RIVERSIDE COUNTY TRANSPORTATION COMMISSION

Riverside-Downtown
STATION IMPROVEMENTS

Riverside-Downtown Station Improvements Project

Environmental Assessment

December 2021

RIVERSIDE COUNTY TRANSPORTATION COMMISSION

Prepared By:
Riverside County Transportation Commission
4080 Lemon Street 3rd Floor
Riverside, CA 92501

RIVERSIDE COUNTY TRANSPORTATION COMMISSION

Riverside-Downtown
STATION IMPROVEMENTS

RIVERSIDE DOWNTOWN STATION IMPROVEMENTS PROJECT

Located at 4066 Vine Street, Riverside, CA 92507
In the City of Riverside
and the County of Riverside

ENVIRONMENTAL ASSESSMENT

Pursuant to

National Environmental Policy Act of 1969 (42 U.S.C. §4321 et seq.), as amended
Federal Transit Act (49 U.S.C. § 5301 et seq.), as amended
Title 23 U.S.C. Highways
Title 49 U.S.C. Transportation
Title 49 U.S.C. § 303 (formally Department of Transportation Act of 1966), Section 4(f)
Executive Order 11990 (Protection of Wetlands)
Executive Order 11988 (Floodplains Management)
Executive Order 12898 (Environmental Justice)
National Historic Preservation Act of 1966, Section 106 (16 U.S.C. § 407f et seq.)
Fixing America's Surface Transportation Act, or "FAST" Act (December 4, 2015)

by the

U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL TRANSIT ADMINISTRATION

and the

RIVERSIDE COUNTY TRANSPORTATION COMMISSION

The following persons may be contacted for additional information concerning this document:

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RIVERSIDE COUNTY TRANSPORTATION COMMISSION

Riverside-Downtown
STATION IMPROVEMENTS

REVIEW PERIOD

A 60-day review period of the proposed Environmental Assessment (EA) begins December 3, 2021 and ends February 3, 2022. Comments on the EA are due no later than February 3, 2022.

AVAILABILITY OF THE EA

Copies of the EA are available for review as follows:

- RCTC website: www.rctc.org/riversidestation
- Hard copy at the RCTC Office located at 4080 Lemon Street, 3rd Floor, Riverside, CA 92501
- Hard copy at the City of Riverside – Third Floor/Planning at 3900 Main Street, Riverside, CA 92522
- Hard copy at the Cesar Chavez Community Center at 2060 University Avenue, Riverside CA 92507

PUBLIC HEARING

RCTC will be conducting two public hearings in the following formats:

Public Hearing Virtual Option

Date: Wednesday, December 15, 2021
Time: 5:00 PM to 7:00 PM
Webinar Link: https://us06web.zoom.us/s/89067185996?pwd=TlVXRkhpMlZqejJ3U3EwUHdjSnhDZz09
Webinar ID: 890 6718 5996
Dial in by phone: (669) 900-6833
Dial in by phone (Spanish): (646) 749-3335; Access Code: 676-566-581

Public Hearing In-person Option

Date: Thursday, December 16, 2021
Time: 5:00 PM to 7:00 PM
Location: Cesar Chavez Community Center – 2060 University Avenue, Riverside CA 92507

The public hearing will provide participants with: (1) an overview of the proposed project; (2) a summary of the environmental analysis contained within the EA; (3) an opportunity to comment on the EA; and (4) a description of the environmental process and schedule. Staff will accept written comments and/or an option will be provided to leave a comment with a court reporter during the public hearing. Comments on the EA are encouraged during the public circulation period from December 3, 2021 to February 3, 2022.

SUBMITTING COMMENTS

Mailed comments must be postmarked before or on the last day of the review period. Comments can be mailed or emailed to the following:

Mr. David Lewis
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4080 Lemon Street, 3rd Floor
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(951) 787-7141
StationProject@rctc.org or
https://bit.ly/RDSComment

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RIVERSIDE COUNTY TRANSPORTATION COMMISSION

Riverside-Downtown
STATION IMPROVEMENTS

Riverside-Downtown Station Improvements Project

Executive Summary

December 2021

RIVERSIDE COUNTY TRANSPORTATION COMMISSION

METROLINK

Prepared By:
Riverside County Transportation Commission
4080 Lemon Street, 3rd Floor,
Riverside, CA 92501

Executive Summary

ES 1.0 Introduction and Background

ES 1.1. Introduction

The Riverside County Transportation Commission (RCTC) and Metrolink in collaboration with the Federal Transit Administration (FTA) propose to improve the Riverside-Downtown Station at 4066 Vine Street in Riverside, California (the Project).

The Project is located in Downtown Riverside, east of the State Route (SR) 91 Freeway and a short distance from SR 60. Figure ES-1. Regional and Project Location Map, illustrates the regional and project location. Proposed improvements include the construction of an additional passenger loading platform and tracks to improve Metrolink service and the extension of the existing pedestrian bridge and additional elevator and stair access. The proposed track would connect to the existing station layover tracks on the east side. The proposed Project would also provide additional parking and improve traffic flow on the east side of the station. These improvements would improve Metrolink train connections and operations without affecting Burlington Northern Railroad and the Atchison, Topeka, and Santa Fe Railway (BNSF) service. The proposed Project would enhance train efficiency and operations to allow more reliable/on-time train service and provide equitable access to regional public transportation for the general public. Other benefits of the proposed Project would include the construction of pedestrian facilities (such as sidewalks), lighting and incorporation of aesthetic elements within the project site. It is anticipated that proposed improvements to the Riverside-Downtown Station would increase train ridership and reduce congestion on freeways and associated vehicle emissions.

The proposed Project is subject to state and federal environmental review requirements because it involves the use of federal funds administered by the FTA; therefore, two environmental documents have been prepared in compliance with the National Environmental Policy Act of 1969 (NEPA) and California Environmental Quality Act (CEQA). RCTC is the lead agency under CEQA, and FTA and RCTC are joint lead agencies under NEPA. The NEPA Environmental Assessment (EA) and CEQA Draft Environmental Impact Report (EIR) are two separate standalone documents and are concurrently being circulated for public review.

ES 1.2. Background

Metrolink has a total of seven commuter lines, and the Riverside-Downtown Station currently provides service to three of these commuter lines: the Riverside Line with connections to Pomona, City of Industry, and Los Angeles; the Inland Empire Orange County Line (IEOC) with service to Santa Ana, Irvine, and Oceanside; and the 91/Perris Valley Line (91/PV Line) that starts in Perris and stops in Riverside before heading to Fullerton and Los Angeles. The station is an origin and destination station for all 12 Riverside Line trains (i.e., four 91/PV Line trains and eight IEOC Line trains). Altogether, there are 12 Riverside Line weekday trains that travel between Riverside and Los Angeles Union Station (LAUS); 13 91/PV Line weekday trains that travel between Perris-South and LAUS; and 16 IEOC Line trains that travel between San Bernardino County and Orange County, for a total of 41 weekday Metrolink passenger trains. Two Amtrak trains currently service and operate through the Riverside-Downtown Station each day.

In addition to passenger train service, Riverside County has three rail mainlines owned by BNSF and Union Pacific Railroad (UPRR), both the BNSF and the UPRR operate freight trains through the Riverside-Downtown Station. On average, approximately 50 to 60 freight trains operate through the Riverside-Downtown Station each day, with this number raising or lowering depending on seasonal variations (RCTC, 2020).

Metrolink's Southern California Rail Expansion (SCORE) Program is a $10 billion initiative to upgrade the regional rail system to meet the current and future needs of the traveling public. The Project was funded from the State's Transit and Intercity Rail Capital Program in April 2018. The Project was also included in RCTC's *Short-Range Transit Plan FY 20/21–24/25* (RCTC, 2020) to increase regional rail service based on ridership trends, growth projects, and RCTC goals.

The Riverside-Downtown Metrolink Station is an integral transportation hub that connects the City of Riverside's Innovation District to the rest of Southern California and beyond. Aside from the LAUS, the Riverside-Downtown Station serves more routes than any station in the Metrolink network. In addition to connecting to business and technology centers across the region, Metrolink service also links the University of California, Riverside with other leading academic institutions such as the University of California, Irvine; University of California, Los Angeles; University of Southern California; California State Polytechnic University; Pomona; and California State University, Fullerton. Before the COVID-19 pandemic, the Riverside-Downtown station served over 1,000 morning boardings. Although ridership has not recovered from pre-pandemic levels, it is anticipated that ridership rebuilding would continue as COVID-19 restrictions ease. Looking forward into the future, this project supports Metrolink's SCORE program with increased frequency goals of having trains serve the station every 15 to 30 minutes throughout the day. With that higher level of service, ridership is expected to grow over the next 10 years. Metrolink anticipates regional mass transit demand to increase and require improvements at the station to address existing and future operational deficiencies and accommodate future projected train service through the construction of additional passenger tracks, platforms and parking.

The Riverside Transit Agency's (RTA) Mobility Hub is in early design phase and would be located across from the Riverside-Downtown Station. Enhancements of local transit service with the completion of RTA's Mobility Hub would result in frequent transit connections to every area of Riverside and provide a link to San Bernardino and Redlands. Because of the proximity of the Riverside-Downtown Station to the future Mobility Hub, all demographics within the service area would have access to equitable regional transportation.

Amtrak also serves the station with the Southwest Chief long distance train to Flagstaff, Albuquerque, Kansas City & Chicago and bus/train connections to the Central Valley, Sacramento, and San Francisco. Planning is also underway to provide multiple daily Amtrak trains from Riverside to the Coachella Valley with stops in Banning, Palm Springs, Indio and eventually Phoenix, Arizona. Other out-of-state service at the Riverside-Downtown Station include daily Megabus connection to Las Vegas.

Metrolink currently has one of the cleanest locomotive fleets in the nation and has committed to pursuing future zero emission options in its recent Climate Action Plan. RCTC shares Metrolink's vision in reducing emissions and sustainable practices in advance planning by working with the City of Riverside to create a plan for an integrated Transit Oriented Community around the station that combines the best of "Car Free," livable, equitable, and walkable residential and employment opportunities that are well connected to transit.

Figure ES-1. Regional and Project Location Map

ES 1.2.1. Future Passenger and Freight Rail

Future Passenger Rail

Based on the *Metrolink Strategic Business Plan* (2021), Metrolink's Service Strategic Actions for the 91/PV Line and IEOC lines would increase train service within the next 5- to 30-year horizon. By 2025, the number of Metrolink passenger trains traveling through the Riverside-Downtown Station would increase to 49 trains or by 69 percent, during the weekday in addition to Amtrak and freight. Successful delivery of capacity, operations and service investments at the station are a crucial element of the Metrolink 2021 Strategic Business Plan; investments would improve reliability and customer experience by doubling capacity (adding new platforms, tracks, and parking) for train service needs due to projected growth. By 2050 additional peak hour and off-peak services could increase to 82 trains or 183 percent for weekday along the 91/PV Line and IEOC Lines.

Future Freight Rail

Consistent with the goals in the 2018 California State Rail Plan, the Project would improve efficiency on the railroad mainlines. California businesses export roughly $162 billion worth of goods to more than 225 foreign countries annually (Caltrans, 2018). By 2040, the state's freight railroad loads will have increased by 38 percent, compared to 2013. Investments to address bottlenecks, improve operations, and increase capacity throughout the network will reduce congestion and delays. In turn, an improved freight rail network will help shift goods movement away from congested roadways, which have a limited ability to expand.

Riverside-Downtown Station Improvements Project Benefits:

- Opportunities and equitable access to public transportation for all users
- Convenient access and regional connectivity to train service within the Eastside Neighborhood and the City of Riverside
- Pedestrian friendly, ADA-compliant sidewalks and crosswalks adjacent to the station with enhanced lighting, trees, and landscape
- Enhanced train efficiency and operations to allow more reliable/on-time train service
- ADA access, additional parking, and drop off areas on the eastside of the station to accommodate and encourage future ridership
- Enhancements to increase ridership, reducing congestion on freeways and associated vehicle emissions

ES 2.0 Purpose and Need

ES 2.1. Project Purpose

The overall purpose of the Project is to expand capacity and improve operations and efficiency, connectivity, and the passenger experience at the Riverside-Downtown Station. The Project is intended to:

- Expand platform capacity to meet passenger train storage needs
- Allow for train meets off the BNSF mainline and minimize impacts to BNSF operations
- Improve train connectivity and passenger accessibility while minimizing impacts on improvement projects near the station that are already designed or in construction
- Facilitate more efficient passenger flow and reduce dwell times
- Enhance safety and access for station users
- Accommodate projected future demand

ES 2.2. Project Need

Beyond the infrastructure capacity need to address existing and future train congestion at the Riverside-Downtown Station, there is an operational deficiency due to the lack of a crossover at the station from west to east which limits train meet options. The proposed Project would address limitations by adding flexibility to operate service between Los Angeles and Perris-South by improving options for 91/PV Line train meets to meet nose to nose, nose to back, or back to back on one of the tracks, while allowing trains to pass through on the other track.

In addition, there is a lack of crossovers from the station to Perris-South which limits train meets and passing options for rail traffic. As such, trains coming from or going to Perris-South and Riverside-Downtown are not able to meet or pass each other. In addition, the San Jacinto Subdivision, extending from Control Point Highgrove to Perris-South, is currently a single track mainline that does not permit trains to meet or pass. This existing limitation in train infrastructure between Riverside-Downtown and Perris-South creates blockages on the BNSF mainline and results in train service and freight train delays. Additional platform tracks on the east side of the station, where trains can meet and hold off at the BNSF mainline, could alleviate congestion and ensure additional passenger service does not impede freight service.

Existing train infrastructure limitations due to lack of crossovers at the Riverside-Downtown Station and from the Riverside-Downtown Station to Perris-South would continue to worsen operational conditions in the next 5 years because Metrolink passenger train service at the Riverside-Downtown Station is anticipated to increase by 69 percent. In addition to the projected increase in freight train traffic, conditions at the station would deteriorate and could affect service times along the Metrolink network (Metrolink, 2021). Without the planned service capacity improvements, the Riverside-Downtown Station would not be able to manage the anticipated train meets, and blockages would continue to deteriorate along the BNSF mainline, causing longer delays and service disruptions. Operational improvements are needed to address these deficiencies.

ES 2.2.1. Access and Parking

The increase in Metrolink train service at the station and future regional growth forecasts are anticipated to increase the demand for on-site parking and easier access to the station. According to Metrolink's *Strategic Business Plan* (Metrolink, 2021), parking at the Riverside-Downtown Station is 93 percent utilized, and station access has been identified as a "high-priority" for improvements. Additional train service and future increase in passenger trips is expected to strain the existing on-site parking supply and impede access to and from the station.

ES 2.3. Alternatives Considered

To comply with CEQA, an EIR shall describe a range of reasonable alternatives to the project, or at the location of the project, which would feasibly attain most of the basic objectives of the project but would avoid or substantially lessen any of the significant effects of the project and evaluate the comparative merits of the alternatives. An EIR need not consider every conceivable alternative to a project. Rather it must consider a reasonable range of potentially feasible alternatives that will foster informed decision making and public participation. An EIR is not required to consider alternatives that are infeasible. Chapter 2 of the Draft EIR discusses the Build Alternative which was selected because it met the most performance criteria (including the capacity for growth) and would best meet the basic objectives of the Project. Chapter 5 of the Draft EIR includes a comparison of alternatives and provides an analysis of a range of reasonable alternatives that were considered for study in the Draft EIR

To comply with NEPA, the EA should discuss alternatives to the proposed action including the no build alternative and identify any other alternatives considered. The Build Alternative was selected because it met the most performance criteria (including the capacity for growth) and would best meet the purpose and need of the project. The Build Alternative and the No Build Alternative were analyzed in the EA and the Draft EIR. In addition, scoping comments received informed the identification and development of alternatives to the proposed Project. Based on these considerations, the following alternatives have been identified by RCTC and FTA for consideration in the EA and the Draft EIR.

ES 2.3.1. No Build Alternative

Under the No Build Alternative, implementation of improvements at the Riverside-Downtown Station would not be constructed and the current configuration of the Riverside-Downtown Station would remain the same. Although there would be no project-related impacts to environmental resources, the No Build Alternative would not meet the Project objectives or improve operations to accommodate the 91/PV Line or the IEOC Lines. Train capacity and storage would be limited to the existing platforms. The No Build Alternative does provide insight on future conditions with no improvements and serves as a baseline for comparison with the Build Alternative.

ES 2.3.2. Build Alternative

RCTC and Metrolink propose improvements to the following elements of the Riverside-Downtown Station: 1) Station Platform and Tracks; 2) Pedestrian Access; and 3) Parking, Circulation, and Streetscape. The proposed improvements include building an additional passenger loading platform and tracks to the east side of the existing station to improve Metrolink service and extend the existing pedestrian overpass to access the new proposed platform (Figure ES-2).

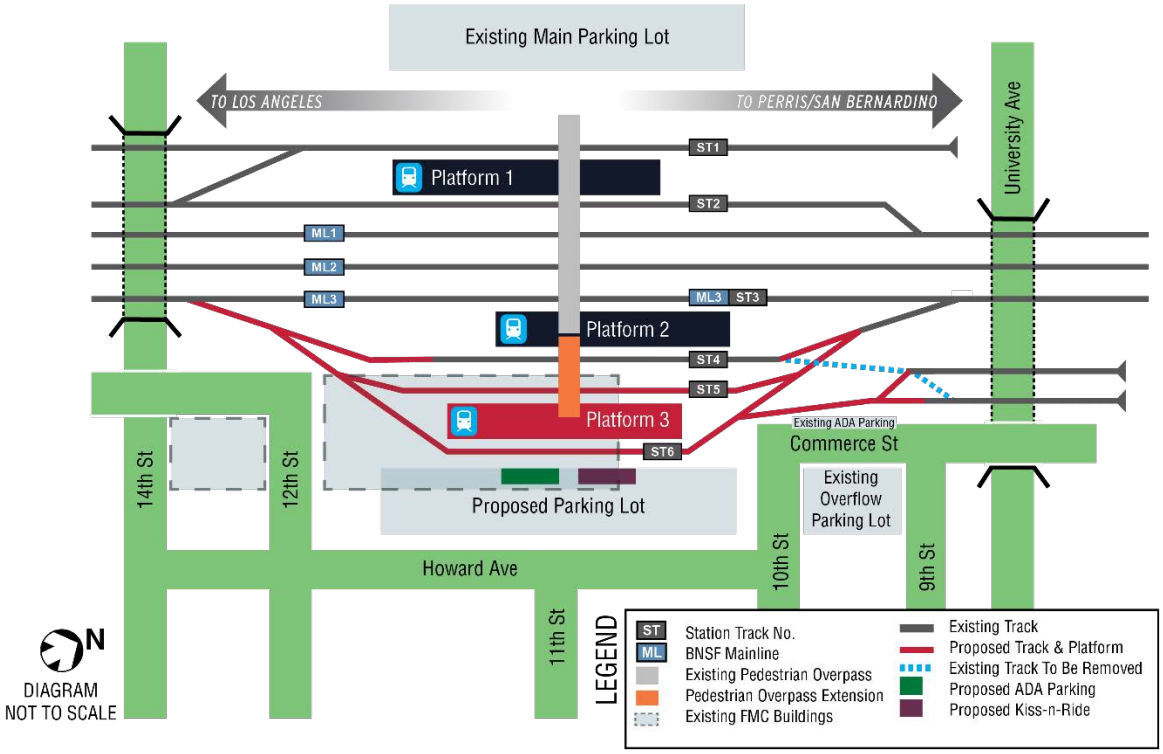

Figure ES-2. Build Alternative

The proposed track would also connect into the existing station layover tracks on the north end of the station and provide additional parking and improve traffic flow on the east side of the station. A summary of the proposed Build Alternative improvements is presented in Table ES-1. Summary of Proposed Build Alternative Improvements.

Table ES-1. Summary of Proposed Build Alternative Improvements

Element	Description
Station Platform and Track Improvements	• Add a new center platform (Platform 3) • Add new tracks (Station Tracks 5 and 6) • Modify the railroad signal system
Pedestrian Access Improvements	• Extend pedestrian overpass access to the new Platform 3 • Provide emergency egress at three locations
Parking, Circulation, and Streetscape Improvements	• Relocate ADA parking • Modify the bus drop-off area • Add sidewalks and trees • Add parking spaces
Utility Relocations	• Gas: SoCal Gas Company • Electric: City of Riverside • Water: City of Riverside • Fiber Optic: AT&T, Spectrum, Frontier and Sprint • Cable TV: CenturyLink • Storm Drain and Sewer: City of Riverside

ADA = Americans with Disabilities Act

ES 2.3.3. Design Options

As part of the Build Alternative, Design Option 1 proposes a longer extension of the pedestrian overpass access from the new proposed platform to the new surface parking lot and is intended to be incorporated with one of the parking design options. Design Options 1A, 1B, 2A, 2B, 3A, and 3B are associated with the new surface parking lot and an option to combine this new parking lot with the existing overflow parking lot on the east side of the station. The combined parking lot design option includes traffic circulation improvements along Howard Avenue, 9th Street, 10th Street, and Commerce Street. If RCTC decides to move forward with the Build Alternative and any one of the six proposed parking design options, Design Option 1 may or may not be selected to be incorporated as part of the selected Build Alternative.

Pedestrian Overpass Access Improvements

Access from the existing station area would be provided by the proposed extension of the pedestrian overpass (Figure ES-3. Build Alternative with Pedestrian Overpass Access Design Option 1). The Build Alternative with Pedestrian Overpass Access Design Option 1 includes a longer extension of the pedestrian overpass to Platform 3 and new surface parking lot (two spans, two towers/elevators).

The new pedestrian overpass elevator tower would be located 14 feet clear of both Track 5 and Track 6 on Platform 3. Emergency egress access would be provided by two 10-foot-wide, at-grade pedestrian crossings at the north and south end of Platform 3 to the proposed surface parking lot.

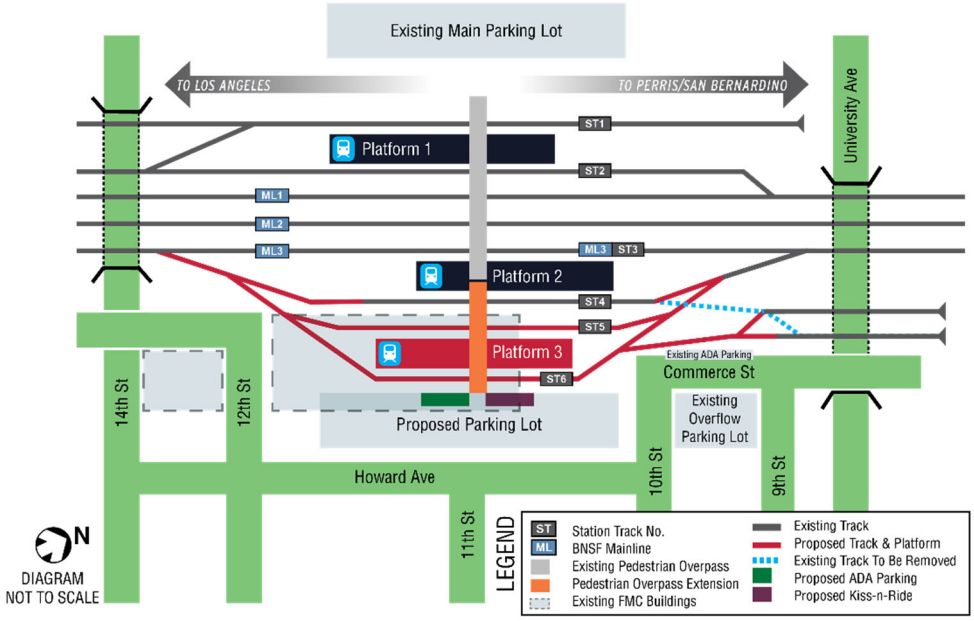

Figure ES-3. Build Alternative with Pedestrian Overpass Access Design Option 1

Parking, Circulation, and Streetscape Improvements

All parking design options would require the acquisition of parcels directly east of the station and demolition of existing structures and other ancillary structures to facilitate construction of the proposed Build Alternative improvements: A summary of proposed parking design options is presented in Table ES-2 and illustrated on Figure ES-4 through Figure ES-9 (see pages ES-30 through ES-35).

Table ES-2. Proposed Parking Design Options

Build + Design Option	Description
Parking, Circulation, and Streetscape Improvements	
Parking Design Option 1A	• New surface parking lot east of station. • Up to approximately 556 parking spaces[1] • *Impacts existing structures and other ancillary structures and residential parcels on the corner of 12th Street and Howard Avenue to facilitate construction of the proposed improvements.*
Parking Design Option 1B	• New surface parking lot east of station. • Up to approximately 500 parking spaces[1] • *Avoids relocation impacts to residential parcels on the corner of 12th Street and Howard Avenue.*
Parking Design Option 2A	• New surface parking lot east of station combined with existing overflow parking lot with the extension of Howard Avenue through to 9th Street. • Up to approximately 560 parking spaces[1] • *Impacts existing structures and other ancillary structures and residential parcels on the corner of 12th Street and Howard and requires acquisition of additional parcels directly east of the existing overflow parking lot.*

Build + Design Option	Description
Parking Design Option 2B	• New surface parking lot east of the station combined with existing overflow parking lot and the extension of Howard Avenue through to 9th Street. • Up to approximately 516 parking spaces[1] • *Avoids relocation impacts to residential parcels on the corner of 12th Street and Howard Avenue.*
Parking Design Option 3A	• New surface parking lot east of the station combined with existing overflow parking lot and the extension of Howard Avenue through to 9th Street. • Up to approximately 470 parking spaces[1] • *Avoids relocation impacts to additional parcels east of the existing overflow parking lot by routing Howard Avenue around the parcels.*
Parking Design Option 3B	• New surface parking lot east of the station combined with existing overflow parking lot and the extension of Howard Avenue through to 9th Street. • Up to approximately 414 parking spaces[1] • *Avoids relocation impacts to additional parcels east of the existing overflow parking lot and residential parcels on the corner of 12th Street and Howard Avenue.*

[1.] Indicates an approximate number of parking stalls. Number of parking stalls provided are the maximum estimate of parking stalls within the preliminary layout for each design option. These options illustrate the potential capacity of each parking lot design option for evaluation and comparison purposes in this EA and EIR. The number of stalls may change due to implementation of proposed avoidance, minimization, and mitigation measures for noise. In addition, the number of stalls may change during the final design phase due to design refinement to accommodate existing site hydrological conditions. These factors may reduce the approximate number of parking stalls under each estimate, but the potential reductions in the number of parking stalls are proportionate with the maximum parking stall estimate under each design option.

ES 2.3.4. Right of Way Requirements

Full acquisition of the existing Prism Aerospace building would be required to construct the Build Alternative. Depending on the design option selected, additional industrial and/or residential parcels would be required. Temporary construction easements (TCE) may be required to accommodate the construction of project features adjacent to the Project. Right of way (ROW) requirements identified in the EA and the Draft EIR are considered preliminary (approximately 15 percent complete) and are subject to refinement as additional information and design plans are further developed. ROW requirements to construct the proposed Project may result in a minor increase or decrease in response to comments or selection of a preferred alternative and/or during subsequent phases of project development or final design; however, the project footprint would remain the same.

ES 2.3.5. Construction Schedule

Project construction activities will occur for an estimated total of 24 months. It is anticipated that construction of the Build Alternative would begin in late 2023 and be completed by late 2025. Project construction would typically take place between the hours of 7:00 a.m. and 7:00 p.m. within the City of Riverside, in accordance with the City of Riverside Municipal Code § 7.35.0120(G). The proposed Project and selected parking design option would be constructed in phases to avoid impacts to commuter and freight train schedules during construction.

ES 2.3.6. Preliminary Cost Estimate

The Project is funded by Measure A proceeds, Southern California Optimized Rail Expansion Program, and an FTA grant. Preliminary cost estimates for the Build Alternative vary by design option from approximately $64.7 million to $80.4 million, as summarized in Table ES-3.

Table ES-3. Preliminary Cost Estimate

Project Cost	Design Option 1[a]	Build Alternative					
		+ Design Option 1A	+ Design Option 1B	+ Design Option 2A	+ Design Option 2B	+ Design Option 3A	+ Design Option 3B
Construction	$4,038,000	$20,449,000	$20,384,000	$20,839,000	$20,774,000	$20,678,000	$20,614,000
Environmental	--	$6,413,000	$6,404,000	$6,421,000	$6,412,000	$6,413,000	$6,404,000
ROW	--	$14,032,000	$11,853,000	$18,060,000	$15,881,000	$14,042,000	$11,863,000
Engineering	$485,000	$8,707,000	$8,706,000	$10,000,000	$9,446,000	$9,444,000	$9,443,000
Support Costs[b]	$485,000	$2,221,000	$2,213,000	$2,268,000	$2,260,000	$2,249,000	$2,241,000
Other Costs[c]	$1,073,000	$15,374,000	$15,125,000	$16,724,000	$16,307,000	$16,083,000	$15,835,000
Total	**$6,081,000**	**$67,196,000**	**$64,685,000**	**$74,312,000**	**$71,080,000**	**$68,909,000**	**$66,400,000**

[a.] RCTC may choose to incorporate Design Option 1 to any of the Design Options (1A through 3B). The cost of Design Option 1 would be added to the cost of the Build Alternative and parking lot design option selected.
[b.] Support costs include project management and construction management.
[c.] Other costs include contingency and inflation.
-- indicates not applicable

ES 2.4. Permits and Approvals

RCTC is seeking federal funding for the Riverside-Downtown Station Improvements Project and is required to comply with federal environmental regulations under NEPA (Code of Federal Regulations (CFR) Title 40, Parts 1500-1508) and its implementing regulations, in accordance with 23 CFR part 771. While FTA and RCTC are joint lead agencies for the proposed Project under NEPA, FTA manages and provides oversight for the development and approval of the NEPA environmental document. Approval of the EA from both agencies is required to proceed to the next phase. Under CEQA, certification of the Final EIR and approval of the Project by RCTC would be required prior to construction and implementation of the Project. The EIR, as defined by § 15161 of the State CEQA Guidelines, serves as an informational document for the general public and the proposed Project's decision-makers. RCTC, as CEQA lead agency, has the responsibility for preparing and circulating the Draft EIR for public review and certifying the Final EIR, pursuant to State CEQA Guidelines § 15089 and 15090, respectively. Implementation of the Project would require discretionary actions and permits from the agencies identified in Table ES-4.

Table ES-4. Anticipated Permits and Approvals

Agency	Action	Timing
CPUC	Approval for pedestrian bridge and at-grade crossings	Final Design Phase
City of Riverside	Approval of street improvements	Final Design Plans and Construction Phase
City of Riverside	Obtain encroachment permit	Final Design Phase
Federal Transit Administration	Approval of NEPA Environmental Document	End of Environmental Phase
Regional Water Quality Control Board	SWPPP and NPDES General Permit	Pre-construction and Construction Phases

Agency	Action	Timing
Riverside County Transportation Commission	Certification of the EIR, adoption of Findings and Statement of Overriding Considerations, adoption of the Mitigation Monitoring and Reporting Program	End of Environmental Phase
SHPO	Concurrence with the HRR historic property eligibility determination, FOE, Section 4(f) Individual Evaluation and MOA	Environmental Phase
SHPO/U.S. Department of Interior	Draft Individual Section 4(f) concurrence from the official with jurisdiction	Environmental Phase

Source: HNTB, 2020

CPUC = California Public Utilities Commission
FOE = Finding of Effect
HRR = Historic Resources Report
MOA = Memorandum of Agreement
NPDES = National Pollutant Discharge Elimination System
SHPO = State Historic Preservation Officer
SWPPP = Stormwater Pollution Prevention Plan

ES 2.5. Summary of Environmental Impacts

This environmental document addresses the potential environmental impacts of the proposed Project and was prepared based on public and agency input. In compliance with NEPA regulations and the State CEQA Guidelines, the EA and Draft EIR evaluated potential environmental consequences associated with construction and operation of the Build Alternative and design options. Various environmental topics were evaluated related to the proposed Project. As part of the scoping and environmental analyses completed for the Project, agriculture and forestry and mineral resources were considered, but no impacts were identified. Consequently, there is no further discussion of these environmental topics in this document. Due to the highly urbanized nature of the project study area, potential environmental impacts pertain primarily to the built environment. As summarized in Table ES-5, the Build Alternative would result in no impacts to public services, wildfire, or safety and security, and most of the evaluated environmental resources (aesthetics, air quality, biological resources, energy, geology and soils, greenhouse gas emissions, hydrology and water quality, population and housing, recreation, transportation, tribal cultural resources, land use planning, and environmental justice would result in less than significant or no adverse effects). Hazards and hazardous materials, utilities and service systems, noise, archaeological and tribal cultural resources would have potentially significant impacts or adverse effects, but could be mitigated to reduce the severity of the impact to less than significant impacts or to no adverse effect.

ES 2.6. Unavoidable Significant Impacts under CEQA and Adverse Effects under NEPA

The Build Alternative and all design options would result in unavoidable significant impacts under CEQA and adverse effects under NEPA after implementation of proposed avoidance, minimization, and mitigation measures for the following environmental resource topics:

- **Cultural/Section 4(f):** Former FMC Plant 1 building. The Build Alternative would require the demolition of the FMC Plant 1 building. Demolition of the historic structures would also cause indirect impacts to the former FMC Plant 2 building's integrity of setting and association.
- **Noise:** If the Build Alternative with Design Option 1B, 2B, or 3B is selected; there would be potentially significant noise impacts to two residences at 3021 12th Street during demolition of the former FMC Plant 1 building (Prism Aerospace building).

ES 2.7. Summary of Environmental Consequences and Mitigation Measures

Table ES-5 provides a summary of all potential environmental impacts of the Build Alternative and all design options. For further and more detailed information about each of the impacts as they pertain to the Build Alternative and all design options, the reader is referred to Chapter 4.0 of the EA and Chapter 3.0, 4.0, and 5.0 of the Draft EIR. Table ES-5 includes a list of proposed avoidance, minimization, and/or mitigation measures to be implemented to address potential project-related permanent and temporary impacts. RCTC and FTA are committed to satisfying all applicable federal, state, and local environmental regulations and applying reasonable and feasible mitigation measures to reduce adverse effects and potentially significant impacts. Should FTA and RCTC approve the Project, in accordance with NEPA regulations, the Environmental Commitments Record, which lists all the committed mitigation measures, would be adopted and included in the NEPA approval document. Similarly, should RCTC approve the Project, in accordance with CEQA regulations, it will also adopt the Mitigation Monitoring and Reporting Program upon approval of the proposed Project, these mitigation measures will become part of the Project, and will be considered binding under CEQA and NEPA.

Table ES-5. Summary of Environmental Impacts

CEQA/NEPA Potential Environmental Impacts		Proposed Avoidance, Minimization, Mitigation Measures[1]	CEQA/NEPA Level of Impact
Build Alternative	**Design Option**		
Aesthetics/Visual			
Aesthetics/Visual: ***Temporary Impacts (Construction)*** Temporary construction related impacts, are anticipated due to removal of trees and potential night time work requiring the use of lighting.	Construction-related impacts are similar under all design options.	AES-1: Landscape design will be in accordance with RCTC Station Design Criteria, following RCTC's general landscape requirements and in coordination with the City of Riverside to the greatest extent possible. The new parking lot(s) design will be compatible with landscaped parking lots within the project area with drought tolerant vegetation, trees, and lighting. AES-2: Nighttime construction activities near residential areas will be avoided to the extent feasible. If nighttime work is required, the construction contractor will install temporary lighting in a manner that directs light toward the construction area and will install temporary shields as necessary so that light does not spill over into residential areas. AES-3: During final design, all new or replacement lighting would be designed to be directed away from residential areas. To the greatest extent feasible, new light fixtures will include appropriate shields to direct light away from residential areas. AES-4**:** Noise barrier design will be consistent with RCTC and local jurisdiction standards and an aesthetic design treatment plan will be implemented to soften the noise barrier's structural intrusion, as well as maintain the community character and history. RCTC shall maintain the paint color and aesthetics over time. AES-5: Consultation regarding potential indirect adverse visual effects to historic properties will be conducted with consulting parties in accordance with Section 106 of the National Historic Preservation Act of 1966. BIO-2: See Biological Resources section below for further details on this measure.	**CEQA:** Less Than Significant Impact **NEPA:** No Adverse Effect
Aesthetics/Visual: ***Permanent Impacts (Operations)*** The Build Alternative would remove the Prism Aerospace Building (formerly the FMC) and residential houses (under Design Options 1A, 2A, and 3A), which is an existing obstruction to views of Mount Rubidoux looking west along 12th Street. Removal of this building and construction of the 12-foot noise barrier (located on the eastern edge of the Prism Aerospace building structure as depicted in Figure 4-20 of the EA) would enhance views from this vantage point and result in a beneficial impact. The Build Alternative and all design options would incorporate streetscape improvements such as providing uniform landscape elements along ADA-compliant sidewalks to buffer the station and local roadways. Landscape improvements would incorporate drought-tolerant planting, and to the greatest extent feasible, use recycled water to maintain landscape elements. In addition to landscape elements, street lighting would be incorporated along sidewalks to enhance safety and walkability to and from the station.	Changes to the surrounding existing visual environment include landscaping and lighting, construction of a 12-foot-high noise barrier and removal of the following structures by design option and construction of an 8-foot high wall along Howard Avenue for design options 2A or 2B: • Design Option 1A: FMC Complex and two 12th Street residences • Design Option 1B: FMC Complex • Design Option 2A: FMC Complex two 12th Street residences and two multifamily and one business on 9th Street and 10th Street • Design Option 2B: FMC Complex and two multifamily residences one business on 9th Street and 10th Street • Design Option 3A: FMC Complex and two 12th street residences • Design Option 3B: FMC Complex		

CEQA/NEPA Potential Environmental Impacts		Proposed Avoidance, Minimization, Mitigation Measures[1]	CEQA/NEPA Level of Impact
Build Alternative	**Design Option**		
Air Quality			
Air Quality: ***Temporary Impacts (Construction)*** The Project would result in temporary impacts to air quality from dust and emissions. ***Permanent Impacts (Operations)*** Overall, the Build Alternative and all design options would result in a net decrease in emissions compared to No Build conditions due to the reduction in regional VMT. Moreover, the Build Alternative and all design options would not result in an increase in criteria pollutants in the South Coast Air Basin where it is designated as federal non-attainment for O_3 and $PM_{2.5}$. As such, operation of the Build Alternative would not result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment.	Temporary and permanent impacts are similar under the Build Alternative and all design options.	AQ-1: In accordance with SCAQMD Rule 403, fugitive dust emissions from the project site shall be controlled by regular watering or other dust preventive measures, as specified in SCAQMD Rule 403: • Minimize land disturbed by clearing, grading, and earth moving, or excavation operations to prevent excessive amounts of dust. • Provide an operational water truck on-site at all times; use watering trucks to minimize dust; watering should be sufficient to confine dust plumes to the project work areas; watering shall occur at least twice daily with complete coverage, preferably in the late morning and after work is done. • Suspend grading and earth moving when wind gusts exceed 25 miles per hour unless the soil is wet enough to prevent dust plumes. • Securely cover trucks when hauling materials on or off-site. • Stabilize the surface of dirt piles if not removed immediately. • Limit vehicular paths, limit speeds to 15 miles per hour on unpaved surfaces, and stabilize any temporary roads. • Minimize unnecessary vehicular and machinery activities. • Sweep paved streets at least once per day where there is evidence of dirt that has been carried on to the roadway. • Revegetate or stabilize disturbed land, including vehicular paths created during construction to avoid future off-road vehicular activities.	**CEQA:** Less Than Significant Impact **NEPA:** No Adverse Effect

CEQA/NEPA Potential Environmental Impacts		Proposed Avoidance, Minimization, Mitigation Measures[1]	CEQA/NEPA Level of Impact
Build Alternative	**Design Option**		
Biological Resources			
Biological Resources: ***Temporary Impacts (Construction)*** There are limited biological resources within and near the Project as the majority of this area is covered with hardscape. Plant species within the biological study area typically consist of non-native and ornamental landscaping. There is a potential for nesting birds and roosting bats to occur on-site during construction.	Potential temporary impacts resulting from the construction of the Build Alternative and all design options are similar.	BIO-1: The following measures will be implemented by the Project to avoid and minimize impacts to special-status and nesting birds during construction. • Where feasible, the contractor will complete tree and shrub removals and structure demolition between September 1 and January 31, which is outside of the nesting season. • During nesting season (February 1 through August 31) pre-construction surveys for active nests (nests with eggs or juvenile birds that are dependent on parental care) will be conducted by a qualified biologist no more than 48 hours prior to starting construction activities. Surveys will cover any potential nesting sites within 500 feet of construction activity, including vegetation removal and structure demolition. • Surveys and avoidance measures for active nests will conform to current USFWS and CDFW protocol and recommendations. • If active nests are observed during pre-construction surveys or during construction, active nest sites will be designated as environmentally sensitive areas and identified with appropriate markers for the duration that eggs or juvenile birds are nest-dependent. • A qualified biologist will develop buffer recommendations for active nests that are site and species-specific, based on current USFWS and CDFW guidance, and at an appropriate distance that will protect normal bird behavior to prevent nesting failure or abandonment. Additional buffer distance will be implemented for raptors. Buffers will be in place for the duration eggs or juvenile birds are nest-dependent. • The qualified biologist will monitor the behavior of the birds (adults and young when present) at the nest site to ensure they are not disturbed by project construction. Nest monitoring will continue during nearby construction, until the biologist has confirmed the young have fully fledged (have completely left the nest site and are no longer dependent on the parents). • A qualified biologist will conduct WEAT for all on-site workers regarding environmental protection measures on the Project, including tree protection measures, stormwater and water quality protection measures, invasive species, and potential special-status species that could occur in or near the Project, including roosting bats, peregrine falcon, and nesting birds. BIO-2: The final design of the Project will avoid or minimize tree removals to the extent feasible. The following measures will be implemented to avoid and minimize tree removal and damage to trees during construction: • The size and species of trees that would require removal will be determined prior to construction. • Trees within the project footprint will be surveyed by a licensed arborist prior to removal and transplant.	**CEQA:** Less Than Significant Impact with Mitigation Incorporated **NEPA:** No Adverse Effect
Biological Resources: ***Permanent Impacts (Operations)*** The Project would require replacement of up to 51 trees within the project footprint.	The Build Alternative design options would require the removal of trees as follows: • Design Option 1/Design Option 1A: up to 36 • Design Option 1B: up to 32 • Design Option 2A: up to 51 • Design Option 2B: up to 47 • Design Option 3A: up to 47 • Design Option 3B: up to 43		

