# Appendix J-1
VMT Memo

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# TRANSPORTATION TECHNICAL MEMORANDUM

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| **To:** | Jim Minnick, Planning Director, Imperial County |
| **From:** | Sabita Tewani, AICP, PTP |
| **Subject:** | Vehicle Miles Traveled (VMT) Analysis for the Lithium Valley Specific Plan |
| **Date:** | December, 2025 |
| **cc:** | Matthew Valerio, Dudek |
| | Dennis Pascua, Dudek |
| **Attachments** | Figure 1 – Project Location and Site Plan |
| | Figure 2 – Project Traffic Analysis Zones from SCAG Travel Demand Model |
| | Figure 3 – Transit Facilities |
| | A – VMT output tables from SCAG Travel Demand Model Run, Iteris |
| | B – Employment Conversion Factors by Land use, Iteris |

The following technical memorandum provides a vehicle miles traveled (VMT) analysis for the proposed Lithium Valley Specific Plan (LVSP) (Project/Plan Area), located in Imperial County (County). The VMT screening and analysis in this memorandum has been prepared consistent with the Governor's Office of Planning and Research (OPR)[1] Technical Advisory on Evaluating Transportation Impacts under CEQA (December 2018) and discussions and inputs from the County staff and project consultant team including Rick Engineering and Iteris.

## 1.0 Project Description and Location

The Project is located in Imperial County, east of San Diego County, west of the Arizona border, and north of the US-Mexico border, which forms its southern boundary. The Plan Area is located in the northern portion of the County, bordering the southeastern side of the Salton Sea. The Specific Plan Area was designed to encompass a substantial portion of the Known Geothermal Resource Area (KGRA) but excludes the unincorporated town of Niland and the City of Calipatria, as well as certain state- and federally-owned lands within the Salton Sea.

The northern boundary of the Plan Area extends to include the railroad corridor, while the eastern boundary is marked by major transportation corridors, including State Route 111 (SR 111), with close proximity to the North-South railroad line that runs parallel to SR-111. To the south, the Plan Area extends to reach the New River, further defining the project's spatial limits. Figure 1 illustrates the Project Location and Site Plan.

The Project spans approximately 51,622 acres adjacent to the Salton Sea, and addresses implementation of the LVSP that plans for the transformation of primarily undeveloped land. This Plan Area includes the Salton Sea, areas of agriculture, open space, and conservation areas. The Plan Area requires extensive development of infrastructure, roadways, and utilities to achieve the LVSP's goals. The project includes the implementation of LSVP land use

[1] Effective July 1, 2024, the Governor's Office of Planning and Research was renamed the Governor's Office of Land Use and Climate Innovation (LCI).

regulations, design guidelines, transportation networks, and infrastructure policies tailored to support the unique community-based needs of the Lithium Valley region.

The LVSP proposes to establish the following land uses:

- **Green Industrial:** Promotes industrial operations that decarbonize the energy and mineral recovery industries, with a focus on geothermal energy production and environmentally responsible mineral recovery operations.
- **Manufacturing:** Supports the assembly of clean energy products and accommodates industrial, office, and warehouse space for manufacturers, including geothermal energy and mineral recovery operations.
- **Logistics:** Facilitates the efficient movement of goods, accommodating warehousing, management, distribution activities, geothermal energy, and mineral recovery operations.
- **Playas Renewables:** Promotes uses similar to Green Industrial, with restrictions to ensure compatibility with the environmental conditions of the Salton Sea and the exposed playas, requiring dust suppression measures.
- **Community Opportunity Area:** Addresses community needs of nearby residential areas, allowing for commercial hubs, social gathering areas, recreational uses, healthcare services, and childcare services, planned in collaboration with neighboring communities.
- **Interim Agriculture:** Retains large agricultural areas until they are needed for industry-driven uses, including existing agricultural lands and other agriculture-related uses, transitioning to industrial uses in later phases.
- **Solar:** Supports the development of large-scale solar power generation facilities, transitioning to other uses like Logistics or Manufacturing after their lifespans end.
- **Playas Restoration:** Supports Salton Sea restoration, habitat creation, and dust suppression while allowing subsurface geothermal i.e. well drilling, focusing on environmental restoration and mitigation activities.
- **Floodplain Drainage Basin:** Maintains and enhances the Alamo River and New River drainage basins, including a buffer zone to improve water quality and environmental health while reducing flooding impacts.
- **Conservation:** Protects areas of environmental, cultural, and tribal significance, retaining areas for restoration and mitigation projects, including those under contract for restoration efforts and new areas for Salton Sea rehabilitation projects.

The proposed 30-year buildout spans three phases, with each phase lasting approximately 10 years. The development is slated to begin in 2026, with Phase 1 estimated to conclude 2035, Phase 2 in 2045, and the full buildout or Phase 3 in 2055.

- **Phase 1:** This phase would focus on initial development stemming from existing infrastructure, geothermal plants, and foreseeable geothermal, mineral recovery, and renewable energy-driven projects. Phase 1 encompasses 29,481,088 square feet (SF) of building space across 25,521 acres of mixed land uses
- **Phase 2:** This phase would extend outward from Phase 1, reaching areas with less established infrastructure. Phase Two includes new classifications like Playas Renewables. Phase 2 is anticipated to occur between 2035 and 2045. Phase 2 encompasses 13,534,427 SF of building space across 13,662 acres of mixed land uses

- **Phase 3:** The final phase would focus on the Interim Agriculture Overlay land use designation. These areas would remain in agricultural use until the need arises to transition into industrial or energy-driven uses as development and industries expand beyond their original land use zones. Phase 3 is anticipated to occur between 2045 and 2055, and beyond. Phase 3 encompasses 8,759,333 SF of building space across 12,439 acres of mixed land uses
- **Reduced Density Alternative:** Under this alternative, an overall reduction of intensity of development by approximately 50% would be achieved with a 50% reduced density of development proposed on developed land uses except Green Industrial, an increase in areas designated as Conservation, reduced agricultural land converted to non-agricultural uses. A reduced Phase 2 or 3 conversion of agricultural land overlay to other uses and a one third or 33% reduction in development intensity of the Green Industrial development use. A reduced area would be available for development [50% non-green industrial uses would see ~12,347,106 SF, no Phase 3 Green Industrial Agricultural overlay conversion and 33% reduction in remaining Green Industrial Development ~13,540,318 SF [Totals ~25,887,424]]. Reduced alternative encompasses 35,090 acres of mixed land uses.
- **Increased Density Alternative:** Under this alternative, an approximately 50% increase in the intensity of Green Industrial development to approximately 40,620,000 square feet, and an associated 10% increase in each of the Manufacturing (to ~8,260,000 SF), Logistics (to ~12,240,000 SF). Compared to the development anticipated under the proposed project, this would result in approximately 25% increase in development intensity (by square feet). It should be noted that a qualitative analysis of the Increased Alternative was conducted based on the quantitative results obtained for Phases 1,2,3 and Reduced Alternative.

# 2.0 Vehicle Miles Traveled

## 2.1 Background

On September 27, 2013, Governor Brown signed Senate Bill (SB) 743, which became effective on January 1, 2014. The purpose of SB 743 is to streamline the review under the CEQA process for several categories of development projects, including the development of infill projects in transit priority areas, and to balance the needs of congestion management with statewide goals related to infill development, promotion of public health through active transportation, and reduction of greenhouse gas emissions. SB 743 adds Chapter 2.7, Modernization of Transportation Analysis for Transit Oriented Infill Projects, to the CEQA Statute (California Public Resources Code, Section 21099). Section 21099(d)(1) provides that aesthetic and parking impacts of a residential, mixed-use residential, or employment center project on an infill site within a transit priority area shall not be considered significant impacts on the environment. In addition, SB 743 mandates that alternative metrics for determining impacts relative to transportation shall be developed to replace the use of level of service (LOS) in CEQA documents.

In the past, environmental review of transportation impacts focused on the delay that vehicles experience at intersections and on roadway segments, which is often measured using LOS. Mitigation for impacts on vehicular delay involved increasing capacity, such as widening a roadway or increasing the size of an intersection, which in turn encourages more vehicular travel and greater pollutant emissions. SB 743 directed OPR to develop an alternative metric for analyzing transportation impacts in CEQA documents. The alternative shall promote the

state's goals of reducing greenhouse gas emissions and traffic-related air pollution, promoting the development of multimodal transportation system, and providing clean, efficient access to destinations. Under SB 743, it was anticipated that the focus of transportation analysis would shift from vehicle delay to VMT within transit priority areas (i.e., areas well served by transit).

Pursuant to SB 743, OPR released the draft revised CEQA Guidelines in November 2017, recommending the use of VMT for analyzing transportation impacts. Additionally, OPR released updates to the Technical Advisory on Evaluating Transportation Impacts in CEQA (OPR 2018), to provide guidance on VMT analysis. In this Technical Advisory, OPR provides its recommendations to assist lead agencies in screening out projects from VMT analysis and selecting a significance threshold that may be appropriate for their particular jurisdiction. While OPR's Technical Advisory is not binding on public agencies, CEQA allows lead agencies to "consider thresholds of significance recommended by other public agencies, provided the decision to adopt those thresholds is supported by substantial evidence" (14 CCR 15064.7[c]).

