

4.15 Transportation

This section describes the existing transportation system serving and surrounding UCR. It analyzes impacts pertaining to vehicle miles traveled (VMT); transit, bicycle, pedestrian, and facilities; roadway hazards; and emergency access that would result from implementation of projects under the proposed 2021 LRDP. The analysis in this section is based on the Transportation Impact Analysis (TIA) prepared by Fehr & Peers for the proposed 2021 LRDP project (Appendix J).

4.15.1 Environmental Setting

Roadway System

UCR is within the eastern portion of the City of Riverside (City), in western Riverside County. It takes access from the I-215/SR 60 freeway and arterial roadways that lead to the downtown area and west side of Riverside, and Corona, Ontario, and beyond. Access ramps are available to the I-215/SR 60 freeway from both West Campus and East Campus areas. Other roadways in the study area are described below. The TIA area identified for use in the transportation analysis is shown in Figure 4.15-1, and includes the following highways and roadway segments:

Regional Highways

The I-215/SR 60 freeway is an interstate highway in Southern California. As a combined route, the I-215/SR 60 freeway traverses in a north/south direction from Moreno Valley to Riverside. The I-215/SR 60 freeway diagonally bisects the campus. Near the project study area, it is an eight-lane facility (four lanes in each direction). Access to the I-215/SR 60 freeway near the project study area is provided at Blaine Street, University Avenue, Martin Luther King Boulevard, and Central Avenue.

Local Access Roads

Iowa Avenue is a north-south four-lane facility that bisects portions of the West Campus and will be widened to six lanes in the future.¹ Iowa Avenue is designated as an arterial by the City's General Plan. It has a speed limit of 45 miles per hour (mph).

Canyon Crest Drive is a north-south facility that widens from a 66 foot (ft) two-lane collector into an 88 ft four-lane arterial. Canyon Crest Drive bisects portions of East Campus and provides access to the campus core. It has a variable speed limit ranging between 25 and 40 mph.

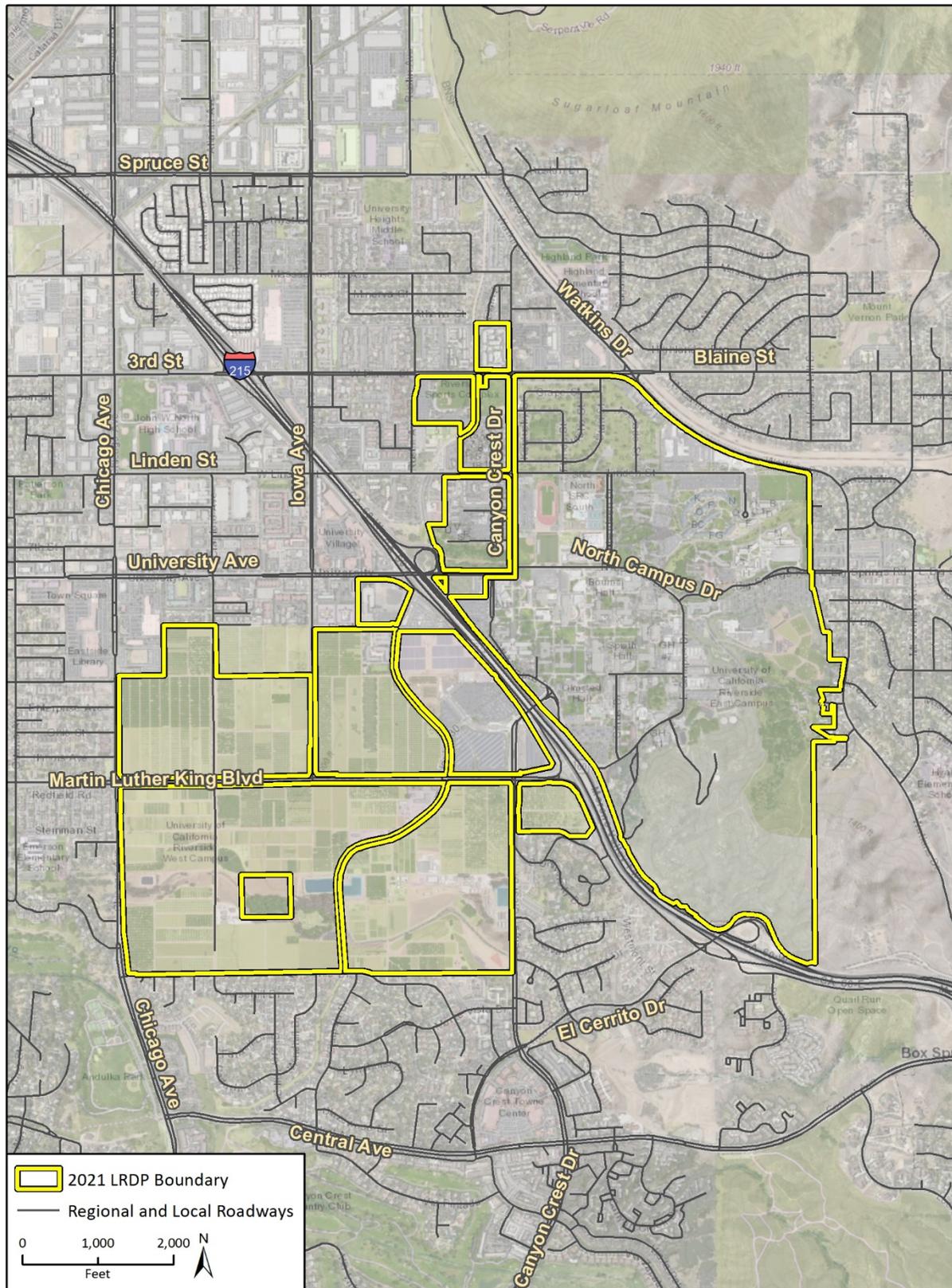
Watkins Drive is a north-south two-lane facility that is along the western edge of East Campus. Watkins Drive is designated as an arterial by the City's General Plan. It has a variable speed limit ranging between 35 and 40 mph.

Blaine Street is an east-west four-lane facility that is along the northern edge of East Campus. It is designated as an arterial in the City's General Plan. It has a speed limit of 40 mph.

West Linden Street is an east-west facility that bisects portions of the East Campus. It is designated as a two-lane 80 ft collector east of the I-215/SR 60 freeway in the City's General Plan. It has a speed limit of 40 mph.

¹ The TIA includes the widening of this roadway in the modeling as part of the traffic analysis.

Figure 4.15-1 Regional and Local Roadways



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Fig. 4.15-1 Regional and Local Roadways

University Avenue is an east-west four-lane facility that provides access to the campus core, where it narrows to two lanes in the segment east of the I-215 overpass until it transitions to Canyon Crest Drive. It is designated as a parkway in the City's General Plan. It has a speed limit of 35 mph.

Martin Luther King Boulevard is an east-west four-lane facility that bisects West Campus. It is designated as an arterial in the City's General Plan. It has a speed limit of 50 mph.

Big Springs Road is an east-west two-lane facility on East Campus. It has a speed limit of 25 mph.

North/South/East/West Campus Drive is a two-lane facility that encompasses the Academic Center of East Campus. It has a speed limit of 25 mph.

Campus Travel Characteristics

Campus travel characteristics describe the purpose for which commuters travel to and from the site. Land uses, such as agricultural research, academic instruction, and campus administration, may dictate the number of trips necessary to be on the campus for different types commuters (e.g., faculty, graduate researchers, staff). The UCR campus has a mix of medical, education, employment, recreation, and residential uses, with some supporting uses, such as utility plants, facilities buildings, and agricultural research supporting facilities. Traffic volumes that occur at campus gateways inform campus travel at different times of the day. The proposed 2021 LRDP provides long-term planning for the land uses, activities, and facilities on the UCR campus. Predominant uses can be described by the primary facilities, programs, and/or activities within a geographic area on campus used to achieve specific planning objectives.

Travel to and from campus includes on-campus or campus-adjacent commutes, regional commutes from the greater Inland Southern California or beyond, and longer distance commutes from Los Angeles and other metropolitan areas. Generally, undergraduate and graduate students live on campus or locally in Riverside and surrounding inland communities, commuting by automobile, public transportation, bicycle, or on foot. For the most part, campus staff and faculty reside in the region, in Riverside, and in nearby communities. They may drive, use public transportation, bicycle, or walk to campus. Adjunct faculty may commute from more distant areas, such as Orange County, Los Angeles, or beyond. Whereas most drive, many may employ carpools or vanpools, or use the Metrolink regional train system. The TIA describes the data sources for campus trip distribution (see Appendix J).

Vehicle Travel

The following describes baseline VMT levels in the study area. Baseline VMT levels for the campus and the region are in Table 4.15-1. The data demonstrates that the campus produces a lower VMT per Service Population than does the region as a whole and would continue to do so. This is likely primarily a result of fewer trips and trips of shorter length associated with students living on or near campus or from students and staff using transit to access the campus and the areas near the campus.

Table 4.15-1 Campus Baseline (2018) VMT Compared to Regional VMT Baseline (2018)

	VMT	Service Population	VMT per Service Population
UCR Campus Baseline	518,486	28,661	18.09
WRCOG Region Baseline	67,532,979	2,357,270	28.65
UCR Campus Baseline Plus Project (2021 LRDP)	750,916	42,545	17.65

Note: WRCOG = Western Riverside Council of Governments; VMT = Vehicle Miles Traveled; LRDP = Long Range Development Plan

Service population includes employees, residential students, and non-residential students/commuters

Source: Appendix J

Campus Gateways and Off-Ramp Queuing

Primary vehicular access points to the campus occur at Canyon Crest Drive as it enters West Campus north of Martin Luther King Boulevard, and University Avenue as it enters East Campus and transitions to Canyon Crest Drive traveling north. Figure 4.15-2 illustrates the trip distribution for travel on major arterials and the highway to the campus.

A freeway off-ramp queuing analysis was conducted at eight locations near the campus to determine queuing conditions at the off-ramps. Each intersection was configured according to its existing (and future, if applicable) arrival conditions, including signal timing and physical geometry. Off-ramp queue storage would be considered significant if projects implemented under the proposed 2021 LRDP increase the calculated 95th percentile queue length by movement exceeding 85 percent of the available storage length during the a.m. or p.m. peak hours.

Queuing results for the 2018 baseline conditions are detailed in the TIA and reflect findings that show queuing did not exceed 85 percent of the storage length at any ramp terminal intersections (Appendix J).