CEQA/NEPA Potential Environmental Impacts		Proposed Avoidance, Minimization, Mitigation Measures[1]	CEQA/NEPA Level of Impact
Build Alternative	**Design Option**		
		• Trees that do not need to be removed will have protection measures implemented, where necessary, to prevent incidental damage during construction. Protection measures will be implemented as specified by the arborist. • Trees that need to be removed will be transplanted within the project footprint to the greatest extent feasible. • Trees within the City ROW that are removed and cannot be transplanted will be replaced as follows: Non-native trees will be replaced at a 1:1 ratio and native trees will be replaced at a 3:1 ratio (replaced:removed) within or near the Project to the greatest extent feasible. Tree replacement and planting will be coordinated through the City of Riverside in accordance with applicable landscaping plans and approved aesthetic concepts. BIO-3: Bats could roost in structures and vegetation within the project footprint. Preconstruction bat surveys will be conducted by a qualified biologist to determine if bats are present prior to removing trees or structures that potentially provide suitable habitat. If bats are discovered in or near active construction, a protective buffer zone will be established by the biologist.	
Cultural Resources			
Cultural Resources: *Historic Resources* *Permanent Impacts (Operations)* The Build Alternative will require removal of the FMC building Plant 1 and depending on design option selected, may require removal of the 12th Street and/or Ninth Street neighborhood residences. Demolition of historic structures may indirectly impact the Eastside Neighborhood's integrity of setting and association.	The Build Alternative design options will require the demolition or removal of the following structures: • Design Option 1A: FMC Complex and 12th Street residences • Design Option 1B: FMC Complex • Design Option 2A: FMC Complex, 12th Street and Ninth Street Neighborhood Conservation Area residences • Design Option 2B: FMC Complex and Ninth Street Neighborhood Conservation Area residences • Design Option 3A: FMC Complex and 12th Street residences • Design Option 3B: FMC Complex	***Historic Resources*** **CUL-1 Historical Resources and Build Alternative with Design Options 1A and 1B** ***Former FMC Plant 1 Building*** • Potential mitigation/minimization measures for the demolition of Plant 1 and associated impacts to Plant 2 would include HABS-like documentation/recordation of both buildings. Additionally, it would be appropriate to salvage building materials (e.g., station signage for the historic site) for reuse at the station and/or donate the materials to a local building salvage company. Additional measures may be identified during public involvement and ongoing consultation with interested parties and with the SHPO. ***12th Street Residences and Worker's Houses*** • To minimize impacts to residences from proposed design options, fences and/or vegetated screening could be placed between the houses on 12th Street, the proposed noise barrier, and the proposed passenger station and parking lot. For the four houses on Howard Avenue, vegetated screening could be placed between the parking lot and Howard Avenue. Streetscape enhancements (street trees and sidewalks) would lessen the overall change to the setting caused by the demolition of Plant 1.	**CEQA:** Potentially Significant Impact **NEPA:** Adverse Effects

CEQA/NEPA Potential Environmental Impacts		Proposed Avoidance, Minimization, Mitigation Measures[1]	CEQA/NEPA Level of Impact
Build Alternative	**Design Option**		
Cultural Resources: Archaeological Resources ***Temporary Impacts (Construction)*** Although no impacts are anticipated, there is a potential for encountering undiscovered archaeological resources in a subsurface context during ground disturbing activities that would result in a less than significant impact to archaeological resources.	Potential temporary construction related impacts resulting from the construction and of the Build Alternative and all design options are similar.	**CUL-2 Historical Resources and Build Alternative with Design Options 2A and 2B** ***Former FMC Plant 1 Building*** • Potential mitigation/minimization measures for the demolition of Plant 1 and associated impacts to Plant 2 would include HABS-like documentation/recordation of both buildings. Additionally, it would be appropriate to salvage building materials (e.g., station signage for the historic site) for reuse at the station and/or donate the materials to a local building salvage company. Additional measures may result as part of the public involvement and ongoing consultation with interested parties and the SHPO. ***12th Street Residences and Ninth Street Neighborhood Conservation Area Residences*** • To minimize potential impacts to residences from proposed design options, fences and/or vegetated screening could be placed between the houses on 12th Street, the proposed noise barrier, the proposed passenger station and parking lot, and Howard Avenue. Impacts can be further minimized through streetscape enhancements (already proposed as part of the Project). • For the 9th Street residences that would be demolished as a result of Design Options 2A and 2B (3006 9th Street and 2994 9th Street), mitigation measures would include HABS-like documentation/recordation of both buildings. **CUL-3 Historical Resource and Build Alternative with Options 3A and 3B** ***Former FMC Plant 1 Building*** • Potential mitigation/minimization measures for the demolition of Plant 1 and associated impacts to Plant 2 would include HABS-like documentation/recordation of both buildings. Additionally, it would be appropriate to salvage building materials (e.g., station signage for the historic site) for reuse at the station and/or donate to a local building salvage company. Additional measures may result as part of the public involvement and ongoing consultation with interested parties and with the SHPO. ***12th Street Residences, Howard Avenue Worker's Houses*** • To minimize impacts to residences from proposed design options, fences and/or vegetated screening could be placed between the houses on 12th Street, the proposed noise barrier, and the proposed passenger station and parking lot. For the four houses on Howard Avenue, vegetated screening could be placed between the parking lot and Howard Avenue. Streetscape enhancements (street trees and sidewalks) will lessen the overall change to the setting caused by the demolition of Plant 1.	**CEQA:** Historic Resources: Potentially Significant Impact Archaeological Resources: Less than Significant with Mitigation Incorporated **NEPA:** Adverse Effects

CEQA/NEPA Potential Environmental Impacts		Proposed Avoidance, Minimization, Mitigation Measures[1]	CEQA/NEPA Level of Impact
Build Alternative	**Design Option**		
		Ninth Street Neighborhood Conservation Area • The Howard Avenue extension will feature new lighting, and planting strips and street trees that would soften the edge between the historic residences in the Ninth Street Neighborhood Conservation Area (9th Street and Howard Avenue) and the new roadway, which would minimize changes to the setting of the residences adjacent to the new roadway. **CUL-4 Archaeological Resources** • All ground-disturbing activities including grading will be monitored by a qualified archaeologist and Native American monitor. If archaeological resources are encountered, the monitor would have the authority to temporarily halt or redirect grading and other ground disturbing activity in the immediate area of the find (50-foot radius). • In the course of monitoring, when ground-disturbing activities have reached a point that the monitors are reasonably certain that no additional cultural material would be encountered, monitoring could be halted after conferring with RCTC staff. **CUL-5 Human Remains** If human remains are discovered, the County Coroner will be contacted. If the remains are determined to be of Native American origin, the Most Likely Descendant, as identified by the NAHC, will be contacted to determine proper treatment and disposition of the remains. All requirements of Health and Safety Code §7050.5 and PRC §5097.98 will be followed. AES-4 and AES-5: See Aesthetics/Visual section above for further details on this measure.	
Cumulative			
Cumulative: ***Temporary Impacts (Construction)*** **Construction-related activities that overlap with adjacent projects may result in temporary cumulative impacts due to noise, dust, and traffic congestion. Construction of the Project and other developments may temporarily reduce on-street parking during overlap periods. The impacts during construction are temporary and indirect.**	If construction activities overlap with adjacent projects, potential, temporary noise impacts resulting from the construction of the Build Alternative with Design Options 1B, 2B, and 3B (if selected) would result in a cumulatively considerable noise impact due to the proximity of construction activities relative to the residences immediately adjacent to the Prism Aerospace building at 3021 12th Street. Design Options 1A, 2A, and 3A would result in less significant or no adverse effects. Permanent impacts resulting from the operations of the Build Alternative and all design options are similar	CUM-1: Coordinate construction activities so construction activities do not overlap with other projects in close proximity as feasible.	**CEQA:** Potentially Significant **NEPA:** Adverse Effect
Cumulative: *Permanent Impacts (Operations)* Potential traffic-related impacts from other projects may cause cumulative impacts to circulation; however, with implementation of project features to improve traffic flow no substantial impacts are anticipated. The Build Alternative will require removal of the FMC Plant 1 building and result in a significant and adverse effect to historic resources. Removal of historic structures may indirectly impact the Eastside Neighborhood's integrity of setting and association.			

CEQA/NEPA Potential Environmental Impacts		Proposed Avoidance, Minimization, Mitigation Measures[1]	CEQA/NEPA Level of Impact
Build Alternative	**Design Option**		
Energy			
Energy: ***Temporary Impacts (Construction)*** Increased energy consumption is anticipated during construction for the operation of construction equipment.	Potential temporary and permanent impacts resulting from the construction and operations of the Build Alternative and all design options are similar.	E-1: Energy efficient lighting, such as LED with a longer lifespan would be used at the station to reduce future maintenance needs.	**CEQA:** Less Than Significant Impact **NEPA:** No Impact
Energy: ***Permanent Impacts (Operations)*** Operation of the Project is expected to lower regional energy demands due to reduction in train idling and regional vehicle miles traveled.			
Geology and Soils			
Geology and Soils: ***Temporary Impacts (Construction)/*** ***Permanent Impacts (Operations)*** The Project is within a region susceptible to earthquakes but is not within an earthquake fault zone. A low to moderate liquefaction potential is present at the project site. Impacts to geology and soils are associated with potential ground shaking and minor on-site soils subsidence. The project site is not located on a geologic unit or soil that is unstable or within an area associated with landslides.	Potential temporary and permanent impacts resulting from the construction and operations of the Build Alternative and all design options are similar.	GEO-1: Prior to grading, the proposed structural improvement areas (i.e. all-structural fill areas, pavement, buildings, etc.) will be cleared of surface and subsurface pipelines and obstructions. Heavy vegetation, roots, and debris will be disposed of off-site. Any on-site wells or septic waste will be removed or abandoned in accordance with the Riverside Country Department of Environmental Health. Voids created by removal of buried/unsuitable materials will be backfilled with properly compacted soil in general accordance with the recommendations of the Geotechnical Exploration Report (HNTB, Inc., 2020). GEO-2: Import soils and/or borrow sites, if needed, will be evaluated prior to import. Import soils will be uncontaminated, granular in nature, free of organic material and have very low expansion potential and a low corrosion impact to the proposed improvements. GEO-3: To support the completion of final design plans, a site-specific investigation and subsurface data liquefaction screening and analysis will be performed to evaluate the potential stability and settlement characteristics for the proposed improvements. Information gathered from the subsurface data will allow structures to be designed to withstand a defined level of ground acceleration and fault offset, where applicable. GEO-4: In the event of unanticipated paleontological resource discoveries during project-related activities, work in the immediate vicinity of the discovery will be halted, until the unanticipated discovery can be evaluated by a qualified paleontologist.	**CEQA:** Less Than Significant Impact **NEPA:** No Adverse Effect

CEQA/NEPA Potential Environmental Impacts		Proposed Avoidance, Minimization, Mitigation Measures[1]	CEQA/NEPA Level of Impact
Build Alternative	**Design Option**		
Climate Change and Greenhouse Gas Emissions			
Climate Change and Greenhouse Gas Emissions: Temporary Impacts (Construction) Temporary construction activities would result in a temporary increase in greenhouse gas emissions. ***Climate Change and Greenhouse Gas Emissions: Permanent Impacts (Operations)*** Permanent impacts associated with train operations and service improvements and potential traffic pattern alterations would not result in an increase in GHGs. It is anticipated that the Build Alternative would result in a net benefit by reducing regional VMT and associated GHG emissions.	Potential temporary and permanent impacts resulting from the construction and operations of the Build Alternative and all design options are similar.	No mitigation is required.	**CEQA:** Less Than Significant Impact **NEPA:** No Impact
Hazards and Hazardous Materials			
Hazards and Hazardous Materials: Temporary Impacts (Construction) Temporary impacts associated with the Project includes the use of construction equipment with the potential for release of construction oils, grease, paint chips, etc. on-site. Additionally, the Prism Aerospace property contains contaminated soils that are considered as hazardous materials. The transport, use, and disposal of on-site contaminated soils may potentially result in temporary exposure to workers and surrounding community. ***Hazards and Hazardous Materials: Permanent Impacts (Operations)*** Permanent Impacts associated with potential release of hazardous materials during operations will be the same as existing. However, the Build Alternative would effectively cover exposed contaminated soils to prevent off-site migration through the construction of a parking lot.	Potential temporary and permanent impacts resulting from the construction and operations of the Build Alternative and all design options are similar.	HAZ-1: Prior to subsurface disturbance activities, an SMP will be prepared to address the possibility of encountering localized areas containing contaminants of potential concern, including VOCs, petroleum hydrocarbons, SVOCs, and metals. The plan will be prepared by a qualified environmental consultant and will be implemented during soil disturbance activities under the oversight of an environmental professional. The plan will address monitoring excavated soil; community and worker health and safety; and soil handling, stockpiling, characterization, on-site reuse, export, and disposal protocols. HAZ-2: For areas with the potential for encountering soil contamination (e.g., near areas of known or suspected contamination), appropriate worker and community health and safety measures (e.g., dust control, air monitoring, and stockpile management) will be implemented by the contractor, under the oversight of a qualified environmental professional. HAZ-3: A hazardous waste management plan will be prepared before disturbing utilities (e.g., cementitious pipelines), electrical/lighting equipment, and hazardous building materials such as ACM, LBP, treated wood, and other materials falling under UWR requirements. The plan will address testing protocols, handling, and disposal requirements, and will be implemented by a California Department of Public Health Certified Lead Inspector/Assessor, California Division of Occupational Safety and Health Certified Asbestos Consultant, and/or professionals appropriately qualified in their field, in accordance with applicable local, state, and federal guidelines and regulations. HAZ-4: An ACM survey will be conducted in accordance with the local SCAQMD Rule 1403 requirements for all buildings planned for demolition. Handling and disposal of lead-containing surfaces that may be present in buildings will be conducted in accordance with 17 CCR and 8 CCR, Division of Occupational Safety and Health Lead in Construction Standard § 1532.1. Clean up handling, and/or disposal of other hazardous materials that may be	**CEQA:** Less Than Significant with Mitigation Incorporated **NEPA:** No Adverse Effects

CEQA/NEPA Potential Environmental Impacts		Proposed Avoidance, Minimization, Mitigation Measures[1]	CEQA/NEPA Level of Impact
Build Alternative	**Design Option**		
		present within structures planned for removal will also be conducted in accordance with UWR, if planned for removal. HAZ-5: Consideration will be given to placement of a high-visibility geomembrane at the base of excavation in areas of impacted soil or soil vapor to advise excavators of potential underlying exposure to chemicals detected below the membrane. HAZ-6: Arsenic levels exceeding DTSC's Southern California Regional Background Arsenic Concentration of 12 mg/kg in soil samples collected in the upper 1 to 2 feet of soil along the former railroad tracks in Area C are considered as hazardous material. Soil within the width of the railroad tracks to a depth of 2 feet will be separately stockpiled for off-site disposal at a licensed facility that will accept soil with elevated arsenic levels. HAZ-7: Soil disturbance activities will not be allowed on the So. Cal Gas property (Area A and C) without approval of the SMP by the DTSC and prior notification. Any soil removal in the property will be managed in accordance with all applicable state and federal provisions. HAZ-8: Activities that may disturb, alter, damage, or destroy groundwater monitoring wells on the So. Cal Gas property (Area A and C) are prohibited unless given authorization by the DTSC and the RWQCB. The use of the property will preserve the integrity and physical accessibility of the groundwater monitoring wells. DTSC will be notified about any damage caused to the groundwater monitoring wells. HAZ-9: Dust control measures to minimize fugitive dust emissions during construction and demolition activities will be implemented. Dirt tracked onto paved roads from unpaved areas will be minimized. Trucks hauling excavated materials to the disposal site will be covered and haul routes to the disposal site will avoid the proposed Eastside Neighborhood school.	
Hydrology and Water Quality			
Hydrology and Water Quality: ***Temporary Impacts (Construction)*** Temporary construction activities, including the use of construction equipment, may result in the release of construction materials, oils, concrete, sediment runoff from exposed soils, and other pollutants into surface and ground water. On-site best management practices will be implemented to prevent potential release of contaminants into surface and ground water. On-site drainage patterns will be minimally impacted.	Potential temporary and permanent impacts resulting from the construction and operations of the Build Alternative and all design options are similar.	WQ-1: Proposed grades will remain similar to existing grades and maintain existing flow paths/patterns. WQ-2: The construction of the paved surface parking lot (under all design options) and implementation of non-infiltration BMPs will be implemented to avoid worsening the existing contamination within the project site. In addition, RCTC will implement the Final Soil Management Plan (as approved by DTSC) to ensure contaminated soils are handled appropriately and avoid potential impacts to groundwater. WQ-3: Design the on-site storm drain system to connect with the existing 42-inch storm drain system to minimize the amount of flow draining to the low point at Howard Ave/11th Street. WQ-4: To the greatest extent feasible, maintain existing grades at the project site to allow the floodplain to utilize its current storage area and avoid altering the footprint of the 100-year floodplain. Reduce barriers to flow in floodplain by demolishing Prism	**CEQA:** Less Than Significant Impact **NEPA:** No Adverse Effect
Hydrology and Water Quality: ***Permanent Impacts (Operations)*** The Build Alternative is expected to increase the volume of downstream flow due to the addition of impervious surface area; however, construction of the proposed parking lot will cap contaminated soils resulting in less contaminant seep into the underlying groundwater. The Build Alternative will be designed to follow the existing ground and drainage patterns.			

CEQA/NEPA Potential Environmental Impacts		Proposed Avoidance, Minimization, Mitigation Measures[1]	CEQA/NEPA Level of Impact
Build Alternative	**Design Option**		
		Aerospace building and placing noise barrier in line with flow direction. Design of station improvements will follow RCTC design standard requirements within floodplains and coordinated with the City of Riverside and County of Riverside Flood Control. Certain items such as underground conduits and the elevator system should be designed to be sealed from infiltration of flood water during the final design phase. The inclusion of flood warning devices may also be required. The City of Riverside is the Flood Plain Coordinator for this site. Therefore, coordination with the City will be required during the final design phase of the project. During design, a hydraulic study showing the proposed improvements and the impacts to the overall BFE will be required. WQ-5: During construction of the station improvements, BMPs such as fiber rolls, inlet protection, etc., will be implemented to comply with CGP requirements. Other construction BMPs, as required by local and regulatory agencies, will be implemented by the construction contractor. As directed by RCTC and/or regulatory agencies, non-infiltration BMPs will be implemented to address additional runoff due to the creation of additional impervious surfaces.	
Land Use and Planning			
Land Use and Planning: ***Temporary Impacts (Construction)*** TCEs from adjacent industrial land uses may be required to construct the proposed Project. Preliminary design plans indicate that approximately 0.04 acre from the Solar Max property may be required to accommodate construction of station improvements under the Build Alternative and all design options. TCEs from nearby transportation land uses within the City of Riverside's ROW along Howard Avenue, Commerce Street, 12th Street, 10th Street, and 9th Street may be required to construct the Project. If TCEs are required, RCTC will request TCEs from the City of Riverside to construct within local roadways and may require intermittent lane closures; however, access to these local roadways, residences and businesses will be maintained throughout the duration of construction.	Potential temporary impacts resulting from the construction of the Build Alternative and all design options are similar.	No mitigation is required to address temporary and permanent impacts.	**CEQA:** Less Than Significant Impact **NEPA:** No Impact
Land Use and Planning: ***Permanent Impacts (Operation)*** The Build Alternative will require the conversion of existing industrial and may require residential land uses to transportation uses. The conversion to transportation uses is consistent with the permitted uses identified in the Riverside Marketplace Specific Plan. In addition to the conversion of industrial uses, existing residential properties would be converted to a public facility (parking lot); two existing residential properties at the intersection of Howard Avenue and 12th Street and two existing	Design Options would require conversion of existing land use to transportation use and incorporated into the Riverside-Downtown Station as follows: • Design Option 1A: – Single-family Residential: 0.37 acre – Industrial: 6.9 acres • Design Option 1B: – Single-family Residential: 0.05 acre – Industrial: 6.9 acres • Design Option 2A:		

CEQA/NEPA Potential Environmental Impacts		Proposed Avoidance, Minimization, Mitigation Measures[1]	CEQA/NEPA Level of Impact
Build Alternative	**Design Option**		
multi-family units located along 9th Street are inconsistent with the City of Riverside's land use plan as these residential properties are located in an area designated for industrial uses. These existing homes were constructed prior to the adoption of the current City of Riverside General Plan and Marketplace Specific Plan and are currently considered as non-conforming land uses.	— Single-family Residential: 0.37 acre — Multi-family Residential: 0.37 acre — Industrial: 7.67 acres — Transportation: 0.77 acre • Design Option 2B: — Single-family Residential: 0.05 acre — Multi-family Residential: 0.37 acre — Industrial: 7.67 acres — Transportation: 0.77 acre • Design Option 3A: — Single-family Residential: 0.37 acre — Industrial: 6.9 acres — Transportation: 0.61 acre — Public Facilities: 0.65 acre • Design Option 3B: — Single-family Residential: 0.05 acre — Industrial: 6.9 acres — Transportation: 0.61 acre — Public Facilities: 0.65 acre		
Noise			
Noise: ***Temporary Impacts (Construction)*** Temporary construction vibration and noise impacts are anticipated due to the operation of on-site construction equipment. Construction noise near noise-sensitive land use, such as residences, would be 67.4 dBA L_{EQ} (8-hour) at 250 feet. Demolition activities within 10 feet of 12th Street residences are anticipated to result in temporary significant impacts. Noise generated by construction equipment is not anticipated to exceed 80 dBA L_{EQ} (8-hour) or 70 dBA L_{EQ} (8-hour) at night.	Design options 1B, 2B and 3B if selected, would result in significant vibration and noise impacts during construction. Mitigation measures are required to reduce vibration and noise impacts. If residents will not accept temporary accommodations (Measure N-4) during construction, vibration and noise impacts during construction and demolition activities would remain significant. Design Options 1A, 2A, 3A would result in less significant or no adverse effects to vibration and noise.	N-1: Under the Build Alternative and all design options, a barrier would be constructed along the eastern edge of the existing warehouse structure with a length of approximately 500 feet. The barrier height for this wall would be at least 12 feet high to reduce severe noise impacts to at least moderate levels. The noise barriers would be required to meet a minimum STC rating of 22 to 23 to adequately ensure noise reduction. It can be constructed of masonry, wood, plastic, fiberglass, plexiglass, steel, or a combination of those materials, if it meets the STC rating described above and there are no cracks or gaps through or below the wall. Any seams or cracks must be filled or caulked. N-2: Under the Build Alternative and for Design Options 2A and 2B only, a noise barrier would be constructed along the entirety of the existing western property wall of 2982 9th Street. The barrier would be at least 8 feet high to reduce severe noise impacts to at least moderate levels. The noise barriers would be required to meet a minimum STC rating of 22 to 23 to adequately ensure noise reduction. It can be constructed of masonry, wood, plastic, fiberglass, plexiglass, steel, or a combination of those materials, if it meets the STC rating described above and there are no cracks or gaps through or below the wall. Any seams or cracks must be filled or caulked. N-3: A construction Noise Management Plan will be prepared by the contractor who describes the measures to be included in the construction plans to ensure compliance with noise and vibration limits and submitted for approval by RCTC. The following measures will be included as feasible to reduce construction noise:	**CEQA:** Design Option: 1A, 2A, 3A Less Than Significant with Mitigation Incorporated Design Option: 1B, 2B, 3B Potentially Significant Impact **NEPA:** No Adverse Effects
Noise: ***Permanent Impacts (Operations)*** The Build Alternative would result in permanent impacts as noise level increases are anticipated at multiple receivers for each design option. Noise levels would increase primarily due to the removal of the existing Prism Aerospace building which provides noise attenuation for multiple residential receivers in the area.	Noise impacts associated with each Design Option include: • Design Option 1A: 15 residential receivers with a moderate impact and 9 residential receivers with a severe impact. • Design Option 1B: 15 residential receivers with a moderate impact and 9 residential receivers with a severe impact. • Design Option 2A: 19 residential receivers with a moderate impact and 11 residential receivers with a severe impact. • Design Option 2B: 19 residential receivers with a moderate impact and 11 residential receivers with a severe impact. • Design Option 3A: 15 residential receivers with a moderate impact and 9 residential receivers with a severe impact. • Design Option 3B: 15 residential receivers with a moderate impact and 9 residential receivers with a severe impact.		

CEQA/NEPA Potential Environmental Impacts		Proposed Avoidance, Minimization, Mitigation Measures[1]	CEQA/NEPA Level of Impact
Build Alternative	Design Option		
		• Construction equipment to be properly outfitted and maintained with manufacturer-recommended noise-reduction devices. • Diesel equipment to be operated with closed engine doors and equipped with factory-recommended mufflers. • Mobile or fixed “package” equipment (e.g., arc welders and air compressors) equipped with shrouds and noise control features readily available and specific to the type of equipment being used. • Electrically powered equipment to be used instead of pneumatic or internal-combustion powered equipment, where feasible. • Unnecessary idling of internal combustion engines (e.g., in excess of 5 minutes) to be prohibited. • Material stockpiles and mobile equipment staging, parking, and maintenance areas to be located as far as practicable from noise sensitive receptors. • The use of noise-producing signals, including horns, whistles, alarms, and bells, shall be for safety warning purposes only. • No project-related public address or music system(s) shall be audible at any adjacent sensitive receptor. • Temporary sound barriers or sound blankets shall be installed between construction operations and adjacent noise-sensitive receptors. Due to equipment exhaust pipes being approximately 7 to 8 feet above ground, temporary sound barriers at least 10 feet high above grade may be utilized. To effectively reduce noise levels, the temporary sound barrier shall be constructed of a material with a minimum weight of 2 pounds per square foot with no gaps or perforations and shall remain in place until the conclusion of demolition, grading, and construction activities. • The on-site construction supervisor shall have the responsibility and authority to receive and resolve noise complaints. A clear appeal process for the affected resident shall be established prior to construction commencement to allow for resolution of noise problems that cannot be immediately solved by the site supervisor. • RCTC shall notify residences within 100 feet of the project’s property line in writing within two weeks of any construction activity, such as demolition, asphalt removal, and/or heavy grading operations. The notification to residences shall describe the activities anticipated, provide dates and hours, and provide contact information with a description of a complaint and response procedure. N-4: If Design Option 1B, 2B, or 3B is selected for construction, RCTC will provide temporary but similar housing accommodations within the city of Riverside to the residents of 3021 12th Street during periods of construction where significant noise is generated such as during the demolition work to remove the existing Prism Aerospace building walls or if construction	

CEQA/NEPA Potential Environmental Impacts		Proposed Avoidance, Minimization, Mitigation Measures[1]	CEQA/NEPA Level of Impact
Build Alternative	**Design Option**		
		work exceeds the following thresholds: daytime construction work exceeds 80 dBA L_{EQ} (8-hour) or if nighttime project construction work exceeds 70 dBA L_{EQ} (8-hour) at nearby residences. AES-4: See Aesthetics/Visual section above for further details on this measure.	
Population and Housing			
Population and Housing: ***Temporary Impacts (Construction)*** The Build Alternative would not displace a substantial number of people or existing housing during construction.	***Temporary Impacts:*** Temporary and permanent impacts resulting from the construction and operations of the Build Alternative and all design options are similar.	No mitigation is required to address temporary and permanent impacts.	**CEQA:** Less Than Significant Impact **NEPA:** No Adverse Effects
Population and Housing: ***Permanent Impacts (Operations)*** The Build Alternative will require up to 10 residential unit (single family and multifamily combined) displacements and up to 2 non-residential displacements. Suitable and comparable replacement properties for housing and business relocations are available within a 10-mile radius of the project study area.	The following number of displacements would occur under each design option: • Design Option 1/Design Option 1A: – Residential Unit Displacements: 2 – Non-Residential Displacements: 1 • Design Option 1B: – Residential Unit Displacements: 0 – Non-Residential Displacements: 1 • Design Option 2A: – Residential Unit Displacements: 10 – Non-Residential Displacements: 2 • Design Option 2B: – Residential Unit Displacements: 8 – Non-Residential Displacements: 2 • Design Option 3A: – Residential Unit Displacements: 2 – Non-Residential Displacements: 1 • Design Option 3B: – Residential Unit Displacements: 0 – Non-Residential Displacements: 1		

CEQA/NEPA Potential Environmental Impacts		Proposed Avoidance, Minimization, Mitigation Measures[1]	CEQA/NEPA Level of Impact
Build Alternative	**Design Option**		
Public Services			
Public Services: ***Temporary Impacts (Construction)/Permanent Impacts (Operations)*** The Build Alternative will not result in the acquisition or displacement of any police, fire stations, schools, parks, or other public facilities.	Potential temporary and permanent impacts resulting from the construction and operations of the Build Alternative and all design options are similar.	No mitigation is required to address temporary and permanent impacts.	**CEQA:** No Impact **NEPA:** No Impact
Recreation			
Recreation: ***Temporary Impacts (Construction)*** Construction would result in short-term, temporary impacts to Lincoln Park including increases in noise, dust, visual effects, and traffic. Construction would not result in the loss of access to or use of adjacent parks or recreational resources. ***Recreation:*** ***Permanent Impacts (Operations)*** Permanent impacts are not anticipated; however, noise levels may increase due to the removal of the FMC Complex Plant 1. A 12-foot noise barrier is proposed to reduce noise levels due to the removal of the FMC Complex Plant 1.	Potential temporary and permanent impacts resulting from the construction and operations of the Build Alternative and all design options are similar.	REC-1: Implementation of construction BMPs to minimize dust, odors, and noise would ensure that park activities and amenities would not be substantially affected. In addition, temporary, localized, site-specific disruptions to the local roadways serving Lincoln Park in the project study area may occur during various stages of construction. To avoid access related impacts to Lincoln Park during construction, RCTC must coordinate with the construction contractor and the City of Riverside to maintain access to Lincoln Park.	**CEQA:** Less than Significant Impact **NEPA:** No Impact
Transportation			
Transportation: ***Temporary Impacts (Construction)*** The Build Alternative may temporarily affect local circulation and access due to short-term street or lane closures.	Potential temporary impacts resulting from the construction of the Build Alternative and all design options are similar.	T-1: A TMP would be developed in coordination with the City of Riverside and emergency responders during the final design phase and would be implemented prior to and during construction to ensure traffic safety, minimize construction-related traffic congestion, detour routes, and minimize inconveniences to commuters, local residences, and businesses. At a minimum, the TMP would include appropriate signage, identification of alternate/detour routes, incident management, construction strategies, on- and off-site street circulation, and anticipated temporary traffic lane closures.	**CEQA:** Less Than Significant Impact **NEPA:** No Adverse Effect
Transportation: ***Permanent Impacts (Operations)*** The Project would improve train service and operational efficiencies which would have an overall beneficial impact of reducing freeway congestion and VMT in the region.	Under Design Options 1A and 2A study area intersections would operate at acceptable LOS and maintain the same roadway configuration. Design Options 2A, 2B, 3A, or 3B would vacate Commerce Street and provide a new north-south connection via the proposed Howard Avenue extension. All study area intersections for Opening Year (2025) and Build-out (2045), the LOS for the traffic study area intersections would either remain the same or stay at above acceptable LOS D threshold, as established by the City of Riverside. The Build Alternative and all design options would not increase regional VMT.		

CEQA/NEPA Potential Environmental Impacts		Proposed Avoidance, Minimization, Mitigation Measures[1]	CEQA/NEPA Level of Impact
Build Alternative	**Design Option**		
Tribal and Cultural Resources			
Tribal and Cultural Resources: ***Temporary Impacts (Construction)/Permanent Impacts (Operations)*** Although no impacts are anticipated, there is a potential for encountering undiscovered tribal cultural resources in a subsurface context during development of the Build Alternative.	Potential temporary and permanent impacts resulting from the construction and operations of the Build Alternative and all design options are similar.	TCR-1 Pre-construction Activities: Prior to construction, RCTC will establish the notification protocol with Tribes that have requested consultation as part of the Assembly Bill 52 process. This consultation will address the evaluation of the newly discovered resources and avoidance and/or mitigation measures, as appropriate, and a pre-construction meeting will be held with the construction contractor (for ground-disturbing activities) and include the qualified Native American tribal cultural monitor. TCR-2 Construction Monitoring: Construction related ground-disturbing activities such as grading, and other activity will be monitored during construction by a qualified Native American tribal cultural monitor. TCR-3 Inadvertent Discovery of Tribal Cultural Resources during Construction: In the event that tribal cultural resources are encountered, the Native American tribal cultural monitor would have the authority to temporarily halt or redirect grading and other ground-disturbing activity within a 50-foot radius of the find, and these materials and their context will be avoided, until the archaeological principal investigator and RCTC have been notified and notice has been given to the consulting Tribes. Project personnel will not collect or retain cultural resources. Prehistoric resources include, but are not limited to, flaked stone tools and debitage; projectile points; mortars and pestles; dark, friable soil containing shell and bone; dietary debris; heat-affected rock; or human burials. Pursuant to California PRC § 21083.2(b), avoidance is the preferred method of preservation for archaeological resources. TCR-4 Tribal Cultural Resources that may be Eligible for NRHP or CRHR: If cultural material is encountered that appears to be eligible for CRHR, the monitors will coordinate with RCTC staff to develop and implement appropriate mitigation measures. Anticipated mitigation measures include documentation and collection of cultural material, as well as controlled excavation, if necessary. Cataloging and analysis methods will be agreed upon among the parties but will not delay project construction.	**CEQA:** Less Than Significant Impact with Mitigation Incorporated **NEPA:** No Adverse Effects
Utilities and Service Systems			
Utilities and Service Systems: ***Temporary Impacts (Construction)*** The Build Alternative will require the temporary relocation of gas, water, electric, storm drain, sewer, fiber optic, or cable TV utilities.	***Temporary/Permanent Impacts:*** Potential temporary and permanent impacts resulting from the construction and operations of the Build Alternative and all design options are similar.	UTIL-1: RCTC will protect in place or relocate affected utilities with minimal disruption to services and provide advanced notification. RCTC would develop a plan for public outreach to inform customers of construction schedules and potential short-term disruptions to service systems, as needed. UTIL-2: RCTC would continue coordination with Riverside Public Utilities to provide compensation to rehabilitate an existing well located offsite.	**CEQA:** Less Than Significant with Mitigation Incorporated. **NEPA:** No Adverse Effects
Utilities and Service Systems: ***Permanent Impacts (Operations)*** The Build Alternative will require the permanent relocation of gas, water, electric, storm drain, sewer, fiber optic, or cable TV utilities. A municipal well will be permanently removed from the project site.			

CEQA/NEPA Potential Environmental Impacts		Proposed Avoidance, Minimization, Mitigation Measures[1]	CEQA/NEPA Level of Impact
Build Alternative	**Design Option**		
Wildfire			
Wildfire: ***Temporary Impacts (Construction)/Permanent Impacts (Operations)*** The Build Alternative is not located in a high fire hazard zone and would not exacerbate or increase wildfire risk.	***Temporary/Permanent Impacts:*** N/A.	N/A	**CEQA:** No Impact **NEPA:** N/A
NEPA Only Environmental Topics			
Environmental Justice			
Access and Circulation: ***Temporary Impacts (Construction)*** Existing roadways and intersections may be subject to temporary detours and lane blockages adjacent to the Riverside-Downtown Station at multiple locations throughout the traffic study area. Local roadways may be subject to temporary lane and/or street closures that could be intermittently occupied by construction equipment. ***Access and Circulation:*** ***Permanent Impacts (Operations)*** EJ populations would not experience permanent disproportionately high and adverse effects on access and circulation.	See the CEQA Transportation section of this table for impacts to access and circulation by design option.	Refer to Transportation Measure: T-1	
Noise: ***Temporary Impacts (Construction)*** The use of on-site construction equipment will result in temporarily increased noise levels. ***Noise:*** ***Permanent Impacts (Operations)*** The Build Alternative would remove an existing building that is effectively abating existing noise from the surrounding area. Noise impacts are anticipated at existing residences and at a park. It is anticipated that first row homes near the station would experience severe noise impacts under FTA guidelines.	See the CEQA Noise section of this table for noise impacts by design option.	Refer to Noise Measures N-1 to N-4	**NEPA:** No Adverse Effect
Community Character and Cohesion: ***Temporary/Permanent Impacts*** EJ populations would not experience permanent or temporary disproportionately high and adverse effects on community character and cohesion.	See the CEQA Land Use Planning, CEQA Population, and CEQA Public Services sections of this table for community character and cohesion impacts by design option.	N/A	
Relocations: ***Temporary Impacts (Construction)*** No property in addition to what would be acquired for permanent use may be required for TCEs. ***Relocations:*** ***Permanent Impacts (Operations)*** The Build Alternative and all Design Options would require the displacement and relocation of adjacent properties.	See the CEQA Recreation section of this table for parks and recreation impacts by design option.	N/A	

CEQA/NEPA Potential Environmental Impacts		Proposed Avoidance, Minimization, Mitigation Measures[1]	CEQA/NEPA Level of Impact
Build Alternative	**Design Option**		
Parks and Recreation: ***Temporary/Permanent Impacts*** EJ populations would not experience permanent or temporary disproportionately high and adverse effects on parks and recreation.	See the CEQA Population and Housing section of this table for relocation impacts by design option.	Refer to Recreation Measure: REC-1	**NEPA:** No Adverse Effect
Utilities and Service Systems: ***Temporary/Permanent Impacts*** EJ populations would not experience permanent or temporary disproportionately high and adverse effects on utilities and public services.	Potential temporary and permanent impacts resulting from the construction and operations of the Build Alternative and all design options are similar.	Refer to Utilities and Service System Measures UTIL-1 and UTIL-2	
Safety and Security	No Impact	No Impact	**NEPA:** No Impact
Section 4f			
Section 4(f): Historic Sites ***Temporary/Permanent Impacts*** The FMC Plant 1 and 2 and Worker's Houses on Howard Avenue are considered historic sites of national, state, or local significance because they are eligible for listing in the National Registry. The Worker's House are a multi-component resource located on a single parcel (4110 through 4140 Howard Avenue) (4). The historic resource comprises four dwellings located on one parcel. Collectively, they represent early iterations of Worker's Houses, two of which take on the form of a Shotgun House.	Potential permanent impacts resulting from the operations of the Build Alternative and all design options are similar. The Project Design Options will require the demolition or removal of the following structures: • Design Option 1A: FMC Complex and 12th Street residences • Design Option 1B: FMC Complex • Design Option 2A: FMC Complex, 12th Street residences, and Ninth Street Neighborhood Conservation Area residences • Design Option 2B: FMC Complex and Ninth Street Neighborhood Conservation Area residences • Design Option 3A: FMC Complex and 12th Street residences • Design Option 3B: FMC Complex	Refer to Cultural Resources CUL-1 to CUL-3	**NEPA**: Use/Adverse Effect
Section 4(f): Public Parks, Recreation Areas, Waterfowl and Wildlife Refuges. Lincoln Park – No Use	Lincoln Park - No Use	Refer to Recreation Measure: REC-1	**NEPA:** No Use

ACM = asbestos containing material
BMP = best management practice
CDFW = California Department of Fish and Wildlife
CRHR = California Register of Historical Resources
dBA = A-weighted decibels
DTSC = Department of Toxic Substances Control
EJ = environmental justice
FMC = Food Machinery Corporation
GHG = greenhouse gas
HABS = Historic American Buildings Survey
LBP = lead-based paint
LEQ = peak hour noise equivalent level
LOS = level of service
NAHC = Native American Heritage Commission
NRHP = National Register of Historic Places
O_3 = ozone
$PM_{2.5}$ = fine particles of 2.5 micrometers or smaller
RWQCB = Regional Water Quality Control Boards
SCAQMD = South Coast Air Quality Management District
STC = Sound Transmission Class
SMP = Site Management Plan
TCE = temporary construction easements
TMP = Traffic Management Plan
URA = Uniform Relocation Assistance and Real Property Acquisition Act
USFWS = United States Fish and Wildlife Service
UWR = Universal Waste Rules
VMT = vehicle miles traveled
WEAT = worker environmental awareness training