In December 2018, the CEQA Guidelines were updated to add new Section 15064.3, Determining the Significance of Transportation Impacts, which describes specific considerations for evaluating a project's transportation impacts using the VMT methodology. This new methodology is required to be used for projects beginning on July 1, 2020.

CEQA Guidelines Section 15064.3(b) is divided into four subdivisions as follows:

1. Land Use Projects. Vehicle miles traveled exceeding an applicable threshold of significance may indicate a significant impact. Generally, projects within one-half mile of either an existing major transit stop or a stop along an existing high quality transit corridor should be presumed to cause a less than significant transportation impact. Projects that decrease vehicle miles traveled in the project area compared to existing conditions should be presumed to have a less than significant transportation impact.
2. Transportation Projects. Transportation projects that reduce, or have no impact on, vehicle miles traveled should be presumed to cause a less than significant transportation impact. For roadway capacity projects, agencies have discretion to determine the appropriate measure of transportation impact consistent with CEQA and other applicable requirements. To the extent that such impacts have already been adequately addressed at a programmatic level, such as in a regional transportation plan EIR, a lead agency may tier from that analysis as provided in Section 15152.
3. Qualitative Analysis. If existing models or methods are not available to estimate the vehicle miles traveled for the particular project being considered, a lead agency may analyze the project's vehicle miles traveled qualitatively. Such a qualitative analysis would evaluate factors such as the availability of transit, proximity to other destinations, etc. For many projects, a qualitative analysis of construction traffic may be appropriate.
4. Methodology. A lead agency has discretion to choose the most appropriate methodology to evaluate a project's vehicle miles traveled, including whether to express the change in absolute terms, per capita, per household or in any other measure. A lead agency may use models to estimate a project's vehicle miles traveled, and may revise those estimates to reflect professional judgment based on substantial evidence. Any assumptions used to estimate vehicle miles traveled and any revisions to model outputs should be documented and explained in the environmental document prepared for the project.

The Technical Advisory also provides guidance on transit. More specifically, OPR's Technical Advisory on Evaluating Transportation Impacts under CEQA explains "When evaluating impacts to multimodal transportation networks, lead agencies generally should not treat the addition of new transit users as an adverse impact" (OPR 2018). As

also discussed in OPR's SB 743 amendment package transmittal letter "Legislative findings in Senate Bill 743 plainly state that CEQA can no longer treat vibrant communities, *transit,* and active transportation options as adverse environmental outcomes" (OPR 2017). As an example, the Technical Advisory suggests that "an infill development may add riders to transit systems and the additional boarding and alighting may slow transit vehicles, but it also adds destinations, improving proximity and accessibility. Such development also improves regional vehicle flow by adding less vehicle travel onto the regional network" (OPR 2018).

Section 15064.3, subdivision (a), states, "For the purposes of this section, 'vehicle miles traveled' refers to the amount and distance of automobile travel attributable to a project." Here, the term "automobile" refers to on-road passenger vehicles, specifically cars and light trucks. Per SB 743, heavy vehicle traffic is not required to be included in the estimation of a project's VMT. In the PEIR, the Project's GHG analysis, includes consideration of truck trips.

## 2.2 VMT Screening Criteria

Per OPR's Technical Advisory, the following criteria may be used to screen land use projects from conducting a detailed VMT assessment and would constitute a less-than-significant impact related to VMT for CEQA purposes:

- **Screening Thresholds for Small Projects:** Projects that generate or attract fewer than 110 trips per day[2] generally may be assumed to cause a less-than-significant transportation impact.
- **Map-Based Screening for Residential and Office Projects:** Projects located in areas designated by VMT data maps as low VMT areas can be screened out as they would likely result in similarly low levels of VMT.
- **Presumption of Less Than Significant Impact Near Transit Stations:** Projects proposed within ½ mile of an existing major transit stop[3] or an existing stop along a high-quality transit corridor[4] will have less-than-significant impact on VMT. This presumption would not apply if project-specific information[5] indicates that the project will generate significant levels of VMT.

[2] Technical Advisory, p. 12: CEQA provides a categorical exemption for existing facilities, including additions to existing structures of up to 10,000 square feet, so long as the project is in an area where public infrastructure is available to allow for maximum planned development and the project is not in an environmentally sensitive area. (CEQA Guidelines, § 15301, subd. (e)(2).) Typical project types for which trip generation increases relatively linearly with building footprint (i.e., general office building, single tenant office building, office park, and business park) generate or attract an additional 110-124 trips per 10,000 square feet. Notably categorical exemptions apply throughout the state and are not location specific. (CEQA Guidelines 15300) . Therefore, absent substantial evidence otherwise, it is reasonable to conclude that the addition of 110 or fewer trips could be considered not to lead to a significant impact.

[3] Technical Advisory p. 13: Pub. Resources Code, § 21064.3 ("'Major transit stop' means a site containing an existing rail transit station, a ferry terminal served by either a bus or rail transit service, or the intersection of two or more major bus routes with a frequency of service interval of 15 minutes or less during the morning and afternoon peak commute periods."). It should be noted that this interval for headways for major transit stop was amended from 15 to 20 minutes per AB 2553 in September 2024.

[4] Technical Advisory p. 14: Pub. Resources Code, § 21155 ("For purposes of this section, a high-quality transit corridor means a corridor with fixed route bus service with service intervals no longer than 15 minutes during peak commute hours.").

[5] Technical Advisory p. 14: The presumption might not be appropriate if the project:
- Has a Floor Area Ratio (FAR) of less than 0.75
- Includes more parking for use by residents, customers, or employees of the project than required by the jurisdiction (if the jurisdiction requires the project to supply parking)
- Is inconsistent with the applicable Sustainable Communities Strategy (as determined by the lead agency, with input from the Metropolitan Planning Organization)
- Replaces affordable residential units with a smaller number of moderate- or high-income residential units.

- **Presumption of Less Than Significant Impact for Affordable Residential Development:** Projects that include a high percentage of affordable housing near job centers are expected to have a less-than-significant impact on VMT.

As described in Section 3.0, the Project did not screen out using any criteria mentioned above and therefore VMT analysis was prepared.

## 2.3 VMT Metric and Analysis

For land use projects and plans, such as the proposed Project, based on the predominant use, the following VMT efficiency metrics and method of estimation can be used:

- **Residential (Home-based) VMT per capita:** All home-based vehicle trips are traced back to the residence of the trip-maker (non-home-based trips are excluded) and then divided by the population within the geographic area to get the efficiency metric of home-based VMT per capita (or per resident).
- **Employment (Work) VMT per employee:** All work-based vehicle trips are counted and then divided by the number of employees within the geographic area to get the efficiency metric of work VMT per employee.
- **Total VMT per Service Population:** The total VMT to and from all zones in the geographic area are divided by the total service population to get the efficiency metric of VMT per service population. The total service population is the sum of the number residents and the number of employees.

The VMT analysis for LVSP was conducted by Iteris using the current version of the Southern California Association of Governments (SCAG) Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS) Travel Demand Forecasting Model[6] (herein referred as SCAG model). The current SCAG model is consistent with the 2024-2050 RTP/SCS, also known as Connect SoCal 2024. The SCAG model runs on the TransCAD software platform and is an Activity Based Model (ABM)[7].

The ABM model used for the project's VMT estimation is an advanced travel demand model that simulates individual travel choices based on a person's daily activities, such as commuting, shopping, and leisure, rather than relying on aggregate trip patterns. Based on input data and parameters, the ABM model represents the interactions

[6] SCAG: The most current version of the SCAG Model has a base year of 2019 and future year of 2050 and was developed for the 2024 SCAG Regional Transportation Plan and Sustainable Communities Strategy, April 2016. The model contains traffic analysis zones that contain socio-economic data reflecting the population, employment, and land use development characteristics throughout the region. The SCAG model contains traffic analysis zones that contain socio-economic data reflecting the population, employment, and land use development characteristics throughout the region. The TAZ's are characterized as Tier 1 and Tier 2 zones, and each Tier 1 zone contains multiple Tier 2 zones. The Tier 2 zones represent a smaller geographic area that allows the model to produce more refined trip assignment forecasts. Both Tier 1 and Tier 2 zones are used to calculate VMT. Total VMT is calculated using the Tier 1 zones and VMT by trip purpose (e.g., homebased VMT) is calculated using the Tier 2 zones. The SCAG regional model contains the socioeconomic data and transportation network for the entire SCAG region including the incorporated cities. The model also contains neighboring, external zones that are used to estimate travel demand that occurs between the SCAG region and adjacent areas, as well as estimate regional travel demand for those traveling through the SCAG region.

[7] The Activity-Based Model (ABM) is a new generation of travel demand model. The ABM simulates daily activities and travel patterns of all individuals in the region, as affected by transportation system level of service. This new modeling system is designed to meet or exceed federal regulations and state laws/requirements. The ABM Model is the primary transportation model used in the development of the 2024 RTP/SCS and has been used in the Project's VMT analysis.

between various land uses and the transportation network more accurately compared to traditional trip-based models

The regional SCAG Model was used to estimate average VMT for the County for year 2024[8], 2035 and 2050, for above mentioned metrics, as shown in Table 1[9]. The County boundary same as the ICTC region has been used to define the region. A comparison to the total ICTC regional VMT provides an appropriate baseline for a project's VMT analysis.

