

RTIP ID# <i>(required)</i> 3A07020-RIV071252
TCWG Consideration Date March 26, 2019
Project Description <i>(clearly describe project)</i> The California Department of Transportation (Caltrans), in cooperation with City of Indio (City), the County of Riverside, and Coachella Valley Association of Governments (CVAG) is proposing to improve the existing Interstate 10 (I-10)/Jackson Street Interchange located in Indio, California, as shown in Figure 1. The I-10/Jackson Street interchange is a major access point for existing residential and commercial uses. Reconstructing the interchange and widening Jackson Street will address existing deficiencies, remove the existing bottleneck, and accommodate further growth and development. The project limits extend from approximately Post Mile (PM) R54.9 to PM R56.5 along I-10 and from Kenner Avenue (South of I-10) to Atlantic Avenue (North of I-10) along Jackson Street. The project objectives are to enhance traffic operations, and reduce existing and projected traffic congestion on Jackson Street and the interchange ramps due to the planned and residential and commercial growth in City of Indio and adjacent City of Coachella. The improvements are expected to improve safety by eliminating existing nonstandard design features. Two build alternatives (Build Alternative 2 and Build Alternative 4) and a No Build Alternative are being proposed for this project. Build Alternative 2 is a Compact Diamond (Type L-1) and Build Alternative 4 is a Diverging Diamond Interchange (DDI) also known as Double Crossover Diamond (DCD) interchange. The proposed alternatives are further discussed below. No Build Alternative The No Build Alternative would maintain the existing configuration of the I-10/Jackson Street interchange. Under this alternative, the nonstandard skew angles of the ramps at the intersections with Jackson Street would not be corrected, and widening along the ramps to create additional lanes to increase capacity of on- and off-ramps would not be provided. In addition, the No Build Alternative would not make any improvements along Jackson Street; additional lanes would not be constructed to increase capacity, sidewalks and curbs would not be added to enhance pedestrian, Bike and Low Speed Electric Vehicles (LSEV) access, and no access ramps to future CV Link facility will be constructed. Although this alternative avoids construction costs, potential environmental impacts, and ROW impacts compared to the build alternatives, it does not provide additional capacity for ongoing and planned development within the City of Indio and the neighboring communities, therefore it does not meet the purpose and need of the project. Alternative 2: Compact Diamond Under this build alternative, the existing I-10/Jackson Street interchange would maintain the compact diamond configuration and reconstruct Jackson Street, I-10 bridge overcrossing, Whitewater River Bridge, and the I-10 on and off ramps, as shown on Figure 2. Jackson Street at the I-10 bridge crossing would be reconstructed from one lane to two lanes in each direction, and include two left turn lanes at each ramp intersection for access to eastbound and westbound I-10 on-ramps. The existing Jackson Street bridge at the Whitewater River Bridge would be widened to increase the number of through lanes from one lane to two lanes in each direction. This alternative would include reconstruction and restriping of Jackson Street to transition the additional travel lanes to the existing lane configurations north and south of the interchange. The I-10 westbound (WB) and eastbound (EB) on-ramps would be widened to two lanes and transition to a single lane merging to I-10. Interchange off-ramps would be widened, realigned and restriped to accommodate additional turn lanes to Jackson Street. Auxiliary lanes would be constructed at the I-10 WB and EB ramps to enhance merging and diverging traffic to I-10. Alternative 2 includes the following improvements:

