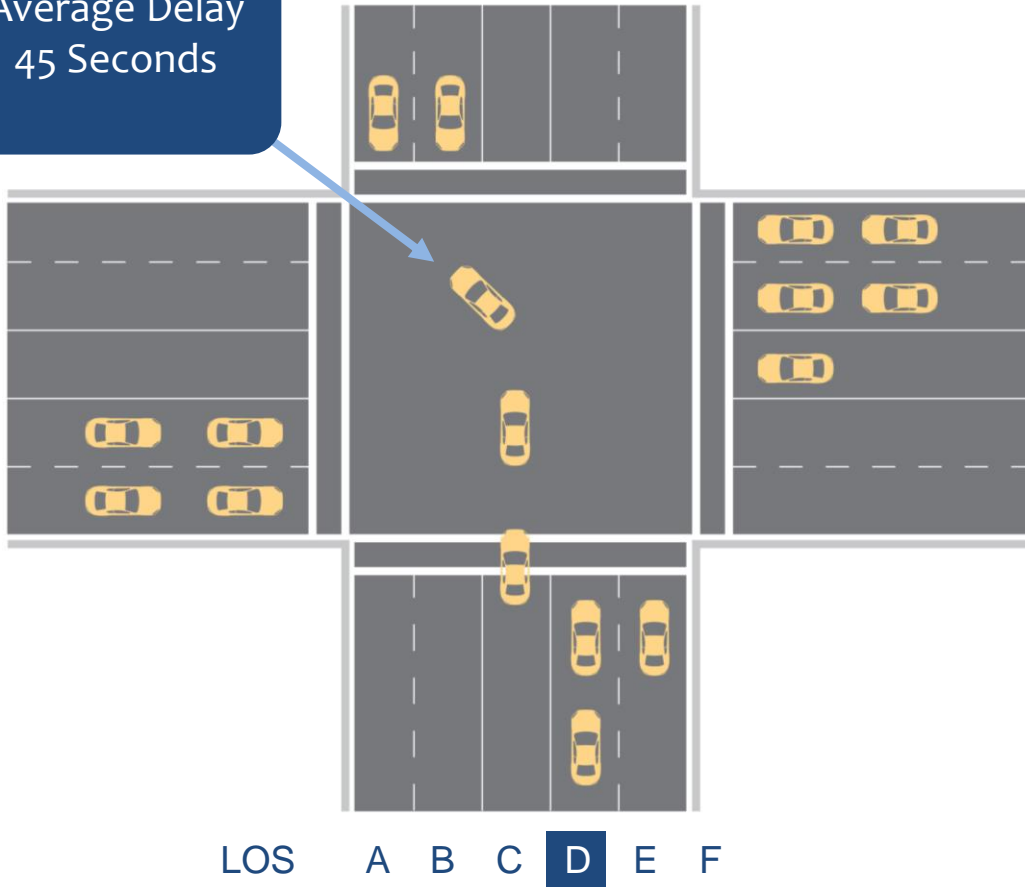
CA Governor's Office of
**Land Use and
Climate Innovation**



Level of Service (LOS)

Impact to the Driver

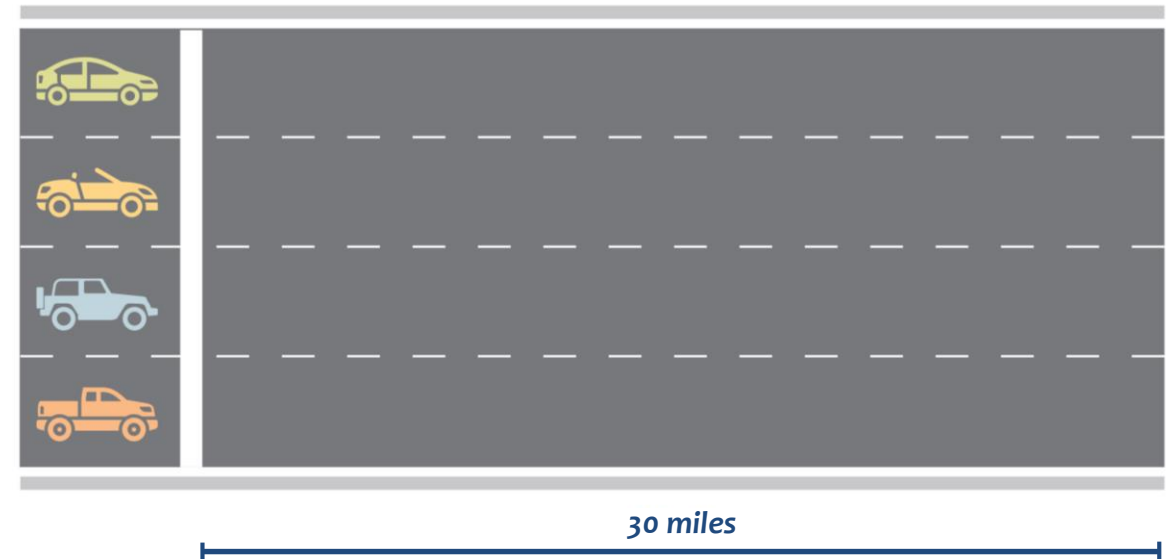
Average Delay
45 Seconds



Non-CEQA

Vehicle Miles Traveled (VMT)

