INITIAL STUDY
ENVIRONMENTAL CHECKLIST FORM
For EID-1484-2018 / SBVD-1483-2018, ARCH-1486-2018, SPEC-1492-2018

1. Project Title:

"Northwest Corner" (NWC) Broad & Tank Farm Mixed-Use Commercial / Assisted-Living Center including Vesting Tentative Map #3115

2. Lead Agency Name and Address:

City of San Luis Obispo
919 Palm Street
San Luis Obispo, CA 93401

3. Contact Persons and Phone Number:

John Rickenbach, Contract Planner
jfrickenbach@aol.com (805) 610-1109

Brian Leveille, Senior Planner
bleveille@slocity.org (805) 781-7166

4. Project Location:

3985 Broad Street and 660 Tank Farm Road

5. Project Sponsor's Name and Address:

NKT Development LLC and Westmont Development LP
c/o C. M. Florence, AICP
Oasis Associates
3427 Miguelito Court
San Luis Obispo, CA 93401

6. General Plan Designation:

Community Commercial with Special Focus Overlay, Business Park and Conservation Open Space.

7. Zoning:

Community Commercial with Special Focus Overlay (C-C-SF) and Airport Area Specific Plan Designations: Business Park with Airport Area Specific Plan Overlay, (BP-SP), and Conservation Open Space with Airport Area Specific Plan Overlay (C/OS-SP).

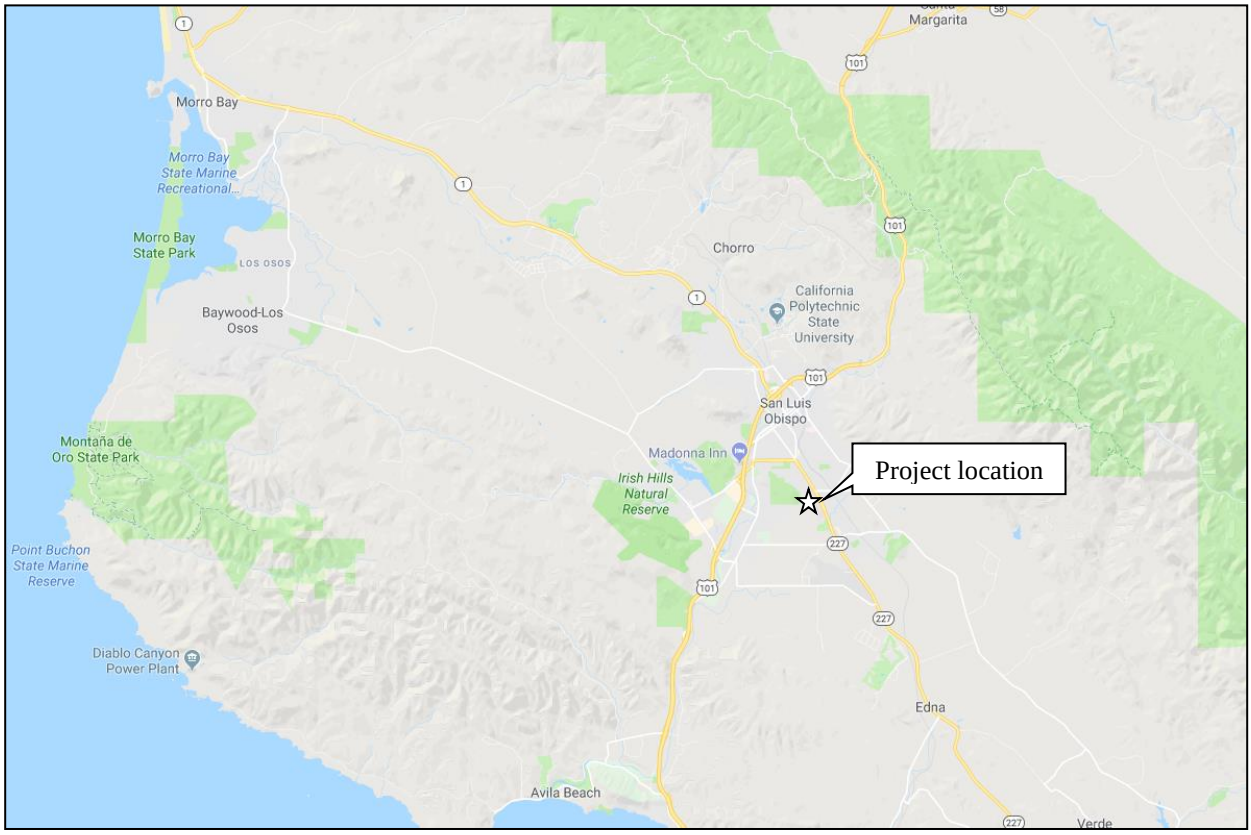
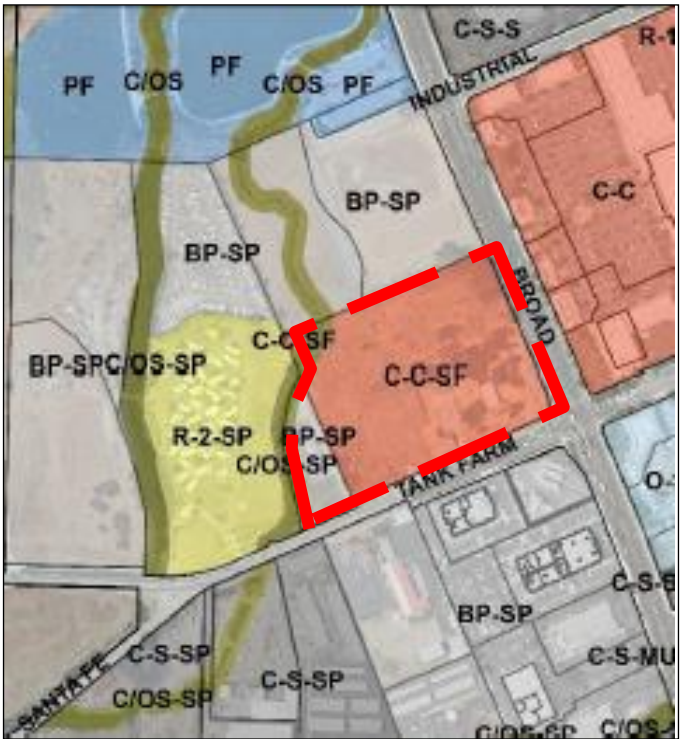


Figure 1: Regional Location

Figure 2:

Project Vicinity, Site and Zoning Designations



8. Description of the Project:

The applicant is proposing a seven (7) lot subdivision on two parcels with a combined area of approximately 10.07 acres. Lot 1 of Vesting Tentative Tract Map (VTTM) 3115 would include the assisted living facility on 4.79 acres, and Lots 2-7 would comprise the commercial shopping center on 5.28 acres. The proposal is located within the Airport Area Specific Plan (AASP) located at 3985 Broad Street and 660 Tank Farm Road, San Luis Obispo, CA 93401 (APNs: 053-421-003 and -004). The two-parcel, 10±-acre property, contains a single-family residence at 660 Tank Farm Road, while 3985 Broad Street is currently vacant (Attachment 2, project plans).

The proposed development project includes a retail shopping center and assisted living facility. See description below for greater detail. The proposed retail shopping center consists of an anchor retail grocer space and additional buildings for retail/restaurant use totaling 49,269 square feet in six (6) independent detached buildings. The assisted living facility would occupy the westerly portion of the development and include approximately 139 living units, support and administrative space in 133,656 square feet, serving residents of 60 years in age and older.