- Reconstruction of the existing Whitewater River Bridge Structure with a new wider bridge structure which can accommodate two 12-foot-wide through lanes, 10' shoulder and 6 foot-wide sidewalk on each direction;
- Reconstruction of existing Jackson Street Overcrossing (OC) (Bridge No. 56-612, PM R55.74) with a new OC bridge with two 12 foot-wide through lanes each direction, two 12 foot-wide left turn lanes for the northbound traffic turning left onto WB I-10, one 12 foot-wide left turn lane for southbound traffic turning left onto I-10 EB, 10 foot-wide sidewalk on both NB and SB direction of the new OC bridge;
- Widening of existing Jackson Street between Kenner Avenue and Atlantic Avenue to two 12 foot-wide through lanes on the southbound direction. Widening of the existing Jackson Street between Kenner Avenue and Jackson Street/WB ramps intersection to two 12 foot-wide through lanes;
- Realignment and widening of the I-10 EB and I-10 WB on- and off-ramps. At I-10 EB ramp intersection, the EB on-ramp is reconstructed to 2 lanes and EB off-ramp is reconstructed to 3 lanes. At I-10 WB ramp intersection, the WB on- and off-ramps to accommodate 2 lanes each. All the on- and off-ramps transition to single lanes before merging to I-10 mainline;
- Construction of WB auxiliary lane between Monroe Street and Jackson Street;
- Construction of auxiliary lane at EB on-ramp on the southeast quadrant of the interchange for approximately 300 feet to enhance merging traffic to I-10 EB;
- Construction of 600-foot WB auxiliary lane preceding Jackson Street WB off-ramp;
- Installation of planned ramp meter on the I-10 WB and EB on-ramps;
- Reconstruction and restriping of Jackson Street, where additional travel lanes transition to the existing lane configurations at Kenner Avenue and Atlantic Avenue;
- Construction of new retaining walls along the I-10 EB off-ramp, I-10 WB on- and off-ramps, along Jackson Street ramp intersections, and on the southeast side of the existing bridge over the Whitewater River;
- Construction of new access ramps to future CV Link facility (to be built by others); and
- Utility relocation
- Right-of-way acquisitions, partial acquisitions, permanent easements, and temporary construction easements.

Alternative 4: Diverging Diamond Interchange (DDI)

Under this build alternative, the existing I-10/Jackson Street interchange would be reconstructed to a DDI configuration utilizing a twin bridge layout spanning over the I-10 freeway and the Whitewater River, as shown on Figure 3. Two new parallel bridge structures over the Whitewater River and Jackson Street overcrossing would be constructed to accommodate two lanes, shoulders and sidewalks. The existing bridges along Jackson Street will be evaluated whether it could accommodate two travel lanes and may be reconstructed. The crossover intersections would gradually transition traffic from the right side of the road to the left side of the road while providing free right and left-turn movements to the I-10 on-ramps before crossing over back to the right-side of the road for through traffic. The DDI configuration requires two cross-over intersections with two-phase traffic signal operation within the interchange; inbound and outbound freeway traffic would cross one intersection compared to two intersections for the diamond interchange configuration. In addition, Alternative 4 would include reconstruction and restriping of Jackson Street to transition the additional travel lanes to the existing lane configurations north and south of the interchange. The I-10 westbound and eastbound on-ramps would be widened to two lanes and transition to a single lane merging to the I-10 freeway. Interchange off-ramps would be widened, realigned and restriped to accommodate additional turn lanes to Jackson Street. Auxiliary lanes would be constructed at the I-10 WB and eastbound EB ramps to enhance merging and diverging traffic to I-10. Alternative 4 includes the following improvements:

- Construction of a new parallel bridge over the Whitewater River to accommodate two 12 foot-wide through lanes, 10 foot-wide shoulder and 6 foot-wide sidewalk along Jackson Street. The existing bridge will be evaluated to identify whether it can remain in place or reconstructed to accommodate the two 12 foot-wide through lanes, 10 foot-wide shoulder and 6 foot-wide sidewalk for Jackson Street southbound traffic;
- Construction of a new parallel bridge on the east side of the existing Jackson Street OC (Bridge No. 56-612, PM R55.74). The existing bridge OC will be evaluated to determine whether it can remain in place or reconstructed. The existing OC will accommodate the two 12-foot-wide Jackson Street northbound (NB) through lanes and one 12 foot-wide free left turn for NB traffic turning left onto I-10 WB on-ramp. The newly constructed parallel bridge will accommodate two 12 foot-wide southbound (SB) through lanes and one 12 foot-wide free left turn for SB traffic accessing I-10 EB on-ramp;
- Widening of existing Jackson Street between Kenner Avenue and Atlantic Avenue to accommodate two 12 foot-wide through lanes on the southbound direction.
- Widening of existing Jackson Street between Kenner Avenue to Jackson Street/WB ramp intersection to two 12 foot-wide through lanes on northbound direction;
- Realignment and widening of I-10 EB on-ramp and I-10 WB on- and off-ramps to two lanes at ramp intersections. All the on- and off-ramps would transition to single lanes before merging to I-10 mainline. The EB off-ramp would maintain its existing two-lane configuration at the ramp intersection but one lane splits as left turn only lane heading northbound on Jackson Street;
- Construction of WB auxiliary lane between Monroe Street and Jackson Street;
- Construction of auxiliary lane would be constructed at EB on-ramp for approximately 300 feet on the southeast quadrant of the interchange to enhance merging traffic to I-10 EB;
- Construction of 600-foot WB auxiliary lane preceding Jackson Street WB off-ramp;
- Installation of planned ramp meter on the I-10 WB and EB on-ramps;
- Construction of signalized intersections to allow traffic crossover;