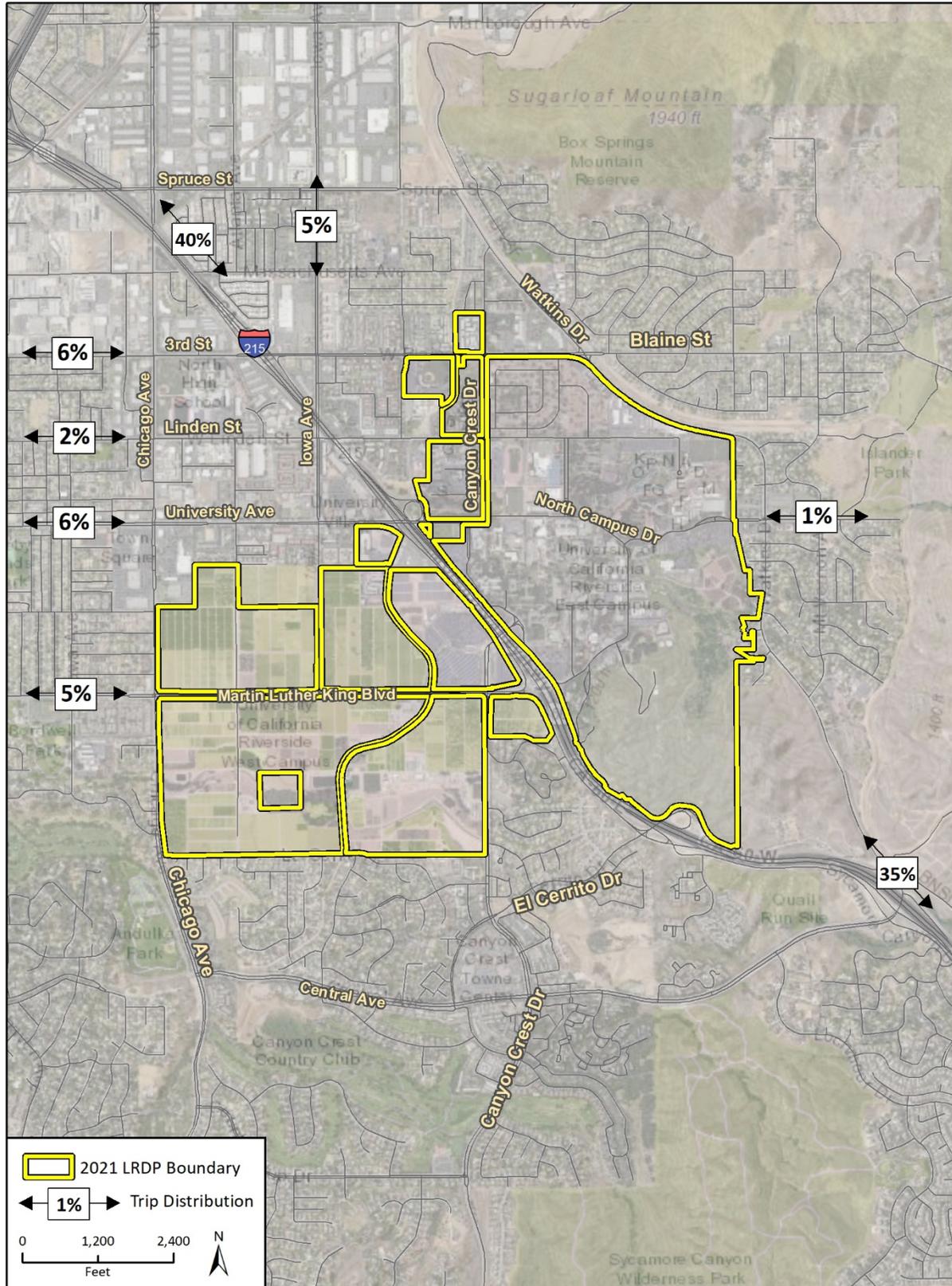
Site Access

Multiple roadways provide access to the campus, including Martin Luther King Boulevard, University Avenue, West Linden Street, Blaine Street, and Big Springs Road to the east and west, and Canyon Crest Drive, Watkins Drive, and Iowa Avenue to the north and south. Three interchanges along the I-215/SR 60 freeway at Blaine Street, University Avenue, and Central Avenue provide regional connectivity. Changes to vehicular access are not proposed as part of the proposed 2021 LRDP implementation.

On-site Circulation

On-site circulation is and would continue to be provided by a series of roadways and multi-modal paths connecting the buildings on the campus to the internal parking facilities and adjacent street network. North/South/East/West Campus Drive distributes vehicles to the perimeter of the Academic Center from the various external access points. Development of parking facilities at the campus edges prioritizes active transportation modes in the Academic Center by creating better access and pedestrian-oriented circulation.

Figure 4.15-2 Project Trip Distribution



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 Trip distribution data provided by Fehr & Peers, 2020.

Fig. 4.15-2 Trip Distribution

Parking

UCR actively manages parking demand through a tiered parking permit system where users purchase permits for various parking facilities at different price points, based on distance to the Academic Center. This Campus permit program generally necessitates mode choice and parking decisions before an individual initiates a trip to Campus. Campus parking supply and demand are reviewed regularly to identify the adequacy of the parking facilities. The University typically experiences peak parking demand in the first few weeks of the fall quarter. Based on past observations, historical parking data suggests that the campus' parking inventory has been able to accommodate 86% of this peak demand. The shortfall has typically been addressed through interim strategies including utilizing available capacity at the Hunter Park Metrolink Station and temporary leases of parking capacity in private ownership within reasonable proximity of the campus, coordination with RTA to improve transit access and increase ridership, and promotion of the Campus Transportation Demand Management (TDM) measures and UPASS (described in greater detail below). On average, 67 percent of parking spaces are occupied on campus during peak periods (UCR 2016a). UCR is also currently in the process of completing a new parking structure with approximately 1,079 space (Parking Structure 1), with construction completion anticipated in Summer 2021. The proposed 2021 LRDP projects that campus growth would create a net demand of up to 3,100 parking spaces on campus for a total projected capacity of approximately 12,700 spaces. To meet projected demand, the proposed 2021 LRDP includes construction of four new parking structures in addition to Parking Structure 1. However, this demand figure is likely conservative in light of the fact that the proposed 2021 LRDP includes housing for 68 percent of the increase in student population and because most development proposed within the LRDP is contained within a transit priority area, as shown in Figure 4.15-5 below.

In addition to the active parking management the UCR implements, the City has implemented residential parking permit programs on some residential streets near the campus. This residential parking program helps minimize the effect of UCR staff, students, and visitors from parking off-campus and walking onto campus. UCR staff work with the City and surrounding neighborhoods to develop solutions to parking related concerns on residential streets. Given all of these factors, UCR does not anticipate that individuals searching for parking will affect the trip length or otherwise affect the VMT analysis.

Pedestrian and Bicycle Facilities

Pedestrian connectivity is important for students, faculty, staff, and visitors to access campus facilities. Once on campus, walking is the primary mode of travel within and between school facilities. The pedestrian system consists of a network of walkways that connect parking areas with the Academic Center, athletic facilities, and student services. Pedestrian facilities include sidewalks, crosswalks, and pedestrian signals. Sidewalks are generally provided on most streets that border and traverse the campus, including the following:

- Iowa Avenue
- Canyon Crest Drive
- Watkins Drive
- Blaine Street
- West Linden Street
- University Avenue
- Martin Luther King Boulevard

- Big Springs Road
- North/South/East/West Campus Drive
- Aberdeen Drive

Pedestrian access to bus stops near and on campus occur along Canyon Crest Drive, West Campus Drive, Blaine Street, Big Springs Road, and at Parking Lot 30. The major streets that provide access to campus include Martin Luther King Boulevard, University Avenue, West Linden Street, Blaine Street, Canyon Crest Drive and Big Springs Road. These roadways have well-connected and maintained sidewalk networks near the campus. These streets currently provide access for pedestrians to the bus stops located near and on campus along Canyon Crest Drive, West Campus Drive, Blaine Street, Big Springs Road, and at Parking Lot 30.

Near UCR, the City has implemented bicycle facilities within rights-of-way of various classes. These include Class II facilities, striped lanes located next to curbs or parking lanes for the exclusive use of bicycle riders; and Class IV facilities, separated bikeways designed exclusively for bicycle travel and protected from vehicular traffic by some kind of separation (e.g., flexible posts, inflexible physical barriers, on-street parking).

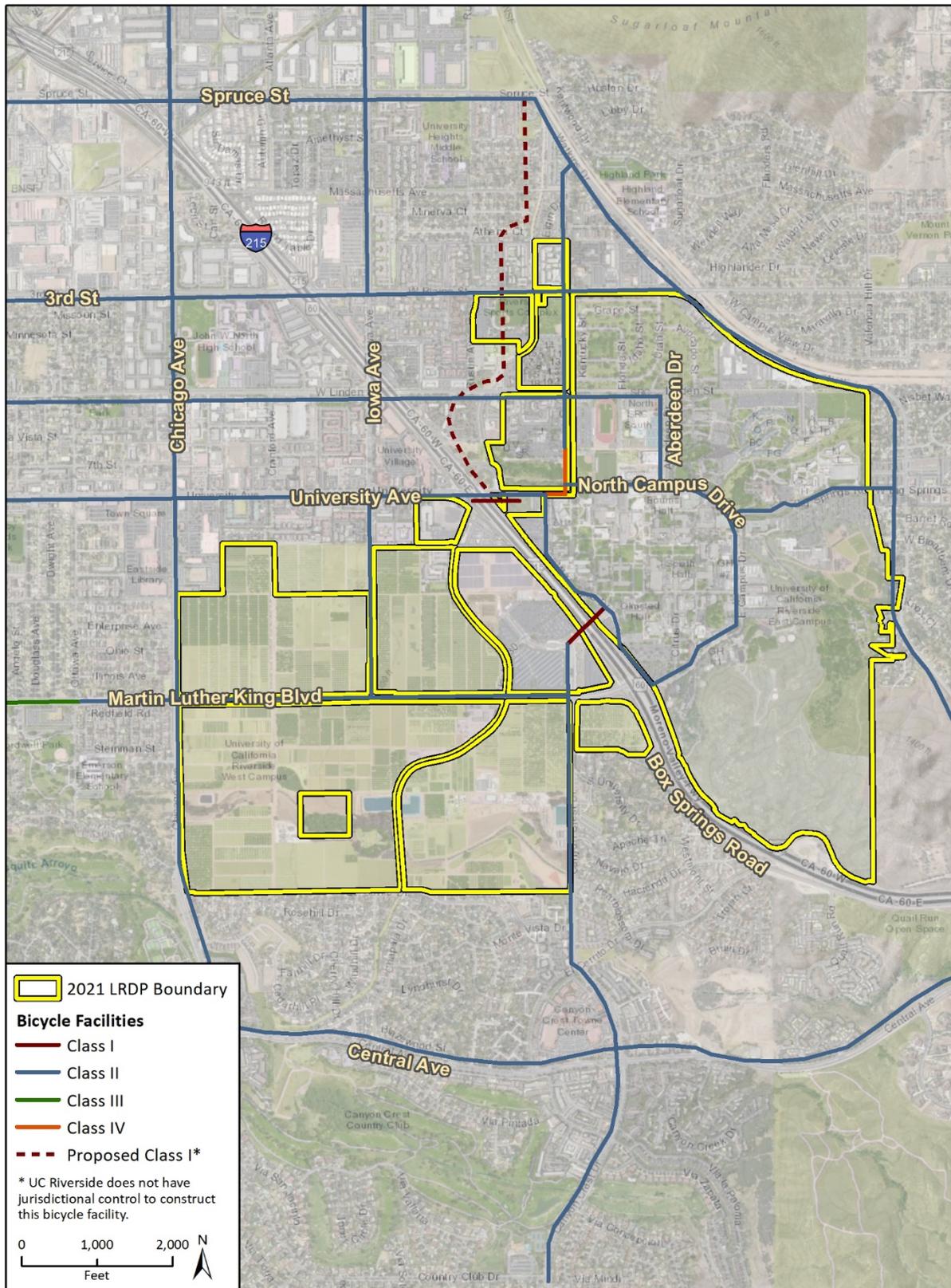
UCR seeks to expand its integrated network of bicycle and pedestrian facilities throughout the campus and actively promote use of these modes of alternative transportation. A campus-wide assessment of infrastructure to promote bicycle use was conducted in 2018 to evaluate existing conditions and recommend potential programs that could increase ridership, facilitate on-campus bicycle parking, and increase programs to support bicycle safety for the UCR community. This would also align with the City's goal to improve the bicycle network, increase cycling as a transportation mode, and eliminate barriers to cycling throughout the City, including to UCR (City of Riverside 2007, 2012). UCR current policies that support cycling to campus include offering free State bicycle registration to students and employees and information about bike safety.

Table 4.15-2 lists the bicycle facilities on nearby roadways and Figure 4.15-3 illustrates their locations.

Table 4.15-2 Bicycle Facilities near UCR

Roadway	Type	Location
Iowa Avenue	Class II on both sides of street	North of University Avenue
Canyon Crest Drive (north of University Avenue)	Class II on west side of street Class II on both sides of street Class IV on east side of street	Between University Avenue & Bannockburn Village driveway Between Bannockburn Village Driveway and Blaine Street Between University Avenue & Bannockburn Village driveway
Canyon Crest Drive (South of University Avenue)	Class I on both sides of street Class II on both sides of street	Between Martin Luther King Boulevard to the I-215/SR 60 freeway Martin Luther King Boulevard to West Campus Drive Between the I-215/SR 60 freeway to West Campus Drive
Watkins Drive	Class II on both sides of street	Between Blaine Street & the I-215/SR 60 freeway
Blaine Street	Class II on both sides of street	Between the I-215/SR 60 freeway & Iowa Avenue
West Linden Street	Class II on both sides of street	Between Aberdeen Drive & Iowa Avenue
University Avenue	Class II on both sides of street Class IV on south side of street	Between Canyon Crest Drive & Iowa Avenue Between West Campus Drive & Canyon Crest Drive
Big Springs Road	Class II on both sides of street	Between East Campus Drive & Mt. Vernon Avenue
Martin Luther King Boulevard	Class II on both sides of street	Between Canyon Crest Drive & Chicago Avenue
Aberdeen Drive	Class II on both sides of street	Between West Linden Street and North Campus Drive
North/South/East/West Campus Drive	Class II on both sides of street	On campus loop between Parking Lot 1 driveway and Aberdeen Drive

Figure 4.15-3 Bicycle Facilities Near Campus



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 Additional data provided by Fehr & Peers, 2020.