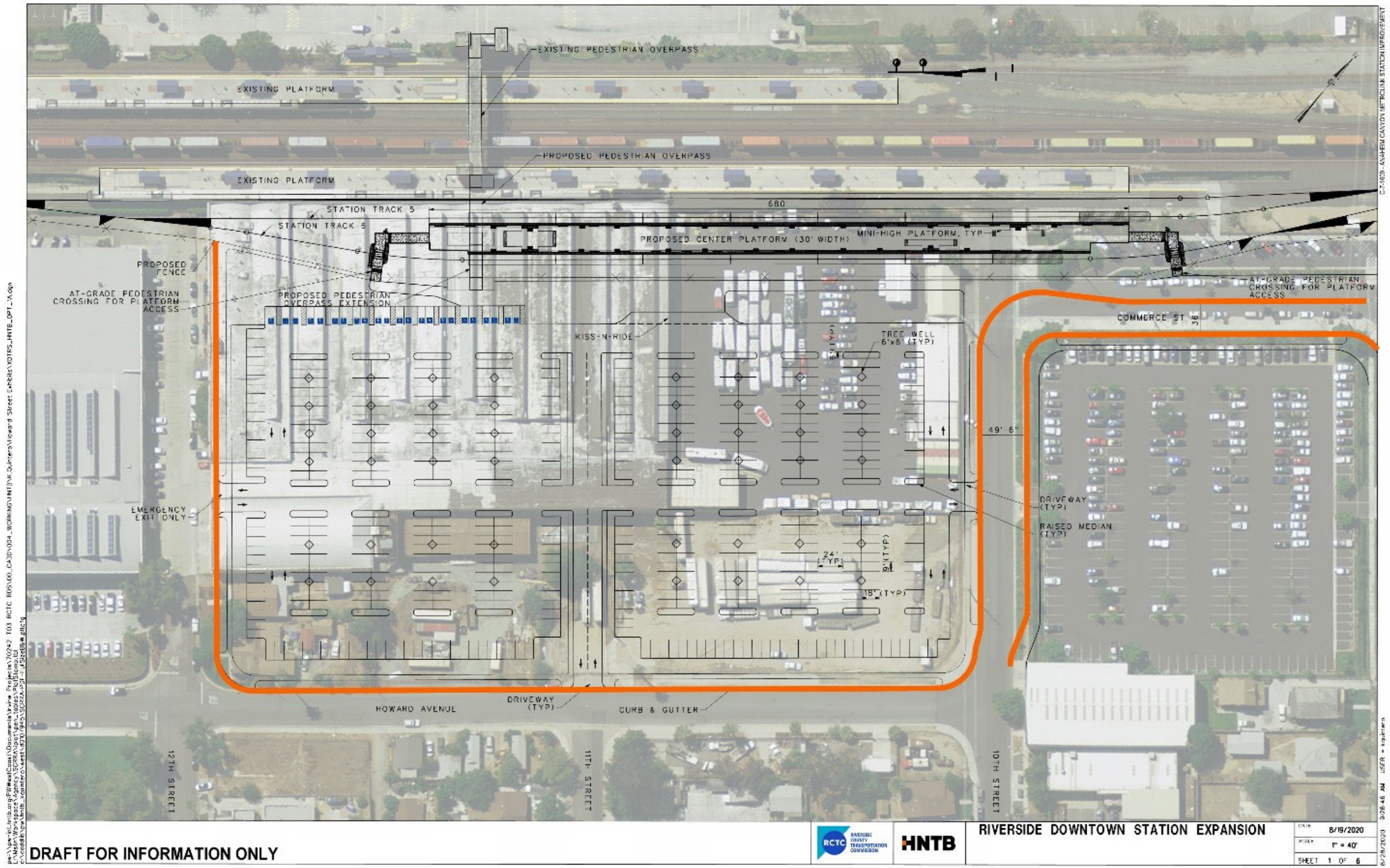

Figure ES-4. Build Alternative with Parking Design Option 1A

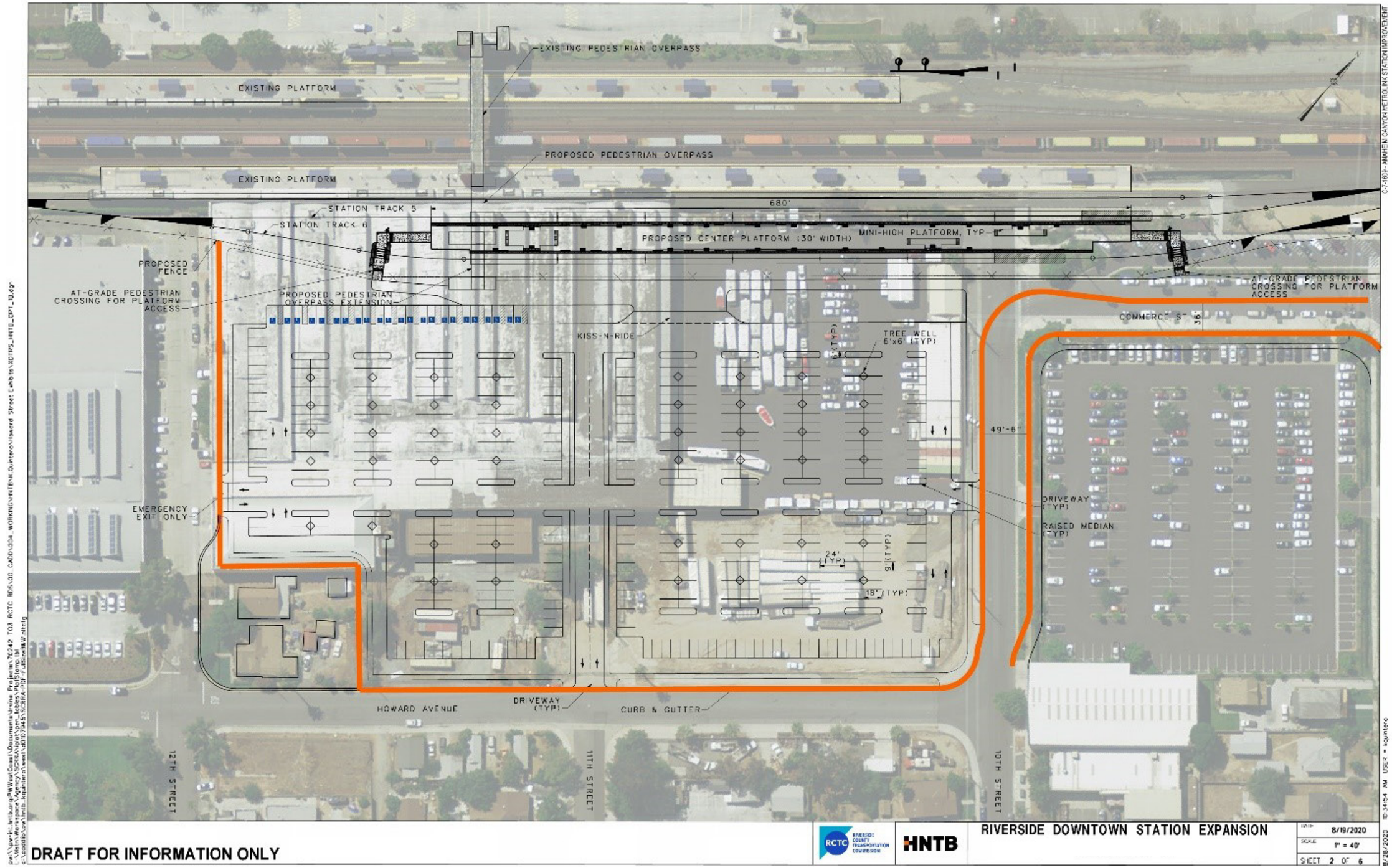

Figure ES-5. Build Alternative with Parking Design Option 1B

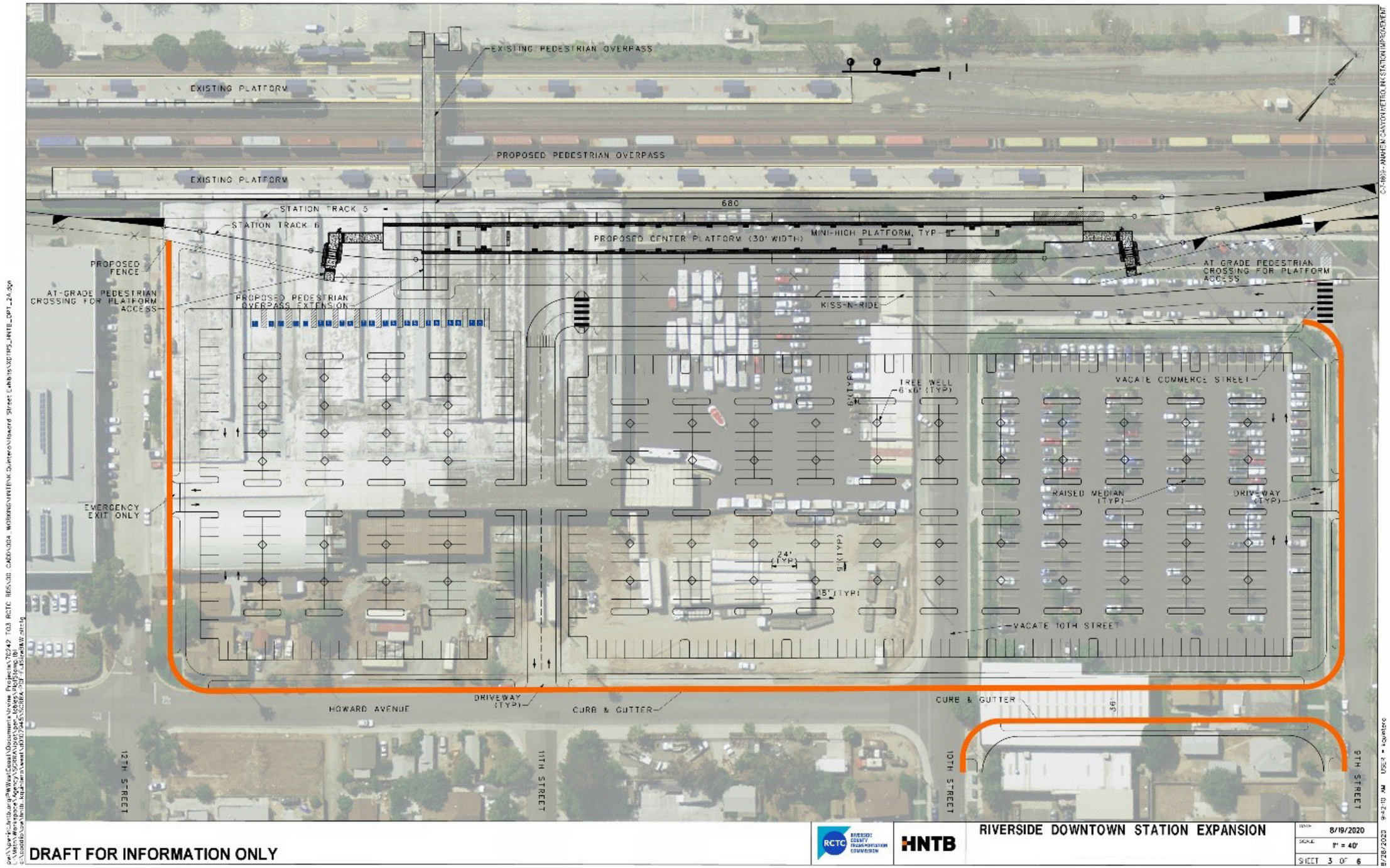

Figure ES-6. Build Alternative with Parking Design Option 2A

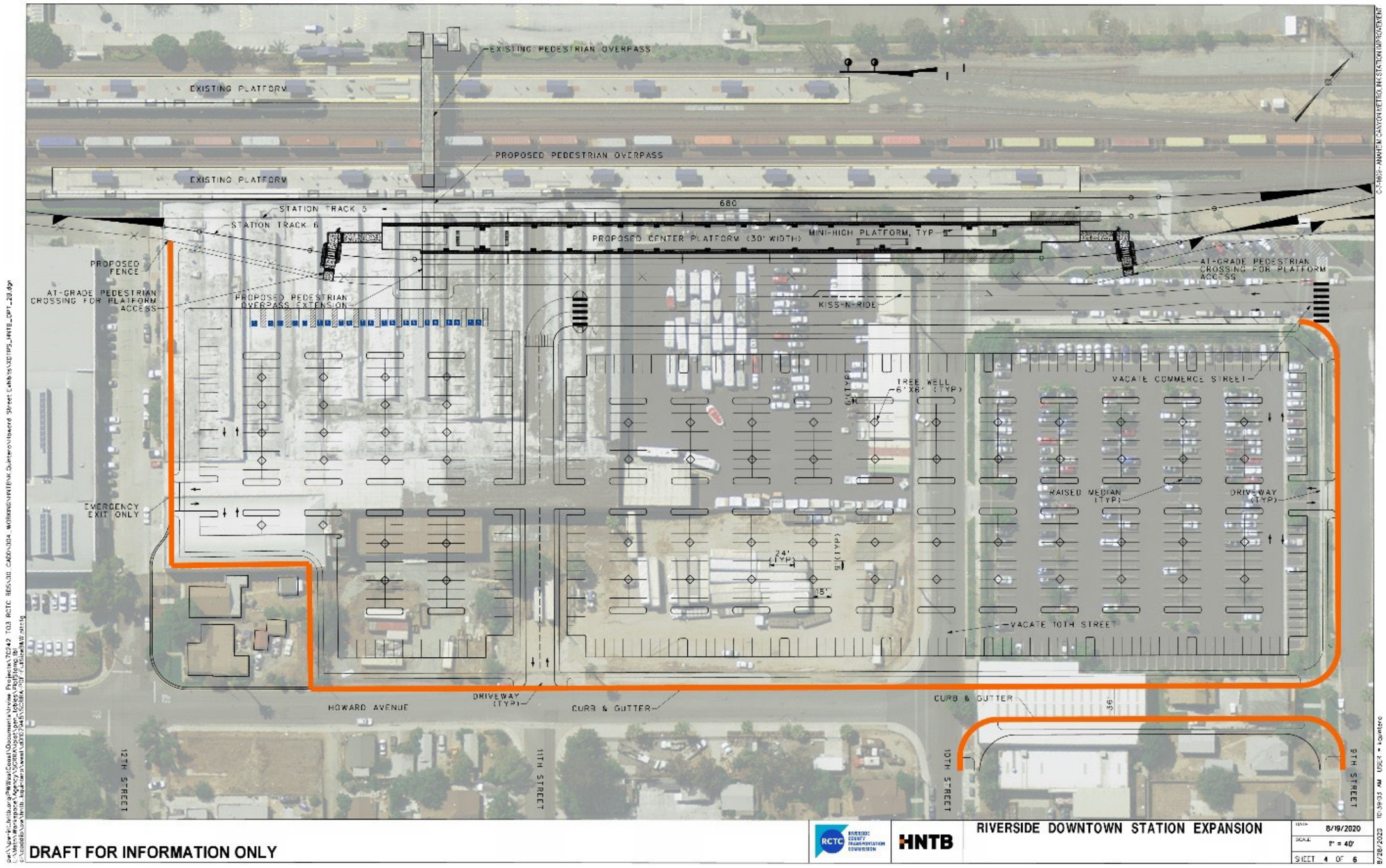

Figure ES-7. Build Alternative with Parking Design Option 2B

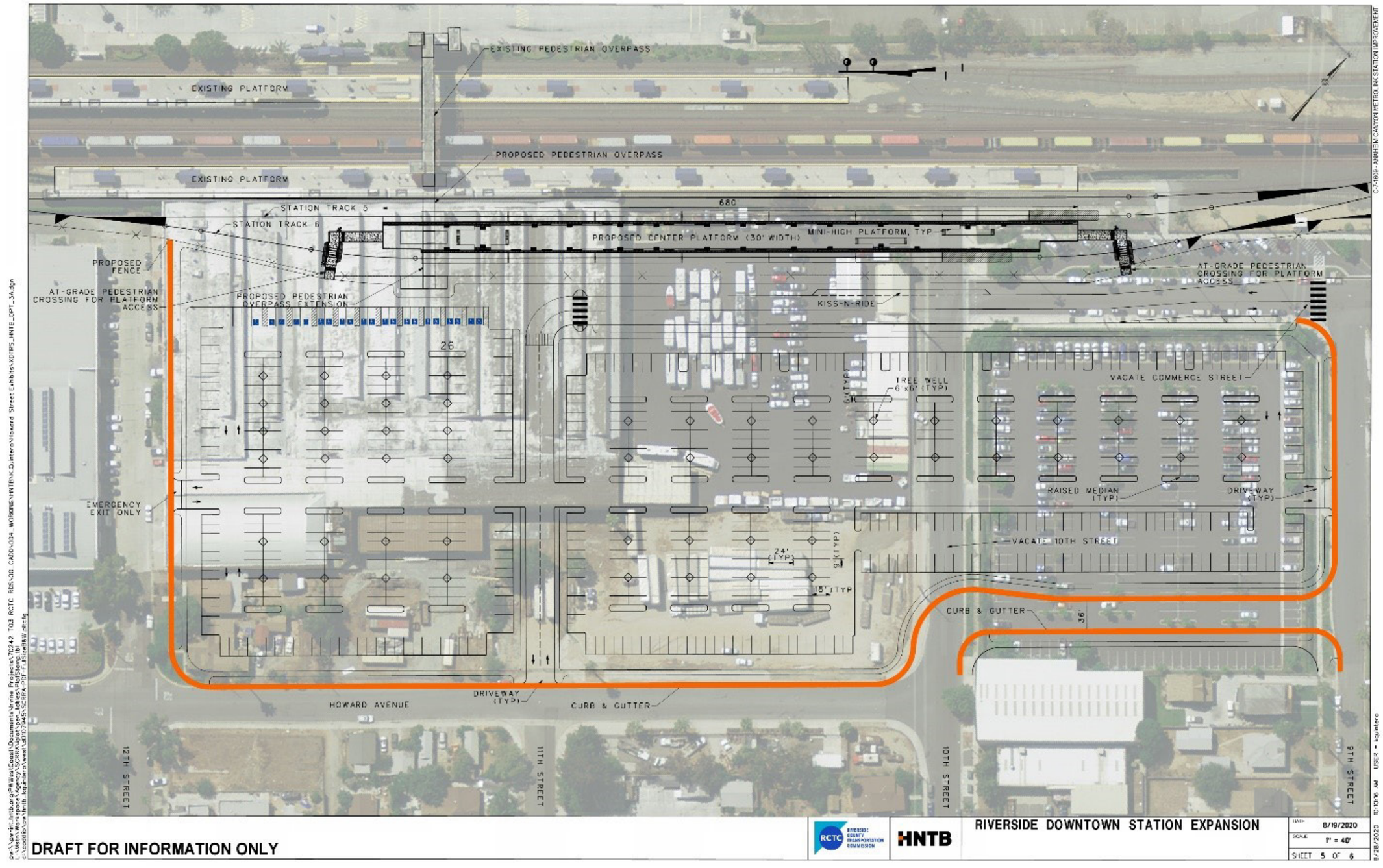

Figure ES-8. Build Alternative with Parking Design Option 3A

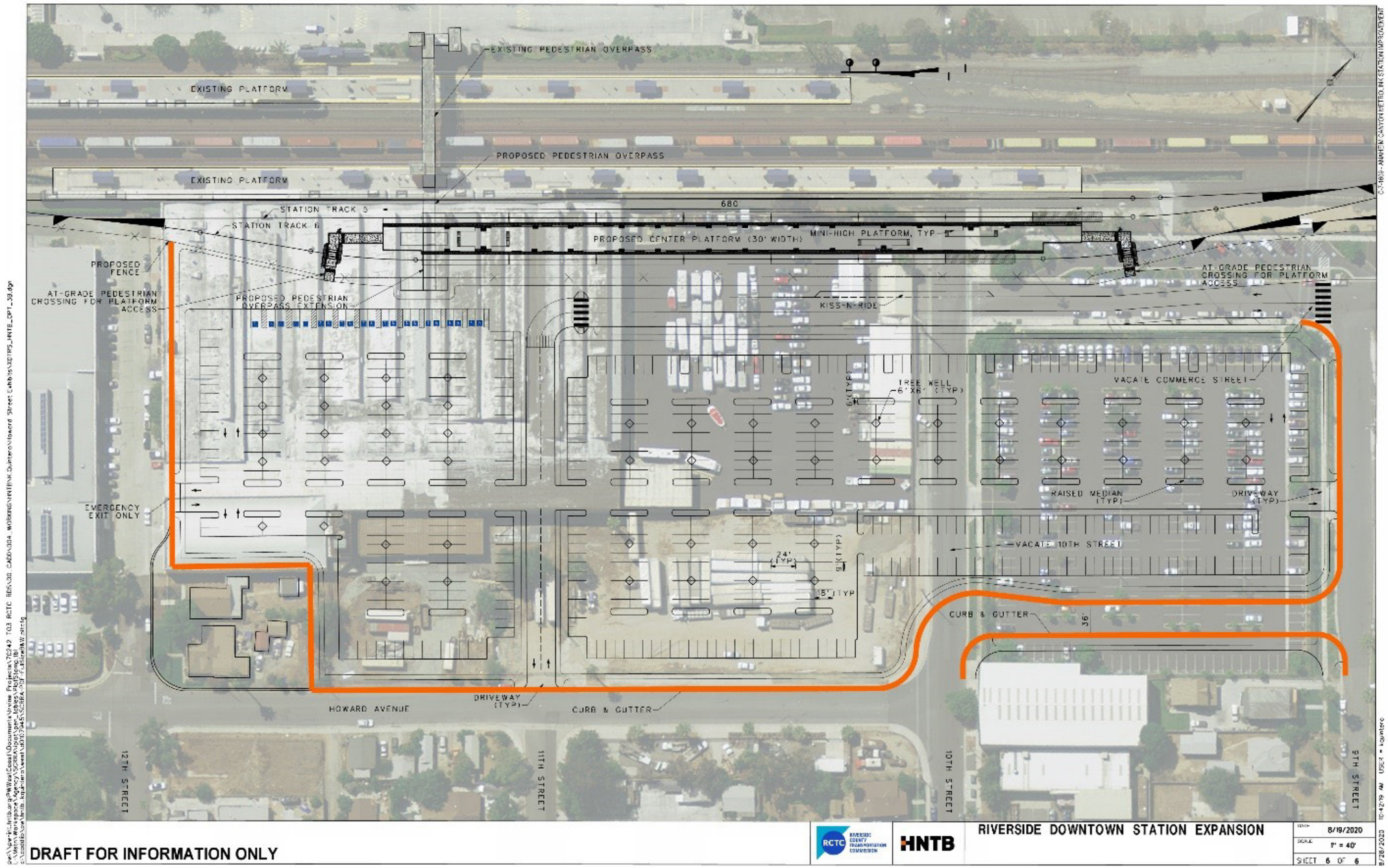

Figure ES-9. Build Alternative with Parking Design Option 3B

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APPENDICES

FIGURES

TABLES

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ACRONYMS AND ABBREVIATIONS

Acronym	Definition
°F	degrees Fahrenheit
§	Section (used with codes)
%	percent
91/PV Line	91/Perris Valley Line
ACBCI	Agua Caliente Band of Cahuilla Indians
ADA	Americans with Disabilities Act
AES	Aesthetics
APE	Area of Potential Effects
APN	Assessor's Parcel Number
AQ	Air Quality
AREMA	American Railway Engineering and Maintenance-of-Way Association
ASR	Archaeological Survey Report
AVE	area of visual effect
BFE	Base Floodplain Elevation
BIO	Biological
bgs	below ground surface
BMP	best management practice
BNSF	Burlington Northern Railroad and the Atchison, Topeka, and Santa Fe Railway
BSA	biological study area
CA	California
CCA	Clean Air Act
CEQA	California Environmental Quality Act
CFR	Code of Federal Regulations
CHRIS	California Historical Resources Information System
CIA	Community Impact Assessment
CO	carbon monoxide
CP	control point
CPUC	California Public Utilities Commission
CREC	Controlled REC
CRHR	California Register of Historical Resources
CUL	Cultural
CUM	Cumulative
DBA	A-weighted decibels
DOI	Department of Interior
DOT	Department of Transportation

Acronym	Definition
DTSC	Department of Toxics and Substance Control
EA	Environmental Assessment
EIC	Eastern Information Center
EIR	Environmental Impact Report
EIS	Environmental Impact Statement
EJ	Environmental Justice
ESA	Environmental Site Assessment
FEMA	Federal Emergency Management Agency
FGC	Fish and Game Code
FIRM	Flood Insurance Rate Maps
FMC	Food Machinery Corporation
FOE	finding of effect
FONSI	Finding of No Significant Impact
FRA	Federal Railroad Administration
FTA	Federal Transit Administration
FY	Fiscal year
GEO	Geology
GHG	greenhouse gas
HABS	Historic American Buildings Survey
HAZ	hazardous waste
HELIX	HELIX Environmental Planning
HFC	hydrofluorocarbon
HMA	hot-mix asphalt
HREC	Historical REC
HRR	Historic Resources Report
ID	identification
IEOC	Inland Empire Orange County
LBP	lead-based paint
L_{DN}	Day Night Level
L_{EQ}	Equivalent Continuous Sound Pressure Level
LOD	Limits of Disturbance
LOS	Level of service
MOA	Memorandum of Agreement
MT CO2e	metric tons of carbon dioxide equivalent
NAHC	Native American Heritage Commission
NEPA	National Environmental Policy Act
NHPA	National Historic Preservation Act
NSLUs	noise-sensitive land uses
NOP	Notice of Preparation

Acronym	Definition
NOx	nitrogen oxides
NPDES	National Pollutant Discharge Elimination System
NR	National Register
NRHP	National Register of Historic Places
O_3	ozone
PCB	polychlorinated biphenyl
PCE	Perchloroethylene
PDR	Project Definition Report
$PM_{2.5}$	fine particulate matter 2.5 micrometers and smaller
PM_{10}	course particulate matter 10 micrometers and smaller
Project	Riverside County Transportation Commission Riverside-Downtown Station Improvement Project
RCTC	Riverside County Transportation Commission
REC	Recreation
RECs	recognized environmental conditions
REL	Relocation
ROW	right of way
RTA	Riverside Transit Agency
RUSD	Riverside Unified School District
RWQCB	Regional Water Quality Control Board
SBLI	Soboba Band of Luiseño Indians
SCAB	South Coast Air Basin
SCAG	Southern California Association of Governments
SCAQMD	South Coast Air Quality Management District
SCORE	Southern California Optimized Rail Expansion
SCRRA	Southern California Regional Rail Authority
SHPO	State Historic Preservation Officers
SMBMI	San Manuel Band of Indians
SR	State Route
STC	Sound Transmission Class
SWPPP	Stormwater Pollution Prevention Plan
TAC	Toxic air contaminant
TCE	temporary construction easements
THPO	Tribal Historic Preservation Officer
TIA	Traffic Impact Analysis
TMDL	Total Maximum Daily Load
TMP	Traffic Management Plan
TOD	transit-oriented development
U.S.	United States

Acronym	Definition
U.S.C.	United States Code
USGS	U.S. Geological Survey
VMT	vehicle miles traveled
VOC	volatile organic compound
WQ	Water Quality

1.0 Introduction and Background

1.1. Project Introduction

The Riverside County Transportation Commission (RCTC) and Metrolink propose to improve the Riverside-Downtown Station at 4066 Vine Street in Riverside, California (the Project). The Project is located in Downtown Riverside, east of the State Route (SR) 91 Freeway and a short distance from SR 60. Figure 1-1. Project Location illustrates the regional and Project location[1]. Proposed improvements include the construction of an additional passenger loading platform and tracks to improve Metrolink service and the extension of the existing pedestrian bridge and additional elevator and stair access. The proposed track would connect to the existing station layover tracks on the east side. The proposed Project would also provide additional parking and improve traffic flow on the east side of the station. These improvements would improve Metrolink train connections without affecting Burlington Northern Railroad and the Atchison, Topeka, and Santa Fe Railway (BNSF) service.

Figure 1-1. Project Location

1.2. Roles and Responsibilities

The Federal Transit Administration (FTA), in cooperation with RCTC has prepared this Environmental Assessment (EA) pursuant to the National Environmental Policy Act (NEPA) of 1969. FTA serves as the NEPA Lead agency for projects receiving FTA funding. RCTC is the project sponsor, the co-NEPA lead, and the California Environmental Quality Act (CEQA) lead agency.

This EA complies with the requirements of the NEPA (42 U.S. Code [U.S.C.] 4321-4347), the Council of Environmental Quality NEPA implementing regulations (Title 40 Code of Federal Regulations (CFR) Sections [§§] 1500-1508), and the NEPA implementing procedures of the FTA (23 CFR Part 771 and 774) to sufficiently evaluate the proposed Project's merits and possible environmental impacts. This EA presents an evaluation of the Build and the No Build Alternative and discusses the purpose and need of the Project; alternatives development; potential effects resulting from operations and construction; proposed mitigation; and outreach activities associated with the public, tribes, and agencies.

The EA is in circulation for 60 days to interested agencies, stakeholders, organizations, and individuals, and a public hearing will be held to ensure interested parties are able to provide input regarding the Project and potential environmental impacts. After circulation, all comments will be addressed and responses will be documented in the final environmental document; thereafter, FTA, in cooperation with RCTC, will select a preferred alternative and make the final determination of the Project's effect on the environment. If FTA determines that the NEPA action does not significantly impact the environment, FTA will issue a Finding of No Significant Impact (FONSI). If it is determined that the project is likely to have a significant effect on the environment, an Environmental Impact Statement (EIS) will be prepared.

[1] Enlarged versions of all maps and diagrams presented in Sections 1.0 through 3.0 of this report are provided in Appendix D.

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2.0 Purpose and Need

2.1. Project Purpose

The overall purpose of the Project is to expand capacity and improve operations and efficiency, connectivity, and the passenger experience at the Riverside-Downtown Station. The Project is intended to:

- Expand platform capacity to meet passenger train storage needs
- Allow for train meets off the BNSF mainline and minimize impacts to BNSF operations
- Improve train connectivity and passenger accessibility while minimizing impacts on improvement projects near the station that are already designed or in construction
- Facilitate more efficient passenger flow and reduce dwell times
- Enhance safety and access for station users
- Accommodate projected future demand

2.2. Project Need

Metrolink's Southern California Rail Expansion (SCORE) Program is a $10 billion initiative to upgrade the regional rail system to meet the current and future needs of the traveling public. The Project was funded from the State's Transit and Intercity Rail Capital Program in April 2018. The Project was also included in RCTC's *Short-Range Transit Plan FY 20/21–24/25* (RCTC, 2020) to increase regional rail service based on ridership trends, growth projects, and RCTC goals.

2.2.1. Riverside-Downtown Station

The Riverside-Downtown Station currently provides service to three commuter lines, the Riverside Line, 91/Perris Valley Line (91/PV Line), and the Inland Empire Orange County (IEOC) Line and Amtrak's Southwest Chief. In addition to passenger train service, three freight mainlines, owned by BNSF (right of way [ROW] owner) and Union Pacific Railroad, operate through the station. On average, approximately 50 to 60 freight trains operate through the station each day, with this number increasing or decreasing depending on seasonal variations (RCTC, 2020). Table 2-1 summarizes weekday passenger and freight train moves through the Riverside-Downtown Station.

Table 2-1. Weekday Train Moves through Riverside-Downtown Station

Weekday Passenger Trains	Number of Trains
Metrolink Riverside Line	12
Metrolink 91/PV Line	13
Metrolink IEOC Line	16
Amtrak	2
Total Passenger Trains	**43**
Weekday Freight Trains	**50 to 60**
Total Weekday Passenger and Freight Train moves	**93 to 103**

Sources: Metrolink Strategic Business Plan (January, 2021);Short Range Transit Plan FY 19/20- 24/25 (RCTC, 2020)

2.2.2. Future Passenger Rail

As shown in the Metrolink *Strategic Business Plan* (2021), in March 2020, the Los Angeles Unified School District instituted remote learning for approximately 700,000 students, and the City of Los Angeles and Los Angeles County issued "Safer at Home" orders that shut down all but essential businesses and pushed others to telecommuting and other online means of work and educational instruction. The transit community nationwide saw drastic ridership and revenue decreases, exacerbated by the loss of local and state sales taxes due to the shuttered economy. The lowest ridership decline for the Metrolink system occurred in April 2020, with an average ridership drop of 91 percent compared to the prior year. Southern California's economy was severely affected by the pandemic, with the unemployment rate going from 6 percent in February 2020 to 18 percent in April, compared to 14 percent across the United States (SCAG, 2020[2]). A recovery plan framework was designed to protect employees and riders against the spread of COVID-19 and to restore customer confidence as key to getting people back on the system.

The first two strategies focused on health and safety and operational transparency. In accordance with direction from public health officials, Metrolink requires face coverings and social distancing. To date, Metrolink has a 99 percent compliance rate with customers wearing face masks. Metrolink also launched its "How Full is my Train?" crowding-tool page on its website. The page is easily viewed from a mobile device and empowers riders to determine how comfortable they are taking a particular train, based on the occupancy the last time the train ran. Also, Metrolink installed two hand sanitizers on every train car in its fleet, is using electrostatic sprayers to disinfect trains and has onboard clean teams disinfecting high touch-point surfaces. These definitive actions have made Metrolink eligible to join more than 100 transit agencies in receiving the American Public Transportation Association Health & Safety Commitments Program seal.

Opportunities to restore ridership means connecting more meaningfully to local businesses and communities and recognizing the ongoing importance of essential workers. The triple bottom line approach is nimble and meant to provide greater value for a greater number of people. Metrolink enables many to realize the American Dream of homeownership, while conveniently getting to well-paying jobs; and to that end, Metrolink developed a 5-Day Flex Pass and increased the eligible age for children, ages 5 to age 17, to ride free. This allows a family of four to enjoy a ride together for $20, since each adult ticket is only $10 for weekend rides. Also, Metrolink launched its SoCal Explorer loyalty program, which provides rewards to those using Metrolink and allows them to use their redeemed points in support of local businesses. Finally, Metrolink has begun marketing more aggressively to essential industries, such as more than 600 healthcare facilities in its service area.

As Metrolink considers how to "future-proof operations" and ensure sustainable financial performance, research indicates that businesses may decide to stagger work hours, which would create an opportunity to reduce the crowding on trains during peak hours and allows Metrolink to expand off-peak service options. At the same time, Metrolink also faces changes in travel patterns due to increased prevalence of teleworking, which could affect Metrolink's service delivery plans. Global Workplace Analytics forecasted, based on their Global Work from Home Survey, a greater adoption of teleworking. They projected that 25 to 30 percent of the global workforce will be working from home multiple days of week by the end of 2021. As a result, trains cannot necessarily return to full-service levels exactly as they were before, even when riders come back to the system. Metrolink is evaluating new service scenarios and taking a more focused, line-by-line approach and will continue to push for installation of customer amenities like onboard Wi-Fi. Additionally, Metrolink is building tools to ensure transparency with its partners and stakeholders to highlight innovations and generate confidence through recovery from this crisis. In Metrolink's market analysis, there is an assumption of full recovery to pre-COVID ridership levels by 2024.

In accordance with the *Metrolink Strategic Business Plan* (2021), Metrolink's Service Strategic Actions include, improving station access and improved wayfinding, parking strategies, partnerships with cities, and fare strategies.

Capital Actions detail projects (including equipment) that contribute most positively to Metrolink under a specific scenario for the 91/PV Line and IEOC lines that would increase train service within the next 5- to 30-year horizon

In accordance with Metrolink's *Strategic Business Plan,* page 57 (2021), in addition to Amtrak and freight the number of Metrolink passenger trains traveling through the Riverside-Downtown Station during the weekday will increase as follows, by 2025, to 49 trains, by 2030 to 55 trains, and by 2035 to 60 trains, and will continue to increase thereafter.

[2] *Southern California Association of Governments, Monthly Economic Report, July 2020.*

Additional peak hour and off-peak services could increase to 82 trains for weekday along the 91/PV Line and IEOC Lines. As shown in Figure 2-1, successful delivery of capacity, operations, and service investments at the station are a crucial element of the Metrolink 2021 Strategic Business Plan; investments would improve reliability and customer experience by doubling capacity (adding new platforms, tracks, and parking) for train service needs due to projected growth.

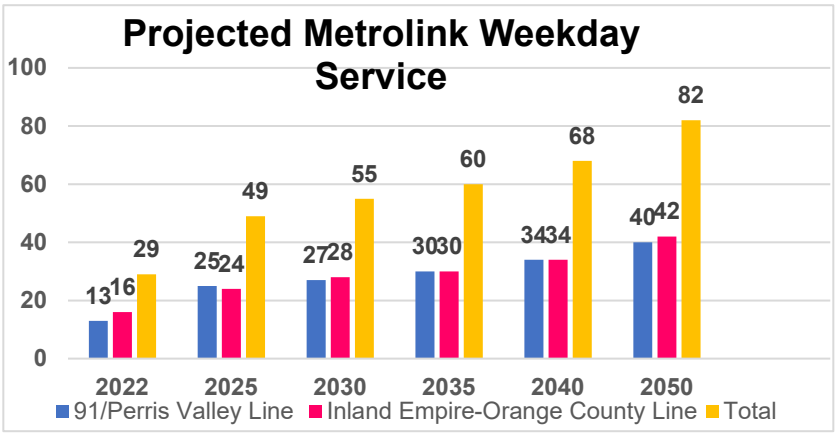

Figure 2-1. Projected Metrolink Weekday Service

2.2.3. Future Freight Service

Consistent with the goals in the 2018 California State Rail Plan, the Project would improve efficiency on the railroad mainlines. California businesses export roughly $162 billion worth of goods to more than 225 foreign countries annually[3]. The state's extensive rail network supports California's economy, while minimizing impacts on air quality compared to other modes. Rail is an efficient, safe, and cost-effective way to move goods because energy consumption and greenhouse gas (GHG) emissions per ton carried are far lower than with diesel trucks. The ability of the state's freight railroads to deliver these benefits depends on fluid traffic conditions on the station mainlines. By 2040, the state's freight railroad loads will have increased by 38 percent, compared to 2013. Investments to address bottlenecks, improve operations, and increase capacity throughout the network will reduce congestion and delays. In turn, an improved freight rail network will help shift goods movement away from congested roadways, which have a limited ability to expand.

2.2.4. Operational Needs

Beyond the infrastructure capacity need, there is an operational deficiency due to single track operation and the lack of a crossover at the station from west to east and from the station to Perris-South, which limits train meets and passing options for rail traffic. A train meet is a railroad and rail transit operation for trains traveling in one direction to "meet" another train traveling in the opposite direction. Under existing conditions, trains must stop and wait for other trains to pass on a single track mainline. As such, trains coming from or going to Perris-South and Riverside-Downtown are not able to meet or pass each other. In addition, the San Jacinto Subdivision, extending from Control Point (CP) Highgrove to Perris-South, is currently a single track mainline that does not permit trains to meet or pass. The time and location for where trains meet is intended to avoid collisions or to allow faster trains to bypass slower service trains. The Project would address limitations by adding flexibility to operate service between Los Angeles and Perris-South by improving options for 91/PV Line train meets to meet nose to nose, nose to back, or back to back on one of the tracks, while allowing trains to pass through on the other track without impacting BNSF mainline operations.

This existing limitation in train infrastructure between Riverside-Downtown and Perris-South creates blockages on the BNSF mainline and results in train service and freight train delays. Additional platform tracks on the east side of the station, where trains can meet and hold off at the BNSF mainline, could alleviate congestion and ensure additional passenger service does not impede freight service.

Existing train infrastructure limitations due to lack of crossovers at the Riverside-Downtown Station and from the Riverside-Downtown Station to Perris-South would continue to deteriorate in the next 5 years because Metrolink passenger train service at the Riverside-Downtown Station is anticipated to increase by 69 percent[4]. Without the planned service capacity improvements, the Riverside-Downtown Station would not be able to manage the anticipated train meets, and blockages would continue along the BNSF mainline, causing longer delays and service disruptions.

[3] California State Rail Plan, Caltrans, 2018

[4] Based on Metrolink Business Strategic Plan (2021) future service strategic actions for the 91 PV Line and IEOC Line.

2.2.5. Access and Parking

The increase in Metrolink train service at the station and future regional growth forecasts are anticipated to increase the demand for on-site parking and easier access to the station. According to Metrolink's Strategic Business Plan (2021), main parking lot at the Riverside-Downtown Station is 93 percent utilized, and station access has been identified as a "high-priority" for improvements. Additional train service and future increase in passenger trips is expected to strain the existing on-site parking supply and impede access to and from the station.

3.0 Description of Alternatives

Environmental review under NEPA must consider the effects of not implementing the proposed Project. The No-Build Alternative provides a basis for comparing the build alternatives and is used as the baseline for comparing environmental impacts.

3.1. No Build Alternative

Under the No Build Alternative, implementation of improvements at the Riverside-Downtown Station would not be constructed and the current configuration of the Riverside-Downtown Station would remain the same. Although there would be no project-related impacts to environmental resources, the No Build Alternative would not meet the purpose and need or improve operations to accommodate the 91/PV Line or the IEOC Lines. Train capacity and storage would be limited to the existing platforms. The No Build Alternative does provide insight on future conditions with no improvements and serves as a baseline for comparison with the Build Alternative.

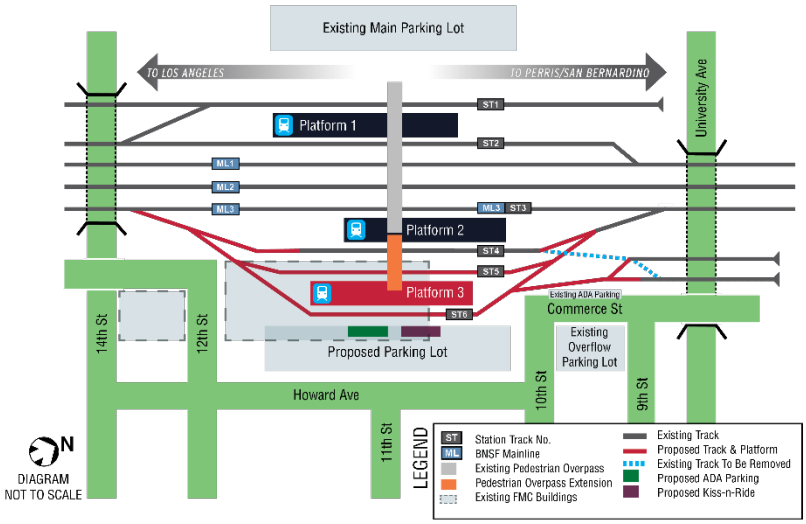

Figure 3-1. Build Alternative

3.2. Build Alternative

RCTC and Metrolink propose improvements to the following elements of the Riverside-Downtown Station: 1) Station Platform and Tracks; 2) Pedestrian Access; and 3) Parking, Circulation, and Streetscape. The proposed improvements include building an additional passenger loading platform and tracks to the east side of the existing station to improve Metrolink service and extend the existing pedestrian overpass to access the new proposed platform (Figure 3-1 and Table 3-1). The proposed improvements would enhance Metrolink train connections without affecting BNSF service. The improvements would be designed in accordance with the most recent applicable codes, Southern California Regional Rail Authority (SCRRA), BNSF, Americans with Disabilities Act (ADA), American Railway Engineering and Maintenance-of-Way Association (AREMA), Federal Railroad Administration (FRA), and California Public Utilities Commission (CPUC), standards, and guidelines.

Table 3-1. Summary of Proposed Build Alternative Improvements

Element	Description
Station Platform and Track Improvements	• Add a new center platform (Platform 3) • Add new tracks (Station Tracks 5 and 6) • Modify the railroad signal system
Pedestrian Access Improvements	• Extend pedestrian overpass access to the new Platform 3 • Provide emergency egress at three locations
Parking, Circulation, and Streetscape Improvements	• Relocate ADA parking • Modify the bus drop-off area • Add sidewalks and trees • Add parking spaces

3.2.1. Build Alternative Project Features

Station Platform and Track Improvements

The Build Alternative, includes the following station platform and track improvements as part of the proposed Project (Figure 3-1):

- Addition of a new center platform (Platform 3) that is approximately 680 feet long and 30 feet wide with direct access from the new parking area to the east via an at-grade crossing and access from the west using the extended pedestrian overpass from Platform 2
- Addition of new tracks (Station Tracks 5 and 6) and other track improvements
- Modification of the railroad signal system

Platform 3 would be located between Station Tracks 5 and 6. Platform 3 would be able to service seven 85-foot passenger cars. The centerline to centerline spacing of the parallel tracks at the platform would be approximately 40 feet. Demolition of existing structures and other ancillary improvements would be required to facilitate construction of the station platform and track improvements.

Pedestrian Access Improvements

The Build Alternative includes the following pedestrian access improvements as part of the proposed Project:

- Extend the existing pedestrian overpass access from Platform 2 to Platform 3 (Figure 3-1).
- Add pedestrian at-grade access from the proposed surface parking lot on the east side of proposed station improvements to Platform 3, and safety enhancements such as proper channelization and automated gates and flashers would be included where appropriate.
- Provide emergency egress at three locations from Platform 3
  - Construct new north end pedestrian at-grade crossing to proposed surface parking lot
  - Construct new pedestrian access from proposed surface parking lot via Pedestrian Overcrossing (Design Option 1)
  - Construct new south end pedestrian at-grade crossing to proposed surface parking lot

Parking, Circulation, and Streetscape

The Build Alternative includes the following parking, circulation, and streetscape improvements as part of the proposed Project:

- Relocate ADA parking
- Modify the bus drop-off area
- Add sidewalks and trees
- Add up to 560 additional parking spaces (proposed surface parking lot) at the east side of the station

Utility Relocations

The Build Alternative would require the relocation of the following utilities:

- Gas: SoCal Gas Company
- Electric: City of Riverside
- Water: City of Riverside
- Fiber Optic: AT&T, Spectrum, Frontier and Sprint
- Cable TV: CenturyLink
- Storm Drain and Sewer: City of Riverside

3.2.2. Design Options

As part of the Build Alternative, there is a design option related to a longer extension of the pedestrian overpass access from the new proposed platform to the new surface parking lot. Another design option is associated with the new surface parking lot and combining this new parking lot with the existing overflow parking lot on the east side of the station. This parking design option includes traffic circulation improvements along Howard Avenue, 9th Street, 10th Street, and Commerce Street.

A summary of the proposed design options is presented in Table 3-2. Refer to Appendix D for enlarged versions of figures for all the design options.

Table 3-2. Summary of Proposed Build Alternative with Design Options

Build + Design Option	Description	Key Features
Pedestrian Overpass Access Improvements		
Design Option 1	Pedestrian overpass access extended from the new Platform 3 to the new surface parking lot	N/A
Parking, Circulation, and Streetscape Improvements		
Design Option 1A	New surface parking lot east of station	Up to approximately 556 parking spaces Impacts existing structures and other ancillary structures and residential parcels on the corner of 12th Street and Howard Avenue to facilitate construction of the proposed improvements
Design Option 1B	New surface parking lot east of station	Up to approximately 500 parking spaces Avoids relocation impacts to residential parcels on the corner of 12th Street and Howard Avenue
Design Option 2A	New surface parking lot east of station combined with existing overflow parking lot with the extension of Howard Avenue through to 9th Street	Up to approximately 560 parking spaces Impacts existing structures and residential parcels on the corner of 12th Street and Howard and requires acquisition of additional parcels directly east of the existing overflow parking lot and vacation of 10th and Commerce Streets
Design Option 2B	New surface parking lot east of the station combined with existing overflow parking lot and the extension of Howard Avenue through to 9th Street(516 parking spaces)	Up to approximately 516 parking spaces Avoids relocation impacts to residential parcels on the corner of 12th Street and Howard Avenue
Design Option 3A	New surface parking lot east of the station combined with existing overflow parking lot and the extension of Howard Avenue through to 9th Street	Up to approximately 470 parking spaces Avoids impacts to additional parcels east of the existing overflow parking lot by routing Howard Avenue around the parcels
Design Option 3B	New surface parking lot east of the station combined with existing overflow parking lot and the extension of Howard Avenue through to 9th Street	Up to approximately 414 parking spaces Avoids relocation impacts to additional parcels east of the existing overflow parking lot and residential parcels on the corner of 12th Street and Howard Avenue

[a.] Indicates an approximate number of parking spaces. Number of parking spaces provided are the maximum estimate of parking spaces within the preliminary layout for each design option. These options illustrate the potential capacity of each parking lot design option for evaluation and comparison purposes in this EA. The number of spaces may change due to implementation of proposed avoidance, minimization, and mitigation measures for noise. In addition, the number of spaces may change during the final design phase due to design refinement to accommodate existing site hydrological conditions. These factors may reduce the approximate number parking spaces under each estimate, but the potential reductions in the number of parking spaces are proportionate with the maximum parking space estimate under each design option.