PM Conformity Hot Spot Analysis – Project Summary for Interagency Consultation

<ul style="list-style-type: none"> • Construction of new retaining walls along portions of WB on- and off-ramps and along Jackson Street at WB ramp intersection and on the southwest side of the existing bridge over the Whitewater River Bridge; • Reconstruction and restriping of Jackson Street where additional travel lanes transition to the existing lane configurations at Kenner Avenue and Atlantic Avenue. • Construction of new access ramps to future CV Link facility (to be built by others). • Utility relocation • Right-of-way acquisitions, partial acquisitions, permanent easements, and temporary construction easements. 				
Type of Project <i>(use Table 1 on instruction sheet)</i> Reconfigure Existing Interchange				
County Riverside		Narrative Location/Route & Postmiles PM R54.9 to PM R56.5 Caltrans Projects – EA# 08-0M910		
Lead Agency: Caltrans				
Contact Person Joza Burnam		Phone# 949.870.1532	Fax#	Email jmburnam@esass.com
Hot Spot Pollutant of Concern <i>(check one or both)</i> PM2.5 X PM10 X				
Federal Action for which Project-Level PM Conformity is Needed <i>(check appropriate box)</i>				
Categorical Exclusion (NEPA)	X	EA or Draft EIS	FONSI or Final EIS	PS&E or Construction
Other				
Scheduled Date of Federal Action: 2020				
NEPA Assignment – Project Type <i>(check appropriate box)</i>				
Exempt		Section 326 –Categorical Exemption	X	Section 327 – Non-Categorical Exemption
Current Programming Dates <i>(as appropriate)</i>				
	PE/Environmental	ENG	ROW	CON
Start	2018	2018	2018	2020
End	2020	2020	2024	2024

Project Purpose and Need (Summary): *(attach additional sheets as necessary)*

Purpose

The purpose of the proposed project is to:

- Increase capacity at I-10/Jackson Street interchange directly associated with the forecast travel demand for the 2040 design year within the City of Indio;
- Accommodate multimodal travel that integrates with the City's General Plan and preserves the values of the area;
- Improve existing interchange geometric deficiencies. The above objectives will be evaluated within the project limits while minimizing right-of-way, environmental, and economic impacts.

Need

The project addresses the following needs, transportation deficiencies, and problems:

- The average daily traffic at I-10/Jackson Street is expected to increase from 17,400 average vehicles per day in 2014 to 49,300 average vehicles per day by 2040, increasing by approximately 180%. Without planned improvements to increase capacity, and due to the increase in traffic in the year 2040, the current intersection and ramp intersections are anticipated to operate at unacceptable levels of service (LOS) E or F according to the Traffic Engineering Performance Assessment (TEPA);
- Gaps in the pedestrian and bicycle infrastructure impedes the connection between communities and businesses across the interchange;

The existing ramp alignments, ramp intersections, and Jackson Street contain geometric deficiencies. Without planned improvements, it is anticipated that the increased daily traffic may diminish the safety within the interchange related to these geometric deficiencies.

Surrounding Land Use/Traffic Generators *(especially effect on diesel traffic)*

The area surrounding the site supports a variety of land uses including outdoor recreational use areas, single family residences, restaurants, commercial properties, a hotel (Fairfield Inna and Suites) and a school (Andrew Jackson Elementary School). Andrew Jackson Elementary school is located approximately 1,000 feet south of the I-10. Some residential land uses are located approximately 750 feet from the edge of the roadway.