Fig. 4.15-3 Bicycle Facilities Near Campus

Disruptive Trends in Travel

Transportation and mobility are being transformed by several forces that range from new technologies, personal preferences, and the unique effects of unprecedented events such as the coronavirus 2019 (COVID-19) pandemic. The combination of these forces could alter travel demand relationships in unknown ways in the near- and long-term. These disruptive trends increase uncertainty in forecasting travel conditions, especially considering that new technologies, such as automated vehicles (AV) may operate on future networks within the planning horizon for the proposed 2021 LRDP.

The COVID-19 pandemic brings associated federal, State, and local government actions to curtail mobility and encourage physical distancing (i.e., limit in-person economic and social interactions) that temporarily but profoundly changed travel conditions during 2020/2021. While travel activity will likely return to some form of normality after government shelter-in-place orders lift and the pandemic abates, it is possible that some of these temporary changes will influence people's travel choices into the future, including either accelerating or diminishing some of the emerging trends in transportation already underway prior to the pandemic, that include the following:

- Substituting internet shopping and home delivery for some shopping or meal-related travel.
- Participating on social media platforms instead of social/recreational travel.
- Substituting telework for in-office work/commute travel.
- Using new travel modes and choices such as private transportation companies, car sharing, bicycle/scooter sharing, and on-demand micro transit services that contributed to changes in traditional travel demand relationships.
- Transitioning to Automated Vehicles for both passenger vehicles and commercial vehicles and trucks, research, development, and deployment testing of which is ongoing.²
- Connected vehicles can communicate wirelessly with their surroundings, including other vehicles, bicyclists, pedestrians, roadway infrastructure (i.e., traffic signals, toll facilities, and traffic management facilities) and the internet. The influence that connected vehicles may have is still speculative, but includes potential for reduction in collisions and congestion, and greater overall network performance optimization.

Transit Services

The Riverside Transit Agency (RTA) provides fixed route, commuter, and dial-a-ride bus service in western Riverside County. The City's Riverside Special Services offers Americans with Disabilities Act (ADA) transit support and all buses on fixed routes are equipped with bike racks that hold two bicycles. RTA routes that serve the UCR campus include routes 1, 10, 13, 14, 16, 51, 52, 204, 208, and RapidLink Gold Line, the times and stops of which are listed in Table 4.15-3. Figure 4.15-4 illustrates the transit routes near campus. Detailed schedule information is provided in Appendix J.

UCR partners with RTA in providing students, faculty, and staff free access to public transportation. Faculty, staff, and graduate students who commute daily using public transit are eligible to participate in the UPASS program. Faculty and staff enrolled in UPASS are also eligible to participate

² AVs do not require an operator and navigate roadways autonomously. Forecasts of how quickly research, development, and deployment testing will transition to full deployment and marketing of AVs vary widely on the pace of the transition, and the market acceptance of fully automated operation, and regulatory approval. More uncertainty exists around the behavioral response to AVs. In terms of VMT impacts on the transportation system and the environment, the worst-case scenario would be one in which AVs are privately owned, as they are now, but the automated function of AVs would cause them to be used more as described above.

in a Regional Ride Home Program offered through IE Commuter that reimburses the cost of up to two emergency rides home per year using private ride services. Transit ridership has increased five-fold since the UPASS program began in 2007, from 100,000 rides in the first year to approximately 600,000 rides between fall 2018 to fall 2019.

Metrolink, operated by the Southern California Regional Rail Authority is the regional commuter rail system that serves the Riverside region. Metrolink provides rail service to a six-county region, including Los Angeles, Ventura, Riverside, San Bernardino, Orange, and San Diego counties. It offers a discount for students and a cost-reduction incentive program for faculty and staff who use Metrolink for their daily commutes. Metrolink serves the campus with two local stations: Downtown Riverside and Hunter Park/UCR, approximately 2.8 miles west and 1.8 miles north of campus, respectively. Metrolink’s 91/Perris Valley line runs from Los Angeles Union Station to the Downtown Riverside station at 5:45 am and from 3:35 pm to 7:15 am Monday through Friday; it offers service to the Hunter Park/UCR station from 3:35 pm to 5:30 pm Monday through Friday, and 3:15 pm to 7:12 pm Saturday and Sunday (Metrolink 2020).

Table 4.15-3 2018 Academic Year Transit Schedule to UCR

Route	Stops/Route	Operational Times
1	UCR – Downtown Riverside – Corona Metrolink Station	4:27 am to 11:17 pm, weekdays, every 20 minutes 5:37 am to 11:04 pm, weekends, every 30 minutes
10	Big Springs Road & Watkins Drive – Downtown Riverside – Galleria at Tyler	5:58 am to 9:06 pm, weekdays, every 60 minutes 8:04 am to 7:41 pm, weekends, every 90 minutes
13	Hunter Park/UCR Metrolink Station – Downtown Riverside – Galleria at Tyler	4:47 am to 8:17 pm, weekdays, every 60 minutes 7:26 am to 6:10 pm, weekends, every 60 minutes
14	Galleria at Tyler – Downtown Riverside– Loma Linda VA hospital	5:53 am to 8:17 pm, weekdays, every 75 minutes 7:15 pm to 5:42 pm, weekends, every 60 minutes
16	Moreno Valley Mall – UCR	4:24 am to 11:02 pm, weekdays, every 30 minutes 6:37 pm to 9:50 pm, weekends, every 30 minutes
51	UCR – Canyon Crest Town Center	7:00 am to 5:40 pm, weekdays, every 40 minutes
52	Hunter Park/UCR Metrolink Station – UCR	4:48 am to 7:30 pm, weekdays, every 40 minutes
204	UCR – Downtown Riverside – Ontario Mills Mall – Montclair Transit Center	6:33 am to 8:47 pm, weekdays, every 60 minutes
208	Temecula – Moreno Valley – Downtown Riverside	6:15 am to 8:49 pm, weekdays, every 40 minutes
Rapidlink Gold	Corona – Downtown Riverside – UCR	7:35 am to 9:35 am and 2:45 pm to 6:45 pm, weekdays, every 15 minutes

Source: Appendix J

4.15.2 Regulatory Setting

Federal

No federal plans, policies, regulations, or laws related to transportation and circulation apply to the proposed 2021 LRDP. Federal regulations relating to the Americans with Disabilities Act (ADA), Title VI, and environmental justice do apply to transit service and access.

State

California Global Warming Solutions Act of 2006 (Assembly Bill 32 and Senate Bill 32)

The “California Global Warming Solutions Act of 2006,” (Assembly Bill [AB] 32), outlines California’s major legislative initiative for reducing GHG emissions. AB 32 codifies the statewide goal of reducing GHG emissions to 1990 levels by 2020 and requires California Air Resources Board (CARB) to prepare a Scoping Plan that outlines the main State strategies for reducing GHG emissions to meet the 2020 deadline. In addition, AB 32 requires CARB to adopt regulations to require reporting and verification of statewide GHG emissions. Based on this guidance, CARB approved a 1990 statewide GHG level and 2020 target of 431 million metric tons (MMT) of carbon dioxide equivalents (CO₂e), which was achieved in 2016. CARB approved the Scoping Plan on December 11, 2008, which included GHG emission reduction strategies related to energy efficiency, water use, and recycling and solid waste, among others (CARB 2008). Many of the GHG reduction measures included in the Scoping Plan (e.g., Low Carbon Fuel Standard, Advanced Clean Car standards, and Cap-and-Trade) have been adopted since the Scoping Plan’s approval.

CARB approved the 2013 Scoping Plan update in May 2014. The update defined the CARB’s climate change priorities for the next five years, set the groundwork to reach post-2020 statewide goals, and highlighted California’s progress toward meeting the “near-term” 2020 GHG emission reduction goals defined in the original Scoping Plan. It also evaluated how to align the State’s longer term GHG reduction strategies with other State policy priorities, including those for water, waste, natural resources, clean energy, transportation, and land use (CARB 2014).

On September 8, 2016, Governor Brown signed Senate Bill (SB) 32 into law, extending the California Global Warming Solutions Act of 2006 by requiring the State to further reduce GHG emissions to 40 percent below 1990 levels by 2030 (the other provisions of AB 32 remain unchanged). On December 14, 2017, the CARB adopted the 2017 Scoping Plan, which provides a framework for achieving the 2030 target. The 2017 Scoping Plan relies on the continuation and expansion of existing policies and regulations, such as the Cap-and-Trade Program, and implementation of recently adopted policies and legislation. The 2017 Scoping Plan also puts an increased emphasis on innovation, adoption of existing technology, and strategic investment to support its strategies. As with the 2013 Scoping Plan update, the 2017 Scoping Plan does not provide project-level thresholds for land use development. Instead, it recommends that local governments adopt policies and locally appropriate quantitative thresholds consistent with statewide per capita goals of six metric tons (MT) of CO₂e by 2030 and two MT of CO₂e by 2050 (CARB 2017). As stated in the 2017 Scoping Plan, these goals may be appropriate for plan-level analyses (city, county, sub-regional, or regional level).

Senate Bill 375

SB 375, signed in August 2008, enhances the State’s ability to reach AB 32 goals by directing CARB to develop regional GHG emission reduction targets to be achieved from passenger vehicles for 2020

and 2035. In addition, SB 375 directs each of the State's 18 major Metropolitan Planning Organizations (MPO) to prepare a "sustainable communities strategy" (SCS) that contains a growth strategy to meet these emission targets for inclusion in the Regional Transportation Plan (RTP). On March 22, 2018, CARB adopted updated regional targets for reducing GHG emissions from 2005 levels by 2020 and 2035. Southern California Association of Governments (SCAG) was assigned targets of an 8 percent reduction in GHGs from transportation sources by 2020 and a 19 percent reduction in GHGs from transportation sources by 2035. In the SCAG region, SB 375 also provides the option for the coordinated development of subregional plans by the subregional councils of governments and the county transportation commissions to meet SB 375 requirements.

Senate Bill 743

Senate Bill 743 was signed into law on September 27, 2013 and declares that "automobile delay, as described solely be level of service or similar measures of vehicular capacity or traffic congestion shall not be considered a significant impact on the environment." It further directed the Office of Planning and Research (OPR) to develop revisions to the CEQA Guidelines to establish new criteria for determining the significance of transportation impacts. SB 743 was enacted, in part, as further implementation of California's Climate Action Plan to meet California Global Warming Solutions Act (AB 32) GHG emission reduction targets.

SB 743 seeks to reduce criteria air pollutants and GHG emissions in the transportation sector by reducing VMT. SB 743 changed the approach to transportation impact analysis by establishing measures such as VMT, VMT per capita, or automobile trip generation rates as the primary measures of transportation impacts and eliminates the traditionally used measures of auto delay, level of service (LOS), and other measures of traffic congestion as a basis for determining significant impacts. In December 2018, OPR adopted and promulgated its changes to the CEQA Guidelines (14 California Code of Regulations Section 15000 et seq.) and OPR's Advisory on Evaluating Transportation Impacts in response to SB 743.

Section 15064.3 of the CEQA Guidelines contains the operative language for implementing the goals of SB 743 when determining the significance of a project's transportation impacts. There are four key aspects of CEQA Guidelines Section 15064.3 that apply in the case of the projects under the proposed 2021 LRDP:

1. A project's effect on automobile delay shall not constitute a significant environmental impact (Section 15064.3[a]).
2. For a land use project like the proposed 2021 LRDP, "Vehicle miles traveled exceeding an applicable threshold of significance may indicate a significant impact... Projects that decrease VMT in the project area compared to existing conditions should be presumed to have a less than significant transportation impact" (Section 15064.3[b][1]).
3. A lead agency has discretion to choose the most appropriate methodology to evaluate a project's VMT, including whether to express the change in absolute terms, per capita, per household or in any other measure" (Section 15064.3[b][4]).
4. The terms and conditions of Section 15064.3 apply prospectively, and a lead agency may elect to be governed by the provisions of [15064.3] immediately. Beginning on July 1, 2020, the provisions of [15064.3] shall apply statewide" (Section 15064.3[c]).

CEQA Guidelines Section 15064.3(b)(1) also states that "Generally, projects within one-half mile of either an existing major transit stop or a stop along an existing high quality transit corridor should be presumed to cause a less than significant transportation impact." This was based upon OPR's

Statement of Reasons for Regulatory Action which explained that “A significant body of research indicates that projects located close to existing transit will enable lower vehicle use because of the availability of transit. (See, e.g., Cervero, R. (2002). *Built Environments and Mode Choice: ...*This reduction in vehicle miles traveled is most pronounced within one-half mile of transit. Notably, because many other programs and other statutory provisions focus on one-half mile surrounding transit, using that distance in the presumption promotes consistency with other policies. (See, e.g., Public Resources Code § 21155(b)...”)