Driver's Impact to Transportation System

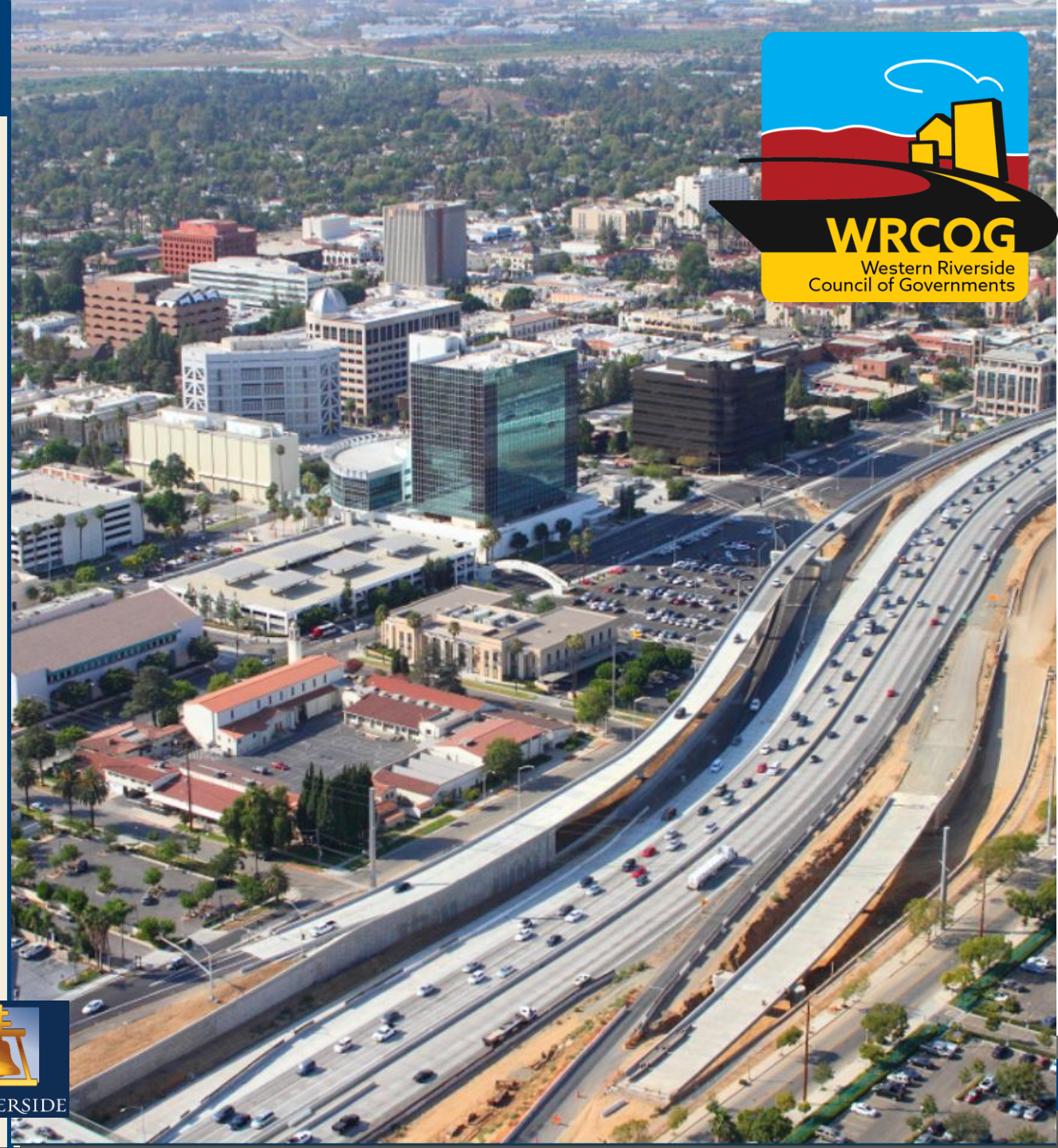


4 vehicles travel 30 miles
or simply
 $4 \times 30 = 120 \text{ VMT}$

Senate Bill 743 Mandate July 2020

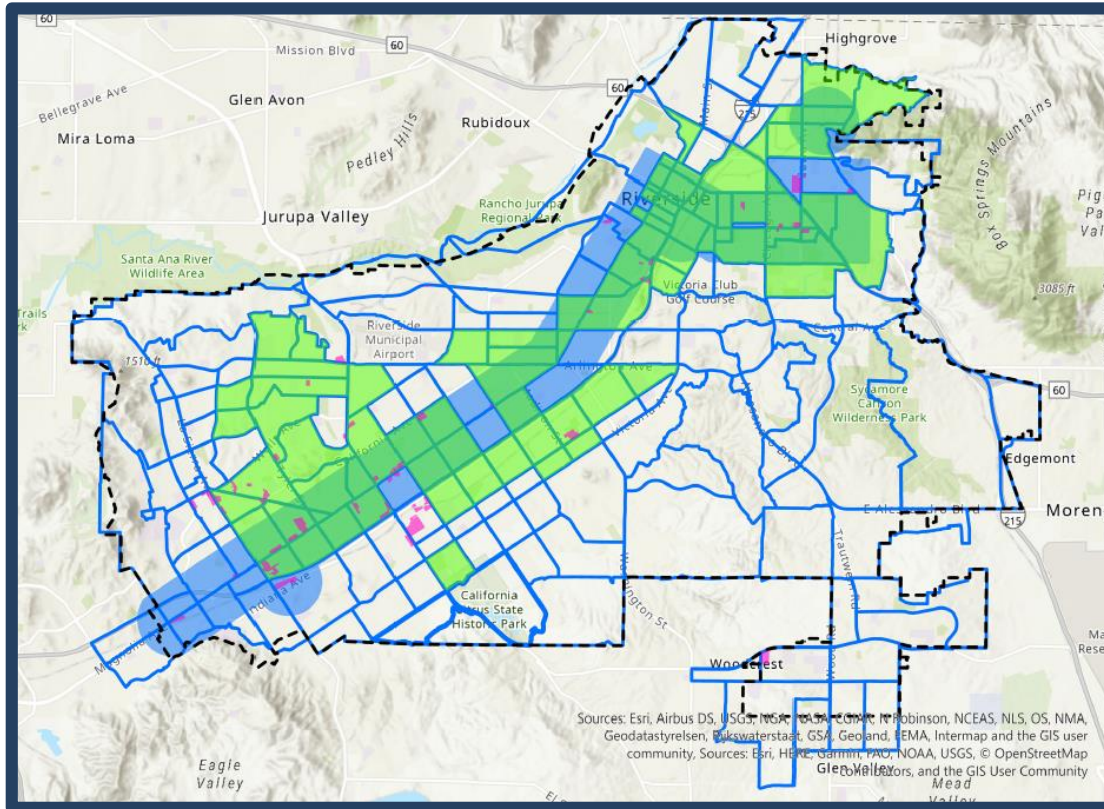
VMT EXEMPTION PROCESS

- **W.R.C.O.G.** – Traffic Impact Study Guidelines with VMT Methodology (Adopted 2020)
- **VMT Screening Tool** Map of low, moderate or high VMT area & compares to thresholds
- **Project Type Screening**
 1. Transit Priority Area (TPA)
 2. Low VMT Area
 3. Project Type
 4. Mixed Use Projects
 5. Redevelopment Projects