The I-10/Jackson Street interchange provides access for trucks to retail and commercial businesses and residential land uses along Jackson Street. Heavy vehicle percentages at the study intersections are relatively low at 3 and 1 percent during the AM and PM peak hours. Traffic generators with and without the project would be gasoline vehicles and diesel truck traffic.

Opening Year: Build and No Build LOS, AADT, % and # trucks, truck AADT of proposed facility

During the AM peak hour all freeway facilities operate acceptably under the No Build Alternative and both Build Alternatives. According to the Traffic Operations Report (Fehr & Peers, 2018) developed for the Proposed Project, with the addition of an auxiliary lane in the westbound direction between Jackson Street and Monroe Street, density is decreased between the Jackson Street On-Ramp and Monroe Street Off-Ramp.

During the PM peak hour, all eastbound and westbound study segments operate acceptably at LOS C or better in No Build and Build conditions. In the eastbound direction, density would remain unchanged with the project in place for all freeway locations except from the Jackson Street Off-Ramp where density is decreased. In the westbound direction density is unchanged from Golf Center Parkway to the Jackson Street Off-Ramp; however, with the auxiliary lane in place density is decreased in both Build Alternatives.

AADT volumes are not expected to change from No Build to Build conditions (Build Alternative 2 and 4). In the No Build and Build conditions AADT volumes are well below 125,000 AADT. Truck percentages also remain unchanged from No Build to Build conditions, which is below 4% for all segments of the I-10.

Segment	No Build LOS		Alternative 2 and 4 LOS ^a		AADT ^b	Truck % ^b	Truck AADT
	AM	PM	AM	PM			
Eastbound							
Mainline between Monroe Street and Jackson Street	B	C	B	C	52,920	2.2	1,164
Diverge to Jackson Street	B	C	B	C	--	--	--
Merge from Jackson Street	B	B	B	B	--	--	--
Mainline between Jackson Street and Golf Center Parkway	B	B	B	B	34,910	1.4	489
Westbound							
Mainline between Golf Center Parkway and Jackson Street	B	B	B	B	39,160	1.4	548
Diverge to Jackson Street	B	C	B	C	--	--	--
Merge from Jackson Street	C	C	B	B	--	--	--
Mainline between Jackson Street and Monroe Street	C	C	B	B	53,240	2.2	1,171

Notes:

- a) Build Alternative 2 and 4 are projected to have the same LOS for AM and PM peak hour in the opening year.
- b) AADT and truck percentages are forecasted to remain the same from No Build conditions to Build conditions.
- AADT information not available for these segments.

RTP Horizon Year / Design Year: Build and No Build LOS, AADT, % and # trucks, truck AADT of proposed facility

During the AM peak hour, under the No Build Alternative in the design year (2045), the Jackson Street On-Ramp was found to operate unacceptably at LOS E in the westbound direction. Under both Build Alternative 2 and Build Alternative 4, density is improved to LOS C with the addition of the westbound auxiliary lane under both Build Alternatives. During the PM peak hour, under the No Build Alternative, all westbound freeway facilities were found to operate unacceptably at LOS E or LOS F, while all eastbound facilities were found to operate acceptably.

Under Build Alternative 2, all westbound freeway facilities are improved with the project in place. All facilities from the Golf Center Parkway On-Ramp to the Jackson Street Off-Ramp are improved to better than No Build conditions while the remaining study facilities from the Jackson Street On-Ramp to the Monroe Street Off Ramp are improved from unacceptable to acceptable operations under Build Alternative 2. These improvements are due to increased capacity between the interchanges with the westbound auxiliary lane in place. The addition of the auxiliary lane improves the downstream bottleneck, creating benefit at all upstream study facilities where no physical improvements are proposed.

Under Build Alternative 4, all westbound freeway facilities, which operate unacceptably under the No Build Alternative, are either improved to better than No Build Conditions or acceptable operations. While freeway facilities between the Golf Center Parkway On-Ramp and Jackson Street Off-Ramp continue to operate at LOS E, density is significantly reduced at all locations. All facilities from the Jackson Street On-Ramp to the Monroe Street Off-Ramp are improved to LOS D or acceptable operations. Similar to Alternative 2, improvements in all study locations are a result of the reduced bottleneck at downstream locations.