**Table 1. Imperial County Baseline VMT by Analysis Year**

| VMT Metric | Analysis Year | | |
|---|---|---|---|
| | 2024 | 2035 (Without Project )1 | 2050 (Without Project )1 |
| Home based VMT per capita | 22.29 | 31.98 | 37.28 |
| Work VMT per employee | 50.06 | 48.80 | 56.62 |

**Source**: Imperial County Baseline VMT Data, Iteris, June 2025.

1 All existing land uses in the Plan Area would remain unchanged in comparison to baseline conditions.

A detailed VMT analysis of the Project has been conducted using the work VMT per employee to determine the significance of its transportation impact.

## 2.4 VMT Impact Criteria and Significance Threshold

The OPR's Technical Advisory provides numeric thresholds for evaluating the significance of transportation impacts and mitigation. A project exceeding a level of 15% below existing VMT per capita or employee may indicate a significant transportation impact. Existing VMT per capita or employee may be measured as regional VMT per capita/employee or as regionwide or countywide VMT per capita/employee. The VMT threshold guidance in OPR's Technical Advisory was based upon the California Air Resources Board 2017 Scoping Plan-Identified VMT Reductions and Relationship to State Climate Goals (CARB 2019). Consistent with that guidance, one of the thresholds for project-generated VMT is whether the project would result in a VMT per service population, which is 15 percent below the Existing Conditions VMT per service population for the WRCOG region. As explained in the Technical Advisory:

Based on OPR's extensive review of the applicable research, and in light of an assessment by the California Air Resources Board (CARB) quantifying the need for VMT reduction in order to meet the State's long-term climate goals, OPR recommends that a per capita or per employee VMT that is 15 percent below that of existing development may be a reasonable threshold. [¶] Fifteen percent reductions in VMT are achievable at the project level in a variety of place types. [¶] Moreover, a 15 percent reduction is consistent with SB 743's direction to OPR to select a threshold that will help the State achieve its climate goals. As described above, section 21099 states that the criteria for determining significance must "promote the reduction in greenhouse gas emissions." In its

8 The year 2024 VMT per capita and employee has been estimated by interpolating the total VMT and population and employment values between year 2019 and year 2035.

9 The LVSP includes policies to ensure parking is appropriately sized for each development, including operational parking development standards (LVSP Section 4.1(G) and Table 4-2), and construction parking (LVSP Policy CT-24). Therefore, the County does not anticipate that individuals will increase VMT searching for parking or otherwise affect the VMT analysis.

document the CARB 2017 Scoping Plan-Identified VMT Reductions and Relationship to State Climate Goals, CARB assesses VMT reduction per capita consistent with its evidence-based modeling scenario that would achieve State climate goals of 40 percent GHG emissions reduction from 1990 levels by 2030 and 80 percent GHG emissions reduction levels from 1990 by 2050. Applying California Department of Finance population forecasts, CARB finds per-capita light-duty vehicle travel would need to be approximately 16.8 percent lower than existing, and overall per-capita vehicle travel would need to be approximately 14.3 percent lower than existing levels under that scenario. Below these levels, a project could be considered low VMT and would, on that metric, be consistent with 2017 Scoping Plan Update assumptions that achieve climate state climate goals… [¶] In summary, achieving 15 percent lower per capita (residential) or per employee (office) VMT than existing development is both generally achievable and is supported by evidence that connects this level of reduction to the State's emissions goals (OPR 2018).OPR recommends that a per capita or per employee VMT that is fifteen percent below that of existing development may be a reasonable threshold for residential and employment-based projects. The County finds that this recommended threshold is appropriate to use for the LVSP. Consequently, this analysis uses as one of the significance thresholds 15% below or 85% of the regional average VMT of the year 2024[10]. A majority of the Plan Area is undeveloped land, and phased development of the Project is anticipated to occur by year 2035 and year 2050, therefore Project VMT for Phase 1,2, and 3 was compared to the baseline VMT of the year 2024. Because the analysis shown in Section 3.0 concludes that the Project would result in a significant and unavoidable VMT impact under the year 2035 and 2050, it is reasonable to assume this impact finding would apply to an existing baseline or conditions comparison. Therefore, an Existing plus Project analysis was not conducted for the Project's VMT analysis. As also discussed in OPR's Technical Advisory "[a] project that falls below an efficiency-based threshold that is aligned with long-term environmental goals and relevant plans would have no cumulative impact distinct from the project impact. Accordingly, a finding of a less-than-significant project impact would imply a less than significant cumulative impact, and vice versa." (OPR Technical Advisory p. 6.)

### Direct Impact Criteria

- The work VMT per employee exceeds 85% of the ICTC regional average[11] work VMT per employee

### Cumulative Impact Criteria

- The Project demonstrates an impact after applying an efficiency based VMT threshold

# 3.0 Project VMT Analysis

This section describes the VMT screening, methodology, project features, and Project VMT and impact determination used in the Project's VMT analysis.

[10] The year 2024 VMT per capita and employee has been estimated by interpolating the total VMT and population and employment values between year 2019 and year 2035.

[11] The ICTC region includes the Imperial County with seven incorporated cities (Brawley, Calexico, Calipatria, El Centro, Holtville, Imperial and Westmorland) and eight unincorporated communities (Bombay Beach, Heber, Niland, Ocotillo, Palo Verde, Salton City, Seeley and Winterhaven).

## 3.1 VMT Screening

The Project would not meet any screening criteria noted in Section 2.2.

- The Project is estimated to generate 47,055 daily trips in Phase 1, 80,243 daily trips in Phase 2, and 92,933 daily trips in Phase 3, and therefore, would not be considered a Small Project.
- Currently, map-based screening for low VMT areas is not available for Imperial County. The Project would not readily screen out using map-based screening because most land uses are not developed in the Specific Plan Area.
- The Project is not located within ½ mile of a major transit stop or high-quality transit area. It should be noted that the Project proposes to implement several transit facilities and services, such as transit hubs and express bus routes as well as shuttle service in coordination with the County and other regional agencies. However, the Plan Area currently has limited transit accessibility under existing conditions and would not screen out using transit proximity criteria.
- The Project is not a 100% affordable housing project.

The Project would not screen out using any VMT screening criteria by OPR and hence VMT analysis has been prepared. The VMT analysis addresses the potential impacts associated with changes to existing land uses and the associated overall effects of phased buildout of the LVSP through 2055. Analysis at site-specific level was not conducted because the actual locations of project development within each phase (and their chronological sequence or concurrence) that may be implemented in the future are speculative.

It should be noted that the Specific Plan area also comprises of transportation improvements such as roadways, intersection lane and control improvements, bridges and other infrastructure such as bike, pedestrian and transit facilities which will be constructed within and outside the Specific Plan Area. Per OPR's Technical Advisory, some of these transportation projects would not have the potential to induce travel or VMT and screen out of requiring a detailed VMT analysis:

- Rehabilitation, maintenance, replacement, safety, and repair projects designed to improve the condition of existing transportation assets such as highways; roadways; bridges; culverts
- Addition of roadway capacity on local or collector streets provided the project also substantially improves conditions for pedestrians, cyclists, and, if applicable, transit
- Addition of a new lane that is permanently restricted to use only by transit vehicles
- Installation of roundabouts or traffic circles
- Addition of new or enhanced bike or pedestrian facilities on existing streets/highways or within existing public rights-of-way
- Installation of publicly available alternative fuel/charging infrastructure

Additionally, as noted in OPR's Technical Advisory, "Transit and active transportation projects generally reduce VMT and therefore are presumed to cause a less-than-significant impact on transportation. This presumption may apply

to all passenger rail projects, bus and bus rapid transit projects, and bicycle and pedestrian infrastructure projects." (OPR Technical Advisory p. 23.)

The transportation improvements that are part of LVSP include improvement or construction or improvement of bridges, collector streets with active transportation facilities, roundabouts, dedicated bus lane, transit facilities and potential rail projects in the future. Any roadway segment and/or intersection improvement proposed within the Specific Plan Area or its study area is a result of the traffic generated by the Project and cumulative traffic generated in the County.These transportation improvements would either screen out or would not propose any roadway expansion (including State Highway facilities) that are not included in the County's General Plan. Furthermore, as discussed above, the SCAG ABM model used in the Project's VMT analysis considers individual travel behaviors such as redirecting trip and trip inducement and hence is a superior tool compared to a trip-based model. It should be noted that the project's VMT analysis uses a conservative estimate of employment and population for the Plan Area where currently there is not much development, therefore potential of trip inducement is captured by the analysis. Additionally, LVSP policies described below such as Policies CT-17, CT-19, CT-20, CT-21 and CT-22 would ensure that availability of transit modes, transit only lanes and facilities such as transit hubs, increased bus frequency and shuttle service will divert some of the induced trips in the long term scenario to more efficient modes of travel and reduce VMT. Therefore, no additional VMT analysis for transportation improvements is required in this section. The VMT analysis shown in this section addresses the redistribution of trips on the transportation network.