3.2.3. Right of Way Requirements

Full acquisition of the existing Prism Aerospace building (also known as the former FMC Plant 1 building) would be required to construct the Build Alternative. Depending on the design option selected, additional industrial and/or residential parcels would be required. TCEs adjacent to the project site may be required from the City of Riverside and private property owners, including industrial/commercial and residential property. For the purpose of EA analysis, design plans and ROW requirements identified in this EA are considered preliminary (15 percent complete). Based on public or stakeholder comments and selection of a preferred alternative, ROW requirements may vary during subsequent phases of project development and final design; however, the project footprint would remain the same.

3.2.4. Construction Schedule

Project construction activities will occur for an estimated total of 24 months. It is anticipated that construction of the Build Alternative would begin late 2023 and be completed by late 2025. Project construction would typically take place between the hours of 7:00 a.m. and 7:00 p.m. within the City of Riverside, in accordance with the City of Riverside Municipal Code § 7.35.0120(G). The proposed Project and selected parking design option would be constructed in phases to avoid impacts to commuter and freight train schedules during construction.

3.2.5. Preliminary Cost Estimate

The Project is funded by Measure A proceeds, SCORE, and FTA grant. Preliminary cost estimates for the Build Alternative vary by design option. Estimated project costs for construction, environmental, ROW, engineering, support cost, and other related costs are detailed in Table 3-3.

Table 3-3. Preliminary Cost Estimate

Project Cost	Design Option 1[a]	Build Alternative					
		+ Design Option 1A	+ Design Option 1B	+ Design Option 2A	+ Design Option 2B	+ Design Option 3A	+ Design Option 3B
Construction	$4,038,000	$20,449,000	$20,384,000	$20,839,000	$20,774,000	$20,678,000	$20,614,000
Environmental	--	$6,413,000	$6,404,000	$6,421,000	$6,412,000	$6,413,000	$6,404,000
ROW	--	$14,032,000	$11,853,000	$18,060,000	$15,881,000	$14,042,000	$11,863,000
Engineering	$485,000	$8,707,000	$8,706,000	$10,000,000	$9,446,000	$9,444,000	$9,443,000
Support Costs[b]	$485,000	$2,221,000	$2,213,000	$2,268,000	$2,260,000	$2,249,000	$2,241,000
Other Costs[c]	$1,073,000	$15,374,000	$15,125,000	$16,724,000	$16,307,000	$16,083,000	$15,835,000
Total	**$6,081,000**	**$67,196,000**	**$64,685,000**	**$74,312,000**	**$71,080,000**	**$68,909,000**	**$66,400,000**

[a.] RCTC may choose to incorporate Design Option 1 to any of the Design Options (1A through 3B). The cost of Design Option 1 would be added to the cost of the Build Alternative and parking lot design option selected.
[b.] Support costs include project management and construction management.
[c.] Other costs include contingency and inflation.
[d.] -- Indicates not applicable

3.3. Alternatives Considered but Eliminated from Further Evaluation

3.3.1. Project Definition Report

In November 2016, RCTC completed a Project Definition Report (PDR) for the Project. A PDR is a preliminary report that defines the major project components, describes the project issues, recommends a preferred design approach, and establishes a conceptual cost estimate. Six Alternatives were considered in the PDR and evaluated against the evaluation criteria. One of the major factors evaluated in the initial screening of alternatives considered environmental impacts of each alternative, including property acquisitions, and avoiding impacts to historic properties such as the former Food Machinery Corporation (FMC) Complex (Plant 1 and Plant 2). Preliminary layouts of the alternatives are provided in Appendix D.

The following six alternatives were considered in the PDR:

- **Alternative 1** focused on adding additional platform capacity on the east side of the station with the new platform adjacent to, but slightly north of, the existing platform. This alternative provided the capacity required while minimizing impact to BNSF but presented impacts to passenger accessibility and convenience. Locating the station platform further north required two pedestrian crossings between platforms, thus lengthening the time it would take to transfer between services. The location of the station platform would not achieve the project's basic objective of facilitating efficient passenger flow. Impacts to the former FMC Plant 1 building, would occur as a result of the additional tracks leading into the new platform.
- **Alternative 2** shifted the platform further south, providing improved passenger accessibility by allowing for the existing pedestrian bridge to potentially be extended. This alternative also limited impacts to BNSF but required multiple property acquisitions, including both the Prism Aerospace building (former FMC Plant 1 building) and the Solar Max building (former FMC Plant 2 building) just southeast of the station. This was identified as an unacceptable impact in the initial alternatives development and eliminated from further consideration because this alternative would result in significant environmental impacts and the most property acquisitions and displacements. This alternative would also result in the greatest impacts to historic properties because the former FMC Complex (Plant 1 and Plant 2), would be removed.
- **Alternative 3** provided convenient passenger access and minimized any impacts to adjacent businesses by constructing the additional tracks and platform on RCTC owned property on the west side of the station. Although this alternative would avoid the removal of historic buildings, Alternative 3 would not allow the 91/PV Line and IEOC trains to use the west side platform because there are no existing crossovers between the Riverside-Downtown Station and the 91/PV Line connection, and BNSF will not allow new crossovers to be added/constructed and it would require removal of station improvements that are planned or in construction. It would also require reconfiguration of bus access into the main station parking lot and reduce existing parking capacity. In addition to failing to meet most of the project objectives, this alternative was determined infeasible, and it was eliminated from further consideration.

  Although Alternative 3 avoids the removal of historic buildings, provides convenient passenger access and minimizes any impacts to adjacent businesses by constructing the additional tracks and platform on RCTC-owned property on the west side of the station, this alternative failed to meet project objectives and determined to be infeasible.

  Alternative 3 would not meet purpose and need because it would require the removal of existing station amenities and improvements such as the layover tracks and the new security building that are planned or in construction. It would require reconfiguration of bus access and drop-off areas at the station. Removal or reconfiguration of on-site bus facilities would not enhance access to the station because bus drop-off areas and lay-over capacity would be reduced and affect bus connectivity with the train station. Alternative 3 may cause onsite traffic circulation issues that could result in inefficiencies for bus to train passenger connections. Alternative 3 would reduce existing parking at the station due to the additional tracks and new passenger platform at the main parking lot. In addition, this alternative would not provide the capacity for growth and accommodate future travel demand because the proposed station configuration inhibits efficient drop-off at the station and reduces the available parking spaces to accommodate existing commuters and would worsen parking needs as projected future travel demands increase.

  Alternative 3 would not allow the 91//PV Line and IEOC trains to use the west side platform because there are no existing crossovers between the Riverside-Downtown Station and the 91/PV Line connection, and it would require additional crossovers to be constructed on the BNSF mainline between the Riverside-Downtown Station and CP Highgrove. Alternative 3 would result in impacts to BNSF operations, which would not achieve one of the basic objectives of the Project – to minimize impacts to BNSF operations. Alternative 3 requires BNSF approval to allow work within BNSF ROW to construct the crossovers. BNSF will not allow new crossovers to be added/constructed because it would significantly impede BNSF operations. Since BNSF approval of the new crossovers would not be granted or attained within a reasonable period of time to allow reasonable access to construct the crossovers within their jurisdictional boundaries, Alternative 3 was determined not to be a feasible alternative.

- **Alternative 4** looked at minimizing the need for property acquisition by shifting the track usage of the BNSF mainline to the west. This alternative increased the off-mainline capacity of the existing platform by shifting the BNSF mainline utilizing a series of reversing curves. To replace the lost platform on the west side of the station, a new 16 foot platform track with a side platform would require much less property to construct, versus 26 to 30 feet for a center platform, and could repurpose the existing layover tracks to mainline tracks and require a new at grade crossing across Mission Inn Avenue. While this alternative reduced the need for property acquisitions and the need to construct additional crossovers on the BNSF mainline between the station and CP Highgrove, it required a significant amount of trackwork, a new railroad bridge over 14th Street, and the extension of the two current storage tracks (converted to mainline tracks) across Mission Inn Avenue at-grade. The complexity of the special trackwork, CPUC's required involvement to approve a new at-grade crossing, and the significant involvement required of BNSF, countered the benefit of reducing the amount of property required, including avoiding impacts to historic buildings. Alternative 4 was considered infeasible to construct and eliminated from further consideration.

  Alternative 4 was eliminated from consideration because this alternative failed to meet the Project's purpose and need and was determined infeasible. Alternative 4 minimized the need for property acquisition by shifting the track usage of the BNSF mainline to the west. While this alternative avoided impacts to historic buildings, Alternative 4 does not allow the Perris Valley trains to use the west side platform because there are no existing crossovers between the Riverside-Downtown Station and the 91/PV Line connection, and BNSF will not allow new crossovers to be added/constructed because it would significantly impede BNSF operations. It would also require a new crossover track on the BNSF Mainline 1 between the Riverside Downtown Station and CP Highgrove and a new railroad bridge over 14th Street.

  Alternative 4 would not meet the Project's purpose and need because it would not improve train connectivity and operations and accommodate projected future demand. The elimination of two existing layover tracks on the west side of the station would also preclude construction of a future planned third layover track at this location and would not allow capacity for future growth to accommodate future travel demand. The removal of the existing layover tracks directly adjacent to the Riverside-Downtown Station would result in commuter trains being serviced and parked at a remote facility in Colton, which would add operational logistics and costs to accommodate the loss of the layover tracks at the Riverside-Downtown Station. The remote facility would need to be checked for adequate space to service and park the trains. Agreements with BNSF would also need to be confirmed for adequate permission to move trains between the remote facility and the Riverside-Downtown Station. The remote facility would also require additional train movements on the BNSF system, which would be above the current limits in the Shared Use Agreement between BNSF and RCTC. Therefore, renegotiation of the Shared Use Agreement would be required. Efforts to renegotiate the existing Shared Use Agreement have been ongoing for the last 20 years, and BNSF may object to the additional train movements. It would also require reconfiguration of bus access into the main station parking lot and reduces existing parking capacity.

  In addition to failing to meet most of the project objectives, this alternative was considered infeasible and eliminated from further consideration because of the required approvals from BNSF, which would not be obtained. Similar to the Alternative 3, BNSF approval is a critical element for Alternative 4 to be considered a viable alternative. As previously mentioned, on-going negotiations with BNSF on the Share Use Agreement for the last 20 years, and approval would not be obtained within a reasonable period of time due to legal factors, and would not result in reasonable access to BNSF's ROW to allow construction of the new crossovers. Furthermore, Alternative 4 is infeasible because of the economic viability because of the construction of a new railroad bridge over 14th Street and the availability of infrastructure to implement this alternative.
- **Alternative 5** intended to split the difference, providing additional capacity on both the west and east sides of the station. Though this minimized impacts to adjacent properties and BNSF while maintaining passenger accessibility, it still required removing the existing RCTC station features on the west side of the station and the construction of a new pedestrian bridge over the tracks because the proposed new platform would be located where the west elevators and security tower are located. This alternative would result in the removal of the historic, former FMC Plant 1 building, and potentially the removal (or a portion thereof) of the adjacent former FMC Plant 2 building. Alternative 5 was eliminated from further consideration because of the removal of existing station elements, and it was determined infeasible because of impacts to BNSF.
- **Alternative 6** extended the station's footprint to the east and required a partial or complete property acquisition of the existing Prism Aerospace building, formerly the FMC Plant 1. While modifications or removal of the building

is required, this alternative preserved the solar panel manufacturing business to the southeast and required only minimal property acquisition, adjacent to this business. Passenger and layover capacity would be maintained and expanded to the northeast of the station.

To summarize, following a comprehensive process of reviewing six alternative concepts, RCTC in partnership with Metrolink selected Alternative 6 (the Build Alternative) as the alternative for the expansion of the station because it met the most performance criteria (including the capacity for additional growth) and would best meet the purpose and need of the Project. Alternative 6 was moved forward for further analysis in the environmental phase and evaluated in this Draft EA and Environmental Impact Report (EIR). Table 3-4 shows the proposed alternatives, evaluation criteria, and whether the evaluation criteria were met (indicated by an "X").

Table 3-4. 2016 Project Definition Report Alternatives Evaluation and Criteria

Evaluation Criteria	Alternative 1	Alternative 2	Alternative 3	Alternative 4	Alternative 5	Alternative 6
Layover Capacity	X	X	X	X	X	X
Connectivity	N/A	X	X	X	X	X
Safe Access	X	X	X	X	X	X
No Property Needs	N/A	N/A	X	X	N/A	N/A
Environmental	X	X	X	X	X	X
No Impact to Businesses	N/A	N/A	X	X	N/A	N/A
Meets service plan needs	X	X	N/A	N/A	X	X
Capacity for Growth beyond Plan	N/A	N/A	N/A	N/A	X	X
No BNSF impact	X	X	N/A	N/A	N/A	X
Criteria Met	5	6	6	6	6	7

N/A = not applicable

3.3.2. Historic Resources Avoidance and Adaptive Reuse Alternatives

In addition to the alternatives considered in the PDR, seven avoidance alternatives and two adaptive reuse alternatives were developed to avoid or minimize impacts to the FMC Complex Plant 1, which is a historic resource, protected under Section 4(f) the United States Department of Transportation (DOT) Act of 1966. The avoidance alternatives and adaptive reuse alternatives were considered but eliminated from further review. Avoidance Alternatives 1, 1A, 2, 2A, 2B, 2C, and 3 avoid impacts to the FMC Complex (Plant 1 and Plant 2); however, they did not meet the performance criteria or the purpose and need. Avoidance Alternatives 1, 1A, 2, 2A, 2B, 2C, and 3 were evaluated using the criteria outlined in 23 CFR 774.17, and they did not meet the criteria for a prudent and feasible avoidance alternative because they would compromise the Project to a degree that it would be unreasonable to proceed with the Project in light of its stated purpose and need. Avoidance Alternatives 2A and 2C would require a grade separation of Mission Inn Avenue and would result in an estimated cost of $45 million, which would more than double the estimated construction cost of the Project, resulting in costs of an extraordinary magnitude. Based on this evaluation, there was no feasible and/or prudent avoidance alternative to avoid the use of land from any and all Section 4(f) properties. Full or Partial Adaptive Reuse were also evaluated; however, given the extensive loss of integrity associated with adaptive or partial reuse resulting in an adverse effect, the environmental impacts, and overall costs of remediation and structural alteration, both the full adaptive reuse and partial reuse of the structure were not considered viable alternatives. Refer to Appendix Q Individual Section 4(f) Evaluation for a detailed discussion of the avoidance alternatives related to the FMC Complex Plant 1.

3.4. Permits and Approvals

This EA serves as an informational document for the general public and the proposed Project's decision-makers. FTA and RCTC are co-NEPA leads responsible for preparing the EA to comply with NEPA, and RCTC, as the CEQA lead agency, is responsible for preparing the Draft EIR to comply with CEQA; both documents evaluate potential environmental impacts from the Riverside-Downtown Station Improvements Project and are being circulated concurrently to facilitate public review. In accordance with NEPA guidelines 23 CFR 771.115 (a) and 40 CFR 1501.4 (e)(2), a Finding of No Significant Impact (FONSI) would be issued by FTA if it is determined that there are no significant impacts or unusual circumstances. RCTC will certify the Final EIR in accordance with State CEQA Guidelines § 15089 and § 15090, respectively. Implementation of the Project would require discretionary actions and permits from the agencies identified in Table 3-5 prior to commencement of construction and implementation.

Table 3-5. Anticipated Permits and Approvals

Agency	Action	Timing
CPUC	Approval for pedestrian bridge and at-grade crossings	Final Design Phase
City of Riverside	Approval of street improvements and encroachment permits	Final Design Phase
Federal Transit Agency	Approval of Final Environmental Document	Environmental Phase
Regional Water Quality Control Board	SWPPP and NPDES General Permit	Pre-construction and Construction Phases
Riverside County Transportation Commission	Certification of the EIR, adoption of Findings and Statement of Overriding Considerations, adoption of the Mitigation Monitoring and Reporting Program	Environmental Phase
SHPO	Concurrence with the HRR historic property eligibility determination, FOE, the Section 4(f) Evaluation, and MOA	Environmental Phase SHPO concurrence on the HRR was received September 16, 2021.
U.S. DOI	Draft Individual Section 4(f) evaluation circulation to U.S. DOI and concurrence from the official with jurisdiction	Environmental Phase

DOI = Department of Interior
FOE = Finding of Effect
HRR = Historic Resources Report
MOA = Memorandum of Agreement
NEPA = National Environmental Policy Act
NPDES = National Pollutant Discharge Elimination System
SHPO = State Historic Preservation Officer
SWPPP = Stormwater Pollution Prevention Plan

4.0 Affected Environment and Environmental Consequences

The EA analyzes potential impacts to environmental resources from the Build Alternative and design options. The Build Alternative with all design options would be constructed and operated within an existing train station in a developed urban area of Downtown Riverside zoned for commercial and industrial use. The proposed improvements require acquisition of the Prism Aerospace building (a historic resource also known as the FMC Plant 1 building), and depending on the design option selected, there is a potential for residential acquisitions and street reconfiguration. Environmental resources and potential project-related effects are similar for all design options with minor variations in the magnitude of effects. Unless otherwise noted, the term "Build Alternative" is used as the general term to describe potential effects related to the proposed action, which includes *all* design options." If a specific design option is mentioned, a different magnitude of impact is being disclosed for that particular design option.

Technical studies were completed to support the findings for the EA. Each study was prepared according to applicable federal, state, or local regulations, describes the study area and methodology, discloses potential temporary and/or permanent impacts from the Build Alternative and design options, and describes measures to avoid, minimize, or mitigate potential impacts.

Appendices A through D contain a list of references, list of preparers, project-related correspondence, and enlarged figures, all relevant to the EA.

Appendix E includes the Avoidance, Minimization, and/or Mitigation Summary/Environmental Commitments Record, which summarizes all the recommended measures to avoid, minimize, or mitigate potential environmental impacts during construction and/or operations.

Appendices G through T contain the environmental technical studies used to support the EA and are referred to in the following analysis.

4.1. Resources with No Impacts

There are no coastal zones, farmland or timberlands, or wild and scenic rivers within the project study area. The following resources were evaluated and the Build Alternative would have no impacts to:

Energy: The Build Alternative and all design options provide enhancements to Metrolink service and increase train ridership, and result in no permanent impacts in a reduction in regional vehicle miles traveled (VMT) in comparison to the No Build Alternative. Construction would require consumption of energy (i.e., fossil fuels and electricity) to operate and transport equipment and materials, but the energy consumption for construction would be temporary (up to 24 months). For more information, refer to the *Energy Analysis Technical Memo* (HNTB, 2021), as provided in Appendix K.

Land Use: The Build Alternative and all design options would be built within railroad ROW in areas designated for industrial use within the Market Place Specific Plan sub area. The Build Alternative would require conversion of industrial facilities, two single-family residences and two multi-family residences, on land designated for industrial or commercial use to transportation uses, and Design Options 2A, 2B, 3A and 3B may vacate and incorporate segments of 10th and Commerce Street. Land use conversion required by the Build Alternative ranges between 6.95 acres and 9.18 acres, depending on the design option and is compatible with the *Riverside Marketplace Specific Plan and Environmental Impact Report* (City of Riverside, 1991) and City of Riverside General Plan (2019), which allow development related to "passenger train, bus terminals, and parking lots uses. Although the proposed Project would reduce industrial land uses within the area and may convert existing residential properties to transportation uses, the conversion to is consistent with the city planning and permitted uses. For more information, refer to the *Community Impact Assessment* (CIA) (HNTB, 2021), as provided in Appendix I.

Parkland and Community Facilities: The Build Alternative would result in no impacts to Dario Vasquez Park (located about 0.5 mile from the Project) or to North Park (located on Vine Street and Mission Inn Avenue, west of the station and east of SR 91). Construction of the Build Alternative would result in temporary short-term impacts to Lincoln Park, including potential increases in noise, dust, visual effects, and traffic. These impacts would be minimized through standard construction measures and would not result in the loss of access to or use of adjacent parks or recreational resources. Permanent direct impacts are not anticipated; however, noise levels may increase due

to the removal of the FMC Plant 1 building, which would result in an indirect impact; however, the park is not considered a noise sensitive resource because its primary purpose is for active sport and recreational activities, and a noise barrier has been proposed to abate noise. For more information, refer to the CIA (HNTB, 2021), as provided in Appendix I.

Paleontological Resources: The Build Alternative would have no impacts to paleontological resources. The project area is highly disturbed and artificial fill is present throughout the surface of the project area. The area is mapped with low sensitivity for Holocene-age young alluvial deposits and a higher sensitivity for Pleistocene-age older alluvial deposits; however, there are no documented paleontological localities within the boundaries of the project area, and previous remedial excavations have been completed over much of the site to depths up to 30 feet. Also, a significant amount of trenching has taken place for the construction of a vapor extraction system that operated at the site in the past. For more information, refer to the *Paleontological Identification and Evaluation Report* (HNTB, 2021), as provided in Appendix O.

Safety and Security: The Build Alternative and all design options would result in no impacts to Safety and Security. The Build Alternative would comply with the *City of Riverside General Plan* (2012) public safety measures for transportation to address potential hazards and to ensure traveler safety on all modes of transportation. In addition, Metrolink's mission is to provide a safe, efficient, dependable, and on-time transportation service that offers outstanding customer experience and enhances the quality of life and commits to deploy new technologies and processes to enhance safety and security for riders, employees, and communities. RCTC is committed to safety, and the Build Alternative and all design options would incorporate safety features along the new platform and provide lighting within the expanded station. In addition, ADA sidewalks and lighting along the sidewalks surrounding the station would be incorporated to improve conditions for pedestrians. Project improvements would be designed in accordance with the most recent applicable codes and guidelines for SCRRA, BNSF, ADA, AREMA, FRA, and CPUC, standards, and guidelines.

Climate Change and Greenhouse Gases: The Build Alternative and all design options would improve overall air quality and reduce GHG emissions by decreasing the number of regional vehicle trips and VMT by shifting vehicle trips to passenger rail. During construction, additional emissions would be generated through the use of construction equipment; best management practices (BMPs) and dust control measures would be implemented to minimize construction emissions and avoid adverse effects. GHGs from construction activities would primarily result from demolition and construction equipment, most of which would be diesel-powered. Other emissions would result from trucks hauling construction materials and from construction workers' vehicles. Construction of the Project is currently planned to last from 2023 to 2025. Project construction and production of materials used will release GHGs and were estimated for Design Options 1A and 2A, which would require the most equipment and result in approximately 1,833 metric tons of carbon dioxide equivalent [MT CO2e] for Option 1A and 1,874 MT CO2e for Option 2A. These construction-related GHGs would be temporary (up to 24 months) and would also be reduced through BMPs and measures to reduce fugitive dust to protect air quality and would not significantly contribute to emissions implicated in climate change. During operation, the Build Alternative would have a beneficial impact by reducing VMT and GHG emissions. Under the No Build, traffic congestion in the area would likely increase as planned developments are constructed and vacant and underutilized land is occupied. Without effective train options, a likely increase in vehicle travel from Riverside County would increase emissions of GHGs. For more information, refer to the *Air Quality and Greenhouse Gas Emissions Technical Report* (HNTB, 2021), as provided in Appendix G.

No Build Alternative: Under the No Build Alternative, the current configuration of the Riverside-Downtown Station would remain the same and improvements would not be constructed. The No Build Alternative would not result in any temporary construction or permanent impacts to environmental resources discussed below; however, the No Build Alternative would not improve access, service, train operations, or parking and would not meet the Project's purpose and need and may result in increased congestion on roadways, increases in vehicle emissions and GHGs as population increases and roadways become more congested.

4.2. Aesthetics

The *Visual Impact Assessment* (HNTB, 2021) was completed for the Project in June to evaluate the potential visual effects of the Project. and is contained in Appendix S. The results of the study are summarized herein.

4.2.1. Existing Conditions

The project site is located within an urbanized core of the Downtown Riverside area, where existing residential, commercial, and industrial development surround the project site and where existing development may obstruct views of the surrounding mountains.

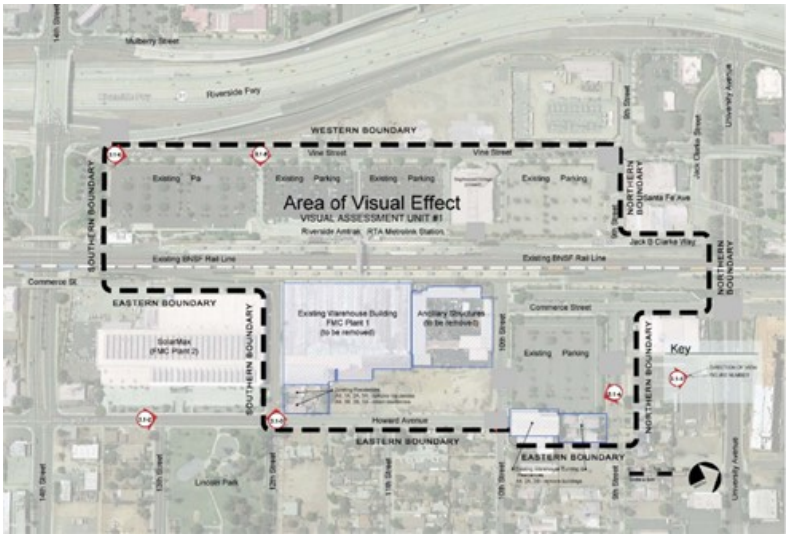

Figure 4-1. Area of Visual Effect

Affected Environment

The Project's Area of Visual Effect (AVE) is relatively flat, and the AVE boundaries are as follows: University Avenue to the north, Howard Avenue to the east, 14th Street to the south, and Vine Street to the west, (Figure 4-1).

- Northern Boundary: Ninth Street and University Avenue (depressed) form the northern visual boundary
- Eastern Boundary: Residences and businesses fronting Howard Avenue form the eastern visual boundary
- Southern Boundary: Vine Street turns from west to south and ramps down to the east to connect to 14th Street. Vine Street is heavily landscaped and restricts views to the project area. The southern edge, east of the BNSF Railway tracks, is the northern side of the SolarMax office/warehouse building.
- Western Boundary: Park-and-ride surface parking lots, serving the Riverside-Downtown Station and Regional Transit Authority (RTA) Metrolink Station; Brightwood College, with adjoining surface parking lots (now closed); and "Riverside Naval Growers Association" office and warehouse building (vacant and boarded) are located west of the BNSF Railway tracks from south to north.

Viewers are residents, employees, neighborhood travelers (drivers, bicyclists, and walkers), and commuters arriving and departing from the station and/or as they pass by the warehouse building at the station.

4.2.2. Environmental Consequences

Anticipated effects on visual resources during construction would be typical of rail projects and include the presence of heavy equipment and traffic control measures. Users in buildings or on streets and sidewalks that are in proximity to the project area would encounter views of the construction. Residents in adjacent homes, employees in local businesses, staff of railroads, and businesses and commuters would likely perceive construction activities as visually disruptive. Also anticipated are temporary detour routes, noise, and dust that would be associated with demolition and construction. During construction of the proposed Project and all the design options, construction equipment and heavy machinery would be placed on-site and near adjacent streets.

As shown in the conditions comparison on Figure 4-2, the Build Alternative would remove the Prism Aerospace Building (formerly the FMC Plant 1 building) to construct improvements and potentially 12th Street residential houses (under Design Options 1A, 2A, and 3A), which is an existing obstruction to views of Mount Rubidoux looking west along 12th Street. Removal of the Prism Aerospace building would enhance views of the mountains and provide sidewalks with landscaping and trees from this vantage point, resulting in a beneficial impact.

To abate noise from the removal of the Prism Aerospace Building, the Build Alternative proposes constructing a 12-foot-high approximately 500-foot-long noise barrier is proposed at the approximate location of the east wall of the existing Prism Aerospace building. The Build Alternative with Design Option 2A or 2B proposes constructing an 8-foot-high masonry wall along the Howard Avenue extension adjacent to multi-family units (Assessor's Parcel Number [APN] 211-191-005) to replace an existing property wall and to abate noise due to the removal of the neighboring multi-family structure.

The noise barrier design would be consistent with RCTC and local jurisdiction standards, and an aesthetic design treatment plan would be implemented to soften the noise barrier's structural intrusion, as well as maintain the community character and history.

As shown in the existing and post-project conditions view comparison (Figure 4-3) along 11th Street, at the street level, the exterior of the existing building has a corrugated steel exterior that appears to be rusted, and in disrepair. The surrounding area of the property is overgrown with patches of vegetation and is littered with debris. Much of the site is used as equipment storage where construction equipment, trailers, steel drums, and large steel containers are visible along the sidewalk. As such, the removal of the Prism Aerospace building for some viewers may be viewed as a positive change.

Figure 4-2. 12th Street and Howard Avenue looking west on 12th Street
Left Photo: No Build, Right Photo Build Alternative with noise barrier (simulation)

Figure 4-3. 11th Street looking west across Howard Avenue
Left Photo: No Build, Right Photo: Build Alternative (simulation)

The Build Alternative and all design options would incorporate streetscape improvements such as providing uniform landscape elements along ADA-compliant sidewalks to buffer the station and local roadways. Landscape improvements would incorporate drought-tolerant planting, and to the greatest extent feasible, use recycled water to maintain landscape elements. Trees that need to be removed will be transplanted within the project footprint to the greatest extent feasible (BIO-2). In addition to landscape elements, street lighting would be incorporated along sidewalks to enhance safety and walkability to and from the station. The Build Alternative would result in no adverse effects by incorporating an aesthetic design treatment plan (colors, textures, materials, landscaping, lighting, etc.) and consultation regarding potential indirect adverse visual effects to historic properties will be conducted with interested parties in accordance with Section 106 of the National Historic Preservation Act of 1966 therefore, visual impacts are not anticipated.

4.2.3. Avoidance, Minimization and Mitigation

To avoid and minimize impacts to aesthetics and visual resources, context sensitive solutions and compatible aesthetic treatments would be implemented. Refer to Appendix E for Aesthetics Measures: AES-1 to AES-5 and BIO-2.

4.3. Air Quality

The *Air Quality and Greenhouse Gas Emissions Technical Report* was completed in April 2021 (HNTB, 2021) to evaluate potential air quality effects from the Project and is contained in Appendix G. The results of the study are summarized herein.

4.3.1. Existing Conditions

The Los Angeles region is bound by the Pacific Ocean to the southwest and high mountains around the rest of its perimeter. The general region lies in the semi-permanent high-pressure zone of the eastern Pacific, resulting in a mild climate tempered by cool sea breezes with light, average wind speeds. The annual average maximum temperature, as measured at the Riverside Fire Station 3 climatic station, approximately 2 miles southwest of the project site, is 79.5 degrees Fahrenheit (°F). The highest monthly average maximum temperature (94.4°F) occurs in August, and the lowest monthly average minimum temperature (39.1°F) occurs in January. The average annual precipitation is approximately 10 inches (Western Regional Climate Center, 2016).

What are Criteria Pollutants?

The Clean Air Act identified several air pollutants of concern nationwide, known as criteria pollutants. The U.S. Environmental Protection Agency established maximum allowable concentrations for the six criteria pollutants in an effort to protect public health, public welfare, and the environment. Refer to Appendix D for the federal and state Ambient Air Quality Standards.

The criteria pollutants of interest for transportation projects are carbon monoxide (CO), particulate matter (PM_{10} and $PM_{2.5}$), ozone and the ozone precursors, volatile organic compounds (VOCs), and nitrogen oxides (NOx).

The Project is located in the County of Riverside within the South Coast Air Basin (SCAB), which consists of all or part of four counties: Los Angeles, San Bernardino, Riverside, and Orange. SCAB is a coastal plain with connecting broad valleys and low hills. Air quality in the non-desert portion of the County of Riverside is regulated by South Coast Air Quality Management District (SCAQMD). SCAQMD is responsible for reducing emissions from stationary (area and point), mobile, and indirect sources. SCAB is designated as a non-attainment for ozone ($O_{3,}$) and fine particulate matter of 2.5 micrometers or smaller ($PM_{2.5}$) criteria pollutants. The Riverside-Rubidoux monitoring station is located closest to the project site and tracks exceedances of ozone, $PM_{2.5}$, PM_{10} (coarse particulate matter of 10 micrometers or smaller), and nitrogen oxide levels. A list of criteria pollutants within SCAB and current federal and state attainment status for SCAB is included in Appendix D.

Toxic air contaminants (TACs) are a diverse group of air pollutants that may cause or contribute to an increase in deaths or in serious illness or that may pose a present or potential hazard to human health. TACs include both organic and inorganic chemical substances that may be emitted from a variety of common sources, including gasoline stations, motor vehicles, dry cleaners, industrial operations, painting operations, and research and teaching facilities. TACs are different than the criteria pollutants because ambient air quality standards are not established for TACs. TACs occurring at extremely low levels may still cause health effects, and it is typically difficult to identify levels of exposure that do not produce adverse health effects. TAC impacts are described by carcinogenic risk and by chronic (i.e., of long duration) and acute (i.e., severe but of short duration) adverse effects on human health.

Affected Environment

Some land uses are considered more sensitive to changes in air quality than others, depending on the population groups and the activities involved. The California Air Resources Board has identified the following typical groups who are most likely to be affected by air pollution: children, the elderly, athletes, and people with cardiovascular and chronic respiratory diseases. According to SCAQMD, sensitive receptors include residences, schools, playgrounds, child-care centers, athletic facilities, long-term health-care facilities, rehabilitation centers, convalescent centers, and retirement homes. The closest off-site sensitive receptors to the Project are the residences located between 9th Street and 10th Street that would be directly adjacent to the Project's construction activities under Design Options 2A, 2B, 3A, and 3B. Other receptors near the project site include Lincoln Park and the community center located at this park. Soils contaminated through the use of known solvents during historical industrial operations may be present beneath the FMC Plant 1 building. Land use covenants exist in this area and dictate that soil disturbance activities shall not be conducted without the preparation of a soil management plan and the consent of the Department of Toxic Substance Control.

Construction-related emissions were modeled for the worst-case scenario under Build Alternatives 1A and 2A to determine whether criteria pollutants would exceed limits within an area designated as non-attainment for O_3, and $PM_{2.5}$. Based on impact footprint and amount of demolition required, these two Build Alternative parking design options are anticipated to require the most construction activity and thus will generate the highest level of pollutants of the proposed parking design options. Therefore, if emissions associated with Design Options 1A and 2A are below significance thresholds, it is assumed that emissions associated with the other circulation and parking design options (Design Options, 1B, 2B, 3A, and 3B) would be below significance thresholds as well. Construction emissions analysis assessed maximum daily emissions from individual construction activities, including demolition, site preparation, grading, paving, track construction, bridge/platform construction, and architectural coating. The use of heavy equipment would be required during these various construction activities.

4.3.2. Environmental Consequences

The Build Alternative construction would result in temporary increases in air pollutant emissions. These temporary emissions would be generated in the form of fugitive dust emissions (PM_{10} and $PM_{2.5}$) and ozone precursor emissions (nitrogen oxides [NO_X] and volatile organic compounds [VOCs]). Operation of heavy equipment and vehicles during the construction phase would generate exhaust emissions from fuel combustion. Fugitive dust emissions would be generated from earth disturbance during site grading, as well as from construction vehicles operating on dirt roadways within or adjacent to construction sites. The Project's emissions associated with construction of Design Options 1A and 2A were estimated using CalEEMod. These two design options were evaluated because they are anticipated to require the most construction activity and thus generate the highest level of pollutant emissions of the proposed design options; therefore, if emissions associated with Design Options 1A and 2A are below significance thresholds, it is assumed that emissions associated with the rest of the proposed design options would be below significance thresholds.

Tables 6-1 and 6-2 in Appendix G present the results of the maximum daily and estimated construction GHG emissions calculations for construction of the Build Alternative with Design Options 1A and 2A. These two design options were analyzed because they would require the most construction activity and equipment and thus generate the highest level of construction-related emissions of the proposed design options. Therefore, if emissions associated with Design Options 1A and 2A are below significance thresholds, it is assumed that emissions associated with the rest of the proposed design options would be below significance thresholds. The Build Alternative would not generate short-term emissions that could potentially cause an increase in the frequency or severity of existing air quality violations; cause or contribute to new violations; or delay timely attainment of air quality standards. Air quality impacts associated with an increase in criteria pollutants during project construction would be less than significant.

The Build Alternative would result in criteria pollutant emissions from mobile (vehicular) sources and area sources. Mobile sources would be associated with the increased number of vehicle trips to and from the Riverside-Downtown Station due to projected increase in train ridership and would primarily result in emissions of NO_X and carbon monoxide (CO). However, these trips would generally be of short distances and the regional VMT for these trips would be offset by the use of trains. Area sources, such as reactive organic gas emissions, would be associated with the reapplication of architectural coatings on building and parking surfaces, which would occur occasionally as part of the station's operational maintenance activities.

Overall, however, the Project would result in a net decrease in emissions compared to existing conditions. The purpose of the Project is to provide station improvements to enhance Metrolink service and increase transit ridership. Increased ridership would result in a reduction in regional VMT and associated criteria pollutant emissions. The Project would not result in an increase in the number of train trips or associated emissions. Between the Build Alternative and No Build Alternative, the same number of train trips would occur for existing and future conditions. While the Project would result in increased vehicle trips to and from the station, these trips would generally be of short distances and the VMT for these trips would be offset by the use of transit. The occasional reapplication of architectural coating would result in minimal emissions. As such, operation of the Project would not result in a cumulatively considerable net increase of any criteria pollutant for which the project region is in nonattainment. Moreover, the Build Alternative and all design options would not result in an increase in criteria pollutants in the SCAB where it is designated as federal non-attainment for O_3 and $PM_{2.5}$. The Build Alternative would result in no temporary or permanent adverse effects.

4.3.3. Avoidance, Minimization, and Mitigation Measures

No adverse effects are anticipated during construction or operations, and mitigation measures are not required. However, temporary impacts to air quality are anticipated during construction. To avoid or minimize effects during construction, dust prevention measures will be implemented to avoid and minimize impacts to residences located between 9th Street and 10th Street and to Lincoln Park and the community center. Refer to Appendix E for Air Quality Construction Measure AQ-1 and Hazardous Waste Measures HAZ-1, HAZ-2 and HAZ-9.

4.4. Biological

A *Biological Resource Study* was completed in November 2020 (HNTB, 2020) to evaluate potential project-related effects to biological resources and is contained in Appendix H. Applicable regulations include the Migratory Bird Treaty Act (16 U.S.C. §703), Endangered Species Act (Section 7), and Executive Order 131112, Invasive Species and Fish and Game Code (FGC). A U.S. Fish and Wildlife Service list of threatened and endangered species that may occur in the proposed Project location was obtained on September 25, 2020 and on September 9, 2021. The results of the study are summarized herein.

4.4.1. Existing Conditions

The Project is located within an entirely urbanized area that consists of existing development and landscaped areas. The Project site is relatively flat and is at 880 feet in elevation. Mount Rubidoux and the Santa Ana River Reach 3 are 1.3 and 1.8 miles to the west of the Project, respectively, and Sugarloaf Mountain, Box Springs Mountain, and Sycamore Canyon are to the east of the Project. The Project is within the Santa Ana River watershed. Tequesquite Arroyo Creek is located approximately 0.7 mile to the south and runs underneath SR 91. Riverside Canal is located just west of the Project footprint. It is culverted underground to the north of 14th Street and is daylighted south of 14th Street, approximately 70 feet to the west of the footprint. Lake Evans is 1.25 miles to the northwest of the biological study area (BSA). The majority of this area is covered with paving, concrete and hardscape. Plant species within the BSA typically consist of non-native and ornamental landscaping. Ruderal and weedy species are commonly found at the margins of hardscape areas, where they can grow in small patches of disturbed areas. There are no natural communities within or adjacent to the project footprint. There are no waters or wetlands within the project footprint. There is no riparian vegetation associated with the Riverside Canal, as it is a constructed watercourse. No critical habitat or essential fish habitat was identified in the BSA, and there are no habitat features that provide connectivity for wildlife populations. Highway 215 and SR 91, which act as barriers to wildlife movement, as well as extensive urbanization within 1 mile of the Project, make the existing condition of the BSA unsuitable for supporting wildlife movement and does not currently contribute to habitat connectivity.

Affected Environment

Nesting migratory birds, such as the Cooper's hawk and peregrine falcon, are present within or near the BSA. Trees, shrubs, and structures within and near the project footprint may provide suitable nesting habitat for a number of species, including the red-tailed hawk and red-shouldered hawk, as well as other native migratory species. Nests may be found in and on structures such as bridges, buildings, poles, and towers. All of these birds, their nests, and their eggs are protected from intentional and incidental take under the federal Migratory Bird Protection Act and California Assembly Bill 454 Migratory Birds, as well as the FGC §§ 3503 and 3513, respectively. Peregrine falcons are a fully protected species, and therefore, cannot be taken. In addition to nesting birds, the pallid bat, western mastiff bat, and yuma myotis, other native species have the potential to be found in structures and vegetation in or near the project footprint. Native species that do not otherwise have a special-status, such as the Mexican free-tailed bat (Tadarida brasilensis), have the potential to roost in structures and buildings. The long-term persistence of North American bat species is threatened by the loss of clean, open water; modification or destruction of roosting and foraging habitat; and, for hibernating species, disturbance or destruction of hibernacula. All native bats are protected under the FGC.

Plant species within the BSA typically consist of non-native and ornamental landscaping. Ruderal and weedy species are commonly found at the margins of hardscape areas, where they can grow in small patches of disturbed soil areas. The Riverside Canal is outside the project footprint, but within the BSA, and is considered Waters of the State and Waters of the U.S. because of its hydrologic connection to the Santa Ana River. Street trees in the City of Riverside include Mexican fan palm (Washingtonia robusta), California fan palm (W. filifera), crape myrtle (Lagerstroemia indica), shamel ash (Fraxinus udei), and holly oak (Quercus ilex) and may occur within the footprint.

4.4.2. Environmental Consequences

Applicable Regulations

NEPA requires using all practicable means to ensure a safe, healthful, productive, and aesthetically and culturally pleasing surroundings for Americans (42 U.S.C. 4331[b][2]).

Federal Uniform Relocation Act of 1970 provides equitable and fair relocation assistance for displaced residents and businesses.

Consistency with regional and local plans

The Build Alternative would not result in any temporary impacts to nesting birds such as the cooper's hawk, peregrine falcon, and pallid; or to roosting bats such as the pocketed free-tailed, western mastiff, western yellow or Yuma myotis that may be present and or nesting in the project vicinity; or to the Riverside Canal because pre-construction surveys, construction work windows, and avoidance measures such as direct removal, filling, hydrological interruption, or other means would be implemented during pre-construction to avoid impacts.

The Build Alternative would potentially transplant or replace up to 51 trees, depending on which design option was selected. Most of these trees were planted by RCTC in the overflow parking lot, as were the palm trees along the railroad ROW. Trees that need to be removed will be transplanted within the project footprint to the greatest extent feasible. A site visit was not conducted for this study, and therefore the exact species could not be determined. The size and species of tree would be determined prior to construction. No work is proposed within the culverted or open section of the Riverside Canal, and indirect impacts to the Riverside Canal through polluted stormwater runoff during construction would be prevented by complying with a Storm Water Pollution Prevention Plan (SWPPP) and the NPDES Construction General Permit under Section 402 of the Clean Water Act. With the implementation of the proposed avoidance and minimization measures, the Build Alternative would have a minimal impact on biological resources. Appendix H, Table 6-1 presents a list of impacted trees by design option.

4.4.3. Avoidance, Minimization, and Mitigation Measures

No adverse effects are anticipated during operations; however, there may be temporary impacts to biological resources during construction. To avoid or minimize impacts, and where feasible trees that need to be removed will be transplanted within the project site and plant and shrub removals and structural demolition would take place outside of nesting season (September 1 to January 31). If work is done within nesting season (February 1 to September 30) then preconstruction surveys for nesting birds and bats would be conducted and if nesting birds or roosting bats are present work buffers would be implemented. Refer to Appendix E for Biological Measures BIO-1, BIO-2 and BIO-3.