TECHNICAL ADVISORY ON EVALUATING TRANSPORTATION IMPACTS IN CEQA

To aid in SB 743 implementation, Governor’s Office of Planning and Research (OPR) released a Technical Advisory on Evaluating Transportation Impacts in CEQA (Technical Advisory) in December 2018. The Technical Advisory provides advice and recommendations to CEQA lead agencies on how to implement SB 743 changes (OPR 2018). This includes technical recommendations regarding the assessment of VMT, thresholds of significance, VMT mitigation measures, and screening thresholds for certain land use projects. Lead agencies may consider and use these recommendations at their discretion.

The Technical Advisory identifies screening thresholds to quickly identify when a project should be expected to cause a less-than-significant impact without conducting a detailed study. The Technical Advisory suggests that projects meeting one or more of the following criteria should be expected to have a less-than-significant impact on VMT:

- Small projects—projects consistent with a SCS and local general plan that generate or attract fewer than 110 trips per day.
- Projects near major transit stops—certain projects (residential, retail, office, or a mix of these uses) proposed within 0.5 mile of an existing major transit stop or an existing stop along a high-quality transit corridor.
- Affordable residential development—a project consisting of a high percentage of affordable housing may be a basis to find a less-than-significant impact on VMT.
- Local-serving retail—local-serving retail development tends to shorten trips and reduce VMT. The Technical Advisory encourages lead agencies to decide when a project will likely be local-serving, but generally acknowledges that retail development including stores larger than 50,000 square feet might be considered regional-serving. The Technical Advisory suggests lead agencies analyze whether regional-serving retail would increase or decrease VMT (i.e., not presume a less-than-significant impact).
- Projects in low-VMT areas—residential and office projects that incorporate similar features (i.e., density, mix of uses, transit accessibility) as existing development in areas with low VMT will tend to exhibit similarly low VMT.

The Technical Advisory also identifies recommended numeric VMT thresholds for residential, office, and retail projects, as described below.

- Residential development that would generate vehicle travel exceeding 15 percent below existing residential VMT per capita may indicate a significant transportation impact. Existing VMT per capita may be measured as a regional VMT per capita or as city VMT per capita.
- Office projects that would generate vehicle travel exceeding 15 percent below existing regional VMT per employee may indicate a significant transportation impact.

- Retail projects that result in a net increase in total VMT may indicate a significant transportation impact.

For mixed-use projects, the Technical Advisory suggests evaluating each component independently and applying the significance threshold for each project type included. Alternatively, the lead agency may consider only the project's dominant use.

The VMT threshold guidance in OPR's Technical Advisory was based upon the *California Air Resources Board 2017 Scoping Plan-Identified VMT Reductions and Relationship to State Climate Goals* (CARB 2019). Consistent with that guidance, one of the thresholds for project-generated VMT is whether the project would result in a VMT per service population, which is 15 percent below the Existing Conditions VMT per service population for the WRCOG region. As explained in the Technical Advisory:

Based on OPR's extensive review of the applicable research, and in light of an assessment by the California Air Resources Board (CARB) quantifying the need for VMT reduction in order to meet the State's long-term climate goals, OPR recommends that a per capita or per employee VMT that is 15 percent below that of existing development may be a reasonable threshold. [¶] Fifteen percent reductions in VMT are achievable at the project level in a variety of place types. [¶] Moreover, a 15 percent reduction is consistent with SB 743's direction to OPR to select a threshold that will help the State achieve its climate goals. As described above, section 21099 states that the criteria for determining significance must "promote the reduction in greenhouse gas emissions." In its document the CARB 2017 Scoping Plan-Identified VMT Reductions and Relationship to State Climate Goals, CARB assesses VMT reduction per capita consistent with its evidence-based modeling scenario that would achieve State climate goals of 40 percent GHG emissions reduction from 1990 levels by 2030 and 80 percent GHG emissions reduction levels from 1990 by 2050. Applying California Department of Finance population forecasts, CARB finds per-capita light-duty vehicle travel would need to be approximately 16.8 percent lower than existing, and overall per-capita vehicle travel would need to be approximately 14.3 percent lower than existing levels under that scenario. Below these levels, a project could be considered low VMT and would, on that metric, be consistent with 2017 Scoping Plan Update assumptions that achieve climate state climate goals... [¶] In summary, achieving 15 percent lower per capita (residential) or per employee (office) VMT than existing development is both generally achievable and is supported by evidence that connects this level of reduction to the State's emissions goals (OPR 2018).

The Project proposes to increase the number of students, faculty, staff, and residential beds on campus, which are the same uses considered in OPR's Technical Advisory setting proposed VMT thresholds. While all these population components are responsible for an increase in trips and VMT generated by the UCR campus, management of residential and employment VMT has been found to help the State reach emissions goals. The methodology utilized in the VMT analysis accounts for residential and employment VMT as well as additional VMT generated by nonresidential students who commute to the campus each day. The VMT threshold used in this study of 15 percent below the WRCOG baseline demonstrates that the UCR is balancing its increase in campus population while managing VMT and helping the State achieve emission goals.

Similarly, OPR's Technical Advisory further explains that a "project that falls below an efficiency-based threshold that is aligned with long-term environmental goals and relevant plans would have no cumulative impact distinct from the project impact. Accordingly, a finding of a less-than-significant project impact would imply a less than significant cumulative impact, and vice versa."

The Technical Advisory also provides guidance on transit. More specifically, OPR's Technical Advisory on Evaluating Transportation Impacts under CEQA explains "When evaluating impacts to multimodal transportation networks, lead agencies generally should not treat the addition of new transit users as an adverse impact" (OPR 2018). As also discussed in OPR's SB 743 amendment package transmittal letter "Legislative findings in Senate Bill 743 plainly state that CEQA can no longer treat vibrant communities, *transit*, and active transportation options as adverse environmental outcomes" (OPR 2017). As an example, the Technical Advisory suggests that "an infill development may add riders to transit systems and the additional boarding and alighting may slow transit vehicles, but it also adds destinations, improving proximity and accessibility. Such development also improves regional vehicle flow by adding less vehicle travel onto the regional network" (OPR 2018).

California Department of Transportation

Caltrans is responsible for planning, designing, constructing, operating, and maintaining the State highway system. Federal highway standards are implemented in California by Caltrans. Any improvements or modifications to the highway system, including ramps and access points, within the study area would need to be approved by Caltrans. The following Caltrans planning documents emphasize the State of California's focus on transportation infrastructure that supports mobility choice through multimodal options, smart growth, and efficient development.

- Smart Mobility 2010: A Call to Action for the New Decade (Smart Mobility Framework) (Caltrans 2010a)
- Complete Streets Implementation Action Plan (Caltrans 2010b, Caltrans 2013)
- Strategic Management Plan 2020-2024 (Caltrans 2021a)
- California Transportation Plan 2050 (Caltrans 2021b)

In the study area, Caltrans projects on the I-215/SR 60 freeway would occur outside the vicinity of the project study area.

Caltrans Encroachment Permit Requirements

Any work within the existing right of way would have to comply with Caltrans permitting requirements. This includes a traffic control plan that adheres to the standards set forth in the California Manual of Uniform Traffic Control Devices (MUTCD) (Caltrans 2021c). As part of these requirements, there are provisions for coordination with local emergency services, training for flagmen for emergency vehicles traveling through the work zone, temporary lane separators that have sloping sides to facilitate crossover by emergency vehicles, and vehicle storage and staging areas for emergency vehicles. MUTCD requirements also provide for construction work during off-peak hours and flaggers.

Executive Order B-48-18: Zero-Emission Vehicles

On January 26, 2018, Governor Brown signed Executive Order B-48-18 requiring all State entities to work with the private sector to have at least 5 million zero-emission vehicles (ZEVs) on the road by 2030, as well as install 200 hydrogen fueling stations and 250,000 electric vehicle (EV) charging stations by 2025. It specifies that 10,000 of the EV charging stations should be direct current fast chargers. This order also requires all State entities to continue to partner with local and regional governments to streamline the installation of ZEV infrastructure. The Governor's Office of Business and Economic Development (GO-Biz) published a Plug-in Charging Station Design Guidebook in July

2019 (GO-Biz 2019) and updated the Hydrogen Station Permitting Guidebook in September 2020 (GO-Biz 2020) to aid in these efforts. All State entities are required to participate in updating the 2016 Zero-Emissions Vehicle Action Plan, along with the 2018 ZEV Action Plan Priorities Update, which includes and extends the 2016 ZEV Action Plan (Governor’s Interagency Working Group on Zero-Emission Vehicles 2016, 2018), to help expand private investment in ZEV infrastructure with a focus on serving low-income and disadvantaged communities.

Executive Order N-79-20

Governor Gavin Newsom signed Executive Order N-79-20 in September 2020, which sets a statewide goal that 100 percent of all new passenger car and truck sales in the State will be zero-emissions by 2035. It also sets a goal that 100 percent of statewide new sales of medium- and heavy-duty vehicles will be zero emissions by 2045, where feasible, and for all new sales of drayage trucks to be zero emissions by 2035. Additionally, the Executive Order targets 100 percent of new off-road vehicle sales in the State to be zero emission by 2035. CARB is responsible for implementing the new vehicle sales regulation.

University of California

UC Policy on Sustainable Practices

The UC established the UC Policy on Sustainable Practices, effective July 2020, which applies to all campuses and has the following goals related to reducing vehicle travel:

- Policy D.1: Each location will reduce GHG emissions from its fleet and report annually on its progress. Locations shall implement strategies to reduce fleet emissions and improve the fuel efficiency of all university-owned or operated fleet vehicles and equipment where practical options exist through acquisition and fleet operation protocols.
 - By 2025, zero-emission vehicles or hybrid vehicles shall account for at least 50 percent of all new light-duty vehicle acquisitions. Lawrence Berkeley National Laboratory will follow federal fleet requirements in the case where federal and UC fleet requirements conflict.
- Policy D.2: The University recognizes that single-occupant vehicle (SOV) commuting is a primary contributor to GHG emissions and localized transportation impacts.
 - By 2025, each location shall strive to reduce its percentage of employees and students commuting by SOV by 10 percent relative to its 2015 SOV commute rates.
 - By 2050, each location shall strive to have no more than 40 percent of its employees and no more than 30 percent of all employees and students commuting to the location [campus] by SOV.
- Policy D.3: Consistent with the State of California goal of increasing alternative fuel – specifically electric – vehicle usage, the University shall promote purchases and support investment in alternative fuel infrastructure at each location.
 - By 2025, each location shall strive to have at least 4.5 percent of commuter vehicles be ZEV.³
 - By 2050, each location shall strive to have at least 30 percent of commuter vehicles be ZEV.
- Each location (campus) will develop a business-case analysis for any proposed parking structures serving University affiliates or visitors to campus to document how a capital investment in

³ ZEV stands for a zero-emissions vehicle.

parking aligns with each campus' Climate Action Plans and/or sustainable transportation policies.

University of California, Riverside

UCR Transportation Demand Management (TDM) Program

Transportation Demand Management programs include multi-pronged efforts such as marketing, incentives, expanded vanpool offerings, on- and near-campus housing amenities, parking pricing, and more. UCR encourages students to use designated bike paths to commute to and travel within the campus. Registered bicyclists or walkers are eligible to receive a complimentary parking allotment and are eligible to utilize the day-use locker and shower facilities at the Student Recreation Center without charge. UCR encourages ride-sharing services, and partners with Waze Carpool, an app-based resource that helps riders find someone to share rides to campus. The average vehicle ridership has increased from approximately 1.36 to 1.57 occupants per vehicle over the last 15 years.

UCR Standard Conditions during Construction Activities

Contractors are required to follow standard conditions during construction, including, but not limited to, the following:

- Construction parking must be configured to minimize traffic interference.
- Temporary traffic controls, such as a flag person, are provided during all phases of construction to maintain smooth traffic flow.
- Dedicated turn lanes are provided for movement of construction trucks and equipment on- and off-site.
- Construction activities that affect traffic flow on the arterial system are scheduled during off-peak hours, to the extent practicable.
- Improvements to traffic flow by signal synchronization are implemented, to the extent feasible.
- Vehicles and equipment are required to be properly tuned and maintained according to manufacturers' specifications.
- Construction trucks are rerouted away from congested streets or sensitive receptor areas, to the extent feasible.