## 3.2 Lithium Valley Specific Plan Policies

To enhance public transportation accessibility and efficiency within the Lithium Valley region, consultation will continue between Imperial County, the Imperial County Transportation Commission (ICTC), and the Southern California Association of Governments (SCAG). This partnership aims to identify transportation improvements to be integrated into the next Long Range Transportation Plan (LRTP) update or amendment. Imperial County shall continue to consult with ICTC and SCAG to identify public transportation improvements to be included in the next LRTP update or amendment. Through this coordination and LRTP update or amendment process, triggers may be established for improvements based on operational needs and employment metrics within the Specific Plan Area and phased according to current and projected demand to align with community needs. Once there is sufficient demand, it is anticipated that either an employee shuttle or an express bus route will connect the nearby communities to the employment centers.

The following policies from the LVSP will be implemented in the Plan Area to enhance transit access and connectivity of the Project with the County by reducing single occupancy vehicle use and VMT:

Policy CT-16: VMT Mitigation Bank: In support of California's Climate Action Plan for Transportation Infrastructure, (CAPTI) 2.0, the County will support Caltrans' statewide VMT mitigation bank or exchange program at the local and regional level.

Policy CT-17: Agency Consultation: Public transportation hubs and their integration with existing transportation network shall include coordination with Caltrans. Consultation with Caltrans, IVTA, and ICTC should occur to further determine access to the transportation hub and effects to SR-111.

Policy CT-19: Increased Bus Frequencies: The Project tenants or individual employers shall consult with IVT on bus service routes and service times to serve their Project. The goal is to reduce service intervals

on weekdays from the current 60-180 minutes to 15-30 minutes and while service internals on weekends to 30-60 minutes.

Policy CT-20: Dedicated Bus Lane on SR-111: The County, IVT, and Project tenants should consult with Caltrans for construction of a new outside lane, exclusive to buses, defined as a dedicated bus lane. This lane would improve the reliability and timeliness of transit services, making public transportation a more attractive option for residents and employees.

Policy CT-21: Development of Transit Hubs: As illustrated in Figure 3, Transit Facilities, strategically located transit hubs are proposed to facilitate seamless connectivity. These hubs will serve as essential nodes within the transit system. Transit or Mobility hub is a central place where multiple modes of transportation converge, designed to facilitate seamless transfers, improve accessibility, and reduce travel time for commuters.

- The locations of the hubs are intended to connect the communities of Niland and Calipatria with the employment hub in the heart of the Plan Area. Implementation of Transit Hub would require consultation with IVT, Imperial County and communities of Niland and Calipatria.
- Each transit hub is proposed to include designated spaces for park and ride lots, shared vehicles, and shuttles to employment centers, providing for efficient transfers and accessibility for commuters. Transit Hubs should be supplemented with additional strategies or programs that provide increased public transit, bicycle, and pedestrian access and improvements. The Transit Hub is anticipated to strengthen the effectiveness of other proposed TDM strategies.

Policy CT-22: Express Bus Connections: The County, IVT, and Project tenants should identify additional express bus routes that may be implemented based on the region's needs and demand and connect to the Plan Area. The express bus route should consider stops at various locations within the northern communities inclusive of transit hubs and employment centers. This service will link workers to their jobs, promote rideshare opportunities, provide further travel opportunities to the general public. Express routes should also connect Calipatria to SDSU Brawley Campus and Imperial Valley College, facilitating access to educational institutions and expanding opportunities for residents.

Policy CT-23: Employee Shuttle: An employee shuttle should be implemented once there are three (3) employers with over 200 on-site employees, for a total of over 600 employees in the Plan Area. The employee shuttle would connect the transit hubs at Niland and Calipatria to the employment centers of over 200 on-site employees. This service would link workers to their jobs, promote rideshare opportunities.

The employee shuttle or express bus route may be funded and operated by one or more of the following: the newly established Lithium Valley Infrastructure Special District, the participating private employers, or ICTC. In consultation with ICTC and SCAG, Imperial County would also enhance transit safety and convenience by upgrading transit stops with shelters and real-time trip information systems. Improvements would be triggered based on operational needs and employment metrics, with a shuttle system introduced to connect employees to transit hubs and commercial destinations.

Policy CT-24 Construction Traffic Management Plan. The Project Applicant/Developers shall prepare a Construction Traffic Management Plan (CTMP), which shall be implemented by the construction contractor to address short-term traffic circulation, safety and access effects during Project construction. The CTMP shall be reviewed and approved by the County prior to the issuance of the first building permit. The TMP and its requirements shall also be provided to all construction contractors as one component of building plan/contract document packages.

The CTMP shall include, but not be limited to, the elements described below:

- Where applicable, maintain existing access for operational land uses in proximity of the Project throughout construction.
- Where applicable, coordinate with adjacent or affected businesses and/or properties and emergency service providers to ensure adequate access exists to the Project and neighboring sites.
- Where applicable, provide notification to transit providers, emergency service personnel, and local businesses and residents in advance of construction activities.
- Use measures to encourage and facilitate carpooling among construction workers to reduce use of single occupancy vehicles for commuting to the project site.
- Identify designated transport routes for heavy trucks to be used throughout Project construction.
- Identification and description of Material Storage Locations (if any).
- Location and description of Construction Trailer (if any).
- Identification and Description of Parking - Estimate the number of workers and identify parking areas for their vehicles.
- Identification and Description of Maintenance Measures - Identify and describe measures taken to ensure that the work site and public right-of-way would be maintained (including dust control).
- Schedule deliveries and pick-ups of construction materials to non-peak travel periods along major travel corridors such as SR-111.
- Construction traffic shall be routed to avoid travel through, or proximate to, sensitive land uses.
- All temporary signage, temporary traffic control measures such as lane closures; the use of warning signs, cones, crossing structures, lights, and barricades will conform to the CA MUTCD.
- Flaggers that serve to alert motorists and pedestrians to slow moving trucks and to guide trucks to maneuver turn movement and prioritize movement of traffic at intersections to access highway and reduce queuing at major intersections and to facilitate truck turn maneuvers in and out of the project driveways.
- Coordination with Caltrans and Imperial County in order to secure the necessary encroachment and trip permits necessary for any oversized haul trucks.
- All construction contractors shall be provided with written information on the CTMP along with clear consequences to violators for failure to follow the plan.

## 3.3 Analysis Approach

The VMT analysis for LVSP was conducted by Iteris using the current version of the SCAG model. The current SCAG model is consistent with the 2024-2050 RTP/SCS, also known as Connect SoCal 2024. The SCAG ABM model represents the interactions between various land uses and the transportation network more accurately compared to traditional trip-based models as well as considers VMT inducement. Therefore, the ABM model considers redirecting trips and VMT inducement. The methodology included using the raw outputs of the activity-based assignments, summarizing only auto trips, and multiplying by the provided Highway Performance Monitoring System (HPMS) factor as used in the SCAG Emissions process. The resulting VMT was confirmed by comparison with the Connect SoCal regional VMT total VMT per capita, as documented in the Connect SoCal 2024 Report. This memorandum also includes the baseline and Project VMT estimated using the HPMS factor, although it should be noted that the significance of the impact would be same if raw output i.e. only automobile VMT was used per SB 743 requirements.

The model is made up of TAZs that include the socio-economic data (SED), e.g., population, employment, households, workers, and school enrollment from RTP. The Project is located in multiple Tier 2 TAZs: 14013100, 14013200, 14013300, 14016100, 14016200, 14086100, 14088100. Figure 2 illustrates the Project TAZs. The SED assumptions and changes for the Project (required for estimating traffic growth and VMT) in the SCAG model were based on the dwelling units, household size, number of employee estimates for each use using best available industry and County sources provided by Rick Engineering as part of phased development of the Specific Plan. See Attachment B for employee conversion factors used for each land use to determine the project's SED. The Project's dominant use is employment therefore, work VMT per employee can be considered the primary metric. However, the Project is a land use plan which also includes residential and other community-based uses in Phases 2 and 3,including "operational workforce housing catering to workers within the Plan Area," i.e. the Community Opportunity Areas with the goal. The VMT analysis from the SCAG model considers internal capture of trips which would occur among employment, and community uses proposed in the Project. Some of the proposed transit facilities such as an express bus route along SR-111 and transit stops in Calipatria and Niland are included in the SCAG model run for the Project. However, the VMT estimates provided herein do not quantitively account for VMT reduction that could be achieved by implementation of shuttles in the Project area.

The current SCAG model's base year is 2019 and horizon year is 2050. The Project analysis was conducted for year 2035 and year 2050 to correspond to anticipated completion/buildout year of each project phase. The year 2035 and year 2050 model runs were conducted with and without the Project, by adjusting the model's land use (i.e., SED) inputs. Additionally, to accurately model the increased employment opportunities available in the County because of the Project, Iteris adjusted the workers per household in 20 of the most populated TAZs in the County. Outside of the Plan Area, Iteris ensured that all cumulative development including the Los Lagos development was included in the background assumptions. The daily work VMT per employee for the Project has been compared to 15% below the Imperial County Baseline year 2024 to estimate the Project's potential direct and cumulative impacts.

## 3.4 Project VMT

The Project SED data for each phase and reduced alternative as shown in Table 2 was added into Project TAZs to estimate Project generated VMT for Phases 1, 2 and 3 and Reduced Alternative.