4.5. Community Impacts/Growth

The *Community Impacts Assessment* (CIA) was completed for the Project in June 2021 (HNTB, 2021) to evaluate the potential project-related effects to the community. The assessment is provided in Appendix I and includes a table that lists applicable policies referenced in the City of Riverside's General Plan. The results of the study are summarized herein.

4.5.1. Existing Conditions

Population: Based on U.S. Census data, the overall population in the CIA study area declined from 3,900 to 3,400 between 2010 and 2018. Although population in the project study area is trending lower, the total city population of Riverside has increased from approximately 304,000 to 324,000 during the same 8-year period. Southern California Association of Governments (SCAG) projections indicate that population within the City of Riverside would continue to increase to 395,800 by 2045. There is little discrepancy between the CIA study area and the city and county, with a range of 24 to 29 percent of the population under 18 and 10 to 14 percent of the population 65 and over. Within the project study area, the under 18 years of age demographic consisting of 29 percent of the population suggests that a large portion of the residents are considered dependents as it correlates to the greater than average household size of four people compared to three people within the city (U.S. Census, 2018).

With an average household size of 4.3 persons, the CIA study area has a larger average household size than the city (3.4 persons) and County of Riverside (3.3 persons) by approximately one person. Approximately 11 percent of the housing units in the study area are vacant, more than the city's 6 percent, but less than the county's 14 percent vacancy rate. The ratio of owner to renter occupied housing units in the study area differs from that of the city and county. While approximately one-third of housing units in the study area are owner-occupied, more than half and two-thirds of housing units are owner-occupied in the city and county, respectively. The proportion of single-family homes

to multi-family homes in the study area is similar to that of the city. Both have a higher proportion of multi-family homes than the county. There are no non-traditional types of housing units (such as boats, recreational vehicles, vans, etc.).

Economic Conditions: In the City of Riverside, there were 149,034 persons employed in the civilian labor force, with 8.1 percent of the total labor force unemployed. According to data compiled by the U.S. Census Bureau in the 2017 Economic Census, in both the city and county, the majority of jobs were in health care and social assistance. Many jobs were also in retail trade, accommodation, and food services. The City of Riverside also had a large share of jobs in administrative support, waste management and remediation services. Retail trade had the largest share of sales or receipts in the county, while health care and social assistance had the largest share of sales or receipts in the city. Wholesale trade followed each business type closely in share of sales or receipts for both the city and county.

In two of the three census block groups adjacent to the proposed Project and within the CIA study area, median household incomes were about 40 to 50 percent lower than in the region. Two of the three census block groups composing the CIA study area had proportions of persons below the poverty threshold and an unemployment rate that were greater than the proportions reported for either the County or City of Riverside.

The California Department of Tax and Fee Administration report of taxable sales for the third quarter of 2019 indicates that total taxable sales for Riverside County were $9,714,389,801, an increase of 3.4 percent from third quarter of the previous year. Net sales and use tax revenue collected by the county for fiscal year 2018-2019 is estimated at $31.3 million, according to the County of Riverside's Fiscal Year 2019/20 Adopted Budget. For the City of Riverside, total taxable sales were $1,431,352,676 for the third quarter of 2019. The city's 2019 Popular Annual Financial Report estimates the city's sales tax revenue at $130.6 million. The same report indicates that sales tax revenue more than doubled between 2014 and 2019.

Property taxes in the study area are collected by the Riverside County Treasurer–Tax Collector. Total property tax revenue in the county amounts to approximately $390.6 million in the 2018-2019 fiscal year. The City of Riverside expects to receive about $69 million in property tax revenue for the 2019-2020 fiscal year according to its 2019 Comprehensive Annual Financial Report.

Local commercial centers within the vicinity of the proposed Project area are situated along Commerce Street, 14th Street, University Avenue, and Vine Street. The types of businesses along Commerce Street and Vine Street, which parallel the railroad corridor, and 14th Street are primarily manufacturing, automotive, and industrial office park. Along University Avenue, there are a variety of commercial services, including automotive shops, bars and restaurants, grocery markets, liquor stores, and legal services.

Affected Environment

The Eastside Neighborhood is medium density residential areas with single-family homes. Community facilities include three parks, one with a community center and one school. There are no institutions, libraries, or social service organizations (Figure 4-4).

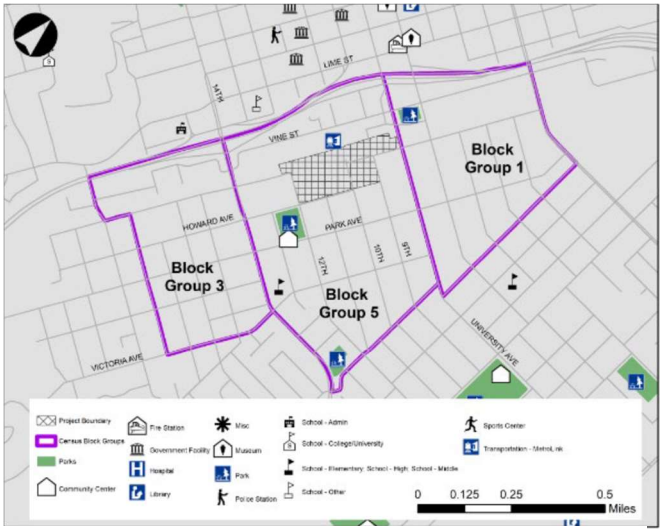

Figure 4-4. Community Facilities

Emergency Services: Police and fire protection are provided by the Riverside Police Department and Riverside Fire Department, respectively. The nearest police and fire stations are outside the CIA study area approximately 0.4 mile from the Riverside-Downtown Station. The city contracts with American Medical Response for ambulance services. American Medical Response has a facility within the CIA study area at 3198 15th Street, about 0.3 mile south of the station. Riverside Community Hospital is outside the CIA study area less than a mile from the station.

Utilities and Communications Providers: Water and electricity in the CIA study area are provided by Riverside Public Utilities, a customer-owned utility governed by community volunteers and the City of Riverside. The City of Riverside Public Works Department maintains the sewer, stormwater system, and trash and recycling, and telecommunications providers include AT&T, Frontier Communications, and Spectrum.

4.5.2. Environmental Consequences

Under the No Build Alternative, no acquisitions would be required, and no businesses would be impacted; thus, there would be no economic impacts and loss of tax revenue under the No Build Alternative. there would be no employment loss from the businesses on the proposed Project site. Tax revenue from property or sales would not be expected to change, except relative to other economic changes in the country and region.

Under the Build Alternative, construction would result in a local increase in jobs for the anticipated 2-year duration of the construction. The Build Alternative and all design options would require local roadway work that may include temporary full or partial roadway closures and detours. Project construction activities would be temporary in duration and confined to the site; a Traffic Management Plan (TMP) would be implemented to maintain access to and from the neighborhood and businesses Aside from businesses being permanently acquired, there are no businesses in the neighborhood for which access would not be maintained. As a result, temporary impacts to tax revenue are expected to be minor.

Business Displacements: Businesses would be displaced, depending on the Build Alternative and parking design option. Prism Aerospace, which occupies seven parcels on 6.87 acres and has an annual revenue of approximately $12 million, would be displaced under the Build Alternative and all design options. At the time of the preparation of this EA, the property owner of the Prism Aerospace building was seeking to lease industrial/office space to another business entity within the property along 10th Street. Additional business(es) maybe be displaced if the ancillary building within the Prism Aerospace building is leased to potential tenant(s).

West Coast Standards, which occupies two parcels on a 0.77-acre of land and has an annual revenue of approximately $1.2 million, would be displaced under Design Options 2A and 2B only. Prism Aerospace and West Coast Standards are neither unique to the city, nor do they make up a business type that can only function on the site in which they are currently located. If possible, RCTC will assist displaced businesses to find suitable replacement sites within the City or County of Riverside. With relocation assistance to a suitable replacement site where the existing or an equivalent customer base can be maintained, no adverse effects to business are anticipated.

Employment Impacts: Prism Aerospace employs approximately 50 people at the subject site. Under the Build Alternative and all design options, employment at Prism Aerospace and other businesses adjoined to this property would be lost if the business were not relocated to a site accessible to the proper workforce.

West Coast Standards employees six people at the subject site. Under Parking Design Options 2A and 2B, this employment would be lost if the business were not relocated to a site accessible to the proper workforce. With relocation assistance to a suitable replacement site where the current employees could maintain their employment, no adverse effects to employment are anticipated.

Tax Revenue Effects: Residences generate property tax for the city and county while businesses generate both property and sales tax for the city and county. Taxes are collected by the county, which then distributes a share to the city. Table 4-1 summarizes the annual tax revenue collected by the county for each of the potentially affected properties.

Table 4-1. Annual Tax Revenue Collected for Potentially Affected Properties

Property	Property Type	Annual Tax Revenue
Prism Aerospace	Warehouse/manufacturing	$48,700[a]
West Coast Standards	Warehouse	$12,218[b]
Vacant industrial property	Vacant	$2,502[a]
Agosto single family property	Residential	$2,455[a]
Ballesteros single family property	Residential	$354[a]
Martinez multi-family property	Residential	$4,121[b]

Property	Property Type	Annual Tax Revenue
Tekelian multi-family property	Residential	$2,214[b]

Source: Appraisal of Real Property, Integra Realty Resources, April 2018, May 2018, September 2020

[a.] Fiscal year 2017-2018
[b.] Fiscal year 2019-2020

While sales tax revenue from businesses would be maintained with a suitable relocation site that maintains a comparable customer base within the city, the property tax would be a permanent loss as the properties would be permanently converted from tax generating business and residential properties to a transportation use. Table 4-2 summarizes the estimated tax revenue lost by the County of Riverside, assuming a total loss of revenue from displaced properties.

Table 4-2. Tax Revenue by Potentially Displaced Property

Property	Estimated Potential Tax Revenue Loss
Parking Design Option 1A	$54,011
Parking Design Option 1B	$51,202
Parking Design Option 2A	$72,564
Parking Design Option 2B	$63,420
Parking Design Option 3A	$54,011
Parking Design Option 3B	$51,202

Source: Draft Relocation Impact Report, Helix, 2021

Note: Tax revenue loss is based on the most recent year of tax receipts available and assumed to be approximately the same as that year.

The tax revenue for the County and City of Riverside for fiscal year 2018-2019 had a sales tax revenue of $31.3 million and property tax revenue of $390.6 million for the County and $130.6 million sales tax revenue and $69 million property tax revenue for the city, the worst case loss of tax revenue under Parking Design Option 2A makes up less than a tenth of a percent of tax revenue.

Utilities and Emergency Services: During construction activities, utilities would generally be protected in place or relocated on-site. The municipal water well, currently located where the third platform and added track are proposed, would need to be abandoned. RCTC will coordinate with utility owners prior to abandonment to avoid or minimize service disruption during construction. Water would be required on-site during the normal course of construction. RCTC and the construction contractor will coordinate with the operator of the water supply to ensure that construction water use does not impact community water use. With this coordination, impacts would be less than significant. The Build Alternative would require the relocation of the following utilities: Gas (SoCal Gas Company), Electric (City of Riverside), Water (City of Riverside), Fiber Optic (AT&T, Spectrum, Frontier and Sprint), Cable TV (Centurylink), and Storm Drain and Sewer (City of Riverside).

The Project would require the abandonment of a municipal water well. This abandonment is not anticipated to impact the city's water supply. The completed Riverside-Downtown Station would not require a larger water supply than the existing Prism Aerospace building currently on the project site. Therefore, impacts to the water supply would be less than significant.

Police and Fire Stations are located in the Downtown-Riverside area on the opposite side of SR 91, approximately 0.4 mile from the project site. Due to the distance and location, temporary impacts to emergency services are not anticipated. Permanent changes to the roadway network would increase rather than decrease access to the neighborhood; thus, access for emergency services would remain unchanged or improve. Since the Project does not increase the number of residents living in or businesses operating in the CIA study area, City, or County of Riverside, it is not expected that it would induce demand for new or expanded utilities or emergency services.

4.5.3. Avoidance, Minimization, and Mitigation Measures

No adverse effects are anticipated to the community with implementation of measures. To avoid or minimize impacts from potential relocations, RCTC will comply with the guidelines in the Uniform Relocation Assistance Act of 1970, as amended, to assist displaced businesses in finding a suitable replacement site within the City or County of Riverside as feasible.

4.6. Cultural Resources

The *Historic Resources Report* (HNTB, 2021) and *Archaeological Survey Report* (Helix, 2021) were both completed in July 2021(HNTB, 2021) to evaluate potential project-related effects on cultural resources and is contained in Appendix L. The results of the studies are summarized herein.

4.6.1. Existing Conditions

Applicable Regulations

National Historic Preservation Act of 1966, U.S.C. Title 54, Section 306108, and its implementing regulations, Code of Federal Regulations Title 36, Part 800.

The Project is located within a highly developed area with a mix of newer and older developments. The area is encompassed by the BNSF railroad corridor to the west, and Ninth Street (generally) to the north.

Affected Environment

Cultural resources include historic and prehistoric archaeological sites, districts, buildings, structures, objects, and landscapes. They also include cultural or traditional places or resources that have value to a community, such as an Indian tribal group. The Area of Potential Effects (APE) (Figure 4-5) is the geographic area within which a project may cause direct effects, which are caused by the proposed Project and occur at the same time and place. Indirect effects to the character or use of historic or archaeological resources, which may be caused by the proposed Project, may occur later in time or farther removed in distance, but are still reasonably foreseeable. 40 CFR § 1508.8(a)-(b).

The APE includes aboveground and belowground areas. The aboveground portion of the APE includes the existing ROW and parcels immediately adjacent to areas of the proposed project-related station platform, track, pedestrian access, and parking improvements.

Figure 4-5. Area of Potential Effects
Source: Historic Resource Report (HNTB, 2021)

The below-ground APE consists of construction ground disturbance areas and varies from 5 feet to a maximum of 10 feet deep, with most of the disturbances occurring at about 5 feet deep. On June 4, 2020, the State Historic Preservation Officer (SHPO) concurred with the APE, and on March 17, 2021, the SHPO reviewed the updated Project Description and found the APE remained valid. The APE is in an urban developed and disturbed area within existing train and industrial and commercial ROW. No archaeological sites were identified within the APE, as the Project been previously disturbed by the construction of the station and tracks and surrounding development. Chapter 5.0, Public Involvement/Consultation and Coordination provides further details on Section 106 Consultation.

Identification of Archaeological Resources: The survey methodology used to identify potential and existing historic resources within the Project's APE was based on best practices in the survey and inventory of historic properties, established in *NRHP Bulletin 24: Guidelines for Local Surveys: A Basis for Preservation Planning*. The survey and inventory of historic properties was also performed in accordance with the survey methods established in 36 CFR § 800.4 and consisted of the following reviews:

- Available reports and documents on file with the California Historical Resources Information System (CHRIS)
- State's Built Environment Resource Database (BERD)
- Documents on file with the City of Riverside's planning division
- Documents provided by the RCTC

In December 2019, HELIX Environmental Planning (HELIX) visited the Eastern Information Center (EIC) of CHRIS at the University of California, Riverside and gathered information to help prepare for both the ASR (Appendix A) and the Historic Resource Report (HRR). HELIX examined all available records and documents on file at CHRIS-EIC located within 0.5-mile of the Project APE. In addition to information on file at the CHRIS-EIC, HELIX and HNTB secured unpublished cultural resources reports on file with the City of Riverside's Community Development Department, Planning Division. Two cultural resources were identified within the APE during a records search and one was identified during the pedestrian field survey (Table 4-3). See Appendix D for a figure of the U.S. Geological Survey Topographical Map.

Table 4-3. Identification of Archaeological Resources

Name	Identification Number	Survey Results
Upper Riverside Canal	(P-33-004495)	The canal was not observed during the field survey, and access to the area where the canal is mapped was limited.
Southern Pacific Co. Riverside Branch Main Line alignment	(P-33-021086)	The alignment was identified within the APE by the records search. The railroad line was described as a subsurface resource, present beneath currently existing development; but no evidence of it was observed during the pedestrian field survey conducted in March 2020.
Historic sidewalk stamps	N/A	Historic sidewalk stamps dating from the early to mid-twentieth century were identified during the field survey at the edge of the LOD. Two of the sidewalk stamps are within the LOD: one marked Pearson & Dickenson, dated 1925, on the south side of 10th Street, east of Howard Avenue; and one marked City Inspector, with no date, on the east side of Howard Avenue, just north of 10th Street. Two others are outside the LOD, on the north side of 12th Street, east of Howard Avenue; one is marked Frank Sloan 1950, the other is a curb incised with WPA (Works Progress Administration) 1939.

Source: Archaeological Survey Report (HNTB, 2021)

Identification of Historic Resources: There are 12 previously recorded historic resources and 7 newly-recorded historic built environment resources(refer to Appendix L [HRR] and Appendix C (Department of Parks and Recreation 523 Forms]). Of the 12 previously recorded historic-era, built-environment resources, only 2 are considered eligible by the National Register of Historic Places (NRHP)–eligible historic properties as follows: The former FMC Complex, which includes Plants 1 and 2, with associated ancillary structures (mostly additions) is recommended eligible for the NRHP and the California Register of Resources (CRHR), as it is also designated as a City of Riverside local landmark.

Of the seven newly-recorded properties within the APE, only one is recommended eligible for the CRHR — the multi-component resource located on a single parcel (4110, 4120, 4130, and 4140 Howard Avenue). The historic property comprises four dwellings located on one parcel and collectively represent early iterations of worker houses, two of which take on the form of a Shotgun House.

The properties are either individually eligible or are contributing to a locally-designated, multi-component resource and were identified through survey evaluation. Table 4-4 provides the details of the properties.

Table 4-4. Food Machinery Corporation Complex and Worker Houses

APE No.	Site Address	APN	Property Name (if applicable) and SHPO Identification
17 18 19 21 28	3087 12th Street	211201004 211201006 211201007 211201026 211201039	FMC Complex Plant 1 (P-33-09769)
33	3080 12th Street	211231024	FMC Complex Plant 2 (P-33-09769)
30	4110 Howard Avenue 4120 Howard Avenue 4130 Howard Avenue 4140 Howard Avenue	211203009	Worker's Houses

The remaining (newly-recorded) properties within the APE include warehouses on Commerce Street, a city park, and a commercial retail establishment on 14th Street. None of these resources were recommended eligible for the NRHP. The warehouses are recommended eligible as City of Riverside local landmarks as contributing features to the Citrus Industry Thematic District (unrecorded), and a commercial retail establishment on 14th Street (recommended not eligible for state or local listing) Northeast of the FMC Complex and across 10th Street, a variety of early citrus industry buildings that were originally part of the Sunkist Citrus Growing Cooperative are now part of the group of buildings that represent the potential, locally-designated, Citrus Thematic Industrial Historic District many of which date back to the early years of the 20th century. They have been adapted for uses such as commercial, office, and restaurant uses. The full extent of the district has not been investigated, but the boundary appears to include the FMC Complex. East of the FMC Complex are single-family residences (previously recorded and located within the Ninth Street Neighborhood Conservation Area and previously found ineligible for the NRHP. These resources were evaluated but found not eligible or on the National Register (NR). Refer to Appendix D for properties not eligible or on the NR.

Figure 4-6. FMC Complex Plant 1 Building A West Elevation

Food Machinery Complex: FMC Plants 1 and 2 (APE Map Nos. 17, 18, 19, 21, 28, and 33) appear to be NRHP-eligible under Criteria A and B at the statewide level of significance. Plants 1 and 2 are NRHP-eligible under Criterion B for association with FMC engineer, James M. Hait, who designed the Water Buffalo an amphibious landing vehicle, and who would later become chairman of FMC Corporation. FMC Plants 1 and 2 are recommended NRHP-eligible under Criterion D because, Sanborn maps, dated 1908 and 1945, reveal the presence of "Japanese Shanties" (1908) at the southeast corner of the property, which later became "Mexican Shanties" (1945). An early, racially-segregated swimming pool is likely buried at the southwest intersection of 12th Street and Howard Avenue, beneath blacktop paving. The pool was originally part of Lincoln Park before Howard

Avenue was connected between 12th and 13th Streets. Existing photos of FMC Plants 1 and 2 are shown in Figure 4-6 through Figure 4-8. Appendix D provides a photo and aerial view of the FMC Complex in 1955.

FMC Plant 1 (APE Map Nos. 17, 18, 19, 21, and 28) is NRHP-eligible under Criterion B because of the food machinery contributions of the FMC Riverside Complex, based on the important citrus industry inventions of Fred Stebler, George Parker, and Hale Paxton.

Figure 4-7. FMC Plant 1 Building A, Interior Bowstring Truss and Sawtooth Roof (Looking West/Southwest*)*

Figure 4-8. East Elevation, Plant 2 (Existing)

All three of these men were employed by the FMC in the company's first Riverside years, and through their innovations, they established FMC as an industry leader in the realm of food machinery FMC Plant 2 (APE Map No. 33) is also NRHP-eligible under Criterion C as an intact, expressive example of World-War-II-era industrial architecture. The period of significance for Plant 1 is 1938 to 1980 and for Plant 2 is 1942 to 1958.

Worker Houses Located at 4110, 4120, 4130, and 4140 Howard Avenue: The Worker Houses located at 4110, 4120, 4130, and 4140 Howard Avenue (APE Map No. 30 APN 211203009) are recommended eligible for the NRHP, two as representative examples of shotgun houses, and two as an expression of simple, worker's housing located in Eastside, which was home to communities associated with the citrus industry, including Japanese, Mexican, Mexican-American, African-American, and people of European descent. The worker houses are significant on the state and local level, meeting NRHP Criterion C.

4.6.2. Environmental Consequences

The Project's impacts would alter the houses' integrity of setting, feel, and association, as Build Alternative Options 1A through 3B would require demolition of the FMC's Plant 1 building (APE Map Nos. 17, 18, 21, and 28) and depending on design option, the houses on the corner of 12th and Howard (APE Map Nos. 22 and 23) , which are part of the historic setting of the houses. However, this change would not alter the aspects of integrity of location and design, which are (along with setting) the most important aspects of integrity under Criterion C. (Figure 4-9 through Figure 4-12).

Figure 4-9. 4110 Howard Avenue

Figure 4-10. 4120 Howard Avenue

Figure 4-11. 4130 Howard Avenue

Figure 4-12. 4140 Howard Avenue

Archaeological Resources: The project study area has been previously developed with railroad tracks, paved roads, concrete sidewalks, buildings, and grass or landscaped grounds. Based upon the results of the ASR, records search, and field review, the Build Alternative would not impact archaeological resources within the APE. Although no impacts are anticipated, there is a potential for encountering undiscovered archaeological resources in a subsurface context during ground disturbing activities, which would result in no adverse effect to archaeological resources. As specified below, construction monitoring by a qualified archaeologist and other measures will be employed during ground disturbing activities to avoid potential impacts during construction. Historic Resources Avoidance Alternatives are described in Section 4.13.

Full Adaptive Reuse Option: A full adaptive reuse option for a complete retrofit/reuse of the existing Plant 1 was also considered to mitigate impacts to the historic FMC Complex's Plant 1 while weighing the overall project objectives against core performance criteria. Although the Full Adaptive Reuse Alternative would reuse the structural timber trusses and supports and retain the distinctive sawtooth roof, the building's overall integrity of design, materials, workmanship, and feel would be compromised as a result of the substantial loss of historic fabric associated with full adaptive reuse as a covered, enclosed train station. The alterations to make the structure a fire-rated enclosure for the train station includes encapsulation of the reused timber trusses, supports, and framing elements (all character-defining features) in fireproof materials, such as concrete or steel. In addition, the Full Adaptive Reuse Option would not meet the Secretary of Interior's Standards for Rehabilitation and would still result in a significant impact.

Partial Adaptive Reuse Option: Partial adaptive reuse was considered to mitigate impacts to the historic FMC Complex's Plant 1 by deconstructing Plant 1 so that only a canopy remained, covering a portion of the proposed track and platform, reducing the structure's size to a much smaller one than the existing size of Plant 1. The canopy structure would be open (not enclosed or filled with train exhaust or hazardous waste/materials) to allow for ventilation. The canopy structure would only be 56,000 square feet, as opposed to the full adaptive reuse of the existing 120,000 square-foot structure. Although the Partial Adaptive Reuse Option would reuse the structural timber trusses and supports and retain the distinctive sawtooth roof, the building's overall integrity of design, materials, workmanship, and feel would be compromised as a result of the substantial loss of historic fabric as an open (not enclosed) train station. The alterations to make the structure a fire-rated enclosure for the train station includes encapsulation of the reused timber trusses, supports, and framing elements (all character-defining features) in fireproof materials, such as concrete or steel. The Partial Adaptive Reuse Option would not meet the Secretary of Interior's Standards for Rehabilitation, and it would still result in an adverse effect.

FMC Complex Plant 1: The Build Alternative would result in demolition of the FMC's Plant 1, which would result in an adverse effect to the FMC Complex as a whole, according to 36 CFR 800.5(a)(2)(i). Demolishing Plant 1 (a primary character-defining feature of the FMC Complex) adversely affects the FMC Complex's ability to convey its historic significance and diminishes the complex's integrity of location, design, material, workmanship, setting, feel, and association.

FMC Complex Plant 2: The Build Alternative would not result in direct impacts to Plant 2; however, Plant 2 would be the only remaining building in the complex of seven extant historic buildings in the FMC Complex upon project

completion. Although Plant 2 is not directly impacted, demolishing Plant 1 adversely affects Plant 2. The scale of the buildings is a character-defining feature of the complex, and removing approximately half of the complex, which is in close proximity to the remaining Plant 2, adversely affects Plant 2's ability to convey its significance. However, no land from Plant 2 would be permanently incorporated into the Project, and proximity impacts, due to demolition of Plant 1, would not be so severe that the qualities that made Plant 2 eligible for the NRHP are substantially impaired.

Figure 4-13 shows the FMC with No Build conditions and Figure 4-14 shows visual simulations of the FMC with Build conditions.

Figure 4-13. FMC Complex Plants 1 and 2 and Metrolink Station (No Build)

Figure 4-14. FMC Complex Plants 1 and 2 and Metrolink Station (Build)

Worker Houses: Under the Build Alternative, the demolition of FMC Plant 1 would occur across the street from the Worker Houses and would not directly impact any of the houses. Additionally, the Project would not alter the aspects of integrity of location and design. The Build Alternative would result in a No Adverse Effect to the Worker Houses because the overall integrity of location, design, workmanship, feel, and association of the houses would remain intact enough to convey their historic significance. Figure 4-15 shows the No Build conditions and Figure 4-16 show the Build Alternative.

Figure 4-15. 11th and Howard Avenue Looking South (No Build)

Figure 4-16. 11th and Howard Avenue Looking South (Build)

4.6.3. Avoidance, Minimization, and Mitigation Measures

Measures are needed to mitigate adverse effects during construction and operations of the project. Proposed measures include preparing Historic American Buildings Survey (HABS) documentation, screening demolition activities during construction, and salvaging materials (e.g., station signage for the historic site). An aesthetic measure has been included for noise barrier design and for consultation with consulting parties regarding potential indirect adverse visual effects to historic properties according to Section 106. Refer to Appendix E for Cultural Resources Mitigation Measures: CUL-1, CUL-2, CUL-3, CUL-4, CUL 5, AES-4, and AES-5. With the implementation of mitigation, it is anticipated that impacts would be reduced, but still result in an adverse effect.

4.7. Hazardous Waste

A Phase I (2018) and a Limited Phase II (2019) Initial Site Assessment (ISA) was completed to evaluate potential project-related effects to hazardous waste and is contained in Appendix M. The results of the study are summarized herein.

4.7.1. Existing Conditions

Environmental Records Review: Results of the environmental records review indicate the following conditions exist within the project site vicinity: railroad tracks, an abandoned elevator shaft, a former manufactured gas plant, potentially contaminated groundwater (Riverside Plume), contaminated soils from past oil, gas, pesticides, solvents and chemical leaks/spills incidents, and land use restrictions due to these site conditions.

Environmental Lien and Activity Use Limitations Search: The activity use limitations and land use covenant consist of the following restrictions for portions of Areas A and C (refer to Figure 4-17 for locations): The property shall not be used as a residence, hospital, school, daycare, or other similar sensitive use resulting in indoor habitation greater than 12 hours a day. Activities that may disturb, alter, damage, or destroy groundwater monitoring wells on the property are prohibited unless given authorization by the Department of Toxic Substance Control.

Site Reconnaissance: A site reconnaissance was conducted to assess the potential for recognized environmental conditions (RECs) in connection with the site. None of the following RECs were observed, waste generation/storage/disposal, aboveground storage tanks, potential evidence of underground storage tanks, chemical and petroleum, pools of liquid, sewage disposal sites, drums/unidentified substance containers, stressed vegetation, pits, ponds, lagoons, wastewater discharge disposal systems, septic systems/cesspools, municipal solid waste disposal areas. A summary of the RECs observed are listed in Table 4-5.

Table 4-5. Site Observation Summary Table

Conditions	Observed or Noted?	Comments
Hazardous Substances/Petroleum Products	**Yes**	Approximately 30 10-gallon propane tanks used for forklifts were stored at the western end of the storage yard in Area A. A flammables cabinet containing small quantities of flammables was observed within the manufacturing building (Area C).
Potential PCB-Containing Equipment	**Yes**	Multiple pad-mounted transformers were observed on the eastern and western ends of the storage yard (Area A). Signs of staining or release of PCBs were not observed.
Concrete Patches/Pads	**Yes**	Concrete patches and pads were observed around the manufacturing building (Area C). The nature of the patches and pads is unknown, but may be related to the environmental investigation of the former FMC Corporation.
Floor Drains/Sumps	**Yes**	Floor drains were observed around the manufacturing building (Area C) and storage yard (Area A). Additionally, storm drains were observed in a natural depression at the western edge of 11th Street. Staining or other signs of release of hazardous materials were not observed.
Elevator	**Yes**	An abandoned elevator shaft was observed at the southern portion of the manufacturing building (Area C). This is considered an REC.
Wells	**Yes**	A municipal water well operated by the city of Riverside was observed at the northwestern portion of the manufacturing building (Area C).
Stained Soil or Pavement	**Yes**	Minor oil staining was observed on pavement.

PCB = polychlorinated biphenyl

Affected Environment

Based on the findings and recommendations of the 2018 Phase I ESA, a Limited Phase II ISA was conducted in September 2019 within Areas A, B, C, and D (as shown on Figure 4-17). Soil samples were taken at these locations to determine the extent and type of contamination. The results of the Limited Phase II ISA indicate the following contaminants were found: arsenic, lead, total petroleum hydrocarbons diesel, semi-volatile organic compounds and VOCs, and PCB, polycyclic aromatic hydrocarbons.

Figure 4-17. Phase 1 ESA and Phase II Limited ESA

4.7.2. Environmental Consequences

The Build Alternative would result in no adverse effects to Hazardous Waste. Under the Build Alternative, construction of the Project would require the handling, storage, transport, and disposal of contaminated soils and hazardous materials. Project construction activities would involve excavating, trenching, and grading activities Excavation of contaminated soils would require specialized handling, treatment, and off-site transport. The use of construction equipment would likely generate onsite hazardous waste during construction, including diesel and petroleum fuels, paint and paint chips, equipment lubricants, resins, and hot-mix asphalt/concrete residual waste. Construction equipment fueling would also occur on-site. Buildings proposed to be demolished may have been constructed using asbestos-containing materials and lead-based paints (LBPs). Demolition of structures containing LBP requires specific remediation activities regulated by federal (40 CFR 745), state (17 California Code of Regulations 35001 through 36100), and local laws. Under the Build Alternative the contaminated soils and materials would be capped and contained under the new surface parking lot. The routine transport, use, and storage of potentially hazardous materials during operations and maintenance of the Build Alternative would remain similar to No Build conditions. Hazardous materials including fuel, lubricants, and brake fluids are likely to be present on-site and within the vicinity of the station. The existing station facility would implement BMPs for the safe storage, containment, and disposal of hazardous materials during operation of the station facility.

4.7.3. Avoidance, Minimization, and Mitigation Measures

Mitigation measures are required to ensure hazards and hazardous materials do not affect the surrounding population. Refer to Appendix E for Hazardous Waste Construction Measures: HAZ-1 to HAZ-9 to minimize effects due to construction-related subsurface disturbance. With implementation of mitigation measures, no adverse effects related to hazards and hazardous materials are anticipated.

4.8. Geology/Soils/Seismicity

The *Geotechnical Exploration Report* (HNTB, 2020) was prepared to document the results of potential project-related impacts to geological and paleontological resources. The results are summarized herein and are contained in Appendices J, respectively.

4.8.1. Existing Conditions

There are limited geologic hazards in the corridor, as defined in the *County of Riverside General Plan* (2020), Based on published geologic hazard maps, this site is not located within a currently designated Alquist-Priolo Earthquake Fault Zone or in a county fault zone; The Riverside County Geologic Hazards maps indicate that the site is located in a zone of low to moderate liquefaction potential.
The project site possesses a low expansion potential and is not located on a geologic unit or soil that is unstable or within an area prone to landslides.

Affected Environment

Much of the corridor has been previously disturbed and developed for the Riverside-Downtown Station and paved with artificial fill present below the surface of the Project area.

4.8.2. Environmental Consequences

The Build Alternative would be designed in accordance with appropriate industry standards, including established engineering and construction practices and methods; therefore, the Build Alternative would not worsen existing hazards posed by seismic shaking, when compared to No Build conditions. In addition, the project study area is nearly flat and not adjacent to any hills or steep slopes. Therefore, the potential for landslides to occur due to the project is unlikely. However, liquefaction-induced subsidence is not expected to be a significant hazard at this site due to the absence of shallow groundwater, near surface saturated sand layers, and underlying dense older alluvium. Excavation of soils to a depth of 5 feet below ground surface (bgs) would occur during the removal of the building foundation for the majority of the proposed improvements; however, the maximum depth would be 10 feet at spot locations for the extension of the pedestrian overpass where foundations are required.

4.8.3. Avoidance, Minimization, and Mitigation Measures

No adverse effects are anticipated during construction and operations, and mitigation measures are not required. However, temporary impacts to geology/soils and seismicity are anticipated during construction. To avoid or minimize temporary impacts during construction, measures are proposed to minimize effects due to ground disturbing activities. Refer to Appendix E for Geological Construction Measures: GEO-1 to GEO-4.

4.9. Noise and Vibration

The *Noise and Vibration Technical Report* was completed in July 2021 (HNTB, 2021) to evaluate potential noise and vibration effects from the proposed project and is contained in Appendix N. The results of the study are summarized herein.

4.9.1. Existing Conditions

The project site is located at the existing Riverside-Downtown Station and near the SR 91 freeway. The project site is surrounded by existing residential, commercial, and industrial development. Adjacent land uses to the project site include single-family residences to the east, industrial uses and Lincoln Park to the south, commercial uses to the west, and industrial and residential uses to the north. Other nearby land uses in the vicinity include churches and vacant lots. The City of Riverside Municipal Code noise ordinance states that construction shall not occur between the hours of 7:00 p.m. and 7:00 a.m. on weekdays, between the hours of 5:00 p.m. and 8:00 a.m. on Saturdays, or at any time on Sunday or a federal holiday. If construction activities occur during night-time hours, appropriate noise control measures would be implemented, for example, prohibiting noise-intensive activities such as pile-driving and demolition. A Construction Noise Management Plan would be prepared and implemented to ensure construction noise-related impacts to residences are avoided or minimized.

Six measurements were taken in and around the project site for the ambient noise survey. Measurements were conducted to assess the general noise conditions of the site, gain insight on noise sources, and to conduct specific measurements throughout the project vicinity. Figure 4-18 shows general noise measurement locations on the left. and noise receiver locations on the right within the project vicinity. The following noise measurements were taken:

- Measurement M1 was recorded within Lincoln Park south of the Project.
- Measurement M2 was taken adjacent to the SolarMax building south of the Project.
- Measurement M3 was taken adjacent to the existing railroad platform at the western end of 12th Street.
- Measurements M4 and M5 were taken along Park Avenue within the existing residential neighborhood.
- Measurement M6 was taken adjacent to existing residences between 9th Street and 10th Street.

These noise receivers are generally located near the project site along Howard Avenue, 9th Street, 10th Street, 11th Street, 12th, and 13th Streets.

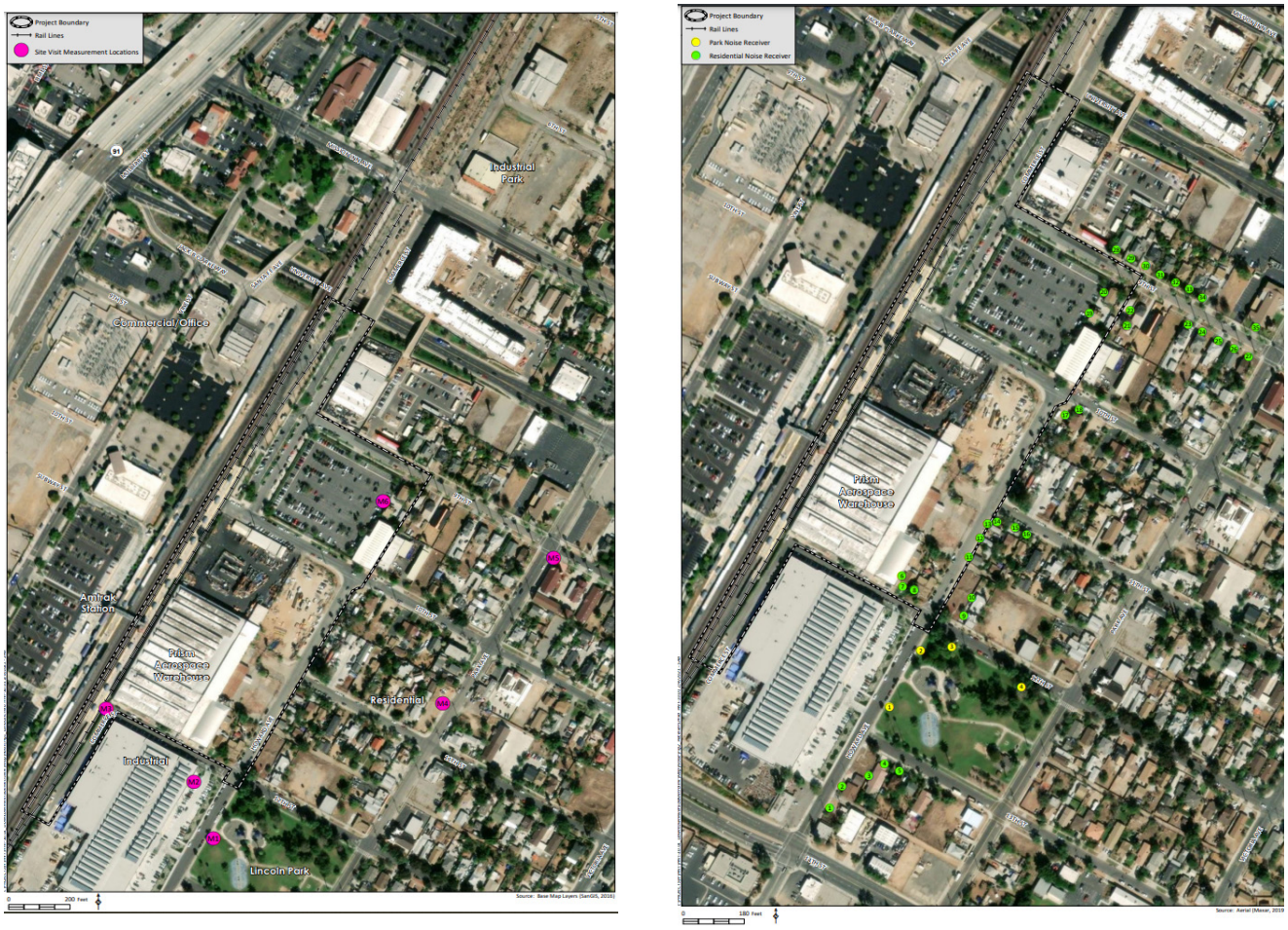

Figure 4-18. Noise Measurement Locations (left) Modeled Noise Receiver Locations (right)

Railroad Noise. Noise sources from the existing railroad include passenger and freight trains. Train noise occurs during both daytime and nighttime hours, and noise levels from 24-hour train operations are incorporated into the *Noise and Vibration Technical Report* (Helix Environmental Inc., 2021). Although train pass-bys from passenger trains can be as low as 30 per day, the noise analysis conservatively assumes 108 passenger trains per day, with a maximum of six trains in a given hour, each with one engine and five cars. Because passenger trains would stop at the Riverside-Downtown Station, passenger trains are modeled as traveling at an average speed of 15 miles per hour. Detailed freight train schedules are not publicly available but are estimated to range from 60 to 126 pass-bys per 24-hour period. In addition, freight trains utilize an average of two engines and 100 cars. To conservatively account for fluctuations in freight train pass-bys and future increase in freight train traffic, 126 freight trains over a 24-hour period was assumed. Although they may travel at varying speeds, freight trains were conservatively modeled at approximately 50 miles per hour.

Vehicle Traffic. Vehicular noise in the project vicinity consists of traffic on local roadways and vehicles traveling along SR 91. The traffic volume data along local roadways used in the noise analysis was taken from the project's *Traffic Impact Analysis* (TIA) (HNTB, 2020) (Appendix R). Existing traffic volumes were calculated in the TIA from traffic counts for each roadway in the project vicinity. Project trip generation for the project was calculated for the future parking lot expansion. Future traffic levels on nearby roadways accounted for additional project traffic minus the trips generated by the existing Prism Aerospace warehouse use in the building that would be demolished. The net project trips are incorporated into this analysis. Roadway segment traffic volumes used in the project's analysis are provided in Table 6.2 Appendix N. Volumes for Opening Year (2025) No Project and Opening Year (2025) with Project are provided. Roadway volumes for SR 91 used in the model are provided peak hour traffic counts conducted by Caltrans (Caltrans 2017). The TIA provided roadway segment data for AM and PM peak hours. The higher PM peak hour data for each roadway segment was conservatively incorporated into the CadnaA Model to generate one-hour noise levels. These noise levels were then weighted for a 24-hour period to generate the Day Night Level (L_{DN}) from roadway traffic. Although an ambient noise site survey was conducted at the project and in the project vicinity, the existing noise conditions are not defined by these measurements. A noise model was created to establish the existing conditions of the proposed Project of the typical noise environment. The Notice of Preparation (NOP) for the CEQA EIR was published in January 2020 and existing conditions should reflect the noise environment at the project site as they existed at the time of the issuance of the NOP. In March 2020, a state of emergency was ordered in response to the COVID-19 pandemic, which imposed significant restrictions on several public and commercial activities. Following that declaration, commuting patterns and traffic levels have been altered, typically resulting in reduced vehicular use and traffic throughout the state at the time the noise analysis commenced. To ensure an accurate and conservative noise analysis, vehicle traffic volumes prior to the COVID-19 pandemic were utilized to assess existing and future noise conditions.

Freight and passenger train services. Due to their proximity to nearby residences, freight and passenger train services are a source of a substantial amount of existing noise and were largely unchanged during the COVID-19 pandemic. However, vehicular noise, particularly along SR 91, also contributes ambient noise within the Project vicinity. Noise level measurements conducted during the December 2020 noise measurement field survey are expected to be substantially lower than noise levels at the time of the NOP's publication. A noise model was created to approximate the existing ambient noise conditions of the project vicinity to present a fair and accurate description of the Project's environmental impacts. Noise sources were applied to the model to approximate transportation noise from vehicle and train traffic.