Regional and Local (Binding)

Southern California Association of Governments Regional Transportation Plan & Sustainable Communities Strategy

Every 4 years, the Southern California Association of Governments (SCAG) updates its Regional Transportation Plan (RTP) for the 191-city SCAG region. The RTP assembles a regional project list based on input from cities, counties, transit agencies, congestion management agencies, regional transportation planning agencies, and Caltrans. This project list is then combined with population and employment growth forecasts. Beginning with the 2012 RTP, SB 375 required the inclusion of a Sustainable Communities Strategy (SCS) in RTPs prepared by metropolitan planning organizations (MPOs) such as SCAG. The key goal of the SCS is to achieve GHG emission reduction targets through integrated land use and transportation strategies, although SB 375 did not require any modification of the regional project list contained in the RTP. Instead, the focus is on other transportation and

land use strategies that influence vehicle travel; a key objective is for planners and developers to consider how land use patterns influence travel demand.

Riverside Traffic Analysis Model (RivTAM)

The Riverside Traffic Analysis Model (RivTAM) was used to develop traffic volume and VMT forecasts for this study.⁴ The current RivTAM uses a 2008 base year, a 2035 future year, and Socioeconomic Data (SED) consistent with the SCAG 2008 Regional Transportation Plan (RTP) model. As the RivTAM model was prepared before the 2016 SCAG Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS),⁵ the roadway networks and SED were reviewed for consistency with the 2016 RTP/SCS in the study area as described below.

WRCOG has completed a Socio-Economic Data (SED) update within the WRCOG boundaries to maintain consistency with the 2016 SCAG RTP/SCS. Consistent with the SCAG model, this SED has a 2012 base year and a 2040 future year. This WRCOG SED information was utilized in the RivTAM for both the base year and future year modeling efforts.

Baseline 2018 campus population (students, residents, faculty, and staff) and projected LRDP growth information was provided by UCR for use in this analysis. The RivTAM base year UCR land uses were adjusted to reflect the 2018 campus population conditions for the Cumulative 2035 Future Year RivTAM Without Project scenario. Future year UCR land uses were updated to reflect growth consistent with expectations provided by UCR for the Cumulative Plus 2035 Project scenario. A list of approved and pending developments was also requested from the City of Riverside, County of Riverside, and City of Moreno Valley. These lists were then reviewed with land use assumptions in the future year model to ensure that all reasonably foreseeable projects within a fifteen-mile radius of UCR were accounted for in the land uses assumed in the model under cumulative conditions. Additional details on this modeling are included in Appendix J.

Regional and Local (Non-Binding)

As noted in Section 4, “University of California Autonomy,” UCR, a constitutionally created State entity, is not subject to municipal regulations of surrounding local governments for uses on property owned or controlled by UCR that are in furtherance of the university’s educational purposes. However, UCR may consider, for coordination purposes, aspects of local plans and policies of the communities surrounding the campus when it is appropriate and feasible, but not bound by those plans and policies in its planning efforts.

Western Regional Council of Governments TOD Planning Framework

The WRCOG policies for Transit-Supportive Development offers principles that support compact development in existing and proposed transit center station areas with an emphasis on direct, safe, and convenient pedestrian connections to stations and other transportation modes (WRCOG 2013). It encourages urban design that emphasizes pedestrian-oriented neighborhoods that are an asset to the communities in which they occur. The circulation policies are as follows:

⁴ The RivTAM model was developed by the Riverside County Transportation Department in 2009. The *RivTAM Model Development & Validation Report and Users Guide* was prepared in February 2009 as a reference to using the RivTAM model. WRCOG updated the RivTAM model to be consistent with the 2016 SCAG RTP/SCS. WRCOG is the current manager of the RivTAM model and requests for a copy of the RivTAM model can be submitted to WRCOG staff.

⁵ The 2016 SCAG Regional Transportation Plan/Sustainable Communities Strategy is available online <http://scagrtpscs.net/Pages/FINAL2016RTPSCS.aspx>

1. Promote linkages between transit center stations and other modes of transportation, including pedestrian, bicycle, automobile, bus, Metrolink, commuter rail, and airport facilities.
2. Seek to create balanced station area circulation concepts that provide equitable access to all forms of transportation in these focused station areas.
3. Design roadways, pedestrian walkways, bikeways, and transit routes to minimize conflicts between different modes of transportation that occupy the same or proximate rights-of-way.
4. When modifying the existing street network, encourage creation of walkable blocks, and an overall system which pedestrians can perceive and understand.

City of Riverside General Plan

The City's General Plan contains objectives, policies, and tools that aim to provide and improve transportation along with circulation throughout the City. Policies concerning regional roadways focus on supporting the development and improvement of major roadways such as Community and Environmental Transportation Acceptability Process corridors (Ramona Expressway/Cajalco Road), Van Buren Boulevard/I-215 Interchange, SR 91, SR 60, I-215, and I-15 freeways. Furthermore, there are also objectives, policies and tools that aim to create various options for modes of transportation that can reduce daily trips (City of Riverside 2018).

Although UCR is not required to comply with local planning documents, as it is a State entity, the University seeks to integrate its circulation planning with that of the City, as it relates to areas adjacent to the campus. The City's General Plan Transportation and Circulation Element contains objectives to increase and maintain a mix of transportation modes and transportation system management techniques that would be supported by the proposed 2021 LRDP approach to transportation infrastructure and to increasing use of multi-modal transportation options. The proposed 2021 LRDP policies also integrate with the City's objective to cooperate in regional transportation improvements that would reduce VMT and encourage telecommunications use to reduce air and noise pollution generated by vehicular traffic. Finally, the proposed 2021 LRDP policies support the City's objective to increase pedestrian and cyclist safety near schools and in residential neighborhoods.

4.15.3 Environmental Impacts and Mitigation Measures

Significance Criteria

UCR utilizes the following 2020 CEQA Guidelines Appendix G significance criteria questions related to Transportation.

Would the proposed 2021 LRDP:

- a) Conflict with an applicable program, plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities?
- b) Conflict or be inconsistent with CEQA Guidelines Section 15064.3 (b)?
- c) Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?
- d) Result in inadequate emergency access?

Analysis Methodology

The transportation analysis that follows is based on the TIA prepared by Fehr & Peers (Appendix J). The updated CEQA Guidelines and SB 743 changed the criteria for determining what constitutes a significant transportation-related environmental impact such that it relies upon quantification of VMT instead of LOS. The OPR determined that projects can avoid full VMT analysis if they occur in a Transit Priority Area (CEQA Guidelines Section 15064.3(b)(1).) Figure 4.15-5 shows the TPAs around the campus.

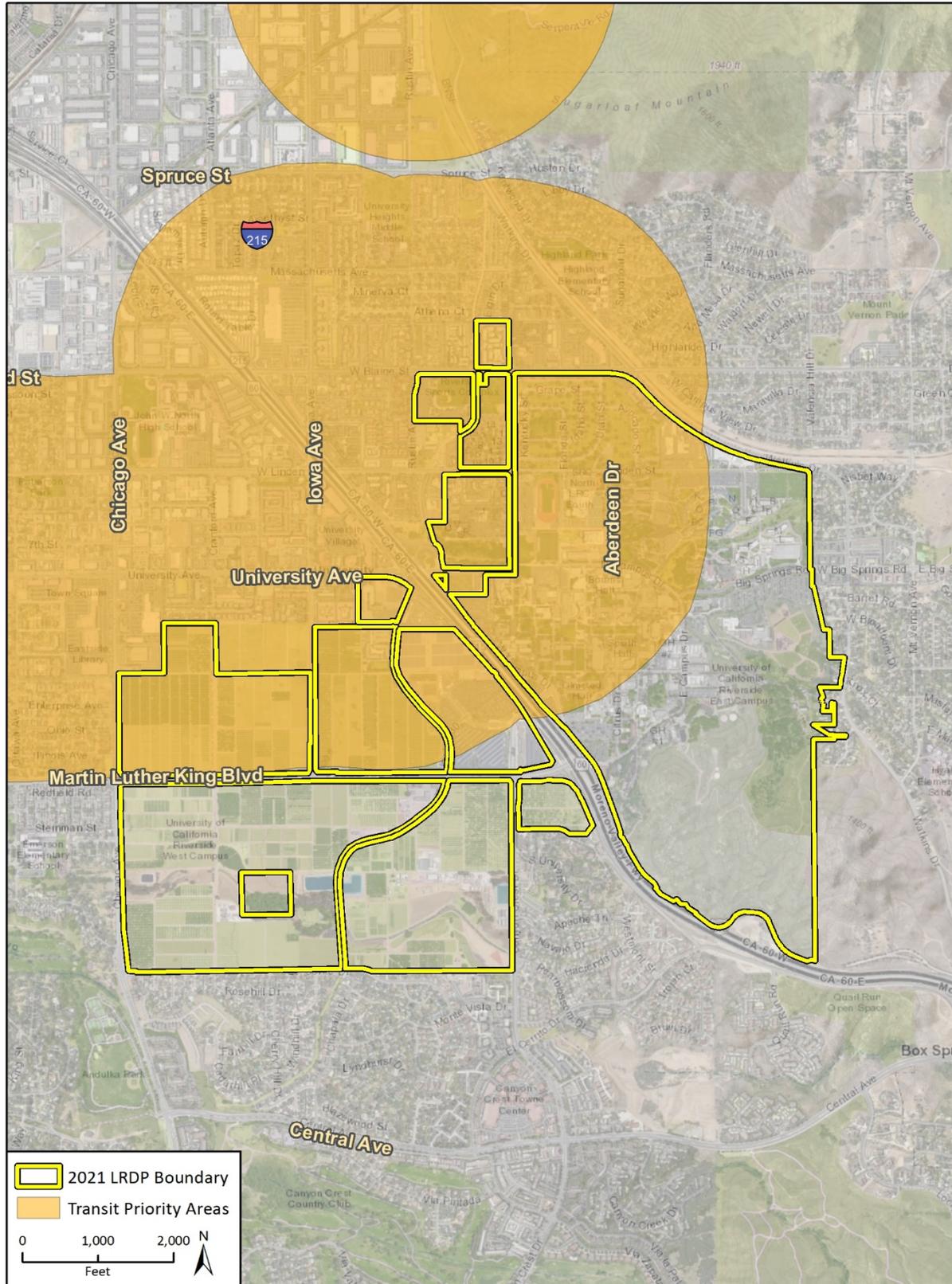
CEQA Guidelines Section 15064.3 (b)(1) states that lead agencies should generally presume projects within 0.5 mile of an existing major transit stop or a stop along an existing high-quality transit corridor will have a less than significant impact to transportation. This assumes development with better access to high-quality transit services is likely to result in more transit mode share and a reduction in VMT. In the campus vicinity, the RapidLink Gold Line qualifies as a major transit stop (Public Resources Code Section 21064.3). Most of the development anticipated to occur under buildout of the 2021 LRDP would occur within transit priority areas in the northern portions of East Campus and the northern portions of West Campus designated as Agricultural/Campus Research, Student Neighborhood, Campus Support, and University Avenue Gateway. Furthermore, the other portions of campus are connected to these areas by a series of interconnected pedestrian and bicycle paths described in Section 4.15.1.

The Technical Advisory states that “new retail development typically redistributes shopping trips rather than creating new trips,” and that “local-serving retail development tends to shorten trips and reduce VMT” by “adding retail opportunities into the urban fabric and thereby improving retail destination proximity.”

The VMT analysis reflects the number of vehicle-trips generated by operation of the campus and the expected distance that drivers will travel to and from UCR for work/school trips and other trips generated by campus visitors and students living in on-campus housing. UCR campus-wide VMT was calculated for each scenario based on the outputs of the current version of RivTAM (see Section 4.15.2 above and Appendix J for additional information on RivTAM). The metric identified for the transportation analysis is “Total VMT per Service Population.” This represents the daily VMT generated by operation of UCR divided by the number of employees, residential students, and commuter (nonresidential) students to the campus. The RivTAM was modified by adding 11,078 students, 7,489 residential beds, and 2,806 employees to assess the proposed 2021 LRDP-generated VMT per Service Population.