## Table 2. SED Summary by Phase

| | Phase 1 | Phase 2 (includes Phase 1) | Phase 3 (includes Phases 1, and 2 | Reduced Density Alternative (Phase 1-3) |
|---|---|---|---|---|
| Households | 2,500 | 3,588 | 3,588 | 3,588 |
| Population | 6,823 | 11,754 | 11,754 | 11,754 |
| Employment | 21,427 | 36,740 | 42,314 | 37,233 |

**Source:** VMT Output, Iteris, June 2025.

The efficiency metric of work VMT per employee and total VMT per service population were used for Project's VMT analysis. The results of the VMT analysis are summarized in this memo, which is related to the Project's consistency with CEQA Guidelines section 15064.3, subdivision (b)

Per criteria outlined in Section 2.3, Phase 1, 2 and 3 of the Project would have an impact if it results in daily work VMT per employee that exceeds 15 percent below the County Baseline work VMT per employee.

A summary of Project VMT per employee is provided in Table 3, respectively. The model outputs for each phase provided by Iteris are included in Attachment A.

### Work VMT

To meet the threshold of 85% of the ICTC regional average and have a less than significant VMT impact, the daily work VMT per employee, the Project should be 42.6or less than the County's VMT threshold. As shown in Table 3, the Project's daily work VMT per employee of 66.9 in Phase 1, 67.5 in Phase 2, 66.6 in Phase 3, and 66.4 in Reduced Alternative would be significantly above the ICTC regional threshold for daily work VMT per employee. Therefore, per the Project's VMT significance criteria, the Project's VMT per employee would result in **a significant VMT impact**.

## Table 3. Project VMT - Employee

| Metric/Criteria | VMT/Threshold | | | |
|---|---|---|---|---|
| | Phase 1 | Phase 2 (includes Phase 1) | Phase 3 (includes Phases 1 and 2) | Reduced Density Alternative (Phase 1-3) |
| Work VMT | 1,433,155 | 2,479,454 | 2,816,871 | 2,472,484 |
| No. of Employees | 21,427 | 36,740 | 42,314 | 37,233 |
| Project TAZ – Work VMT per employee | 66.9 | 67.5 | 66.6 | 66.4 |
| Regional Threshold | 50.0 | 50.0 | 50.0 | 50.0 |
| 85% of Threshold | 42.6 | 42.6 | 42.6 | 42.6 |
| **Project VMT above Regional Threshold** | **Yes** | **Yes** | **Yes** | **Yes** |
| **Potentially Significant Impact** | **Yes** | **Yes** | **Yes** | **Yes** |

**Source**: VMT Output, Iteris, June 2025.

### Reduced Density Alternative

The Reduced Density Alternative would result in overall reduction of development by approximately 50% of all land uses except Green Industrial which would be reduced by 33%. The VMT analysis uses an efficiency metric (i.e. per employee, per capita), rather than an absolute numeric threshold. The work VMT and total VMT and the number of employees were observed to decrease slightly under this alternative. By normalizing the work or total VMT by the number of employees, the ratio of VMT per employee was found to be slightly lower than Phase 3 VMT. Therefore, per the Project's VMT significance criteria, the Project's work VMT under Reduced Density Alternative would also have a **significant impact**.

### Increased Density Alternative

The Increased Density Alternative would result in approximately 25% increase in development intensity and has been analyzed qualitatively. The VMT analysis uses an efficiency metric (i.e. per employee, per capita), rather than an absolute numeric threshold. The work VMT and total VMT would increase under this alternative even though it is expected to result in efficiency through scaled development. The number of employees would also increase under this alternative. By normalizing the work or total VMT by the number of employees, the ratio of VMT per employee would be similar to Phase 3 VMT, i.e., 66.6 VMT per employee . Therefore, per the Project's VMT significance criteria, the Project's work VMT under Increased Density Alternative would also have a **significant impact**.

### Project VMT Impact

VMT reduction measures and Transportation Demand Management (TDM) measures (MM TRA-1-through MM TRA-3) provided in Table 5, could be used to mitigate the Project's VMT impact. Additionally, implementation of LVSP policies will increase transit usage and accessibility of the Project within the County and region by reducing single occupancy vehicle use and VMT .

As shown in Table 3, Phases 1, 2,3, the project would result in a significant VMT impact because the work VMT per employee would exceed the 15% below the County's baseline VMT in year 2035 and year 2050. As discussed in Section 5 below MM-TRA 1 Trip Reduction Program, MM-TRA-2 Site Design, and MM-TRA-3 Transit Oriented Features. However, impacts are considered **significant and unavoidable**.

## 3.5 Construction VMT

Typical construction traffic would consist of construction workers commuting to and from the project site, trucks transporting heavy equipment and materials, and the potential disruptions to transportation circulation in the area. The project construction would be generally consistent with construction activities in terms of the temporary nature of activities, trip generation characteristics, and the types of vehicles and equipment required. Due to the location of the Project within the County and anticipated scale of construction, temporary workforce housing will be provided for all phases of construction. LVSP includes a special "Temporary Construction Housing" use category. In particular that use allows for residential facilities specifically for construction workers on project-based assignments. On-site facilities and services may include but are not limited to shared kitchens, sanitation facilities, and common areas, all subject to applicable California health and safety standards. As discussed in LVSP Table 3-2, such facilities are allowed in the designations for Green industrial Playas Renewables, Manufacturing, and Logistics. Additionally LVSP Policy HP-6 provides Local Hiring strategies that prioritize Imperial County residents.

Construction work with rights of way would have to comply with encroachment permit procedures. Any work within the existing right of way would have to comply with Caltrans permitting requirements. This includes a traffic control plan that adheres to the standards set forth in the most current version of the California Manual of Uniform Traffic Control Devices (CA MUTCD, Caltrans 2014). As part of these requirements, there are provisions for coordination with local emergency services, training for flagmen for emergency vehicles traveling through the work zone, temporary lane separators that have sloping sides to facilitate crossover by emergency vehicles, and vehicle storage and staging areas for emergency vehicles. MUTCD requirements also provide for construction work during off-peak hours and flaggers. Similarly, Imperial County Code Sections 12.12.010 et seq, require an application to apply for an encroachment permit if the project has the potential to " to place, build, construct or erect any structure, thing or contrivance or to excavate, cut, fill in, upon, over, across, along, above and/or under any public street, road or highway including the sidewalks." This includes requirements to provide barriers and warning lights within the construction zones, including compliance with Caltrans MUTCD Manual. As part of these procedures, Section 4 of the County's Encroachment Permit Application also requires preparation of a Traffic Control plan, including detour plans in compliance with the MUTCD manual, generally limiting closure times during non-peak hours (i.e. between 9 AM and 3 PM), and flaggers. Therefore, construction impacts are considered less than significant. Furthermore, the LVSP incorporates these requirements through LVSP Policy CT-24 Construction Traffic Management Plan (CTMP).

# 4.0 Cumulative Impact

The Technical Advisory states that "A project's cumulative impacts are based on an assessment of whether the "incremental effects of an individual project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects" (California Public Resources Code, Section 21083[b][2]; see 14 CCR 15064[h][1]). When using an absolute VMT metric, i.e., total VMT (as recommended for retail and transportation projects), analyzing the combined impacts for a cumulative impacts analysis may be appropriate. However, metrics such as VMT per capita or VMT per employee, i.e., metrics framed in terms of efficiency (as recommended below for use on residential and office projects), cannot be summed because they employ a denominator. A project that falls below an efficiency-based threshold that is aligned with long-term environmental goals and relevant plans would have no cumulative impact distinct from the project impact. Accordingly, a finding of a less-than-significant project impact would imply a less than significant cumulative impact, and vice versa. This is similar to the analysis typically conducted for greenhouse gas emissions, air quality impacts, and impacts that utilize plan compliance as a threshold of significance."

As shown in Table 3, the Project's work VMT per employee would be above the ICTC regional average VMT. Because the Project would result in significant impact, the Project's cumulative impact would be considered significant and cumulatively considerable for VMT.

# 5.0 Mitigation Measures

VMT reducing strategies from the California Air Pollution Control Officers Association (CAPCOA) Handbook for Analyzing Greenhouse Gas Emission Reductions, Assessing Climate Vulnerabilities, and Advancing Health and Equity (2024) (GHG Reduction Handbook) were reviewed for the Project and are recommended as mitigation measures. While the County can incentivize carpooling and ridesharing, it is legally infeasible to make such a

measure mandatory. (See Health and Safety Code § 40717.9; *Merced Alliance for Responsible Growth v. City of Merced* 2012 WL 5984917.) VMT reduction measures (MM TRA-1-through MM TRA-3) are proposed below.

MM-TRA 1: Trip Reduction Program: Prior to issuance of a grading permit, the Development Manager/Applicant of each development (with 50 employees or more) shall prepare a Trip Reduction Program aimed at discouraging single-occupancy vehicle trips and encouraging alternative modes of transportation, such as carpooling, and shuttle /transit use, and where applicable walking, and biking with the goal of reducing VMT to 15% below the regional average.. The Program shall be subject to review and approval by the Imperial County Department of Public Works. The exact measures to be implemented shall be determined when the Program is prepared, prior to issuance of a final certificate of occupancy for each development in the Project. The Program may include but would not be limited to commute trip reduction program, marketing, carpool/vanpool service with incentives such as monetary assistance with fares or gas costs for carpool/vanpool users, subsidized/discounted daily or monthly public transit passes, employee shuttles, as well as encouraging telecommuting and alternative work schedule, if applicable to the type of employment.