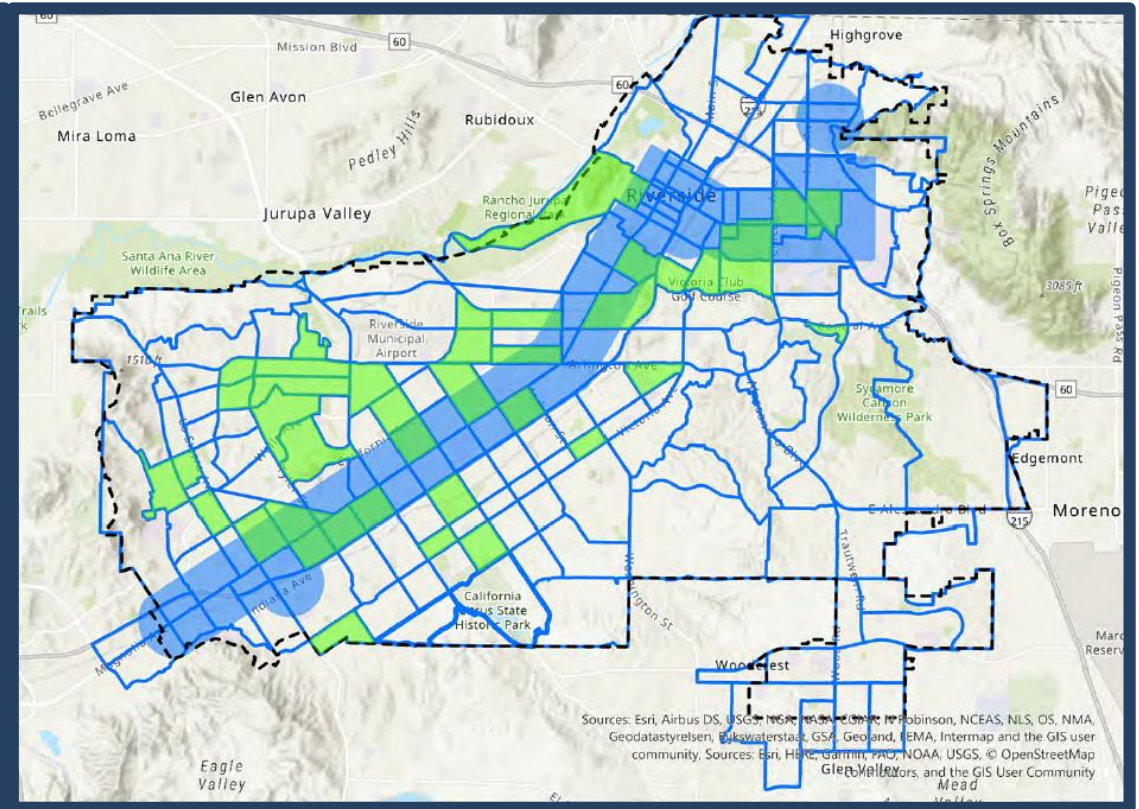
VMT SCREENING CRITERIA

SCREENING PROCESS – Does the Project Need a VMT Analysis?



Residential & Transit Screening

***Maps for visualization purposes only, individual site review conducted by Traffic Engineering Division**



Office and Industrial Screening



VMT EXEMPTION HISTORICAL DATA



**DEVELOPMENT APPLICATIONS REVIEWED
ANNUALLY ~ 175 Projects**

**90% of development applications are exempt
from VMT analysis**



VMT exempted projects use screening criteria:

- Local Serving Project (50%) (OPR Technical Advisory)
- Project Type Screening (20%)
- Housing Element Site (10%)
- Smaller Projects (10%)



VMT IMPACTS & MITIGATION (EXISTING EFFORTS)

- **How To Mitigate Significant Impacts of the 10% projects?**

- Mitigation measures from CAPCOA Handbook and / or
- Prepare an Environmental Impact Report (EIR)

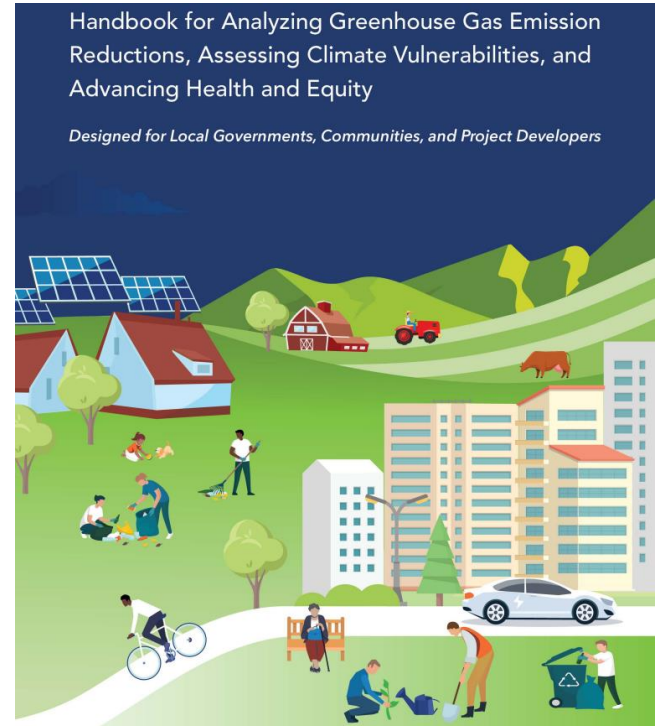


- **Cost:**

- EIR costs in the range of 100K-400K; EIR = TIME
- Schedule will take months
- Capital improvements can be excessive

- **Lessons Learned:**

- Not so simple as state mandate for local agencies
- Local agency approach varies widely
- Full VMT mitigation may not be feasible



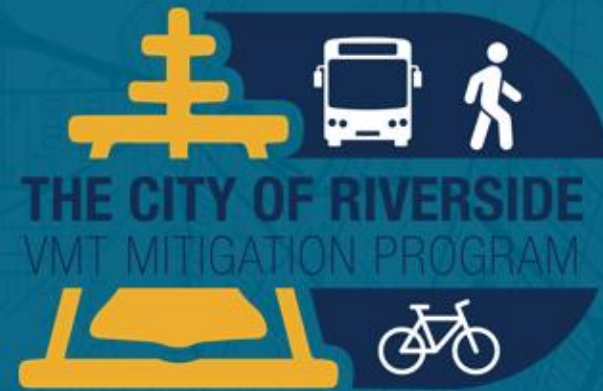
VMT MITIGATION PILOT PROGRAM OPTION

- Streamline the development process
- Provide certainty to developers
- Mitigation resource for other agencies



- VMT Mitigation Voluntary **Pilot** Program
 - Started (2023)
 - <https://www.riversidevmt.com/>
 - Multiple Public Outreach Meetings
 - Goal is to adopt program by 2024!





THE CITY OF RIVERSIDE
VMT MITIGATION PROGRAM

Vehicle Miles Traveled (VMT) Mitigation

Through Fees, Banks, & Exchanges Program

Prepared for:



Prepared by:

Kimley»Horn

Expect More. Experience Better.