Project-generated VMT was estimated using the Origin/Destination method that ascertain the impact of the VMT generated by implementation of the proposed 2021 LRDP compared to the significance threshold. The Baseline (2018) Plus Project and Cumulative (2035) Plus Project VMT per Service Population calculations were determined by measuring the UCR campus-wide VMT plus the proposed 2021 LRDP population growth. These VMT measurements and associated calculations of VMT per Service Population were used to evaluate the VMT impact of UCR with the addition of the proposed 2021 LRDP projects. This calculation methodology reflects the VMT generation characteristics of the UCR campus with the inclusion of more faculty/staff, student housing residents, and commuter students proposed under the 2021 LRDP.

Figure 4.15-5 Transit Priority Areas



Imagery provided by Microsoft Bing and its licensors © 2021.
Additional data provided by Fehr & Peers, 2020.

Fig 4.15-5 Transit Priority Areas

The impact assessment for bicycle and pedestrian travel considers existing and planned bicycle and pedestrian facilities and reviews the proposed 2021 LRDP to determine if it would physically disrupt an existing facility or prevent the implementation of a planning facility. This assessment also considers whether the projects under the proposed 2021 LRDP would increase conflicts between cyclists and pedestrians and other modes of travel.

The impact assessment for transit considers existing and planned transit facilities and services and reviews the proposed 2021 LRDP to determine if it would physically disrupt an existing service or facility or prevent the implementation of a planned service or facility. This assessment also considers whether the projects under the proposed 2021 LRDP could conflict with transit performance standards established by transit operators.

The estimated increase in transit demand presumes that future background travel conditions remain relatively constant and does not account for potential changes associated with emerging travel technologies or increased mobility choices. As noted earlier, these emerging travel trends are already contributing to changes in the traditional travel demand relationships. Furthermore, the current COVID-19 pandemic and subsequent response by government agencies has reduced transit demand and shared mobility options. It is uncertain how this will translate into longer-term transit demand changes.

To determine whether the proposed 2021 LRDP would result in significant impacts under existing and cumulative scenarios related to transportation, the following thresholds would apply to criterion “b” and each independently supports the VMT significance conclusions of this EIR:

- A project would result in a significant project generated VMT impact if the Baseline (2018) Plus Project-generated VMT per Service Population exceeds 15 percent below the WRCOG baseline VMT per Service Population⁶; or the Cumulative⁷ (2035) Plus Project-generated VMT per Service Population exceeds 15 percent below the WRCOG baseline VMT per Service Population.
- The proposed 2021 LRDP’s effect on VMT would be considered significant if the cumulative link-level boundary WRCOG region VMT per Service Population increases under the Cumulative (2035) Plus Project condition compared to Cumulative (2035) conditions.⁸
- The WRCOG VMT per Service Population was calculated for the baseline condition using the RivTAM model to establish the regional threshold.
- The 2021 LRDP proposes to increase the population of the campus with greater numbers of students, faculty, staff, and residential beds. While all of these population components contribute to increases in trips and VMT generated by the operation of the campus, management of residential and employment VMT has been found to help the State reach emissions goals. The methodology utilized in the VMT analysis accounts for residential and employment VMT and additional VMT generated by nonresidential students who commute to the campus each day.

⁶ The geographic scope of the VMT analysis utilized the geographic boundaries provided in the RivTAM model. The RivTAM model includes the geographic area of Riverside County and the SCAG area (Ventura, Los Angeles, Orange, San Bernardino, Riverside, and Imperial Counties) in the traffic modeling analysis. While the RivTAM model is used for projects located in the WRCOG region, the VMT analysis accounts for trips in the larger SCAG area.

⁷ While the Campus has prepared a cumulative 2035 scenario, the 2018 analysis based upon the efficiency metrics is an independent basis for the cumulative analysis. As discussed in OPR’s Technical Advisory on implementing SB 743, “project that falls below an efficiency-based threshold that is aligned with long-term environmental goals and relevant plans would have no cumulative impact distinct from the project impact. Accordingly, a finding of a less-than-significant project impact would imply a less than significant cumulative impact, and vice versa.”

⁸ This methodology is also described by OPR as an “Absolute” VMT metric. For further discussion and details of the legal and technical advisories, see Appendix J.

2021 LRDP Objectives and Policies

The proposed 2021 LRDP contains objectives and policies relevant to transportation including the following:

Land Use (LU)

- Objective LU5: Continue to grow on-campus student housing to 40 percent and increase student life facilities.
 - Policy: Provide increased housing capacity and student life facilities in existing student neighborhoods in the northern portions of East Campus.
- Objective LU6: Enhance Canyon Crest Drive as a new Campus “Main Street” and northern gateway.
 - Policy: Ensure that all proposed buildings increase a mix of active uses that have a street interface.
- Objective LU7: Celebrate the University Avenue corridor as the primary gateway into campus.
 - Policy: Promote new facilities in this area that serve a broad swath of the campus population, engage the community, and support multi-modal access.

Mobility (M)

- Mobility Objective M1: Reduce future vehicular traffic, parking demand, and GHG emissions by increasing student housing on campus up to 40 percent of projected enrollment in 2035.
 - Policy: Continue to grow and support on-campus residency by focusing on more affordable student housing options, as well as the capacity for returning students (upperclassmen) and graduate students.
 - Policy: Promote public transit as a convenient and preferred mode of commuting to campus and connecting campus residents to the community and regional designations.
 - Policy: Develop the University Avenue and Canyon Crest Drive Gateway streetscapes to support increased use and functional efficiency of the RTA system, improved clarity of drop-off and pick-up locations for ride-sharing services, reduced conflict, and improved safety for cyclists, pedestrians, and emerging micro-mobility solutions in these increasingly busy mixed-mode circulation areas.⁹
 - Policy: Improve access to public transit on campus by providing connectivity to access points via pathways or shuttles, as well as comfortable waiting facilities, proximate to commuter-related services, where appropriate.
 - Policy: Advocate and support the development of a Metrolink train platform along Watkins Drive, adjacent to campus to provide direct access and significantly reduce commute times. Consider dedicated vanpools or shuttles to nearby stations in the interim.
- Objective M2: Invest in infrastructure to increase bicycle use and support other active transportation modes to integrate desired routes with the campus’ and City’s circulation framework.

⁹ Micro-mobility is a category of transportation provided by very light vehicles such as electric scooters, electric skateboards, shared bicycles, and electric pedal bicycles. The primary condition of inclusion in the category is a gross vehicle weight of less than 500 kilograms and operating at speeds typically lower than 15 mph (ITDP 2020).

- Policy: Support and facilitate City-led initiatives to extend bikeways to campus from every direction, including routes proposed along Canyon Crest Drive, Martin Luther King Boulevard, and the Gage Canal.
- Policy: Develop wayfinding systems to interconnect preferred bicycle routes and invest in safe and secure pathways along all bicycle routes.
- Policy: Provide adequate support amenities to facilitate and encourage the use of bicycles and other alternative transportation modes.
- Policy: Develop a comprehensive improvement plan for Campus Drive to improve function, safety, and utility for each mode of travel, as incremental growth occurs.
- Objective M3: Emphasize safe and pleasing passage for pedestrians and bicycle riders through the careful, continued development and integration of the campus multi-modal circulation framework and its extensions into the immediate community.
 - Policy: Identify and address gaps within the existing non-motorized circulation network, both on-campus and within the adjacent community.
 - Policy: Implement University policies to improve pedestrian safety and encourage social interaction in zones of high pedestrian activity.

2021 LRDP Alternative Transportation Features

UCR's site access and vehicular circulation plan would not change with the proposed 2021 LRDP. Under implementation of the proposed 2021 LRDP, circulation on campus would retain current services and expand as described below.

Pedestrian Access

The campus provides pedestrian access to buildings, parking areas, and surrounding neighborhoods through a system of walkways and plazas that create a pedestrian-friendly environment. These would continue to be part of new development under the proposed 2021 LRDP and the existing and added network of off-street paths will be designated as shared walkways and bikeways.

Bicycle Access

Along with pedestrian facilities, the proposed 2021 LRDP will encourage the use of bicycling as an active and sustainable mode of transportation. Shared facilities on all connecting roadways offer access to the campus from surrounding streets for bicyclists. Increased bicycle parking is also proposed throughout the campus.

Transit Access

Transit facilities are located near campus along Canyon Crest Drive, Blaine Street, Big Springs Road, and at Parking Lot 30. The proposed 2021 LRDP would not remove transit stops.

Impact Analysis

Impact T-1 CONFLICT WITH A PROGRAM, PLAN, ORDINANCE, OR POLICY ADDRESSING ROADWAY, TRANSIT, BICYCLE, AND PEDESTRIAN FACILITIES.

IMPLEMENTATION OF THE PROPOSED 2021 LRDP WOULD INCREASE BICYCLE AND PEDESTRIAN TRAVEL, BUT IT WOULD NOT PHYSICALLY DISRUPT AN EXISTING PEDESTRIAN OR BICYCLE FACILITY OR INTERFERE WITH IMPLEMENTATION OF A PLANNED PEDESTRIAN OR BICYCLE FACILITY. IMPLEMENTATION OF THE PROPOSED 2021 LRDP WOULD NOT CONFLICT WITH ANY EXISTING PROGRAMS, PLANS, ORDINANCES, OR POLICIES THAT ADDRESS THE CIRCULATION SYSTEMS. IMPACTS WOULD BE LESS THAN SIGNIFICANT. NO MITIGATION MEASURES ARE REQUIRED.

Pedestrian and Bicycle Travel

Projects implemented under the proposed 2021 LRDP would have an impact if they substantially disrupt existing pedestrian facilities, including adding new vehicular, pedestrian, or bicycle traffic at locations experiencing pedestrian safety concerns. New development implemented under the proposed 2021 LRDP would be designed to increase pedestrian connectivity, expanding the circulation system and facilitating safe movement for pedestrians on campus and in nearby or adjacent areas. As implementation of the proposed 2021 LRDP will continue UCR's investment in improving the quality, safety, and character of the pedestrian experience and ensuring it is developed with universal access in mind, the proposed 2021 LRDP would not conflict with any policies regarding pedestrian travel.

More specifically, the proposed 2021 LRDP incorporates Objective M2, which includes policies which support ongoing bike planning efforts, provide wayfinding for bicyclists, and amenities to support bicyclists. Objective M3 also includes policies to eliminate gaps in existing bicycle facilities, thereby resulting in improvements to baseline conditions. The 2021 LRDP also proposes that sections of the loop road will be improved incrementally as new buildings are built alongside the road; existing bicycle lanes will be widened, while auto travel lanes will be narrowed to slow traffic; and space for shade trees will be added to shade the sidewalk and roadway and buffer pedestrians from faster traffic. Additionally, traffic within sections of the campus loop road and internal campus streets including Eucalyptus Drive, Citrus Drive, and North Campus Drive will be transformed to pedestrian-priority routes and limited to service and emergency access only.

The proposed 2021 LRDP would continue to support initiatives that extend bicycle facilities from City streets to campus circulation routes and that invest in safe, secure pathways along all bicycle routes. Furthermore, projects implemented under the proposed 2021 LRDP would be encouraged to increase amenities that facilitate and encourage the use of bicycles and other alternative transportation modes. Implementation of the proposed 2021 LRDP would also include continued collaboration with the City to integrate its bicycle network with the campus and nearby areas where new development may occur. The proposed 2021 LRDP would, therefore, not conflict with bicycle master plans or other alternative transportation plans in the area.

Transit System Travel

As listed in Table 4.15-3, regional transit serves the campus and gives access to nearby shopping, dining, and entertainment options in areas like downtown Riverside, Moreno Valley, and the southwestern part of Riverside. Under the proposed 2021 LRDP, new development would not disrupt transit operations, and would improve access through increased connectivity along with improved access and safety. More specifically, Objective M1 includes policies which promote public

transit, provide for development of University Avenue and Canyon Crest Drive with streetscapes to improve functional efficiency of the RTA system, and advocate for the Metrolink train platform. The proposed 2021 LRDP would continue Transportation Demand Management programs, such as UPASS ride sharing, vanpooling, and other practices that encourage use of alternative transportation modes. Implementation of the proposed 2021 LRDP would not conflict with local or regional transportation plans, ordinances, or policies regarding circulation systems or transportation facilities.

Transit ridership has increased five-fold since the UPASS program began in 2007 to Fall 2019. The proposed 2021 LRDP notes that UCR will continue to partner with the City and RTA to address constraints and expand transit access for students, faculty, and staff. Furthermore, the proposed 2021 LRDP notes that UCR aspires to advocate for a new Metrolink station platform along Watkins Drive that would make campus more accessible from the larger southern California region and connect UCR to other research and learning institutions.