FTA's *Transit Noise and Vibration Impact Assessment* (FTA, 2018) was used to establish impact criteria for noise and vibration, define sensitive receivers, and provide methodology for assessing impacts during construction and operation of the proposed Project. FTA provides different operational noise criteria for different scenarios and land uses. Noise impact criteria can be assessed for projects that generate new sources of transit noise and for projects that propose changes to an existing transit system. The proposed Project would involve modifications to an existing transit facility; therefore, the impact criteria for that scenario is used for the proposed Project. Three land-use categories are identified by FTA for impact assessment. For Category 2 land uses (residential areas where people sleep), noise exposure is characterized using L_{DN}. For Category 1 and Category 3 land uses (areas with primarily daytime use), noise exposure is characterized using the peak hour noise equivalent level (L_{EQ}), which is a time-averaged sound level over the noisiest hour of transit-related activity.

FTA noise impact criteria are represented by a sliding scale, based on existing noise exposure and land use of sensitive receivers. The basic concept of the FTA noise impact criteria is that more project noise is allowed in areas where existing noise is higher. However, in areas where existing noise exposure is higher, the allowable increase above the existing noise exposure decreases. FTA defines two levels of noise impact: moderate and severe. In accordance with FTA guidance, mitigation to reduce noise levels must be considered for both degrees of impact. Figure 4-19 depicts the amount of project-added noise that is allowed for Category 2 (e.g. residences) and Category 3 land (e.g., parks).

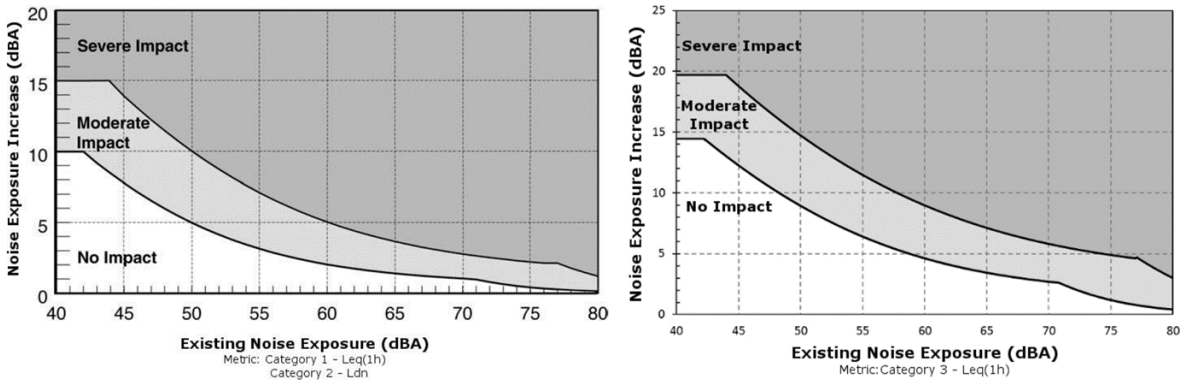

Figure 4-19. Allowed Increases in Noise Land Use Category 2 (left) Category 3 (right)

Source: FTA Transit Noise and Vibration Impact Assessment, 2017

No standardized criteria have been developed by FTA for assessing construction noise impacts. FTA recommends the following criteria for determining whether detailed assessment of construction noise is warranted, and it provides two analysis and assessment options. This analysis compares the combined construction equipment noise to identify locations where noise may exceed the criteria.

Based on existing modeled noise, current noise levels within the noise study area range from 54.5 dBA to 72.7 dBA at residential locations and 58.6 dBA to 61 dBA at park receivers. The city of Riverside exterior noise standards, vibration and construction noise criteria, existing noise levels and impact thresholds for residential and park receivers are provided in Appendix D, Table D-13.

Affected Environment

Noise-sensitive land uses (NSLUs) are land uses that may be subject to stress and/or interference from excessive noise, such as residential dwellings, schools, transient lodging (hotels), hospitals, educational facilities, and libraries. Industrial and commercial land uses are generally not considered sensitive to noise. NSLUs in the project area include single-family residences abutting the project boundary, residential areas adjacent to the east directly across Howard Avenue, and Lincoln Park located directly south of the project. Land uses in which ground-borne vibration could potentially interfere with operations or equipment, such as research, manufacturing, hospitals, and university research operations (FTA, 2018) are considered "vibration-sensitive." The degree of sensitivity depends on the specific equipment that would be affected by the ground-borne vibration. In addition, excessive levels of ground-borne vibration of either a regular or an intermittent nature can result in annoyance to residential uses or schools. Vibration-sensitive land uses in the project area include the adjacent single-family residences.

4.9.2. Environmental Consequences

The Build Alternative would result in no adverse effects from noise or vibration with recommended noise reduction measures. The Build Alternative has six proposed design options of which three options proposes to change the existing roadway access configuration with the option to acquire and incorporate two single family parcels at the northwest corner of Howard Avenue and 12th Street as part of the expanded station (Design Options "A"). Conversely, Design Options "B" would not acquire these properties. Because of the similarities of the proposed station improvements between the "A" and "B" design options as it relates to the noise analysis, the impact analysis are combined and presented as follows for Opening Year 2025 Conditions: Design Options 1A and 1B, 2A and 2B, and 3A and 3B. Under the Build Alternative**,** construction noise impacts would occur if noise from daytime construction work exceeds 80 A-weighted decibels (dBA) L_{EQ} (8-hour), or if nighttime project construction work exceeds 70 dBA L_{EQ} (8-hour) at nearby residences.

Construction of the project would require demolition of existing structures, installation of utilities, and construction of new platform and tracks. The magnitude of the impact would depend on the type of construction activity, equipment, duration of each construction phase, distance between the noise source and receiver, and any intervening structures. Due to the proximity of residences both adjacent to the project construction site and across Howard Avenue from the project site, construction would generate elevated noise levels that may disrupt nearby residences for all design options.

Construction equipment would not all operate at the same time or location and would not be in constant use during a typical 8-hour operating day. Therefore, a conservative average distance between the Project's closest residence and general construction activity is estimated at 250 feet. Multiple construction equipment types would be in use throughout the day. For example, a dozer and an excavator may be working on the site simultaneously but would not be working in close proximity to one another at a given time due to the nature of their respective operations. An excavator, loader, and dump truck were analyzed together for construction noise impacts during demolition due to their likelihood of being used in conjunction with one another.

Based on these assumptions, general construction using an excavator, loader, and dump truck at the nearest noise-sensitive land use, such as residences, would be 67.4 dBA L_{EQ} (8-hour) at 250 feet. At these distances throughout a given workday, construction equipment is not anticipated to exceed the 80 dBA L_{EQ} (8-hour) screening level for noise. However, on individual days, construction activities may occur at distances closer to residences than those analyzed. Because heavy equipment may be required near residences, construction noise impacts would be temporary but may be substantial. Refer to Appendix D for Construction Equipment Noise Levels (Table D-19).

During demolition of the Prism Aerospace building, demolition would be required up to the property line of the residence at 3021 12th Street. Because heavy equipment would be required during demolition of the warehouse, and because this work would be located at the residence's shared property line and within 10 feet of the residence itself, noise impacts from the use of anticipated demolition equipment such as an excavator, loader, and dump truck, are assessed as substantial under Design Options 1B, 2B, and 3B. Implementation of noise measures are required to mitigate adverse effects to this residence.

Hauling would be required to remove existing on-site material and import aggregate/sleepers/rails during construction. Approximately four trucks would be required per hour during site preparation, demolition, and construction. Haul routes to reach the project site would likely be along short segments of Howard Avenue and Commerce Street. Truck noise is not anticipated to generate noise impacts along those roadways and impacts from material hauling would temporary and not anticipated to be substantial. Implementation of the Build Alternative would result in noise level increases at multiple receivers for each design option. Noise levels would increase primarily due to the removal of the existing Prism Aerospace building. This structure currently provides noise attenuation for multiple residential receivers along Howard Avenue from railroad and freeway noise sources. With the removal of this existing structure and its replacement with a level parking lot, the barrier to noise would be removed and expose residences to elevated noise levels. Similarly, the Design Options 2A and 2B would result in the removal of existing structures to accommodate the extension of Howard Avenue and result in a noise level increase for those first-row residences.

Noise level increases range from 0.1 dBA L_{DN} to 14.6 dBA L_{DN}. The largest noise increase would occur for the Design Option 1B, 2B, and 3B scenarios, at residences located at the northern corner of Howard Avenue and 12th Street. Noise levels at residential receiver 6 would increase by 14.6 dBA L_{DN}, which is above the 7-dBA-L_{DN} threshold for severe impacts and well above the 3-dBA-L_{DN} threshold for moderate impacts.

The Opening Year (2025) scenario's modeled noise levels for residential receivers and corresponding noise level increases above existing conditions; based up the increase in noise levels, there would be moderate and severe impacts.

Design Options 1A and 3A would have the fewest number of impacted locations, with 12 receivers modeled with a moderate impact and six receivers modeled with a severe impact. Design Option 2B would have the highest number of impacted locations, with 19 receivers modeled with a moderate impact and 11 receivers modeled with a severe impact. Design Options 1A, 2A, and 3A would not have noise impacts at the residences at the northern corner of Howard Avenue and 12th Street, as those residences would be demolished as part of the project.

Moderate and severe impacts to nearby residences would occur for all design options. Based on FTA's noise impact criteria, moderately impacted residential receivers are not considered substantial; however, residential receivers identified as severely impacted are considered significant impacts and mitigation in the form of noise abatement would be required to reduce severe noise impacts to at least moderate levels.

Refer to Appendix D for the following tables with noise impacts for the Build Alternative with Design Options

- Table D-20, Opening Year (2025) Option 1A and 1B Noise Impacts – Residential Receivers
- Table D-21, Opening Year (2025) Option 2A and 2B Noise Impacts – Residential Receivers
- Table D-22, Opening Year (2025) Option 3A and 3B Noise Impacts – Residential Receivers

The Opening Year (2025) scenario's modeled noise levels for park receivers, corresponding noise level increases above existing conditions, and determination of moderate and severe impacts are provided below.

Refer to Appendix D for the following tables:

- Table D-23, Opening Year (2025) Option 1A and 1B Noise Impacts – Park Receivers
- Table D-24, Opening Year (2025) Option 2A and 2B Noise Impacts – Park Receivers
- Table D-25, Opening Year (2025) Option 3A and 3B Noise Impacts – Park Receivers

Noise reduction measures would be required to reduce severe impacts at nearby noise-sensitive receivers in the vicinity of the project site. Figure 4-20 shows two locations for noise barriers to reduce severe noise impacts at nearby residential receivers. An approximately 500-foot noise barrier was modeled along the eastern edge of the existing Prism Aerospace building (former FMC Plant 1 building) and a noise barrier along the potential extension of Howard Avenue near 9th Street. The noise barrier was modeled to reduce severe impacts to receivers 9 through 14 for all Options.

The noise barrier along the potential extension of Howard Avenue near 9th Street would only be required for the Option 2A and 2B scenarios, as severe impacts to receivers 21 and 22 were only identified in that option. That noise barrier's location would generally be on the eastern edge of the potential extension of Howard Avenue at the existing western property wall of 2982 9th Street.

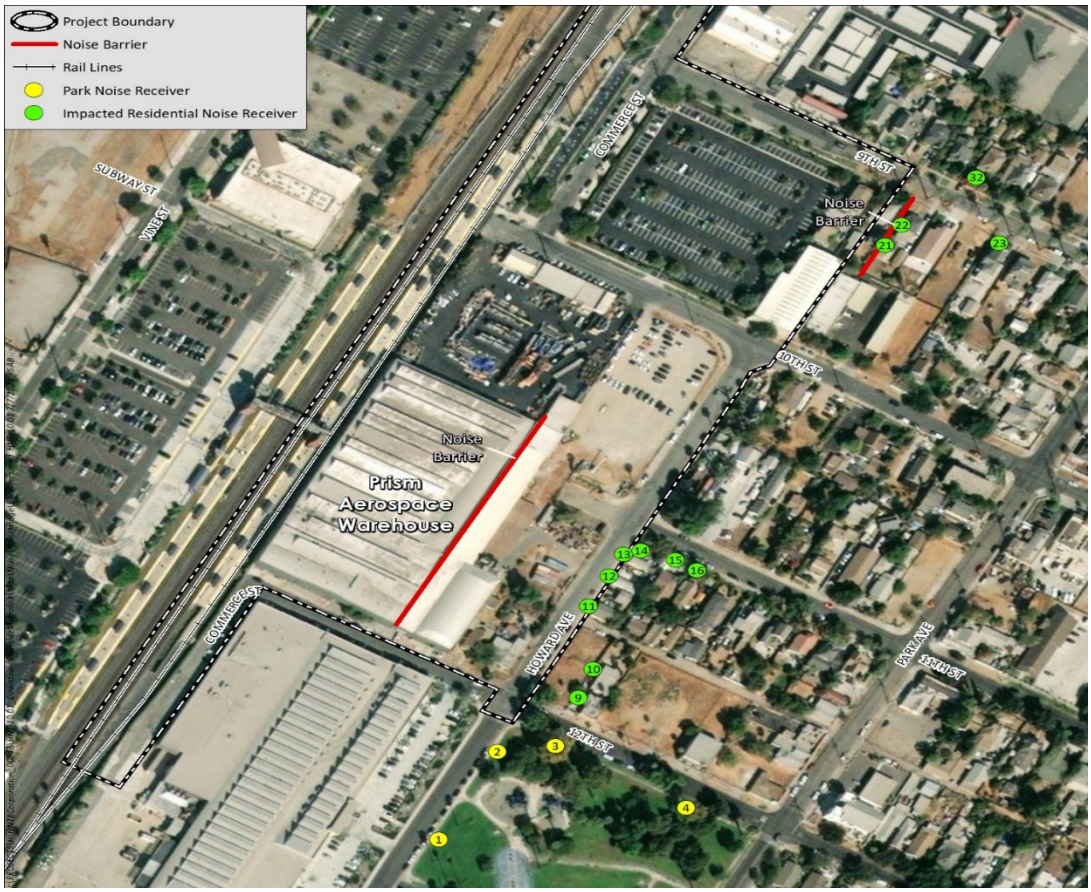

Figure 4-20. Noise Barriers and Modeled Noise Receiver Locations

Modeling results show noise reductions for severe and moderate impacted residential receivers with the implementation of the noise barrier near the existing warehouse location. Noise level increases over existing conditions were provided for walls with heights ranging from 8 feet to 12 feet.

To reduce severe impacts for residential receivers 9 through 14, a 500-foot noise barrier along the existing warehouse, wall location would need to be constructed at a height of at least 12 feet (For residential receivers 21 and 22, the noise barrier along the potential extension of Howard Avenue near 9th Street would need to be at least 8 feet in height (moderate impacts at the park receivers at all but one location would be reduced with an 8-foot wall.

Based on the modeling results, tables summarizing the noise environment under the Build Alternative with noise barrier are shown for design options as depicted in Appendix D.

- Table D-26. Opening Year (2025) Option 2A Impacts – Residential Receivers with 500-Foot Warehouse Wall
- Table D-27. Opening Year (2025) Option 2A Impacts – Park Receivers with Noise Barriers
- Table D-28. Opening Year (2025) Option 2A and 2B Impacts – Residential Receivers with Noise Barrier Along Future Howard Avenue Extension Near 9th Street

To reduce noise to levels below the severe impact threshold limit, noise barriers would be required to be constructed at the locations shown on Figure 4-20. At this point in project design, specifications for all potential noise barriers would include the following:

- For Options 1A, 1B, 2A, 2B, 3A, and 3B, a barrier would be constructed along the eastern edge of the existing warehouse structure, with a length of approximately 500 feet. The barrier height for this wall would be at least 12 feet in height to reduce severe noise impacts to at least moderate levels.
- For Design Option 2A and 2B only, a noise barrier would be constructed along the entirety of the existing western property wall of 2982 9th Street. The barrier would be at least 8 feet in height to reduce severe noise impacts to at least moderate levels.

The noise barriers would be required to meet a minimum Sound Transmission Class (STC) rating of 22 to 23 to reduce severe noise impacts to moderate levels and adequately ensure noise reduction. It can be constructed of masonry, wood, plastic, fiberglass, plexiglass, steel, or a combination of those materials, if it meets the STC rating described above and there are no cracks or gaps, through or below the wall. Any seams or cracks must be filled or caulked.

Implementation of noise reduction measures would be required to attenuate operational noise levels. Noise abatement measures would reduce noise impacts for Design Options 1A, 2A, and 3A of the Build Alternative to below the FTA's severe impact thresholds. Additionally, implementation of a construction noise management plan would be required to reduce construction noise for all design options.

4.9.3. Avoidance, Minimization, and Mitigation Measures

Measures are needed to mitigate adverse effects during construction and operations of the Project. Measures include the incorporation of noise barriers and aesthetic treatments, preparation and implementation of a Construction Noise Management Plan, and temporary accommodations for residences at 3021 12th Street. Refer to Appendix E for Construction and Operational Noise and Vibration Measures: N-1 to N-4 and AES-4. With implementation of mitigation measures, no adverse effects are anticipated.

4.10. Water Quality, Water Resources, and Floodplains

A *Hydrology/Hydraulics/Stormwater Quality Technical Memorandum* was completed in July 2021 (HNTB, 2021) to evaluate potential project-related impacts to water quality water resources, and floodplains. This information is contained in Appendix T and results from the study are summarized herein.

4.10.1. Existing Conditions

The Project is located within the City of Riverside, in the relatively flat, lowlands area (the Perris Plain) between the Santa Ana Mountains to the south and west, and the San Bernardino Mountains to the north and east. The San Bernardino Mountains are part of the transverse ranges that trend east to west. The Santa Ana Mountains are part of the Peninsular Mountain Ranges that trend north to south. The Perris Plain is punctuated by low hills and rocky outcrops (WRCRCA, 2003). The Project itself is relatively flat and is at 880 feet in elevation (USGS, 2020). Mount Rubidoux and the Santa Ana River Reach 3 are 1.3 and 1.8 miles to the west of the Project, respectively, and Sugarloaf Mountain, Box Springs Mountain, and Sycamore Canyon are to the east of the Project.

The Project is within the Santa Ana River watershed. Tequesquite Arroyo Creek is located approximately 0.7 mile to the south and runs underneath SR 91. Riverside Canal is located just west of the Project site. It is culverted underground to the north of 14th Street and is daylighted south of 14th Street, approximately 70 feet to the west of the footprint. Lake Evans is 1.25 miles to the northwest of the Project. The Riverside Canal runs along the western edge of the project footprint. The canal is in an underground culvert for the majority of the length of the project area, with a short daylighted segment in an engineered channel, parallel to the southernmost part of the footprint. The site is

mostly impervious, except for industrial areas west of Howard Avenue and south of 10th Street, this area contains permeable compacted soil. Flooding in the City of Riverside mainly results from intense rainfall, which usually occurs in the winter. Federal Emergency Management Agency (FEMA) Flood Insurance Rate Maps (FIRM) show that portions of the City fall within the 100-year flood zone. Flood hazard risks are greatest in the vicinity of channels, creeks, streams, and watercourses. This includes the Santa Ana River and several dams.

Affected Environment

Hydrology and Hydraulics: City drainage facilities mainly consist of underground storm drains that collect stormwater and convey it to regional facilities (Figure 4-21). The general drainage patterns for the overall site drain toward the west away from the railroad to Howard Avenue and eventually drains into the Santa Ana River. The low point in the study area is located just west of Howard Avenue on 11th Street. At the low point, stormwater is conveyed to two catch basins (at the west end of 11th Street and at the intersection of Howard Avenue and 11th Street) and floods during annual storm events. The drainage system is undersized for intercepting and conveying flow from this amount of area; drainage facilities consist of three 3.5-foot curb inlet catch basins located at the low point that outlets through one 12-inch pipe that connects to an existing 42-inch storm drain. This storm drain ultimately flows into a box culvert under the station.

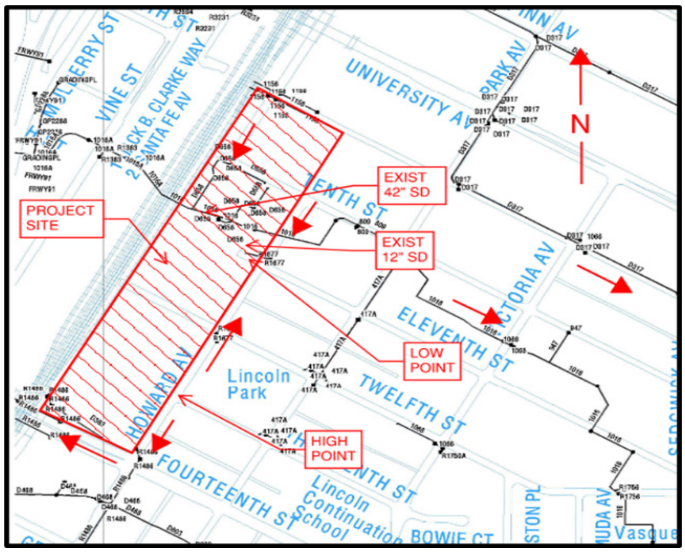

Figure 4-21. Existing Storm Drain System Network

Source: Storm Drain Map Index, City of Riverside

Floodplains: The proposed Project is within the vicinity of a 100-year existing floodplain (Zone AE), within the Middle Santa Ana River Watershed, which ultimately flows into the Santa Ana River through Prado Dam (Figure 4-22). Appendix D provides an enlarged view of the 100-year Floodplain. The floodplain offers flood storage for the Santa Ana River to spread out and accommodate temporary storage of flood water, which reduces the erosion potential and flood peaks. Based on the FEMA FIRM, the 100-year base flood elevation is approximately 886 feet for the project site.

Water Quality: The Project is within the Santa Ana River's Reach 3 and has three impairments, pathogens, copper, and lead. The Middle Santa Ana River Bacterial Indicator Total Maximum Daily Load (TMDL) is currently in effect to address pathogens as shown in Table 4-6. Copper and lead TMDLs are slated to be in effect for 2021. Appendix D contains a table with beneficial uses and constituents for receiving waters.

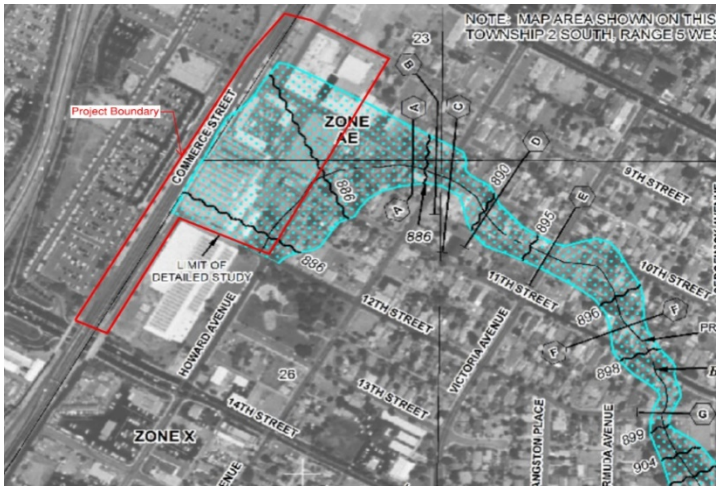

Figure 4-22. 100-Year Floodplain Within the Project Boundary

Source: Flood Insurance Rate Map (06065C0726G), Federal Emergency Management Agency

Table 4-6. Numeric Water Quality Objectives for Santa Ana River, Reach 3[1]

Water Body	Water Quality Objectives (mg/L)[1]							
	Total Dissolved Solids	**Hardness**	**Sodium**	**Chloride**	**Total Inorganic Nitrogen**	**Sulfate**	**Chemical Oxygen Demand**	**Boron**
Santa Ana River Reach 3 (Base Flow)	700	350	100	140	10	150	30	.75

Source: Santa Ana Water Quality Control Board, Chapter 4, Water Quality Objectives, June 2019
[1] Santa Ana River Reach 3 from Prado Dam to Mission Boulevard in Riverside

Groundwater: Groundwater measurements collected in 2008 were anticipated to be encountered at a depth of 100 to 110 feet bgs within the project site. The groundwater gradient was reported to flow towards the south-southwest. Groundwater levels, gradient, and flow direction can fluctuate due to seasonal variations, groundwater withdrawal or injection, changes in land use, and other factors.

4.10.2. Environmental Consequences

Hydrology and Hydraulics: During construction, the construction contractor may temporarily reroute drainage patterns within the construction site. If not effectively managed through construction site BMPs, this could result in the loosening and migration of soil to other areas beyond the construction site. BMPs that could be used to manage erosion and siltation may include but are not limited to the following: fiber rolls, compost socks, placing inlet protection for any existing catch basins, mulch or compost blankets, concrete washouts, and silt fences. Additional BMP measures beyond those identified above may be incorporated through the preparation of an SWPPP, which will identify all BMP measures to control stormwater discharge during construction. The proposed Project will be designed to follow the existing ground and drainage patterns and would result in an additional 45,000 square feet of impervious area, which will have an incremental increase of approximately 2 cubic feet per second if no BMPs are incorporated. With the addition of permanent BMPs, the Project is expected to control the erosion, siltation, and flow. No adverse effects are anticipated.

Floodplains: The proposed Project is within the vicinity of a 100-year existing floodplain, during a 100-year flood event, the project site would be inundated and potentially release pollutants in the flood waters during construction. To avoid impacts, construction BMPs would be implemented during construction to ensure that pollutants are not released during a flood event. These would include erosion and sediment control BMPs, drain inlet protection, stabilized entrances and exits, appropriate concrete washout placement and vehicle storage location, rain event action plans, etc. The proposed Project would construct additional railroad tracks within the vicinity of the station. During a 100-year flood event, the station would be inundated, including existing and proposed railroad tracks containing chemicals associated with railroad ties that could potentially contaminate flood waters. The platform and pedestrian bridge would also be under water and could potentially release hydraulic fluids, which will require certain features such as underground conduits and the elevator system to be sealed from infiltration of flood water and may necessitate the inclusion of flood warning devices. The railroad, however, is located along the higher side of the project site. Therefore, it should incur minimal inundation longevity during the storm event. This coupled with the fact that the track is located over pervious track ballast and sub-ballast (which retain pollutants to protect against their transport into the environment), pollutants from the track should be minor and should not be increased due to the project over existing conditions.

Water Quality and Groundwater: Construction activities could potentially release oils, grease, concrete, and other pollutants into the soil. These pollutants could contaminate the groundwater through rainstorms and construction watering activities; however, the preparation and implementation of an SWPPP during all phases of construction would reduce potential effects to groundwater and no adverse effects are anticipated.

Construction of the Build Alternative and all design options would require grading and excavation of soil between 5 feet and 10 feet (at some locations) in depth. Groundwater is anticipated to be encountered at a depth of 100 to 110 feet bgs. Therefore, no adverse effects to groundwater are anticipated during construction.

Underlying soils at the Prism Aerospace parcel are contaminated; and there is potential for contaminated water to enter the groundwater through the project site. However, the Build Alternative will have less permeable area compared to the No Build conditions, which would decrease the amount of land enabling infiltration into the

groundwater. The proposed Project would not interfere with groundwater discharge, as the project site would be mostly paved to eliminate any runoff from infiltrating into the soil. Converting exposed soil areas to a paved surface parking lot would effectively cap the surface from seepage and significantly reduce further contamination into the groundwater within the project site. Furthermore, any proposed BMPs would be non-infiltrated BMPs, which would prevent infiltration into the surrounding soil.

To ensure that the proposed Project does not exacerbate current contaminants within the project site, RCTC, the Department of Toxics and Substance Control (DTSC), and the Regional Water Quality Control Board (RWQCB) have agreed to limit the use of the project site to a paved surface parking lot. Based on preliminary design plans, the proposed Project is consistent with this agreement to construct a paved surface parking lot. Under the Build Alternative and all design options, the contaminated area within the project site will be paved over to prevent further infiltration and contamination. Therefore, no adverse effects to groundwater are anticipated.

4.10.3. Avoidance, Minimization, and Mitigation Measures

No adverse effects are anticipated during construction and operations, and mitigation measures are not required. However, temporary impacts to water quality, water resources, and floodplains are anticipated during construction. To avoid or minimize temporary impacts during construction, the Project will follow the avoidance and minimization measures WQ-1 through WQ-5, as indicated in the Environmental Commitments Record provided in Appendix T, and will comply with the *Water Quality Management Plan*, SWPPP, and the NPDES Permit. No additional measures are recommended.

4.11. Transportation and Traffic

The TIA was completed in September 2020 (HNTB, 2020) and the *Community Impacts Assessment* was completed in June 2021 (HNTB, 2020) to evaluate the potential project-related effects to transportation and traffic and is contained in Appendix R and I, respectively. The results of the studies are summarized herein.

4.11.1. Existing Conditions

The Riverside transportation network consists of local and regional roadways, train, and bus systems, bicycles, and pedestrians. The transportation network within the traffic study area includes:

- Freeways: SR 91, I 215, SR 60 (Mission Inn Avenue)
- Major Arterials: 14th and Lime/Olivewood Streets
- Connected Streets: Vine Street, Commerce Street, 10th Street, 11th Street, 12th Street, and 13th Street and Howard Avenue
- Passenger Rail: Metrolink: Riverside, 91/PV Line, IEOC and Amtrak
- Bus Service: Riverside Transit Authority (RTA) bus: 1, 10, 12, 13, 14, 15, 16, 29, 41, 49, 200, and 208, Omnitrans 215, Megabus, and Metrolink shuttle from the station to local streets: Vine Street, University Avenue, Market Street, 10th Street, Lemon Street, and 14th Street
- Bicycle and Pedestrian Facilities: The main components of the pedestrian circulation system are sidewalks and crosswalks. Most developed properties within the CIA study area are improved with paved sidewalks. While the city requires installation of sidewalks in conjunction with new development, some older local streets in the CIA study area built before this requirement took effect do not have sidewalk improvements adjacent to the developed parcel. These properties without paved sidewalks are located along residential homes on 12th Street, several residences along Howard Avenue, industrial building and vacant lots along Howard Avenue, and an industrial building along 10th Street.
- Within the study area roadways, there are no dedicated Class I (bike path) and Class II (bike lanes) bicycle facilities. Currently, bicycles share the roadway with vehicles along the roadways near the project site. At the Riverside-Downtown Station, bicycle racks and lockers are provided on-site.
- Parking Facilities: The Riverside-Downtown Station provides free on-site parking at two parking lots located adjacent to the station at Vine Street and 10th Street. There are currently 1,115 parking spaces and 25 handicapped spaces available. On-street parking is permitted along nearby streets at the station: Vine Street, 9th Street, 10th Street, and Commerce Street.

Affected Environment

The transportation study area includes the streets and 12 intersections around the project site.

1. SR 91 Westbound Off-Ramp and Mission Inn Avenue
2. Mulberry Street/SR 91 Eastbound On-Ramp and Mission Inn Avenue
3. Vine Street and Mission Inn Avenue
4. Commerce Street and Mission Inn Avenue
5. Park Avenue and University Avenue
6. Commerce Street and 9th Street
7. Howard Avenue and 10th Street
8. Howard Avenue and 12th Street
9. Howard Avenue and 14th Street
10. SR 91 Eastbound On/Off-Ramp and 14th Street
11. State Route 91 (SR 91) Westbound Off-Ramp/Mulberry Street and 14th Street
12. Lime Street/Olivewood Avenue and 14th Street

Existing traffic volumes were based on traffic counts conducted at the 12 previously discussed study intersections. AM and PM peak-hour counts collected for two intersections in the study area were obtained from the City of Riverside in April 2019, and AM and PM peak-hour counts collected for 10 intersections in the study area were obtained from Counts Unlimited in February 2020. The City of Riverside uses Level of Service (LOS) D as the maximum acceptable threshold for the study intersections with roadway classified collector and all other intersections are to maintain LOS C. The City of Riverside *Traffic Impact Analysis* guidelines (City of Riverside, 2017) state that for projects contained in the *General Plan 2025* (City of Riverside, 2019), a significant impact is defined when project-generated trips cause the peak-hour LOS to change from above to below the acceptable threshold.

4.11.2. Environmental Consequences

The Build Alternative would result in no adverse effects to transportation or traffic other than potential short-term access disruptions during construction, which would include traffic generated by construction workers to and from the site, the import and export of materials and equipment, and the localized movement of equipment to and from multiple locations within the traffic and CIA study area. Construction of the Project is anticipated to occur over an approximately 2-year time period and anticipated to begin in 2023 and completed by 2025. Existing transit service and bicycle traffic may experience minor delays due to potential construction-related traffic and activities. These potential delays and inconveniences may occur to transit and bicycle facilities as adjacent roadway lanes would be occupied intermittently throughout the construction phase and require street and/or lane closures which may affect transit service and bicycle use near the construction site. In addition, heavy trucks and construction equipment may result in temporary lane and/or street closures to accommodate construction activities and ingress/egress movements to and from the project site, which may affect local circulation and access to nearby residences and businesses as construction activities encroach into local streets adjacent to the project site. These roadways that may require temporary lane and street closures include: Howard Avenue, Commerce Street, 12th Street, 11th Street, 10th Street and 9th Street. In the event of temporary lane and/or street closures, alternate routes and signage will be provided and access to and from residences and businesses will be maintained throughout the duration of construction. Construction activities would primarily be contained within the project site boundaries. In some instances, existing sidewalks and adjacent roadway lanes would be occupied intermittently throughout the construction phase to accommodate sidewalk reconstruction and other streetscape improvements. Alternate pedestrian access, bicycle and vehicle detours would be provided to and from the Riverside-Downtown Station and adjacent residences and businesses to maintain access throughout the duration of construction. Existing access points and circulation routes to and from the residential neighborhoods, within the vicinity of the construction area, would all remain open once the Project is completed and, under some design options, new pedestrian and vehicle access would be added. This would have beneficial effects on access to the residential neighborhoods and for the Metrolink station. Under Design Options 2A, 2B, 3A, and 3B, Commerce Street would be vacated to accommodate the expansion of the parking lot; however, a new north-south access point would be constructed to provide a replacement connection to Howard Avenue.

Changes to traffic volumes, especially in the peak travel periods, have the potential to affect the transportation network. The AM peak hours (7:00 a.m. to 9:00 a.m.) and PM peak hours (4:00 p.m. to 6:00 p.m.) are considered the worst-case traffic conditions with the highest congestion. LOS for these intersections were analyzed for 2020 (existing year/no Build), Build 2025 (year of opening), and Build 2045 (Build Out Year). Trip generation to the station under the Build Alternative conditions were estimated at approximately 115 vehicles coming in during the AM peak hour and 112 vehicles going out during PM peak hour.

The results of the study and comparisons of the No Build and Build Alternative for Year 2025 are:

- LOS are the same for the No Build and Build Alternative at all intersections, except for Howard Avenue and 10th Street, which changes from LOS A to B under the Build Alternative and Lime Street/14th Street (AM peak hour), which are below the LOS threshold under the Build Alternative.
- Lime Street/Olivewood Avenue and 14th Street (PM peak hour) and Vine Street and Mission Inn Avenue (PM peak hour) would operate below the LOS threshold under the No Build Alternative.
- Year 2045 show LOS conditions are the same for the No Build and Build Alternatives except at Commerce Street and Mission Inn Avenue which changes from LOS E to F, Howard Avenue and 12th Street which changes from LOS A to B, and Howard Avenue and 14th Street which changes from D to C under the Build Alternative.
- Mulberry Street and Mission Inn Avenue, Vine Street and Mission Inn Avenue, and Commerce Street and Mission Inn Avenue would operate at LOS D or below under both the No Build and Build Alternative.

While the proposed Project does not cause significant impacts, intersection LOS is expected to degrade, and improvements such as a traffic signal could be considered to improve the intersections operated below the threshold. The LOS for the study intersections for year 2025 and 2045 under the No Build and Build Alternative are provided in the TIA (HNTB, 2020) Tables 7.2 and 7.4 in Appendix R and are summarized herein. The following information summarizes the results of the intersection traffic analysis anticipated to operate at unsatisfactory LOS under each traffic analysis scenario. All other intersection LOS traffic analysis scenarios that are not discussed herein are expected to operate at acceptable LOS.

- The intersection of Lime Street/Olivewood Avenue and 14th Street: Forecasted to operate at an unsatisfactory LOS below the threshold defined by City of Riverside during the p.m. peak hour under all Build and No Build future condition scenarios. The project is not forecasted to cause a significant impact on this intersection and no mitigation is required.
- The intersection of Vine Street and Mission Inn Avenue is forecasted to operate at an unsatisfactory LOS below the threshold defined by City of Riverside during the p.m. peak hour for the with cumulative projects and project conditions scenario. Although, a signal warrant analysis was conducted at this intersection, the warrant was not met at this intersection. Although it was evaluated that the LOS may improve by adding in a southbound right turn lane, it would not be directly related to the Project.
- During the p.m. peak-hour period, the following intersections are forecasted to operate at an unsatisfactory LOS below the threshold, as defined by City of Riverside for the With and Without Project Conditions: Vine Street and Mission Inn Avenue, and Commerce Street and Mission Inn Avenue.

For the Howard Extension plan (Options 2A, 2B, 3A, and 3B), the results of the analysis show that the volumes on Howard Avenue and 10th Street are relatively low, and there are no traffic impacts resulting from the project or the Howard Avenue extension.

The No Build and Build Alternatives would result in the same intersection LOS conditions for Year 2025 and Year 2045. Both the No Build and Build Alternatives would not preclude planned bicycle improvements. However, the Build Alternative and all design options would improve train service and operational efficiencies which would have a beneficial impact of reducing freeway congestion in the region and improving air quality. Under the No Build Alternative, roadway congestion and air quality would continue to worsen, and service, operations, access, and parking at the station would remain limited.

The Project is anticipated to generate some additional traffic within the local street network. Upon completion of the proposed Project, the station improvements would not result in permanent impacts to existing local and regional train service and would be compatible with Metrolink and Amtrak regional train service. The proposed station improvements would benefit train service within the City of Riverside and surrounding communities; expansion of the existing station infrastructure would enhance access for station users and accommodate projected future travel demand, which could encourage and promote train ridership.

The Build Alternative and all design options would require property acquisitions to construct station improvements. Some of the proposed acquisition parcels are currently constructed without sidewalks, which include existing residential properties along 12th Street (for Parking Design Options 1A, 2A, and 3A) and industrial properties along Howard Avenue. As a result of the redevelopment of these existing properties to transportation uses, sidewalks immediately adjacent to the station would be reconstructed to meet the latest City of Riverside and to ADA standards, which would enhance pedestrian facilities within the perimeter of the station. Other proposed ADA compliant pedestrian facility improvements at the Riverside-Downtown Station would include on-site improvements such as the extension of pedestrian access to the new Platform 3. Both sidewalk improvements and pedestrian access to the new platform would provide ADA access and enhance pedestrian access to and from the train station.

Existing bicycle facilities within the traffic study area would remain as a shared roadway facility between vehicles and bicycles within the roadway network after the completion of the proposed Project. On-site bicycle racks within the station complex would be maintained during and after the construction of the station improvements. No permanent impacts to pedestrian and bicycle facilities would occur.

4.11.3. Avoidance, Minimization, and Mitigation Measures

No adverse effects are anticipated during construction and operations, and mitigation measures are not required. However, minor effects to transportation and traffic are anticipated during construction. To avoid or minimize temporary impacts during construction, a TMP will be prepared prior to construction and implemented. To ensure traffic safety, reduce accident hazards, minimize construction-related traffic congestion, detour routes, and minimize inconveniences to commuters and local residences and businesses. At a minimum, the TMP must include appropriate signage, identification of alternate/detour routes, incident management, construction strategies, on-site and off-site street circulation, planned haul routes, anticipated temporary traffic lane closures, demand management and a public awareness campaign. The project construction contractor shall follow the plan and coordinate with the city in advance if any deviations or changes to the plan are necessary. Refer to Appendix E for Transportation and Traffic Measures T-1 Construction Traffic Management Plan.

Applicable Regulations

Title VI of the Civil Rights Act of 1964 prohibits discrimination based on race, color, or national origin.

Executive Order 12898 to address environmental justice in minority and low-income populations

U.S. DOT Order 5610.2(a) to address environmental justice in minority populations and low-income populations

U.S. DOT FTA, Circular FTA C 4703.1, Environmental Justice Policy Guidance for Federal Transit Administration Recipients, August 15, 2012

Executive Order 13166, "Improving Access to Services for Persons with Limited-English Proficiency."

4.12. Environmental Justice

The *Environmental Justice (EJ) Analysis* was conducted to determine the potential for disproportionately high and adverse impacts on minority and low-income populations (Appendix I, Community Impacts Assessment). The analysis was prepared using guidance from the 2012 FTA circular on the Environmental Justice Policy Guidance for FTA Recipients. The results of the study are summarized below.

4.12.1. Existing Conditions

Demographic data on EJ populations was collected using the estimate data in the 2010 U.S. Census, 2019.

Table 4-7 shows the CIA study area has a higher percentage of EJ populations when compared to the city and county. There are several social service organizations in the study area, such as shelters and food banks, with most located in Downtown Riverside.

Table 4-7. Environmental Justice Populations

Geographic Area	Total Population	Minority	Low-Income
CIA Study Area	3,900	96.9%	25.5%
City of Riverside	303,871	66.7%	15.6%
County of Riverside	2,189,641	61.3%	14.7%

Source: U.S. Census Bureau, 2010 Census

Meaningful involvement of EJ populations is essential to ensure EJ populations concerns are considered in the decision-making process. Almost 97 percent of the population in the CIA study area is Hispanic. To properly notify the community, the NOP with the date and location of the scoping meeting was translated into Spanish and advertised in the La Prensa newspaper, a Spanish publication. The scoping meeting provided comment cards, and project information was available in Spanish, as Spanish translation was provided to encourage understanding and participation at the meeting.

All future project notices and information at public meetings will be available in Spanish and translators will be available. Accommodations will also be made for public that may not have access to computers, for example hard copies can be made available at public libraries and telephones lines will be available at virtual public meetings so the public can call in to encourage participation.

RCTC also met with the Eastside Neighborhood Forum on March 5, 2020 and on April 1, 2021.

Affected Environment

The CIA study area has a significantly higher proportion of Hispanic/Latino population (91.5 percent) than both the city (53.3 percent) and county (48.4 percent) and has a larger percentage of those living below the poverty line (25.5 percent) and a lower median income ($40,228) than either the city (15.6 percent and $65,313) or county (14.7 percent and $65,948). However, Block Group 3 (one of the three census block groups that makes up the CIA study area) has a notably higher median income ($73,571) and lower percentage of population living below the poverty line (5.3 percent) than the rest of the CIA study area. The makeup of the minority population is relatively similar across census block groups within the CIA study area.

4.12.2. Environmental Consequences

The Build Alternative would not result in disproportionately high and adverse impacts to EJ populations.

Access and Circulation: Under the Build Alternative, trips generated by construction activities would add additional traffic on the local roadway network and may temporarily affect the traffic study area roadways and intersections and may affect bus service and bicycle traffic due to detours or potential construction-related traffic and activities. A TMP would be used to ensure that local circulation and access is maintained during of construction. In the event of street and/or lane closures, detour routes will be identified and signage within the affected area would be posted to maintain train and bus services and non-motorized routes.

In some instances, existing sidewalks and adjacent roadway lanes would be occupied intermittently throughout the construction phase to accommodate sidewalk reconstruction and other streetscape improvements. Alternate pedestrian access, bicycle and vehicle detours would be provided to and from the Riverside-Downtown Station and adjacent residences and businesses throughout the duration of construction.

With the implementation of a TMP to ensure traffic safety and to maintain access to commuters, local residences, and businesses, EJ populations would not experience disproportionately high and adverse effects to access. Under the Build Alternative, peak-hour LOS does not change from above to below the acceptable LOS threshold. The Project would not conflict with a program, plan, ordinance, or policy addressing the circulation system. Therefore, the proposed Project is not anticipated to result in significant impacts at any of the study area intersections; therefore, EJ populations would not experience disproportionately high and adverse effects on access and circulation.