VMT MITIGATION PILOT PROGRAM

Summary:

- Study Purposes
- Outreach Efforts
- Program Recommendation
- Mitigation Measures Reviewed
- Mitigation Measure Packages
- Findings and Remaining Steps



VMT MITIGATION PILOT PROGRAM PURPOSE

Study Purposes

- Identify new solutions to mitigate significant transportations impacts
- Provide information to public about VMT
- Evaluate the feasibility of a VMT Mitigation Program

VMT MITIGATION PILOT PROGRAM OUTREACH

Outreach Efforts

15



Online
Survey
Responses

1



Public
Meeting

6



Stakeholder
Advisory
Committee
Meetings

4



Targeted
Agency
Meetings

20+



City Staff
Meetings

Targeted Agencies:




- WRCOG
- County of Riverside
- RTA
- UCR

Project Website: <https://www.riversidevmt.com/>

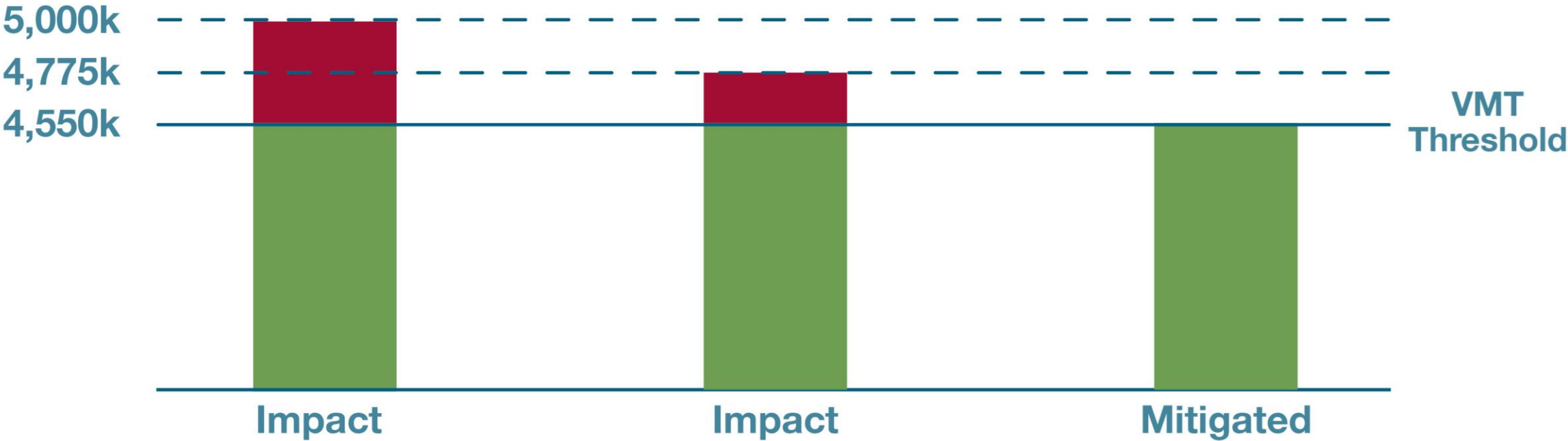


VMT MITIGATION PILOT PROGRAM RECOMMENDATION

- VMT Bank is the Recommended Framework

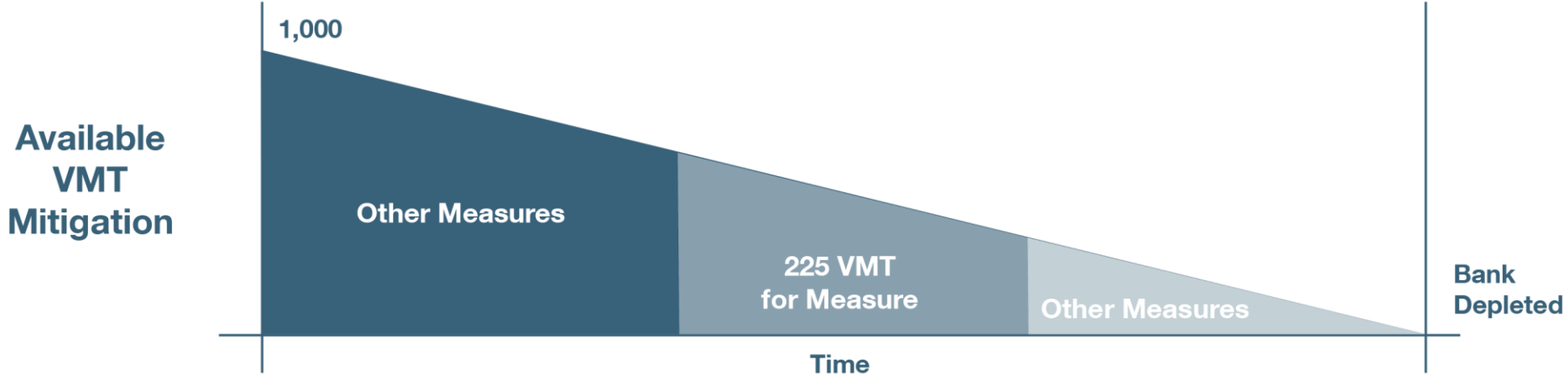
