INITIAL STUDY #21-23

General Plan Amendment #21-02
Site Utilization Plan Revision #12
to Planned Development (P-D) #8
Site Plan Review #473
Lot Split #21-04

SOUTHEAST CORNER OF LOUGHBOROUGH DRIVE
AND MEADOWS AVENUE
Assessor's Parcel Numbers: 058-030-028

Proposed Mixed-Use Project with 161 Multi-Family Units
and a Medical/Dental Clinic

Table of Contents

Initial Study #21-23
List of Figures

CITY OF MERCED
PLANNING & PERMITTING DIVISION

TYPE OF PROPOSAL: General Plan Amendment #21-02, Site Utilization Plan Revision #12 to Planned Development (P-D) #8, Site Plan Review #473, and Lot Split #21-04 to construct a 161-unit, three-story apartment complex and a 12,666-square-foot medical/dental clinic

INITIAL STUDY: #21-23

DATE RECEIVED: June 30, 2021 (date application determined to be complete)

LOCATION: Southeast corner of Loughborough Drive and Meadows Avenue

ASSESSOR'S PARCEL NUMBERS: 058-030-028

Please forward any written comments by October 20, 2021, to:

Julie Nelson, Senior Planner
City of Merced Planning & Permitting Division
678 West 18th Street
Merced, CA 95340

Applicant Contact Information:

APPLICANT	OWNER
Upholdings, LLC 7370 N. Lincoln Ave., Ste. A Lincolnwood, IL 60712	Ashley Investments, LLC 1530 W. Main St. Merced, CA 95340

General Plan and Zoning Designations

Current General Plan Designation: Regional/Community Commercial (RC) – refer to the General Plan and Zoning Map at Figure 3 on page 12.

Current Zoning Designation: Planned Development (P-D) #8 – refer to the General Plan and Zoning Map at Figure 3.

Project Site

The proposed project is generally located in the northwestern portion of the City (refer to the vicinity map provided at Figure 1). The project site is an approximately 6.95-acre site located on the southeast corner of Loughborough Drive and Meadows (Figure 2). The project site is currently vacant and covered with native vegetation. There are sidewalks on the north and west sides of the project site and the site is adjacent to developed lots to the south and east. The surrounding land uses are shown on the map at Figure 2 on page 11 and listed in the table on Page 2.

Surrounding Land	Existing Use of Land	Zoning Designation	City General Plan Land Use Designation
North	Apartments (across Loughborough Drive)	P-D #8	High-Medium Density Residential (HMD)
South	Apartments & Commercial	P-D #7	High-Medium Density Residential (HMD) & Regional Community Commercial (RC)
East	Commercial (formerly In-Shape)	P-D #8	Low-Medium Density Residential (LMD)
West	Apartments (across Meadows Avenue)	P-D #8	High-Medium Density Residential (HMD)

Project Description

The proposed project would subdivide the existing 6.9-acre parcel into three separate parcels (Parcel A, B, and C) (Figure 4 on page 13) to construct a 161-unit apartment complex, including a community/office building, open space, a dog park, a 12,667-square-foot medical and dental clinic, and associated parking for the apartments and clinic (refer to the Site Plan at Figure 5 on page 14). As shown on the site plan, Parcel A, which would be 3.61 acres, would have 10 apartment buildings, the community building, open space, dog park, and parking. Parcel B, which would be 1.98 acres, would include 7 apartment buildings, open space, and parking. Parcel C, which would be 1.34 acres, would include the clinic and related parking. The apartment project would provide a density of 29 units per acre (gross).

The proposed project includes the following applications:

- General Plan Amendment #21-02 to change 5.59 acres from Regional/Community Commercial (RC) to High Density Residential (HD).
- Site Utilization Plan Revision #12 to Planned Development (P-D) #8 to change the land use designation within P-D #8 from High-Medium Density Residential (12-24 units/acre) for 5.59 acres to High-Density Residential (24 to 36 units/acre) to allow the construction of 161 units and to change the land use designation for 1.34 acres from High-Medium Density Residential to Office to allow the construction of the medical/dental clinic.
- Site Plan Review #473 is required in compliance with Zoning Ordinance Section 20.20.020 (Q) , a Site Plan Review is required for all projects within a Planned Development to address conformance with the standards for the Planned Development.
- Lot Split #21-04 would subdivide the existing 6.9-acre lot into 3 individual parcels as described above.

Processes and Procedures

The City Council takes final action to approve or deny a General Plan Amendment upon recommendation by the Planning Commission. A public hearing shall be held before both the Planning Commission and City Council. A General Plan Amendment becomes effective immediately following the adoption of the resolution by the City Council.

Within a Planned Development, specific land uses are identified with the Site Utilization Plan. Per Zoning Ordinance Section 20.20.020 (Planned Development (P-D) Zoning Districts), subsection N, "A public hearing by the Planning Commission and City Council shall be required prior to approval of significant revisions to the Site Utilization Plan (SUP) which involve changes in land use, expansion or intensification of development or changes in the standards of development." Because the proposed change involves a land use change, an intensification of the density, and changes in the development standards, this request must be reviewed by the Planning Commission for a recommendation to the City Council, with City Council taking final action. A Site Utilization Plan Revision is approved by Ordinance which requires a second reading/adoption after introduction by the City Council and would become effective 30 days after the second reading.

As previously discussed, a Site Plan Review Permit is required per the Zoning Ordinance. In accordance with Zoning Ordinance Section 20.66.040 (C), if a project requires multiple approvals by the Planning Commission and the Development Services Department, the Planning Commission shall act upon all required permits as part of a single application. Therefore, the Site Plan Review application would be presented to the Planning Commission along with the General Plan Amendment and Site Utilization Plan Revision. The Planning Commission Action would be the final action on the Site Plan Review (subject to appeal to the City Council). However, if the Planning Commission approves the Site Plan Review application, the approval would only be effective if the City Council approves the General Plan Amendment and Site Utilization Plan Revision.

The Lot Split is an administrative process and would be reviewed and approved by the City's Minor Subdivision Committee. Once the tentative parcel map is approved, the developer is required to submit a final parcel map for review and recording to finalize the Lot Split.

Planned Development (P-D) #8 Development Standards

As part of the Site Utilization Plan Revision, standards are being proposed for the project. These standards include the density, setback requirements, building height, etc. The table below sets forth the proposed standards for this project within P-D #8.

PLANNED DEVELOPMENT #8 SITE UTILIZATION PLAN REVISION #12 MERCY VILLAGE APARTMENTS	
MULTI-FAMILY STANDARDS	
DESIGN CATEGORY	DESIGN/DEVELOPMENT STANDARD
Density	24 to 36 dwelling units/acre for this project
Land Use	High Density Residential uses including all uses as shown in Table 20.08-1 for property Zoned R-4. All uses are subject to the review process specified in Table 20. 80-1.
Building Height	40 ft.
Maximum Lot Coverage	65%
Minimum Distance Between Main Buildings	10 ft.

DESIGN CATEGORY	DESIGN/DEVELOPMENT STANDARD
Setback Requirements	Exterior Yard – Minimum 20 Ft. Interior Yard Setback – One Yard - Minimum 10 Ft. Other Yards – Minimum 6 Ft.* *Minimum 10-foot setback for structures over 25 ft. in height; 1 additional foot setback for each additional 5 ft. in height. Projections – architectural features may project a maximum of 5 Ft. into an exterior yard setback. All other projections shall comply with Table 20.26-1 of the Zoning Ordinance.
Building Design & Building Materials	All building designs shall be consistent with the elevations provided and approved with Site Utilization Plan Revision #12 for Planned Development (P-D) #8, unless otherwise approved by the Director of Development Services. All materials shall be of high-quality and be consistent or better than those provided and approved with Site Utilization Plan Revision #12 for Planned Development (P-D) #8, unless otherwise approved by the Director of Development Services. All paint colors shall be approved by the Director of Development Services or his/her designee at the building permit stage. If mechanical equipment is mounted to the roof, it shall be screened from public view. At the discretion of the Director of Development Services, all design and/or material changes may be referred to the Site Plan Committee for approval.
Fencing	Fencing along Loughborough Drive and Meadows Avenue shall be of high-quality materials, such as wrought-iron or tubular steel. Side-yard fencing along the eastern and southern property lines may be wood or other material approved by the Director of Development Services. Pedestrian access shall be provided to Loughborough Drive and Meadows Avenue and between Parcels A, B, and C. If the project has gated vehicular access, a minimum 20-foot stacking distance at each entrance shall be provided and all gates shall meet the requirements of the Fire and Police Departments for emergency access.

DESIGN CATEGORY	DESIGN/DEVELOPMENT STANDARD
Parking	As part of an affordable housing project with at least 50% of the total number of units designated for low- and very low-income tenants, the following shall apply: The parking provided throughout the site on Parcels A, B, and C may be combined to meet the parking requirements for the entire project. The parking spaces for the Clinic (Parcel C) may be counted towards the parking requirement for the multi-family uses. Due to the proximity of bus stops to the site, a 5% reduction in parking is allowed in accordance with Zoning Ordinance Section 20.38.050 (E). In consideration for providing affordable housing units, an additional reduction of up to 12% in the required parking spaces shall be allowed. Vehicular parking spaces, with the exception of compact spaces, shall have a width of 9 feet and a depth of not less than 18 feet (including a 2-foot overhang beyond the curb or wheel stop). Compact Parking spaces are allowed with a minimum width of 8.0 feet and a minimum depth of 16 feet. A maximum of 25% of the total parking spaces may be compact spaces. Bicycle parking spaces shall be provided as required by Zoning Ordinance Section 20.38.080. If a project is constructed that does <u>not</u> provide at least 50% of all units as affordable housing for very low- and low-income residents, all parking shall be provided as required by Zoning Ordinance Section 20.38.
Private Outdoor Space	Each unit shall be provided with a usable outdoor space that is a minimum of 40 square feet. Private outdoor space shall be screened with solid or near-solid fencing/railings. Materials shall be compatible with the building materials.
Signing	Signing shall comply with the Merced Municipal Code Section 17.36.572, as applicable, and the North Merced Sign Ordinance as applicable.
General Design Standards as required by Section 20.46.030 of the City of Merced Zoning Ordinance	The Project shall comply with these requirements, except as permitted by other design standards approved by Site Utilization Plan Revision #12 to P-D #8.
Specific Design Standards as required by Section 20.46.040 of the City of Merced Zoning Ordinance	The Project shall comply with these requirements, except as permitted by other design standards approved by Site Utilization Plan Revision #12 to P-D #8.

COMMERCIAL OFFICE (CLINIC) STANDARDS	
DESIGN CATEGORY	DESIGN/DEVELOPMENT STANDARD
Land Use	Medical/Dental Clinic including all uses as shown in Table 20.10-1 for property Zoned Commercial Office (C-O) All uses are subject to the review process specified in Table 20.10-1.
Building Height	40 Ft.
Setback Requirements	Exterior Yard – Minimum 20 Ft. Interior Yard Setback – One Yard - Minimum 10 Ft. Other Yards – Minimum 6 Ft.* *Minimum 10-foot setback for structures over 25 ft. in height; 1 additional foot setback for each additional 5 ft. in height. Projections – architectural features may project a maximum of 5 Ft. into an exterior yard setback. All other projections shall comply with Table 20.26-1 of the Zoning Ordinance.
Maximum Lot Coverage	n/a
Building Design & Building Materials	All building designs shall be consistent with the elevations provided and approved with Site Utilization Plan Revision #12 for Planned Development (P-D) #8, unless otherwise approved by the Director of Development Services. All materials shall be of high-quality and be consistent or better than those provided and approved with Site Utilization Plan Revision #12 for Planned Development (P-D) #8, unless otherwise approved by the Director of Development Services. All paint colors shall be approved by the Director of Development Services or his/her designee at the building permit stage. If mechanical equipment is mounted to the roof, it shall be screened from public view. At the discretion of the Director of Development Services, all design and/or material changes may be referred to the Site Plan Committee for approval.

DESIGN CATEGORY	DESIGN/DEVELOPMENT STANDARD
Parking	As part of an affordable housing project with at least 50% of the total number of units designated for low- and very low-income tenants, the following shall apply: The parking provided throughout the site on Parcels A, B, and C may be combined to meet the parking requirements for the entire project. The parking spaces for the Clinic (Parcel C) may be counted towards the parking requirement for the multi-family uses. Due to the proximity of bus stops to the site, a 5% reduction in parking is allowed in accordance with Zoning Ordinance Section 20.38.050 (E). In consideration for providing affordable housing units, an additional reduction of up to 12% in the required parking spaces shall be allowed. Vehicular parking spaces, with the exception of compact spaces, shall have a width of 9 feet and a depth of not less than 18 feet (including a 2-foot overhang beyond the curb or wheel stop). Compact Parking spaces are allowed with a minimum width of 8.0 feet and a minimum depth of 16 feet. A maximum of 25% of the total parking spaces may be compact spaces. Bicycle parking spaces shall be provided as required by Zoning Ordinance Section 20.38.080. If a project is constructed that does <u>not</u> provide at least 50% of all units as affordable housing for very low- and low-income residents, all parking shall be provided as required by Zoning Ordinance Section 20.38.
Fencing	Fencing along Loughborough Drive or visible from Loughborough Drive shall be of high-quality materials, such as wrought-iron or tubular steel. Side-yard fencing along the eastern and southern property lines may be wood or other material approved by the Director of Development Services. Pedestrian access shall be provided to Loughborough Drive and Meadows Avenue and between Parcels A, B, and C. If the project has gated vehicular access, a minimum 20-foot stacking distance at each entrance shall be provided and all gates shall meet the requirements of the Fire and Police Departments for emergency access.
Signing	All signing shall comply with the North Merced Sign Ordinance.

Building and Site Design

The proposed project would construct 161 multi-family units within seventeen buildings (three two-story and fourteen three-story buildings) on Parcels A and B, and a 12,667.5-square-foot medical/dental clinic on Parcel C as shown on the Site Plan at Figure 5 on page 14. The site provides a total of 271 parking spaces to serve the development. There are 190 spaces on Parcels A and B to serve the multi-family component of the development. Some of these spaces would be located in carports built into the ground floor of the buildings. Parcel C would have 81 spaces to serve the clinic and provide additional parking for the apartments. The clinic would be separated from the apartment complex by a fence with a gate allowing access from one parking lot to the other.

The apartment complex would have access from Loughborough Drive and Meadows Avenue. The clinic would have access from Loughborough Drive. There would also be access through the gate between the clinic and the apartment complex that would allow emergency access to Loughborough Drive and Meadows Avenue (refer to the Site Plan at Figure 5).

There are four different building types identified on the site plan at Figure 5 for the multi-family component of the project – Building types A, B, C, and D. Buildings type A and B would be two-story buildings with a total of 5 units in each building, plus six covered parking stalls and covered bike parking on the ground floor. Buildings type A and B would have the same unit mix of two- and three- bedroom units (refer to the Floor Plans at Figures 6 and 7 on pages 15 and 16). The building elevations for Buildings type A and B would be the same with the exception of the roof slope (see Figures 8 and 9 on pages 17 and 18). The highest point of the buildings would be 30 feet. There are two type A and one type B buildings on the site.

Building type C is a three-story building. Building type C has 10 units in each building plus six covered parking stalls and covered bike parking on the ground floor. This building type has a mixture of one-, two-, and three-bedroom units (refer to the floor plan at Figure 10 on page 19). The building elevations are provided at Figure 11 on page 20. There are eight type C buildings on the site.

Building type D is also a three-story building and has 11 units per building plus six covered parking stalls and covered bike parking on the ground floor. Building type D has a mixture of one-, two-, and three-bedroom units (Figure 12 on page 21). The building elevations are the same as Building Type C, with the exception of the roof slope (Figure 13 on page 22). These buildings would be 39 feet tall at the highest point. There are six type D buildings.

As described above, the floor plans for each building include a mixture of unit types. The table below shows the number of bedrooms and bathrooms in each unit type, the total square footage of each unit type, and the total number of each unit type provided. Each unit is provided with a balcony/patio or porch area of at least 50 square feet. Additionally, roof-top solar panels will be installed on each residential building and the community/office building.

Unit No.	Bedrooms	Baths	Square Feet	No. of Units
101	2	1	927.5	17
102	1	1	645.5	6
103	1	1	655.5	6
201	2	1	905.5	31

202	3	2	1296.5	42
203a	3	2	1359	3
203b	1	1	663	28
204	1	1	668.5	28
			Total Units	161

The table below provides the number of each unit type within each building type.

Building Type	101	102	103	201	202	203a	203b	204	Total Units/Building	No. of Buildings
A	1			1	2	1			5	2
B	1			1	2	1			5	1
C	1			2	3		2	2	10	8
D	1	1	1	2	2		2	2	11	6

The table below provides the total number of one-, two-, and three-bedroom units provided in the project.

One Bedroom	68
Two Bedroom	48
Three Bedroom	45
Total	161

The Community/Office building would be a single-story building consisting of 3,870.5 square feet of floor area. The building would include a multi-purpose room for tenants, a gym, laundry facilities, a kitchen, bathrooms, four offices, a conference room, a mail room, and maintenance area (refer to the floor plan at Figure 12 on page 21). The architecture of the building would match the apartments (see the building elevations at Figure 12). The highest point of the building would be 22' 3". The amenities provided by this building would be for tenants only and would not be open to the public.

The medical/dental clinic would be located on Parcel C and is 12,667.5 square feet. The clinic would provide 8 dental chairs, two chiropractic rooms, two behavioral health offices, fifteen exam rooms, an x-ray room, lab, administrative office space, a break room, reception and waiting area. The clinic will be a Federally Qualified Health Center (FQHC). FQHC's provide services to anyone in need, but traditionally see lower-income patients. The clinic will offer a full scope of services, including primary care, dental, women's health services, lab testing, and mental and behavior health services. The hours of the clinic are anticipated to be from 8:00 a.m. to 5:00 p.m., Monday through Friday, but could vary slightly. The architecture of the building would be compatible with the apartments, but has different architectural features and different materials. The building would be single-story with the highest point of the building being 21 feet. The floor plan and elevations for the clinic are provided at Figure 13 on page 22.

Figure 1
Proximity Map

Figure 2
Subject Site & Surrounding Uses

Figure 3 - Proposed Land Use Changes

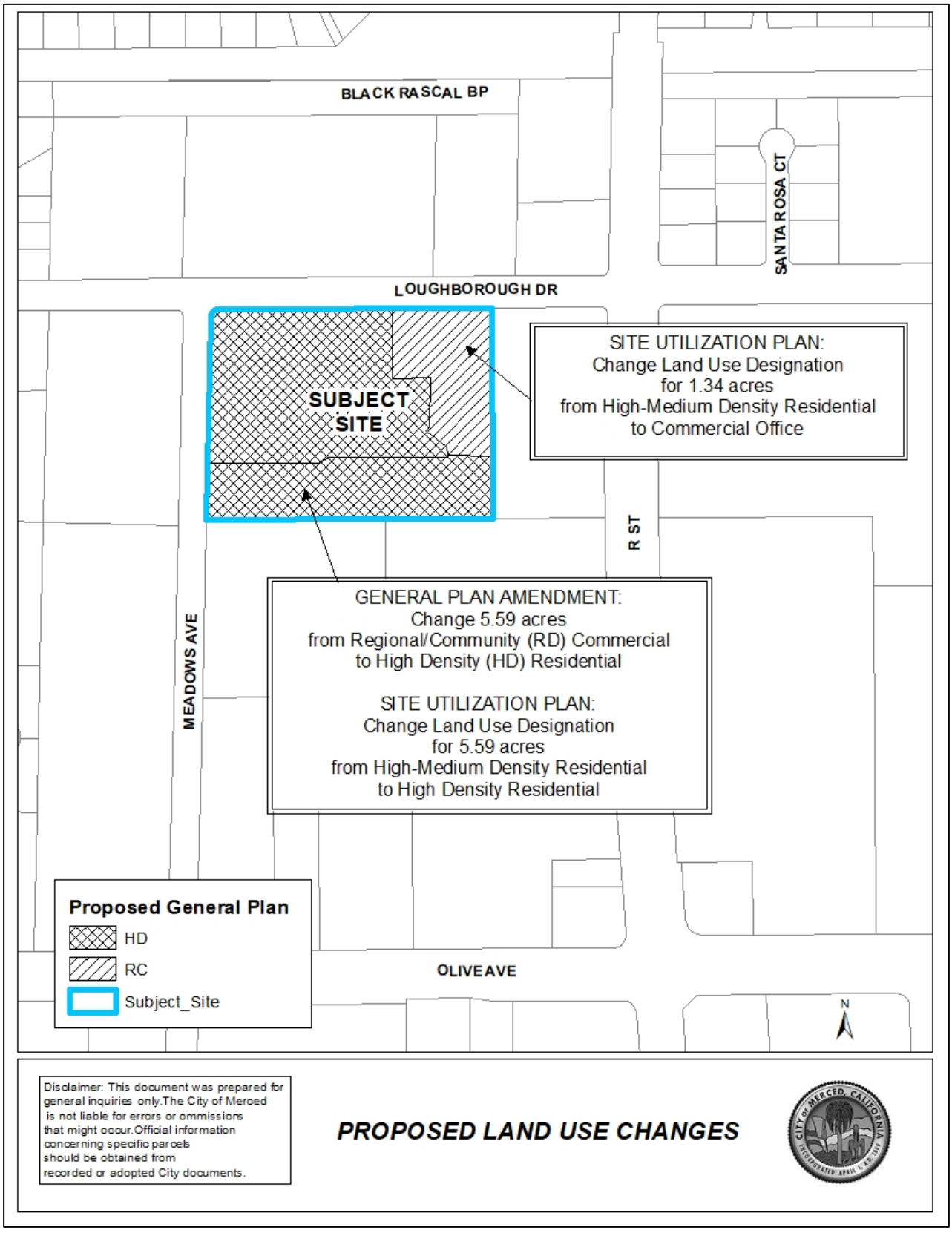


Figure 4 – Tentative Subdivision Map

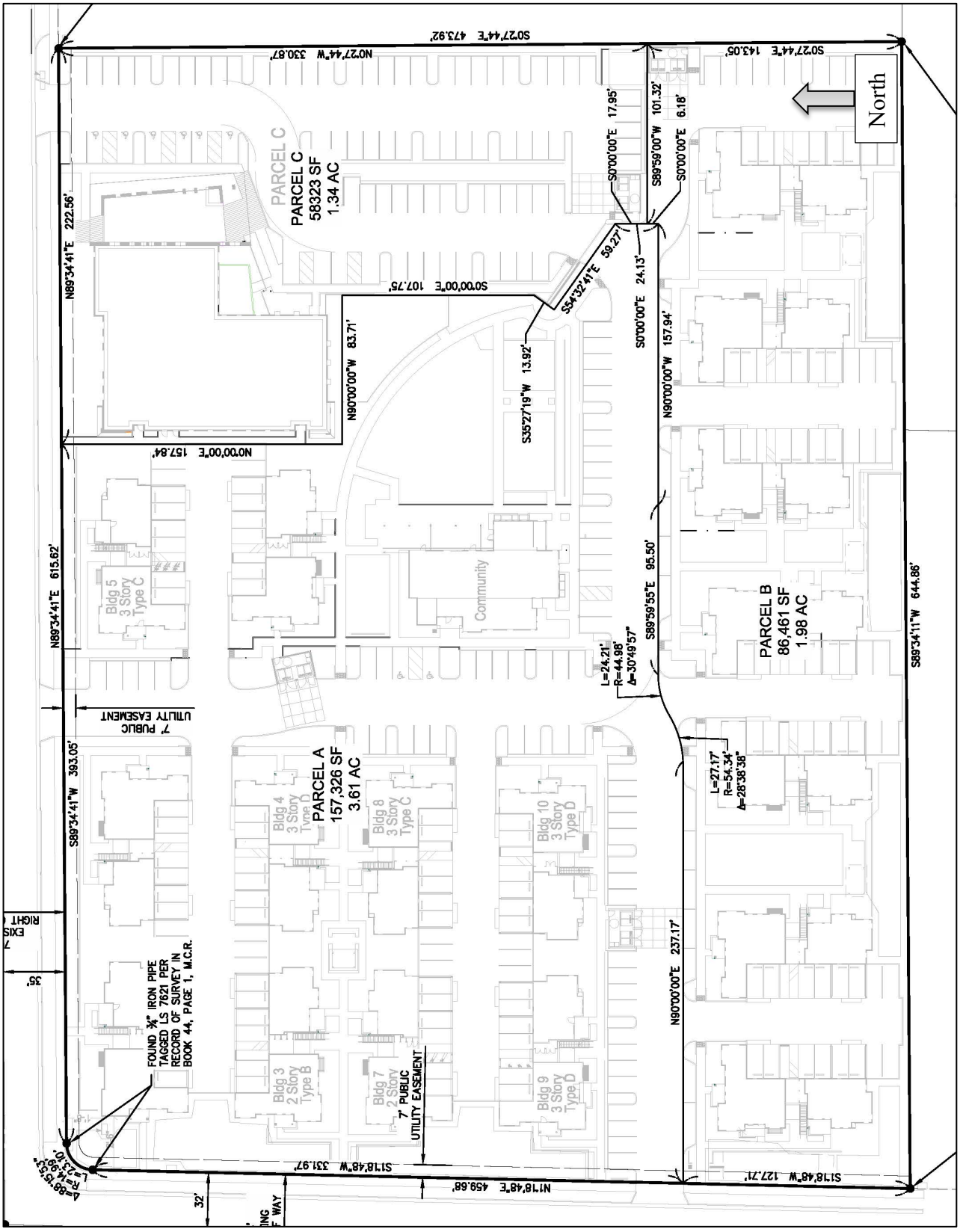


Figure 5 – Site Plan

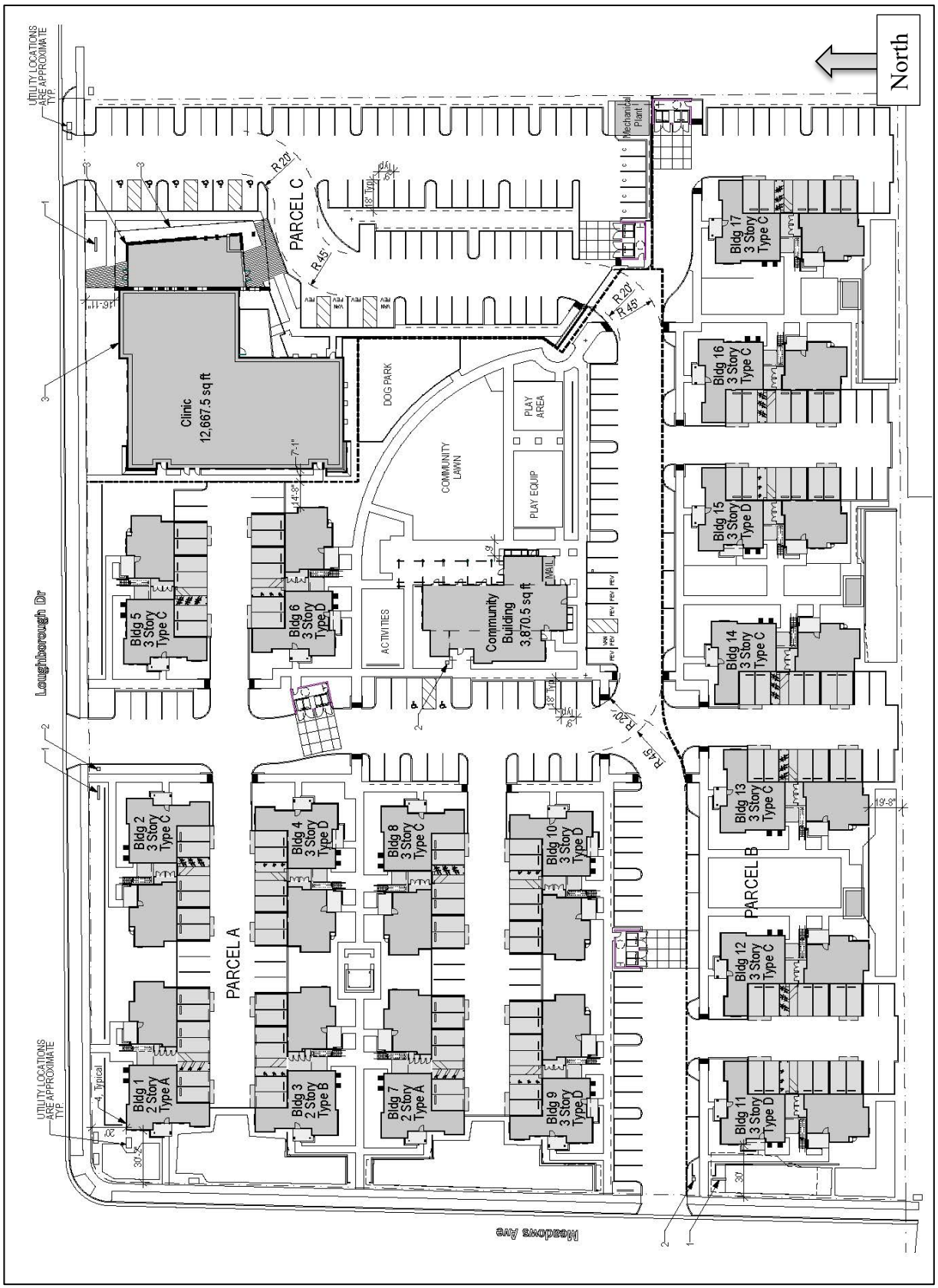
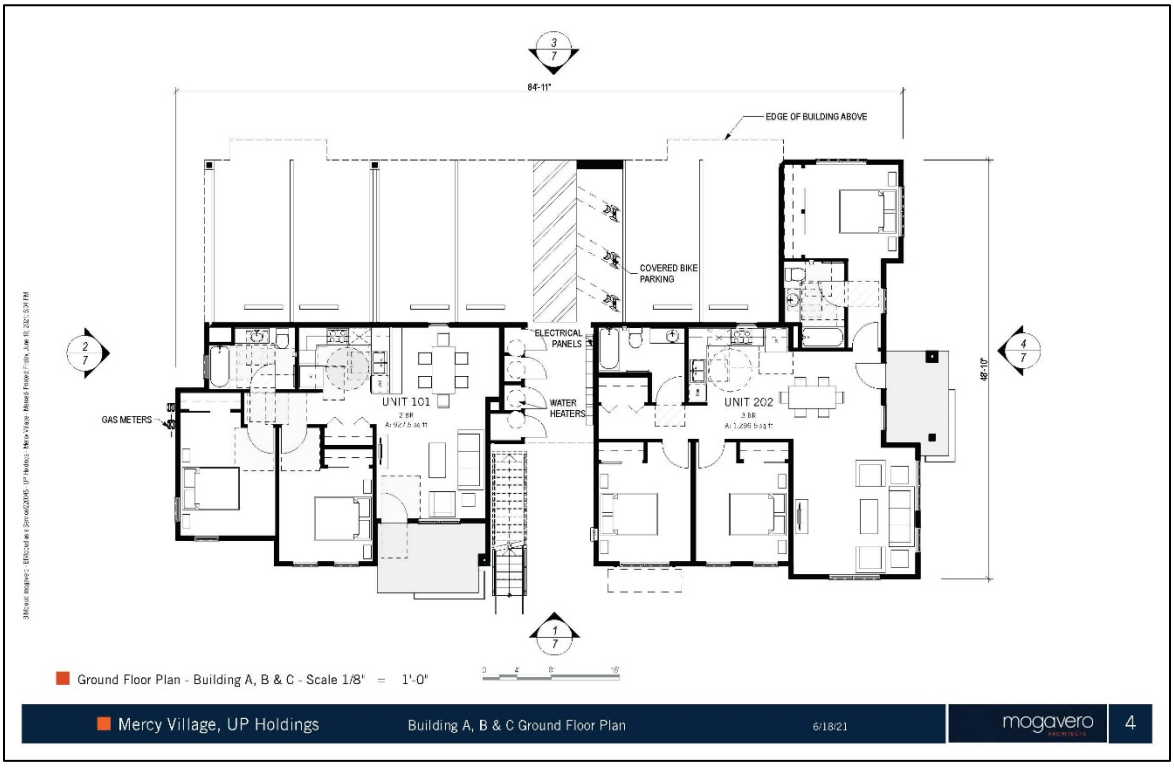