MM-TRA 2: Site Design: The County's Site Plan review process should ensure that each development connects pedestrian, and bike facilities to the existing and proposed facilities within a quarter mile radius of the development.

A project that is designed around an existing or planned bicycle facility encourages alternative mode use. The Project design should include a comparable network that connects the project uses to the future on-site and offsite facilities that are proposed along SR-111, Main Street, Sinclair Road, Main Street, Gentry Road, English Road and Class I multi-use path. Building design can ensure provision of bicycle lockers or a bicycle room where access is such that bicycles are protected from theft and inclement weather and providing public areas with a bicycle stand and tools necessary for tire changes and minor repairs to bicycles.

MM-TRA 3: Transit Oriented Features: The County shall consult with IVT, ICTC, SCAG, and developer/applicant of each development or phase to contribute towards construction or implementation of transit features. Based on phasing and proposed project type, the County shall require the developer/applicant to implement a transit feature to either connect to the nearest transit stop or hub and/or enhance the service or provide transit features such as bus shelters.

Table 5 includes VMT reduction percentage for some of the measures that correspond to MM-TRA 1 through MM-TRA 3 from the CAPCOA guide. Because some of these VMT reducing features and measures are non-quantifiable and some depend upon other agencies it is not possible to show that with the implementation of these features and measures, the Project's VMT impacts can be reduced to a less than significant level. The reduction percentage is provided for informational purposes.

# 6.0 Conclusion

As shown in Table 3, Phases 1, 2,3, the Reduced Density Alternative, and the Increased Density Alternative of the Project would result in a potentially significant VMT impact because the work VMT per employee would exceed the County's baseline VMT. The Project would implement LVSP policies and mitigation measures to ensure that VMT reduction is achieved to the extent feasible. Because some of these VMT reducing measures are non-quantifiable or cannot be modeled, depend upon planning efforts from multiple regulatory agencies and it is not possible to guarantee the implementation of measures prior to occupancy or even with completion of Phase 1, the Project's VMT impacts would be significant. Therefore, impacts to CEQA Guidelines section 15064.3, subdivision (b) would be considered **significant and unavoidable**.

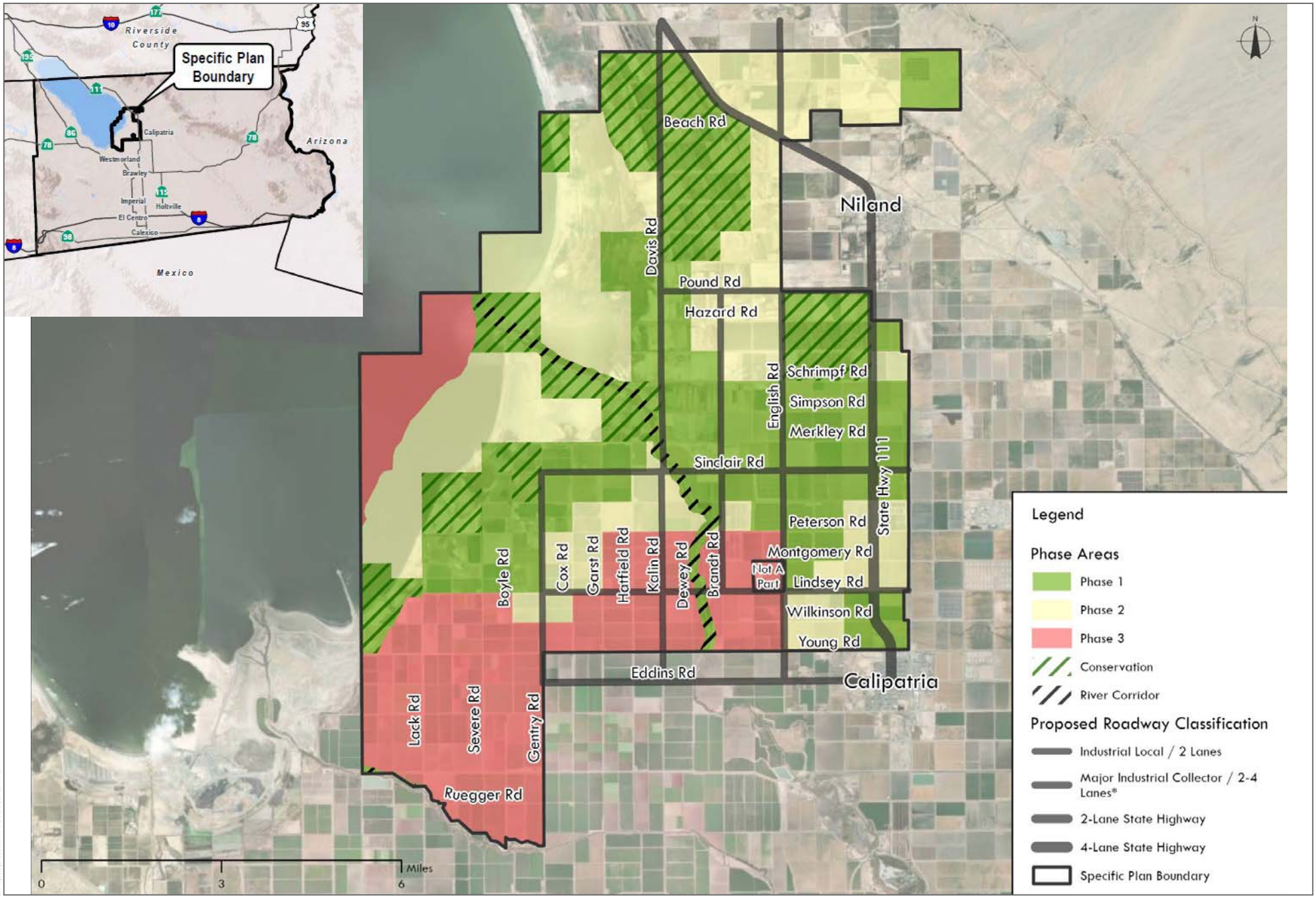
# 7.0 References

OPR (Office of Planning and Research). 2018. Technical Advisory on Evaluating Transportation Impacts in CEQA. Accessed October 2023. http://opr.ca.gov/docs/20190122-743_Technical_Advisory.pdf.

## Table 5. VMT Reduction Measures for Individual Sites/Developments

| Strategy | Description of VMT Reduction Measure | Potential VMT Reduction Percentage [1] |
|---|---|---|
| **MM TRA-1:** Trip Reduction Program | ▪ Implement Commute Trip Reduction Marketing (T-7)<br>▪ Provide Ridesharing Program (T-8)<br>▪ Subsidized or Discounted Transit Programs (T-9)<br>▪ Provide End of Trip Bicycle Facilities (T-10)<br>▪ Provide Employee-sponsored shuttle (T-11) | ▪ 4%<br>▪ 8%<br>▪ 5.5%<br>▪ 4.4%<br>▪ 20.4% |
| **MM TRA 2:** Site Design | ▪ Provide pedestrian network improvements (T-18)<br>▪ Construct or Improve Bike Facility or Boulevard (T-19A/19-B)<br>▪ Expand Bikeway Network (T-20)<br>▪ Orient Project Toward Transit, Bicycle, or Pedestrian Facility (T-32)<br>▪ Locate Project near Bike Path/Bike Lane (T-33) | ▪ 6.4%<br>▪ 0.8%<br>▪ 0.5%<br>▪ Non-Quantified<br>▪ Non-Quantified |
| **MM TRA-3:** Transit | ▪ Extend Transit Network Coverage or Hours (T-25)<br>▪ Increase Transit Service Frequency (T-26)<br>▪ Provide Bus Rapid Transit (T-28)<br>▪ Provide Transit Shelters (T-46)<br>▪ Provide Real-Time Transit Information (T-43)<br>▪ Provide On-Demand Microtransit (T-45)<br>▪ Provide Bike Parking Near Transit (T-47) | ▪ 4.6%<br>▪ 11.3%<br>▪ 13.8%<br>▪ 0.32%<br>▪ Non-Quantified<br>▪ Non-Quantified<br>▪ Non-Quantified |