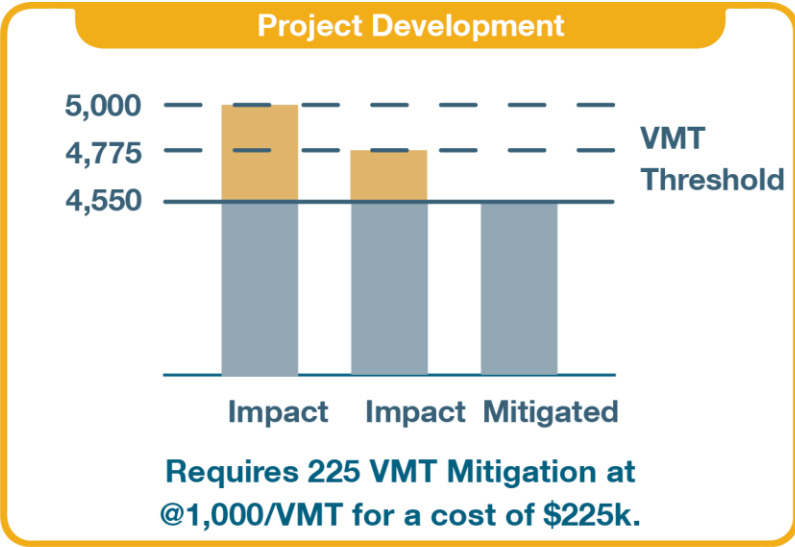
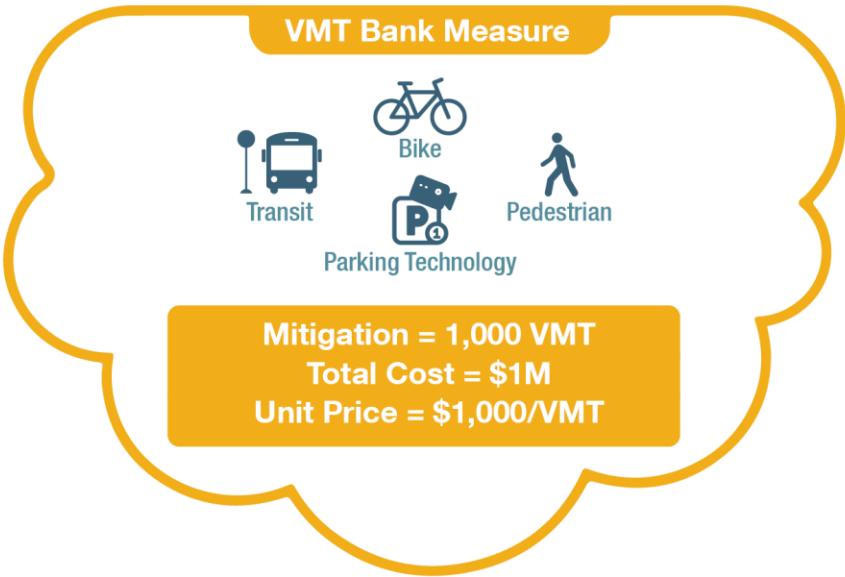
	VMT Bank	VMT Exchange	VMT Impact Fee
			
Predefined Projects	✓	✗	✓
Applicant Can Provide a Project Option	✗	✓	✗
Experience Administering Similar Programs	✓ / ✗	✗	✓
Can Result in Low Cost per VMT Reduced	✓	✓ / ✗	✗
Supportive of All SB 743 Goals	✓	✓	✓ / ✗

How VMT Mitigation Works (If There's an Impact)



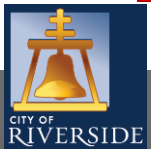
Note: Numbers Used are Provided as an Example

How a VMT Bank Works



MITIGATION MEASURES REVIEWED

- 29 bike projects analyzed
- 11 pedestrian projects considered, 4 analyzed
- 14 transit operations projects screened
- 6 transit projects analyzed
- 3 Transportation Demand Management (TDM) measures considered
 - *Carpool – not analyzed*
 - *Telecommute: Work-from-Home (WFH) every day vs. WFH 1 day a week*
 - Analyzed
 - *Free Transit Pass – not analyzed*