Figure 6 - Floor Plan Building Types A & B



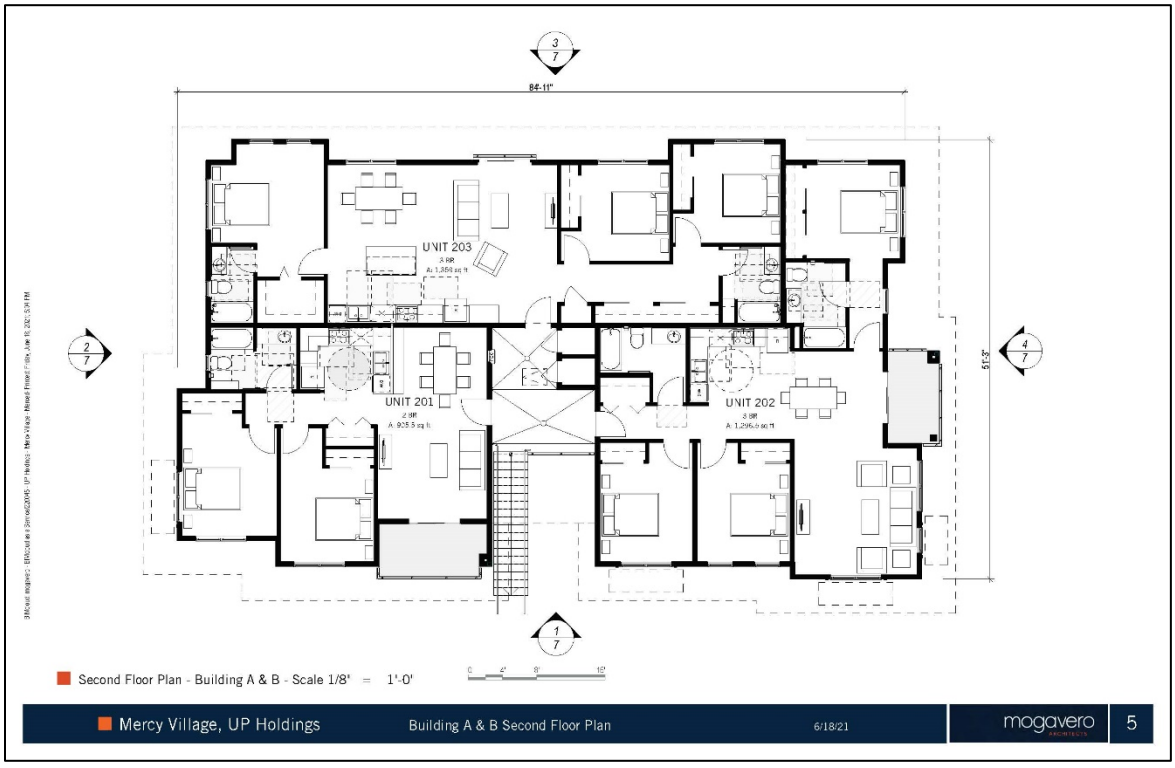
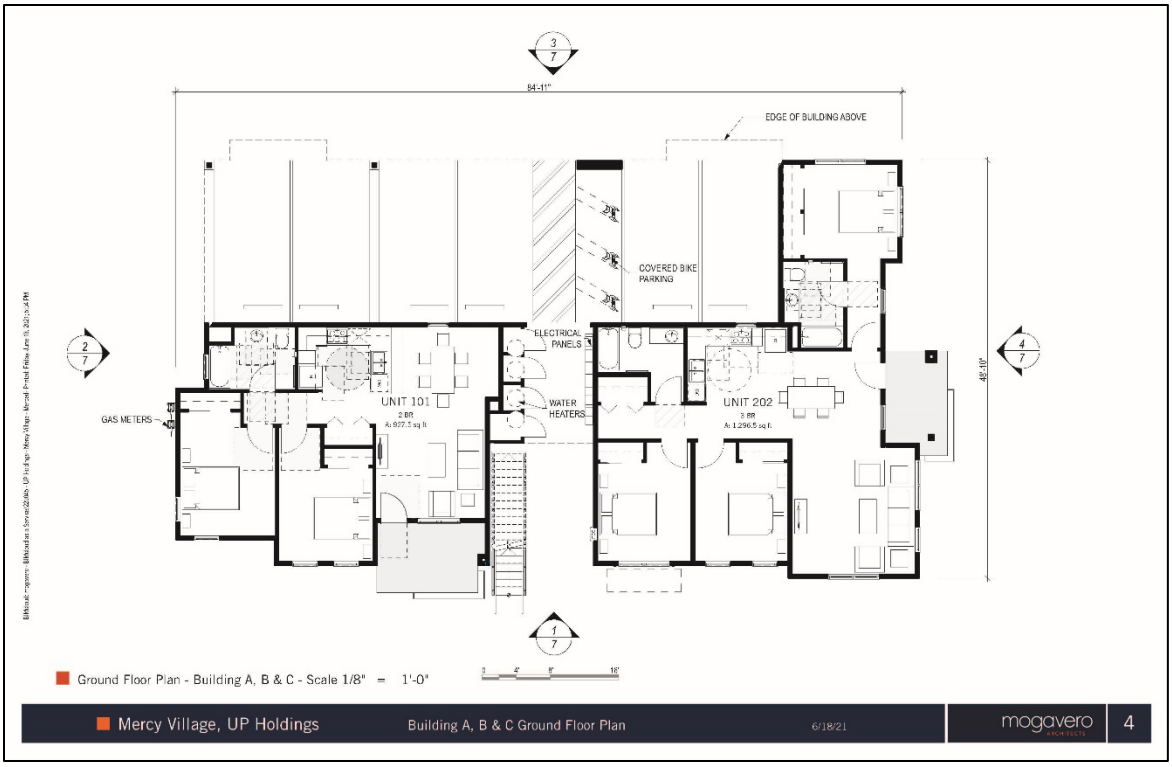


Figure 7 – Elevations – Building Types A & B

Building Type A

Building Type B

Figure 8 – Floor Plan – Building Type C



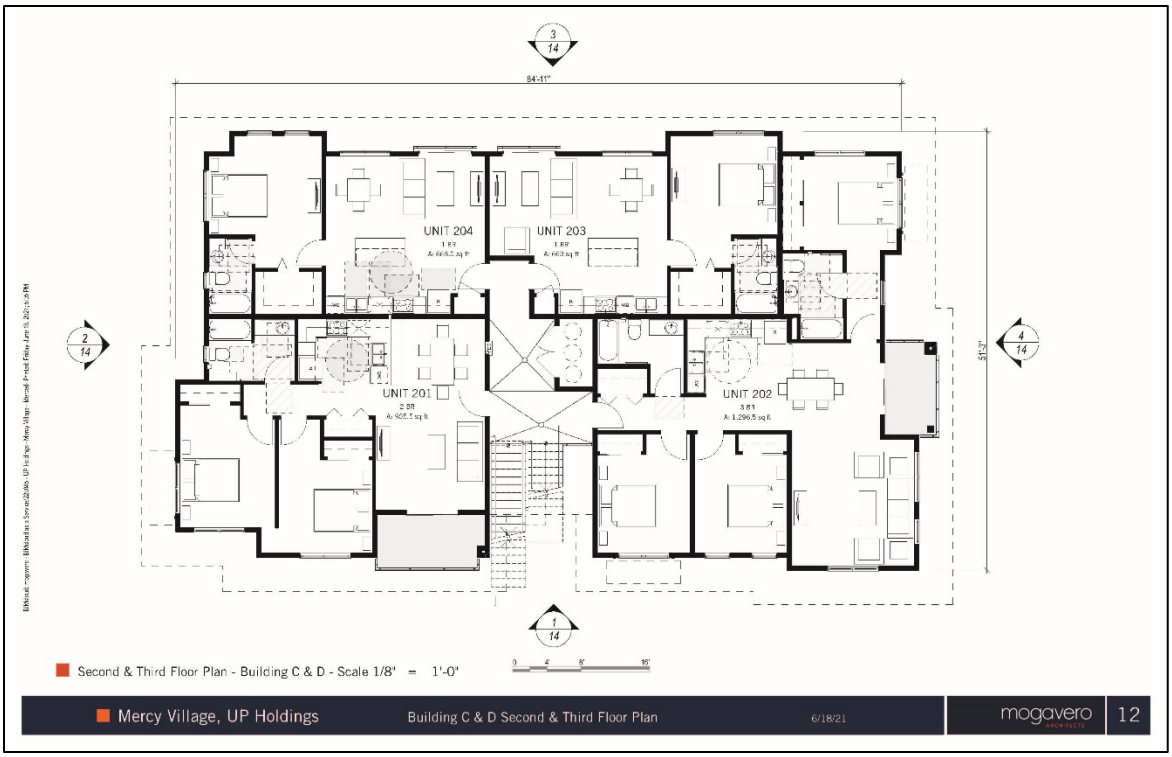


Figure 9 – Elevations – Building Type C

Figure 10 – Floor Plan – Building Type D

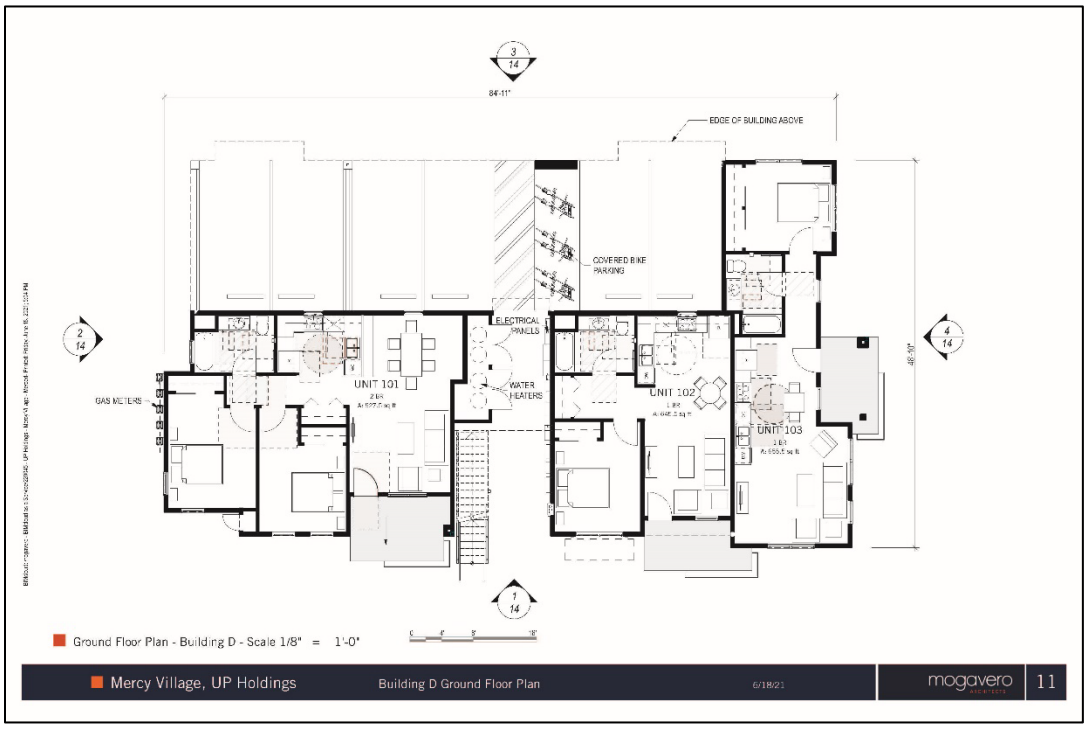


Figure 11 – Elevations – Building Type D

See Figure 9 for Building Perspectives

Figure 12 – Floor Plan and Elevation – Community/Office Building

Figure 13 – Floor Plan and Elevation – Clinic


PARCEL C
Ground Floor Plan - Clinic - Scale 1" = 20'
Mercy Village, UP Holdings
Clinic Ground Floor Plan
6/18/21
mogavero
23


Clinic North Elevation - Scale 3/32" = 1'-0"
Clinic East Elevation - Scale 3/32" = 1'-0"
Clinic South Elevation - Scale 3/32" = 1'-0"
Clinic West Elevation - Scale 3/32" = 1'-0"
Mercy Village, UP Holdings
Clinic Elevations
mogavero
24

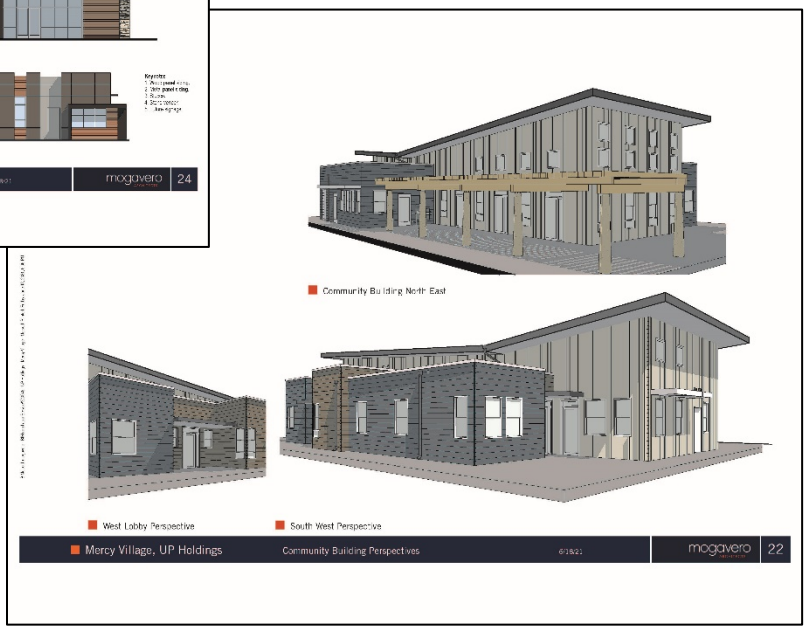
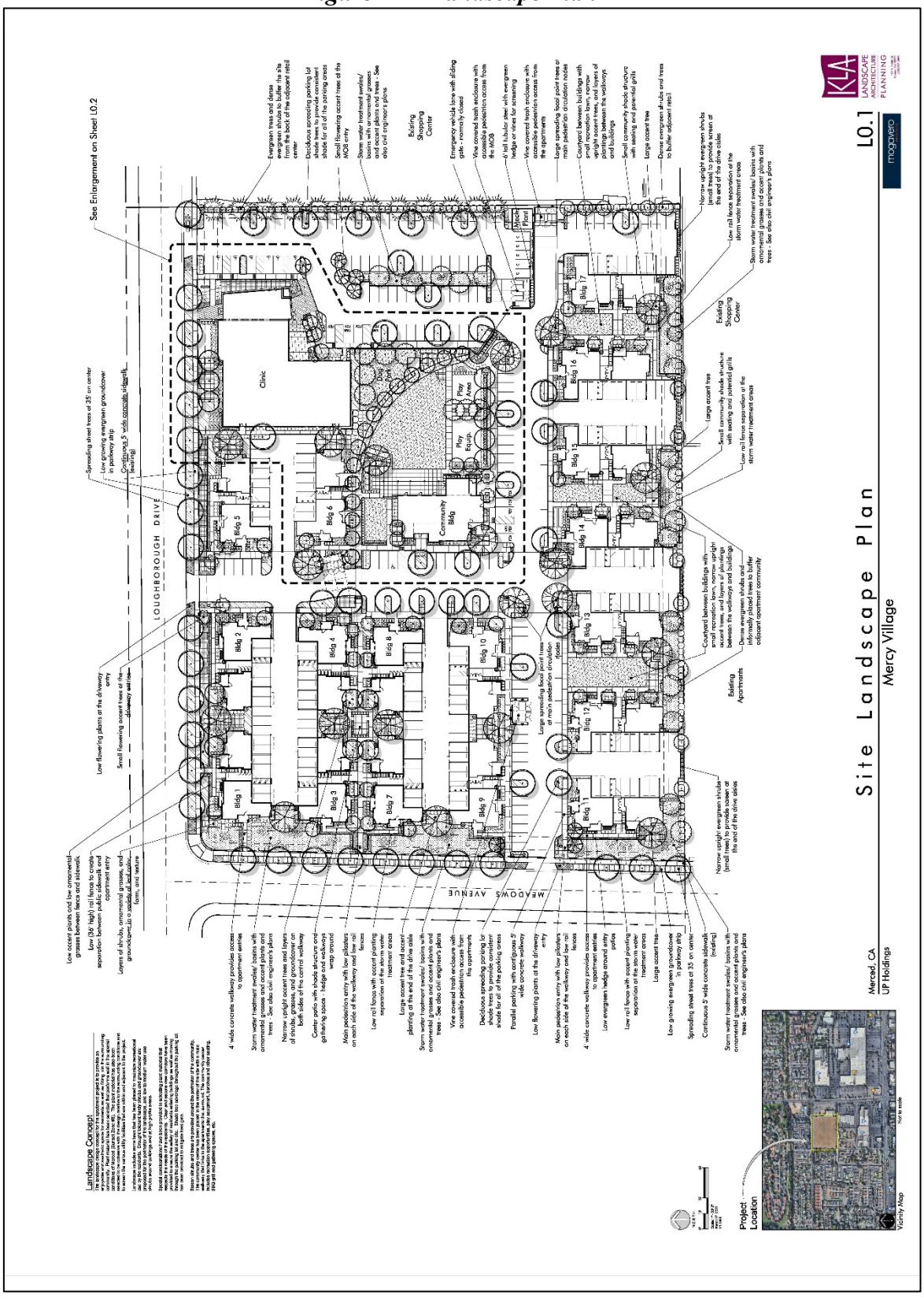

Community Building North East
West Lobby Perspective
South West Perspective
Mercy Village, UP Holdings
Community Building Perspectives
6/18/21
mogavero
22

Figure 14 – Landscape Plan



Background

Background

Planned Development #8 was established in 1970 upon annexation of this property and the surrounding land to the north and west. At that time, the land use for this site was anticipated to be a commercial use. However, the site was never developed. In 1981, the land use designation for the Site Utilization Plan was changed to Regional Commercial which was consistent with the General Plan designation of the site. In 1986, the Site Utilization Plan land use designation was changed to Elderly Care Facility, but also retained the commercial land use designation for a shopping center. The elderly care facility was never constructed. In 2006, the land use designation for the site was changed from elderly care facility to High-Medium Density Residential to allow the construction of 78 townhouses. This project was never constructed.

A. INITIAL FINDINGS

A. The proposal is a project as defined by CEQA Guidelines Section 15378.

B. The project is not a ministerial or emergency project as defined under CEQA Guidelines (Sections 15369 and 15369).

C. The project is therefore discretionary and subject to CEQA (Section 15357).

D. The project is not Categorically Exempt.

E. The project is not Statutorily Exempt.

F. Therefore, an Environmental Checklist has been required and filed.

B. CHECKLIST FINDINGS

A. An on-site inspection was made by this reviewer on September 1, 2021.

B. The checklist was prepared on September 28, 2021.

C. The *Merced Vision 2030 General Plan* and its associated EIR (SCH# 2008071069) were certified in January 2012. The document comprehensively examined the potential environmental impacts that may occur as a result of build-out of the 28,576-acre Merced SUDP/SOI. For those significant environmental impacts (Loss of Agricultural Soils and Air Quality) for which no mitigation measures were available, the City adopted a Statement of Overriding Considerations (City Council Resolution #2011-63). This document herein incorporates by reference the *Merced Vision 2030 General Plan, the General Plan Program EIR* (SCH# 2008071069), and Resolution #2011-63.

As a subsequent development project within the SUDP/SOI, many potential environmental effects of the Project have been previously considered at the program level and addressed within the General Plan and associated EIR. (Copies of the General Plan and its EIR are available for review at the City of Merced Planning and Permitting Division, 678 West 18th Street, Merced, CA 95340.) As a second-tier environmental document, Initial Study #21-23 plans to incorporate goals, policies, and implementing actions of the *Merced Vision 2030 General Plan*,

along with mitigation measures from the General Plan EIR, as mitigation for potential impacts of the Project.

Project-level environmental impacts and mitigation measures (if applicable) have been identified through site-specific review by City staff. This study also utilizes existing technical information contained in prior documents and incorporates this information into this study.

Project-level environmental impacts have been identified through site-specific review by City staff. This study also utilizes existing technical information contained in prior documents and incorporates this information into this study.

C. ENVIRONMENTAL IMPACTS:

Will the proposed project result in significant impacts in any of the listed categories? Significant impacts are those which are substantial, or potentially substantial, changes that may adversely affect the physical conditions within the area affected by the project including land, air, water, minerals, flora, fauna, ambient noise, and objects of historic or aesthetic significance. An economic or social change by itself shall not be considered a significant effect on the environment. A social or economic change related to a physical change may be considered in determining whether the physical change is significant. (Section 15372, State CEQA Guidelines. Appendix G of the Guidelines contains examples of possible significant effects.)

A narrative description of all "potentially significant," "negative declaration: potentially significant unless mitigation incorporated," and "less than significant impact" answers are provided within this Initial Study.

ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED:

The environmental factors checked below would be potentially affected by this project, involving at least one impact that is a “Potentially Significant Impact,” as indicated by the checklist on the following pages.

X	Aesthetics		Agriculture/Forestry Resources	X	Air Quality
X	Biological Resources	X	Cultural Resources	X	Energy
X	Geology/Soils	X	Greenhouse Gas Emissions	X	Hazards and Hazardous Materials
X	Hydrology/Water Quality	X	Land Use/Planning		Mineral Resources
X	Noise	X	Population/Housing	X	Public Services
X	Recreation	X	Transportation		Tribal Cultural Resources
X	Utilities/Services Systems	X	Wildfire	X	Mandatory Findings of Significance

DETERMINATION

On the basis of this initial evaluation:

I find that although the proposed project could have a significant effect on the environment, there will not be a significant effect in this case because revisions in the project have been made by or agreed to by the project proponent. A MITIGATED NEGATIVE DECLARATION will be prepared.

Prepared by: _____ 9/29/21
Julie Nelson, Senior Planner — Date

Approved by: _____ 9/30/21
Kim Espinosa, Planning Manager
Environmental Coordinator, City of Merced — Date

Distributed for Public Review: September 30, 2021

1) Aesthetics

SETTING AND DESCRIPTION

The project site consists of approximately 6.9 acres of land generally located at the southeast corner of Loughborough Drive and Meadows Avenue in the northwest portion of the City. The site is currently vacant, but is surrounded by urban development. Multi-family residential units abut the site to the south, as well as across Loughborough Drive to the north and across the Meadows Avenue to the west. Commercial uses are located adjacent to the site to the east and south. The multi-family dwellings in the area are all one- and two-story units measuring from 15 to 25 feet in height. The commercial buildings in the immediate area are approximately 30 feet in height.

The site is not located within a designated scenic corridor and there are no scenic vistas visible from the site. The topography of the site is level and there are no outstanding features noted.

The proposed project would include the construction of three two-story buildings, fourteen three-story buildings, a community/office building for the apartment complex and a medical/dental clinic. The two-story buildings would have a height of 30' at the highest point and the three-story buildings would be 39' tall at the highest point. The community/office building would be 22' 3" at the highest point and the clinic would be 21' tall at the highest point. The three two-story apartment buildings are located near the corner of Loughborough Drive and Meadows Avenue. The fourteen three-story buildings are located along Loughborough Drive and Meadows Avenue and spread throughout the remainder of Parcels A and B. All the buildings would have a minimum 20-foot setback from Loughborough Drive and a 30-foot setback from Meadows Avenue. Refer to the site plan at Figure 5 on page 14 for the location of the buildings.

The site would be enhanced with landscaping along the perimeter and between the buildings as well as parking lot trees (refer to the Landscape Plan at Figure 14 on Page 23 for the conceptual landscape plan for the site).

Parking lot lighting and exterior building lighting would be added to the site.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
1. Aesthetics. Will the project:				
a) Have a substantial adverse effect on a scenic vista?				✓
b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?				✓

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
c) In non-urbanized areas, substantially degrade the existing visual character or quality of public views of the site and its surroundings? (Public views are those that are experienced from publicly accessible vantage point). If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality?			✓	
d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?		✓		

Impact Analysis

Would the project:

a) *Have a substantial adverse effect on a scenic vista?*

The site is not designated as a scenic vista and is not located near any designated scenic vistas. Therefore, the project would not have any adverse impacts on a scenic vista and there would be **no impact**.

b) *Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?*

There are no officially designated State Scenic Highways or Routes in the project vicinity. Therefore, the project would have **no impact** on scenic resources, such as rock outcroppings, trees, or historic buildings within a scenic highway.

c) *If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality?*

The City's zoning ordinance does not regulate scenic quality other than building height and general aesthetics. The site is currently vacant and development would enhance the site and prevent future blight issues. Therefore, any changes to the visual character of the site would be a **less than significant impact.**

d) *Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?*

The General Plan Amendment and Zone Change would not create any additional source of light or glare that would affect views in the area. The construction of the project would add artificial lighting to the area. The parking areas and buildings would add artificial lighting to the site and area. The site is surrounded by urban development. The proposed project may result in low level, off-site light and glare from streetlights, security lights, parking lot lighting and reflective material, such as glass. Off-site effects depend upon the

type of lighting fixtures installed and building materials used to construct the buildings. All lighting would be required to meet the California Energy Code and would be required to be shielded so it doesn't spillover onto adjacent properties as required by the Energy Code. The addition of lighting would be a **less than significant impact with the following mitigation measure.**

Mitigation Measures:

AES 1**)** All exterior lighting shall be shielded to prevent spillover onto adjacent properties.