AADT volumes are not expected to change from No Build to Build conditions (Build Alternative 2 and 4). In the No Build and Build conditions AADT volumes are well below 125,000 AADT. Truck percentages also remain unchanged from No Build to Build conditions, which is below 4% for all segments of the I-10.

Segment	No Build LOS		Alternative 2 and 4 LOS ^a		AADT ^b	Truck % ^b	Truck AADT
	AM	PM	AM	PM			
<i>Eastbound</i>							
Mainline between Monroe Street and Jackson Street	D	D	D	D	82,520	2.2	1,815
Diverge to Jackson Street	D	D	D	D	--	--	--
Merge from Jackson Street	C	C	C	D	--	--	--
Mainline between Jackson Street and Golf Center Parkway	C	C	C	D	72,190	1.4	1,011
<i>Westbound</i>							
Mainline between Golf Center Parkway and Jackson Street	C	F	C	E	80,730	1.4	1,130
Diverge to Jackson Street	D	F	D	E	--	--	--
Merge from Jackson Street	E	F	C	D	--	--	--
Mainline between Jackson Street and Monroe Street	D	E	C	D	53,240	2.2	1,171

Notes:

a) Build Alternative 2 and 4 are projected to have the same LOS for AM and PM peak hour in the opening year.

b) AADT and truck percentages are forecasted to remain the same from No Build conditions to Build conditions.

-- AADT information not available for these segments.

Opening Year: If facility is an interchange(s) or intersection(s), Build and No Build cross-street AADT, % and # trucks, truck AADT

During opening year (2025), under the No Build Alternative, all study intersections operate at LOS C or better. Under Build Alternative 2, all study intersections continue to operate acceptably. Under Build Alternative 4, all study intersections continue to operate acceptably.

AADT volumes are not expected to change from No Build to Build conditions (Build Alternative 2 and 4). In the No Build and Build conditions AADT volumes are well below 125,000 AADT. Truck percentages also remain unchanged from No Build to Build conditions, which is below 4% for all study intersections.

Study Intersections	No Build LOS		Alternative 2 and 4 LOS ^a		AADT ^b	Truck % ^b	Truck AADT
	AM	PM	AM	PM			
Jackson Street/I-10 Westbound Ramps	A	A	B	A	25,100	3	753
Jackson Street/I-10 Eastbound Ramps	C	F	B	B			

Notes:

- a) Build Alternative 2 and 4 are projected to have the same LOS for AM and PM peak hour in the opening year.
- b) AADT and truck percentages are forecasted to remain the same from No Build conditions to Build conditions.

RTP Horizon Year / Design Year: If facility is an interchange (s) or intersection(s), Build and No Build cross-street AADT, % and # trucks, truck AADT

During the design year (2045), under the No Build Alternative, the Jackson Street/I-10 Eastbound Ramp terminal intersection was found to operate unacceptably at LOS E. Under Build Alternative 2, the Jackson Street/I-10 Eastbound Ramp terminal intersection is improved from LOS E to LOS C, while the Jackson Street/I-10 Westbound Ramp terminal intersection is improved from LOS C to LOS B. Under Build Alternative 4, the Jackson Street/I-10 Eastbound Ramp terminal intersection is improved from LOS E to LOS B, while the Jackson Street/I-10 Westbound Ramp terminal intersection is improved from LOS C to LOS B.

Study Intersections	No Build LOS		Alternative 2 and 4 LOS ^a		AADT ^b	Truck % ^b	Truck AADT
	AM	PM	AM	PM			
Jackson Street/I-10 Westbound Ramps	A	A	B	A	33,860	3	1,016
Jackson Street/I-10 Eastbound Ramps	C	F	B	B			

Notes:

- a) Build Alternative 2 and 4 are projected to have the same LOS for AM and PM peak hour in the opening year.
- b) AADT and truck percentages are forecasted to remain the same from No Build conditions to Build conditions.

Describe potential traffic redistribution effects of congestion relief (impact on other facilities)

There are no redistribution effects of congestion relief on other facilities. This proposed project will address reducing congestion, improving traffic operations, accommodating travel demand due to planned and approved developments, and improve safety of all modes of travel, including bicycles and pedestrians.