Option A Mitigation Measure Package

Project ID	Roadway	Ward	Description	Cost	VMT Reduced	Cost/VMT
14	Columbia Avenue	1	Stripe bike lane between American Dr and Salmon River Rd	\$41,719	90	\$462
15	Cypress Avenue	6,7	Stripe bike lane between La Sierra Ave and Crest Ave	\$38,800	145	\$267
16	Orange Street	1	Construct separated bikeway between 14th St and 3rd St	\$176,239	733	\$240
17	Hole Avenue	6	Stripe buffered bike lane between Collett Ave and Magnolia Ave	\$ 63,360	322	\$197
18	Tyler Street	6,7	Stripe bike lane between Diana Ave and Arlington Ave	\$110,000	571	\$193
19	University Avenue	2	Construct a buffered bike lane between Iowa Ave and Campus Dr	\$133,358	750	\$178
20	Jackson Street	5	Construct bike path between Diana Ave and Magnolia Ave	\$54,600	310	\$176
21	Adams Street	5	Strip buffered bike lane between Diana Ave and Arlington Ave	\$83,200	738	\$113
22	Brockton Avenue	3	Stripe bike lane between Magnolia Ave and Beatty Dr	\$62,605	593	\$106
23	California Avenue	5	Stripe buffered bike lane between Van Buren Blvd and Adams St	\$76,800	801	\$96
24	Van Buren Boulevard	5,6	Stripe buffered bike lane between SR 91 and Arlington Ave	\$161,600	1,904	\$85
25	Monroe Street	5	Stripe buffered bike lane between Diana Ave and Arlington Ave	\$90,400	1,308	\$69
26	Gramercy Place	6	Strip bike boulevard between Crest Ave and Rutland Ave	\$4,400	129	\$34
27	Colorado Avenue	5	Stripe bike boulevard between Van Buren Blvd and Adams St	\$25,944	1,606	\$16
28	Rutland Avenue	6	Stripe bike boulevard between Wells Ave and Arlington Ave	\$15,072	1,058	\$14
29	Wells Avenue	6	Stripe bicycle route between Tyler St and Crest Ave	\$5,960	614	\$10
Total				\$1,144,057	11,672	\$98

Note: Option A includes bike improvements only. Improvements sourced from the Riverside PACT Active Transportation Master Plan. Only improvements with Cost/VMT less than \$2,000 included. Twelve Projects are 80% funded by SS4A Grant (Project ID#’s 15, 17-18, 20, 21, 23-29)

Option B Mitigation Measure Package

Project ID	Roadway/Route	Ward	From/To or Route Name	Cost	VMT Reduced	Cost/VMT
14	Columbia Avenue	1	Stripe bike lane between American Dr and Salmon River Rd	\$41,719	90	\$462
15	Cypress Avenue	6,7	Stripe bike lane between La Sierra Ave and Crest Ave	\$38,800	145	\$267
16	Orange Street	1	Construct separated bikeway between 14th St and 3rd St	\$176,239	733	\$240
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29	Wells Avenue	6	Stripe bicycle route between Tyler St and Crest Ave	\$5,960	614	\$10
32	10	N/A	Riverside/Watkins-Galleria	\$5,900,000	2,285	\$2,582
33	22	N/A	Riverside - Perris	\$5,900,000	2,797	\$2,109
34	13	N/A	Hunter Park Metro-Galleria	\$5,900,000	2,990	\$1,973
35	14	N/A	Galleria-Loma Linda VA	\$5,900,000	3,142	\$1,878
36	12	N/A	Corona Hills Plaza/Riverside/La Cadena-Merced	\$5,900,000	3,553	\$1,660
37	15	N/A	Riverside/Downtown-Merced	\$5,900,000	4,227	\$1,396
Total				\$36,544,057	30,666	\$1,192

Note: Option B includes bike and transit improvements only. Transit improvements developed in coordination with RTA.

Option C Mitigation Measure Package

Project ID	Roadway/Route	Ward	From/To or Route Name	Cost	VMT Reduced	Cost/VMT
14	Columbia Avenue	1	Stripe bike lane between American Dr and Salmon River Rd	\$41,719	90	\$462
15	Cypress Avenue	6,7	Stripe bike lane between La Sierra Ave and Crest Ave	\$38,800	145	\$267
16	Orange Street	1	Construct separated bikeway between 14th St and 3rd St	\$176,239	733	\$240
17	Hole Avenue	6	Stripe buffered bike lane between Collett Ave and Magnolia Ave	\$ 63,360	322	\$197
18	Tyler Street	6,7	Stripe bike lane between Diana Ave and Arlington Ave	\$110,000	571	\$193
19	University Avenue	2	Construct a buffered bike lane between Iowa Ave and Campus Dr	\$133,358	750	\$178
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36	12	N/A	Corona Hills Plaza/Riverside/La Cadena-Merced	\$5,900,000	3,553	\$1,660
37	15	N/A	Riverside/Downtown-Merced	\$5,900,000	4,227	\$1,396
25	Orange Street	1	Complete street with 5.5-foot sidewalks between SR-60 and Center Street	\$1,000,000	24	\$41,667
22	Main St	1	Complete street with 5-8-foot sidewalks between Columbia Ave and Santa Ana River	\$1,000,000	30	\$33,333
Total				\$39,544,057	30,720	\$1,287