2) Agriculture Resources

SETTING AND DESCRIPTION

Merced County is among the largest agriculture producing counties in California (ranked fifth), with a gross income of more than $3.4 billion in 2017. The County's leading agriculture commodities include milk, chickens, almonds, cattle and calves, tomatoes, and sweet potatoes.

According to the Important Farmland Map prepared by the California Department of Conservation, this site is considered to be "Urban and Built-Up Land" (refer to Figure 15 on page 31).

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
2. Agriculture and Forestry Resources. Will the project:				
a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and monitoring Program of the California Resources Agency, to non - agriculture?				✓
b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?				✓
c) Conflict with existing zoning for, or cause rezoning of, forest land [as defined in Public Resources Code Section 12220(g)], timberland (as defined by Public Resources Code Section 4526), or timberland zoned Timberland Production [as defined by Government Code Section 51104(g)]?				✓

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
d) Result in the loss of forest land or conversion of forest land to non-forest use?				✓
e) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use?				✓

Impact Analysis

Would the project:

a) *Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and monitoring Program of the California Resources Agency, to non -agriculture?*

The project site is located within the City Limits of Merced and was annexed in 1970. The California Department of Conservation prepares Important Farmland Maps through its Farmlands Mapping and Monitoring Program (FMMP). The system of classifying areas is based on soil type and use. According to the most recent Merced County Important Farmlands Map, the site is classified as "Urban and Built-Up Land" (Figure 15 on page 31). Therefore, the proposed project would not have any effect on Prime Farmland, Unique Farmland, or Farmland of Statewide Importance. The proposed project would not affect protected farmland and there would be **no impact.**

b) *Conflict with existing zoning for agricultural use, or a Williamson Act contract?*

There are no Williamson Act contract lands in this area. Therefore, there is **no impact.**

c) *Conflict with existing zoning for, or cause rezoning of, forest land as defined in Public Resources Code Section 12220(g)), timberland (as defined by Public Resources Code Section 4526), or timberland zoned Timberland Production (as defined by Government Code Section 51104(g))?*

There is no forest land or timberland on the site. The project would not conflict with any zoning or plan for forest land or timberland. Therefore, **there is no impact**.

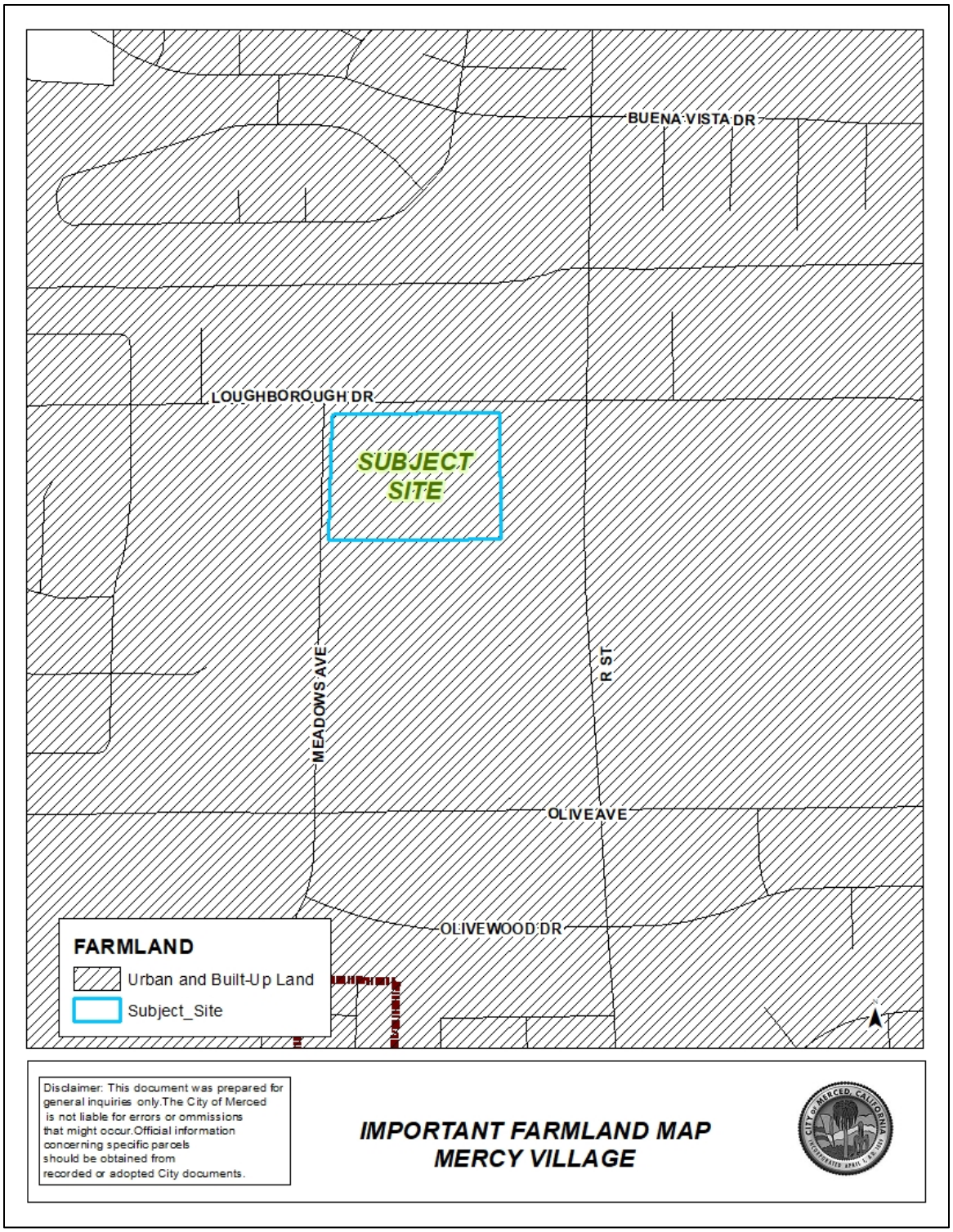
d) *Result in the loss of forest land or conversion of forest land to non-forest use?*

See item 3 above. **No impact.**

e) *Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use?*

The nearest land being used for farming is approximately one mile to the west and northwest, outside the City Limits. The proposed development would not cause the use of this land to change. Therefore, there is **no impact.**

Figure 15 - Important Farmland Map



3. Air Quality

SETTING AND DESCRIPTION

The San Joaquin Valley Air Pollution Control District (SJVAPCD) will review the project to assess the impact to air quality and to establish acceptable mitigation measures. Hence, the City recognizes that additional mitigation measures may be applied to subsequent phases of the development of this area. While the action of the SJVAPCD is independent of City reviews and actions, their process allows the City to review proposed mitigation measures that could affect project design and operation. Any proposed changes are subject to approval by the City.

The project is located in the San Joaquin Valley Air Basin (SJVAB), which occupies the southern half of the Central Valley and is approximately 250 miles in length and, on average, 35 miles in width. The Coast Range, which has an average elevation of 3,000 feet, serves as the western border of the SJVAB. The San Emigdio Mountains, part of the Coast Range, and the Tehachapi Mountains, part of the Sierra Nevada, are both located to the south of the SJVAB. The Sierra Nevada extends in a northwesterly direction and forms the eastern boundary of the SJVAB. The SJVAB is basically flat with a downward gradient to the northwest.

The climate of the SJVAB is strongly influenced by the presence of these mountain ranges. The mountain ranges to the west and south induce winter storms from the Pacific to release precipitation on the western slopes, producing a partial rain shadow over the valley. A rain shadow is defined as the region on the leeward side of the mountain where precipitation is noticeably less because moisture in the air is removed in the form of clouds and precipitation on the windward side. In addition, the mountain ranges block the free circulation of air to the east, resulting in the entrapment of stable air in the valley for extended periods during the cooler months.

Winter in the SJVAB is characterized as mild and fairly humid, and the summer is hot, dry, and cloudless. During the summer, a Pacific high-pressure cell is centered over the northeastern Pacific Ocean, resulting in stable meteorological conditions and a steady northwesterly wind.

For additional information, please refer to the Air Quality Analysis prepared by Crawford & Bowen Planning, Inc. at Appendix A.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
3. Air Quality. Would the project:				
a) Conflict with or obstruct implementation of the applicable air quality plan?		✓		
b) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard?			✓	
c) Expose sensitive receptors to substantial pollutant concentrations?			✓	

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
d) Create objectionable odors affecting a substantial number of people?			✓	

Impact Analysis

Would the project:

a) *Conflict with or obstruct implementation of the applicable air quality plan?*

Thresholds of significance applied in this report are from the San Joaquin Valley Air Pollution Control District (SJVAPCD) is "Guidance for Assessing and Mitigating Air Quality Impacts" (GAMAQI) (San Joaquin Valley Air Pollution Control District 2015). These thresholds define an identifiable quantitative, qualitative, or performance level of a particular environmental effect. Project-related emission levels which exceed any of the thresholds of significance means the project-related effect will normally be considered significant. Project related emissions at or below the thresholds of significance means the project-related effect normally will be considered to be less than significant. The SJVAPCD has established thresholds of significance for criteria pollutant emissions generated during construction and operation of projects. These Thresholds may be found in Table 1 of the Air Quality analysis at Appendix A.

The significance thresholds presented in the SJVAPCD GAMAQI are based on the attainment status of the San Joaquin Valley Air Basin in regard to air quality standards for specific criteria pollutants. Because the air quality standards are set at concentrations that protect public health with an adequate margin of safety, these emission thresholds are regarded as conservative and would overstate an individual project's contribution to health risks.

For a project to be consistent with SJVAPCD air quality plans, the pollutants emitted from a project should not exceed the SJVAPCD emission thresholds or cause a significant impact on air quality. In addition, emission reductions achieved through implementation of offset requirements are a major component of the SJVAPCD air quality plans. Per the Air Quality Analysis found at Appendix A, none of the emissions would exceed the SJVAPCD significance threshold. However, to ensure the project creates no air quality impacts during construction or operation and to ensure adherence to the requirements of the SJVAPCD, the following mitigation measure is required. This would reduce any possible impacts to **less than significant with mitigation.**

Mitigation Measures:

AIR-1) Consistent with SJVAPCD Regulation VIII (Fugitive PM_{10} Prohibitions), the following controls are required to be included as specifications for the proposed project and implemented at the construction site:

- All disturbed areas, including storage piles, which are not being actively utilized for construction purposes, shall be effectively stabilized of dust emissions using water, chemical stabilizer/suppressant, covered with a tarp or other suitable cover or vegetative ground cover.

- All on-site unpaved roads and off-site unpaved access roads shall be effectively stabilized of dust emissions using water or chemical stabilizer/suppressant.
- All land clearing, grubbing, scraping, excavation, land leveling, grading, cut and fill, and demolition activities shall be effectively controlled of fugitive dust emissions utilizing application of water or by presoaking.
- When materials are transported off-site, all material shall be covered, or effectively wetted to limit visible dust emissions, and at least six inches of freeboard space from the top of the container shall be maintained.
- All operations shall limit or expeditiously remove the accumulation of mud or dirt from adjacent public streets at the end of each workday. (The use of dry rotary brushes is expressly prohibited except where preceded or accompanied by sufficient wetting to limit the visible dust emissions. Use of blower devices is expressly forbidden.)
- Following the addition of materials to, or the removal of materials from, the surface of out-door storage piles, said piles shall be effectively stabilized of fugitive dust emission utilizing sufficient water or chemical stabilizer/suppressant.

b) *Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard?*

The proposed project would generate air emissions during project construction and operation. Short- term construction emissions would occur in association with construction activities, including grading, and vehicle/equipment use. Long-term operational emissions are associated with stationary sources and mobile sources. Stationary source emissions result from the consumption of natural gas and electricity. Mobile source emissions result from vehicle trips and result in air pollutant emissions affecting the entire air basin. As noted above, specific criteria for determining whether the potential air quality impacts of a project are significant are set forth by the SJVAPCD.

Because neither the short-term or long-term construction and operation of the project would exceed the thresholds of significance set forth the by the SJVAPCD, this impact is considered **less than significant.**

c) *Expose sensitive receptors to substantial pollutant concentrations?*

Construction of the proposed project may expose surrounding sensitive receptors to airborne particulates, as well as a small quantity of construction equipment pollutants (i.e., usually diesel-fueled vehicles and equipment). However, based on the findings of the Air Quality Analysis at Appendix A indicates the construction emissions would not exceed the SJVAPCD construction threshold levels. Additionally, the Analysis indicates that operational emissions would not exceed the SJVAPCD threshold levels. Therefore, this impact is considered **less than significant.**

d) *Create objectionable odors affecting a substantial number of people?*

During construction, the various diesel-powered vehicles and equipment in use on-site would create localized odors. These odors would be temporary and are not likely to be noticeable for extended periods of time beyond the project site. The potential for diesel odor impacts is therefore considered less than significant. In addition, the proposed residential and commercial uses are not expected to produce any offensive odors that would result in frequent odor complaints. The proposed project would not create objectionable odors affecting a substantial number of people during project construction or operation, and this impact is considered **less than significant.**

4. Biological Resources

SETTING AND DESCRIPTION

The plan area is located in the Central California Valley eco-region. This eco-region is characterized by flat, intensively farmed plains with long, hot dry summers and cool, wet winters (14-20 inches of precipitation per year). The Central California Valley eco-region includes the Sacramento Valley to the north and the San Joaquin Valley to the south and it ranges between the Sierra Nevada Foothills to the east to the Coastal Range foothills to the west. Nearly half of the eco-region is actively farmed, and about three fourths of that farmed land is irrigated.

According to the State of California, Department of Fish and Game Natural Diversity Data Base (NDDB), the site does not include any plant and/or animal species listed as threatened or endangered by the State of California or the Federal Government. Furthermore, the biological resources evaluation, prepared as part of the *Merced Vision 2030 General Plan Program Environmental Impact Report* (EIR), does not identify the project area as containing any seasonal or non-seasonal wetland or vernal pool areas. Given the adjacent, built-up, urban land uses and major roadways, no form of unique, rare or endangered species of plant and/or animal life could be sustained on the subject site.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
4. Biological Resources. Would the project:				
a) Have a substantial adverse effect, either directly or through habitat modification, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?				✓

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
b) Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?				✓
c) Conflict with any local policies or ordinance protecting biological resources, such as a tree preservation policy or ordinance?				✓
d) Conflict with the provisions of an adopted Habitat Conservation plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?				✓
e) Conflict with any local policies or ordinance protecting biological resources, such as a tree preservation policy or ordinance?				✓
f) Conflict with the provisions of an adopted Habitat Conservation plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?				✓

Impact Analysis

Would the project:

a) *Have a substantial adverse effect, either directly or through habitat modification, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?*

The proposed project would not have any direct effects on animal life by changing the diversity of species, number of species, reduce any rare or endangered species, introduce any new species, or deteriorate existing fish or wildlife habitat. Although the *Merced Vision 2030 General Plan* identifies several species of plant and animal life that exist within the City's urban boundaries, the subject site, which is surrounded by developed urban uses, does not contain any rare or endangered species of plant or animal life. Therefore, there would be **no impact.**

b) *Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?*

The proposed project would not have any direct effects on riparian habitat or other sensitive natural community. The City General Plan identifies Bear, Black Rascal, Cottonwood, Miles, Fahrens, and Owens Creeks within the City's growth area. The subject site is not located adjacent to any of these areas or any water way. Therefore, the project would have **no impact** on riparian habitat.

c) *Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?*

The project site would not have any direct effect on wetlands as no wetlands have been identified in this area. All of the area surrounding the subject site has been modified from its original state and is developed with urban uses. There is **no impact.**

d) *Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?*

The project would not have any adverse effects on any resident or migratory fish or wildlife species or with established native resident migratory wildlife corridor, or impede the use of native wildlife nursery sites. There is **no impact.**

e) *Conflict with any local policies or ordinance protecting biological resources, such as a tree preservation policy or ordinance?*

The proposed project would not conflict with local policies and/or ordinances protecting biological resources. There are no trees on the site. The only vegetation is some wild winter grass that has recently grown. The City's General Plan does not identify this site as being a biological resource and there is no evidence of any biological resource on the site. Therefore, there is **no impact.**

f) *Conflict with the provisions of an adopted Habitat Conservation plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?*

The proposed project would not have any effects on a habitat conservation plan. There are no adopted habitat conservation plans, Natural Conservation Community Plan, or other approved local, regional, or state habitat conservation plan for the City of Merced or Merced County. There is **no impact.**

5. Cultural Resources

SETTING AND DESCRIPTION

The City of Merced area lies within the ethnographic territory of the Yokuts people. The Yokuts were members of the Penutian language family which held all of the Central Valley, San Francisco Bay Area, and the Pacific Coast from Marin County to near Point Sur.

Merced County was first explored by Gabriel Moraga in 1806, when he named the Merced River, "El Rio de Nuestra Senra de la Merced." Moraga's explorations were designed to locate appropriate sites for an inland chain of missions. Moraga explored the region again in 1808 and 1810.

Archaeology

Archaeological sites are defined as locations containing significant levels of resources that identify human activity. Very little archaeological survey work has been conducted within the City or its surrounding areas. Creeks, drainage, and sloughs exist in the northern expansion area of the City, and Bear Creek and Cottonwood Creek pass through the developed area. Archaeological sites in the Central Valley are commonly located adjacent to waterways and represent potential for significant archaeological resources.

Paleontological sites are those that show evidence of pre-human existence. Quite frequently, they are small outcroppings visible on the earth's surface. While the surface outcroppings are important indications of paleontologic resources, it is the geologic formations that are the most important. There are no known sectors within the project area known to contain sites of paleontologic significance.

Historic Resources

In 1985, in response to community concerns over the loss of some of the City's historic resources, and the perceived threats to many remaining resources, a survey of historic buildings was undertaken in the City. The survey focused on pre-1941 districts, buildings, structures, and objects of historical, architectural, and cultural significance. The survey area included a roughly four square-mile area of the central portion of the City.

The National Register of Historic Places, the California Historical Landmarks List, and the California Inventory of Historic Resources identify several sites within the City of Merced. These sites are listed on the Merced Historical Site Survey and maintained by the Merced Historical Society. There are no listed historical sites on the Project site.

According to the environmental review conducted previously for this area, there are no listed historical sites and no known sectors within the project area known to contain sites of paleontological or archeological significance. However, mitigation measures will be adopted to ensure proper steps are taken in the event evidence of archeological artifacts area discovered during construction.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
5. <u>Cultural Resources.</u> Would the project:				
a) Cause a substantial adverse change in the significance of a historical resource as defined in §15064.5?		✓		
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?		✓		
c) Disturb any human remains, including those interred outside of formal cemeteries?		✓		

Impact Analysis

Would the project:

a) *Cause a substantial adverse change in the significance of a historical resource as defined in §15064.5?*

The project would not alter or destroy any historic archaeological site, building, structure, or object, nor would it alter or affect unique ethnic cultural values or restrict religious or sacred uses.

A cultural resources records search was conducted by the Central California Information Center (CCIC) at California State University, Stanislaus as part of the City's General Plan update. No historic resources were found at or near the project site. However, in the case of an unexpected discovery of a cultural resource on the site, compliance with the following mitigation measure would reduce this impact to **less than significant with mitigation.**

<u>Mitigation Measures:</u>

CUL-1) If unknown pre-contact or historic-period archaeological materials are encountered during project activities, all work in the immediate vicinity of the find shall halt until a qualified archaeologist can evaluate the find and make recommendations.

Cultural resources materials may include pre-contact resources such as flaked and ground stone tools and debris, shell, bone, ceramics, and fire-affected rock, as well as historic resources such as glass, metal, wood, brick, or structural remnants. If the qualified archaeologist determines that the discovery represents a potentially significant cultural resource, additional investigations shall be required to mitigate adverse impacts from project implementation. These additional studies may include, but are not limited to, recordation, archaeological excavation, or other forms of significance evaluations.

The applicant shall inform its contractor(s) of the sensitivity of the project site for archaeological deposits, and include the following directive in the appropriate contract documents:

"The subsurface of the construction site is sensitive for archaeological deposits. If archaeological deposits are encountered during project subsurface construction, all ground-disturbing activities within 25 feet shall be redirected and a qualified archaeologist shall assess the situation, consult with agencies as appropriate, and make recommendations for the treatment of the discovery. Project personnel shall not collect or move any archaeological materials. Archaeological deposits can include, but are not limited to, shellfish remains; bones, including human remains; and tools made from, obsidian, chert, and basalt; mortars and pestles; historical trash deposits containing glass, ceramics, and metal artifacts; and structural remains, including foundations and wells."

The City shall verify that the language has been included in the grading plans prior to issuance of a grading permit or other permitted project action that includes ground-disturbing activities on the project site.

b) *Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?*

The project would not alter or destroy any prehistoric archaeological site, building, structure, or object, nor would it alter or affect unique ethnic cultural values or restrict religious or sacred uses.

A cultural resources records search was conducted by the Central California Information Center (CCIC) at California State University, Stanislaus as part of the City's General Plan update. No archeological resources were found at or near the project site. However, in the event of an unexpected discovery of an archeological resource, compliance with Mitigation Measure CUL 1 would reduce any impacts to less than significant. Therefore, this impact would be **less than significant with mitigation**.

Mitigation Measure:

CUL-2) Implementation of Mitigation Measure CUL-1 (above).

c) *Disturb any human remains, including those interred outside of formal cemeteries?*

Disturbance of human remains interred outside of formal cemeteries would result in a significant impact. If human remains are identified during project construction, Section 7050.5 of the California Health and Safety Code and Section 5097.98 of the Public Resources Code shall apply, appropriate. Therefore, implementation of Mitigation Measure CUL-3 reduce potential impacts to human remains to **less than significant with mitigation.**

Mitigation Measure:

CUL-3) If human remains are identified during construction and cannot be preserved in place, the applicant shall fund: 1) the removal and documentation of the human remains from the project corridor by a qualified archaeologist

meeting the Secretary of the Interior's Professional Qualifications Standards for Archaeology, 2) the scientific analysis of the remains by a qualified archaeologist, should such analysis be permitted by the Native American Most Likely Descendant, and 3) the reburial of the remains, as appropriate. All excavation, analysis, and reburial of Native American human remains shall be done in consultation with the Native American Most Likely Descendant, as identified by the California Native American Heritage Commission.

6. Energy

SETTING AND DESCRIPTION

Appendix F (Energy Conservation) of the CEQA Guidelines provides that potentially significant energy implications of a project must be considered in an EIR, with particular emphasis on avoiding or reducing the inefficient, wasteful and unnecessary consumption of energy. As such, this discussion considers the proposed Project's consumption of energy resources, particularly electricity, natural gas, and transportation fuels, during both the project's construction and operational phases.

The proposed apartment project would be built to meet the California Energy Code requirements and would include the installation of solar panels on the roof-tops of each residential building as well as on the community/office building. The project would also provide bicycle parking and is located near a bus stop which would encourage the use of public transit to help reduce energy consumed for transportation. The project would incorporate recycling procedures for the disposal of recyclable materials in accordance with the City's recycling ordinance and AB 341.

According to data from the U.S. Energy Information Administration, apartment buildings with 5 or more units typically use less energy than other home types. Households in apartment buildings with 5 or more units use approximately 50% less energy as other types of homes. The lower energy consumption can be attributed, in part to smaller living spaces and units being bordered by other units or common areas which reduces exposure to outside temperatures and the number of windows in the unit.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
6. **Energy.** Would the project:				
a) Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?		✓		
b) Conflict with or obstruct a state or local plan for renewable energy or energy efficiency?		✓		

Impact Analysis

a) *Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?*

The project is not expected to result in potentially significant impacts due to wasteful, inefficient, or unnecessary consumption of energy resources during project construction or operation. The project would be constructed on an in-fill lot that has access to existing electrical and telecommunications services. No new transportation, electrical, or telecommunications facilities are required to support the project leading to unnecessary consumption of energy resources. Compliance with the California Green Building Standards Code, the installation of roof-top solar panels, AB 341- Solid Waste Diversion, and the San Joaquin Valley Air Pollution Control District standards during construction and operation of the project will further ensure the efficient consumption of energy resources. Implementation of these regulations would reduce impacts to **less than significant with mitigation.**

Mitigation Measure:

ENE-1) The applicant shall comply with all applicable California Energy Code, AB 341, and San Joaquin Valley Air Pollution Control District rules and regulations regulating energy efficiency and waste.

b) *Conflict with or obstruct a state or local plan for renewable energy or energy efficiency?*

With the implementation of the regulations described in item "a" above, the proposed project would not conflict with a state or local plan for renewable energy or energy efficiency. This impact is **less than significant with mitigation.**

ENE-2) Implementation of Mitigation Measure ENE-1.

7. Geology and Soils

SETTING AND DESCRIPTION

The City of Merced is located approximately 150 miles southeast of San Francisco along the west side of the southern portion of the Great Valley Geomorphic Province, more commonly referred to as the San Joaquin Valley. The valley is a broad lowlands bounded by the Sierra Nevada to the east and Coastal Ranges to the west. The San Joaquin Valley has been filled with a thick sequence of sedimentary deposits of Jurassic to recent age. A review of the geologic map indicates that the area around Merced is primarily underlain by the Pleistocene Modesto and Riverbank Formations with Holocene alluvial deposits in the drainages. Miocene-Pliocene Mehrten and Pliocene Laguna Formation materials are present in outcrops on the east side of the SUDP/SOI. Modesto and Riverbank Formation deposits are characterized by sand and silt alluvium derived from weathering of rocks deposited east of the SUDP/SOI. The Laguna Formation is made up of consolidated gravel sand and silt alluvium and the Mehrten Formation is generally a well consolidated andesitic mudflow breccia conglomerate.

Faults and Seismicity

A fault, or a fracture in the crust of the earth along which rocks on one side have moved relative to those on the other side, is an indication of past seismic activity. It is assumed that those that have been active recently are the most likely to be active in the future, although even inactive faults

may not be "dead." "Potentially Active" faults are those that have been active during the past two million years or during the Quaternary Period. "Active" faults are those that have been active within the past 11,000 years. Earthquakes originate as movement or slippage occurring along an active fault. These movements generate shock waves that result in ground shaking.

Based on review of geologic maps and reports for the area, there are no known active or potentially active faults, or Alquist-Priolo Earthquake Fault Zones (formerly referred to as a Special Studies Zone) in the SUDP/SOI. In order to determine the distance of known active faults within 50 miles of the Site, the computer program EZ-FRISK was used in the General Plan Update.

Soils

According to the USDA Natural Resources Conservation Service website, the soil on the site includes Wyman clay loam, 0 to 1 percent slopes (WnA). Soil properties can influence the development of building sites, including site selection, structural design, construction, performance after construction, and maintenance. Soil properties that affect the load-supporting capacity of an area include depth to groundwater, ponding, flooding, subsidence, shrink-swell potential, and compressibility.

The City of Merced regulates the effects of soils and geological constraints primarily through the enforcement of the California Building Code (CBC), which requires the implementation of engineering solutions for constraints to development posed by slopes, soils, and geology.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
7. **Geology and Soils.** Would the project:				
a) Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:				
i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault?			✓	
ii) Strong seismic ground shaking?			✓	
iii) Seismic-related ground failure, including liquefaction?			✓	
iv) Landslides?			✓	
b) Result in substantial soil erosion or loss of topsoil?		✓		

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse?			✓	
d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property?			✓	
e) Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?			✓	

Impact Analysis

Would the project:

a) *Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:*

i) *Strong seismic ground shaking?*

ii) *Strong seismic ground shaking?*

iii) *Seismic-related ground failure, including liquefaction?*

iv) *Landslides?*

The project site is not located within a mapped fault hazard zone, and there is no record or evidence of faulting on the project site (City of Merced General Plan Figure 11.1). Because no faults underlie the project site, no people or structures would be exposed to substantial adverse effects related to earthquake rupture, and no impact would result from the project.