Community Character and Cohesion: The Build Alternative and all design options would require local roadway work that may include temporary full or partial roadway closures and detours. Project construction activities would be temporary in duration and confined to the site and would not likely have effects substantially different from the same types of effects associated with typical construction activities in Southern California. The Build Alternative would incorporate air quality and noise measures to minimize construction-related dust and noise; thus, EJ populations would not experience disproportionately high and adverse effects. As no large-scale residential acquisitions would be required, barriers erected, community facilities or services displaced, or neighborhood access reduced, the Project's permanent condition for all design options would not result in adverse effects to community character and cohesion. Thus, EJ populations would not experience disproportionately high and adverse effects on community character and cohesion.

The proposed Project would remove an existing building that is effectively abating existing noise from nearby the existing Riverside-Downtown Station, SR 91 freeway and local roadways. As a result, severe noise impacts are anticipated at existing residences and moderate impacts are anticipated at Lincoln Park. The Build Alternative would

incorporate noise-reducing sound wall to reduce noise impacts at residences and at the park. With noise abatement measures the Project would not result in disproportionally high and adverse effects from noise and vibration.

Relocations: The Build Alternative and all design options would consider the needs of displaced residents, including low-income and minority populations, during implementation of relocation assistance strategies. The Build Alternative and all design options would require the relocation of the 6.87-acre Prism Aerospace industrial/manufacturing business and a vacant industrial parcel. As Prism Aerospace is an aerospace warehouse and manufacturing businesses, it does not particularly serve the material or cultural needs of EJ communities. Thus, its displacement would not result in a disproportionately high and adverse effect to EJ populations.

Parking Design Options 2A and 2B would require the relocation of the 0.77-acre West Coast Standards industrial business. As West Coast Standards is an automotive supply business, it does not particularly serve the material or cultural needs of EJ communities. Thus, its displacement would not result in a disproportionately high and adverse effect to EJ populations.

Parking Design Options 1A, 2A, and 3A would displace two three-bedroom single family residences located in an area zoned for industrial and commercial. While the residential community of the study area is predominately made up of EJ populations, the displacement and relocation of two of the 605 households in the study area would not result in a disproportionately high and adverse effect to EJ populations as there is available suitable housing stock within 10 miles of the displaced properties.

Parking Design Options 2A and 2B would displace two multi-family residences located in an area zoned for industrial and commercial, one comprised of two units and the other of six. While the residential community of the study area is predominately made up of EJ populations and those that reside in multi-family residences are anticipated to be low income, the displacement and relocation of eight of the 298 multi-family housing units in the study area would not result in a disproportionately high and adverse effect to EJ populations as there is available suitable housing stock within 10 miles of the displaced properties. Considering the declining population trend and the higher vacancy rate (compared to the city and county), replacement housing is anticipated to be available within the CIA study area.

Public Services

Permanent changes to the roadway network would increase, rather than decrease, access to the neighborhood, thus, access for emergency services would remain unchanged or improve. As the Project does not increase the number of residents or businesses living in or operating in the study area, city, or county, it is not expected that the Project would induce demand for new or expanded utilities or emergency services. Therefore, EJ populations would not experience disproportionately high and adverse effects on utilities and public services.

4.12.3. Avoidance, Minimization, and Mitigation Measures

No adverse effects are anticipated during construction and operations, and mitigation measures are not required. However, temporary impacts to EJ populations are anticipated during construction. To avoid or minimize temporary impacts during construction, a TMP will be prepared and implemented to maintain access to residences and nearby amenities and construction-related measures will be implemented to minimize noise and dust. Appendix E provides the following Measures, AQ-1, N-3, N-4, T-1, and REL-1, which address construction-related air quality, noise, and traffic measures and potential relocation impacts.

4.13. Section 4(f) Evaluation

A *Draft Individual Section 4(f) Evaluation* was completed in March 2021 (HNTB, 2021) to evaluate potential project-related effects on Section 4(f) Historic Sites and is contained in Appendix Q. The Section 4(f) discussion below addresses potential impacts to Section 4(f) publicly owned parks and recreational areas and references the Draft Individual Section 4(f) Evaluation for Section 4(f) historic sites.

Applicable Regulations

Section 4(f) of the Department of Transportation Act of 1966 (49 U.S.C. §303), as amended, requires consideration of:

- Parks and recreational areas of national, state, or local significance that are both publicly owned and open to the public
- Publicly owned wildlife and waterfowl refuges of national, state, or local significance that are open to the public to the extent that public access does not interfere with the primary purpose of the refuge
- Historic sites of national, state, or local significance in public or private ownership regardless of whether they are open to the public (23 U.S.C. §138(a) and 49 U.S.C. §303(a))

4.13.1. Existing Conditions

Historic Sites: There are four locally designated historic districts/conservation areas that are close to or overlapping the APE. The two City of Riverside (potentially) locally eligible districts that overlap the APE are the Citrus Thematic Industrial Historic District and the Ninth Street Neighborhood Conservation Area.

There are 41 parcels within the APE, 29 of which contain a historic-era built environment; 12 are previously-recorded, built environment, historic resources; seven are newly recorded resources, built environment, historic resources; and the remaining parcels are either parking lots, the Metrolink Station, or vacant lots.

Parks: There are 3 parks, one community center, and a public school within the CIA study area; however, only Lincoln Park is within the proximity of the Project.

Affected Environment

The Section 4(f) of the Department of Transportation Act of 1966 (49 USC §303) specifies that the Secretary of Transportation may approve a transportation program or project requiring the use of the above listed lands only if:

1. There is no prudent and feasible alternative to using that land; and
2. The Program or Project includes all possible planning to minimize harm to the park, recreation area, wildlife and waterfowl refuge, or historic site resulting from the use.

As defined in Section 4(f), use can occur under the following three circumstances:

1. Permanent Incorporation: when a Section 4(f) property is is permanently acquired for a transportation project.
2. Temporary Occupancy: when there is temporary use of a property that is adverse to the terms of Section 4(f)'s preservationist purpose.
3. Constructive Use: when the proximity impacts of a transportation project on a Section 4(f) property, even without acquisition of the property, are so great that the activities, features, and attributes of the property are substantially impaired.

Section 4(f) Resources

Publicly Owned Parks, Recreation Areas, Wildlife or Waterfowl Refuges

There are three publicly owned parks within the CIA study area: Dario Vasquez is 0.6 mile from the project site, and North Park is located about 0.2 mile on the west side from the Project and would result in no direct or temporary use. Lincoln Park is located across the street from the proposed Project at the intersection of Howard Avenue and 12th Street. Construction activities and potential road and lane closures would be contained within the project site along Howard Avenue, Commerce Street, 9th Street, 10th Street, 11th Street, and 12th Street. The Build Alternatives and all design options would not result in direct or temporary use affect features, attributes, activities, or close access to Lincoln Park. However, there would be demolition of structures across the street diagonally from Lincoln Park, and construction equipment and activities adjacent to the park may result in temporary and indirect construction-related impacts to air quality, noise, visual, or traffic, but would not result in a direct, temporary, or constructive use of Lincoln Park.

Historic Sites: Within the APE, there are three historic sites outlined in blue that qualify for protection under Section 4(f) (Figure 4-23).

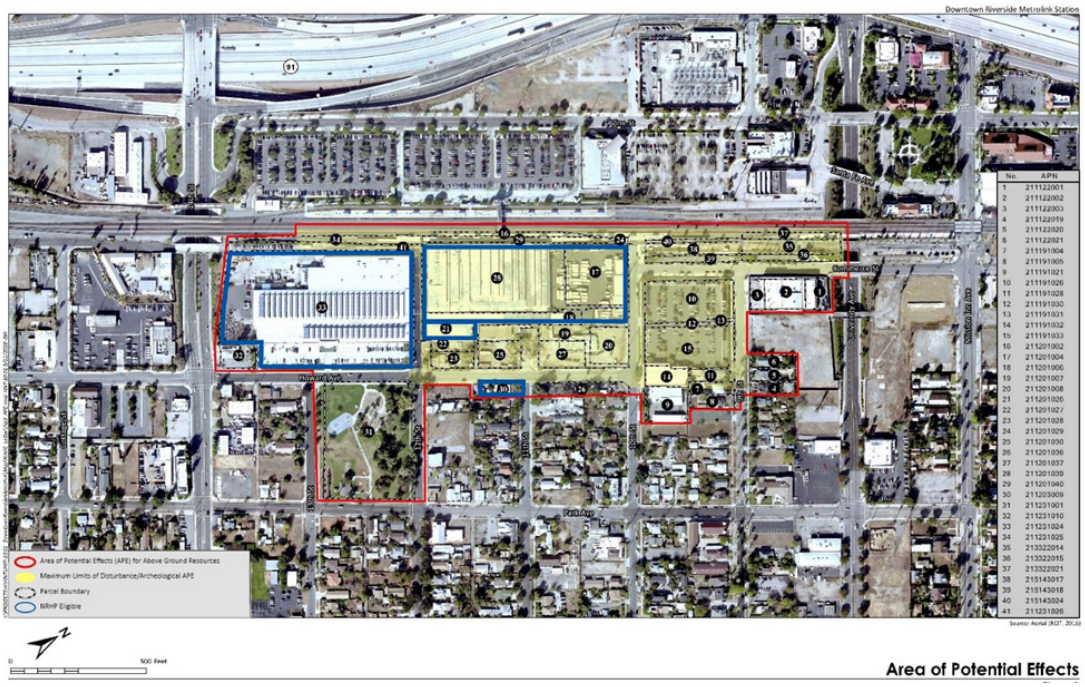

Figure 4-23. Section 4(f) Resources: Historic Sites within the APE

The former FMC Plants 1 and 2 and Worker's Houses are protected under Section 4(f) because they are considered historic sites of national, state, or local significance and they are eligible for listing in the NR and are listed in Table 4-8. For detailed information on these resources refer to Section 4.6 Cultural Resources and Appendix Q Individual Section 4(f) Evaluation.

Table 4-8. Section 4(f) Historic Sites

Property Name	Address	APE Map No./APN
FMC Complex Plant 1	3087 12th Street	(17)/211201004 (18)/211201006 (19)/211201007 (21)/211201026 (28)/211201039
FMC Complex Plant 2	3080 12th Street	(33)/211231024
Worker Houses	4110, 4120, 4130, 4140 Howard Avenue	(30)/211203009

Source: Historic Resources Report (HNTB, 2021)

Section 4(f) Use

Former FMC Complex: Plant 1 Direct Use: The Build Alternative with all design options would result in the demolition of the former FMC Plant 1 building. The direct project impacts (demolition) would result in a direct use under Section 4(f).

Former FMC Complex: Plant 2 No Use: Construction and operation of the Build Alternative with all design options would not result in direct impacts or temporary use during construction to the former FMC Plant 2 building (currently SolarMax building). In addition, indirect impacts from demolition of the Plant 1 building would not result in a substantial impairment so severe that it would impact the SolarMax operations and would not result in a constructive use.

Workers Houses: No Use. Construction and operation of the Build Alternative with all design options would occur across the street from the Worker Houses and would not result in direct impacts or temporary use during construction

to the Worker's Houses. In addition, proximity impacts from demolition of the former FMC Plant 1 building would not result in a substantial impairment of the Workers Houses and would not result in a constructive use.

Section 4(f) Alternatives Analysis

Section 4(f) specifies that the Secretary of Transportation may approve a transportation program or project requiring the use of Section 4(f) property only if there is no prudent and feasible alternative to using that land. 23 CFR 774.17 defines a feasible and prudent avoidance alternative as follows:

1. A feasible and prudent avoidance alternative avoids using Section 4(f) property and does not cause other severe problems of a magnitude that substantially outweighs the importance of protecting the Section 4(f) property. In assessing the importance of protecting the Section 4(f) property, it is appropriate to consider the relative value of the resource to the preservation purpose of the statute.
2. An alternative is not feasible if it cannot be built as a matter of sound engineering judgment.
3. An alternative is not prudent if:
   i. To a degree that it is unreasonable to proceed with the Project in light of its stated purpose and need;
   ii. It results in unacceptable safety or operational problems;
   iii. After reasonable mitigation, it still causes:
      A. Severe social, economic, or environmental impacts;
      B. Severe disruption to established communities;
      C. Disproportionate impacts to minority or low-income populations; or
      D. Severe impacts to environmental resources protected under other Federal statutes.
   iv. It results in additional construction, maintenance, or operational costs of an extraordinary magnitude;
   v. It causes other unique problems or unusual factors; or
   vi. It involves multiple factors in paragraphs (3)(i) through (3)(v) of this definition, that while individually minor, cumulatively cause unique problems or impacts of extraordinary magnitude.

Section 4(f) Avoidance Alternatives

Avoidance alternatives were developed to use of the Section 4(f) FMC Complex (Plants 1 and 2) (APE Map Nos. 17, 18, 19, 21, 28 and 33). The avoidance alternatives were evaluated against Section 4(f) feasible and prudent avoidance alternative criteria, as defined in 23 CFR 774.17; in addition, core performance criteria that addresses the following program and service needs for the proposed station improvements was also used to evaluate the Build Alternative against the avoidance alternatives, the core performance criteria are consistent with the following project objectives:

- Ability to maintain Metrolink equipment storage needs
- Ability to improve connectivity between other Metrolink lines and local transit
- Safe access for pedestrians
- Right of way availability
- Property acquisition needs
- Environmental mitigation
- Impact to adjacent businesses
- Ability to service growth plan
- Potential for additional service growth beyond plan (e.g. parking)
- Impact to BNSF operations

No Build Alternative

Under the No Build Alternative, implementation of improvements at the Riverside Downtown Station would not be constructed and the current configuration of the Riverside Downtown Station would remain the same. Although this alternative would avoid impacts to Section 4(f) resources, the No Build Alternative would not meet the project purpose and need. The No Build Alternative would not expand platform capacity to meet passenger train storage needs or improve efficiency because train meets would continue on the BNSF mainline. The No Build Alternative would not improve regional connectivity or accessibility for commuters or improve operations to accommodate the 91/PV Line, and the IEOC Lines and train capacity and storage would be limited to the existing platforms. The No Build Alternative does not meet the project purpose and need; therefore, the No Build Alternative is not a prudent and feasible avoidance alternative because it would compromise the Project to a degree that it is unreasonable to proceed with the Project in light of its stated purpose and need.

Avoidance Alternative 1

Avoidance Alternative 1 proposed the construction of the new platform and tracks on the west side of the existing station. This alternative avoids the former FMC Complex (Plant 1 and Plant 2) on the east side of the station by moving proposed improvements to the west side of the station (Figure 4-24). This avoidance alternative would provide a new platform and tracks on the west side of the existing station and pedestrian at-grade crossings at both ends of the new platform. The existing pedestrian overpass would be extended to the new platform with an option to extend to the main parking lot.

Determination

Although Avoidance Alternative 1 would avoid the FMC Complex (Plant 1 and Plant 2) (APE Map Nos. 17, 18, 19, 21, 28, and 33), it is not a prudent and feasible avoidance alternative because it would compromise the Project to a degree that it is unreasonable to proceed with the Project in light of its stated purpose and need, as described herein:

- Does not allow the Perris Valley trains to use the west side platform because there are no existing crossovers between the Riverside Downtown Station and the 91/PV Line connection, and BNSF will not allow new crossovers to be added/constructed.
  - Eliminates three existing layover tracks on the west side of the station.. The removal of layover tracks directly adjacent to the station would result in commuter trains being serviced and parked at a remote facility in Colton, which would add operational logistics and costs to accommodate the loss of the layover tracks at the Riverside Downtown Station. The remote facility would need to be checked for adequate space to service and park the trains. Agreements with BNSF would also need to be confirmed for adequate permission to move trains between the remote facility and the Riverside Downtown Station. The remote facility would also require additional train movements on the BNSF system, which would be above the current limits in the Shared Use Agreement between BNSF and RCTC. Therefore, renegotiation of the Shared Use Agreement would be required; efforts to renegotiate the existing Shared Use Agreement have been ongoing for the last 20 years and BNSF may object to the additional train movements.
  - Requires construction of a new railroad bridge over 14th Street.
  - Requires a new turnout and CP on BNSF Mainline Track 1.
  - Reduces existing parking capacity and requires reconfiguration of bus access into the main station parking lot.

Figure 4-24. Avoidance Alternative 1

Avoidance Alternative 1A

Avoidance Alternative 1A proposed the construction of a new platform on the west side of the existing station to avoid crossing the 14th Street railroad bridge. This alternative avoids the former FMC Complex (Plant 1 and Plant 2) (APE Map Nos. 17, 18, 19, 21, 28, and 33) on the east side of the station by moving proposed improvements to the west side of the station (Figure 4-25). Avoidance Alternative 1A would provide a new turnout to the platform and tracks on the west side of the existing station with pedestrian at-grade crossings at both ends of the new platform. The existing pedestrian overpass would be extended to the new platform with an option to extend to the main parking lot.

Determination

Although Avoidance Alternative 1A would avoid the FMC Complex (Plant 1 and Plant 2) (APE Map Nos. 17, 18, 19, 21, 28, and 33), it is not a prudent and feasible avoidance alternative because Avoidance Alternative 1 would compromise the Project to a degree that it is unreasonable to proceed with the Project in light of its stated purpose and need, as described herein:

- Does not allow the Perris Valley trains to use the west side platform due to the lack of crossovers between the Riverside Downtown Station and the 91/PV Line connection and BNSF will not allow new crossovers to be added/constructed.
- Eliminates and requires replacement of three existing layover tracks on the west side of the station. The removal of layover tracks directly adjacent to the station would result in commuter trains being serviced and parked at a remote facility in Colton, which would add operational logistics and costs to accommodate the loss of the layover tracks at the Riverside Downtown Station. The remote facility would need to be checked for adequate space to service and park the trains. Agreements with BNSF would also need to be confirmed for adequate permission to move trains between the remote facility and the Riverside Downtown Station. The remote facility would also require additional train movements on the BNSF system, which would be above the current limits in the Shared Use Agreement between BNSF and RCTC. Therefore, renegotiation of the Shared Use Agreement would be required. Efforts to renegotiate the Shared Use Agreement have been ongoing for the last 20 years, and BNSF may object to the additional train movements.
- Requires a new turnout and CP on BNSF Mainline Track 1.
- Reduces existing parking capacity and requires reconfiguration of bus access into the main station parking lot.

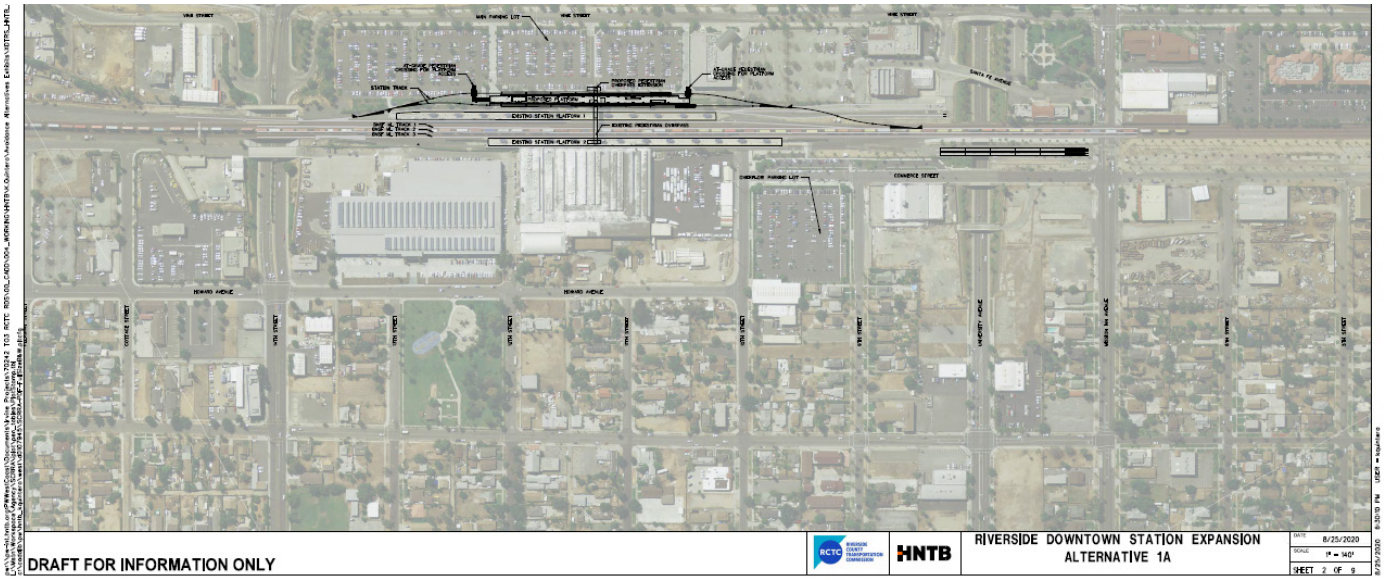

Figure 4-25. Avoidance Alternative 1A

Avoidance Alternative 2

Avoidance Alternative 2 proposed to construct a new platform and tracks on the east side of the existing station (stub ended) with pedestrian grade crossing at the east end of the new platform . This alternative avoids the former FMC Complex (Plant 1 and Plant 2) (APE Map Nos. 17, 18, 19, 21, 28, and 33) on the east side of the station by moving proposed improvements north of the former FMC Complex (Figure 4-26). This avoidance alternative would provide a new platform and tracks on the east side of the existing station and pedestrian grade crossings at the east end of the new platform. This alternative would increase Metrolink train storage capacity while minimizing impacts to BNSF operations. In addition, the south end of the new platform would be near the existing overflow parking lot, providing passengers convenient access.

Determination

Although Avoidance Alternative 2 would avoid the FMC Complex (Plant 1 and Plant 2) (APE Map Nos. 17, 18, 19, 21, 28, and 33) it is not a prudent and feasible avoidance alternative because Avoidance Alternative 2 would compromise the Project to a degree that it is unreasonable to proceed with the Project in light of its stated purpose and need, as described herein:

- Includes a stub-ended configuration that is not acceptable for train operations at this location because it reduces train storage capacity, and trains that are parked on the east side of Platform 2 would block trains from leaving at stub-ended tracks.
- Requires a right-hand turnout within the limits of the existing platform at the station, which would not meet Metrolink standards and would not be permitted due to operational restrictions.
- Requires widening of the existing bridge over University Avenue.
- Eliminates two existing layover tracks on the east side. The removal of layover tracks directly adjacent to the station would result in commuter trains being serviced and parked at a remote facility in Colton, which would add operational logistics and costs to accommodate the loss of the layover tracks at the Riverside Downtown Station. The remote facility would need to be checked for adequate space to service and park the trains. Agreements with BNSF would also need to be obtained for adequate permission to move trains between the remote facility and the Riverside Downtown Station. The remote facility would require additional train movements on the BNSF system, which would be above the current limits in the Shared Use Agreement between BNSF and RCTC. Therefore, renegotiation of the Shared Use Agreement would be required. Efforts to renegotiate the Shared Use Agreement have been ongoing for the last 20 years, and BNSF may object to the additional train movements.
- The location of the proposed platform, combined with the configuration of station tracks, prevents the placement of proper pedestrian paths between the proposed platform and existing Platform 2. The pedestrian paths from the proposed platform to Platform 2 would violate Metrolink criteria and result in unsafe conditions. Without paths from the proposed platform to Platform 2, passengers would need to leave the main station area to access the existing platforms and west side main parking area.
- Does not increase parking capacity.

Figure 4-26. Avoidance Alternative 2

Avoidance Alternative 2A

Avoidance Alternative 2A avoids the former FMC Complex (Plant 1 and Plant 2) (APE Map Nos. 17, 18, 19, 21, 28, and 33) and the two existing layover tracks on the east side of the station by shifting the proposed improvements north of Mission Inn Avenue (Figure 4-27). This avoidance alternative would provide a new platform and tracks on the east side of the existing station and pedestrian grade crossings at both ends of the new platform.

Determination

Although Avoidance Alternative 2A would avoid the FMC Complex (Plant 1 and Plant 2) (APE Map Nos. 17, 18, 19, 21, 28, and 33), it is not a prudent and feasible avoidance alternative because Avoidance Alternative 2A would require Mission Inn Avenue to be grade separated and would result in an estimated cost of $45 million, which would more than double the estimated cost of the Project, resulting in additional construction costs of an extraordinary magnitude. In addition, it would compromise the Project to a degree that it is unreasonable to proceed with the Project in light of its stated purpose and need, as described herein:

- Requires Mission Inn Avenue to be grade separated to accommodate the 4th and 5th tracks and meet CPUC standards.
- Requires a new turnout on BNSF Mainline Track 3 and CP.
- Increases the distance of the west end of the new platform to the pedestrian bridge to 2,300 feet from the main parking, and the east end of the platform to the furthest parking spot in the main parking area is 4,600 feet, which would not provide convenient passenger access.
- Does not increase parking capacity.

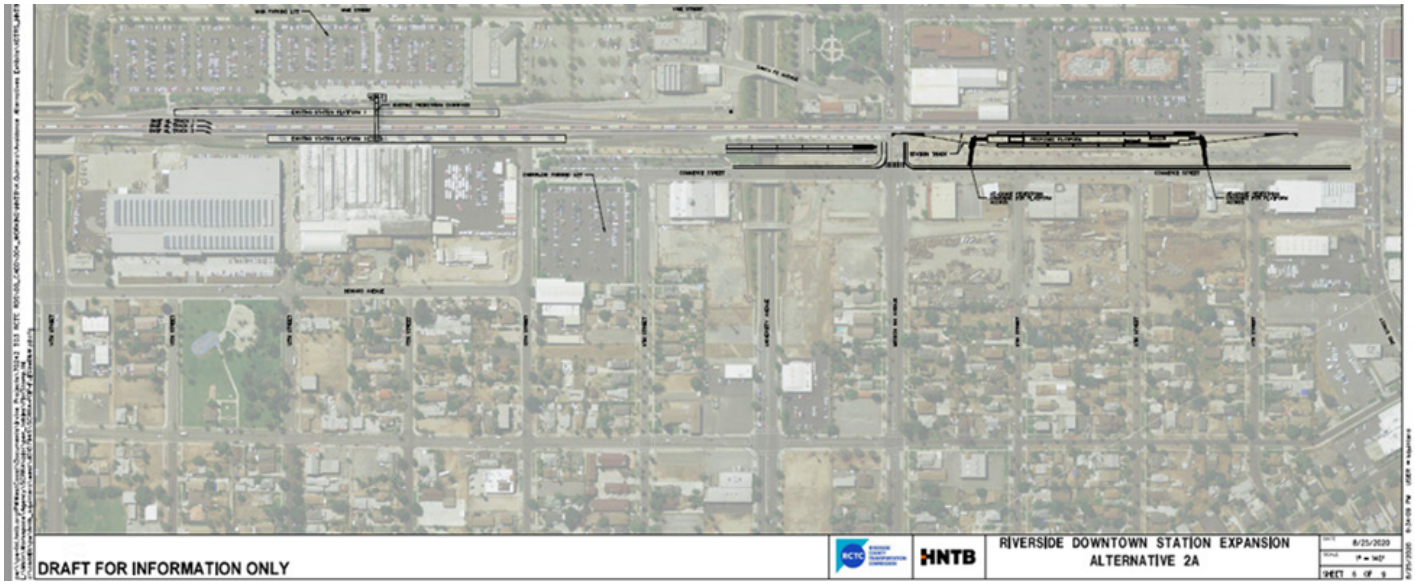

Figure 4-27. Avoidance Alternative 2A

Avoidance Alternative 2B

Avoidance Alternative 2B would avoid the former FMC Complex (Plant 1 and Plant 2) (APE Map Nos. 17, 18, 19, 21, 28, and 33) on the east side of the station and avoids the existing layover tracks by shifting the track improvements farther north, past Mission Inn Avenue (Figure 4-28). This avoidance alternative would provide a new platform and tracks on the east side of the existing station and pedestrian grade crossing at the south end of the new platform.

Determination

Although Avoidance Alternative 2B would avoid the FMC Complex (Plant 1 and Plant 2) (APE Map Nos. 17, 18, 19, 21, 28, and 33), it is not a prudent and feasible avoidance alternative because Avoidance Alternative 2B would compromise the Project to a degree that it is unreasonable to proceed with the Project in light of its stated purpose and need, as described herein:

- Includes a stub-ended configuration that is not acceptable for train operations at this location because it would require a reverse movement (double move) on the BNSF mainline, adversely impacting their operations. The additional movements would create delays, inefficiencies, and unacceptable operations.
- Requires a new turnout on BNSF Mainline Track 3 and a new CP.
- Increases the distance to the west end of the new platform to the pedestrian bridge to 2,300 feet from the main parking, and the east end of the platform to the furthest parking spot in the main parking area is 4,600 feet, which would not provide convenient passenger access.
- Does not increase parking capacity.

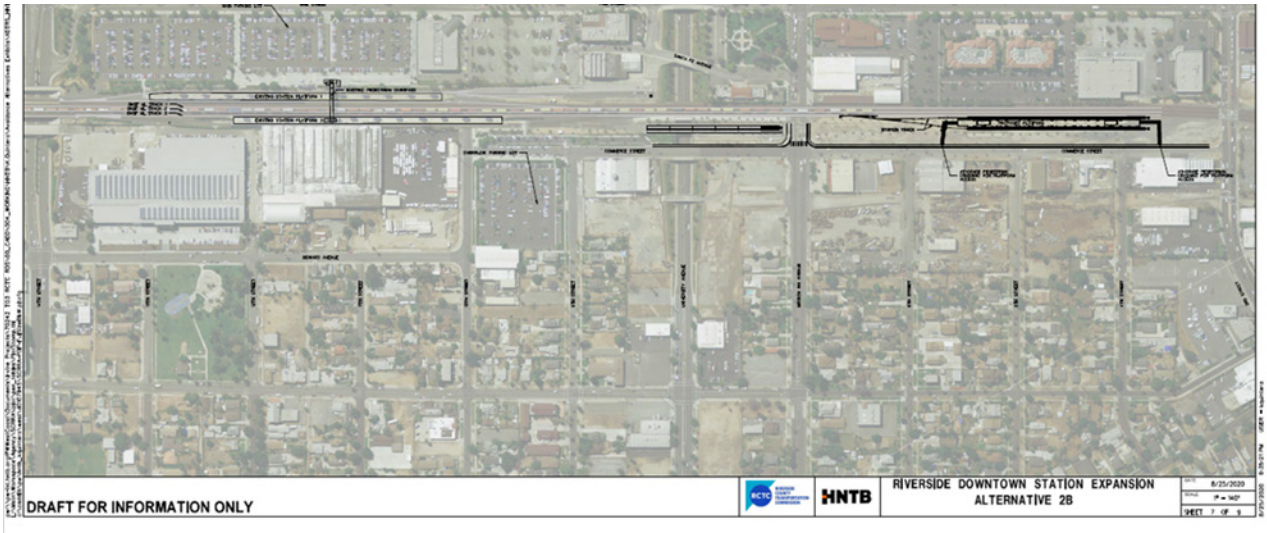

Figure 4-28. Avoidance Alternative 2B

Avoidance Alternative 2C

Avoidance Alternative 2C avoids the former FMC Complex (Plant 1 and Plant 2) (APE Map Nos. 17, 18, 19, 21, 28, and 33) on the east side of the station by shifting the improvements just north of former FMC Complex (Figure 4-29). This avoidance alternative would provide a new platform and tracks just north of Riverside Downtown Station and pedestrian grade crossings at both ends of the new platform.

Determination

Although Avoidance Alternative 2C would avoid the FMC Complex (Plant 1 and Plant 2) (APE Map Nos. 17, 18, 19, 21, 28, and 33), it is not a prudent and feasible avoidance alternative because Avoidance Alternative 2C would require Mission Inn Avenue to be grade separated and would result in an estimated cost of $45 million, which would more than double the estimated cost of the Project, resulting in additional construction costs of an extraordinary magnitude. In addition, it would compromise the Project to a degree that it is unreasonable to proceed with the Project in light of its stated purpose and need, as described herein:

- Would not accommodate passengers to gain access from Platforms 1 and 2 or to the main parking lot on the west side of the station without leaving the main station because it would require a new pedestrian crossing for passengers transferring from the new platform to the existing platform, which is not permitted.
- Requires Mission Inn Avenue to be grade separated to accommodate the 4th and 5th tracks and meet CPUC standards.
- Requires widening of the existing bridge over University Avenue.
- Eliminates and requires replacement of two existing layover tracks. The removal of layover tracks directly adjacent to the station would result in commuter trains being serviced and parked at a remote facility in Colton, which would add operational logistics and costs to accommodate the loss of the layover tracks at the Riverside Downtown Station. The remote facility would need to be checked for adequate space to service and park the trains. Agreements with BNSF would also need to be obtained for adequate permission to move trains between the remote facility and the Riverside Downtown Station. The remote facility would also require additional train movements on the BNSF system, which would be above the current limits in the Shared Use Agreement between BNSF and RCTC. Therefore, renegotiation of the Shared Use Agreement would be required. Efforts to renegotiate the Shared Use Agreement have been ongoing for the last 20 years, and BNSF may object to the additional train movements.
- Requires a new turnout on BNSF Mainline Track 3 and CP.
- Increases the distance from west end of platform to the pedestrian bridge to 1,100 feet from the main parking, and the east end of the platform to the furthest parking spot in the main parking area is 3,400 feet, which would not provide convenient passenger access.

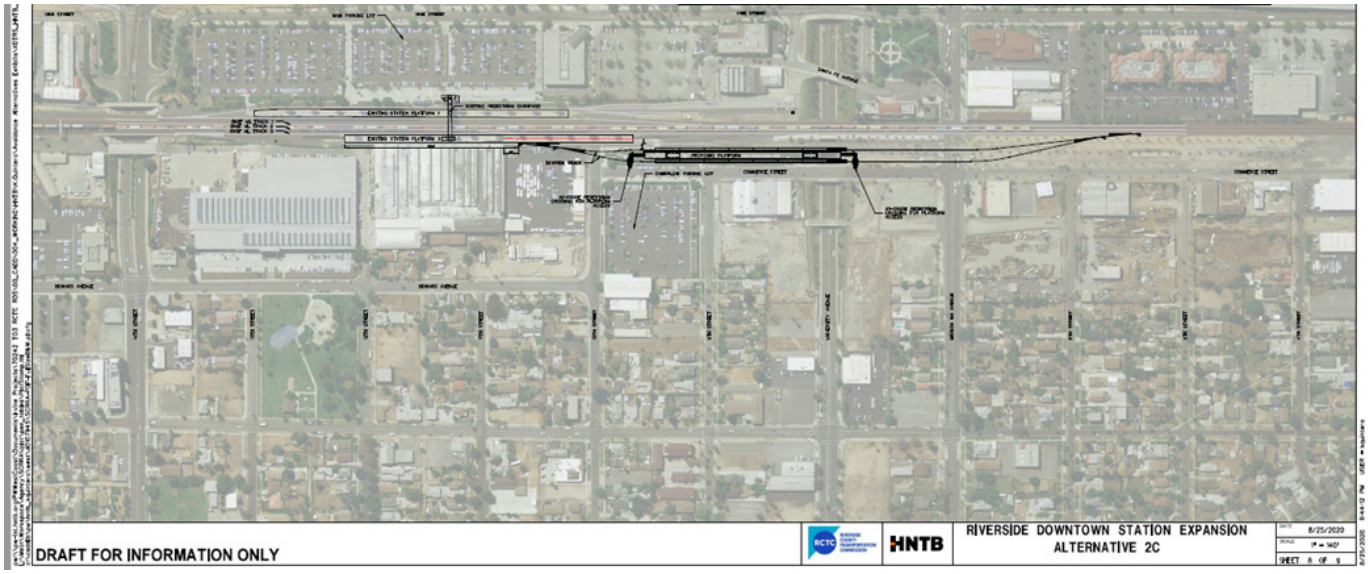

Figure 4-29. Avoidance Alternative 2C

Avoidance Alternative 3 avoids the former FMC Complex (Plant 1 and Plant 2) (APE Map Nos. 17, 18, 19, 21, 28, and 33) on the east side of the station by shifting proposed improvements south of 14th Street (Figure 4-30). Avoidance Alternative 3 would provide a new platform and tracks on the south side of the existing station, and pedestrian grade crossings would be provided at both ends of the new platform.

Determination

Although Avoidance Alternative 3 would avoid the FMC Complex (Plant 1 and Plant 2) (APE Map Nos. 17, 18, 19, 21, 28, and 33), it is not a prudent and feasible avoidance alternative because Avoidance Alternative 3 would compromise the Project to a degree that it is unreasonable to proceed with the Project in light of its stated purpose and need, as described herein:

- Is not an acceptable configuration for train operations at this location because it would require a reverse movement (double move) on the BNSF mainline, adversely impacting their operations. The additional movements would create delays, inefficiencies, and unacceptable operations.
- Requires relocation and modification of existing signals facilities.
- Requires extensive right of way acquisition of frontage road and adjacent properties to accommodate a new platform and tracks and also requires a vacation of Commerce Street.
- Increases the distance from the west end of the platform to the pedestrian bridge to 2,300 feet from the main parking area, and the east end of the platform to the furthest parking spot in the main parking area is 4,600 feet, which would not provide convenient passenger access.

Figure 4-30. Avoidance Alternative 3

Core Performance Criteria

In addition to Section 4(f) feasible and prudent avoidance alternative criteria defined in 23 CFR 774.17; all potential alternatives, including the Section 4(f) avoidance alternatives, were evaluated based on how they best met the core performance evaluation criteria and if they met the project purpose and need.

Purpose and Need

The purpose of the proposed Project is to expand the capacity, improve operations and efficiency, connectivity, and the passenger experience at the Riverside Downtown Station.

Project Objectives

The project objectives are as follows:

- Expand platform capacity to meet passenger train storage needs
- Allow for train meets off the BNSF mainline and minimize impacts to BNSF operations
- Improve transit connectivity and accessibility while minimizing impacts on improvement projects near the station that are already designed or in construction
- Facilitate more efficient passenger flow and reduce dwell times
- Enhance safety and access for station users
- Accommodate projected future demand

Table 4-9 uses the core evaluation criteria and summarizes how each of the alternatives met the criteria.

Table 4-9. Summary of Core Evaluation Criteria by Section 4(f) Avoidance Alternative

Evaluation Criteria	Build Alternative	Avoidance Alternatives 1 and 1A	Avoidance Alternative 2	Avoidance Alternatives 2A and 2B	Avoidance Alternative 2C	Avoidance Alternative 3
No impacts to Layover capacity	X	--	--	X	--	X
Meets Connectivity/ Service Plan Needs	X	X	--	--	--	--
No property acquisition/No Impact to adjacent businesses	--	--	X	X	X	--
No impact to BNSF operations	X	--	X	--	--	--
Meets Metrolink Design Criteria	X	X	--	X	--	X
No impacts to Capacity for future growth (e.g. parking)	X	--	--	--	--	--

Evaluation Criteria	Build Alternative	Avoidance Alternatives 1 and 1A	Avoidance Alternative 2	Avoidance Alternatives 2A and 2B	Avoidance Alternative 2C	Avoidance Alternative 3
Meets Purpose and Need	X	--	--	--	--	--
Criteria Met	**6**	**2**	**2**	**3**	**1**	**2**

X = meets core performance criteria

-- indicates does not meet core performance criteria

Consideration of Section 4(f) Avoidance Alternatives

Avoidance Alternatives 1, 1A, 2, 2A, 2B, 2C, and 3 were considered to avoid impacts to the former FMC Complex (Plant 1 and Plant 2) (APE Map Numbers 17, 18, 19, 21, 28, and 33); however, they did not meet the performance criteria, most of the basic project objectives, or the purpose and need. In addition, Alternatives 2A and 2C would require a grade separation of Mission Inn Avenue, estimated to cost an additional $45 million, which would substantially increase the estimated cost of the Project, and result in construction costs of an extraordinary magnitude. Alternatives 1, 1A, 2, and 2C would impact existing layover capacity and would not accommodate parking expansion. Alternative 2B and 3 would require a double reverse move on the BNSF mainline. Based on this analysis, Avoidance Alternatives 1, 1A, 2, 2A, 2B, 2C, and 3 were considered, but eliminated from further review.

In the evaluation of the Build Alternative with all design options and the Section 4(f) Avoidance Alternatives 1, 1A, 2, 2A, 2B, 2C, 3 against the core performance criteria, the Build Alternative was identified as the best alternative for the expansion of the Riverside-Downtown Station because it is the only alternative that meets the project objectives and purpose and need for the Project, and it met most of the core performance criteria, including the capacity for additional growth in the future.

The Draft Individual Section 4(f) Evaluation (Appendix Q) was sent to DOI for review on March 30, 2021. DOI sent a letter of concurrence on May 14, 2021 acknowledging the findings of the Draft Individual Section 4(f) Evaluation, reference Appendix C for the DOI correspondence.

4.13.2. Environmental Consequences

The Build Alternative and all design options would result in a use as defined under Section 4(f) to a historic site (the FMC Complex Plant 1) and would meet the criteria for a “temporary occupancy no use” to Plant 2, and no use of the Worker’s Houses. The Build Alternative would not result in no use to Lincoln Park, North Park, or Dario Vasquez Park. Refer to Appendix Q for the Draft Individual Section 4(f) Evaluation for a detailed evaluation.

4.13.3. Avoidance, Minimization, and Mitigation Measures

No use is anticipated during construction and operations for parks after implementation of avoidance, minimization, and mitigation measures. A use is anticipated during construction and operation for historic sites, and an adverse effects is anticipated during construction and operations of the Project. Refer to Appendix E for Park and Recreation Avoidance and Minimization Measures: REC-1 and N-3 and Cultural Resource Mitigation Measures CUL-1 to CUL-5, and AES-5.

4.14. Cumulative Effects

4.14.1. Existing Conditions

A cumulative effect is defined as the impact on the environment which results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (federal or non-federal) or person undertakes such other actions (40 CFR ~ 1508.7).

For information regarding existing conditions, refer to respective Sections 4.2.1 through 4.13.1.

Affected Environment

Cumulative effects considers the potential impacts on environmental resources from the Build Alternative and all design options in combination with effects from past, present, and reasonably foreseeable projects (those actions that are likely or probable, versus actions that are merely possible) within the study area. For more information regarding the affected environment for each respective resource topic, refer to Sections 4.2 through 4.13.

All of the environmental resources analyzed in the EA were evaluated for potential impacts from the Build Alternative and all design options and potential cumulative impacts when combined with reasonably foreseeable projects, to understand if the incremental difference results in new or larger impacts.