Westmont Living is a retirement community that provides a spectrum of living options. State licensing is required to operate an assisted living facility. However, the level of assisted service is tailored to the individual needs of each resident. This allows each resident to "age in place" rather than relocate as their service needs change. Based on Westmont's operations, approximately 50% of residents are considered independent living. These are residents of the

community but are not utilizing Assistance with Daily Living ("ADL") Services. The other 50% of residents require some form of assistance. For example, ADL's include medication reminders, dressing or bathing assistance, transportation or mobility utilizing the assistance services or are memory care residents.

The project is proposed for development in three main phases beginning with mass grading and subsequent development of the Westmont assisted living project, followed by the retail portion of the project.

Additional proposed project details include:

1. A seven-lot subdivision, six (6) commercial lots ranging in size from 0.37 acres to 1.76 acres, and one (1) assisted living site of 4.79 acres;
2. The assisted living facility would include 111 assisted living units. Of these, approximately 50 - 60% are independent living, with the balance being assisted living. and 28 memory care beds, constructed in two phases;
3. Phase 1 of the assisted living = 72 assisted units and 28 memory care beds comprising 98,473 square feet (49,610 sf 1st Floor, 48,863 sf 2nd Floor) in a single building. Phase 1 parking and site improvements would consist of 70 parking spaces;
4. Phase 2 of the assisted living = 39 assisted units comprising 35,183 square feet (17,764 sf 1st Floor, 17,418 sf 2nd Floor) in an expanded building attached to the main Phase 1 facility;
5. Assisted living amenities at the site are proposed to include full meal services, entertainment and exercise rooms, movie theater and beauty-barber services;
6. As a 24-hour operation, the assisted living facility is expected to employ approximately 80 full and part time staff. At any given time, as many as 18 employees would be on site for a given shift;
7. The assisted living facility will include various delivery receiving and service needs throughout each day, and will accommodate family and guest visitors throughout each day;
8. Assisted living parking is proposed at 70 parking spaces dedicated to residents and staff;
9. The commercial site is proposed to be developed in 1 phase, with construction of each of the six (6) proposed businesses at varying timeframes based on project demand;
10. Commercial center site improvements include 211 vehicle parking spaces, 11 motorcycle spaces, 16 bicycle racks and 16 bike lockers to serve the proposed uses;
11. Commercial retail uses, building and lot sizes, and associated parking on each distinct commercial parcel include:

a.	Lot 2	Retail	0.54 ac / 23,718 sq ft	Bldg = 8,026 sq ft	Parking = 19 sps
b.	Lot 3	Retail	0.37 ac / 16,007 sq ft	Bldg = 3,205 sq ft	Parking = 10 sps
c.	Lot 4	Restaurant	0.75 ac / 33,015 sq ft	Bldg = 4,835 sq ft	Parking = 39 sps
d.	Lot 5	Restaurant	0.66 ac / 28,920 sq ft	Bldg = 4,982 sq ft	Parking = 34 sps
e.	Lot 6	Retail-Rest.	1.20 ac / 52,196 sq ft	Bldg = 6,240 sq ft	Parking = 34 sps
f.	Lot 7	Grocer	1.76 ac / 76,499 sq ft	Bldg = 21,981 sq ft	Parking = 81 sps
			5.28 ac / 230,355 sq ft	Bldg = 49,269 sq ft	Total = 217 sps

12. Demolition of the existing single-family residence on Tank Farm Road;

13. Amendment to the Airport Area Specific Plan to modify the land use designation from Business Park with Specific Plan Overlay (BP-SP) to Community Commercial with Special Focus Area and Specific Plan Overlay (C-C-SF-SP) and associated text amendments to update the Specific Plan consistent with the proposed project and Special Focus Area policies (Attachment 1);
14. General Plan Amendment and rezone for the 1.37 acre parcel at 660 Tank Farm Road modifying the land use designation from Business Park to Community Commercial and the Zoning Designation from Business Park (BP-SP) to Community Commercial with Special Focus Overlay (C-C-SF-SP);
15. Design Exception for Tank Farm Road frontage improvements to allow 11-foot vs. 12-foot wide travel lanes; and
16. Frontage and on-site improvements (Attachment 2, Project Plans).

Two points of access from Tank Farm Road are proposed via a north-south driveway that is shared with the assisted living portion of the site, and a signalized intersection at the MindBody intersection that connects to the Industrial Way/Broad Street signalized intersection. Access from Broad Street is provided by a driveway located along the northerly property line. This driveway will also provide access to the SESLOC Federal Credit Union building to the north. The existing right-in/right-out driveway access to SESLOC from Broad Street would be eliminated.

The site plan is configured with the smaller commercial buildings near and along the Tank Farm-Broad Street intersection, with parking located between the perimeter buildings and the anchor grocer. The anchor building is located at the northwest quadrant with its entry set at the southeast corner of the footprint near the center of the site. The remaining buildings are oriented on the Broad Street and Tank Farm Road frontages.

Pedestrian access from the public sidewalk is provided at each corner of the site and at intermediate points, both on Broad Street and Tank Farm Road. At the corner of Tank Farm Road and Broad Street, a pedestrian walkway leads from the intersection diagonally between Buildings Three and Four to an interior dining patio. From the northeast corner at the entry drive on Broad Street, the pedestrian access passes through a patio and between Buildings Five and Six to the interior parking area and storefronts. Internal walkways link the retail buildings and connect to the assisted living portion of the project and the SESLOC property.

The commercial buildings are designed with shed roof forms and overhangs with board and batten siding. Materials consist of a mix of storefront, plaster surfaces and vertical siding which are incorporated to provide variation in wall finishes. Other architectural elements include cantilevered awnings, canopies and trellis elements. The color selections for the project reflect a neutral earth tone palette.

The proposed two-story, thirty-two (32) foot high assisted living building's design incorporates an architectural style and materials consistent with the surrounding neighborhood. The color palette is neutral, and materials consist of a mix of Alumawood, Hardie siding, stucco, board and batten, and stone. The assisted living facility design incorporates use of simple shed roof

forms, and board & batten and lap siding, with the intent to provide complementary forms and materials between the assisted living and retail project components.

The proposed project has been designed to collect stormwater runoff from the seven (7) proposed buildings, landscaping, parking and drive aisles, and direct the water into underground storage facilities as a strategy to address current post-construction stormwater regulations. The impervious areas on site have been designed with gradients to direct stormwater through a storm drain system that will route the stormwater to the two (2) proposed underground storage facilities.

The project design includes 0.19 acres of seasonal wetland and ephemeral drainage area to offset potential impacts to wetland areas, and proposes a 3:1 replacement ratio with the enhancement of approximately 0.60 acres along the Orcutt Creek corridor. The enhancement plan provides for the removal of invasive non-native species and planting of native plans in the northwest corner of the site and creek setback areas along Orcutt Creek (see Attachment 3, Biological Wetland Resource Assessment).

9. Site Setting and Surrounding Land Uses:

The site's topography is relatively level and currently supports non-native annual grassland and ruderal habitats. There is an existing soil stockpile on the southern area, which is to be used for the site grading of the proposed development. The site's north and west boundaries are defined by drainage swales that flow west to the confluence with Orcutt Creek. The site supports disturbed non-native annual grassland, non-native trees, and ruderal (previously disturbed) habitats.

The project site is located at the northwest corner of Broad Street and Tank Farm Road within the Airport Area Specific Plan (AASP). Surrounding uses include SESLOC Federal Credit Union to the north, a mobile home park to the west, Marigold Shopping Center to the east, and Mindbody offices and the Edna Valley Market and Gas Station to the south. Orcutt Creek is located along the western boundary of the project site. The majority of the site (8.5 acres) is zoned Community-Commercial with Special Focus Area Overlay (C-C-SF). The Business Park (BP-SP) zoned portion of the site is approximately 1 acre.