Ground shaking of moderate severity may be expected to be experienced on the project site during a large seismic event. All building permits are reviewed to ensure compliance with the California Building Code (CBC). In addition, the City enforces the provisions of the Alquist Priolo Special Study Zones Act that limits development in areas identified as having special seismic hazards. All structures shall be designed and built in accordance with the standards of the California Building Code. Pursuant to CEQA §15162, the project will not create any impacts that warrant additional environmental documentation over and above the impacts addressed in the City's General Plan EIR.

The project **may** expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving seismic-related ground failure,

including liquefaction. However, according to the City's *Merced Vision 2030 General Plan EIR,* the probability of soil liquefaction occurring within the City of Merced is considered to be a low to moderate hazard; however, detailed geotechnical engineering investigation required in compliance with the California Building Code (CBC) would be required for the project.

APPLICABLE GENERAL PLAN GOALS AND POLICIES:

The City's *Merced Vision 2030 General Plan* contains policies that address seismic safety.

Goal Area S-2: Seismic Safety:	
Goal **Reasonable Safety for City Residents from the Hazards of Earthquake and Other Geologic Activity**	
Policies	
S-2.1	Restrict urban development in all areas with potential ground failure characteristics.

The project would not expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving landslides.

Landslides generally occur on slopes of 15 percent or greater. The project site's topography is generally of slopes between 0 and 3 percent, which are considered insufficient to produce hazards other than minor sliding during seismic activity.

These impacts are considered **less than significant.**

b) *Result in substantial soil erosion or loss of topsoil?*

Construction of the proposed project could result in temporary soil erosion and the loss of topsoil due to construction activities, including clearing, grading, site preparation activities, and installation of the proposed drainage and on-site sewer and water systems. Construction activities disturbing one or more acres are required by the State Water Resources Board (SWRCB) to obtain a General Construction Activity Stormwater Permit, which would require the proposed project to implement a Storm Water Pollution Prevention Plan (SWPPP). Project compliance with SWRCB and the City of Merced regulations to avoid erosion siltation effects would reduce this impact to **less than significant with mitigation**.

Mitigation Measures:

GEO-1) The project shall comply with all requirements of the State Water Resources Board (SWRCB) and obtain a General Construction Activity Stormwater Permit.

c) *Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse?*

The City of Merced is located in the Valley area of Merced County and is therefore less likely to experience landslides than other areas in the County. The probability of soil liquefaction actually taking place anywhere in the City of Merced is considered to be a low

hazard. Soil types in the area are not conducive to liquefaction because they are either too coarse or too high in clay content. According to the *Merced Vision 2030 General Plan* EIR, no significant free face failures were observed within the SUDP/SOI and the potential for lurch cracking and lateral spreading is, therefore, very low within the SUDP/SOI area. This impact is **less than significant.**

d) *Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property?*

Expansive soils are those possessing clay particles that react to moisture changes by shrinking (when they dry) or swelling (when they become wet). Expansive soils can also consist of silty to sandy clay. The extent of shrinking and swelling is influenced by the environment, extent of wet or dry cycles, and by the amount of clay in the soil. This physical change in the soils can react unfavorably with building foundations, concrete walkways, swimming pools, roadways, and masonry walls.

Implementation of General Plan Policies, adherence to the Alquist-Priolo Act, and enforcement of the California Building Code (CBC) Standards would reduce this impact to **less than significant.**

e) *Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?*

The EIR prepared for the City's *Merced Vision 2030 General Plan* states the following:

"According to the Geologic, Geohazards and Environmental Health Hazards Evaluation Report (Geocon Consultants, Inc.)", the soils in the SUDP/SOI are not generally considered to be expansive, have a generally low to moderate erosion potential, and are generally considered suitable for wastewater disposal using conventional septic systems."

However, no new septic systems are allowed in the City and any future construction on the site will be required to connect to the City's sewer system. Based on this evaluation, this impact is **less than significant.**

8. Greenhouse Gas Emissions

SETTING AND DESCRIPTION

The issue of project-generated Greenhouse Gas (GHG) Emissions is a reflection of the larger concern of Global Climate Change. While GHG emissions can be evaluated on a project level, overall, the issue reflects a more regional or global concern. CEQA requires all projects to discuss a project's GHG contributions. However, from the standpoint of CEQA, GHG impacts on global climate change are inherently cumulative. The quantity of GHGs that it takes to ultimately result in climate change is not precisely known; however, it can safely be assumed that existing conditions do not measurably contribute to a noticeable incremental change in the global climate.

The project applicant provided an Air Quality and Greenhouse Gas study for the proposed project on this site which was prepared by Crawford and Bowen Planning, Inc. (Appendix A). The study analyzed the emissions associated with a 161-unit apartment complex, including a clubhouse and associated parking. The City of Merced has not developed or adopted a CEQA threshold for determining the significance of GHG emissions at the project-level.

The SJVAPCD document *Addressing Greenhouse Gas Emission Impacts for New Projects* under the California Environmental Quality Act (San Joaquin Valley Air Pollution Control District 2009) presents a tiered approach to analyzing the significance of project-related GHG emissions. This approach was used in the analysis provided at Appendix A.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
8. Greenhouse Gas Emissions. Would the project:				
a) Generate greenhouse gas emission, either directly or indirectly, that may have a significant impact on the environment?			✓	
b) Conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases?		✓		

Impact Analysis

Would the project:

a) *Generate greenhouse gas emission, either directly or indirectly, that may have a significant impact on the environment?*

The following is an excerpt from the Greenhouse Gas Study provide by Crawford & Bowen Planning, Inc. – Appendix A.

The SJVAPCD document *Addressing Greenhouse Gas Emission Impacts for New Projects under the California Environmental Quality Act* (San Joaquin Valley Air Pollution Control District 2009) presents a tiered approach to analyzing the significance of project related GHG emissions. Project GHG emissions are considered less than significant if they can meet any of the following conditions, evaluated in the order presented:

- the project is exempt from CEQA requirements;
- the project complies with an approved GHG emission reduction plan or GHG mitigation program;
- the project implements Best Performance Standards (BPS); or
- the project demonstrates that specific GHG emissions would be reduced or mitigated by at least 29 percent compared to Business-as-Usual (BAU), including GHG emission reductions achieved since the 2002 - 2004 baseline period.

The SJVAPCD states,

"On December 17, 2009, the San Joaquin Valley Air Pollution Control District (District) adopted the guidance: Guidance for Valley Land-use Agencies in Addressing GHG Emission Impacts for New Projects under CEQA and the policy: District Policy – Addressing GHG Emission Impacts for Stationary Source Projects Under CEQA When Serving as the Lead Agency. The guidance and policy rely on the use of performance based standards, otherwise known as Best Performance Standards "*Use of BPS is a method of streamlining the CEQA process of determining significance and is not a required emission reduction measure. Projects implementing BPS would be determined to have a less than cumulatively significant impact. Otherwise, demonstration of a 29 percent reduction in GHG emissions, from business-as-usual, is required to determine that a project would have a less than cumulatively significant impact. The guidance does not limit a lead agency's authority in establishing its own process and guidance for determining significance of project related impacts on global climate change.*"

(San Joaquin Valley Air Pollution Control District 2020)

The City of Merced Climate Action Plan does not qualify as an approved GHG emission reduction plan or GHG mitigation program. Therefore, the first two tiers of the GHG significance criteria would not apply.

Implementation of Mitigation Measure GHG-1 would implement various BPS strategies recommended by the SJVAPCD that are applicable to the project to reduce GHG emissions and would reduce any potential significant impacts to ***less than significant***.

Mitigation Measure:

GHG-1) The project applicant shall demonstrate compliance with the applicable BPS strategies to the Planning Division prior to the issuance of a building permit. The following BPS strategies are considered to be applicable, feasible, and effective in reducing GHG emissions generated by the project:

- The project applicant shall provide a pedestrian access network that internally links all uses and connects to existing external streets and pedestrian facilities.
- The project applicant shall ensure site design and building placement minimize barriers to pedestrian access and interconnectivity. Physical barriers such as walls, berms, landscaping, and slopes between nonresidential uses that impede bicycle or pedestrian circulation shall be eliminated. In addition, barriers to pedestrian access of neighboring facilities and sites shall be minimized.
- The project applicant shall design roadways to reduce motor vehicle speeds and encourage pedestrian and bicycle trips by featuring traffic calming measures. Traffic calming measures include: bike lanes, center islands, closures (cul-de-sacs), diverters, education, forced turn lanes, roundabouts, and speed humps.
- The project applicant shall plant trees to provide shade.
- The project applicant shall install energy efficient heating and cooling systems, appliances and equipment, and control systems.

b) *Conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases?*

According to the Air Quality and Greenhouse Gas analysis found at Appendix A, implementation of mitigation measure GHG-1 and compliance with state regulations, the proposed project would not conflict with any applicable plan, policy, or regulation adopted to reduce greenhouse gas emissions. Implementation of these measures would reduce any potential impacts to **less than significant with mitigation**.

Mitigation Measure:

GHG-2) Implementation of Mitigation Measure of GHG-1.

9. Hazards and Hazardous Materials

SETTING AND DESCRIPTION

Hazardous Materials

A substance may be considered hazardous due to a number of criteria, including toxicity, ignitability, corrosivity, or reactivity. The term "hazardous material" is defined in law as any material that, because of quantity, concentration, or physical, or chemical characteristics, poses a significant present or potential hazard to human health and safety or to the environment.

Wildland and Urban Fire Hazards

Both urban and wildland fire hazard potential exists in the City of Merced and surrounding areas, creating the potential for injury, loss of life, and property damage. Urban fires primarily involve the uncontrolled burning of residential, commercial, or industrial structures due to human

activities. Wildland fires affect grassland, brush or woodlands, and any structures on or near these fires. Such fires can result from either human made or natural causes.

Urban fires comprise the majority of fires in the City of Merced while the potential for wildland fires could increase as large blocks of undeveloped land are annexed into the City. Most of the fires are caused by human activities involving motor vehicles, equipment, arson, and burning of debris.

Airport Safety

The City of Merced is impacted by the presence of two airports-Merced Regional Airport, which is in the southwest corner of the City, and Castle Airport (the former Castle Air Force Base), located approximately eight miles northwest of the subject site.

The continued operation of the Merced Regional Airport involves various hazards to both flight (physical obstructions in the airspace or land use characteristics which affect flight safety) and safety on the ground (damage due to an aircraft accident). Growth is restricted around the Regional Airport in the southwest corner of the City due to the noise and safety hazards associated with the flight path.

Castle Airport also impacts the City. Portions of the northwest part of the City's SUDP/SOI and the incorporated City are within Castle's safety zones. The primary impact is due to noise (Zones C and D), though small areas have density restrictions (Zone B2). The military discontinued operations at Castle in 1995. One important criterion for determining the various zones is the noise factor. Military aircraft are designed solely for performance, whereas civilian aircraft have extensive design features to control noise.

Potential hazards to flight include physical obstructions and other land use characteristics that can affect flight safety, which include: visual hazards such as distracting lights, glare, and sources of smoke; electronic interference with aircraft instruments or radio communications; and uses which may attract flocks of birds. In order to safeguard an airport's long-term usability, preventing encroachment of objects into the surrounding airspace is imperative.

Railroad

Hazardous materials are regularly shipped on the BNSF and SP/UP Railroad lines that pass through the City. While unlikely, an incident involving the derailment of a train could result in the spillage of cargo from the train in transporting. The spillage of hazardous materials could have devastating results. The City has little to no control over the types of materials shipped via the rail lines. There is also a safety concern for pedestrians along the tracks and vehicles utilizing at-grade crossings. The design and operation of at-grade crossings allows the City some control over rail-related hazards. Ensuring proper gate operation at the crossings is the most effective strategy to avoid collision and possible derailments.

Public Protection and Disaster Planning

Hospitals, ambulance companies, and fire districts provide medical emergency services. Considerable thought and planning have gone into efforts to improve responses to day-to-day emergencies and planning for a general disaster response capability.

The City's Emergency Plan and the County Hazardous Waste Management Plan both deal with detailed emergency response procedures under various conditions for hazardous materials spills.

The City also works with the State Department of Health Services to establish cleanup plans and to monitor the cleanup of known hazardous waste sites within the City.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
9. <u>Hazards and Hazardous Materials.</u> Would the project:				
a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?			✓	
b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?			✓	
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?			✓	
d) Be located on a site which is included on a list of hazardous materials site complied pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?				✓
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area?				✓
f) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?				✓

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
g) Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?				✓

Impact Analysis

Would the project:

a) *Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?*

Construction activities of the proposed project would involve the use, storage, transport, and disposal of small amounts of oil, gasoline, diesel fuel, paints, solvents, and other hazardous materials. The handling, use, transport, and disposal of hazardous materials by the construction phase of the project would comply with existing regulations of several agencies—the EPA, the Merced County Environmental Health Department, OSHA, California Division of Occupational Safety and Health, and USDOT. Project maintenance and operation may require the use of cleaners, solvents, paints, and other custodial products that are potentially hazardous. These materials would be used in relatively small quantities, clearly labeled, and stored in compliance with state and federal requirements. With the exercise of normal safety practices, the project would not create substantial hazards to the public or the environment.

The operation of the medical/dental clinic may involve the use of small amounts of hazardous materials. The ongoing use of potentially hazardous materials would comply with existing federal, state, and local regulations for the of such materials.

This impact would be **less than significant** with compliance with existing federal, state, and local requirements.

b) *Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?*

Construction on the project site would be reviewed for the use of hazardous materials at the building permit stage. Implementation of Fire Department and Building Code regulations for hazardous materials. Any potentially hazardous materials related to the medical/dental clinic would be required to obtain the proper permits for such materials and comply with all federal, state, and local requirements. The implementation and compliance with existing regulations would reduce any risk from hazardous materials to a **less than significant** level.

APPLICABLE GENERAL PLAN GOALS AND POLICIES:

The City of Merced *Vision 2030 General Plan* contains policies that address hazardous materials.

Goal Area S-7: Hazardous Materials	
Goal **Hazardous Materials Safety for City Residents**	
Policies	
S-2.1	Prevent injuries and environmental contamination due to the uncontrolled release of hazardous materials.
Implementing Actions:	
7.1.a	Support Merced County in carrying out and enforcing the Merced County Hazardous Waste Management Plan.
7.1.b	Continue to update and enforce local ordinances regulating the permitted use and storage of hazardous gases, liquids, and solids.
7.1.d	Provide continuing training for hazardous materials enforcement and response personnel.

c) *Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?*

The Rivera K-8 school campus is located at the edge of the ¼ mile buffer from the site (refer to Figure 16 on Page 54). As previously described, there may be small amounts of hazardous materials on the site during construction and with the operation of the medical/dental clinic. However, compliance with Fire Department regulations, as well as state and federal regulations through annual inspections and permitting requirements makes this impact **less than significant**.

d) *Be located on a site which is included on a list of hazardous materials site complied pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?*

According to the California Department of Toxic Substances Control EnviroStor database search, the project site is not listed as a hazardous waste site, and no significant hazard to the public or the environment would result with project implementation. Therefore, there is **no impact.**

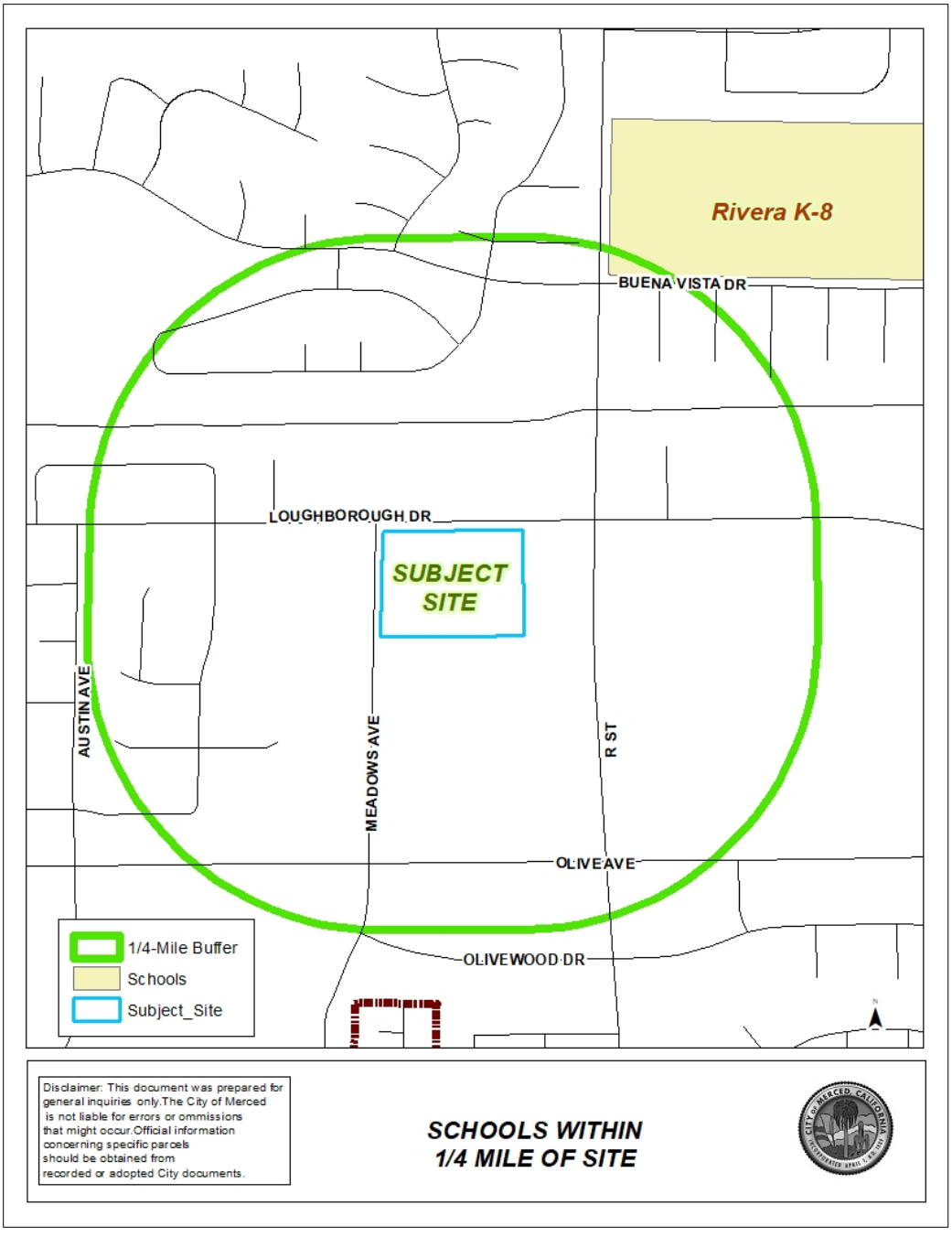
e) *For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area?*

The project site is located over 3.5 miles from the Merced Regional Airport and approximately 7 miles from the Castle Airport. The project site is not located in an area for which an Airport Land Use Plan has been prepared, and no public or private airfields are within two miles of the project area. Therefore, no at-risk population working at the site would be exposed to hazards due to aircraft over-flight. Therefore, implementation of the proposed project would not expose persons to airport-related hazards, and **no impact** would occur.

f) *Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?*

The proposed project will not adversely affect any adopted emergency response plan or emergency evacuation plan. No additional impacts will result from the development of the project area over and above those already evaluated by the EIR prepared for the *Merced Vision 2030 General Plan.* The project would not modify any roadways or cause any other changes that would impair the implementation of an adopted emergency response plan. Therefore, there is **no impact.**

Figure 16 School Sites



APPLICABLE GENERAL PLAN GOALS AND POLICIES:

The *Merced Vision 2030 General Plan* contains policies that address disaster preparedness.

Goal Area S-1: Disaster Preparedness	
Goal **General Disaster Preparedness**	
Policies	
S-1.1	Develop and maintain emergency preparedness procedures for the City.
Implementing Actions:	
1.1.a	Keep up-to-date through annual review the City's existing Emergency Plan and coordinate with the countywide Emergency Plan.
1.1.b	Prepare route capacity studies and determine evacuation procedures and routes for different types of disasters, including means for notifying residents of a need to evacuate because of a severe hazard as soon as possible.
7.1.d	Provide continuing training for hazardous materials enforcement and response personnel.

g) *Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?*

The project site is located within an urban area and is not located within a very high fire hazard severity zone. According to the EIR prepared for the *Merced Vision 2030 General Plan*, the risk for wildland fire in the City of Merced is minimal. According to the Cal Fire website, the Merced County Fire Hazard Severity Zone Map shows the project site is designated as a "Local Area of Responsibility" with a Hazard Classification of "Urban Unzoned."

The City of Merced Fire Department is the responsible agency for responding to fires at the subject site. The project site is located within Fire District #3, and is served by Station #53 located at 800 Loughborough Drive (approximately 1.5 miles from the project site). The proposed project would not expose people or structures to significant loss, injury or death involving wildland fires and there would be **no impact.**

10. Hydrology and Water Quality

SETTING AND DESCRIPTION

Water Supplies and Facilities

The City's water supply system consists 23 wells and 14 pumping stations equipped with variable speed pumps that attempt to maintain 45 to 50 psi (pounds per square inch) nominal water pressure. The City is required to meet State Health pressure requirements, which call for a minimum of 20 psi at every service connection under the annual peak hour condition and maintenance of the annual average day demand plus fire flow, whichever is stricter.

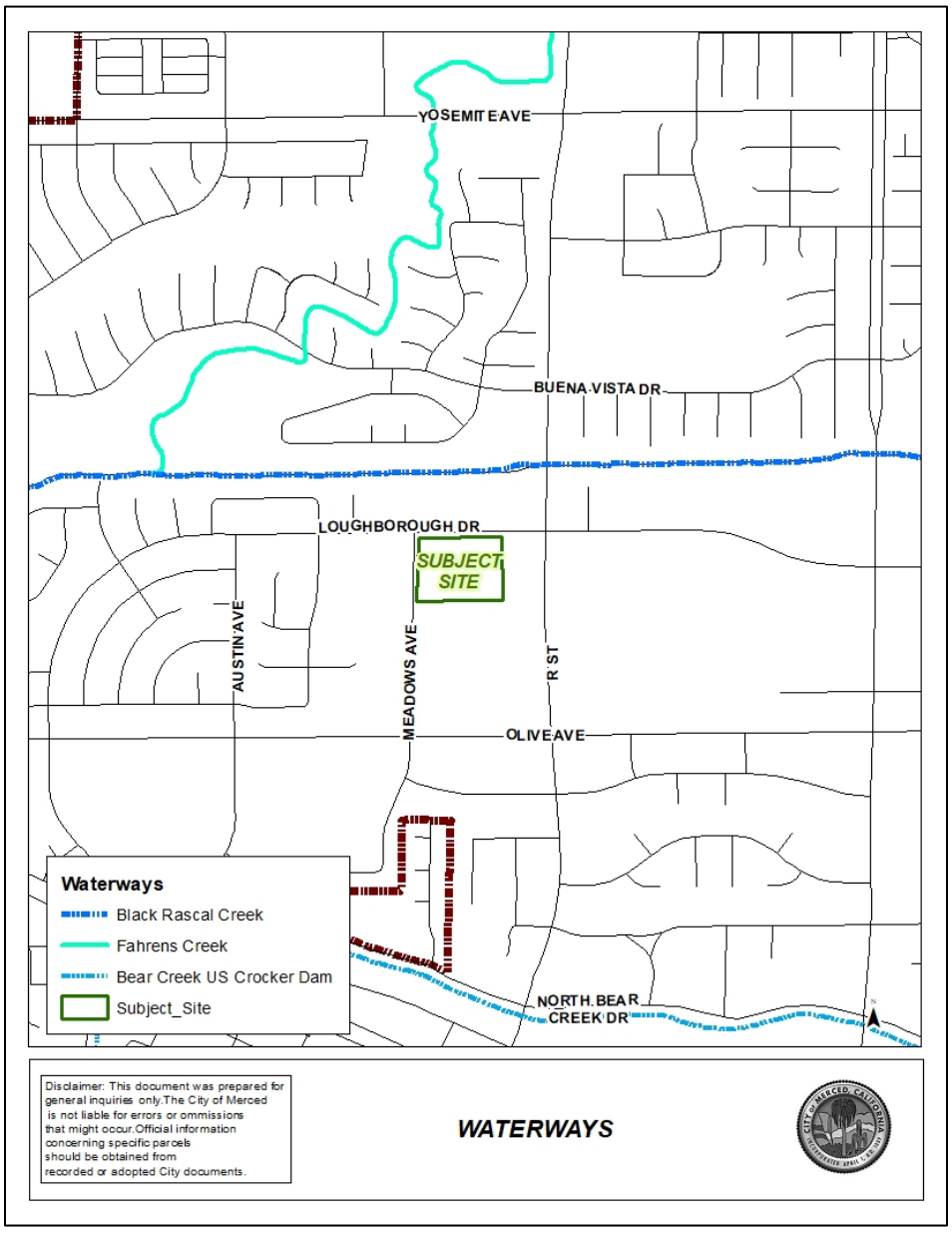
Storm Drainage/Flooding

In accordance with the adopted City of Merced Standard Designs of Common Engineering Structures, percolation/detention basins are designed to temporarily collect run-off so that it can be metered at acceptable rates into canals and streams which have limited capacity.

Proximity to Existing Waterways

The project site is located at southeast corner of Loughborough Drive and Meadows Avenue. Black Rascal Creek is located approximately 0.1 of a mile north of the site. Fahrens Creek is located approximately 0.33 miles north of the site and Bear Creek is located approximately ½-mile to the south. Refer to the map at Figure 17 below.

Figure 17 - Waterways



	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
10. <u>Hydrology and Water Quality.</u> Would the project:				
a) Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality?		✓		
b) Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?			✓	
c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would:				
i. i. result in a substantial erosion or siltation on- or off-site;		✓		
ii. ii. substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or offsite;		✓		
iii. iii. create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff; or		✓		
iv. impede or redirect flood flows?		✓		
d) In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?			✓	
e) Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?			✓	

Impact Analysis

Would the project:

a) *Violate any water quality standards or waste discharge requirements?*

The project site is currently vacant. Construction of the proposed project would result in the majority of the site being covered with impervious surfaces.

The State Water Resources Control Board and nine Regional Water Quality Control Boards regulate the water quality of surface water and groundwater bodies throughout California. The proposed project is within the jurisdiction of the Central Valley Regional Water Quality Control Board (RWQCB).

Pollutants of concern during construction include sediments, trash, petroleum products, concrete waste (dry and wet), sanitary waste, and chemicals. During construction activities, excavated soil would be exposed with an increased potential to expose soils to wind and water erosion, which could result in temporary minimal increases in sediment load into the MID nearby water bodies, including the Black Rascal Creek, located approximately 0.1 miles to the north. Any potential short-term water quality effects from project related construction activities can be minimized and reduced to a level of **less than significant with mitigation** by implementing the following mitigation measure.

Mitigation Measure:

HYDRO-1) To minimize any potential short-term water quality effects from project-related construction activities, the project contractor shall implement Best Management Practices (BMPs) in conformance with the California Storm Water Best Management Practice Handbook for Construction Activity. In addition, the proposed project shall be in compliance with existing regulatory requirements, including the Water Pollution Control Preparation (WPCP) Manual. In addition, implementation of a Storm Water Pollution Prevention Plan (SWPPP) would be required under the National Pollutant Discharge Elimination System (NPDES) to regulate water quality associated with construction activities.

HYDRO-2) If any storm drainage from the site is to drain into MID facilities, the developer shall first enter into a "Storm Drainage Agreement" with MID and pay all applicable fees.

The nearest water bodies to the proposed project include Black Rascal Creek, located approximately 0.1 of a mile to the north; Fahrens Creek, located .33 miles north; and Bear Creek, located approximately 0.5 miles to the south. Operation of the proposed project could result in surface water pollution associated with chemicals, liquid products, petroleum products (such as paints, solvents, and fuels), and waste that may be spilled or leaked and have the potential to be transported via runoff during periods of heavy precipitation into these water bodies. Implementation of Mitigation Measure HYDRO-2, described below, would ensure that stormwater runoff from the proposed project would be appropriately managed to prevent pollutants from being discharged into these water bodies, reducing any potential impacts to **less than significant with mitigation.**

Mitigation Measure:

HYDRO-3) To reduce the potential for degradation of surface water quality during project operation, a SWPPP shall be prepared for the proposed project. The SWPPP shall describe specific programs to minimize stormwater pollution resulting from the proposed project. Specifically, the SWPPP shall identify and describe source control measures, treatment controls, and BMP maintenance requirements to ensure that the project complies with post-construction stormwater management requirements of the RWQCB.

b) *Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?*

The City receives all of its water supply from groundwater. Based on the City's Urban Water Management Plan (UWMP), water consumption was estimated to be 15.9 million gallons of water per day (mgd) or approximately 17,855 acre-feet per year. The UWMP also estimates the projected acre-feet of water use for years 2020, 2025, 2030, and 2035, which are projected to increase each year. By 2035, the City's projected water use is expected to be 31,960 acre-feet of potable and raw water and 5,869 acre-feet of recycled water.