Comments/Explanation/Details (attach additional sheets as necessary)

EPA's 2006 final transportation conformity rule (40 CFR 51.390 and Part 93) that addresses local air quality impacts in PM₁₀ and PM_{2.5} nonattainment and maintenance areas specifies in 40 CFR 93.123(b)(1) that only "projects of air quality concern" are required to undergo a PM_{2.5} or PM₁₀ hotspot analysis. EPA defines projects of air quality concern as certain highway and transit projects that involve significant levels of diesel vehicle traffic, or any other project that is identified by the PM₁₀/PM_{2.5} SIP as a localized concern. A list of projects of air quality concern, as defined by 40 CFR 93.123(b)(1), is provided below:

1. New highway projects that have a significant number of diesel vehicles, and expanded highway projects that have a significant increase in the number of diesel vehicles.
2. Projects affecting intersections that are at level –of –service (LOS) D, E, or F with a significant number of diesel vehicles or those that will change to LOS D, E, or F because of increased traffic volumes from a significant number of diesel vehicles related to the project.
3. New bus and rail terminals and transfer points that have a significant number of diesel vehicles congregating at a single location.
4. Expanded bus and rail terminals and transfer points that significantly increase the number of diesel vehicles congregating at a single location.
5. Projects in or affecting locations, areas, or categories of sites that are identified in the PM_{2.5}- or PM₁₀-applicable implementation plan or implementation plan submission, as appropriate, as sites of violation or possible violation.

The proposed project is not considered a project of air quality concern (POAQC) for PM₁₀ and/or PM_{2.5} because it does not meet the definition of a POAQC as defined in EPA's Transportation Conformity Guidance.

1. The proposed project is not a new or expanded highway project that has a significant increase in the number of diesel vehicles. The project is proposing to improve the existing Interstate 10 (I-10)/Jackson Street Interchange located in Indio, California. Reconstructing the interchange and widening Jackson Street will address existing deficiencies, remove the existing bottleneck, and accommodate further growth and development.

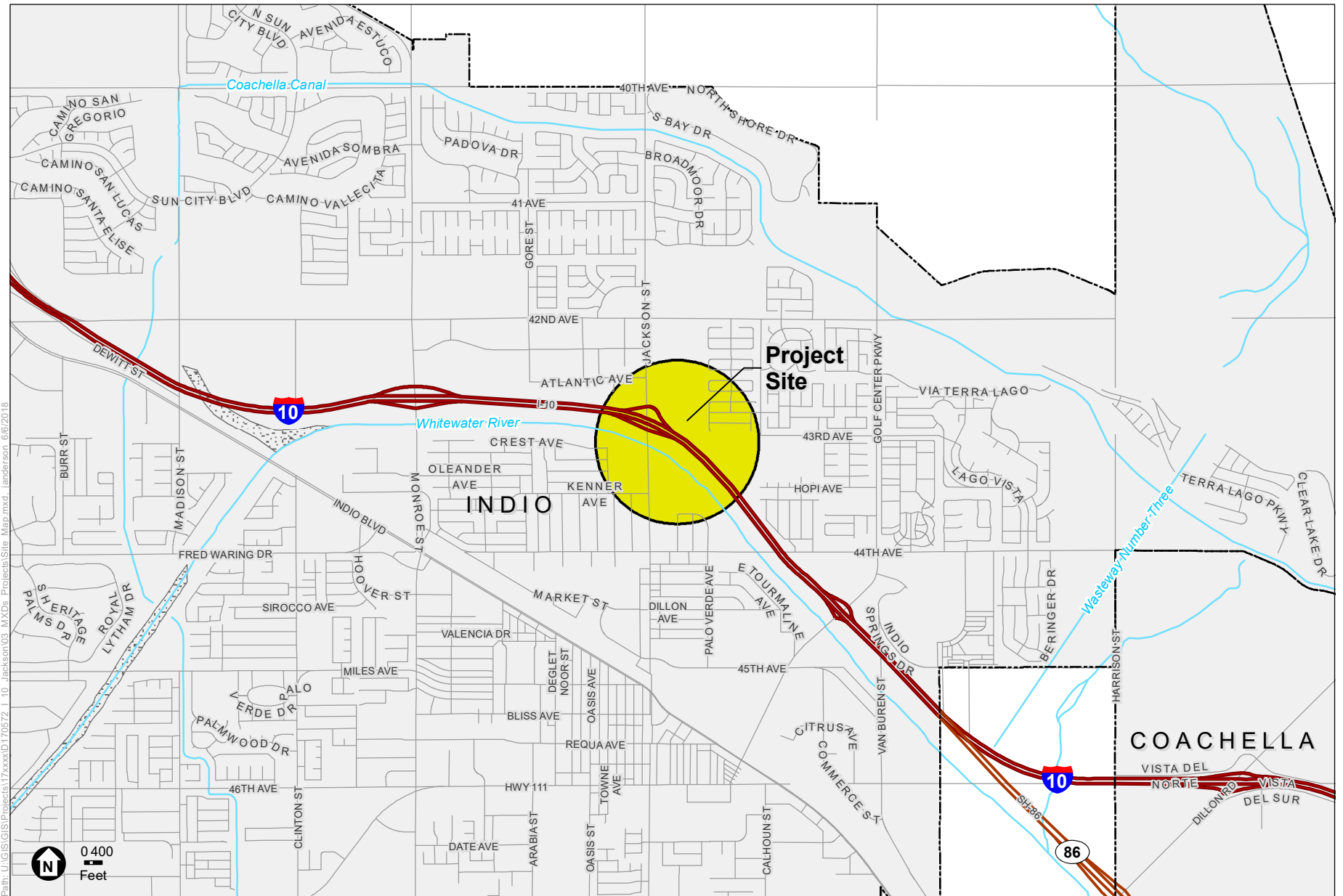
The project objectives are to enhance traffic operations, and reduce existing and projected traffic congestion on Jackson Street and the interchange ramps due to the planned and residential and commercial growth in City of Indio and adjacent City of Coachella. The improvements are expected to improve safety by eliminating existing nonstandard design features.