Surrounding adjacent land uses and zoning are provided in the table below:

	Land Use	Existing Uses / Tenants
North	Business Park (BP-SP)	SESLOC Federal Credit Union
South	Business Park (BP-SP)	Mindbody, Edna Valley Market & Gas Station
East	Community Commercial (C-C)	Marigold Shopping Center / Vons
West	Medium-Density Residential (R-2-SP)	Hidden Hills Mobile Home Park

10. Project Entitlements Requested:

- Vesting Tentative Tract Map 3115

- Architectural Review
- Creek setback exception
- Airport Area Specific Plan Amendments including associated development standards and amendment of the Specific Plan zone designation from BP-SP to C-C-SF-SP to be consistent with the rezone of the property which occurred when the General Plan Land Use and Circulation Element (LUCE) was adopted in 2014.
- General Plan Amendment and rezone for the 1.37-acre parcel at 660 Tank Farm Road modifying the land use designation from Business Park to Community Commercial and the Zoning Designation from Business Park (BP-SP) to Community Commercial with Special Focus Overlay (C-C-SF-SP).

11. Other public agencies whose approval is required:

- SLO County Airport Land Use Commission - Airport Land Use Plan Consistency Determination
- US Army Corps of Engineers Nationwide Permit 39 *Commercial and Institutional Developments* pursuant to Section 404 of the Clean Water Act (CWA)
- Regional Water Quality Control Board CWA Section 401 Water Quality Certification
- California Department of Fish and Wildlife Streambed Alteration Section 1600 Permit

12. Have California Native American tribes traditionally and culturally affiliated with the project area requested consultation pursuant to Public Resources code section 21080.3.1? If so, has consultation begun?

A Cultural Resources Survey of the project site (Terry L. Joslin, Ph.D, RPA, Central Coast Archaeological Research Consultants) has been prepared. Native American Tribes have been notified about the project consistent with City and State regulations.

Attachments

1. General Plan, Rezone, and Specific Plan exhibit and associated proposed text amendments
2. Project plans (Includes Assisted Living Center, Commercial Shopping Center, Public Improvement Plans, and Vesting Tentative Tract #3115)
3. Biological Wetland Resource Assessment, Sage Institute Inc., August 28, 2014, updated March 16, 2018
4. Rincon Consultants, Inc. Air Quality Technical Memorandum, February 26, 2019
5. Central Coast Archaeological Research Consultants Cultural Resources Survey, April 2018
6. ALUC consistency determination, September 19, 2018
7. Rincon Consultants, Technical Memorandum (GHG analysis), April 1, 2019
8. 45 db Acoustical Assessment, October 31, 2017
9. Rincon Consultants, Inc. Technical Noise Analysis Report, June 2019
10. Multi-Modal Transportation Impact Study, November 2018

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.

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

FISH AND GAME FEES

	There is no evidence before the Department that the project will have any potential adverse effects on fish and wildlife resources or the habitat upon which the wildlife depends. As such, the project qualifies for a de minimis waiver with regards to the filing of Fish and Game Fees.
X	The project has potential to impact fish and wildlife resources and shall be subject to the payment of Fish and Game fees pursuant to Section 711.4 of the California Fish and Game Code. This initial study has been circulated to the California Department of Fish and Game for review and comment.

STATE CLEARINGHOUSE

X	This environmental document must be submitted to the State Clearinghouse for review by one or more State agencies (e.g. Cal Trans, California Department of Fish and Game, Department of Housing and Community Development). The public review period shall not be less than 30 days (CEQA Guidelines 15073(a)).

DETERMINATION:

On the basis of this initial evaluation:

I find that the proposed project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared.	
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, or the mitigation measures described on an attached sheet(s) have been added and agreed to by the project proponent. A MITIGATED NEGATIVE DECLARATION will be prepared.	**X**
I find that the proposed project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required.	
I find that the proposed project MAY have a "potentially significant" impact(s) or "potentially significant unless mitigated" impact(s) on the environment, but at least one effect (1) has been adequately analyzed in an earlier document pursuant to applicable legal standards, and (2) has been addressed by mitigation measures based on the earlier analysis as described on attached sheets. An ENVIRONMENTAL IMPACT REPORT is required, but it must analyze only the effects that remain to be addressed	
I find that although the proposed project could have a significant effect on the environment, because all potentially significant effects (1) have been analyzed adequately in an earlier EIR or NEGATIVE DECLARATION pursuant to applicable standards, and (2) have been avoided or mitigated pursuant to that earlier EIR of NEGATIVE DECLARATION, including revisions or mitigation measures that are imposed upon the proposed project, nothing further is required.	

June 5, 2019

Signature
Brian Leveille, Senior Planner

Date

Doug Davidson, Deputy Director

For: Michael Codron
Community Development Director

EVALUATION OF ENVIRONMENTAL IMPACTS:

1. A brief explanation is required for all answers except "No Impact" answers that are adequately supported by the information sources a lead agency cites in the parentheses following each question. A "No Impact" answer is adequately supported if the referenced information sources show that the impact simply does not apply to projects like the one involved (e.g. the project falls outside a fault rupture zone). A "No Impact" answer should be explained where it is based on project-specific factors as well as general standards (e.g. the project will not expose sensitive receptors to pollutants, based on a project-specific screening analysis).

2. All answers must take account of the whole action involved, including off-site as well as on-site, cumulative as well as project-level, indirect as well as direct, and construction as well as operational impacts.

3. Once the lead agency has determined that a particular physical impact may occur, then the checklist answers must indicate whether the impact is potentially significant, less than significant with mitigation, or less than significant. "Potentially Significant Impact' is appropriate if there is substantial evidence that an effect may be significant. If there are one or more "Potentially Significant Impact" entries when the determination is made, an EIR is required.

4. "Negative Declaration: Less Than Significant With Mitigation Incorporated" applies where the incorporation of mitigation measures has reduced an effect from "Potentially Significant Impact" to a "Less than Significant Impact." The lead agency must describe the mitigation measures, and briefly explain how they reduce the effect to a less than significant level (mitigation measures from Section 19, "Earlier Analysis," as described in (5) below, may be cross-referenced).

5. Earlier analysis may be used where, pursuant to the tiering, program EIR, or other CEQA process, an effect has been adequately analyzed in an earlier EIR or negative declaration (Section 15063 (c) (3) (D)). In this case, a brief discussion should identify the following:

   a) Earlier Analysis Used. Identify and state where they are available for review.
   b) Impacts Adequately Addressed. Identify which effects from the above checklist were within the scope of and adequately analyzed in an earlier document pursuant to applicable legal standards, and state whether such effects were addressed by mitigation measures based on the earlier analysis.
   c) Mitigation Measures. For effects that are "Less than Significant with Mitigation Measures Incorporated," describe the mitigation measures which were incorporated or refined from the earlier document and the extent to which they addressed site-specific conditions for the project.

6. Lead agencies are encouraged to incorporate into the checklist references to information sources for potential impacts (e.g. general plans, zoning ordinances). Reference to a previously prepared or outside document should, where appropriate, include a reference to the page or pages where the statement is substantiated.

7. Supporting Information Sources: A source list should be attached, and other sources used or individuals contacted should be cited in the discussion.

8. This is only a suggested form, and lead agencies are free to use different formats; however, lead agencies should normally address the questions from this checklist that are relevant to a project's environmental effects in whatever format is selected.