The proposed project would generate a need for approximately 40,160 gallons per day. Based on the water well production of 15.9 mgd, the proposed project would use approximately 0.25% of the total daily water demand for the City.

Although development of the site would restrict onsite recharge where new impervious surface areas are created, all alterations to groundwater flow would be captured and routed to the stormwater percolation ponds or pervious surfaces with no substantial net loss in recharge potential anticipated. This reduces this impact to a **less than significant** level.

c) *Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would:*

i. result in a substantial erosion or siltation on- or off-site;

ii. substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or offsite;

iii. create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff; or

iv. impede or redirect flood flows?

Implementation of the project would result in grading and landform alterations on the site that would expose native soils that could be subject to the effects associated with wind and water erosion unless adequate measures are taken to limit the transport of soils in surface water from the site to downstream locations. As discussed above, the project applicant would be required to implement a SWPPP that would identify specific measures to address erosion and siltation resulting from grading and construction as well as the potential long-term water quality impacts.

Construction of the project would include connecting on-site drainage facilities to the City's storm drain system. The City has approximately 112 miles of underground storm drain lines, underground storage pipes, and 141 acres of detention ponds. All storm water run-off would be required to be captured on-site and metered into the City's storm drainage per City Standards. The storm water would ultimately be routed to Black Rascal Creek north of the site. At the time of construction, the developer would be required to provide calculations to demonstrate that the proposed on-site retention and the City's storm water system would be able to accommodate the additional run-off from the site.

According to FEMA, the project site is partially located within the shaded Zone X flood zone (0.2 percent chance of flood hazard) and partially within the unshaded Zone X flood zone (area of minimal flood hazard) (refer to Figure 18 on page 61. As previously mentioned any run-off from the site would be required to be captured on-site and metered into the City's storm drain system. Therefore, runoff from the site would not increase the rate or amount of surface water flooding or impede or redirect flood flows.

Implementation of Mitigation Measure HYDRO-1 and Mitigation Measure HYDRO-4 below would reduce any impacts from site drainage to **less than significant with mitigation**.

Mitigation Measure:

HYDRO-4 Prior to issuance of a building permit or as required by the City Engineer, the developer shall demonstrate to the City that storm drainage facilities are adequate to meet the Project demands and that improvements are consistent with the City Standards and the City's Storm Drain Master Plan.

d) *In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?*

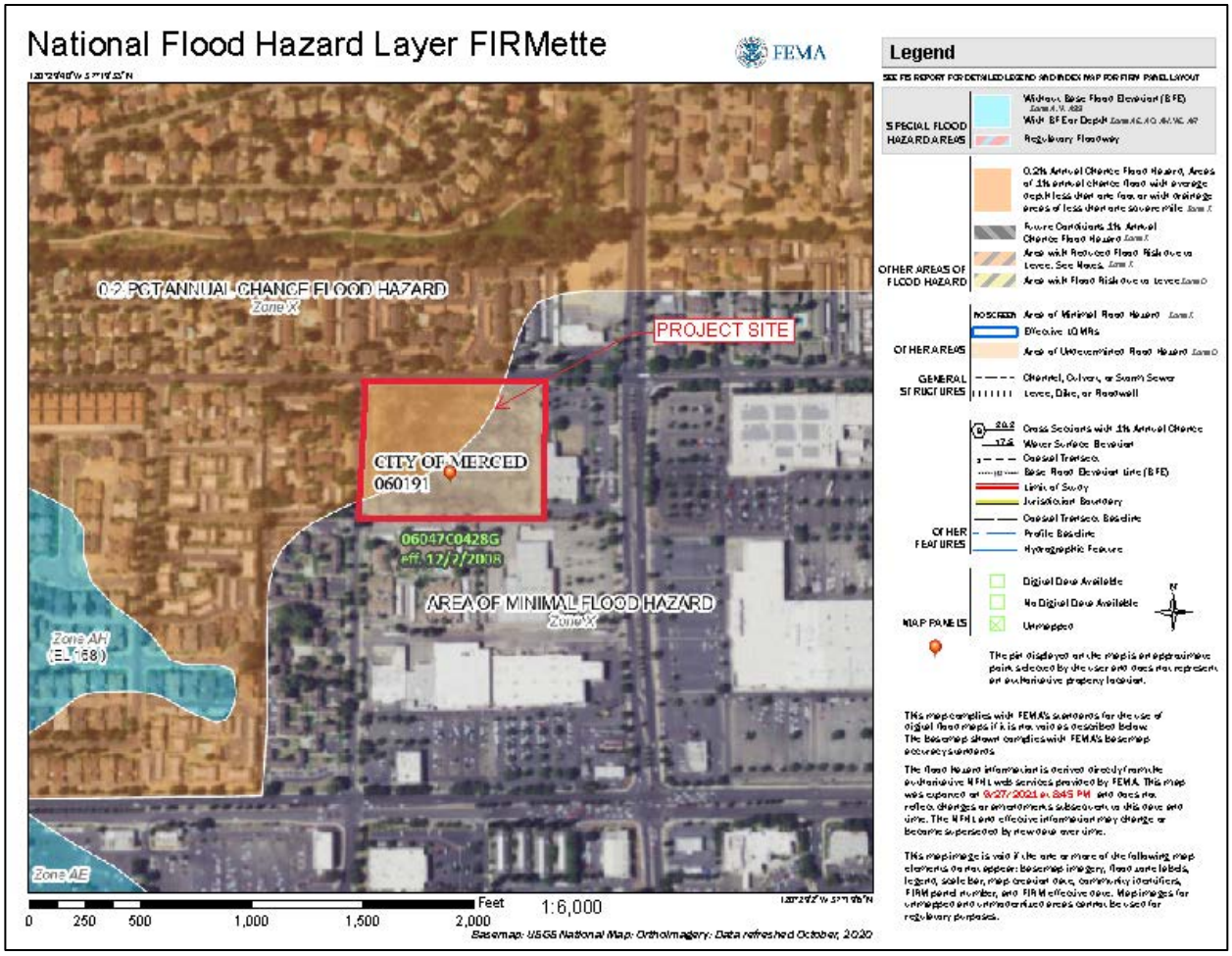
As shown on the map located at Figure 18 on the following page, the project site is located within the shaded Zone X which indicates a 0.2 percent chance of flood hazard and the unshaded Zone X which indicates minimal flood hazard. All building pads and finished floors would be required to requirements of these Flood Zones in compliance with the California Building Code.

The site is not in a tsunami or seiche zone and would not present a risk for release of pollutants due to inundation. This impact is **less than significant.**

e) *Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?*

The proposed project would not obstruct or conflict with the implementation of a water quality control plan or sustainable groundwater management plan. The project would be required to comply with all City of Merced standards and Master Plan requirements for groundwater and water quality control. This impact is **less than significant.**

Figure 18 - FEMA Flood Map



11. Land Use and Planning

SETTING AND DESCRIPTION

The project site is located within the City Limits of Merced and within its Specific Urban Development Plan and Sphere of Influence (SUDP/SOI). The project site currently has a General Plan designation of Regional/Community Commercial (RC) and is zoned Planned Development (P-D) #8. The proposed project includes amending the General Plan designation for 5.59 acres from Regional/Community Commercial (RC) to High Density(HD) Residential and revising the Site Utilization Plan (SUP) land use designation for that 5.59 acres from high-medium density residential to high density residential to allow the construction of 161 multi-family dwelling units. It would also change the land use designation for 1.34 acres from High-Medium Density Residential to Office to allow the construction of the medical/dental clinic. The current and proposed General Plan and Zoning Designations are shown on the map at Figure 3 on Page 12.

Surrounding Uses

Refer to Figure 2 on Page 11 and the table below for the surrounding land uses.

Surrounding Land	Existing Use of Land	Zoning Designation	City General Plan Land Use Designation
North	Apartments (across Loughborough Drive)	P-D #8	High-Medium Density Residential (HMD)
South	Apartments	P-D #7	High-Medium Density Residential (HMD)
East	Commercial (formerly In-Shape)	P-D #8	Regional/Community Commercial (RC)
West	Apartments (across Meadows Avenue)	P-D #8	High-Medium Density Residential (HMD)

Current Use/Background

The project site is currently vacant. The site was annexed into the City in 1970. At that time, Planned Development (P-D) #8 was established which included the project site. Through the years, there have been changes to the General Plan and Site Utilization Plan land use designations. However, no projects have been constructed on the site.

Project Characteristics

The project site is 6.93 acres that will be subdivided into three separate parcels – Parcels A, B, and C. The proposed project includes a General Plan Amendment, Site Utilization Plan Revision, and Site Plan Review to allow the construction of a 161-unit apartment complex, a community/office building, and a medical/dental clinic. The apartments would consist of seventeen two- and three-story buildings and associated parking and would provide a density of 29 units per acre. The community/office building and clinic would be single-story buildings. The apartments would be built in two phases. Phase 1 would be the ten apartment buildings (89 units) and the community/office building on Parcel A (refer to the Site Plan at Figure 5 on page 14). The second phase would be the seven buildings on Parcel B (72 units). The clinic is currently planned to be constructed with the first phase of construction.

The apartment complex would have access from Loughborough Drive and Meadows Avenue. The clinic would have access from Loughborough Drive. There would also be access through the gate between the clinic and the apartment complex that would allow emergency access to Loughborough Drive and Meadows Avenue (refer to the Site Plan at Figure 5).

There are four different building types identified on the site plan at Figure 5 for the multi-family component of the project – Building types A, B, C, and D. Buildings type A and B would be two-story buildings with a total of 5 units in each building, plus six covered parking stalls and covered bike parking on the ground floor. Building types A and B would have the same unit mix of two- and three- bedroom units (refer to the Floor Plans at Figures 6 and 7 on pages 15 and 16).

Building type C is a three-story building with 10 units in each building plus six covered parking stalls and covered bike parking on the ground floor. This building type has a mixture of one, two, and three-bedroom units (refer to the floor plan at Figure 10 on page 19).

Building type D is also a three-story building and has 11 units per building plus six covered parking stalls and covered bike parking on the ground floor. Building type D has a mixture of one, two, and three-bedroom units (Figure 12 on page 21).

The table below provides the total number of one-, two-, and three-bedroom units provided in the project.

One Bedroom	68
Two Bedroom	48
Three Bedroom	45
Total	161

The Community/Office building would be a single-story building consisting of 3,870.5 square feet of floor area. The building would include a multi-purpose room for tenants, a gym, laundry facilities, a kitchen, bathrooms, four offices, a conference room, a mail room, and maintenance area (refer to the floor plan at Figure 12). The architecture of the building would match the apartments (see the building elevations at Figure 12). The highest point of the building would be 22' 3". The amenities provided by this building would be for tenants only and would not be open to the public.

The medical/dental clinic would be located on Parcel C and is 12,667.5 square feet. The clinic would provide 8 dental chairs, two chiropractic rooms, two behavioral health offices, fifteen exam rooms, an x-ray room, lab, administrative office space, a break room, reception and waiting area. The clinic will be a Federally Qualified Health Center (FQHC). FQHC's provide services to anyone in need, but traditionally see lower-income patients. The clinic will offer a full scope of services, including primary care, dental, women's health services, lab testing, and mental and behavior health services. The hours of the clinic are anticipated to be from 8:00 a.m. to 5:00 p.m. Monday through Friday, but could vary slightly. The architecture of the building would be compatible with the apartments, but has different architectural features and different materials. The building would be single-story with the highest point of the building being 21 feet. The floor plan and elevations for the clinic are provided at Figure 13 on page 22.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
11. <u>Land Use and Planning.</u> Would the project:				
a) Physically divide an established community?				✓
b) Cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?			✓	

Impact Analysis

Would the project:

a) *Physically divide an established community?*

The project site is surrounded by urban uses. The proposed project would develop an existing vacant lot and would become a part of the adjacent, surrounding community. The project would not physically divide the community, therefore, there is **no impact.**

b) *Cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?*

The Housing Element of the *Merced Vision 2030 General Plan* includes policies supporting affordable housing, mixed-use development, and higher densities.

Policy H-1.1 Support Increased Density in Residential Zoning Districts

The proposed land use change would increase the density for this site from 6 to 12 units/acre to 24 to 36 units/acre. The proposed apartment project would provide a density of 29 units/acre (gross).

Policy 1.8b Prioritize City efforts to encourage residential development by focusing on in-fill development and densification within the existing City Limits.

The proposed project is an in-fill project on a vacant site. The surrounding area is developed with a mixture of commercial and residential uses. The higher density proposed helps achieve this policy.

Based on the forgoing analysis, the project would comply with the General Plan land use designation of High Density. Therefore, this impact would be **less than significant.**

12. Mineral Resources

SETTING AND DESCRIPTION

The City of Merced does not contain any mineral resources that require managed production, according to the State Mining and Geology Board. Based on observed site conditions and review of geological maps for the area, economic deposits of precious or base metals are not expected to underlie the Merced SUDP/SOI. According to the California Geological Survey, Aggregate Availability in California - Map Sheet 52, Updated 2006, minor aggregate production occurs west and north of the City of Merced, but economic deposits of aggregate minerals are not mined within the immediate vicinity of the SUDP/SOI. Commercial deposits of oil and gas are not known to occur within the SUDP/SOI or vicinity.

According to the Merced County General Plan Background Report (June 21, 2007), very few traditional hard rock mines exist in the County. The County's mineral resources are almost all sand and gravel mining operations. Approximately 38 square miles of Merced County, in 10 aggregate resource areas (ARA), have been classified by the California Division of Mines and Geology for aggregate. The 10 identified resource areas contain an estimated 1.18 billion tons of concrete resources with approximately 574 million tons in western Merced County and approximately 605 million tons in eastern Merced County. Based on available production data and population projections, the Division of Mines and Geology estimated that 144 million tons of aggregate would be needed to satisfy the projected demand for construction aggregate in the

County through the year 2049. The available supply of aggregate in Merced County substantially exceeds the current and projected demand.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
12. Mineral Resources. Would the project:				
a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?				✓
b) Result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan, or other land use plan?				✓

Impact Analysis

Would the project:

a) *Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?*

Based on observed site conditions and review of geological maps for the area, economic deposits of precious or base metals are not known to occur in the Merced SUDP/SOI. Therefore, implementation of the proposed project would have **no impact** on the availability of mineral resources or impact current or future mining operations.

b) *Result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan, or other land use plan?*

No Mineral Resource Zones or mineral resource recovery sites exist within the City of Merced or in the area designated for future expansion of the City (the SUDP/SOI). Therefore, implementation of the proposed project would have **no impact** on the availability of mineral resources or impact current of future mining operations.

13. Noise

SETTING AND DESCRIPTION

Noise is usually defined as unwanted sound. Noise consists of any sound that may produce physiological or psychological damage and/or interfere with communication, work, rest, recreation, or sleep. Several noise measurement scales exist that are used to describe noise in a particular location. A decibel (dB) is a unit of measurement that indicates the relative intensity of a sound. Sound levels in dB are calculated on a logarithmic basis. An increase of 10 dB represents a 10-fold increase in acoustic energy, while 20 dB is 100 times more intense and 30 dB is 1,000 times more intense. Each 10 dB increase in sound level is perceived as approximately a doubling of loudness; and similarly, each 10 dB decrease in sound level is perceived as half as loud. Sound intensity is normally measured through the A-weighted sound level (dBA). This scale gives greater weight to the frequencies of sound to which the human ear is most sensitive. The A-weighted

sound level is the basis for 24-hour sound measurements that better represent human sensitivity to sound at night.

As noise spreads from a source, it loses energy so that the farther away the noise receiver is from the noise source, the lower the perceived noise level would be. Geometric spreading causes the sound level to attenuate or be reduced, resulting in a 6 dB reduction in the noise level for each doubling of distance from a single point source of noise to the noise sensitive receptor of concern. According to the *Merced Vision 2030 General Plan,* outdoor noise exposure not exceeding 60 db is considered to be a "normally acceptable" noise level for residential uses.

Potential noise impacts of the proposed project can be categorized as those resulting from construction and those from operational activities. Construction noise would have a short-term effect; operational noise would continue throughout the lifetime of the project.

The existing noise in the area is predominantly caused by traffic related to the surrounding multi-family and commercial uses.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
13. <u>Noise.</u> Would the project result in:				
a) Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?		✓		
b) Generation of excessive groundborne vibration or groundborne noise levels?			✓	
c) For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?			✓	

Impact Analysis

Would the project result in:

a) *Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?*

Construction Noise

Construction of the project would temporarily increase noise levels in the area during the construction period. The construction of the project is expected to be done in two phases

with each phase expected to take between 120-180 days to complete. Therefore, the noise from construction may be steady for several months and then cease all together. Construction activities, including site clearing, building construction, and paving would be considered an intermittent noise impact throughout the construction period. These activities could result in various effects on sensitive receptors, depending on the presence of intervening barriers or other insulating materials. Although construction activities would likely occur only during daytime hours, construction noise could still be considered disruptive to local residents. The City of Merced does not have a noise ordinance, but past practice has been to allow construction activities during daylight hours (between 7:00 a.m. and 7:00 p.m.). Implementation of the mitigation measures below would reduce potential impacts from construction noise to **less than significant with mitigation.**

Operational Noise

Noise from the multi-family development would be primarily traffic related. Additionally, there would be added noise from possible outdoor activities of the tenants, as well as more frequent refuse collection to serve the site. Parking for the site is located throughout the site. There is a play area, activity area, community lawn area, and dog park near the center of the site that would available for tenants to use. It is not expected that these areas would host large gatherings or generate a large amount of noise. Any noise from these areas would be buffered by the buildings that surround them. Additionally, these areas are set back approximately 150 feet from Loughborough Drive and approximately 300 feet from Meadows Avenue.

Noise generated from the clinic would be primarily traffic-related. It is anticipated that the clinic would be open during traditional office hours such as 8:00 a.m. to 5:00 p.m., Monday through Friday. However, these hours may vary as the project moves forward. It is not anticipated that the hours of operation would extend past 6:00 p.m. or before 7:00 a.m.

According to the General Plan acceptable outdoor noise levels in residential areas should not exceed 60 dB. While the project will contribute to additional noise in the area due to an increase in people and activity in the area and traffic, it is not anticipated to increase the noise level above the recommended 60 dB. Therefore, operational noise is expected to be **less than significant.**

Mitigation Measure:

NOI-1) To reduce potential construction noise impacts, the following multi-part mitigation measure shall be implemented for the project:

- The construction contractor shall ensure that all internal combustion engine-driven equipment is equipped with mufflers that are in good condition and appropriate for the equipment.
- The construction contractor shall locate stationary noise-generating equipment as far as feasible from sensitive receptors when sensitive receptors adjoin or are near a construction disturbance area. In addition, the project contractor shall place such stationary construction equipment so that emitted noise is directed away from sensitive receptors nearest the project site.

- The construction contractor shall prohibit unnecessary idling of internal combustion engines (i.e., idling in excess of 5 minutes is prohibited).
- The construction contractor shall locate, to the maximum extent practical, on-site equipment staging areas so as to maximize the distance between construction-related noise sources and noise-sensitive receptors nearest the project site during all project construction.
- The construction contractor shall limit all noise producing construction activities, including deliveries and warming up of equipment, to the hours of 7:00 a.m. to 7:00 p.m., Monday through Saturday. No such work shall be permitted on Sundays or federal holidays without prior approval from the City.

b) *Generation of excessive groundborne vibration or groundborne noise levels?*

No permanent noise sources would be located within the project site that would expose persons to excessive groundborne vibration or noise levels. Construction activities associated with implementation of the proposed project are not expected to result in excessive groundborne vibration or groundborne noise levels. Therefore, implementation of the proposed project would not permanently expose persons within or around the project sites to excessive groundborne vibration or noise and the project impacts would be ***less than significant***

c) *For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?*

The nearest airports to the project site include Merced Regional Airport, located approximately 3.5 miles southeast of the project site, and Castle Airport, located approximately 7 miles west of the project site. No portion of the project site lies within the 55 dBA CNEL noise contours of these airports. Given the project site's distance from the nearest airports, project implementation would not expose people residing or working in the project area to excessive noise levels and impacts would be **less than significant**.

14. Population and Housing

SETTING AND DESCRIPTION

The implementation of the proposed project would result in the construction of a 161-unit apartment complex with one-, two-, and three-bedroom units and a 12,667-square-foot medical/dental clinic. The project site is surrounded by urban uses.

Expected Population and Employment Growth

According to the State Department of Finance, the City of Merced's population for 2021 was estimated to be 90,971. Population projections estimate that the Merced SUDP area will have a population of 159,900 by the Year 2030. The 2021 population projections prepared by the State also indicate a vacancy rate of 6.1% and an average household size of 3.18 persons per household.

According to the *Merced Vision 2030 General Plan*, the City of Merced is expected to experience significant employment growth by the Year 2030.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
14. Population and Housing. Would the project:				
a) Induce substantial population growth in an area either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?			✓	
b) Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?				✓

Impact Analysis

Would the project:

a) *Induce substantial population growth in an area either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?*

The proposed apartment project includes the construction of 161 dwelling units, with a mixture of one-, two-, and three-bedroom units. The proposed land use change would allow a change in allowable density from 6 to 12 dwelling units/acre to 24 to 36 dwelling units/acre. The proposed apartment project would provide a density of 29 units per acre. The clinic is not expected to substantially increase the population of the area. The growth expected with this project would not exceed the projected growth of the City General Plan. There are no new roads or other infrastructure being proposed with the project. Therefore, this impact would be **less than significant.**

b) *Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?*

Implementation of the proposed project would not displace any existing housing. There is **no impact.**

15. Public Services

SETTING AND DESCRIPTION

Fire Protection

The City of Merced Fire Department provides fire protection, rescue, and emergency medical services from five fire stations throughout the urban area. The City's Central Fire Station is located in the downtown area at 16th and G Streets. The City also has four other stations throughout the City. Station #53, located at 800 Loughborough Drive, would serve the project site.

Police Protection

The City of Merced Police Department provides police protection for the entire City. The Police Department employs a mixture of sworn officers, non-sworn officer positions (clerical, etc.), and unpaid volunteers (VIP's). The service standard used for planning future police facilities is approximately 1.37 sworn officers per 1,000 population, per the Public Facilities Financing Plan.

Schools

The public school system in Merced is served by three districts: 1) Merced City School District (elementary and middle schools); 2) Merced Union High School District (MUHSD); and, 3) Weaver Union School District (serving a small area in the southeastern part of the City with elementary schools). The districts include various elementary schools, middle (junior high) schools, and high schools. The Project site falls within the Merced City School District and Merced Union High School District (MUHSD).

As the City grows, new schools will need to be built to serve our growing population. According to the Development Fee Justification Study for the MUHSD, Merced City Schools students are generated by new multi-family development at the following rate:

Student Generation Rates

Commercial/Industrial Category	Elementary (K-8) (Students per 1,000 sq.ft.)	High School (9-12) (Students per 1,000 sq.ft.)
Retail	0.13	0.038
Restaurants	0.00	0.157
Offices	0.28	0.048
Services	0.06	0.022
Wholesale/Warehouse	0.19	0.016
Industrial	0.30	0.147
Multi-Family	0.188 (per unit)	0.109 (per unit)

Based on the table above, the proposed mixed-use project would be expected to generate 48 total new students [30 Elementary School (K-8) students, and 18 High School students].

Parks

Fahrens Park is located less than one-quarter mile north of the site. Sidewalks and streets are in place to provide pedestrian and bicycle access to the park.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
15. Public Services. Would the project:				
a) Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the following public services:				
i. Fire Protection?			✓	
ii. Police Protection?			✓	
iii. Schools?			✓	
iv. Parks?			✓	
v. Other Public Facilities?			✓	

Impact Analysis

Would the project:

a) *Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the following public services:*

i. *Fire Protection* - The City of Merced Fire Department would provide fire protection services to the site. The project site is located within Fire District #3 and would be served by Fire Station #53, located at 800 Loughborough Drive. The response from this station would meet the desired response time of 4 to 6 minutes, citywide. The proposed change in land use designation would not affect the City's ability to provide fire protection. The project would be required to be constructed with a fire sprinkler system and to meet all requirements of the California Fire Code and the Merced Municipal Code.

At the time a building permit is issued, the developer would be required to pay the fees required by the Public Facilities Financing Plan (PFFP). A portion of this fee goes to cover the City's costs for fire protection such as fire stations, etc. In addition, the developer may be required to annex into the City's Community Facilities District for Services (CFD #2003-2). This would result in an assessment paid with property taxes in which a portion of the tax would go to pay for fire protection services. Affordable housing projects may exempt

themselves from this requirement, but the clinic would still be subject to the CFD.

Compliance with all Fire, Building, and Municipal Code requirements as well as payment of the Impact Fees required by the Public Facilities Financing Program, and annexation into the City's CFD for services would reduce any potential impacts to a **less than significant level**.

ii. *Police Protection* - Development of the project would require additional police services in the area. The proposed mixed-use project is located on a site that is currently vacant. Any change to the status of the site would require additional services. However, the impacts from the proposed project would not substantially increase the impacts beyond what was anticipated with the previous General Plan Amendment and Zone Change that changed the land use for this site to High-Medium Density Residential. Payment of the required Public Facilities Impact Fees and annexation into the City's Community Facilities District (CFD) for services would reduce any potential impacts to a **less than significant** level.

iii. *Schools* - Based on the table provided in the "Settings and Description" section above, the proposed mixed-use project would generate a total of 104 students. The project would be required to pay all fees required by the Leroy F. Greene School Facilities Act of 1988. The payment of this statutory fee under California Government Code §65995 is deemed "full and complete mitigation" of school impacts.

iv. *Parks* - The development of the multi-family apartment project would not trigger the need to construct a new park in the area. Payment of the fees required under the Public Facilities Financing Program (PFFP) as described above and payment of Quimby Act fees would be required at time of building permit issuance to help fund future parks and maintenance of existing parks as well as the payment of fees in lieu of land dedication for future parks would be required at the building permit stage. The proposed amenities onsite and the payment of fees would reduce this potential impact to **less than significant**.

v. *Other Public Facilities* - The development of the project could impact the maintenance of public facilities and could generate impacts to other governmental services. Payment of the fees required under the Public Facilities Financing Program (PFFP) as described above would mitigate these impacts to a **less than significant** level.

16. Recreation

SETTING AND DESCRIPTION

The City of Merced has a well-developed network of parks and recreation facilities. Fahrens Park (a Community Park) is located to the north of the project site within easy walking and biking distance. The City Bike path system would be accessible from Fahrens Park. The City's Frisbee Golf Course is located within approximately ½ mile of the site and is accessible by walking,

bicycling, or car. The closest Community Park would be Applegate Park which is located approximately 1 mile south of the site.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
16. Recreation. Would the project:				
a) Increase the use of neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?			✓	
b) Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?			✓	

Impact Analysis
Would the project:

a) *Increase the use of neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?*

The construction of the proposed apartment project would provide 161 new units to the area. As described above, there are 2 parks, plus the frisbee golf park within a short distance of the site. The site would have easy access to the City's bicycle trail via Fahrens Park. The clinic component of the project is not expected to impact the use of the City's park facilities. The developer would be required to pay the fees described under the Parks section above which would help fund future recreation needs. This impact would be **less than significant.**

b) *Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?*

As described above, the project would provide a community/recreation area near the center of the complex and open space area throughout the site for residents to use for recreation. Also as previously described, the project would be required to pay all impact fees required at the time of building permit issuance which would reduce any impacts to a **less than significant** level.

17. Transportation

SETTING AND DESCRIPTION

The project site is located at the southeast corner of Loughborough Drive and Meadows Avenue (see the Location Map at Figure 2, page 11). Loughborough Drive is a collector road with a 70-foot right-of-way and Meadows Avenue is a local road with a 64-foot right-of-way. Primary access

to Loughborough Drive is via R Street (Arterial), with a secondary route from Olive Avenue (Arterial), via Meadows Avenue. Access to Meadows Avenue is from Olive Avenue to the north or Loughborough Drive to the south. The apartment component of the project will have access from Loughborough Drive and Meadows Avenue with a drive aisle providing a connection to both streets. The clinic will have primary access from Loughborough Drive with an emergency access connection through the apartment complex that would connect to either Loughborough Drive or Meadows Avenue.