Primary vehicular access to the campus would continue to be provided from University Avenue, Canyon Crest Drive, West Linden Street, Watkins Drive, and secondarily, from other local streets under the proposed 2021 LRDP. Most of the development anticipated to occur under buildout of the 2021 LRDP would be infill development which would occur within transit priority areas in the northern portions of East Campus and the northern portions of West Campus designated as Agricultural/Campus Research, Student Neighborhood, Campus Support, and University Avenue Gateway. The proposed 2021 LRDP does not propose any substantive changes to the existing campus vehicular transportation network. Increased bicycle and other multi-modal networks and facilities are encouraged by objectives and policies in the proposed 2021 LRDP to make non-vehicular travel easier within the campus. The proposed 2021 LRDP includes policies to collaborate with other agencies (e.g., Metrolink, the City of Riverside) to expand transit options near the campus that extend access to nearby and more distant services by non-vehicular means.

Although UCR is not required to comply with local planning documents, as it is a State entity, the University seeks to integrate its circulation planning with that of the City, as it relates to areas adjacent to the campus. The City's General Plan Transportation and Circulation Element contains objectives to increase and maintain a mix of transportation modes and transportation system management techniques that would be supported by the proposed 2021 LRDP approach to transportation infrastructure and to increasing use of multi-modal transportation options. The proposed 2021 LRDP policies also integrate with the City's objective to cooperate in regional transportation improvements that would reduce VMT and encourage telecommunications use to reduce air and noise pollution generated by vehicular traffic. Finally, the proposed 2021 LRDP policies support the City's objective to increase pedestrian and cyclist safety near schools and in residential neighborhoods.

Because the proposed 2021 LRDP would continue to align its plans for regional connectivity with local and regional planning efforts, policies, and regulations, projects implemented under the 2021 LRDP would not conflict with those plans, programs, policies, or ordinances. Impacts would **be less than significant**.

Mitigation Measures

No mitigation measures are required.

Significance After Mitigation

Impacts would be less than significant without mitigation.

Impact T-2 CONFLICT OR BE INCONSISTENT WITH CEQA GUIDELINES SECTION 15064.3, SUBDIVISION (B) RELATED TO VEHICLE MILES TRAVELED.

IMPLEMENTATION OF THE PROPOSED 2021 LRDP WOULD RESULT IN ADDITIONAL VEHICULAR TRAVEL ASSOCIATED WITH INCREASED POPULATION ON THE CAMPUS, BUT VMT WOULD CONTINUE TO BE BELOW REGIONAL THRESHOLDS. MULTI-USE DEVELOPMENT IMPLEMENTED UNDER THE PROPOSED 2021 LRDP COMBINED WITH INCREASED USE OF ALTERNATIVE MODES OF TRAVEL WOULD RESULT IN LOWER VMT GENERATED BY THE CAMPUS OVER TIME. PROJECT-GENERATED VMT PER SERVICE POPULATION WOULD BE BELOW THE WRCOG 15 PERCENT THRESHOLD. IMPACTS WOULD BE LESS THAN SIGNIFICANT. NO MITIGATION MEASURES ARE REQUIRED.

Construction

In situations where road closures are necessary, there are ample detour routes that are a short distance away and are not anticipated to substantially increase the miles traveled on the roadway network. Additionally, road closures can be coordinated to minimize the length of the time the road is closed or can occur during periods of time in which the campus population is low (during summer or school breaks) in an effort to minimize the number of vehicles that would be affected by a road closure. Therefore, construction impacts would be less than significant, and no mitigation measures are required.

Operation

The UCR campus is near existing residential and commercial land uses and multiple travel options, including the RapidLink Gold Line, RTA buses, and Metrolink, are available. Most of the development anticipated to occur under buildout of the 2021 LRDP would be infill development which would occur within transit priority areas in the northern portions of East Campus and the northern portions of West Campus designated as Agricultural/Campus Research, Student Neighborhood, Campus Support, and University Avenue Gateway. The intent of the proposed 2021 LRDP is to increase use of alternative modes of transportation, facilitate development that provides a mix of residential, commercial, and other services that will allow students, staff, and faculty to walk or cycle instead of drive, and to provide 40 percent of students with on-campus housing (approximately 68 percent of the increase in students).

The WRCOG VMT per Service Population was calculated for the baseline condition using the RivTAM model to establish the regional threshold. The baseline (2018) UCR campus and UCR campus with the proposed 2021 LRDP growth both operate more efficiently with a lower Project generated VMT per Service Population than the baseline (2018) WRCOG average (see Table 4.15-1). This is due to the VMT efficiency gained with the increase in the proportion of students living on campus; multimodal infrastructure throughout and around the campus which supports alternative modes of transportation; and continued use of Transportation Demand Management programs such as UPASS, ride-sharing, vanpooling, and support of other alternative modes of transportation. The 2021 LRDP growth-generated VMT is more efficient than the baseline WRCOG average, with a lower project-generated VMT per Service Population. This can be attributed to VMT efficiency gained when an increased proportion of students would live on campus with more campus housing,

multimodal infrastructure throughout and around the campus that supports alternative modes of transportation.

The CEQA Guidelines Section 15064.3(b)(1) states that “generally projects within [0.5] mile of either an existing major transit stop or a stop along an existing high quality transit corridor should be presumed to cause a less than significant transportation impact.” The RapidLink Gold Line meets the requirement for a major transit stop and circulates on University Avenue, Canyon Crest Drive, West Linden Street, and Iowa Avenue directly on or within less than 0.5 mile of campus. Therefore, development that occurs near transit stops on those roadways, particularly in the proposed Canyon Crest Gateway, would have a less than significant impact under the proposed 2021 LRDP.

The proposed 2021 LRDP infill development that would form the Canyon Crest Gateway would support “an array of much needed commercial amenities and services presently unavailable on or in the immediate vicinity of campus.” As noted above, increased mix of uses generally facilitates lower VMT as students can walk, cycle, or take other non-vehicular forms of transportation to services located close to where they live. New infill development facilitated by the proposed 2021 LRDP would therefore tend to reduce VMT, as supported by the RivTAM analysis and detailed in Table 4.15-1.

A threshold of 15 percent below the baseline WRCOG average VMT per Service Population was used as one threshold to identify potential project-generated impacts with the idea that the project would need to meet or fall below this level to have a less than significant impact. The baseline WRCOG average VMT was determined to be 28.65 VMT per Service Population. Applying the 15 percent below threshold to the WRCOG average resulted in a threshold of 24.35 VMT per Service Population. As reflected in Table 4.15-1, the UCR VMT per Service Population is 37 percent less than the WRCOG regional VMT. Baseline Plus Project VMT associated with 2021 LRDP implementation would be 38 percent lower than regional VMT, reflecting further reductions based on increased on-campus student residential population. VMT under the 2021 LRDP would be well below the 15 percent threshold, below baseline, and the other thresholds identified above. Impacts would be **less than significant**.

Mitigation Measures

No mitigation required.

Significance After Mitigation

Impacts would be less than significant without mitigation.

Impact T-3 SUBSTANTIALLY INCREASE HAZARDS DUE TO A GEOMETRIC DESIGN FEATURE (E.G., SHARP CURES OR DANGEROUS INTERSECTIONS) OR INCOMPATIBLE USES (E.G., FARM EQUIPMENT).

DEVELOPMENT UNDER THE PROPOSED 2021 LRDP WOULD BE CONSTRUCTED IN SUCH A WAY THAT CHANGES WOULD REMAIN CONSISTENT TO SURROUNDING GEOMETRIC DESIGN FEATURES AND ANY REDESIGN OR CONSTRUCTION OF ON-CAMPUS CIRCULATION PATHS WOULD BE DESIGNED AND CONSTRUCTED TO MEET THE CAMPUS CONSTRUCTION AND DESIGN STANDARDS. HOWEVER, THE INCREASE IN CAMPUS POPULATION UNDER CUMULATIVE PLUS PROJECT CONDITIONS WOULD RESULT IN AN IMPACT RELATED TO AM PEAK HOUR QUEUEING AT THE I-215/SR-60 FREEWAY SOUTHBOUND RAMPS AT MARTIN LUTHER KING BOULEVARD. A MITIGATION MEASURE HAS BEEN PROPOSED BUT ITS IMPLEMENTATION IS UNCERTAIN AT THIS TIME. IMPACTS WOULD BE SIGNIFICANT AND UNAVOIDABLE.

Construction

Construction management plans for each campus projects include information related to truck routes and construction site access and are reviewed and approved prior to construction activity commencing. With these review and approval procedures in place, project developed under the proposed 2021 LRDP would not result in hazardous conditions or incompatible uses. Construction management plans are prepared in accordance with the latest version of the California Manual on Uniform Traffic Control Devices and would not result in hazardous construction site features related to transportation. With inclusion of a construction management plan as standard condition of approval, construction impacts would be **less than significant**, and no mitigation measures are required.

Operation

INCOMPATIBLE USES

Existing farm equipment routes are mostly internal to West Campus, at times, the farm equipment crosses Martin Luther King Boulevard at the gates west of Iowa Avenue and at the intersection of Martin Luther King Boulevard and Parking Lot 30. There is also a farm equipment crossing point at Canyon Crest Drive and Iowa Avenue just south of the CARB facility. When there is work on East Campus, the farm equipment would travel on Canyon Crest Drive and take the campus loop (West/South/East Campus Drive) to the fields. UCR staff participates in tractor safety training and are required to abide by State law when driving farm equipment on City streets. Existing farm equipment movement processes, procedures, and safety measures would remain the same with implementation of the proposed 2021 LRDP. Impacts would be **less than significant**, and no mitigation measures are required.

GEOMETRIC DESIGN FEATURES

Most development under the proposed 2021 LRDP would be infill development, consistent with the existing land use context. As such, implementation of the proposed 2021 LRDP would generate a mix of traffic similar to existing conditions (primarily commuter traffic from students, faculty, and staff) that would circulate on existing internal campus streets and City roadways. The 2021 LRDP proposes that sections of the loop road will be improved incrementally as new buildings are built alongside the road; existing bicycle lanes will be widened, while auto travel lanes will be narrowed to slow traffic; and space for shade trees will be added to shade the sidewalk and roadway and buffer pedestrians from faster traffic. All development under the 2021 LRDP would be required to comply with applicable codes and regulations that govern traffic-related design features and uses,

driveways and site access, including ADA and National Association of City Transportation Officials standards.

The proposed 2021 LRDP does not include new roads that would introduce design features or re-design existing features in a manner that makes them less safe than they are under current conditions. Furthermore, the proposed infill development would not substantially change street designs, although new points of ingress and egress may be installed, depending on project-specific design. All designs would be subject to the Campus Construction and Design Standards, including those applicable to roads, parking facilities, and walkways or bicycle facilities. Therefore, no changes to circulation paths would introduce design features that would not align with Campus Construction and Design Standards. Impacts would be **less than significant**, and no mitigation measures are required.

CUMULATIVE PLUS PROJECT CONDITIONS

The increase in campus population Under Cumulative Plus Project conditions would result in an impact related to vehicle queueing at the I-215/SR-60 freeway southbound ramps at Martin Luther King Boulevard, which would occur only under AM Peak Hour Cumulative plus Project conditions. A queueing analysis was conducted to determine if there would be adequate storage capacity at the off-ramps under future conditions. Off-ramp queues were calculated using the 95th percentile queue length by movement at the off-ramp intersection. Off-ramp queue storage would be considered deficient if the proposed 2021 LRDP increases the calculated 95th percentile queue length by movement exceeds 85 percent of the available storage length during the AM or PM peak hours. Under Cumulative Plus Project conditions, freeway off-ramp queueing was found to exceed 85% of the storage length at the I-215/SR-60 freeway southbound ramps at Martin Luther King Boulevard with inclusion of proposed 2021 LRDP traffic. This is a significant impact.

Mitigation Measures

Improving the intersection is considered feasible pursuant to the following mitigation measure:

MM T-1 Intersection Queuing Improvement

Improvements to the intersection of I-215/SR-60 freeway southbound ramps at Martin Luther King Boulevard shall consist of reconfiguring the southbound approach from one left-turn lane and one shared through/right-turn lane to one shared left/through/right-turn lane and one right-turn lane. Optimizing the signal-timings with the geometric improvements shall also be required.

Significance After Mitigation

UCR does not have jurisdictional control over the identified intersection and any physical improvement would require an agreement with Caltrans. As the off-ramp is controlled by the Caltrans and physical improvements cannot be guaranteed at this time, the off-ramp queuing at this intersection is considered significant and unavoidable under the Cumulative plus Project scenario. Impacts would be significant and unavoidable. UCR recommends that Caltrans approve MM T-1. If Caltrans approves MM T-1, based on the Transportation Impact Analysis included as Appendix J to this EIR, impacts would be reduced to less than significant.