9. The explanation of each issue should identify:

   a) The significance criteria or threshold, if any, used to evaluate each question; and
   b) The mitigation measure identified, if any, to reduce the impact to less than significance

Issues, Discussion and Supporting Information Sources Northwest Corner Mixed-Use (NKT): SBDV-1483-2018 ARCH-1486-2018, SPEC-1492-2018, EID-1484-2018	Sources	Potentially Significant Issues	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
1. AESTHETICS. Would the project:					
a) Have a substantial adverse effect on a scenic vista?	1,5			X	
b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, open space, and historic buildings within a local or state scenic highway?	1,5, 9, 35,			X	
c) Substantially degrade the existing visual character or quality of the site and its surroundings?	1,5, 35,			X	
d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?	1,5, 18, 35			X	

Setting

The City's General Plan Conservation and Open Space Element and Circulation Element assign scenic value ratings of 'moderate' and 'high' to several roadways in the City, based on the availability of views of scenic resources from these public viewpoints. According to the Circulation Element of the General Plan, the segment of U.S. Highway 101 (U.S. 101) through the City of San Luis Obispo is identified as having moderate and high scenic value. The City's General Plan Conservation and Open Space Element identifies Tank Farm Road has having high scenic value west of the intersection with Santa Fe Road, and moderate scenic value east of the intersection with Santa Fe Road. The Conservation and Open Space Element does not identify any "cones of view" or other important scenic vistas in the project site vicinity.

Evaluation

a, c) The proposed project is on the north side of Tank Farm Road with frontage along the moderate scenic value, east of Santa Fe Road and is visible from the portion of Tank Farm Road that is high scenic value west of Santa Fe Road. Existing views of the site consist of security fencing, non-native grasses and trees. Views through the site looking to the north-northeast from Tank Farm Road consist of commercial development on parcels to the north (Sesloc) and east (Marigold). Distant hillside views can be seen through the site and to the east along Tank Farm Road. The project would modify foreground views to the north and northeast through the site by constructing new buildings for the assisted living facility and commercial center development. The assisted living facility building is predominantly 26-feet at its high point to the top of the parapet and the commercial center development building heights range from 21-24 feet in height with some architectural feature projections reaching in the 26-27 foot range with the main anchor tenant architectural projections reaching 34 feet.

The project would modify the foreground and middle ground views from Tank Farm Road by constructing new structures generally two stories in height, with frontage on Tank Farm Road. New development visible in the foreground and would block views of other structures looking to the north and northeast but would not block views of hillsides or other natural resources. Although new structures would block views of hillsides from the moderate scenic value portion of Tank Farm Road, these hillsides are not within designated scenic vistas, and there are no identified scenic "cones of view" through the site. The visual character of the site would be modified, as the existing vacant residence and non-native grasses and trees would be replaced with the proposed new development. Removal of existing trees would not degrade or block any designated high scenic views or otherwise degrade the existing quality of the site or surroundings, and the project would incorporate on-site landscaping and new plantings as part of the riparian enhancement of Orcutt Creek. Additionally, the project has been reviewed by the Architectural Review Commission (ARC) which recommended the Planning Commission find the project consistent with the Community Design Guidelines and Airport Area Specific Plan (AASP).

b) The project site is located along Tank Farm Road, approximately one and a half miles from U.S. 101, which is the nearest state highway to the site. The section of U.S. 101 through the City of San Luis Obispo is classified as an Eligible State Scenic Highway, but is not officially designated (Caltrans 2015). However, due to the distance between U.S. 101 and the project site, there are no available views of the project site from U.S. 101.

d) Existing sources of nighttime lighting in the vicinity of the site include streetlights along Tank Farm Road and Broad Street, spillover lighting from surrounding development to the south and east, light from the headlights of vehicles traveling along Tank Farm Road and Broad Street, and from the single-family residence to the southeast. Development of the project site would

result in an increase in ambient nighttime lighting through the addition of parking lot and security/safety lighting, and exterior fixtures associated with the assisted living facility use and commercial structures. The site would also experience an increase of headlights and vehicle glare from vehicles accessing the site. In addition, exterior building materials, windows, and surface paving materials may cause glare that could affect the nearby residence to the southeast. The project would be required to conform to the City's Night Sky Preservation Ordinance (Zoning Regulations Chapter 17.23), which sets operation standards and requirements for lighting installations. These include limits on outdoor lighting that is misdirected, excess, or unnecessary, and meeting the minimum requirements of the California Code of Regulations for Outdoor Lighting and Signs (CCR Title 24, Chapter 6). The project would also be required to comply with City General Plan policies pertaining to lighting and glare (Policy 9.2.3 Outdoor Lighting), as well as the City's Community Design Guidelines. Prior to development of the site under the proposed project, the applicant would also be required to provide an overall lighting plan that demonstrates that the project complies with the requirements of City Ordinance No. 17.18.030, which prohibits lighting or illuminated devices that would create glare which results in a hazard or nuisance on other properties. Compliance with applicable City policies and regulations would ensure that impacts associated with the creation of new sources of exterior lighting and glare would be less than significant.

Conclusion: Less Than Significant Impact

2. AGRICULTURE RESOURCES. Would the project:

a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?	1,9, 19				X
b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?	12				X
c) 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?	19				X

Setting

There are no agricultural resources on the site. The site currently supports non-native annual grassland and ruderal habitats.

Evaluation

a) The proposed project is not in agricultural use, is not located on lands considered prime agricultural soils, is in an area long designated for infill development in the Airport Area Specific Plan.

b) There is no agricultural zoning or Williamson Act Contract in effect on the subject site.

c) The project site has not been used for grazing in the past. Therefore, this project will not result in any direct loss of productive farmland. Other lands in the vicinity of the project site are either already developed or are slated by the AASP for eventual non-agricultural use whether this project proceeds or not. Therefore, this project has no direct correlation to any planned conversions of farmland to non-agricultural uses. The impacts of conversion of these lands to non-agricultural uses was evaluated both in the environmental documents for the City's Land Use and Circulation Elements and the AASP and found insignificant. This project complies with said policies by being consistent with approved land use designations.

Conclusion: No impact.

3. AIR QUALITY. Where available, the significance criteria established by the applicable air quality management or air pollution control district may be relied upon to make the following determinations. Would the project:					
a) Conflict with or obstruct implementation of the applicable air quality plan?	20,21, 35			X	
b) Violate any air quality standard or contribute substantially to an existing or projected air quality violation?	20,21, 33,35		X		
c) 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 (including releasing emissions which exceed qualitative thresholds for ozone precursors)?	20,21, 33,35		X		
d) Expose sensitive receptors to substantial pollutant concentrations?	20,21, 32,33		X		
e) Create objectionable odors affecting a substantial number of people?	4, 32			X	

Setting

The City of San Luis Obispo is in the San Luis Obispo County portion of the SCCAB, which is under the jurisdiction of SLOAPCD. SLOAPCD monitors air pollutant levels to assure that air quality standards are met, and if they are not met, develops strategies to meet the standards. Depending on whether the standards are met or exceeded, the air basin is classified as being in "attainment" or as "non-attainment." San Luis Obispo County is in non-attainment for the state 24-hour standard for particulate matter (PM_{10}) and the state eight-hour standard for ozone (O_3).[1]

The major sources of PM_{10} in the SCCAB are agricultural operations, vehicle dust, grading, and dust produced by high winds. Additional sources of particulate pollution include diesel exhaust; mineral extraction and production; combustion products from industry and motor vehicles; smoke from open burning; paved and unpaved roads; condensation of gaseous pollutants into liquid or solid particles; and wind-blown dust from soils disturbed by demolition and construction, agricultural operations, off-road vehicle recreation, and other activities. Ozone is a secondary pollutant that is formed by a reaction between nitrogen oxides (NO_X) and reactive organic gases (ROGs) in the presence of sunlight. Therefore, ozone levels are dependent on the amount of these precursors. In the SCCAB, the major sources of ROGs are motor vehicles, organic solvents, petroleum production, and pesticides. The major sources of NO_X are motor vehicles, public utility power generation, and fuel combustion by various industrial sources. [2]