A traffic analysis was prepared by Ruettgers &Schuler Civil Engineers in compliance with CEQA regulations (refer to Appendix B). This analysis analyzed Vehicle Miles Traveled (VMT) in compliance with SB 742 requirements. In addition, the analysis analyzed Level of Service (LOS) as compared to the City's General Plan requirements.

Trip Generation

Based on approved trip generation rates that account for the specific land uses included in the project, the supplemental traffic analysis for Vehicle Miles Traveled prepared by DKS, estimates the proposed project would generate approximately 1,584 average daily trips [the Multi-family Low-Rise Residential Rate (ITE Code 220) and the Clinic Rate (ITE Code 630) was used for this calculation].

Improvements

The project is assumed to repair or replace frontage improvements as needed on Loughborough Drive and Meadows Avenue along the project frontage. These improvements would be required to be consistent with the City's Street standards.

Level of Service

Although SB 743 changed the way CEQA looks at transportation impacts, the City's General Plan continues to rely on Level of Service (LOS) to ensure streets are operating at an acceptable level and not experiencing long delays. The City's General Plan establishes LOS D (tolerable delays) as an acceptable level of service within the City. The traffic analysis considered the Level of Services for 8 intersections and 9 street segments (refer to Tables 3a, 3b, 4a, and 4b of the analysis at Appendix B. The Level of Service for all 8 intersections and 9 street segments maintained a LOS D or better under existing conditions with the project and at build out of the General Plan (2030) plus the project.

Vehicle Miles Traveled Impacts

An evaluation of vehicle miles traveled (VMT) for project traffic was conducted based on applicable California Environmental Quality Act (CEQA) Guidelines and the OPR *Technical Advisory on Evaluating Transportation Impacts in CEQA*, dated December 2018. The guidelines and technical advisory provide "screening thresholds" for identifying whether a land use project should be expected to result in a less-than-significant transportation impact under CEQA. Projects meeting one or more of these criteria would not be required to undergo a detailed VMT analysis. The project includes two separate uses: multi-family residential and a medical clinic. Following is a review of the multi-family residential and the medical clinic use and the corresponding screening thresholds:

Multi-Family Residential

The multi-family residential portion of the project is proposed to be an affordable housing development. There are specific guidelines in the evaluation of affordable housing projects contained in the OPR technical advisory. The following is an excerpt from the advisory for consideration of VMT impacts:

"Adding affordable housing to infill locations generally improves jobs-housing match, in turn shortening commutes and reducing VMT… Further, "… low-wage workers in particular would be more likely to choose a residential location close to their workplace, if one is available." In areas where existing jobs- housing match is closer to optimal, low income housing nevertheless generates less VMT than market- rate housing. Therefore, a project consisting of a high percentage of affordable housing may be a basis for the lead agency to find a less-than-significant impact on VMT. Evidence supports a presumption of less than significant impact for a 100 percent affordable residential development (or the residential component of a mixed-use development) in infill locations. Lead agencies may develop their own presumption of less than significant impact for residential projects (or residential portions of mixed-use projects) containing a particular amount of affordable housing, based on local circumstances and evidence. Furthermore, a project which includes any affordable residential units may factor the effect of the affordability on VMT into the assessment of VMT generated by those units."

The multi-family residential is therefore screened out from further VMT analysis.

Medical Clinic

The medical clinic was reviewed for screening criteria contained in the above-mentioned OPR technical advisory. One of the screening criteria is if the project is within a ½ mile of an existing stop on a high-quality transit corridor. A high-quality transit corridor is defined as "a corridor with fixed route bus service with service intervals no longer than 15 minutes during peak commute hours." An investigation into the current bus routes in Merced determined that both criteria for a high-quality transit corridor are met with this project (see Appendix for bus route information). Therefore, the medical clinic is screened out from further VMT analysis.

Having met screening criteria, it is anticipated that both the multi-family residential and medical clinic will have a less-than-significant VMT impact.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
17. <u>Transportation/Traffic.</u> Would the project:				
a) Conflict with a program, plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities?			✓	
b) Conflict or be inconsistent with CEQA Guidelines § 15064.3, subdivision (b)?			✓	

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
c) Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?			✓	
d) Result in inadequate emergency access?			✓	

Impact Analysis

Would the project:

a) *Conflict with a program, plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities?*

As described the traffic analysis prepared considered both Vehicle Miles Traveled (VMT) and Level of Service (LOS). Based on this analysis, the project is eligible to be screened out under OPR's guidelines for VMT analysis and the LOS analysis found that the streets and intersections will continue to operate at LOS D or better in compliance with the General Plan. Therefore this project would not conflict with a program, plan, ordinance or policy addressing the circulation system and would be considered **less than significant.**

b) *Conflict or be inconsistent with CEQA Guidelines § 15064.3, subdivision (b)?*

As previously described in this section, a VMT analysis was prepared for this project by Ruettgers & Schuler, Civil Engineers. Based on guidance provided by OPR, both the multi-family component and the clinic would be screened out and not require further VMT analysis. Therefore, this impact is **less than significant.** Details regarding the criteria provided by OPR can be found in the traffic analysis at Appendix B.

c) *Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?*

Implementation of the proposed project would not create new roads. This is an in-fill site on existing local roads. The site is approximately 300 feet west of the intersection of Loughborough Drive and R Street, which is a signalized intersection. There is also a signalized intersection at the corner of Olive Avenue and Meadows Avenue approximately 1,000 feet south of the site. The line of site from all driveways would be at least 400 feet in each direction. Therefore, this impact is considered **less than significant.**

d) *Result in inadequate emergency access?*

The proposed project has three driveway entrances, one on Loughborough Drive into the apartment complex, one on Loughborough Drive into the clinic, and one on Meadows Avenue into the apartment complex. The entire apartment complex site can be accessed from any of the driveway entrances, although there is a gate between the clinic parcel and the apartment complex. The clinic could be accessed from Loughborough Drive and has emergency access from Meadows Avenue through the apartment complex. The site has

been analyzed by the City's Police and Fire Departments and determined sufficient emergency access would be provided. This impact is **less than significant.**

18. Tribal Cultural Resources

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
18. Tribal Cultural Resources Would the project:				
a) Cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code § 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:				
i. Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code section 5020.1(k), or				✓
ii. A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code § 5024.1. In applying the criteria set forth in subdivision (c) of Public Resource Code § 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.				✓

Impact Analysis

Would the project:

a) *Cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code § 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:*

   i. *Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code section 5020.1(k)?*

ii. *A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code § 5024.1. In applying the criteria set forth in subdivision (c) of Public Resource Code § 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.*

As stated in the Cultural Resources Section of this Initial Study, improvements associated with the project include site excavation, grading, paving, and construction of buildings. The areas of the project subject to demolition and construction facilities are likely to have been subject to ground disturbance in the past. No tribal resources are known to have occurred or have been identified at the project site or in the vicinity of the project site. However, as noted in the Cultural Resources Section, implementation of Mitigation Measures CUL-1 and CUL-3 would protect previously unrecorded or unknown cultural resources, including Native American artifacts and human remains, should these be encountered during project construction.

In addition, Assembly Bill (AB) 52 provides for consultation between lead agencies and Native American tribal organizations during the CEQA process. Since AB 52 was enacted in July 2015, the City has not been contacted by any California Native American tribes requesting that they be notified when projects are proposed in Merced. No tribes have requested consultation pursuant to Public Resources Code section 21080.3.1. Therefore, it is assumed that no Tribal Cultural Resources would be adversely affected by the project. As a result, ***no impact*** would occur.

19. Utilities and Service Systems

SETTING AND DESCRIPTION

Water

The City's water system is composed of 23 groundwater production wells located throughout the City, and approximately 350 miles of main lines. Well pump operators ensure reliability and adequate system pressure at all times to satisfy customer demand. Diesel powered generators help maintain uninterrupted operations during power outage. The City of Merced water system delivers more than 24 million gallons of drinking water per day to approximately 20,733 residential, commercial, and industrial customer locations. The City is required to meet State Health pressure requirements, which call for a minimum of 20 psi at every service connection under the annual peak hour condition and maintenance of the annual average day demand plus fire flow, whichever is stricter. The City of Merced Water Division is operated by the Public Works Department.

The City of Merced's wells have an average depth of 414 feet and range in depth from 161 feet to 800 feet. The depth of these wells would suggest that the City of Merced is primarily drawing water from a deep aquifer associated with the Mehrten geologic formation. Increasing urban demand and associated population growth, along with an increased shift by agricultural users from surface water to groundwater and prolonged drought, have resulted in declining groundwater levels due to overdraft. This condition was recognized by the City of Merced and the Merced Irrigation District (MID) in 1993, at which time the two entities began a two-year planning process to assure a safe and reliable water supply for Eastern Merced County through the year 2030. Integrated Regional Water Planning continues today through various efforts.

Wastewater

Wastewater (sanitary sewer) collection and treatment in the Merced urban area is provided by the

City of Merced. The wastewater collection system handles wastewater generated by residential, commercial, and industrial uses in the City.

The City Wastewater Treatment Plant (WWTP), located in the southwest part of the City about two miles south of the airport, has been periodically expanded and upgraded to meet the needs of the City's growing population and new industry. The City's wastewater treatment facility has a capacity of 11.5 million gallons per day (mgd), with an average flow of 8.5 mgd. The City has completed an expansion project to increase capacity to 12 mgd and upgrade to tertiary treatment with the addition of filtration and ultraviolet disinfection. Future improvements would add another 8 mgd in capacity (in increments of 4 mgd), for a total of 20 mgd. This design capacity can support a population of approximately 174,000. The collection system will also need to be expanded as development occurs.

Treated effluent is disposed of in several ways depending on the time of year. Most of the treated effluent (75% average) is discharged to Hartley Slough throughout the year. The remaining treated effluent is delivered to a land application area and the on-site City-owned wetland area south of the treatment plant.

Storm Drainage

The Draft *City of Merced Storm Drainage Master Plan* addresses the collection and disposal of surface water runoff in the City's SUDP. The study addresses both the collection and disposal of storm water. Systems of storm drain pipes and catch basins are laid out, sized, and costed in the plan to serve present and projected urban land uses.

It is the responsibility of the developer to ensure that utilities, including storm water and drainage facilities, are installed in compliance with City regulations and other applicable regulations. Necessary arrangements with the utility companies or other agencies will be made for such installation, according to the specifications of the governing agency and the City (Ord. 1342 § 2 (part), 1980: prior code § 25.21(f)). The City requires the construction of storm water percolation/detention basins with new development. Percolation basins are designed to collect storm water and filter it before it is absorbed into the soil and reaches groundwater tables. Detention basins are designed to temporarily collect runoff so it can be metered at acceptable rates into canals and streams which have limited capacity. The disposal system is mainly composed of MID facilities, including water distribution canals and laterals, drains, and natural channels that traverse the area.

The City of Merced has been involved in developing a Storm Water Management Plan (SWMP) to fulfill requirements of storm water discharges from Small Municipal Separate Storm Sewer System (MS4) operators in accordance with Section 402(p) of the Federal Clean Water Act (CWA). The SWMP was developed to also comply with General Permit Number CAS000004, Water Quality Order No. 2003-0005-DWQ.

Solid Waste

The City of Merced is served by the Highway 59 Landfill and the Highway 59 Compost Facility, located at 6040 North Highway 59, one and one-half miles north of Old Lake Road. The County of Merced is the contracting agency for landfill operations and maintenance, while the facilities are owned by the Regional Waste Authority. The City of Merced provides services for all refuse pick-up within the City limits and franchise hauling companies collect in the unincorporated areas.

In addition to these two landfill sites, there is one private disposal facility, the Flintkote County Disposal Site, at SR 59 and the Merced River. This site is restricted to concrete and earth material.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
19. Utilities and Service Systems. Would the project:				
a) Require or result in the relocation or construction of new or expanded water, wastewater treatment or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?			✓	
b) Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years?			✓	
c) Result in a determination by the waste water treatment provider, which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?		✓		
d) Generate solid waste in excess of state or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?			✓	
e) Comply with federal, state, and local management and reduction statutes and regulations related to solid waste?			✓	

Impact Analysis

Would the project:

a) *Require or result in the relocation or construction of new or expanded water, wastewater treatment or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?*

The proposed project would be served by the City's existing water, wastewater treatment, and storm water drainage systems. New storm water drainage lines would need to be constructed from the site to connect to the existing City system. It is expected that the

project would connect to the lines in R Street (approximately 250 feet west of the site) which would ultimately drain into Black Rascal Creek. No extension of water or sewer lines would be required to serve this project. This impact is **less than significant.**

b) *Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years?*

The City's water supply system consists of 23 wells and 14 pumping stations. The project is expected to use approximately 40,160 gallons of water per day. There is a 10-inch water line in Loughborough Drive and an 8-inch line in Meadows Avenue to serve the project site. The City's water supply would be sufficient to serve the proposed project. This impact would be **less than significant.**

c) *Result in a determination by the waste water treatment provider, which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?*

The City's wastewater collection system handles wastewater generated by residential, commercial, and industrial uses in the City. The City Wastewater Treatment Plant (WWTP), located in the southwest part of the City about 2 miles south of the airport, has been periodically expanded and upgraded to meet the needs of the City's growing population and new industry.

The WWTP recently finished two major upgrades (Phase IV and Phase V) to improve the quality of the treated water, referred to as plant effluent, and to improve the quality of biosolids and methods of treatment. The Merced Wastewater Treatment Plant is now one of the most advanced facilities in the state. It is capable of treating up to 12 million gallons of influent a day. The proposed project is estimated to generate approximately 42,745 gallons of wastewater per day (based on 257 gallons/unit and 108 gallons/1,000 s.f. of office space). This represents 0.3% of the overall capacity of the WWTP. The City's WWTP has sufficient capacity to handle this increase. This project is **less than significant with mitigation.**

d) *Generate solid waste in excess of state or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?*

Solid wastes within the County of Merced are disposed of at two landfill sites owned and operated by the Merced County Regional Waste Management Authority. The west side of the County is served by the Billy Wright Road landfill, and the east side (including the City of Merced) by the Highway 59 landfill, 1.5 miles north of Old Lake Road. The County of Merced is the contracting agency for landfill operation and maintenance. It is estimated that the remaining capacity of the Highway 59 site will last until the year 2030. The City of Merced provides services for all refuse pick-up within the City limits, including green waste and recycling. Street sweeping services are also offered.

The proposed project would be required to provide recycling containers as well as general garbage containers. Additionally, in order to reduce the number of containers on site for general waste, the developer may install trash compactors. CalRecycle estimates that the average multi-family unit generates approximately 4 pounds of waste per day (combined trash and recyclables). This equates to 644 pounds/day for the multi-family portion project. The estimated generation rate for offices uses is 6 pounds/day per 1,000 square feet of floor

area. This equates to 76 pounds/date for the clinic, bringing the total expected waste to 720 pounds/day. It is expected that approximately ½ of the total waste generated could be recycled. The City's Refuse Department would be able to serve the project and sufficient capacity is available at the landfill to serve the project. This impact would be **less than significant.**

e) *Comply with federal, state, and local management and reduction statutes and regulations related to solid waste?*

The California Integrated Waste Management Act of 1989 (AB 939) changed the focus of solid waste management from landfill to diversion strategies such as source reduction, recycling, and composting. The purpose of the diversion strategies is to reduce dependence on landfills for solid waste disposal. AB 939 established mandatory diversion goals of 25 percent by 1995 and 50 percent by 2000. The proposed project would be required to comply with all federal, State, and local regulations related to solid waste. Furthermore, the proposed project would be required to comply with all standards related to solid waste diversion, reduction, and recycling during project construction and operation of the project. Therefore, the proposed project is anticipated to result in **less-than-significant** impacts related to potential conflicts with federal, State, and local statutes and regulations related to solid waste.

20. Wildfire

SETTING AND DESCRIPTION

Both urban and wildland fire hazard potential exists in the City of Merced and surrounding areas, creating the potential for injury, loss of life, and property damage. Urban fires primarily involve the uncontrolled burning of residential, commercial, or industrial structures due to human activities. Wildland fires affect grassland, brush or woodlands, and any structures on or near these fires. Such fires can result from either human made or natural causes.

Urban fires comprise the majority of fires in the City of Merced. The site is surrounded by urban uses. The City of Merced Fire Department has procedures in place to address the issue of wildland fires, so no additional mitigation would be necessary.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
20. Wildfire. If located in or near stat responsibility areas or lands classified as very high fire hazard severity zones, would the project:				
a) Substantially impair an adopted emergency response plan or emergency evacuation plan?			✓	
	Potentially Significant Impact	**Less Than Significant with Mitigation Incorporated**	**Less Than Significant Impact**	**No Impact**

b) Due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire?			✓	
c) Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment?			✓	
d) Expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?				✓

Impact Analysis

Would the project:

a) *Substantially impair an adopted emergency response plan or emergency evacuation plan?*

The project does not include the construction of new roadways or major changes to existing roads. The project would also be required to comply with all applicable requirements of the California Fire Code. As such, the project would not impact an adopted emergency response plan or emergency evacuation plan. This impact would be **less than significant.**

b) *Due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire?*

According to the California Department of Forestry and Fire Protection, the project site is not located in any fire hazard zone. The areas surrounding the project site are mostly developed, urban land.

There is a low potential for wildland fires within these parameters. Additionally, the California Building Code and the California Fire Codes work together to regulate building construction and related items such as the care of vacant lots and the storage of flammable liquids.

To provide effective fire prevention activities for low hazard occupancies, the Fire Department conducts seasonal hazard removal programs (primarily weed abatement). The City of Merced employs a weed abatement program, which requires property owners to eliminate flammable vegetation and rubbish from their properties. Each property within the City is surveyed each spring and notices are sent to the property owners whose properties have been identified to pose a fire risk. Since inception of this program in 1992, grass or brush related fires within the City have been greatly reduced. A "bulky item" drop off station has been opened near Highway 59 and Yosemite Avenue. Further, staging areas,

building areas, and/or areas slated for development using spark-producing equipment are cleared of dried vegetation or other materials that could serve as fuel for combustion; impacts are considered **less than significant**.

c) *Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment?*

The project would be required to repair/replace any missing or damaged infrastructure along their property frontage. However, the on-going maintenance of roadways would fall to the City. All other infrastructure or utilities exist in the area. No additional infrastructure or on-going maintenance would be required that would cause an impact to the environment. This impact is **less than significant.**

d) *Expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?*

The project site and surrounding area is relatively flat with no risk of downslope or downstream flooding or landslides. Therefore, there is **no impact.**

21. Mandatory Findings of Significance

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
21. Mandatory Findings of Significance. Would the project:				
a) Have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?			✓	

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
b) Have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probably future projects?)			✓	
c) Have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?			✓	

Impact Analysis

Would the project:

a) *Have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?*

As previously discussed in this document, the project does not have the potential to adversely affect biological resources or cultural resources because such resources are lacking on the project site, and any potential impacts would be avoided with implementation of the mitigation measures and other applicable codes identified in this report. Also, the project would not significantly change the existing urban setting of the project area. Thus, this impact would be **less than significant.**

b) *Have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probably future projects?)*

The Program Environmental Impact Report conducted for the *Merced Vision 2030 General Plan, and the General Plan Program EIR* (SCH# 2008071069) has recognized that future development and build-out of the SUDP/SOI will result in cumulative and unavoidable impacts in the areas of Air Quality and Loss of Agricultural Soils. In conjunction with this conclusion, the City has adopted a Statement of Overriding Considerations for these impacts (Resolution #2011-63) which is herein incorporated by reference.

The certified General Plan EIR addressed and analyzed cumulative impacts resulting from changing agricultural use to urban uses. No new or unaddressed cumulative impacts will result from the Project that have not previously been considered by the certified General Plan EIR or by the Statement of Overriding Considerations, or mitigated by this Expanded

Initial Study. This Initial Study does not disclose any new and/or feasible mitigation measures which would lessen the unavoidable and significant cumulative impacts.

The analysis of impacts associated with the development of the proposed change will contribute to the cumulative impacts identified in the General Plan EIR. The nature and extent of these impacts, however, falls within the parameters of impacts previously analyzed in the General Plan EIR. No individual or cumulative impacts will be created by the Project that have not previously been considered at the program level by the General Plan EIR or mitigated by this Initial Study. This impact is **less than significant.**

c) *Have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?*

Development anticipated by the *Merced Vision 2030 General Plan* will have significant adverse effects on human beings. These include the incremental degradation of air quality in the San Joaquin Basin, the loss of prime agricultural soils, the incremental increase in traffic, and the increased demand on natural resources, public services, and facilities. However, consistent with the provisions of CEQA previously identified, the analysis of the Project is limited to those impacts which are peculiar to the Project site or which were not previously identified as significant effects in the prior EIR. The previously-certified General Plan EIR and the Statement of Overriding Considerations addressed those cumulative impacts; hence, there is no requirement to address them again as part of this Project.

This previous EIR has concluded that these significant adverse impacts are accounted for in the mitigation measures incorporated into the General Plan EIR. In addition, a Statement of Overriding Considerations has been adopted by City Council Resolution #2011-63 that indicates that the significant impacts associated with development of the Project are offset by the benefits that will be realized in providing necessary jobs for residents of the City. The analysis and mitigation of impacts has been detailed in the Environmental Impact Report prepared for the *Merced Vision 2030 General Plan*, which are incorporated into this document by reference.

While this issue was addressed and resolved with the General Plan EIR in an abundance of caution, in order to fulfill CEQA's mandate to fully disclose potential environmental consequences of projects, this analysis is considered herein. However, as a full disclosure document, this issue is repeated in abbreviated form for purposes of disclosure, even though it was resolved as a part of the General Plan.

Potential impacts associated with the Project's development have been described in this Initial Study. All impacts were determined to either be **less than significant** or **less than significant with mitigation measures.**

Attachments:

A) Public Hearing Notice and Notice Area Map
B) Mitigation Monitoring Program

Appendices:

A) Air Quality Analysis and Greenhouse Gas Analysis
B) Traffic Analysis

APPENDIX A
AIR QUALITY & GREENHOUSE GAS
INITIAL STUDY #21-23

September 27, 2021

Ryan Wilson
Project Manager
UPholdings
ryan@upholdings.net

Re: AQ/GHG analysis for the Mercy Village Development Project

Dear Mr. Wilson,

On behalf of Crawford & Bowen Planning, Inc. (C&B), I am pleased to submit this letter report presenting the results of the air quality and greenhouse gas analysis of the Mercy Village Development Project (project). The following air quality and greenhouse gas analysis was prepared to evaluate whether the estimated criteria air pollutant and GHG emissions generated from project implementation would cause significant impacts to air quality in the project area. This assessment was conducted within the context of the California Environmental Quality Act, California Public Resources Code Sections 21000, et seq. The approach follows the Guidelines for Evaluating and Mitigating the Effects of Air Quality prepared by the San Joaquin Valley Air Pollution Control District for quantifying pollution and evaluating possible effects on air quality and the Guidelines for Valley Land-Use Agencies for Addressing GHG Impacts for New Projects under CEQA.

Project Description

Location

The Project site is in the northwestern portion of the City of Merced in the northern part of the San Joaquin Valley, CA. The site lies in the southeast corner of Meadows Avenue and Loughborough Drive, addressed 1150 Loughborough Drive (see Figure 1). The site

is approximately seven acres on APN 058-030-028 in the Merced USGS 7.5 Minute Quadrangle.

Figure 1 – Site Aerial

Project Components

The proposed Project will include the development of a two- and three-story, 160-unit, mixed-use integrated supportive housing development. The Project is designating 30% of its units to serve individuals that are experiencing or are at-risk of homelessness, who also have severe mental illness. The remaining units are intended for mixed-income families. The development will be comprised of 66 one-bedroom units, 45 two-bedroom units, and 40 three-bedroom units.

In addition to the residential units, the property will include an on-site medical clinic, social service staff, and fulltime property management staff. Tenant amenities include laundry facilities, a gym, a mailroom, and a community/multipurpose room (see Figure 2).

Figure 2 – Site Plan

Two points of ingress/egress will be located on Loughborough Drive, with one point of ingress/egress on Meadows Avenue. Community landscaping will be included upon construction completion. Parking areas, lighting, sidewalks, and additional improvements are indicated in the Site Plan. Water, sewer and waste pickup services are proposed to be obtained from the City of Merced, with electricity and natural gas provided by Pacific Gas and Electric.

Project construction would consist of clearing existing vegetation, grading, installation of utility lines, and construction of Project apartment buildings. Project funding is expected to be fully awarded by the end of 2021, with full operations targeted for 2023.

Significance Thresholds

Criteria Pollutants

Emissions of air pollution have global effects, and localized effects. This letter report measures the geographic effects of the pollutant emission requirements of the project compared with SJVAPCD levels of importance for short-term construction activities and long-term project activity. Localized emissions from project construction and operation are often evaluated using concentration-based thresholds that specify if the project will result in a localized excess of any ambient air quality standards or would contribute cumulatively to an established excess. The primary pollutants of concern during project construction and operation are ROG, NOx, PM10, and PM2.5. The SJVAPCD GAMAQI[1] adopted in 2015 contains thresholds for CO, NOx, ROG, SOx, PM10, and PM2.5. Ozone is a secondary pollutant that can be produced miles from the emission source, through the absorption of sunlight reactions of ROG and NOx. Hence ROG and NOx are considered precursors of ozone. Therefore, if a large quantity of ozone precursors are emitted by the project, the project could contribute to exceeding the ozone standards.

The San Joaquin Valley Air Basin (SJVAB) is designated nonattainment of state and federal health-based air quality standards for ozone and $PM_{2.5}$. The SJVAB is designated nonattainment of state PM_{10}. To meet Federal Clean Air Act (CAA) requirements, the SJVAPCD has multiple air quality attainment plan (AQAP) documents, including:

- Extreme Ozone Attainment Demonstration Plan (EOADP) for attainment of the 1-hour ozone standard (2004);
- 2007 Ozone Plan for attainment of the 8-hour ozone standard;

[1] San Joaquin Valley Air Pollution Control District. Final Draft. Guidance for Assessing and Mitigating Air Quality Impacts. February 19, 2015. https://www.valleyair.org/transportation/GAMAQI-2015/FINAL-DRAFT-GAMAQI.PDF. Assessed August 2021.

- 2007 PM_{10} Maintenance Plan and Request for Redesignation; and
- 2008 $PM_{2.5}$ Plan.

Because of the region's non-attainment status for ozone, $PM_{2.5}$, and PM_{10}, if the project-generated emissions of either of the ozone precursor pollutants (ROG or NOx), PM_{10}, or $PM_{2.5}$ were to exceed the SJVAPCD's significance thresholds, then the project uses would be considered to conflict with the attainment plans.

The annual emission standards used by the District for the project describe the significant contribution to both operational and construction emissions as follows:

- 100 tons per year CO
- 10 tons per year NOx
- 10 tons per year ROG
- 27 tons per year SOx
- 15 tons per year PM10
- 15 tons per year PM2.5

The project does not include sources which would generate large quantities of SO2 emissions during construction and operation. Project modeling shows that SO2 emissions are far below the SJVAPCD GAMAQI threshold, as shown in the modeling results in Appendix A. No further SO2 analysis is needed.

Greenhouse Gas Emissions

The SJVAPCD does not recommend assessing the significance of construction-related GHG emissions separate from operational emissions because construction-related emissions would be temporary. However, other air quality districts recommend accounting for construction emissions by amortizing them over a project life and adding the amortized emissions to operational GHG emissions. The South Coast Air Quality Management District, for example, recommends amortizing construction-related emissions over a 30-year project. This approach is applied in this letter report.

The SJVAPCD document *Addressing Greenhouse Gas Emission Impacts for New Projects under the California Environmental Quality Act* (San Joaquin Valley Air Pollution Control District 2009) presents a tiered approach to analyzing the significance of project related GHG emissions.

Project GHG emissions are considered less than significant if they can meet any of the following conditions, evaluated in the order presented:

- the project is exempt from CEQA requirements;
- the project complies with an approved GHG emission reduction plan or GHG mitigation program;
- the project implements Best Performance Standards (BPS); or
- the project demonstrates that specific GHG emissions would be reduced or mitigated by at least 29 percent compared to Business-as-Usual (BAU), including GHG emission reductions achieved since the 2002-2004 baseline period.