Impact T-4 RESULT IN INADEQUATE EMERGENCY ACCESS.

DEVELOPMENT UNDER THE PROPOSED 2021 LRDP WOULD NOT INCLUDE MAJOR CHANGES TO EXISTING ACCESS POINTS OR ON-CAMPUS CIRCULATION PATHS THAT WOULD RESULT IN INADEQUATE EMERGENCY ACCESS. ALL PROJECTS UNDER THE PROPOSED 2021 LRDP WOULD ADHERE TO CAMPUS CONSTRUCTION AND DESIGN STANDARDS. THEY WOULD UNDERGO REVIEW AND APPROVAL BY THE STATE FIRE MARSHAL PRIOR TO IMPLEMENTATION AND USE. IMPACTS WOULD BE LESS THAN SIGNIFICANT. NO MITIGATION MEASURES ARE REQUIRED.

Construction

Construction management plans for each campus projects include information related to truck route details, potential road closures/detours, and emergency access, and are reviewed and approved prior to construction activity commencing. With these review and approval procedures in place, project developed under the proposed 2021 LRDP would not result in inadequate emergency access to construction sites or nearby structures. Construction management plans are prepared in accordance with the latest version of the California Manual on Uniform Traffic Control Devices and include measures such as the following:

- Identify proposed truck routes to be used
- Include a public information and signage plan to inform student, faculty and staff of the planned construction activities, roadway changes/closures, and parking changes
- Store construction materials only in designated areas that minimize impacts to nearby roadways
- Limit the number of lane closures during peak hours to the extent possible. Inform the Campus before any partial road closure.
- Use Caltrans certified flag persons for any temporary lane closures to minimize impacts to traffic flow, and to ensure safe access into and out of the project sites
- Install traffic control devices as specified in the California Department of Transportation Manual of Traffic Controls for Construction and Maintenance Work Zones
- To minimize disruption of emergency vehicle access, affected jurisdictions (Campus Police, City Police, and City Fire Department) [are] consulted to identify detours for emergency vehicles, which will then be posted by the construction contractor
- Coordinate with local transit agencies for temporary relocation of routes or bus stops in works zones, as necessary
- Coordinate with other projects under construction near the project site, so an integrated approach to construction-related traffic is developed and implemented

Furthermore, as detailed in Section 4.18, *Wildfire*, in support of these standard practices, UCR has proposed continuing best practices (CBP) as conditions of individual project approval that would ensure, to the extent feasible, that at least one unobstructed lane in both directions on campus roadways are maintained specifically in the event of a wildfire emergency (**CBP WF-1**) and that the Campus Fire Marshal discloses roadway closures to the City of Riverside Fire Department and identify alternative travel routes, if necessary (**CBP WF-2**). As such, evacuation routes, if present within the specific roadway segment that would require temporary closure as noted above, would be similarly rerouted. Therefore, construction impacts would be **less than significant**, and no further transportation-specific mitigation measures are required.

Operation

Vehicular access to and around the UCR campus would continue to be provided from University Avenue, Canyon Crest Drive, West Linden Street, Watkins Drive, Big Springs Road, Martin Luther King Boulevard, and other local streets under the proposed 2021 LRDP. Most projects implemented under the proposed 2021 LRDP would be infill development, consistent with the existing land use context. The 2021 LRDP proposes that sections of the loop road will be improved incrementally as new buildings are built alongside the road; existing bicycle lanes will be widened, while auto travel lanes will be narrowed to slow traffic; and space for shade trees will be added to shade the sidewalk and roadway and buffer pedestrians from faster traffic. Additionally, traffic within sections of the campus loop road and internal campus streets including Eucalyptus Drive, Citrus Drive, and North Campus Drive will be transformed to pedestrian-priority routes and limited to service and emergency access only.

With more students and employees, the volume of traffic across all modes would increase, which may result in slower travel speeds for some modes. Fire and emergency access would remain the same. Providing adequate emergency vehicle access ensures emergency response vehicles can quickly answer service calls. Direct emergency access would be provided to all buildings from the surrounding streets and the multi-modal paths throughout the campus. All multi-modal paths would be designed to meet the requirements for emergency vehicle access, including provisions under the Fire Code (Chapter 10, Fire-related means of Egress and Fire Apparatus Access Road requirements), which will be reviewed by the Campus Fire Marshal during the plan review process.

New sidewalks or paths would be designed and constructed in accordance with the Campus Construction and Design Standards, and potentially applicable City standards (if within City's public right-of-way), to minimize hazardous conditions. New sidewalks or paths would undergo project-specific environmental review for project-scale safety hazards when a specific campus project advances through the development process. This would include review of means of egress, safety to life and property from fire and other hazards attributed to the built environment, and safety to fire fighters and emergency responders during emergency operations. As part of campus project-level environmental review, input from emergency services, including the campus's designated Deputy State Fire Marshal, would be solicited to ensure that emergency access meets the standards of service providers (UCR 2016b).

Because all projects implemented under the 2021 LRDP would adhere to the Campus Construction and Design Standards and State safety measures, including project-specific design and environmental review to ensure that substantial impacts would not occur. Impacts would be **less than significant**.

Mitigation Measures

No additional mitigation required.

Significance After Mitigation

Impacts would be less than significant without further mitigation.

4.15.4 Cumulative Impacts

Conflict with a Program, Plan, Ordinance, or Policy Addressing Roadway, Transit, Bicycle, and Pedestrian Facilities (Impact T-1)

Transit service providers regularly review operations and schedules and make adjustments to reflect rider demand, travel behavior, and traffic conditions. Additionally, cities regularly prepare, review, and update bicycle master plans and active transportation plans to identify new goals and policies associated with active transportation modes in the City. The identification of these goals and policies are done to reflect existing active transportation usage and plan for potential changes to usage. For example, the City of Riverside Bicycle Master Plan was adopted in 2007 and amended in 2012 and provides a blueprint for bicycle transportation and recreation in the City.

Additionally, the City is in the process of preparing an Active Transportation Plan and updating the Trails Master Plan as part of the Riverside PACT Project. These plans help the City create robust and accessible transportation options for residents and visitors well into the future. UCR has historically worked with the City to address transportation related concerns and provide insights on the development of various plans. UCR will continue to work with the City in the future as the campus and City change. Therefore, cumulative impacts related to conflicts with a program, plan, ordinance, or policy addressing roadway, transit, bicycle, and pedestrian facilities would be less than significant, and the project's contribution **would not be cumulatively considerable**.

VMT (Impact T-2)

As part of the review of future year projections in the WRCOG model, a list of approved and pending developments was also requested from the City of Riverside, County of Riverside, and City of Moreno Valley. These lists were then reviewed with land use assumptions in the future year model to ensure that all reasonably foreseeable projects within a fifteen-mile radius of UCR were accounted for in the land uses assumed in the model under cumulative conditions. A list of all approved and pending developments in the City of Riverside, County of Riverside, and City of Moreno Valley is provided in Appendix J.

The RivTAM future model was modified to reflect the baseline campus population and used to evaluate cumulative project generated VMT per Service Population. The addition of 11,078 students, 7,489 residential beds, and 2,806 employees were incorporated in the campus traffic analysis zones to assess the project-generated VMT per Service Population of the UCR campus with the proposed 2021 LRDP.

The Cumulative (2035) Plus Project scenario operates more efficiently with a lower Project generated VMT per Service Population than the identified threshold. This is due to the same notions of the Baseline (2018) Plus Project analysis. While the Campus has prepared a cumulative 2035 scenario, the 2018 analysis based upon the efficiency metrics is an independent basis for the cumulative analysis. As discussed in OPR's Technical Advisory on implementing SB 743, "project that falls below an efficiency-based threshold that is aligned with long-term environmental goals and relevant plans would have no cumulative impact distinct from the project impact. Accordingly, a finding of a less-than-significant project impact would imply a less than significant cumulative impact, and vice versa."

Overall VMT per Service Population would increase in the WRCOG region from the baseline to future year. The UCR campus follows this trend but would still be below the WRCOG average. The increase in the VMT per Service Population of the future UCR campus with the proposed 2021 LRDP

compared to the future baseline UCR campus is likely associated with the change in land use patterns in the WRCOG region in the future year, and not associated with the planning decisions in the proposed 2021 LRDP. The students and employees associated with future conditions would have more opportunities for goods and services in the WRCOG region. This increase in opportunities for goods and services along with the increase in students and employees could result in a varied trend of the VMT per Service Population Cumulative (2035) Plus Project condition as compared to the Baseline (2018) Plus Project condition.

A threshold of 15 percent below the baseline WRCOG average VMT per Service Population was used to identify potential project-generated impacts with the idea that the project would need to meet or fall below this level to have a less than significant impact. The baseline WRCOG average VMT was determined to be 28.65 VMT per Service Population. Applying the 15 percent below threshold to the WRCOG average resulted in a threshold of 24.35 VMT per Service Population. As reflected in Table 4.15-4, Cumulative (2035) Plus Project VMT associated with 2021 LRDP implementation would be 30 percent lower than regional VMT. Cumulative (2035) Plus Project VMT under the 2021 LRDP would be well below the 15 percent threshold, and below baseline conditions. Impacts would be less than significant, and the project’s contribution would not be cumulatively considerable.

Table 4.15-4 Cumulative Project-Generated VMT

	VMT	Service Population	VMT per Service Population
Cumulative (2035) without project (future UCR campus)	560,180	28,661	19.55
Cumulative plus project (future UCR campus with LRDP)	848,022	42,545	19.93
WRCOG region	67,532,979	2,357,270	28.65
15% below WRCOG threshold	--	--	24.35

Note: Service population includes employees, residential students, and non-residential students/commuters

Source: Appendix J

Project effect on VMT was estimated using the boundary method on the future RivTAM model. This was completed by selecting all roadway segments in the RivTAM model within the WRCOG boundary and multiplying the number of trips on each roadway segment by the length of that roadway segment.

Project effect on VMT is a measure of the potential effects of a project because it captures the combined effect of new VMT, shifting of existing VMT to/from other neighborhoods, and/or shifts in existing VMT to alternate travel routes or modes. Project that have a positive effect on VMT result in a decrease in the regional VMT per Service Population. Conversely, projects that have a negative effect on VMT increase regional VMT per Service Population. A positive effect on VMT (i.e. a decrease in regional VMT per Service Population) is seen as improving VMT efficacy and better for the region.

As reflected in Table 4.15-5, the WRCOG VMT per Service Population under the “with project” condition does not exceed the WRCOG region, identified under the SCAG RTP/SCS condition. Cumulative impacts would be **less than significant (not cumulatively considerable)**.

Table 4.15-5 WRCOG Region Cumulative Project Effect on VMT

	Boundary VMT	Service Population	VMT per Service Population
Cumulative VMT per Service Population	64,586,173	3,568,224	18.10
Project effect on VMT per Service Population	64,665,606	3,582,108	18.05

Note: Service population includes employees, residential students, and non-residential students/commuters
Source: Appendix J

Hazardous Design or Incompatible Uses and Emergency Access (Impacts T-3 and T-4)

Hazardous design features and incompatibility with emergency access and emergency routes are typically localized impacts rather than cumulative in nature. Because all projects implemented under the 2021 LRDP would adhere to the Campus Construction and Design Standards and State safety measures, including project-specific design and environmental review to ensure that substantial impacts would not occur, project-contributable impacts would be less than significant. There are no foreseeable, wide-ranging road closures or route redirects planned in the vicinity of UCR which would, in conjunction with the implementation of the propose LRDP, result in short- or long-term cumulative impacts to emergency access or generally related to hazardous designs. Cumulative contributions would be **less than significant (not cumulatively considerable)**.

However, as described in Impact T-3, the increase in campus population under Cumulative Plus Project conditions would result in an impact related to vehicle queueing at the I-215/SR-60 freeway southbound ramps at Martin Luther King Boulevard, which would occur only under AM Peak Hour Cumulative Plus Project conditions. Feasible mitigation has been recommended, but UCR does not have jurisdictional control over the identified intersection and any physical improvement would require an agreement with Caltrans. UCR recommends that Caltrans approve MM T-1. If Caltrans approves MM T-1, based on the Transportation Impact Analysis included as Appendix J to this EIR, impacts would be reduced to less than significant. Regardless, the proposed 2021 LRDP would **contribute to significant cumulative impacts**.

4.15.5 References

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