Evaluation

a) The San Luis Obispo Air Pollution Control District (SLOAPCD) adopted the 2001 Clean Air Plan (CAP) in 2002. The 2001 CAP is a comprehensive planning document intended to provide guidance to the SLOAPCD and other local agencies, including the City, on how to attain and maintain the state standards for ozone and PM10. The CAP presents a detailed description of the sources and pollutants which impact the jurisdiction, future air quality impacts to be expected under current growth trends, and an appropriate control strategy for reducing ozone precursor emissions, thereby improving air quality. The proposed project is consistent with the general level of development anticipated and projected in the CAP. The proposed development's location, uses, and intensity is generally consistent with planning envisioned in the City's 2014 Land Use and Circulation Element update and with the CAP's land use planning strategies, including locating the proposed development within an urban area proximate to an existing roadway, near transit services and shopping areas. Therefore, potential impacts would be less than significant.

[1] SLOACPD. 2016. *2015 Annual Air Quality Report*. September 2016. Available at: http://www.slocleanair.org/images/cms/upload/files/2015aqrt-FINAL.pdf

[2] SLOACPD. 2016. *2015 Annual Air Quality Report*. September 2016. Available at: http://www.slocleanair.org/images/cms/upload/files/2015aqrt-FINAL.pdf

b), c)

Construction Emissions

Temporary construction activities associated with development under the proposed project would generate criteria pollutant emissions (i.e., fugitive dust and ozone precursor emissions) as well as toxic air emissions (i.e., DPM emissions), which would contribute to the existing San Luis Obispo County non-attainment status for ozone and PM_{10}. Table 1 summarizes the estimated short-term emissions from construction. Table 1 shows maximum daily and quarterly emissions during construction compared to the applicable SLOAPCD construction emissions thresholds.

Table 1 Maximum Construction Emissions

	Daily (lbs/day)	Quarterly (tons/quarter)		
	ROG + NO_X (combined)	ROG + NO_X (combined)[1]	Fugitive PM_{10} (dust)[2]	DPM[2,3]
Maximum Construction Emissions	115.8	3.0	0.2	0.1
SLOAPCD Significance Threshold	137	2.5 (Tier 1)	2.5 (Tier 1)	0.13 (Tier 1)
Threshold Exceeded?	**No**	**Yes**	**No**	**No**

See Appendix A for CalEEMod results.

[1] The combined ROG and NO_X emissions were derived from the rolling maximum quarterly emissions for "ROG + NO_X" from CalEEMod.

[2] Quarterly emissions for Fugitive PM_{10} and DPM were calculated by dividing maximum annual construction emissions from CalEEMod by 4, since construction activities would extend for a duration exceeding 90 days, as recommended by SLOAPCD.

[3] The DPM estimations were derived from the "PM_{10} Exhaust" and "$PM_{2.5}$ Exhaust" output from CalEEMod as recommended by SLOAPCD. This estimation represents a worst case scenario because it includes other PM_{10} exhaust other than DPM.

As shown in Table 1, maximum construction emissions would not exceed the quarterly SLOAPCD thresholds for PM_{10} or DPM or the daily SLOAPCD threshold for ROG and NO_X. However, maximum quarterly construction emissions would exceed the quarterly SLOAPCD threshold for ROG and NO_X during the first quarter of construction, which includes the site preparation and grading phases. Therefore, temporary construction impacts related to emissions of ROG and NO_X would be potentially significant unless mitigation is incorporated. Measures AQ-1 and AQ-2 are recommended to reduce this potential impact to a less than significant level. Measures AQ-1 and AQ-2 incorporate the standard construction equipment mitigation measures and BACT measures required by SLOAPCD for construction projects that exceed the 2.5 tons per quarter threshold for ROG and NO_X emissions (Attachment 4, Rincon Consultants Air Quality Technical Memorandum). Less than significant impact with mitigation incorporated.

Operational Emissions

Development of the proposed project would result in an increase in vehicle trips that would generate new criteria pollutant emissions in the SCCAB. In addition, operation of new land uses on the project site would result in ongoing emissions associated with natural gas use and area sources, such as landscaping, consumption of consumer products, and off-gassing from architectural coatings. Table 2 shows the daily and annual operational emissions associated with the development under the proposed project compared to the applicable SLOAPCD operational emissions thresholds. The analysis of operational emissions does not consider toxic air contaminants because the project does not include a stationary source of toxic air emissions that would impact adjacent sensitive receptors and the project site is not located close to a freeway or urban road with daily traffic volumes of greater than 100,000 vehicles.[3]

Table 2 Operational Emissions

	ROG + NO_X (combined)	Fugitive PM_{10} (dust)	DPM[1]	CO
Proposed Project Daily Emissions	23.5 lbs/day[2]	9.2 lbs/day	0.4 lb/day[2]	50.1 lbs/day
SLOAPCD Daily Threshold	25 lbs/day	25 lbs/day	1.25 lbs/day	550 lbs/day
Threshold Exceeded?	**No**	**No**	**No**	**No**
Proposed Project Annual Emissions	3.8 tons/year	1.4 tons/year	0.06 ton/year	7.7 tons/year
SLOAPCD Annual Threshold	25 tons/year	25 tons/year	n/a	n/a
Threshold Exceeded?	**No**	**No**	**n/a**	**n/a**

[1] DPM estimates were derived from the "PM_{10} Exhaust" and "$PM_{2.5}$ Exhaust" output from CalEEMod as recommended by SLOAPCD. This estimate represents a worst case scenario because it includes all PM_{10} exhaust.

[2] SLOAPCD specifies that CalEEMod winter emission outputs be compared to operational thresholds for these pollutants.
Note: All numbers may not sum exactly due to rounding.

As shown in

2, daily operational emissions associated with development under the proposed project would not exceed SLOAPCD operational daily and annual thresholds for ROG and NO_X, PM_{10}, DPM, or CO. Therefore, long-term operational emissions would be less than significant.

d) The project does not include stationary sources of toxic air emissions that would impact adjacent sensitive receptors and the project site is not located close to a freeway urban road with daily traffic volumes of greater than 100,000 vehicles.[4] The nearest potential sensitive receptors would be the planned residential units located on the parcel immediately adjacent to the project site's western boundary (650 Tank Farm Road). Mitigation Measure AQ-2 includes provisions to address the unlikely potential the residential project is constructed prior to construction of the proposed project. Less than significant Impact with Mitigation Measure incorporated.

e) The project would amend the AASP land use designation consistent with the General Plan and Zoning to allow the proposed uses that are consistent with the Community Commercial Zone (C-C). None of the uses are identified by SLOAPCD as uses that typically create objectionable odors[5]. In addition, the project site is surrounded by service commercial/business park land uses, an existing residence to the southeast, and open space and agricultural operations further to the southwest. None of these land uses include operations listed in the *CEQA Air Quality Handbook* as potential odor-contributing sources. Therefore, development under the proposed General Plan Amendment and rezone would not result in objectionable odors that would affect a substantial number of people. Less than significant impact.

Conclusion: Potentially Significant Unless Mitigation Incorporated.

Mitigation Measures. The following mitigation measures are required to reduce impacts to a less than significant level. Note that these are in addition to compliance with all required state and local laws that relate to air quality, as enforced by the San

[3] The CARB *Air Quality and Land Use Handbook* (2005) recommends avoiding siting new sensitive land uses within 500 feet of a freeway or urban roads with 100,000 vehicles per day.