The SJVAPCD states,

> "Use of BPS is a method of streamlining the CEQA process of determining significance and is not a required emission reduction measure. Projects implementing BPS would be determined to have a less than cumulatively significant impact. Otherwise, demonstration of a 29 percent reduction in GHG emissions, from business-as-usual, is required to determine that a project would have a less than cumulatively significant impact. The guidance does not limit a lead agency's authority in establishing its own process and guidance for determining significance of project related impacts on global climate change."[2]

Methodology

The South Coast Air Quality Control District created the California Emissions Estimator Model (CalEEMod) in collaboration with other air districts in the State. CalEEMod is

[2] San Joaquin Valley Air Pollution Control District. Climate Change Action Plan. http://www.valleyair.org/Programs/CCAP/CCAP_menu.htm. Accessed August 2021.

developed as a common forum for government officials, land use developers, and environmental practitioners to measure possible pollutant requirements and GHG emissions from a range of land uses associated with development and activity.[3] The modeling meets District guidelines from its Guide for Assessing and Mitigating Air Quality Impacts (GAMAQI), where applicable. The model used in this analysis was CalEEMod and it quantifies direct emissions from construction and operation (including vehicle use), as well as indirect emissions, such as GHG emissions from energy use, solid waste disposal, vegetation planting and/or removal, and water use.

The CalEEMod emissions model contains default data characterizing the project construction and operations, which were utilized for this project. Project output files, as applied to the Mercy Village Development Project are presented in the enclosed technical appendix.

Air Quality & Greenhouse Gas Emissions Analysis Results

The following discussion presents the results of the CalEEMod and the significance of air quality and greenhouse gas emissions impacts resulting from the Mercy Village Development Project.

Criteria Pollutant Emissions

Implementation of the Mercy Village Development Project would result in the generation of criteria pollutants over the two-year construction period. Table 1 provides the CalEEMod modeling results, presenting the maximum annual emissions over the two-year construction time period.

Table 1 - Proposed Project Construction and Operation Emissions

	VOC (ROG) (tons/year)	NO_x (tons/year)	PM_{10} (tons/year)	$PM_{2.5}$ (tons/year
Maximum annual construction emissions 2021-2022	1.77	2.67	0.43	0.24
Annual operational emissions	1.25	3.72	2.89	0.37
Annual Threshold of Significance	10	10	15	15
Significant?	**No**	**No**	**No**	**No**

Source: CalEEMod results (Appendix A). Crawford & Bowen Planning (2021)

[3] California Emissions Estimator Model. http://www.caleemod.com/. Accessed August 2021.

As demonstrated in Table 1, neither construction nor operational criteria pollutant emissions would exceed the SJVAPCD significance thresholds. Therefore, this impact is considered ***less than significant***.

Greenhouse Gas Emissions

Construction GHGs would be emitted by the off-road construction equipment and vehicle travel by workers and material deliveries to the project site. The estimated construction GHG emissions are shown in Table 2. Because construction GHG emissions are temporary and reduction measures are limited, a common professional practice is to amortize the construction emissions over the life of the project. A residential project is conservatively assumed to have a life of 30 years.

Table 2 - Construction Greenhouse Gas Emissions

Construction Year	$MTCO_2e$
2021	407
2022	301
Total	**708**
Amortized over 30 years	23.6

Source: CalEEMod results (Appendix A). Crawford & Bowen Planning (2021)

Operational or long-term emissions occur over the life of the project. Sources of emissions may include motor vehicles and trucks, energy usage, water usage, waste generation, and area sources, such as landscaping activities. Operational GHG emissions are shown in Table 3.

Table 2 - Construction Greenhouse Gas Emissions

Category	$MTCO_2e$
Area	72
Energy	116
Mobile	1,874
Waste	106
Water	16
Total Operational	2,184
Total Operational Plus Amortized Construction	**2,207.6**

As described earlier in the Significance Thresholds section, this report applies the tiered approach to determining the significance of GHG emissions impacts presented in the SJVAPCD document Addressing Greenhouse Gas Emission Impacts for New Projects under the California Environmental Quality Act.[4]

The proposed project is not exempt from CEQA requirements, and the City of Merced Climate Action Plan does not qualify as an approved GHG emission reduction plan or GHG mitigation program. Therefore, the first two tiers of the GHG significance criteria would not apply.

In applying the third tier of the GHG significance threshold, the impact of the Mercy Village Development project on GHG emissions would be considered less than significant if the project implements BPS measures. Precise details of project features are not yet available. Therefore, Mitigation Measure GHG-1 would require the proposed project to implement the following applicable BPS strategies.

Mitigation Measure GHG-1: The project applicant shall demonstrate compliance with the applicable BPS strategies to the Planning Division prior to the issuance of a building permit. The following BPS strategies are considered to be applicable, feasible, and effective in reducing GHG emissions generated by the project:

- The project applicant shall provide a pedestrian access network that internally links all uses and connects to existing external streets and pedestrian facilities.
- The project applicant shall ensure site design and building placement minimize barriers to pedestrian access and interconnectivity. Physical barriers such as walls, berms, landscaping, and slopes between nonresidential uses that impede bicycle or pedestrian circulation shall be eliminated. In addition, barriers to pedestrian access of neighboring facilities and sites shall be minimized.

[4] San Joaquin Valley Air Pollution Control District. Guidance for Valley Land-Use Agencies in Addressing GHG Emission Impacts for New Projects under CEQA. December 17, 2009. https://www.valleyair.org/Programs/CCAP/12-17-09/3%20CCAP%20-%20FINAL%20LU%20Guidance%20-%20Dec%2017%202009.pdf. Accessed August 2021.

- The project shall provide car sharing programs, accommodations such as parking spaces for the car share vehicles at convenient locations accessible by public transportation.
- The project applicant shall plant trees to provide shade.
- The project applicant shall install energy efficient heating and cooling systems, appliances and equipment, and control systems.

Implementation of Mitigation Measure GHG-1 would implement various BPS strategies recommended by the SJVAPCD that are applicable to the project to reduce GHG emissions and would reduce any potential significant impacts to ***less than significant***.

Additionally, the Project is required to implement several measures required by State and local regulations to reduce GHG emissions. The California Air Resources Board issued the Final 2017 Scoping Plan Update[5] in November 2017 and it establishes emissions reduction strategies necessary to meet SB 32's 2030 reduction goals. Table 3 identifies the Scoping Plan policies that are applicable to the proposed project. As shown, the proposed project would be consistent with the Scoping Plan.

Table 3 – Applicable State 2017 Scoping Plan Reduction Strategies

Measure Name	Measure Description	Consistency Determination
SB 350 50% Renewable Mandate.	Utilities subject to the legislation will be required to increase their renewable energy mix from 33% in 2020 to 50% in 2030.	**Consistent.** The proposed project will purchase electricity from a utility subject to the SB 350 Renewable Mandate. In addition, the proposed project includes renewable energy through roof top solar systems.
Low Carbon Fuel Standard	This measure requires fuel providers to meet an 18 percent reduction in carbon content by 2030.	**Consistent.** Vehicles accessing the proposed project site will use fuel containing lower carbon content as the fuel standard

[5] California Air Resources Board. California's 2017 Climate Change Scoping Plan. November 2017. https://ww2.arb.ca.gov/sites/default/files/classic/cc/scopingplan/scoping_plan_2017.pdf?utm_medium=email&utm_source=govdelivery. Accessed August 2021.

Measure Name	Measure Description	Consistency Determination
		is implemented.
Mobile Source Strategy (Cleaner Technology and Fuels Scenario)	Vehicle manufacturers will be required to meet existing regulations mandated by the LEV III and Heavy-Duty Vehicle programs. The strategy includes a goal of having 4.2 million ZEVs on the road by 2030 and increasing numbers of ZEV trucks and buses.	**Consistent.** Future residents can be expected to purchase increasing numbers of more fuel efficient and zero emission cars and trucks each year. The 2019 CalGreen Code requires electrical service in new single-family housing to be EV charger-ready. Home deliveries will be made by increasing numbers of ZEV delivery trucks.

The SJVAPCD has adopted a Climate Change Action Plan (CCAP), which includes suggested BPS for proposed residential development projects. Appendix J[6] of the SJVAPCD Final Staff Report for the CCAP contains GHG reduction measures that would be applicable to the proposed project. The proposed project's consistency with these measures is included in Table 4 below. As shown in the table, the project would be consistent with applicable CCAP measures.

Table 4 – Applicable SJVAPCD GHG Reduction Strategies

Measure Name	Measure Description	Project Consistency
	Bicycle/Pedestrian Transit Measures	
5 – Pedestrian Network	The project provides a pedestrian access network that internally links all uses and connects to existing external streets and pedestrian facilities. Existing facilities are defined as those facilities that are physically constructed and ready for use prior to the first 20 percent of the projects occupancy permits being	**Consistent.** The proposed project would provide pedestrian accommodations throughout the project site and connecting offsite to existing external streets and pedestrian facilities.

[6] San Joaquin Valley Air Pollution Control District. Climate Change Action Plan. Final Staff Report December 17, 2009. Appendix J: GHG Emission Reduction Measures – Development Projects. https://www.valleyair.org/Programs/CCAP/bps/Appendix%20J%20-%20Dec%2017%202009.pdf. Accessed August 2021.

Measure Name	Measure Description	Project Consistency
	granted.	
6 – Pedestrian barriers minimized	Site design and building placement minimize barriers to pedestrian access and interconnectivity. Physical barriers such as walls, berms, landscaping, and slopes between residential and nonresidential uses that impede bicycle or pedestrian circulation are eliminated. Barriers to pedestrian access of neighboring facilities and sites are minimized. This measure is not meant to prevent the limited use of barriers to ensure public safety by prohibiting access to hazardous areas, etc.	**Consistent.** The proposed project would provide pedestrian accommodations throughout the project site and connecting offsite to existing external streets and pedestrian facilities.
	Building Component Measures	
26 - Onsite renewable energy system	Project provides onsite renewable energy system(s).	**Consistent.** The 2019 California Building Energy Efficiency Standards requires that all new single-family homes and multi-family buildings under three stories must conform to the new solar code that requires the installation of rooftop solar photovoltaic systems be equipped on all new homes after January 1, 2020. Therefore, the Project will be required to comply with these standards.
	Additional GHG Emission Reduction Measures Requiring Additional Investigation	
11- Vehicle Idling	Limit idling for commercial vehicles, including delivery and construction vehicles.	**Consistent.** CARB limits idling of diesel vehicles to 5 minutes. The Project will comply as applicable.

Measure Name	Measure Description	Project Consistency
16-Energy Efficient Appliances	Install energy efficient heating and cooling systems, appliances and equipment, and control systems.	**Consistent.** The Project will be designed to be compliant with the 2019 California Building Standards and the California Energy Commission's regulations on home appliances.
17 - Renewable Energy Use	Install Photovoltaic roofing tiles for solar power.	**Consistent.** The 2019 California Building Energy Efficiency Standards requires that all new single-family homes and multi-family buildings under three stories must conform to the new solar code that requires the installation of rooftop solar photovoltaic systems be equipped on all new homes after January 1, 2020. Therefore, the Project will be required to comply with these standards.
20 - Tree Plants	Protect existing trees and encourage the planting of new trees. Adopt a tree protection and replacement ordinance, e.g., requiring that trees larger than a specified diameter that are removed to accommodate development must be replaced at a set ratio.	**Consistent.** The existing site is currently vacant and periodically disked for weed control. As a result, few trees are currently on the project site. The site landscaping plan includes the planting of several trees in the parking lot and in the outdoor recreation areas to provide shade.

Therefore, with implementation of Mitigation Measure GHG-1 and compliance with State and local regulations, the Mercy Village Development project would not be a significant source of GHG emissions. Potential impacts resulting from GHG emissions would be ***less than significant***.

Thanks for providing us the opportunity to prepare the air quality and greenhouse gas analysis for the Mercy Village Development Project. Should you have any questions regarding the letter report, please feel free to reach out.

Sincerely,

Emily Bowen, LEED AP
Principal Planner
Crawford & Bowen Planning, Inc.

CalEEMod Calculations available upon request.

APPENDIX B
TRAFFIC ANALYSIS, INCLUDING VMT ANALYSIS
INITIAL STUDY #21-23

Project No: 524-16

TRAFFIC STUDY

MERCY VILLAGE DEVELOPMENT

SOUTHEAST CORNER OF

LOUGHBOROUGH DRIVE & MEADOWS AVENUE

MERCED, CA

Prepared for:

CRAWFORD & BOWEN PLANNING, INC.

September 2021

Prepared by:

RUETTGERS & SCHULER CIVIL ENGINEERS

1800 30TH STREET, SUITE 260
BAKERSFIELD, CA 93301

Ian J. Parks, RCE 51825

APPENDIX B

TABLE OF CONTENTS

INTRODUCTION

The purpose of this study is to evaluate the potential traffic impacts of a proposed development that includes the following separate uses:

- 161 multi-family residential units
- 12,666 square foot medical clinic

The residential portion of the project is planned to be affordable housing. The clinic will be federally subsidized. The proposed project is located on Loughborough Drive west of R Street in Merced, CA. A vicinity map and location map are presented in Figures 1 and 2, respectively.

A. Land Use, Site and Study Area Boundaries

The existing zoning is M-1 and the specific plan designation is AM.

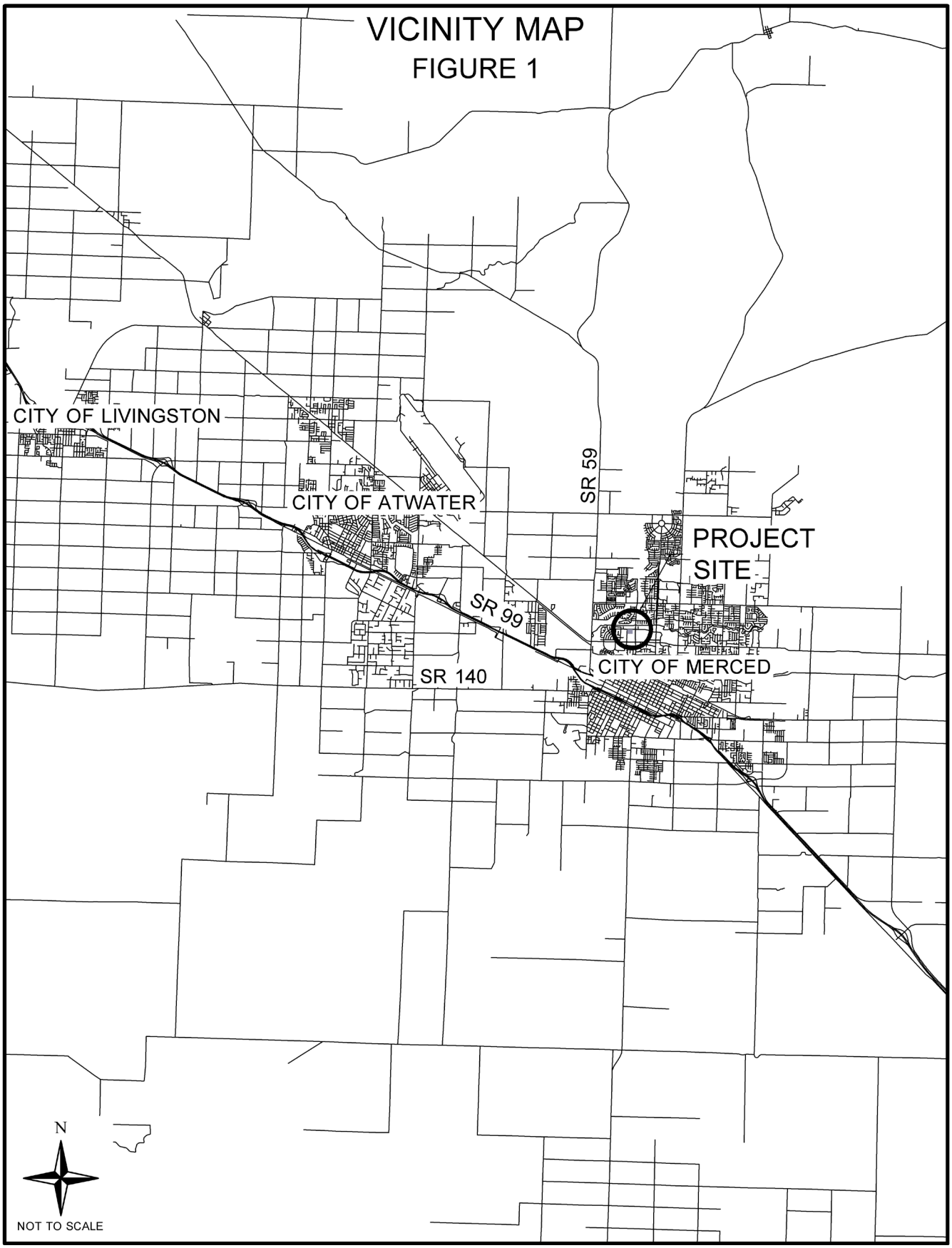
The study area includes a total of nine signalized intersections. The scope of the study was developed in association with the City of Merced.

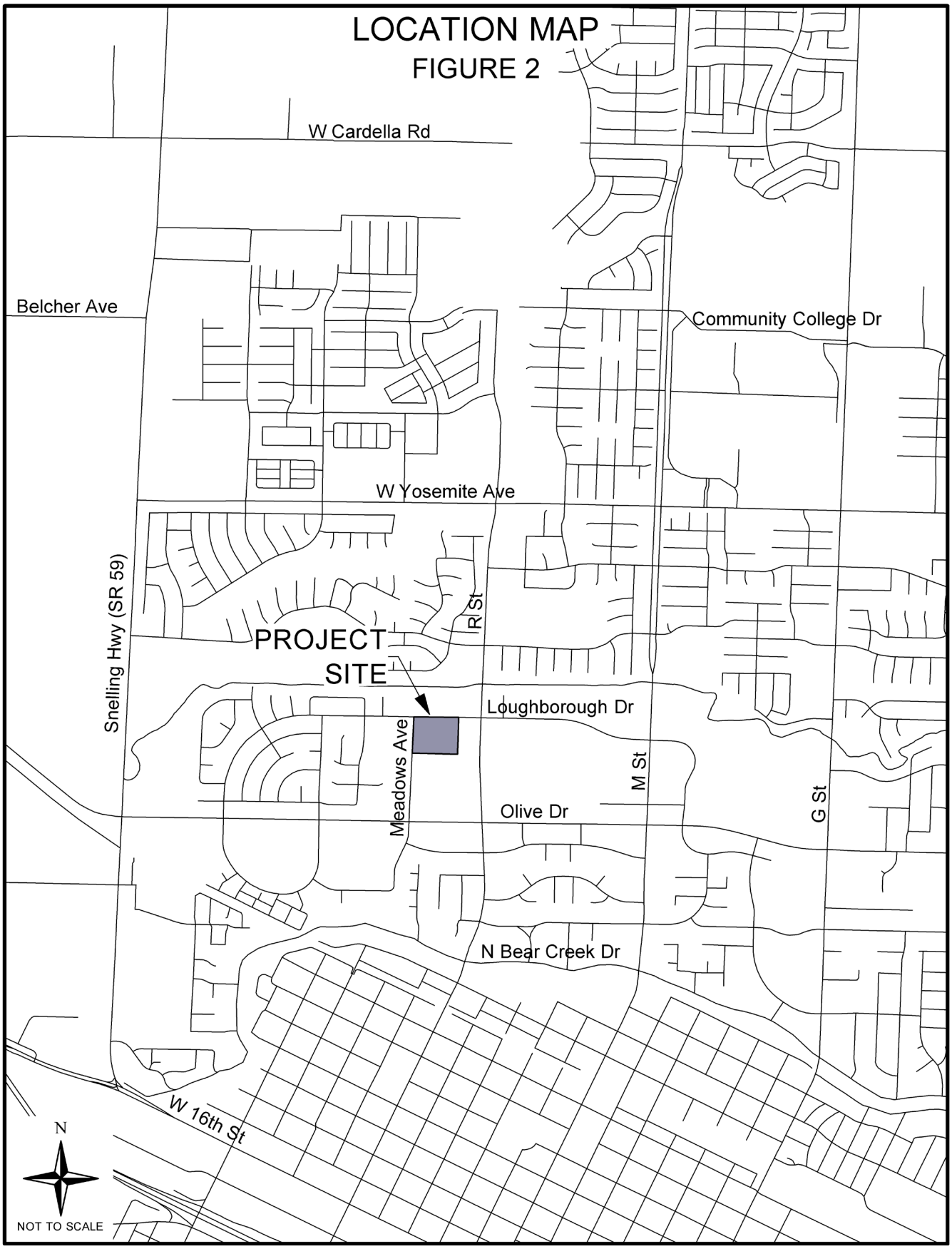
B. Existing Site Uses and Site Access

The site is currently vacant land. As currently planned, access to the proposed development would be provided along Loughborough Drive and Meadows Avenue. A site plan is shown in Figure 3.

C. Existing Uses in Vicinity of the Site

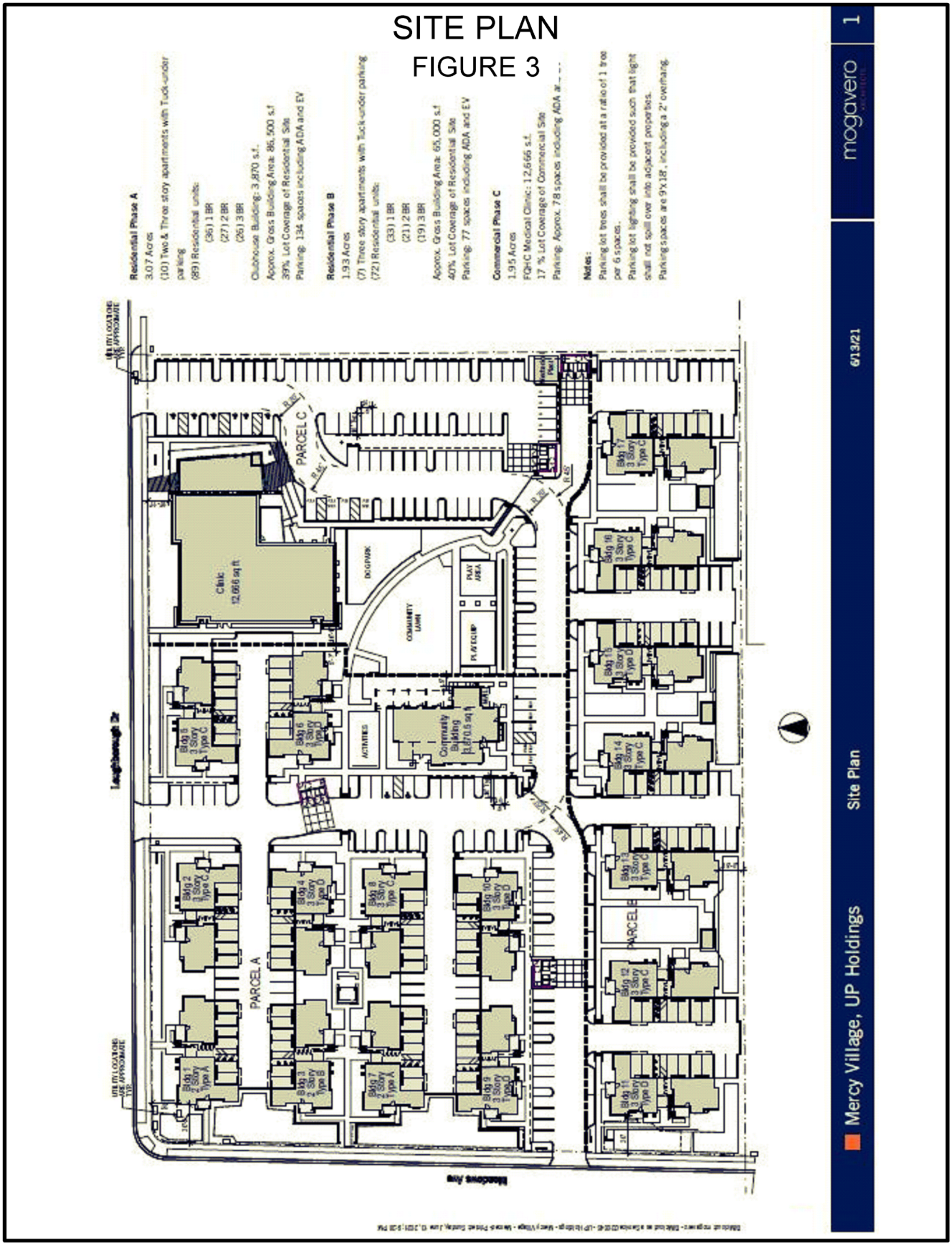
Residential land uses exist to the west and north of the proposed project. Retail and office commercial uses exist to the east and south of the project.


VICINITY MAP
FIGURE 1
CITY OF LIVINGSTON
CITY OF ATWATER
SR 59
PROJECT SITE
SR 99
SR 140
CITY OF MERCED
N
NOT TO SCALE


LOCATION MAP
FIGURE 2
W Cardella Rd
Belcher Ave
Community College Dr
W Yosemite Ave
Snelling Hwy (SR 59)
R St
PROJECT SITE
Loughborough Dr
Meadows Ave
M St
G St
Olive Dr
N Bear Creek Dr
W 16th St
N
NOT TO SCALE

SITE PLAN

FIGURE 3



D. Roadway Descriptions

Buena Vista Drive is a local east-west collector that extends east from Highway 59 and dead ends about 80 feet west of Sundance Drive. In the vicinity of the project it exists as a two-lane roadway with curb and gutter and provides access to residential land uses.

Highway 59 is a north-south state route that extends north from W 16th Street in the City of Merced. In the vicinity of the project it exists as a two-lane roadway and provides access to residential, commercial, and agricultural land uses.

Loughborough Drive is a primarily east-west collector that extends from W Olive Avenue to M Street and then is renamed as Collins Drive east of M Street. In the vicinity of the project it exists as two-lane roadway with curb and gutter and provides access to residential and commercial land uses.

M Street is a north-south transit corridor that extends from N Bear Creek Drive to Bellevue Road in the City of Merced. In the vicinity of the project it exists as a four-lane divided roadway with curb and gutter. M Street provides access to residential and commercial land uses.

Olive Avenue is an east-west arterial that extends east from Highway 59. In the vicinity of the project it exists as a fully-developed six-lane roadway. Olive Avenue provides access to residential, commercial, religious, educational, and agricultural land uses.

R Street is a primarily north-south arterial that extends from approximately ½ mile north of W Yosemite Avenue to approximately ¼ mile south of W Childs Avenue. In the vicinity of the project it exists as a four-lane divided roadway with curb and gutter. R Street provides access to residential and commercial land uses.

Yosemite Avenue is an east-west arterial that extends east from Highway 59. In the vicinity of the project it exists as a four-lane roadway. Yosemite Avenue provides access to residential, commercial, religious, educational, and agricultural land uses.

PROJECT TRIP GENERATION AND DESIGN HOUR VOLUMES

The trip generation and design hour volumes for the residential and medical development were calculated using the Institute of Transportation Engineers (ITE) Trip Generation, 10th Edition. The ADT, AM and PM peak hour rate equations, and peak hour directional splits for ITE Land Use Code 220 (Multi-Family Housing) and 630 (Clinic) were used to estimate the project traffic.

Table 1
Project Trip Generation

ITE Code	Development Type	Variable	ADT RATE	ADT	Rate	In % Split/ Trips	Out % Split/ Trips	Rate	In % Split/ Trips	Out % Split/ Trips
220	Multifamily Housing (Low Rise)	161 Dwelling Units	eq	1176	eq	23% 17	77% 58	eq	63% 57	37% 33
630	Clinic	12.67 1000 sq ft GFA	38.16	483	3.69	78% 36	22% 10	3.28	29% 12	71% 30
Total				1,660		53	68		69	63

TRIP DISTRIBUTION AND ASSIGNMENT

The project trip distribution in Table 2 represents the most likely travel routes for traffic accessing the project. Project traffic distribution was estimated based on a review of the potential draw from population centers within the region and the types of land uses involved. These assumptions were used to distribute project traffic as shown in Figure 4.