Note: Option C includes bike, transit, and pedestrian improvements

PROGRAM \$ / VMT REDUCED COMPARISON

Agency	VMT Mitigation Program Format	Status	Cost per VMT Reduced (\$/VMT Reduced)
City of Lancaster	VMT Mitigation Fee Optional Program	Implemented in 2023, with a cost basis of \$150/VMT	\$150/VMT reduced
City of Palmdale	VMT Bank	Implemented 2024, with a cost basis of \$261/VMT	\$261/VMT reduced
City of San Diego	Active Transportation In-Lieu Impact Fee	Implemented in 2020, with a cost basis of \$1,400/VMT	\$1,400/VMT reduced
City of Watsonville	VMT Bank	Implemented March 2023, with a cost basis of \$1,524/VMT	\$1,524/VMT reduced (maximum)
San Bernardino County Transportation Authority (SBCTA)	VMT Bank	\$2,000,000 in grant funds awarded in 2024 to seed identified mitigation measures. Telework program expected to result in \$161/VMT reduced	\$161/VMT reduced
Western Riverside Council of Governments (WRCOG)	VMT Exchange	In development. Optional participation and expected to be implemented in 2025	--

VMT MITIGATION BANK PILOT PROGRAM

Recommendation and Remaining Steps

A Voluntary Pilot Program is recommended as the initial step

- *VMT Banking*
- *Option A Mitigation Measures Package*
 - *Most cost-effective measures*

Remaining Steps

- *Committee Presentations*
- *Council Presentations and Adoption*
- *Pilot Program Implementation and Evaluation*
- *Final Program Determination*

TREDLite VMT Evaluation Tool

TREDLiteVMT

Choose Your Location

Select parcels by choosing them on the map, searching the address, or uploading a project boundary shapefile.

Jurisdiction

Riverside

Address

Search

Parcel Selection

Zoom in on the map to the parcel level to select the parcels.

Select From Map

Upload Project Shapefile

Single

Box

Shape

Undo

Clear

Theme Layers

TREDLiteUsers ManualResourcesContact Us

VTM Banking

Selected Land Use: 210 - Single-Family Detached Housing

Per Unit Cost

0.00

Persons Per Household

2.4

Based on your project with TCM mitigation results, you'll need to pay \$0.00 to meet the threshold.

BackPrint Results

ITE 210

VTM Capita

Threshold

Project

Project with Mitigation

Regional Average (VTM/Capita): 10.48 Threshold (15% below Average): 8.91

	Mobile	Project	Mitigation	With Mitigation
Shift/Capita	6.45	6.00	6.45	
Daily Trips	472	6.00	472	

Pollutant	Mobile	Mitigation	With Mitigation	Non Mobile	Total
CO (lb/day)	24.93	0.00	24.93	67.28	92.21
ROG (lb/day)	2.52	0.00	2.52	48.13	51.67
NOx (lb/day)	3.88	0.00	3.88	1.64	5.52
SOx (lb/day)	0.03	0.00	0.03	0.13	0.16
PM2.5 (lb/day)	0.82	0.00	0.82	0.03	0.85
PM10 (lb/day)	2.95	0.00	2.95	0.03	11.98
CO2 (M/yr)	542.59	0.00	542.59	236.04	778.63

Presumptions of Less than Significant Impact

☐ Affordable Housing

☐ WQW a 1/2 mile of Major Transit Stop

☐ Local Serving Land Use

☐ Less Than 150 Trips per Day

VMT MITIGATION (ADDITIONAL CONSIDERATIONS)

- VMT Bank Program Funds:
 - Funds will be utilized for VMT reducing projects (bike, ped & transit)
 - Cannot be utilized to fund vehicle improvement projects
- General Plan Update:
 - Recommendations from VMT Mitigation Pilot Program
 - Programmatic EIR would allow for tiering of projects
- CEQA VMT Thresholds:
 - 2020 VMT Adoption – 15% below baseline
 - Amend CEQA VMT Threshold to baseline conditions consistent with other jurisdictions



NEXT STEPS

- ➔ Transportation Board Meeting 11/6/24
- Planning Commission Meeting 11/21/24
- Land Use Committee Meeting 12/9/24
- City Council Meeting 12/17/24



<https://www.riversidevmt.com/>



STRATEGIC PLAN ALIGNMENT

Strategic Priority 6 – Infrastructure, Mobility & Connectivity

Goal 6.2 – to maintain, protect and improve assets and infrastructure within the City’s built environment to ensure and enhance reliability, resiliency, sustainability, and facilitate connectivity.

Cross-Cutting Threads



Community Trust



Fiscal Responsibility



Sustainability &
Resiliency



Equity



Innovation

RECOMMENDATIONS

That the Transportation Board recommend that the City Council:

1. Adopt the draft voluntary Vehicle Miles Traveled Mitigation Bank Pilot Program as recommended in the VMT Mitigation Program Report;
2. Approve Option A (VMT Mitigation Bank Option) and associated bike projects detailed within the VMT Mitigation Program Report;

RECOMMENDATIONS

That the Transportation Board recommend that the City Council:

3. Direct staff to conduct a workshop to educate the development community in the application of the new vehicle miles traveled mitigation program including a training session on the TredLite software to address projects with transportation related VMT impacts;
4. Modify the existing CEQA VMT Impact threshold to the current jurisdictional baseline VMT per capita for residential projects and the current jurisdictional baseline VMT per employee.