[4] The CARB *Air Quality and Land Use Handbook* (2005) recommends avoiding siting new sensitive land uses within 500 feet of a freeway or urban roads with 100,000 vehicles per day.

[5] SLOAPCD CEQA Air Quality Handbook (2012)

Luis Obispo Air Pollution Control District (APCD). It is notable that in a May 3, 2019 letter sent by APCD to the City regarding this project, APCD stated that it concurs that Mitigation Measures AQ-1 and AQ-2 as described below *"are consistent with the APCD's analysis of the proposed project and the APCD supports the inclusion of these measures in the conditions of approval for the construction phase to reduce the daily ozone precursor estimates to below the APCD significance threshold."*

AQ-1. Standard Control Measures for Construction Equipment. The following standard air quality mitigation measures shall be implemented during the site preparation and grading phases of construction at the project site:

- Maintain all construction equipment in proper tune according to manufacturer's specifications;
- Fuel all off-road and portable diesel-powered equipment with CARB-certified motor vehicle diesel fuel (non-taxed version suitable for use off-road);
- Comply with the State Off-Road Regulation;
- Use on-road heavy-duty trucks that meet the CARB's 2007 or cleaner certification standard for on-road heavy-duty diesel engines, and comply with the State On-Road Regulation;
- Construction or trucking companies with fleets that do not have engines in their fleet that meet the engine standards identified in the above two measures (e.g. captive or NO_X exempt area fleets) may be eligible by proving alternative compliance;
- All on and off-road diesel equipment shall not idle for more than 5 minutes. Signs shall be posted in the designated queuing areas and or job sites to remind drivers and operators of the 5-minute idling limit;
- Diesel idling within 500 feet of sensitive receptors shall not be not permitted;[6]
- Staging and queuing areas shall not be located within 500 feet of sensitive receptors;[6]
- Equipment shall be electrified when feasible;
- Gasoline-powered equipment shall be substituted in place of diesel-powered equipment, where feasible; and
- Alternatively-fueled construction equipment shall be used on-site where feasible, such as compressed natural gas, liquefied natural gas, propane or biodiesel.

AQ-2. Best Available Control Technology. Diesel construction equipment used during the site preparation and grading phases shall be equipped with CARB Tier 3 or Tier 4 certified off-road engines and 2010 on-road compliant engines.

Significance After Mitigation

The standard construction equipment mitigation measures and BACT measures have been developed by SLOAPCD to enhance the consistency of projects with the goals and policies of the Clean Air Plan, and SLOAPCD has identified the measures as contributing to achieving and maintaining attainment of State and federal ambient air quality standards. SLOAPCD does not quantify the potential emission reductions achieved by these measures. However, CalEEMod is capable of estimating emissions reductions that would result from implementation of Measure AQ-2, which requires the use of minimum CARB Tier 3 certified off-road engines during the site preparation and grading phases. Table 3 summarizes mitigated maximum daily and quarterly emissions during construction compared to the applicable SLOAPCD construction emissions thresholds (see attachments to Rincon Air Quality Technical Memorandum (Attachment 4) for complete CalEEMod model file, results, and assumptions).

[6] SLOAPCD recommends that diesel idling and staging/queuing areas be prohibited within 1,000 feet of sensitive receptors. However, these restrictions would be infeasible for the proposed project because the project site is approximately 850 feet in length, and the nearest sensitive receptors would be the planned residential units located on the parcel immediately adjacent to the project site's western boundary (650 Tank Farm Road). Therefore, the diesel idling and staging/queuing area restrictions has been reduced to 500 feet.

Table 3 Mitigated Maximum Construction Emissions

	Daily (lbs/day)	Quarterly (tons/quarter)		
	ROG + NO_X (combined)	ROG + NO_X (combined)[1]	Fugitive PM_{10} (dust)[2]	DPM[2,3]
Mitigated Maximum Construction Emissions	65.8	1.7	0.2	0.1
SLOAPCD Significance Threshold	137	2.5 (Tier 1)	2.5 (Tier 1)	0.13 (Tier 1)
Threshold Exceeded?	**No**	**No**	**No**	**No**

See Appendix A for CalEEMod results.

[1] The combined ROG and NO_X emissions were derived from the rolling maximum quarterly emissions for "ROG + NO_X" from CalEEMod.

[2] Quarterly emissions for Fugitive PM_{10} and DPM were calculated by dividing maximum annual construction emissions from CalEEMod by 4, since construction activities would extend for a duration exceeding 90 days, as recommended by SLOAPCD.

[3] The DPM estimations were derived from the "PM_{10} Exhaust" and "$PM_{2.5}$ Exhaust" output from CalEEMod as recommended by SLOAPCD. This estimation represents a worst case scenario because it includes other PM_{10} exhaust other than DPM.

As shown in Table 3, implementation of Measure AQ-2 would reduce maximum quarterly emissions of ROG and NO_X to below the SLOAPCD significance threshold. Implementation of Measure AQ-1 would further reduce ROG and NO_X emissions. Therefore, implementation of Measures AQ-1 and AQ-2 during the site preparation and grading phases would reduce construction-related air quality impacts to a less than significant level.

In addition to the above stated mitigation measures, the APCD is requiring other construction phase and operational phase measures as described below.

Construction Phase:

Developmental Burning
APCD Rule 501 prohibits developmental burning of vegetative material within San Luis Obispo County. The project shall comply with this requirement.

Demolition Activities
Demolition activities can have potential negative air quality impacts, including issues surrounding proper handling, abatement, and disposal of asbestos-containing material (ACM). ACM could be encountered during the demolition or remodeling of existing structures. If this project will include any of these activities, then it may be subject to various regulatory jurisdictions, including the requirements stipulated in the National Emission Standard for Hazardous Air Pollutants (40CFR61, Subpart M - asbestos NESHAP). These requirements include but are not limited to:

- Written notification to the APCD, within at least 10 business days of activities commencing.
- Asbestos survey conducted by a Certified Asbestos Consultant.
- Applicable removal and disposal requirements of identified ACM.

Please contact the APCD Engineering & Compliance Division at 805-781-5912 or go to slocleanair.org/rules-regulations/asbestos.php for further information. To obtain a *Notification of Demolition and Renovation Form* go to the "Asbestos Forms" section of slocleanair.org/library/download-forms.php.

Naturally Occurring Asbestos
Naturally occurring asbestos (NOA) has been identified by the California Air Resources Board as a toxic air contaminant. Serpentine and ultramafic rocks are very common throughout California and may contain NOA. The following requirements

apply because the project site is in a candidate area for NOA. The applicant shall ensure that a geologic evaluation is conducted to determine if the area disturbed is exempt from the CARB Air Toxics Control Measure (ATCM) for Construction, Grading, Quarrying, and Surface Mining Operations (17 CCR 93105) regulation. An exemption request must be filed with the APCD. If the site is not exempt from the requirements of the regulation, the applicant must comply with all requirements outlined in the Asbestos ATCM. This may include development of an Asbestos Dust Mitigation Plan and an Asbestos Health and Safety Program for approval by the APCD. More information on NOA can be found at slocleanair.org/rules-regulations/asbestos/noa.