4.14.2. Past, Present, and Reasonably Foreseeable Future Projects

The following projects represent past, present, and reasonably foreseeable future projects in the project vicinity that may result in cumulative impacts in combination with the Build Alternative (Figure 4-31):

1. **Brandman University Expansion at 3550 Vine Street:** Brandman University opened a new vocational/technical school occupying approximately 10,000 square feet of existing office space in the building complex with existing parking. Effective September 1, 2021, Brandman University became the University of Massachusetts Global. The Brandman University Expansion occupied an existing office building; therefore, there would be no cumulative impacts in combination with the Build Alternative and all design options.
2. **Mid-Rise Multi-family Housing Mission Lofts Apartment Complex at 3050 Mission Inn Avenue.** Mission Lofts apartment complex is a transit-oriented development (TOD) consisting of 212 residential units, 640 square feet of commercial uses, and 315 parking spaces. This project was completed in 2019. According to the Mission Lofts website, the property has an 81walk score with most destinations such as restaurants, museums, shopping, services, the Riverside Downtown Station, and the future Vine Street Mobility Hub situated within walking distance. The Mission Lofts apartment complex provides a new TOD with housing consistent with local planning and nearby destinations such as bike and pedestrian facilities and transit options, which is beneficial for the city.
3. **Affordable multi-family residential units.** This project proposes to construct eight affordable multi-family residential units at 2719 11th Street. This property is currently a vacant lot and the status of the future development is unclear, therefore, this development is not reasonably foreseeable and no cumulative impacts are anticipated.
4. **Vine Street Mobility Hub.** The project proposes to construct up to 18 bus bays and includes a design that incorporates the latest technology in preparation for RTA's zero-emission bus deployment. The hub will also include seating, shelters, security features, a driver's lounge, drought tolerant landscaping, and integration with the City of Riverside's bike lane between Vine Street, 19th Street and the SR 91 Freeway. The RTA Board of Directors has approved a conceptual plan for the mobility hub on a 5-acre vacant lot across from the Riverside-Downtown Metrolink Station. With the conceptual plan approved, RTA will proceed to the project's architectural and engineering phase. Final design phase began in January 2021 and construction is anticipated to begin in January 2022 and end in January 2023, which would not overlap with the construction phase of the Riverside Downtown Station Improvements Project. The Vine Street Mobility Hub would result in beneficial cumulative effects by providing enhanced local and regional transportation options; therefore, no cumulative temporary or permanent impacts are anticipated.
5. **The Riverside Unified School District (RUSD) Eastside Neighborhood TK-6.** The RUSD proposes to develop a TK-6 school with 31 classrooms to serve the Eastside Neighborhood and approximately 800 students at the current location of the Lincoln Continuation High School and Lincoln Park. An NOP of a Draft EIR for the project was published on May 10, 2021; a scoping meeting was held on May 19, 2021, and the scoping comment period ended June 10, 2021. The school district has purchased 13 properties. Three options will be reviewed under the CEQA. All would require vacating Park Avenue between 13th and 14th Streets, and acquisition of 25

parcels located on neighborhood blocks between Howard Avenue and Victoria and between 13th Street and 14th Street, totaling 4.27 acres. The proposed project would involve demolition of the existing structures on the acquired parcels and construction of about 67,300 to 71,000 square feet of building space depending on the option. Construction timeframe of this project is not known, but could potentially result in cumulative construction related impacts if it is construction activities occurs at the same time as the Riverside Downtown Station Improvements Project. The proposed Eastside Neighborhood School requires property acquisitions and potential residential and business displacements (16-25 parcels) and may involve the conversion of Lincoln Park.

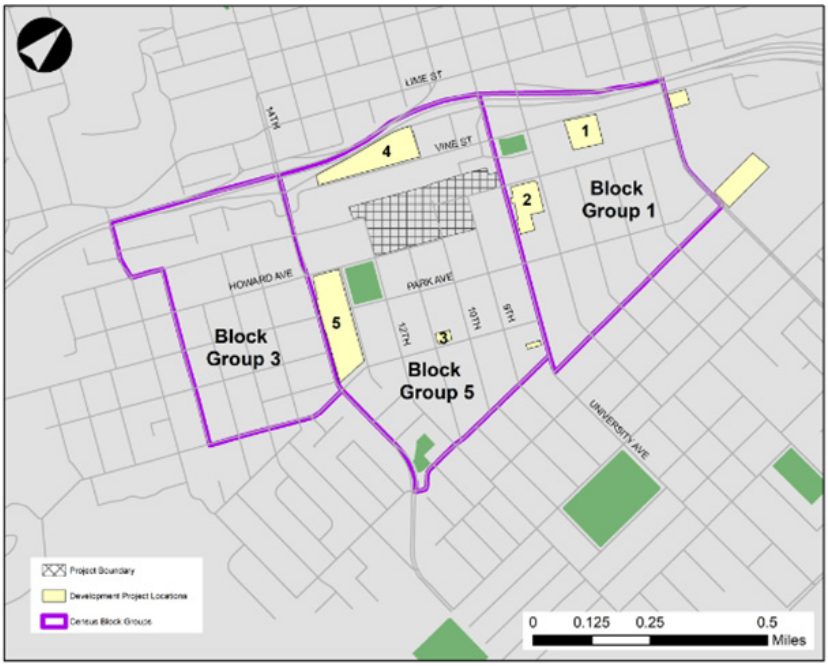

Figure 4-31. Locations of the Five Past, Present, and Reasonably Foreseeable Future Projects

4.14.3. Environmental Resources

The No Build Alternative would not contribute to any potentially negative cumulative effects within the study area and it also would not provide beneficial cumulative effects. This section describes the potential cumulative effects associated with the Build Alternative and potential cumulative effects based on past, present and reasonably foreseeable future development in the project vicinity. If the Build Alternative does not result in a direct or indirect impact on a resource; the Build Alternative will not contribute to cumulative impacts on that resource.

Energy: Operation energy includes all energy consumed by vehicle propulsion. The purpose of the Project is to provide operational station improvements to enhance Metrolink service and promote transit ridership. The Build Alternative and all design options would reduce train congestion through the construction of additional tracks to reduce train queues along the BNSF mainline, which would reduce the consumption of energy. In addition, the proposed Project would not directly influence the number of trains servicing the Riverside-Downtown Station because the frequency of train service is determined by Metrolink. Increased ridership would result in a reduction in regional VMT and associated criteria pollutant emissions. While the Project would result in increased vehicle trips to and from the station, these trips would generally be of short distances and the VMT for these trips would be offset by commuters using transit as opposed to vehicle trips. As such, operation of the Project would not result in a net increase energy consumption. Because of the Build Alternative's potential to *reduce* energy consumption, the Build Alternative would not contribute to cumulatively impacts to energy.

Land Use: The Build Alternative and all design options would be built within railroad ROW in areas designated for industrial use within the Market Place Specific Plan sub area. The Build Alternative would require conversion of industrial facilities, two single-family residences and two multi-family residences, on land designated for industrial or commercial use to transportation uses, and Design Options 2A, 2B, 3A, and 3B may vacate and incorporate segments of 10th and Commerce Street. Land use conversion required by the Build Alternative ranges between 6.95 acres and 9.18 acres, depending on the design option and is compatible with the *Riverside Marketplace Specific Plan and*

Environmental Impact Report (City of Riverside, 1991) and City of Riverside General Plan (2019), which allow development related to "passenger train, bus terminals, and parking lots uses. Although the proposed Project would reduce industrial land uses within the area and may convert existing residential properties to transportation uses, the conversion is consistent with the City of Riverside General Plan and permitted uses; therefore, the Build Alternative would not contribute to cumulative impacts to land use.

Parkland and Community Facilities: The Build Alternative would result in no direct or indirect impacts to Dario Vasquez Park (located about 0.5 mile from the Project) or to North Park (located on Vine Street and Mission Inn Avenue, west of the station and east of SR 91). There may be construction related air quality and noise impacts to Lincoln Park during construction, but these impacts would be temporary and would cease upon completion of the construction. If the RUSD project is constructed at the same time as the Build Alternative; there could be cumulative, but temporary noise and air quality impacts to Lincoln Park; however, the proposed Project would incorporate mitigation measures to address construction-related impacts related to air quality and noise. Similarly, the RUSD project would implement similar measures as a condition of approval. With implementation of mitigation measures, the proposed Project's cumulative contribution would not adversely affect parkland and community facilities during construction.

As discussed in Section 4.9, the Build Alternative would not result in adverse permanent noise impacts to Lincoln Park with the implementation of measures. As such, the Build Alternative would not substantially contribute to cumulative impacts to Lincoln Park as noise generated by the proposed Project would be reduced with noise abatement.

Section 4(f) Resources (Publicly owned parks, recreation, wildlife and waterfowl refuges): The Build Alternative and all design options would result in no permanent or temporary use of Section 4(f) publicly owned parks, recreation, wildlife or waterfowl refuges resources; therefore, the Build Alternative and all design options would not contribute to cumulative impacts to Section 4(f) resources.

Safety and Security: The Build Alternative and all design options provide pedestrian amenities for convenience and safety, including ADA crosswalks, sidewalks, and trees and lighting. With these improvements, the Build Alternative would result in a beneficial cumulative effect on safety and security.

Climate Change and Greenhouse Gases: Operation of the proposed Project would result in GHG emissions primarily from mobile (vehicular) sources and on-site energy use. Mobile sources would be associated with the increased number of vehicle trips to and from the station due to increased transit ridership. Energy usage would be associated with lighting provided at the station and the parking lot. Overall, however, the Project would result in a net decrease in emissions compared to existing conditions. The purpose of the project is to provide station improvements to enhance Metrolink service and promote transit ridership. An increase in ridership would result in a reduction in regional VMT and associated GHG emissions because of reduction of passenger car trips. While the Project would result in increased vehicle trips to and from the station, these trips would generally be of short distances and the VMT for these trips would be offset by the use of transit. Because of the proposed Project's potential to reduce GHG emissions, the Build Alternative would not cumulatively contribute to potential GHG impacts.

Aesthetics: A visual impact assessment was conducted near the project site and resulted in less than significant impacts because of the absence of existing scenic views of the surrounding mountain ranges. In addition, the Build Alternative and design options would result in minor improvement to the overall visual quality of the area with the removal of existing structures that are currently obstructing views to nearby land formations such as Mount Rubidoux to the west of the project site with new sidewalks, landscaping, trees and lighting around the station. Because the Build Alternative results in beneficial impacts to visual resources in the project area (removal of existing obstruction to scenic views), the Build Alternative would not contribute to cumulative adverse impacts to aesthetics.

Air Quality: The construction of cumulative projects may contribute to temporary increases in air pollutants during the construction phase of each respective project. During construction, the relevant projects listed in Section 4.14.2 would contribute to short-term increases in air pollutant emissions that may exceed SCAQMD's thresholds resulting in a cumulative impact to air quality. However, construction emissions would be minor and temporary and would be minimized with implementation of construction BMPs and avoidance and minimization measures AQ-1.

Cumulative projects, including a TOD and RUSD, are anticipated to contribute to air pollutant emissions associated with increased vehicle trips. However, the proposed Project's and the future Vine Street Mobility Hub's contribution to cumulative effects on air quality during operation would result in a net reduction of emissions because these projects are anticipated to increase passenger train and transit ridership and reduce regional VMT, and when

combined with the TOD, which is in walking distance to the train station and with the future Vine Street mobility hub, would serve to increase opportunities for active transportation and transit and passenger trains resulting in a cumulatively beneficial effect on air quality throughout the region. Therefore, the Build Alternative would not contribute to cumulative adverse effects to air quality.

Biological Resources: The results of the biological resources indicate that within the 500-foot BSA, there are no natural communities within or adjacent to the project footprint. The BSA is located within an entirely urbanized area that consists of existing development and landscaped areas. The majority of this area is covered with hardscape. Plant species within the BSA typically consist of non-native and ornamental landscaping. Ruderal and weedy species are commonly found at the margins of hardscape areas, where they can grow in small patches of disturbed soil areas. Because of the absence of suitable habitat within the BSA, there is no potential for state or federally listed species to occur within the BSA. As such, the Build Alternative is located within the downtown core of the City of Riverside and would not cumulatively contribute to impacts to biological resources.

Community Impacts/Growth

Relocations

Business Displacements: The proposed Project would result in business displacements; however, with relocation assistance to a suitable replacement site where existing or an equivalent customer base can be maintained, no adverse effects to businesses are anticipated. Potential business displacements from the RUSD project may result in a cumulative impact. However, relocation assistance would be provided and comply with the Uniform Relocation Act and would not result in an adverse effect cumulative impact.

Residential Displacements: The potential displacement and relocation of two residences and eight of the 298 multi-family housing units in the study area would not result in adverse effects because there is an available suitable housing stock within 10 miles of the displaced properties. Considering the declining population trend and the higher vacancy rate (compared to the city and county), replacement housing is anticipated to be available within the study area. Potential residential displacements from the RUSD project may result in a cumulative impact. However, relocation assistance would be provided and comply with the Uniform Relocation Act and would not result in an adverse effect cumulative impact.

Station improvement features such as the new passenger platform, additional tracks, and parking lot expansion are not anticipated to directly or indirectly influence substantial unplanned population growth within the area. Given the non-growth inducing features of the Build Alternative (operational improvements), declining trend in population within the Eastside Community, and limited opportunities to develop areas near the station, the Build Alternative's potential to directly or indirectly induce growth is not likely to occur; therefore, the Build Alternative would not cumulatively contribute to unplanned population growth.

Hazardous Waste: The Build Alternative and all design options would result in no adverse effects to Hazardous Waste. Under the Build Alternative, construction of the Project would require the handling, storage, transport, and disposal of contaminated soils and hazardous materials. Project construction activities would involve excavating, trenching, and grading activities Excavation of contaminated soils would require specialized handling, treatment, and off-site transport. The use of construction equipment would likely generate on-site hazardous waste during construction, including diesel and petroleum fuels, paint and paint chips, equipment lubricants, resins, and hot-mix asphalt/concrete residual waste. Construction equipment fueling would also occur on-site. Buildings proposed to be demolished may have been constructed using asbestos-containing materials and LBPs. Demolition of structures containing LBP requires specific remediation activities regulated by federal (40 CFR 745), state (17 California Code of Regulations 35001 through 36100), and local laws. Under the Build Alternative the contaminated soils and materials would be capped and contained under the new surface parking. The routine transport, use, and storage of potentially hazardous materials during operations and maintenance of the Build Alternative would remain similar to No Build conditions. Hazardous materials including fuel, lubricants, and brake fluids are likely to be present on-site and within the vicinity of the station. The existing station facility would implement BMPs for the safe storage, containment, and disposal of hazardous materials during operation of the station facility. Cumulative projects would not result in an impact to known hazardous materials and RECs. Information on hazardous materials and extent of contamination of other cumulative projects are not known. It is anticipated that each cumulative project would conduct its own hazardous material studies, disclose potential hazards, and incorporate measures to address potential impacts (if any). If hazardous materials are present, the City of Riverside would require (as part of the conditions of approval) measures to be implemented for the cumulative project to mitigate potential release of hazardous materials,

including transport of hazardous materials. Although the Prism Aerospace property is a known REC, post-project conditions would result in a positive impact in controlling hazardous material migration through the paving of exposed soil areas. With implementation of Mitigation Measures HAZ-1, HAZ-2, HAZ-3, HAZ-6, HAZ-7, and HAZ-9, the Build Alternative would not contribute to cumulative impacts to hazardous waste.

Geology and Soils: The Build Alternative and all design options are not located within a designated earthquake fault zone or within an area subject to landslides. The project site is located in a zone of low to moderate liquefaction potential. Liquefaction-induced settlement is not expected to be a significant hazard at this site due to the absence of shallow groundwater, near surface saturated sand layers, and underlying dense, older alluvium. In addition to the low potential for liquefaction, soils within the project study area are considered to have low potential for soil expansion.

The Build Alternative would have no impacts to paleontological resources and would not result in cumulative impacts. The project area is highly disturbed and artificial fill is present throughout the surface of the project area. The area is mapped with low sensitivity for Holocene-age young alluvial deposits and a higher sensitivity for Pleistocene-age older alluvial deposits; however, there are no documented paleontological localities within the boundaries of the project area, and previous remedial excavations have been completed over much of the site to depths up to 30 feet. The project footprint and adjacent areas are developed and were previously disturbed during development activities. Excavation activities related to the Project are limited to a depth of 3 to 5 feet and 10 feet (at spot locations).

Therefore, the likelihood of discovering undisturbed paleontological resources is low. Based on the records search results and analysis of geologic maps, geotechnical bore logs, literature, and online databases, as well as the current project description, construction activity for the Project has the potential to encounter paleontological resources if excavation activities extend into native Pleistocene-age older alluvial fan deposits in the subsurface of the project area. Given the geologic and soil conditions of the project site, the scope of the construction activities, and that there are no other known projects within the project footprint, the Build Alternative would not cumulatively contribute to impacts related to geology, soils or paleontological resources.

Noise and Vibration: Implementation of the Build Alternative would result in noise level increases at multiple receivers for each design option. Noise levels would increase primarily due to the removal of the existing Prism Aerospace building. This structure currently provides noise attenuation for multiple residential receivers along Howard Avenue from railroad and freeway noise sources. With the removal of this existing structure and its replacement with a level parking lot, the barrier to noise would be removed and expose residences to elevated noise levels. Similarly, the Design Options 2A and 2B would result in the removal of existing structures to accommodate the extension of Howard Avenue and result in a noise level increase for those first-row residences.

Noise level increases range from 0.1 dBA L_{DN} to 14.7 dBA L_{DN}. The largest noise increase would occur for the Design Option 1B, 2B, and 3B scenarios at residences located at the northern corner of Howard Avenue and 12th Street. Design Options 1A and 3A would have the fewest number of impacted locations, with 12 receivers modeled with at least a moderate impact and six receivers modeled with a severe impact. Design Option 2B would have the highest number of impacted locations, with at least 19 receivers modeled with a moderate impact and 11 receivers modeled with a severe impact. Design Options 1A, 2A, and 3A would not have noise impacts at the residences at the northern corner of Howard Avenue and 12th Street because those residences would be removed as part of the Project.

Implementation of the Project would lead to noise level increases for each option at the nearby Lincoln Park. Noise levels at the northern corner of the park for all scenarios would increase by 5.6 dBA L_{EQ} and 5.5 dBA L_{EQ}, respectively, which is within their respective 5 dBA L_{EQ} and 4 dBA L_{EQ} thresholds for moderate impacts. Receivers generally located further from noise sources or are blocked by intervening structures. No park receiver would result in a severe impact.

As indicated in Section 4.9, Noise and Vibration, noise impacts are anticipated at multiple receiver locations primarily due to the removal of the Prism Aerospace building. Noise abatement is required to reduce severe noise impacts to acceptable moderate levels. Based on the results of the noise barrier analysis, severe noise impacts would be reduced with the construction of a 12-foot-high wall at the approximate location of the Prism Aerospace building eastern boundary. The noise barrier would reduce noise to moderate and result in no adverse effect.

During the removal of the Prism Aerospace building, demolition activities would occur at the property line of the residence at 3021 12th Street. Because heavy equipment would be required during the removal of the warehouse, and this work would be located at the residence's shared property line, within 10 feet of the residence, noise impacts from the use of anticipated construction equipment such as an excavator, loader, and dump truck, would result in no adverse effect under Design Options 1B, 2B, and 3B with avoidance, mitigation and/or minimization measures.

The cumulative projects would increase population density and generate new trips; future traffic conditions were modelled assuming ambient growth and trips generated by other projects. Additional traffic within the roadway network would generate traffic noise and contribute to the future noise environment. The proposed residential development, Vine Street Mobility Hub and the RUSD school sites would generate traffic-related noise because vehicle and bus traffic on nearby roadways adjacent to the train station and in combination with the Build Alternative and all design options would cumulatively contribute to future noise. With the implementation of mitigation measures N-1, N-2, N-3, and N-4 the Build Alternative would not result in adverse cumulative noise and vibration impacts.

Water Quality, Water Resources and Floodplains: The existing train station is within the flood zone; however, the Build Alternative and all design options would not result in a net increase of mass (structures constructed within the flood zone) within the Base Floodplain Elevation (BFE). The Build Alternative would not result in significant floodplain encroachment and would result in a net positive effect on the overall floodplain because the proposed site elevation is below the BFE and the Prism Aerospace building that currently impede flows would be removed. Removing these buildings and converting the majority of area to a parking lot are anticipated to improve conditions. Improvements at the project site would be designed to maintain similar grades as that of existing grades to the greatest extent possible, which would allow the floodplain to use its current storage area and avoid increasing the BFE. Because the proposed Project would improve conditions within the floodplain, impacts to surface hydrology is not anticipated

The project site is within the Santa Ana River's Reach 3 and the Build Alternative and all design options have the potential to affect water quality due to associated pollutant sources during the construction and operation of the proposed Project. The Build Alternative and all design options would increase the amount of impervious surface area by approximately 45,000 square feet, and the potential for pollutants to enter receiving waters and peak flows would consequently increase slightly from existing conditions. However, this increase in the amount of impervious surface area is minor (0.0003 percent) relative to the total watershed area for the Santa Ana River Watershed Area (Middle Santa Ana River) is approximately 480 square miles. With the implementation of permanent BMPs, effects to water quality due to the Project operations would be treated to ensure that on-site pollutants do not degrade water quality standards. Proposed BMPs to be incorporated into project design include, lined vegetated swales, bioretention devices, and catch basin inserts, as further described herein would address increases in stormwater runoff resulting from the construction of the Build Alternative and all design options. Therefore, the proposed Project's contribution to cumulative effects on water quality and stormwater runoff and groundwater during operation would be minor.

The projects listed in Section 4.14.2 proposed the Middle Santa Ana River watershed could temporarily degrade water quality during their construction. However, these projects would be required to obtain all applicable permits related to water quality prior to construction activities. Projects that disturb greater than 1 acre of soil area would be required to develop SWPPPs and implement construction site BMPs to reduce construction-related impacts on water quality. In addition, projects that create more than 1 acre of new impervious surface area would be required to implement permanent water quality BMPs to reduce long-term impacts on water quality. Therefore, the Build Alternative's contribution to cumulative effects on water quality from these projects would remain minor.

Traffic and Transportation: Construction of the Project would require a large number of construction workers and movement of equipment to and from multiple locations within the traffic study area. These additional trips generated by construction activities would add additional traffic on the local roadway network and may temporarily affect LOS at the study area roadways and intersections and may require temporary lane closures and detours. Existing transit service and bicycle traffic may experience minor delays due to potential construction-related traffic and activities.

A TMP will be developed prior to project construction and will be implemented during construction to ensure traffic safety, reduce accident hazards, minimize construction-related traffic congestion, detour routes, maintain access and minimize inconveniences to commuters and local residences and businesses. Construction of cumulative projects may generate additional traffic; however, each project would also be required to prepare a TMP to minimize impacts. The Riverside-Downtown Station is a regional transit hub serviced by local and regional transit routes. Existing transit service within the project study area would not be affected after the completion of the Project. Station improvements would improve regional train service and benefit the City of Riverside and the surrounding communities. Expansion of the existing station infrastructure would enhance access for station users, accommodate projected future travel demand and encourage transit ridership and would accomplish several objectives identified in the City of Riverside's General Plan (2025). The Build Alternative and all design options would expand Riverside's multimodal transportation system, reduce single vehicle use and GHG emissions, improve circulation and pedestrian facilities and would not preclude planned bicycle improvements. The addition of parking and ADA-compliant sidewalks with trees

and lighting would also improve access to the Riverside-Downtown Station and provide new facilities for pedestrians enhancing active transportation. The Build Alternative would result in the intersection of Lime Street/Olivewood Avenue and 14th Street forecasted for opening year 2025 to operate at an unsatisfactory LOS below the threshold defined by City of Riverside during the p.m. peak hour for the No Build, the Build Alternative and the Build Alternative with Cumulative Projects (TIA, 2020), since impacts would remain the same in combination with cumulative project the Build Alternative would have no cumulative effect on study area intersections. Therefore, the Build Alternative would not contribute to cumulative effects on traffic and transportation.

Environmental Justice: The Build Alternative and all design options along existing passenger train and transit service and the Vine Street Hub services in the project vicinity would have a positive cumulative effect on access and circulation for EJ populations in the study area. The access and operational improvements to passenger rail are expected to increase mobility and quality of life for those who depend on transit and regional passenger rail including students, the elderly and disabled. As no large-scale residential acquisitions would be required, barriers erected, community facilities or services displaced, or neighborhood access reduced, the Project's permanent condition for all design options in combination with cumulative projects would not result in adverse cumulative effects to community character and cohesion. The Build Alternative and all design options would consider the needs of displaced residents, including low-income and minority populations, during implementation of relocation assistance strategies and result in no adverse effects. In combination with Vine Street Hub, TOD there would be beneficial cumulative effect to access and circulation and cumulative projects are not expected to relocate EJ populations, create barriers or reduce access. The RUSD project may impact the function of Lincoln Park and building a new school for the Eastside community may enhance community cohesion, but the Build Alternative and all design options would have no cumulative effects to character and cohesion or relocations of EJ populations.

Cultural Resources: The Build Alternative and all design options would result in removal of the former FMC Complex Plant 1 building, a historic resource, and an adverse effect under Section 106. The direct Project impacts (removal) would result in a substantial adverse change to historic character-defining features (Plant 1) and severely impact the significance of the former FMC Complex because half of the complex would be removed.

Although the former FMC Complex Plant 2 building would not be directly impacted, removal of the former FMC Complex Plant 1 building would cause a significant adverse change to the setting of Plant 2. Plant 2 would also be impacted by the Build Alternative because the associated resources in the immediate setting would also be removed, which would result in substantial adverse changes to Plant 2, specifically, its integrity of setting, feel, and association. The former FMC Plant 1 building is part of the historic setting of the Worker's Houses. The houses historical associations with the citrus industry-related FMC Complex would be indirectly diminished by removing the former FMC Complex Plant 1 building and the introduction of a new surface parking lot directly across the street.

The RUSD project is within the vicinity of the former FMC Complex Plant 1 and Plant 2 buildings and Worker's houses and could have an incremental and minor effect diminishing the integrity of setting, feel, and association of the former FMC Complex Plant 2 and Worker's Houses; if the project converts Lincoln Park to a playfield.

Past urbanization, in-fill developments, and renovation has contributed to gradual diminishing of historic properties over time. The Build Alternative and all design options' impacts on historic resources would be substantial because of the removal of the former FMC Complex Plant 1 building (a NEPA historic property) and potential removal of historic residences at 3021 12th Street and 3009 12th Street (CEQA historical resources) under Design Options 1A, 2A, and 3A. Other current and reasonably foreseeable actions would contribute to minor effects on historic resources within the RSA because other development projects would not result in direct impacts to aforementioned historic properties. Although mitigation Measures CUL-1 and CUL-2 are proposed to mitigate significant impacts to historic resources, the direct project impacts (removal) would result in a substantial adverse change to historic character-defining features (Plant 1) and severely impact the significance of the former FMC Complex (Plant 1 and Plant 2), as half of the complex would be removed. Similarly, removal of the 12th Street residences under Design Options 1A, 2A, and 3A would result in the demolition of historic-era homes (under CEQA), the proposed Project, in conjunction with past, present, and reasonably foreseeable actions, would result in a cumulative effect related to cultural and historic resources.

Section 4(f) Resources: The Build Alternative and all design options would result in the removal and direct use of the former FMC Plant 1 building, which is a historic property eligible for the NRHP and is a Section 4(f) resource. The Build Alternative and all design options would not result in a use of the Worker's Houses. Current and reasonably foreseeable actions include the proposed transportation and in-fill development projects listed in Section 4.14.2.

Based on the location of these cumulative projects and current information, the former FMC Complex Plant 1 and the Worker's Houses would not be directly affected by any of these projects. However, the Build Alternative and all design options would solely remove a Section 4(f) historic property and contribute to an impact; therefore, cumulative effects related to Section 4(f) historic resources are anticipated.

In general, construction-related activities that overlap with adjacent projects may result in temporary cumulative impacts due to noise, dust, and traffic congestion. Construction of the Project and other developments may temporarily reduce on-street parking during overlap periods. The impacts during construction are temporary and indirect and would be minimized through the implementation of mitigation measures and BMPs as part of the Build Alternative. Additionally, the other projects and coordination and potential phasing of construction would occur to further minimize impacts. Therefore, cumulative impacts during construction would be minor.

4.14.4. Avoidance, Minimization, and Mitigation Measures

To minimize adverse effects during construction from potential overlapping adjacent projects, RCTC will coordinate construction activities as appropriate (Refer to Appendix E for CUM-1 Phase or coordinate construction activities) so construction activities do not overlap with other projects in close proximity as feasible.

5.0 Public Involvement/Consultation and Coordination

Early and continuing coordination with the general public and public agencies is an essential part of the environmental process. It helps agencies determine the necessary scope of environmental documentation and the level of analysis required, and to identify potential impacts and avoidance, minimization, and/or mitigation measures and related environmental requirements. Agency and Section 106, Native American consultation and public participation for this Project have been accomplished through a variety of formal and informal methods, including interagency coordination meetings, public meetings, public notices, focused meetings. This chapter summarizes the results of FTA (NEPA lead agency) efforts to fully identify, address, and resolve project-related issues through early and continuing coordination. Correspondence referred to in this section is contained in Appendix C.

5.1. Notice of Preparation of an EIR and Public Scoping

5.1.1. Notice of Preparation

The NOP was first distributed locally to interested local public agencies and the general public. The CEQA-required 30-day NOP review period began with the filing of the NOP at the Riverside County Clerk and public notification on January 17, 2020 and concluded on February 20, 2020.

A subsequent NOP was submitted to the State Clearinghouse on September 1, 2021, for distribution to state responsible and trustee agencies. Pursuant to CEQA, the NOP review period is 30 days; therefore, the comment period closed on September 30, 2021. Written comments received during the 30-day NOP review period, as well as during the public scoping meeting, are summarized below.

5.1.2. Scoping Meeting

On February 6, 2020, RCTC hosted a scoping meeting for the Riverside-Downtown Station Improvements Project. The scoping meeting provided an opportunity for the public, community, interest groups, media, and government agencies to obtain information, ask questions, and provide comments regarding the proposed Project.

The meeting was held at Abraham Lincoln High School in the City of Riverside and was open to the public for 2.5 hours between 5:00 p.m. and 7:30 p.m. Attendees were welcomed and asked to sign in so they could be added to the Project distribution list; they were then informed of the open house meeting format and invited to view exhibits, learn about the proposed Project, and ask questions to the Project team. Options for submitting comments included: 1) submitting comment cards at the scoping meeting, 2) mailing comment cards after the scoping meeting, and 3) emailing comments to stationproject@rctc.org, until the close of scoping comment period, Thursday, February 20, 2020. Meeting materials and Spanish translation were available at the meeting.

Comments during scoping are summarized below:

- Air Quality and GHGs and concerns regarding air pollution
- Community Impacts
- Section 4(f) Resources
- Cultural (Historic and Archaeology)
- Hazardous Waste and Materials and potential impact to the community
- Noise/Vibration
- Traffic-related concerns

5.2. Public/Community Outreach

Early and continuing coordination with the general public and public agencies is an essential part of the environmental process.

Table 5-1 summarizes ongoing public outreach and engagement as part of the environmental process. Additional stakeholder, agency, and public meetings are anticipated to be conducted throughout the project development process to ensure concerns and questions about the proposed Project are addressed.

Table 5-1. Summary of Community Outreach

Date	Notice/Meeting	Audience/Attendees
January 17, 2020	NOP	• Press Enterprise • La Prensa
January 21, 2020	NOP - State Clearinghouse	• All Agencies
Week of January 27, 2020	NOP	• Mail Distribution – 132 contacts in database • Postcard Distribution to residents/businesses – ½-mile radius (4,500+) • Social Media: Facebook, Twitter, Instagram • Scoping meeting notices posted at Riverside-Downtown Station
February 6, 2020	Scoping Meeting	• Public Participants: • Nineteen individuals signed in at the open house style meeting • Agency Attendees • RCTC: David Lewis, Lorelle Moe-Luna, Cheryl Donahue, Ariel-Alcon Tapia, Karl Sauer • Metrolink: Javier Hernandez, Aubrey Smith • City of Riverside: Nathan Mustafa • City of Riverside City Council, Andrew Melendrez and Miguel Lujano
February 29, 2020	Meeting	• Downtown Riverside Chamber of Commerce
March 5, 2020	Meeting	• Councilman Melendrez' Office - Eastside Neighborhood Forum
August 13, 2020	Meeting	• Transportation Now Riverside Chapter
December 16, 2020	Meeting	• City of Riverside Cultural Heritage Board
February 11, 2021	Meeting	• Transportation Now Riverside Chapter
March 3, 2021	Meeting	• Karen Spiegel, Supervisor District 2
April 1, 2021	Meeting	• Eastside Neighborhood Forum
May 6, 2021	Meeting	• Old Riverside Foundation
June 15, 2021	Meeting	• Riverside Unified School District
July 8, 2021	Meeting	• City of Riverside Mobility and Infrastructure Committee
September 1, 2021	NOP-State Clearinghouse	• State responsible and trustee agencies
September 16, 2021	Meeting	• Riverside Community Health Foundation/Healthy Eating Active Living (HEAL) Zone Program
October 6, 2021	Meeting	• Center for Community Action and Environmental Justice and League of United Latin American Citizens 3190
October 7, 2021	Meeting	• Greater Riverside Chamber of Commerce
October 18, 2021	Meeting	• Downtown Area Neighborhood Alliance
October 20,2021	Meeting	• City of Riverside Cultural Heritage Board
November 3, 2021	Meeting	• City of Riverside City Council Ward 1

Date	Notice/Meeting	Audience/Attendees
November 4, 2021	Meeting	• Old Riverside Foundation
November 8, 2021	Meeting	• Commissioner Conder
November 8, 2021	Meeting	• Riverside County District 1 Supervisor Kevin Jefferies
November 10, 2021	Meeting	• Riverside City Councilmember Clarissa Cervantes
November 15, 2021	Meeting	• Councilmember Perry and Councilmember Hemenway
November 16, 2021	Meeting	• Assemblymember Medina
November 17, 2021	Meeting	• City of Riverside Cultural Heritage Board
November 18, 2021	Meeting	• Eastside Neighborhood Forum

5.3. Section 106 Consultation

5.3.1. State Historic Preservation Office

On April 7, 2020, FTA, as the federal lead agency, initiated Section 106 consultation for the Project to SHPO asking for comments on the delineation of the APE pursuant to Section 106 of the NHPA, as amended 36 CFR 800 (FTA, 2020). The following documents were also attached: a regional location map, Proposed Project Area Map, APE Map, and the APE Technical Memo (HNTB, February 2020). On June 4, 2020, SHPO found the APE as delineated was appropriate (SHPO, 2020).

Subsequent design options and the refinements to the existing project description warranted an update to the Project description to reflect the refinements and to provide additional detail. To address the refinements, on January 5, 2021, FTA sent a letter to SHPO requesting their review and comment on the Updated Project Description Memorandum (HNTB, 2020). FTA's letter concluded the original project description and the current APE (including the LOD) were consistent with the design refinements and additional project details described in the Build Alternative for the following reasons:

- The APE Methodology Technical Memorandum (HNTB, 2020) described improving traffic circulation, and the proposed traffic circulation and parking options (with the optional extension of Howard Avenue from 10th to 9th Streets) are consistent with that original project description.
- The LOD included all the areas anticipated to have ground disturbance and excavation. For clarification, the maximum depth of disturbance is up to 10 feet across all areas within the LOD where structure removal, excavation of materials, foundations, and other ground-disturbing construction activities might occur. In addition, a tribal monitor and an archaeologist will be on site monitoring all ground-disturbing activities during construction, and a post-review discovery plan will be in place prior to commencement of construction activities.

On March 17, 2021, SHPO sent a letter to FTA concluding that the original project description and the current APE (including the LOD) were consistent with the design refinements and additional project details described in the Build Alternative (SHPO, 2021).

On March 25, 2021, FTA submitted the HRR (HNTB, 2021) to SHPO for review and comment.

On September 16, 2021, SHPO sent a letter to FTA providing concurrence on the former FMC Complex Plant 1 and Plant 2 determination that these properties are NRHP-eligible, under Criteria A and B, and the Worker's Houses are eligible for the NRHP. SHPO also recommended additional research and further discussion of the eligibility of these two properties under Criterion D as the Project progresses forward with the FOE.

5.3.2. Public Outreach Section 106

RCTC conducted public outreach as part of the environmental process. The various outreach efforts and responses relevant to Section 106 are summarized below.

On February 6, 2020, RCTC hosted a scoping meeting for the Project. The scoping meeting provided an opportunity

for the public, community, interest groups, media, and government agencies to obtain information, ask questions, and provide comments regarding the proposed Project.

Cultural comments were received during scoping and are summarized as follows:

- Impact on the historic building
- Maintaining the historic value of the building
- Opportunity to reuse the historic building
- Incorporate building into design (make it a hub for people)

City of Riverside Cultural Heritage Board

On December 16, 2020, the project team conducted a virtual meeting with the City's Cultural Heritage Board to familiarize members with the Project and efforts to identify historic and culturally significant resources within the APE and invite them to participate as an interested party, comment on the undertaking, and answer any questions. Following the meeting, on January 11, 2021, FTA, in coordination with RCTC, sent a letter to the Cultural Heritage Board inviting the board to participate as interested parties in the Section 106 process (FTA, 2021). The project team continued Section 106 coordination through additional meetings held on October 20, 2021 and November 17, 2021.

Interested Parties

On January 11, 2021, FTA, in coordination with RCTC, sent letters to the following interested parties, inviting them to participate in the Section 106 consultation; responses to the letters are summarize in Table 5-2.

- American Association for State and Local History
- California Citrus State Historic Park
- The California Historical Society
- California Preservation Foundation
- City of Riverside
- Japanese American Citizens League, Riverside Chapter
- Lincoln Park Neighborhood Group
- Museum of Riverside
- National Trust for Historic Preservation
- Old Riverside Foundation
- Riverside African-American Historic Society
- Riverside County Mexican American Historical Society
- Riverside Historical Society
- Riverside Neighborhood Partnership
- The Mission Inn Foundation

Table 5-2. Summary of Responses Received from Interested Parties

Date	Contact	Comment/Response
January 12, 2021	Riverside Historic Society	Responded that they did not have any concerns with this project with regard to historic structures and the like.
January 25, 2021	Museum of Riverside	Provided additional information about the significance of Lincoln Park (No. 31 in the APE) and brought to the project team's attention that there are significant resources in the general vicinity, but outside the APE. The Museum of Riverside recommended that a historical archaeologist assess sites and any houses to be acquired or demolished prior to grading near the lodge (outside the APE).

Date	Contact	Comment/Response
January 27, 2021	American Association for State and Local History	Responded that they do not participate in local preservation or improvement projects.
February 2, 2021	City of Riverside	Provided comments regarding the historic status of the Mission Inn Historic District (not NRHP-eligible) and the Seventh Street Historic District (NRHP-eligible).
February 17, 2021	Old Riverside Foundation	Provided comments regarding the historic significance of the FMC Complex to Riverside's history, including 3080 10th Street, which is also a part of the FMC Complex. They also indicated that there are historic residences in the APE, beyond the LOD, on Howard Avenue and 12th Street. And finally, they informed the project team about the historic lodges in the Eastside neighborhood.
February 25, 2021	Riverside County Mexican American Historical Society	Responded that the organization did not have any historic sites to identify related to the Project.

Meeting with Old Riverside Foundation

On May 6, 2021, the project team was invited to provide an update on the proposed Project to the Old Riverside Foundation. The project team conducted a presentation of the project overview, project schedule, efforts to identify historic and culturally significant resources within the APE, resources potentially impacted, avoidance alternatives under consideration, and answer any questions regarding the Project. In addition, the project team met with the Old Riverside Foundation on November 4, 2021. RCTC encouraged ongoing coordination and to provide any feedback on the Native American Consultation.

Native American Consultation

On April 3, 2020 FTA sent correspondence to interested parties, including Native American tribes and other consulting parties per 36 CFR Part 800.2(c) to help identify prehistoric sites, sacred sites, and/or traditional cultural properties located in the vicinity of the Project Study Area:

- Agua Caliente Band of Band of Cahuilla Indians (ACBMI)
- Augustine Band of Cahuilla Mission Indians
- Cabazon Band of Mission Indians
- Cahuilla Band of Indians
- Gabrieleño Band of Mission Indians - Kizh Nation
- Gabrieleño/Tongva San Gabriel Band of Mission Indians
- Gabrieleño/Tongva Nation
- Gabrieleño Tongva Indians of California Tribal Council
- Gabrieleño-Tongva Tribe
- Los Coyotes Band of Cahuilla and Cupeño Indians
- Morongo Band of Mission Indians
- Pechanga Band of Luiseño Indians
- Ramona Band of Cahuilla
- San Fernando Band of Mission Indians
- San Manuel Band of Mission Indians
- Santa Rosa Band of Cahuilla Indians
- Serrano Nation of Mission Indians
- Soboba Band of Luiseño Indians
- Torres-Martinez Desert Cahuilla Indians

FTA Section 106 Consultation with the Native American tribes is summarized in Table 5-3.

Table 5-3. Native American Consultation

Date	Tribe	Response or Correspondence
March 3, 2020	San Manuel Band of Mission Indians (SMBMI)	Indicated that the project area was outside the Serrano ancestral territory and, as such, the SMBMI will not be requesting consulting party status with the lead agency.
March 20, 2020	Agua Caliente Band of Cahuilla Indians (ACBCI)	Indicated the Project was not within their boundaries; however, it is within the Tribe's traditional use area, so the Tribal Historic Preservation Officer (THPO) requested copies of project-related cultural resource documentation. ACBCI also requested that ground-disturbing activity be monitored by a qualified archaeologist and a Native American tribal cultural monitor. The THPO also indicated "This letter does not conclude consultation. Upon receipt of requested materials the ACBCI THPO may have additional recommendations or require further mitigation measures." On April 7, 2020, RCTC responded that they would provide the Tribe with a copy of the ASR once it was completed and that consultation efforts would be continued.
April 8, 2020	Soboba Band of Luiseno Indians (SBLI)	Requested initiation of formal consultation, and on April 20, 2020, a consultation meeting with SBLI was held by telephone. SBLI indicated that although the general area is sensitive, in terms of Native American cultural resources, no resources are known in the immediate vicinity of the project site. SBLI requested that the environmental documents provide measures to address inadvertent discoveries, notification to the tribes, and tribal monitoring in the event of such discoveries. Soboba indicated that having an archaeologist present to monitor during construction to identify resources and notify tribal monitors in the event of a discovery would be sufficient; they did not request tribal monitoring.
February 25, 2021	Soboba and ACBCI	Updated project information was provided to both SBLI and ACBCI, as the Project description was refined, and both Tribes were invited to reopen consultation with FTA if desired.
May 12, 2021	ACBCI	Indicated the Project was not within their boundaries; however, it is within the Tribe's traditional use area. The THPO indicated "At this time ACBCI has no comments, but please continue to provide our office with updates as the Project progresses. Also, please inform our office if there are changes to the scope of this project."
September 10, 2021	NAHC	In response to the NOP sent on September 1, 2021, the NAHC recommends consultation with California Native American tribes that are traditionally and culturally affiliated with the geographical area of your proposed project as early as possible to avoid inadvertent discoveries of Native American remains and best protect tribal cultural resources.

Source: Archaeological Survey Report (HELIX, 2021)

NAHC = Native American Heritage Commission

5.3.3. Section 4(f) Consultation

On March 15, 2021, FTA initiated coordination with DOI by providing a project summary. DOI responded with the request to continue coordination on March 15, 2021. On March 30, 2021, the FTA provided DOI with the Section 4(f) evaluation. On May 14, 2021, DOI concurred that there is no feasible and prudent alternative to the proposed use of Riverside-Downtown Station Improvements Project and had no additional comments on this project.

5.3.4. Resource Agencies

Department of Toxic Substance Control (DTSC): The following correspondence was received from DTSC:

- A letter was received from DTSC on November 6, 2020, regarding the Approval of Addendum and Human Health Risk Assessment for Addendum to Limited Phase II ISA 10 APNS Adjacent to the Riverside Downtown Metrolink Station, Riverside California, for the adjoining Solar Max Property, 3080 12th Street Riverside, California 92502.
- A letter was received from DTSC on June 7, 2019, regarding the Technical Memorandum Work Plan Limited Phase II ISA 10 APNS adjacent to the Riverside Downtown Metrolink Station, Riverside California.
- A letter was received from DTSC on May 13, 2020, regarding the Approval of Revised Limited Phase II ISA.

Santa Ana Regional Water Quality Control Board (RWQCB): The following correspondence was received from RWQCB:

- A Letter was from RWQCB on: May 8, 2019, regarding the Potential for Environmental Liability Concerning Properties Overlying Downtown Riverside Contaminant Plume (Global ID# SLT8R0373922).

5.3.5. EA Public Circulation

The EA is being circulated to the public for 60 days and a public hearing will be held. If comments are received on the EA during the public availability period and/or at the public hearing, the EA must be modified to reflect all substantive comments and responses to those comments. Substantive comments are those comments that are related to the facts of the project, environmental document, or studies. Comments that are purely just expressing support or opposition to the project without any factual substantiation may be acknowledged but do not generally require a response. After all comments have been addressed, FTA in cooperation with RCTC will select a preferred alternative and make the final determination of the project's effect on the environment.

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