**Notes:** NA = Not Available
[1] CAPCOA 2024



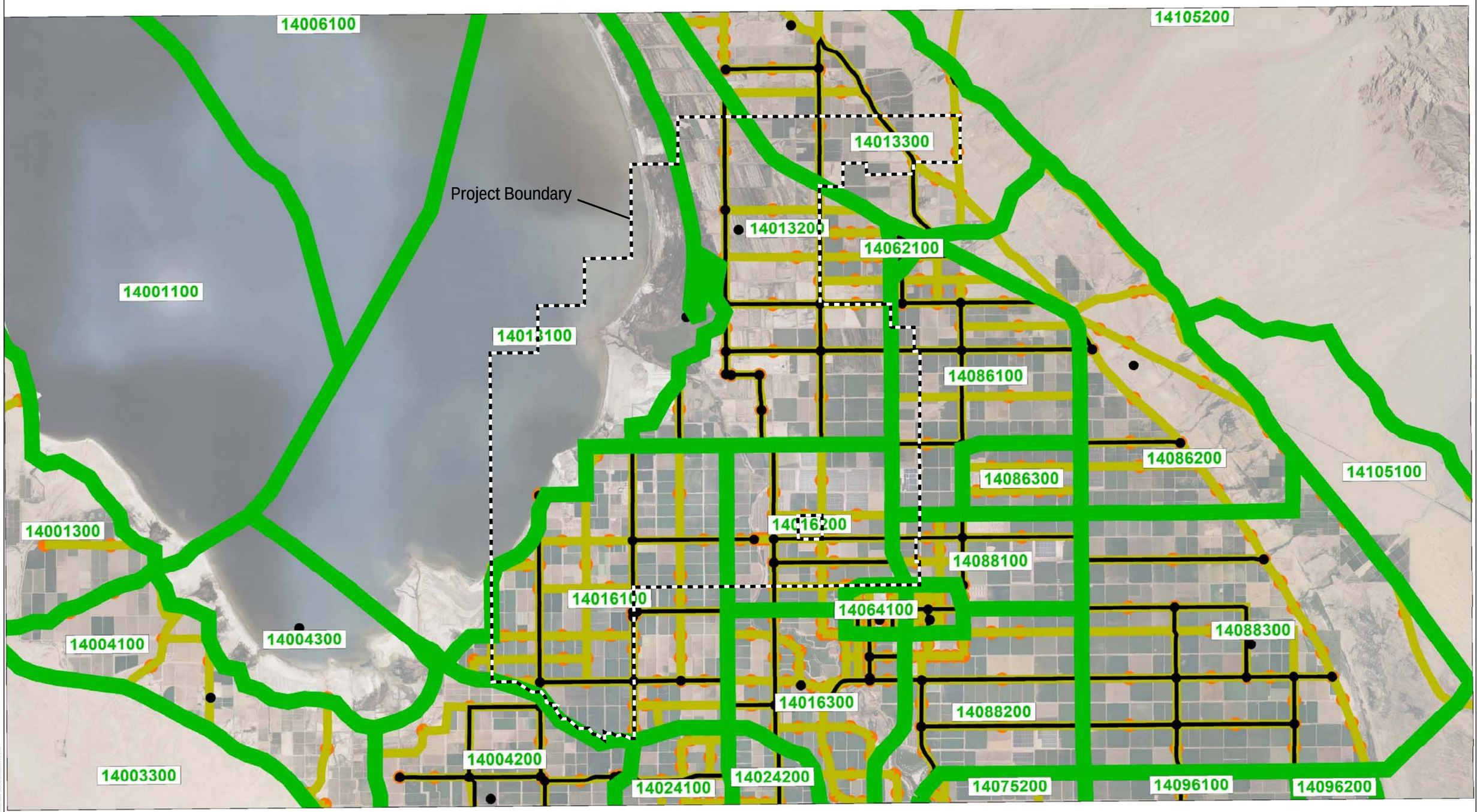

SOURCE: Imperial County 2025

FIGURE 1

Project Location and Site Plan

Lithium Valley Specific Plan

DUDEK



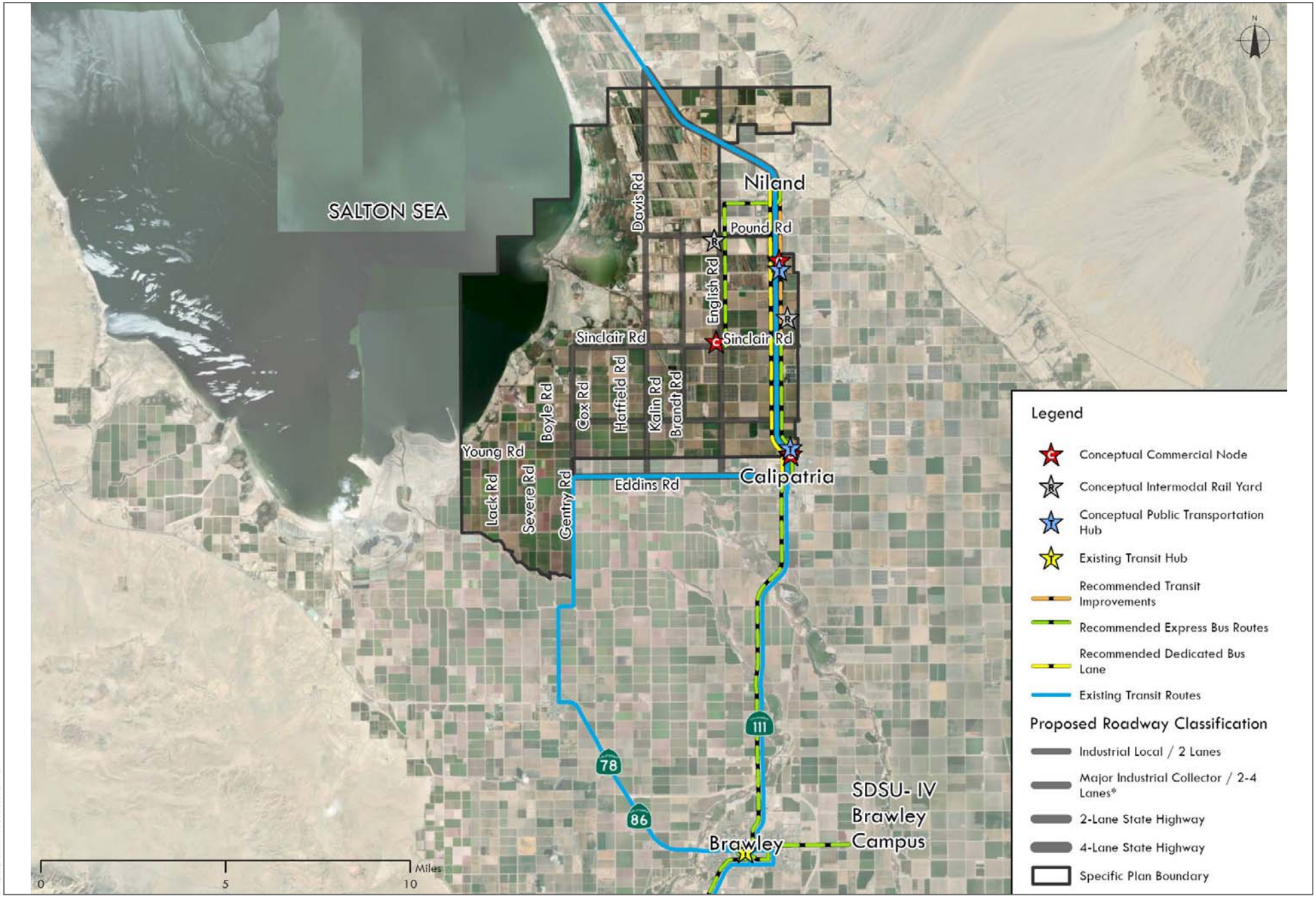

SOURCE: SCAG

FIGURE 2

Project Traffic Analysis Zones from SCAG Travel Demand Model

Lithium Valley Specific Plan

DUDEK




SOURCE: Imperial County 2025

FIGURE 3

Transit Facilities

Lithium Valley Specific Plan

DUDEK

# Attachment A

VMT output tables from SCAG Travel Demand Model Run, Iteris

**2024 With HPMS Factor -Baseline VMT**

| Imperial County | | |
|---|---|---|
| **ID** | **Purpose** | **VMT** |
| Home-based | | 4,169,224 |
| | *Home-Based Work* | 2,394,743 |
| | *Home-Based Other & Other(External)* | 1,176,473 |
| | *Home-Based Work(External)* | 598,008 |
| Work-based | | 3,695,011 |
| | *Home-Based Work* | 2,394,743 |
| | *Work-Based Other & Other(External)* | 233,274 |
| | *Home(External)-Based Work* | 1,066,994 |
| Other-Based | | 335,611 |
| | *Other-Based Other* | 273,038 |
| | *Home(External)-Based Other* | 29,019 |
| | *Work(External)-Based Other* | 33,554 |
| | Total VMT | 5,805,104 |
| | Total Home-based VMT | 4,169,224 |
| | Total Work-based VMT | 3,695,011 |
| | Total Households | 55,884 |
| | Total Population | 187,054 |
| | Household Size | 3.35 |
| | Total Employees | 73,804 |
| | **Total Home-based VMT/Capita** | **22.29** |
| | **Total Work-based VMT/Employee** | **50.06** |
| | **Total VMT/Service Population** | **22.25** |