Dust Control Measures

This project is greater than 4 acres and within 1,000 feet of sensitive receptors (residential units). Construction activities can generate fugitive dust, which could be a nuisance to residents and businesses in close proximity to the proposed construction site. Projects with grading areas that are greater than 4-acres or are within 1,000 feet of any sensitive receptor shall implement the following measures to manage fugitive dust emissions such that they do not exceed the APCD's 20% opacity limit (APCD Rule 401) or prompt nuisance violations (APCD Rule 402):

a. Reduce the amount of the disturbed area where possible;

b. Use of water trucks or sprinkler systems in sufficient quantities to prevent airborne dust from leaving the site and from exceeding the APCD's limit of 20% opacity for greater than 3 minutes in any 60-minute period. Increased watering frequency would be required whenever wind speeds exceed 15 mph. Reclaimed (non-potable) water should be used whenever possible. When drought conditions exist and water use is a concern, the contractor or builder should consider the use of an APCD-approved dust suppressant where feasible to reduce the amount of water used for dust control. Please refer to the following link from the San Joaquin Valley Air District for a list of potential dust suppressants: Products Available for Controlling Dust;

c. All dirt stock pile areas should be sprayed daily and covered with tarps or other dust barriers as needed;

d. Permanent dust control measures identified in the approved project revegetation and landscape plans should be implemented as soon as possible, following completion of any soil disturbing activities;

e. Exposed ground areas that are planned to be reworked at dates greater than one month after initial grading should be sown with a fast germinating, non-invasive grass seed and watered until vegetation is established;

f. All disturbed soil areas not subject to revegetation should be stabilized using approved chemical soil binders, jute netting, or other methods approved in advance by the APCD;

g. All roadways, driveways, sidewalks, etc. to be paved should be completed as soon as possible. In addition, building pads should be laid as soon as possible after grading unless seeding or soil binders are used;

h. Vehicle speed for all construction vehicles shall not exceed 15 mph on any unpaved surface at the construction site;

i. All trucks hauling dirt, sand, soil, or other loose materials are to be covered or should maintain at least two feet of freeboard (minimum vertical distance between top of load and top of trailer) in accordance with California Vehicle Code (CVC) Section 23114;

j. "Track-Out" is defined as sand or soil that adheres to and/or agglomerates on the exterior surfaces of motor vehicles and/or equipment (including tires) that may then fall onto any highway or street as described in CVC Section 23113 and California Water Code 13304. To prevent 'track out', designate access points and require all employees, subcontractors, and others to use them. Install and operate a 'track-out prevention device' where vehicles enter and exit unpaved roads onto paved streets. The 'track-out prevention device' can be any device or combination of devices that are effective at preventing track out, located at the point of intersection of an unpaved area and a paved road. Rumble strips or steel plate devices need periodic cleaning to be effective. If paved roadways accumulate tracked out soils, the track-out prevention device may need to be modified;

k. Sweep streets at the end of each day if visible soil material is carried onto adjacent paved roads. Water sweepers shall be used with reclaimed water where feasible. Roads shall be pre-wetted prior to sweeping when feasible;

l. All PM_{10} mitigation measures required should be shown on grading and building plans; and

m. The contractor or builder shall designate a person or persons whose responsibility is to ensure any fugitive dust emissions do not result in a nuisance and to enhance the implementation of the mitigation measures as necessary to minimize dust complaints and reduce visible emissions below the APCD's limit of 20% opacity for greater than 3 minutes in any 60-minute period. Their duties shall include holidays and weekend periods when work may not be in progress (for example, wind-blown dust could be generated on an open dirt lot). The name and telephone number of such persons shall be provided to the APCD Compliance Division prior to the start of any grading, earthwork or demolition (Contact Tim Fuhs at 805-781-5912).

Construction Permit Requirements

Portable equipment 50 horsepower (hp) or greater used during construction activities may require California statewide portable equipment registration (issued by the California Air Resources Board) or an APCD permit. The following list is provided as a guide to equipment and operations that may have permitting requirements but should not be viewed as exclusive. For a more detailed listing, refer to the Technical Appendices, page 4-4, in the APCD's *CEQA Air Quality Handbook* (April 2012).

- Portable generators and equipment with engines that are 50 hp or greater;
- Electrical generation plants or the use of standby generators;
- Internal combustion engines;

Operational Phase:

Loading Dock Operations

In addition, because the truck loading dock portion of the project is within 1,000 feet of sensitive receptors (assisted care facility), the applicant shall comply with these more restrictive requirements to minimize impacts to nearby sensitive receptors.

- Staging and queuing areas shall not be located within 1,000 feet of sensitive receptors;
- Diesel idling within 1,000 feet of sensitive receptors shall not be permitted;
- Use of alternative fueled equipment and electrification of loading docks (e.g., electrical plug-ins for truck refrigeration units and electrification of loading equipment) is recommended; and
- Signs that specify the no idling areas must be posted and enforced at the site.

Residential Wood Combustion

Under APCD Rule 504, only APCD approved wood burning devices can be installed in new dwelling units. These devices include:

- All EPA-Certified Phase II wood burning devices;
- Catalytic wood burning devices which emit less than or equal to 4.1 grams per hour of particulate matter which are not EPA-Certified but have been verified by a nationally-recognized testing lab;
- Non-catalytic wood burning devices which emit less than or equal to 7.5 grams per hour of particulate matter which are not EPA-Certified but have been verified by a nationally-recognized testing lab;
- Pellet-fueled woodheaters; and
- Dedicated gas-fired fireplaces.

Operational Permit Requirements

Depending on the types of equipment that may be present at the site, operational sources may require APCD permits. The following list is provided as a guide to equipment and operations that may have permitting requirements and should not be viewed as exclusive. For a more detailed listing, refer to the Technical Appendix, page 4-4, in the APCD's *CEQA Air Quality Handbook* (April 2012).

- Portable generators and equipment with engines that are 50 hp or greater;
- Food and beverage preparation (primarily coffee roasters);
- Furniture and fixture products; and
- Dry cleaning.

Most facilities applying for an Authority to Construct or Permit to Operate with stationary diesel engines greater than 50 hp, should be prioritized or screened for facility wide health risk impacts. A diesel engine-only facility limited to 20 non-emergency operating hours per year or that has demonstrated to have overall diesel particulate emissions less than or equal to 2 lb/yr does not need to do additional health risk assessment.

4. BIOLOGICAL RESOURCES. Would the project:					
a) Have a substantial adverse effect, either directly or through habitat modifications, 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?	5,15, 28,29, 35, 38,39		X		
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 US Fish and Wildlife Service?	5,15, 28,29, 35, 38,39		X		
c) Have a substantial adverse effect on Federally protected wetlands as defined in Section 404 of the Clean Water Act (including, but not limited to, marshes, vernal pools, etc.) through direct removal, filling, hydrological interruption, or other means?	5,15, 28,29, 35, 38,39		X		
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 wildlife nursery sites?	5,15, 28,29, 35, 38,39			X	
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	5,10, 29			X	
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?	5,10, 29				X

Setting

The urbanized area of the City of San Luis Obispo lies at the convergence of two main geologic features: Los Osos Valley, which drains westerly into Morro Bay via Los Osos Creek, and San Luis Valley, which drains to the south- southwest into the Pacific Ocean at Avila Beach via San Luis Obispo Creek. San Luis Obispo, Stenner, Prefumo, and Brizzolara Creeks, and numerous tributary channels pass through the city, providing important riparian habitat and migration corridors connecting urbanized areas to less-developed habitats in the larger area surrounding the City.

Much of the areas outside the city limits consist of open rangeland grazed year-round, along with agricultural lands dominated by annual crop rotations and vineyards. A variety of natural habitats and associated plant communities are present within the City and support a diverse array of native plants and resident, migratory, and locally nomadic wildlife species, some of which are considered as rare, threatened, or endangered species. However, the largest concentrations of natural and native habitats are located in the larger and less developed areas outside the city limits.