According to the *Interstate 10/Jackson Street Interchange Project Traffic Volume Report* (Fehr & Peers, 2018), the proposed project would not increase average daily traffic or vehicle miles traveled (VMT) from No Build to Build conditions. Furthermore, truck traffic volumes would also remain the same between No Build and Build conditions. Traffic volumes would not exceed the 125,000 average daily trips criteria for a POAQC. In addition, the total truck percentages along the Jackson Street overcrossing or the I-10 mainline corridor would not exceed the 8 percent criteria, and the total truck AADT would not exceed the 10,000-vehicle criteria for POAQC.

Time Period	Vehicle Miles Traveled		
	2018	2025	2045
AM Peak Hour	36,880	42,500	58,590
PM Peak Hour	91,230	102,930	136,380
Daily	829,870	942,590	1,264,640

2. The proposed project does not affect intersections that are at LOS D, E, or F with a significant number of diesel vehicles. According to the *Interstate 10/Jackson Street Interchange Project Traffic Operations Report* (Fehr & Peers, 2018), during the design year (2045), Build Alternative 2, would improve one study intersection and two freeway facilities from unacceptable to acceptable operations. Travel time would be improved by three seconds along the corridor while speed would increase by two miles per hour. Alternative 4, would improve one study intersection and two freeway facilities from unacceptable to acceptable operations. Travel time is decreased by three seconds under Build Alternative 4, while speed is increased by one mile per hour.
3. The proposed project does not include the construction of a new bus or rail terminal.
4. The proposed project does not expand an existing bus or rail terminal.
5. The proposed project is not in or affecting locations, areas, or categories of sites that are identified in the PM_{2.5} and PM₁₀ applicable implementation plan or implementation plan submission, as appropriate, as sites of violation or possible violation.