Table 2
Project Trip Distribution

Direction	Percent
North	10
East	35
South	45
West	10

EXISTING AND FUTURE TRAFFIC

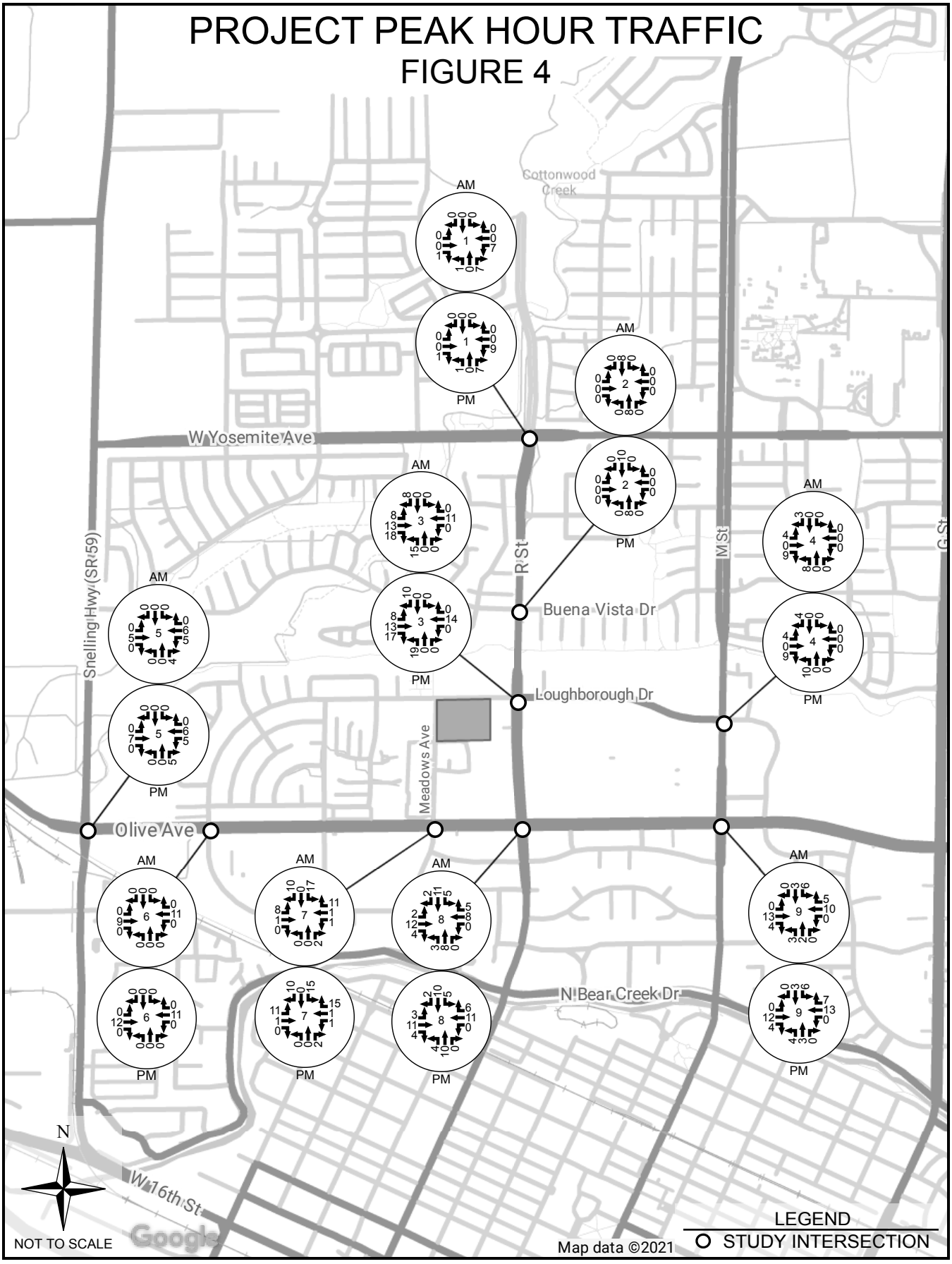
Weekday peak hour turning movements were counted at the following intersections in April 2021 (see Appendix for count data).

- R Street & W Yosemite Avenue
- R Street & Buena Vista Drive
- R Street & Loughborough Drive
- M Street & Loughborough Drive
- Highway 59 & Olive Avenue
- Loughborough Drive & Olive Avenue
- Meadows Avenue & Olive Avenue
- R Street & Olive Avenue
- M Street & Olive Avenue

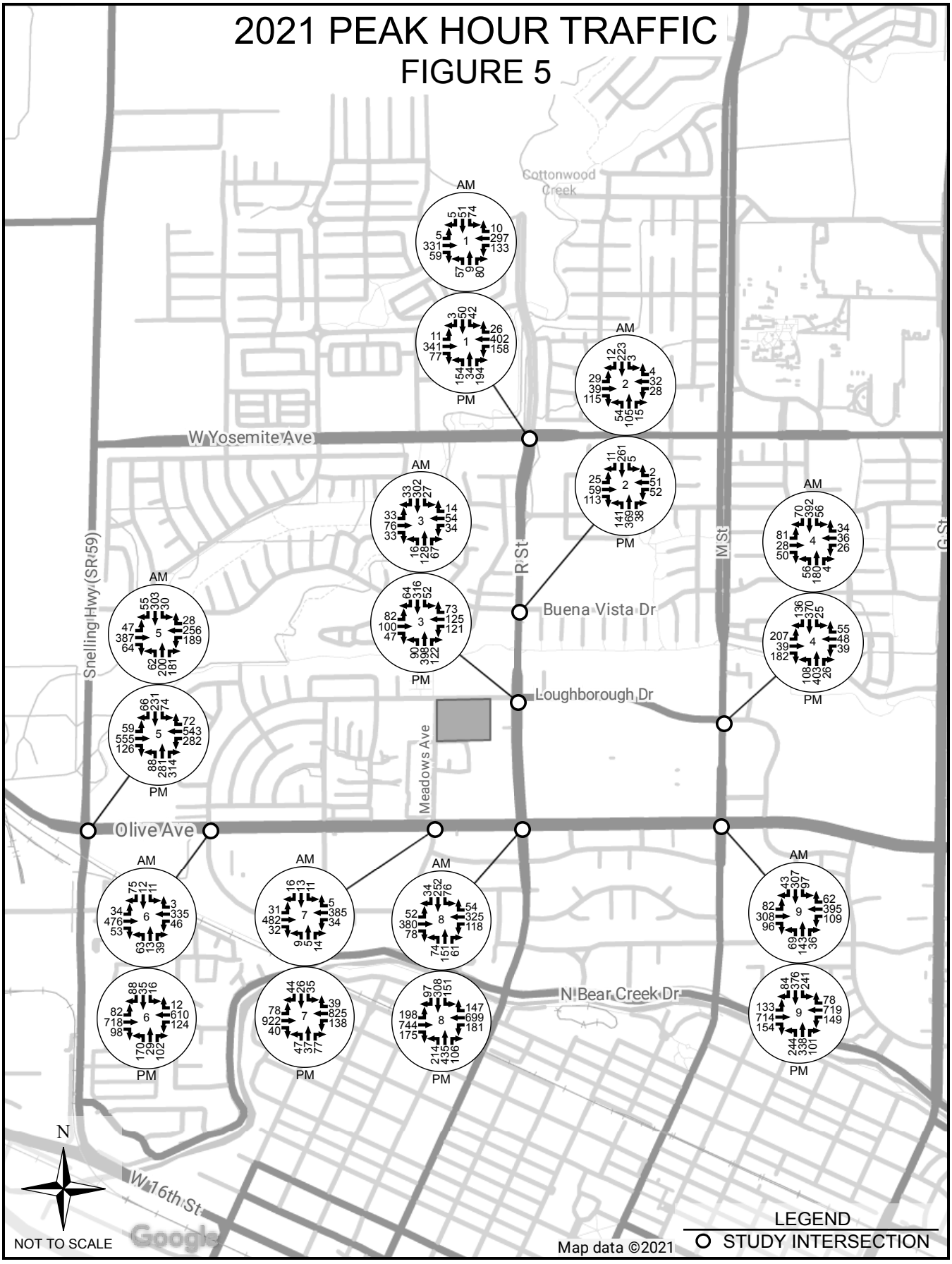
Traffic counts were conducted between the hours 6:00 to 8:00 AM and 4:00 to 6:00 PM and are shown in Figure 5. Traffic counts were compared to pre-COVID 19 count data and found to accurately reflect normal traffic volumes. The scope of intersections was approved by the City of Merced Public Works. Existing + Project peak hour volumes are shown in Figure 6.

Annual growth rates ranging between 0.01% and 3.85% were applied to existing traffic volumes to estimate future traffic volumes for the year 2030. These growth rates were estimated based on a review of existing and approved future developments in the vicinity of the project and MercedCAG traffic model data. Future peak hour volumes are shown in Figures 7 and 8.

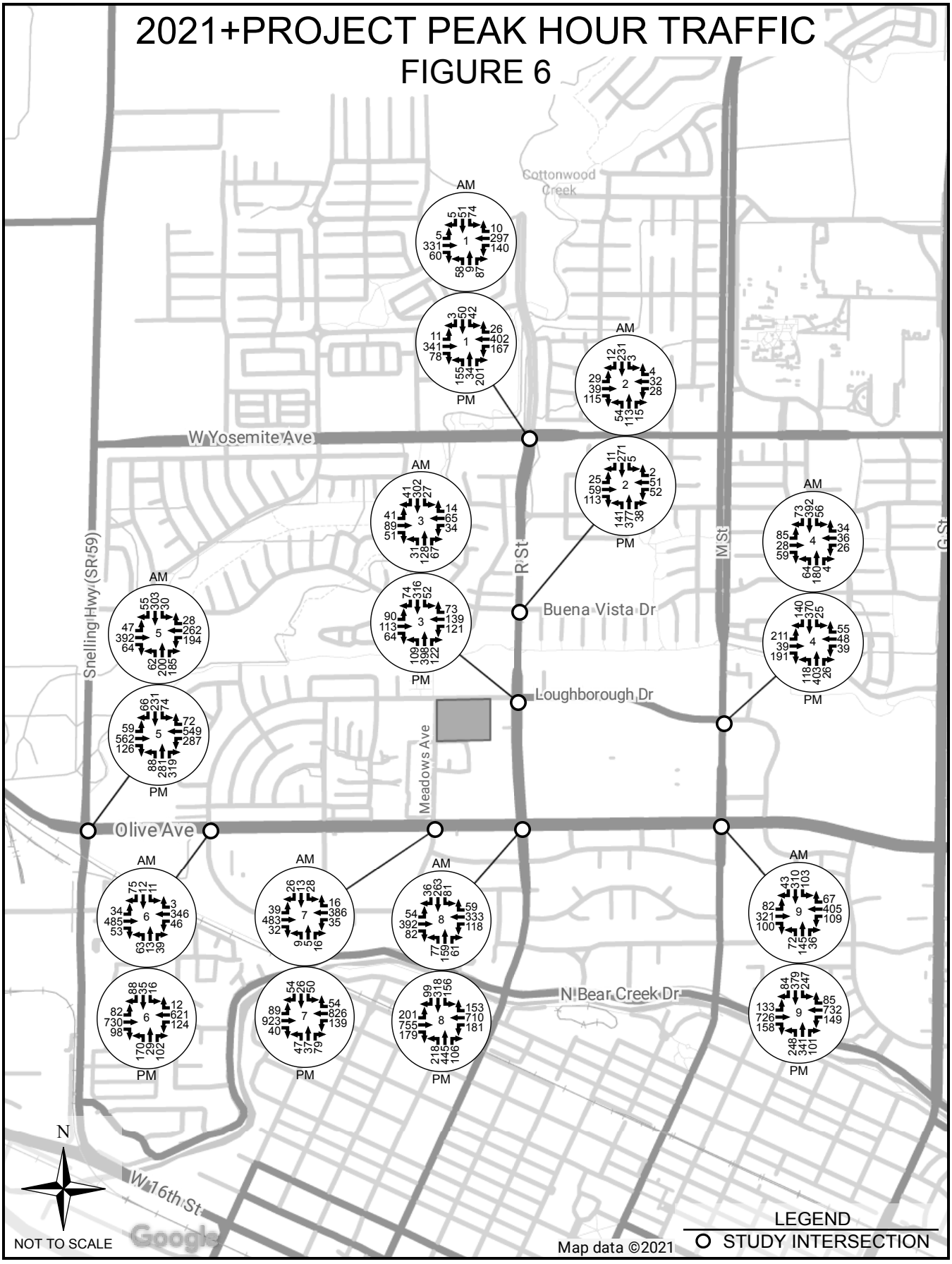
PROJECT PEAK HOUR TRAFFIC
FIGURE 4



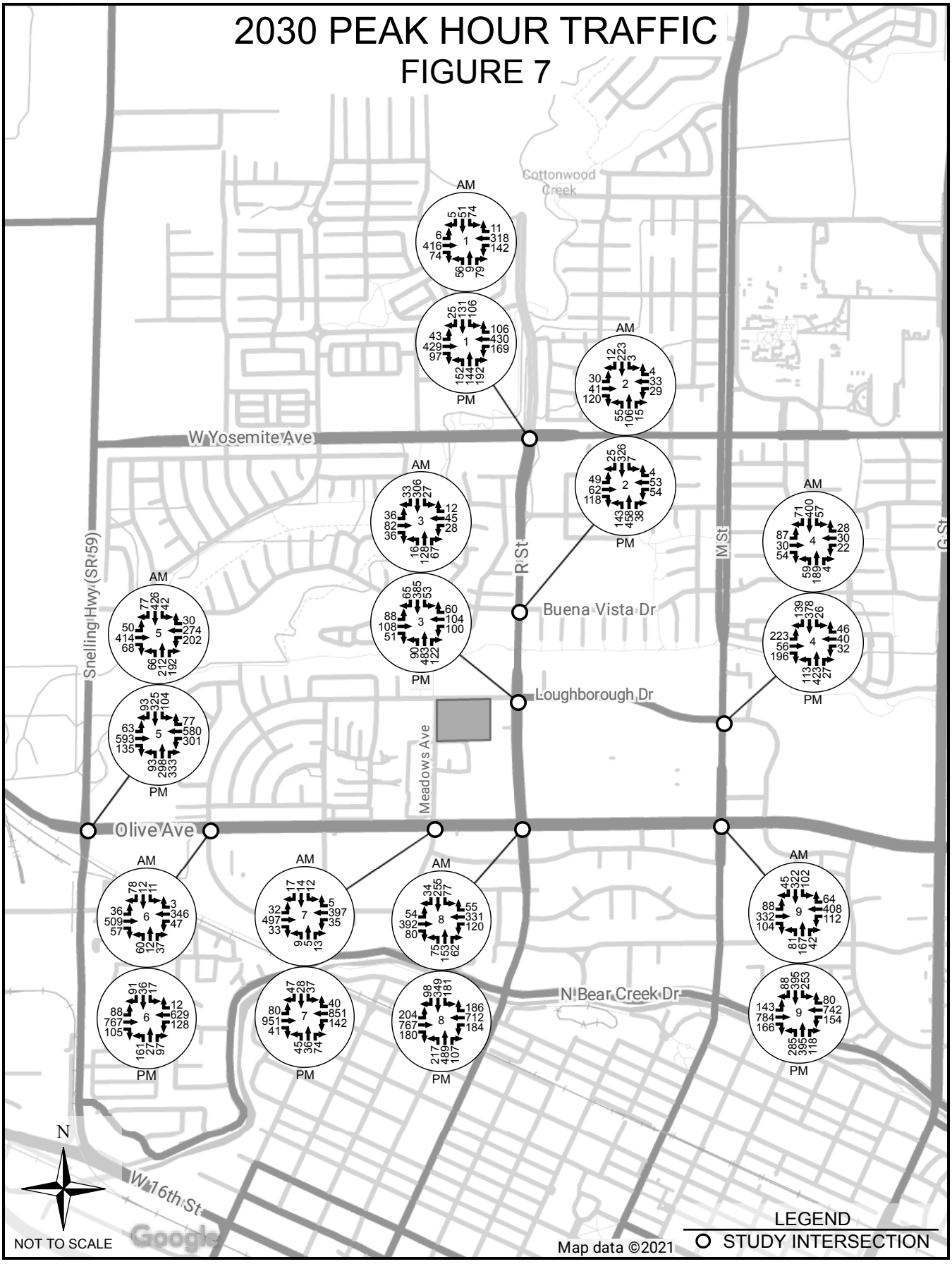
2021 PEAK HOUR TRAFFIC
FIGURE 5



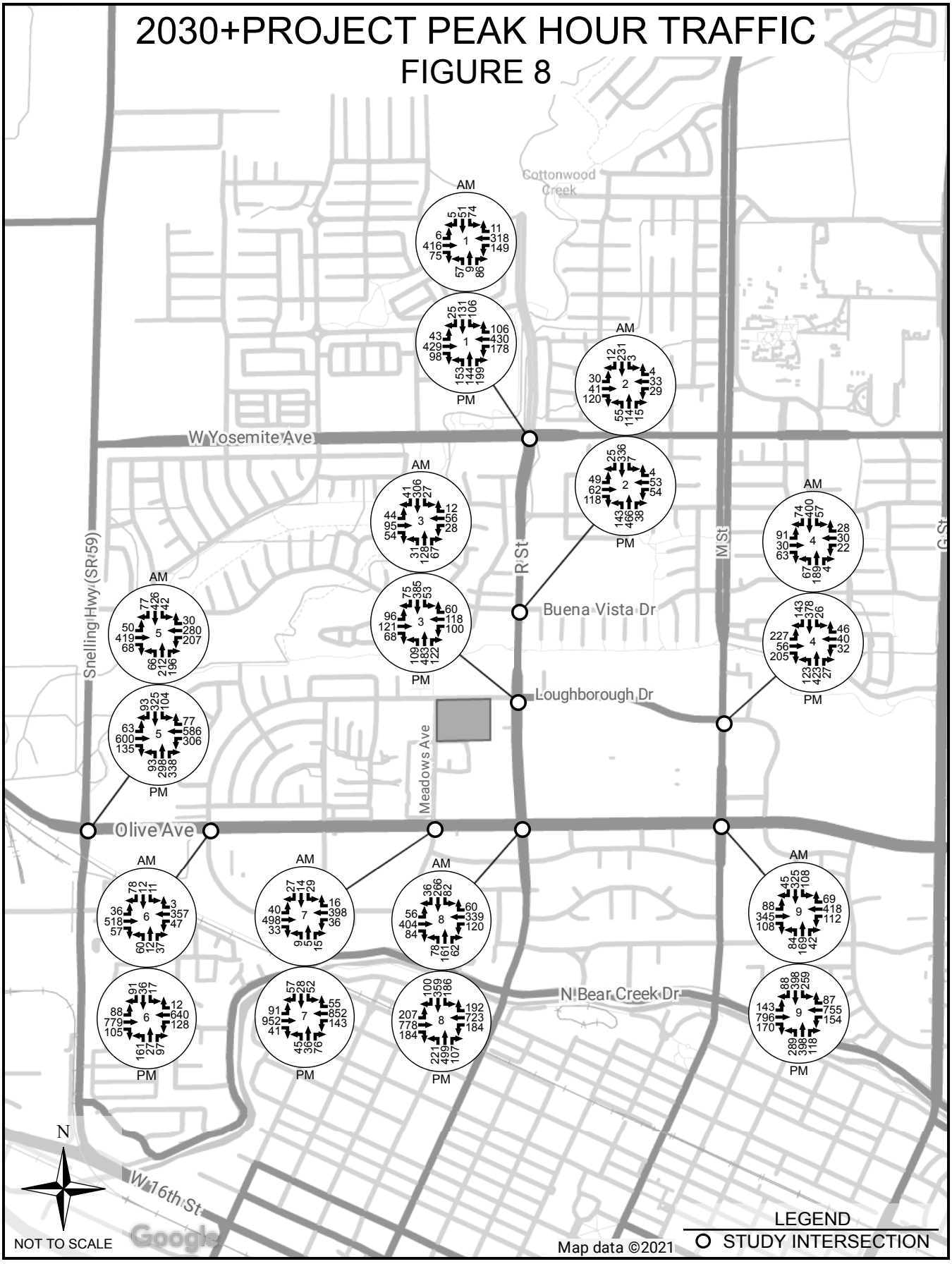
2021+PROJECT PEAK HOUR TRAFFIC
FIGURE 6



2030 PEAK HOUR TRAFFIC
FIGURE 7



2030+PROJECT PEAK HOUR TRAFFIC
FIGURE 8



INTERSECTION ANALYSIS

A capacity analysis of the study intersections was conducted using Synchro 9 software from Trafficware. This software utilizes the 2010 capacity analysis methodology in the Transportation Research Board's Highway Capacity Manual.

- Existing (2021)
- Existing (2021) + Project
- Future Cumulative (2030)
- Future Cumulative (2030) + Project

Criteria for intersection level of service (LOS) are shown in the tables below.

LEVEL OF SERVICE CRITERIA
UNSIGNALIZED INTERSECTION

Average Control Delay (sec/veh)	Level of Service	Expected Delay to Minor Street Traffic
≤ 10	A	Little or no delay
> 10 and ≤ 15	B	Short traffic delays
> 15 and ≤ 25	C	Average traffic delays
> 25 and ≤ 35	D	Long traffic delays
> 35 and ≤ 50	E	Very long traffic delays
> 50	F	Extreme delays

LEVEL OF SERVICE CRITERIA
SIGNALIZED INTERSECTIONS

Volume/Capacity	Control Delay (sec/veh)	Level of Service
< 0.60	≤ 10	A
0.61 - 0.70	> 10 and ≤ 20	B
0.71 - 0.80	> 20 and ≤ 35	C
0.81 - 0.90	> 35 and ≤ 55	D
0.91 - 1.00	> 55 and ≤ 80	E
> 1.0	> 80	F

Level of service for the study intersections is presented in Tables 3a and 3b. The Level of Service goal for the City of Merced is a Level of Service "D". Per Policy T-1.8, LOS "E" or "F" would be acceptable if roadway widening conflicts with other General Plan policies or significant right-of way acquisition.

Table 3a
PM Intersection Level of Service

#	Intersection	Control Type	2021	2021+ Project	2030	2030+ Project
1	R St & W Yosemite Ave	Signal	D	D	D	D
2	R St & Buena Vista Dr	Signal	C	C	C	C
3	R St & Loughborough Dr	Signal	C	D	C	D
4	M St & Loughborough Dr	Signal	C	C	C	C
5	Hwy 59 & Olive Ave	Signal	D	D	D	D
6	Loughborough Dr & Olive Ave	Signal	C	C	C	C
7	Meadows Ave & Olive Ave	Signal	B	B	B	B
8	R St & Olive Ave	Signal	D	D	D	D
9	M St & Olive Ave	Signal	D	D	D	D

Table 3b
AM Intersection Level of Service

#	Intersection	Control Type	2021	2021+ Project	2030	2030+ Project
1	R St & W Yosemite Ave	Signal	D	D	D	D
2	R St & Buena Vista Dr	Signal	C	C	C	C
3	R St & Loughborough Dr	Signal	B	B	B	C
4	M St & Loughborough Dr	Signal	B	B	B	B
5	Hwy 59 & Olive Ave	Signal	C	C	D	D
6	Loughborough Dr & Olive Ave	Signal	C	C	C	C
7	Meadows Ave & Olive Ave	Signal	A	A	A	A
8	R St & Olive Ave	Signal	C	C	C	C
9	M St & Olive Ave	Signal	C	C	C	C

ROADWAY ANALYSIS

A capacity analysis of the study roadways was conducted using Table 4 in the State of Florida Department of Transportation *Quality/Level of Service Handbook* dated June 2020 (see Appendix). The City of Merced Policy T-1.8 states that the peak hour level of service for roadways shall be no lower than LOS "D" for urban areas. The analysis was performed for the following AM and PM traffic scenarios:

- Existing (2021)
- Existing (2021) + Project
- Future Cumulative (2030)
- Future Cumulative (2030) + Project

Table 4a
PM ROADWAY LEVEL OF SERVICE

Street	2021 Two-Way LOS		2021+Project Two-Way LOS		2030 Two-Way LOS		2030+Project Two-Way LOS	
	VOL	LOS	VOL	LOS	VOL	LOS	VOL	LOS
Loughborough Dr: R St to M St	720	D	747	D	767	D	794	D
Olive Dr: Snelling Hwy (SR 59) to Loughborough Dr	1840	C	1863	C	1988	C	2011	C
Olive Dr: Loughborough Dr to Meadows St	1956	C	1979	C	2015	C	2038	C
Olive Dr: Meadows St to R St	2127	C	2162	C	2178	C	2213	C
Olive Dr: R St to M St	2048	C	2081	C	2208	C	2241	C
R St: Olive Dr to Loughborough Dr	1336	C	1372	C	1507	C	1543	C
R St: Loughorough Dr to Buena Vista Dr	985	C	1003	C	1137	C	1155	C
R St: Buena Vista Dr to W Yosemite Ave	673	C	691	C	869	C	903	C

Table 4b
AM ROADWAY LEVEL OF SERVICE

Street	2021 Two-Way LOS		2021+Project Two-Way LOS		2030 Two-Way LOS		2030+Project Two-Way LOS	
	VOL	LOS	VOL	LOS	VOL	LOS	VOL	LOS
Loughborough Dr: R St to M St	321	C	345	D	331	D	355	D
Olive Dr: Snelling Hwy (SR 59) to Loughborough Dr	1071	C	1091	C	1154	C	1174	C
Olive Dr: Loughborough Dr to Meadows St	955	C	975	C	985	C	1005	C
Olive Dr: Meadows St to R St	943	C	974	C	966	C	997	C
Olive Dr: R St to M St	1014	C	1044	C	1058	C	1088	C
R St: Olive Dr to Loughborough Dr	619	C	652	C	628	C	661	C
R St: Loughorough Dr to Buena Vista Dr	540	C	556	C	548	C	564	C
R St: Buena Vista Dr to W Yosemite Ave	389	C	405	C	411	C	427	C

MITIGATION & RECOMMENDATIONS

Upon review of intersection and roadway level of service, it was determined that no intersection or roadway improvements are necessary.

VEHICLE MILES TRAVELED (VMT)

An evaluation of vehicle miles traveled (VMT) for project traffic was conducted based on applicable California Environmental Quality Act (CEQA) Guidelines and the OPR *Technical Advisory on Evaluating Transportation Impacts in CEQA*, dated December 2018. The guidelines and technical advisory provide "screening thresholds" for identifying whether a land use project should be expected to result in a less-than-significant transportation impact under CEQA. Projects meeting one or more of these criteria would not be required to undergo a detailed VMT analysis. The project includes two separate uses: multi-family residential and a medical clinic. Following is a review of the multi-family residential and the medical clinic use and the corresponding screening thresholds:

Multi-Family Residential

The multi-family residential portion of the project is proposed to be an affordable housing development. There are specific guidelines in the evaluation of affordable housing projects contained in the OPR technical advisory. The following is an excerpt from the advisory for consideration of VMT impacts:

> *"Adding affordable housing to infill locations generally improves jobs-housing match, in turn shortening commutes and reducing VMT… Further, "... low-wage workers in particular would be more likely to choose a residential location close to their workplace, if one is available." In areas where existing jobs- housing match is closer to optimal, low income housing nevertheless generates less VMT than market- rate housing. Therefore, a project consisting of a high percentage of affordable housing may be a basis for the lead agency to find a less-than-significant impact on VMT. Evidence supports a presumption of less than significant impact for a 100 percent affordable residential development (or the residential component of a mixed-use development) in infill locations. Lead agencies may develop their own presumption of less than significant impact for residential projects (or residential portions of mixed-use projects) containing a particular amount of affordable housing, based on local circumstances and evidence. Furthermore, a project which includes any affordable residential units may factor the effect of the affordability on VMT into the assessment of VMT generated by those units."*

The multi-family residential is therefore screened out from further VMT analysis.

Medical Clinic

The medical clinic was reviewed for screening criteria contained in the above-mentioned OPR technical advisory. One of the screening criteria is if the project is within a ½ mile of an existing stop on a high-quality transit corridor. A high-quality transit corridor is defined as "a corridor with fixed route bus service with service intervals no longer than 15 minutes during peak commute hours." An investigation into the current bus routes in Merced determined that both criteria for a high-quality transit corridor are met with this project (see Appendix for bus route information). Therefore, the medical clinic is screened out from further VMT analysis.

Having met screening criteria, it is anticipated that both the multi-family residential and medical clinic will have a less-than-significant VMT impact.

REFERENCES

1. Highway Capacity Manual, Special Report 209, Transportation Research Board
2. California Manual on Uniform Traffic Control Devices for Streets and Highways, 2012 Edition, Federal Highway Administration (FHA)
3. Merced Vision 2030 General Plan
4. Technical Advisory on Evaluating Impacts in CEQA, Governor's Office of Planning and Research, December 2018
5. Trip Generation, 10th Edition, Institute of Transportation Engineers (ITE)

APPENDIX

Available upon Request