## Imperial County

| Scenario | Population | Employees | Raw | | | | | | With HPMS Factor | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Total VMT | Home-Based VMT | Work-Based VMT | Total VMT per Capita | Work-Based VMT per Employee | Total VMT per Service Population | Total VMT | Home-Based VMT | Work-Based VMT | Total VMT per Capita | Work-Based VMT per Employee | Total VMT per Service Population |
| 2019 Existing | 180,727 | 69,465 | 4,134,577 | 2,945,394 | 2,716,506 | 22.88 | 39.11 | 16.53 | 5,514,341 | 3,981,492 | 3,510,843 | 30.51 | 50.54 | 22.04 |
| 2035 NB-NP-NoGP | 200,917 | 83,261 | 4,819,465 | 3,393,006 | 3,146,518 | 23.99 | 37.79 | 16.96 | 6,426,309 | 4,582,366 | 4,063,393 | 31.98 | 48.80 | 22.61 |
| 2035 NP-GP | 200,972 | 83,351 | 4,840,523 | 3,396,137 | 3,180,904 | 24.09 | 38.16 | 17.02 | 6,444,782 | 4,582,236 | 4,100,182 | 32.07 | 49.19 | 22.67 |
| 2035 LVSP-Ph1 | 204,775 | 102,511 | 9,012,663 | 6,590,360 | 6,219,113 | 44.01 | 60.67 | 29.33 | 11,251,354 | 8,354,398 | 7,525,321 | 54.94 | 73.41 | 36.62 |
| 2050 NB-NP-NoGP | 216,637 | 96,599 | 6,078,906 | 4,110,604 | 4,235,353 | 28.06 | 43.84 | 19.41 | 8,077,066 | 5,534,188 | 5,469,124 | 37.28 | 56.62 | 25.79 |
| 2050 NP-GP | 216,671 | 96,966 | 6,087,039 | 4,111,249 | 4,242,103 | 28.09 | 43.75 | 19.41 | 8,087,608 | 5,535,057 | 5,477,686 | 37.33 | 56.49 | 25.79 |
| 2050 LVSP-Ph2 | 220,976 | 126,642 | 11,590,041 | 8,015,975 | 8,599,550 | 52.45 | 67.90 | 33.34 | 14,314,677 | 10,090,295 | 10,298,772 | 64.78 | 81.32 | 41.18 |
| 2050 LVSP-Ph3Max | 220,976 | 132,216 | 11,453,901 | 7,671,061 | 8,780,767 | 51.83 | 66.41 | 32.43 | 14,063,568 | 9,622,147 | 10,443,381 | 63.64 | 78.99 | 39.82 |
| 2050 LVSP-Ph3Red | 220,976 | 127,135 | 11,566,736 | 7,973,760 | 8,599,451 | 52.34 | 67.64 | 33.23 | 14,288,968 | 10,037,878 | 10,302,662 | 64.66 | 81.04 | 41.05 |

## Project Zones

| | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Total VMT | Home-Based VMT | Work-Based VMT | Total VMT per Capita | Work-Based VMT per Employee | Total VMT per Service Population | Total VMT | Home-Based VMT | Work-Based VMT | Total VMT per Capita | Work-Based VMT per Employee | Total VMT per Service Population |
| 2019 Existing | 491 | 581 | 42,190 | 16,486 | 24,974 | 85.93 | 42.98 | 39.36 | 50,414 | 20,219 | 29,364 | 102.68 | 50.54 | 47.03 |
| 2035 NB-NP-NoGP | 2,965 | 2,177 | 102,572 | 20,348 | 65,762 | 34.59 | 30.21 | 19.95 | 139,411 | 24,982 | 89,572 | 47.02 | 41.14 | 27.11 |
| 2035 NP-GP | 3,020 | 2,267 | 106,365 | 19,181 | 70,318 | 35.22 | 31.02 | 20.12 | 142,204 | 23,111 | 93,482 | 47.09 | 41.24 | 26.90 |
| 2035 LVSP-Ph1 | 6,823 | 21,427 | 1,467,248 | 150,377 | 1,282,653 | 215.04 | 59.86 | 51.94 | 1,651,961 | 171,766 | 1,433,155 | 242.12 | 66.89 | 58.48 |
| 2050 NB-NP-NoGP | 7,415 | 6,697 | 341,847 | 19,293 | 239,430 | 46.10 | 35.75 | 24.22 | 472,489 | 23,499 | 320,770 | 63.72 | 47.90 | 33.48 |
| 2050 NP-GP | 7,449 | 7,064 | 359,637 | 19,381 | 252,557 | 48.28 | 35.75 | 24.78 | 497,237 | 23,607 | 338,358 | 66.75 | 47.90 | 34.26 |
| 2050 LVSP-Ph2 | 11,754 | 36,740 | 2,572,528 | 259,419 | 2,210,982 | 218.86 | 60.18 | 53.05 | 2,961,737 | 328,933 | 2,479,454 | 251.98 | 67.49 | 61.07 |
| 2050 LVSP-Ph3Max | 11,754 | 42,314 | 2,857,049 | 242,364 | 2,508,223 | 243.07 | 59.28 | 52.84 | 3,288,130 | 311,997 | 2,816,871 | 279.75 | 66.57 | 60.81 |
| 2050 LVSP-Ph3Red | 11,754 | 37,233 | 2,570,065 | 263,446 | 2,202,379 | 218.65 | 59.15 | 52.46 | 2,962,902 | 334,140 | 2,472,484 | 252.08 | 66.41 | 60.48 |

## SCAG

| Scenario | Population | Employees | Raw | | | | | | With HPMS Factor | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Total VMT | Home-Based VMT | Work-Based VMT | Total VMT per Capita | Work-Based VMT per Employee | Total VMT per Service Population | Total VMT | Home-Based VMT | Work-Based VMT | Total VMT per Capita | Work-Based VMT per Employee | Total VMT per Service Population |
| 2019 Existing | 18,812,898 | 8,961,624 | 359,708,980 | 287,519,066 | 156,627,389 | 19.12 | 17.48 | 12.95 | 417,840,158 | 333,983,910 | 181,939,336 | 22.21 | 20.30 | 15.04 |
| 2035 NB-NP-NoGP | 19,930,002 | 9,871,745 | 335,990,090 | 268,601,695 | 132,088,302 | 16.86 | 13.38 | 11.27 | 390,288,150 | 312,009,377 | 153,434,581 | 19.58 | 15.54 | 13.10 |
| 2035 NP-GP | 19,943,676 | 9,883,712 | 347,379,770 | 277,209,755 | 137,482,787 | 17.42 | 13.91 | 11.65 | 403,518,472 | 322,008,551 | 159,700,849 | 20.23 | 16.16 | 13.53 |
| 2035 LVSP-Ph1 | 19,947,479 | 9,902,872 | 337,792,240 | 270,256,644 | 133,743,104 | 16.93 | 13.51 | 11.32 | 392,381,537 | 313,931,776 | 155,356,809 | 19.67 | 15.69 | 13.14 |
| 2050 NB-NP-NoGP | 20,910,425 | 10,279,224 | 340,426,857 | 273,047,840 | 132,365,055 | 16.28 | 12.88 | 10.91 | 395,441,926 | 317,174,045 | 153,756,059 | 18.91 | 14.96 | 12.68 |
| 2050 NP-GP | 20,910,459 | 10,279,591 | 340,428,008 | 273,048,284 | 132,365,944 | 16.28 | 12.88 | 10.91 | 395,443,262 | 317,174,561 | 153,757,092 | 18.91 | 14.96 | 12.68 |
| 2050 LVSP-Ph2 | 20,914,764 | 10,309,267 | 343,923,782 | 276,381,284 | 135,683,461 | 16.44 | 13.16 | 11.01 | 399,503,974 | 321,046,194 | 157,610,740 | 19.10 | 15.29 | 12.79 |
| 2050 LVSP-Ph3Max | 20,914,764 | 10,314,841 | 343,957,596 | 276,392,642 | 135,691,482 | 16.45 | 13.15 | 11.01 | 399,543,254 | 321,059,388 | 157,620,058 | 19.10 | 15.28 | 12.79 |
| 2050 LVSP-Ph3Red | 20,914,764 | 10,309,760 | 342,201,479 | 274,945,580 | 134,612,686 | 16.36 | 13.06 | 10.96 | 397,503,337 | 319,378,472 | 156,366,921 | 19.01 | 15.17 | 12.73 |

# Attachment B

Employment Conversion Factors by Land use, Iteris

| Land Use | Emp Conversion Factor | Phase |
|---|---|---|
| Commercial | 2.5 employees per tsf | 2 |
| Restaurants | 4 employees per tsf | 2 |
| Hotels | 1 employee per room | 2 |
| Office | 3.5 employees per tsf | 2 |
| Medical Office | 4 employees per tsf | 2 |
| Recreation Center | 3.5 employees per tsf | 2 |
| Day Care Center | 0.12 employees per tsf | 2 |
| Fire Station | 3.5 employees per tsf | 2 |
| Church | 3.5 employees per tsf | 2 |
| Library | 2 employees per tsf | 2 |
| Golf Course | 0.6 employees per acre | 2 |
| Park | 0.075 employees per acre | 2 |
| School | 0.1 employees per acre | 2 |
| Light Industrial | 3 employees per tsf | 1,2 |
| Warehousing | 1.5 employees per tsf | 1,2 |
| RV Park | 0.075 per acre | 1 |
| Green Industrial | 600 employees per facility<br>(1,200,000 SF for 1 Facility/campus) | 1,2 |
| Manufacturing | 2,500 employees per facility<br>(3,300,000 SF for 1 Facility/campus) | 1,2 |
| Solar | 2.25 per tsf | 1 |
| Agriculture | 0.03 per tsf | 3 |
| Playas Renewable | 50 employees per facility | 1,2 |

**Source:** Iteris, July 2025
**Note:** tsf – thousand square feet