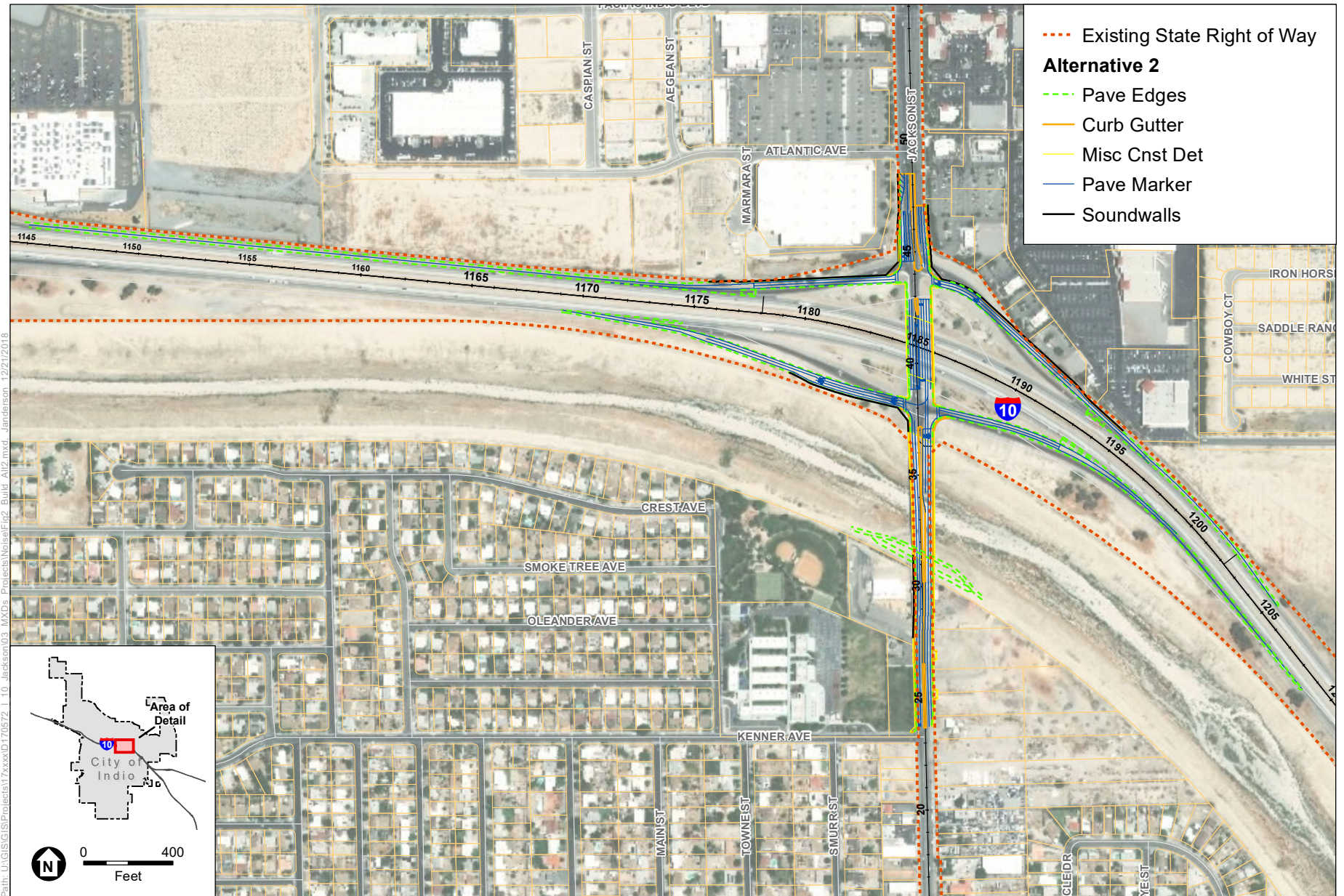
The traffic volumes presented for the proposed project Build Alternative demonstrate that the project meets CAA transportation requirements and 40 CFR 93.116 without the need to perform a quantitative analysis. The proposed Build Alternative would not create a new, or worsen an existing, PM₁₀ or PM_{2.5} violations.



SOURCE: Riverside County GIS; National Hydrography Dataset

I-10 / Jackson Street Interchange Project

Figure 1
Site Map



SOURCE: Riverside County GIS

I-10 / Jackson Street Interchange Project

Figure 2
Build Alternative 2



SOURCE: Riverside County GIS

I-10 / Jackson Street Interchange Project

Figure 3
Build Alternative 4