The site currently supports disturbed non-native annual grassland and ruderal habitats (i.e., previously disturbed). The majority of the site has been developed with site improvements and buildings, etc., as recent as 2003, and dating back to approximately 1937 with buildings and active equipment/materials storage. The site has been vacant since 2004 when buildings were removed and the surface was cleared leaving only the non-native trees, the remaining vacant residence, and a temporary soil stockpile. The existing residence at 660 Tank Farm Road is to be removed as part of the proposed development.

An approved soil stockpile exists on the southwest corner of the property. An ephemeral drainage with a low-flow channel and a small adjacent wetland floodplain at the eastern reach enters the site through a 24-inch culvert in the northeast corner of the property (across from the Marigold Center entry of Broad Street) and flows west to the confluence with Orcutt Creek, located in the northwest corner of the shopping center site. Orcutt Creek flows southwesterly along the west edge of the property to a culvert under Tank Farm Road. The property is bordered by urban development on the north, east, and south sides with residential development to the west.

Part of the project(s) description is to enhance the riparian corridor and replace a small wetland removed to enable the entry off Broad Street. Based upon circulation between the proposed projects and the existing SESLOC facility, located north of the subject properties, the Broad Street access will impact 0.19 acres of seasonal wetland. Included in the impact area is a new crossing of the ephemeral drainage required to provide access from the subject properties to the existing SESLOC facility.

Onsite enhancement of approximately 0.60 acre along the Orcutt Creek corridor is a part of the proposed project description to mitigate for impacts to the 0.19-acre seasonal wetland and ephemeral drainage crossing at a 3:1 replacement ratio.

The enhancement plan will also include removal of noxious invasive non-native herbaceous and woody species, while a new native plant planting program is proposed in the northwest corner and creek setback areas along Orcutt Creek.

Table CMMP-1 from the Sage Biological Assessment (Attachment 3) is a list of creek enhancement plantings proposed as part of the project.

Methods of Survey and Assessment

Sage Institute biologists conducted a review of available background information including the proposed project information, aerial photographs dating back to 1937, NRCS Soils Survey information, and a search and review of the current California Natural Diversity Data Base (CNDDB) within an approximate five-mile search radius of the proposed project site. The five-mile radius was used as the typical 10-mile search radius would have included areas well outside of the city limits that would not be relevant to this study in the urbanized City of San Luis Obispo. The CNDDB provided a list with mapped locations of special-status plant and wildlife species, as well as natural communities of special concern, that have been recorded within the region of the project site.

Sage conducted field reconnaissance surveys of the proposed project site on May 20, July 10, and July 31, 2014; July 3, 2017; and February 22, 2018. The purpose of the field surveys was to document existing conditions within the project site in terms of habitat for plants and wildlife species, and the potential to support jurisdictional wetlands, riparian habitats, and/or waters of the U.S./State. Plant and wildlife species observed in the field were recorded. The field surveys included a thorough and

complete springtime floristic inventory and rare plant survey in 2014 of observable and identifiable plants. The 2017 and 2018 field surveys affirmed conditions are unchanged from the 2014 initial field surveys. A wetland delineation and preliminary jurisdictional determination was completed identifying Army Corps of Engineers jurisdiction authority under their Nationwide Permitting Program.

The study area habitat types were described by the aggregation of plants and wildlife based on the composition and structure of the dominant vegetation observed at the time the field reconnaissance was conducted. The determination of jurisdictional wetlands and/or waters of the U.S./State was made using the currently accepted U.S. Army Corps of Engineers (Corps) wetland delineation methodology and Clean Water Act Section 404 implementing regulations and guidance.

PLANT COMMUNITIES - The project site supports the following distinct plant communities: 1) disturbed non-native annual grassland with non-native trees; and 2) an ephemeral drainage with mostly herbaceous vegetation along with several willow trees, a patch of bulrush, and a non-native blackberry thicket. Orcutt Creek along the western edge of the project area is choked with non-native forbs and shrubs. Figure 4 of the Sage report provides a habitat map. Figure 6 provides a set of representative photographs of the existing conditions of the proposed project site. All plant species observed during the field surveys including rare plant survey are included in the Sage Report (Attachment 3)

DISTURBED NON-NATIVE ANNUAL GRASSLAND – The disturbed annual grassland habitat, is dominated by nonnative annual grasses and herbaceous broadleaf plant species, along with very few native species. Disturbed non-native annual grassland habitat occurs as the dominant habitat type over the entire project site with the exception of the ephemeral drainage that runs along the north property border. The approximately 9.3-acres of disturbed annual grassland within the study area was observed to be very low in species diversity and dominated by a near pure stand of wild oats (Avena barbata). Other plant species observed in the non-native grassland habitat include, ripgut brome (Bromus diandrus), filaree (Erodium cicutarium), cheeseweed (Sidalcea sp.), fennel (Foeniculum vulgare), wild radish (Raphanus sativus), poison hemlock (Conium maculatum), harding grass (Phalaris aquatica), teasel (Dipsacus sativus), shortpod mustard (Hirschfeldia incana), bur-clover (Medicago polymorpha), milk thistle (Silybum marianum), narrow-leaf milkweed (Asclepias fascicularis), and bristly ox-tongue (Helminthotheca echioides). A few coyote brush shrubs (Baccharis pilularis) are scattered on the site along with non-native pine, cypress, acacia, and eucalyptus trees.

WILDLIFE - The mosaic of remnant patches of ruderal and vacant lands within the urbanized landscape on and around the project area can provide habitat for a variety of wildlife species that have become adapted to the urban environment such as raccoons, opossums, ground squirrels and other rodents, and reptiles. Even in urbanized areas, drainage corridors and trees can provide high quality habitat for a variety of wildlife species that have become adapted to the urban environment, but in particular to resident and migratory birds. Common birds observed during field surveys included the northern mockingbird, house finch, American goldfinch, and red-tailed hawk. Given that the site is surrounded by urban development, other wildlife use is likely limited with generally low wildlife values attributed to this disturbed site.

EPHEMERAL DRAINAGE & SEASONAL WETLAND – An ephemeral drainage swale and low-flow channel runs just offsite along the north property boundary from a 24-inch culvert under Broad Street at the northeast property corner to the confluence with Orcutt Creek, which then cuts across the northwest corner of the site. For the most part, the drainage channel runs outside the property adjacent to the northern border. It appears to sheet flow over some of the property along an upper terrace above the drainage but below the general elevation of the rest of the property. A small stand of arroyo willow (Salix lasiolepis) occurs at the northwest corner with one small isolated tree in the center of the drainage. A patch of bulrush (Schoenoplectus sp.), a Himalayan blackberry (Rubus armeniacus) thicket, and one Canary Island date palm (Phoenix canariensis) occur along the drainage. The upper terrace was dominated by Harding grass, teasel, soft chess, rabbitsfoot grass (Polypogon sp.), and bristly ox-tongue. A patch of yerba mansa (Anemopsis californica) is mostly offsite in the swale with a small amount encroaching onto the site along the property line. Orcutt Creek with an established bed, bank, and channel runs along the western property line and is choked with non-native Italian rye grass (Festuca perennis), harding grass, bristly oxtongue, and castor bean (Ricinus communis) for most of its length.

WATERS OF THE U.S., WATERS OF THE STATE & WETLANDS - The ephemeral drainage swale with low-flow channel is located just offsite adjacent to the northern property line of the McBride parcel. The limits were shown on the SESLOC grading plans as jurisdictional waters of the U.S., subject to U.S. Army Corps of Engineers (Corps), and waters of the State by the California Department of Fish and Wildlife (CDFW). Currently it appears that any source of hydrology for the ephemeral drainage is from a culvert outfall just offsite at the northeast corner of the McBride property from runoff from surrounding

commercial and residential development. The drainage appears to become a prominent drainage feature between 1994 and 2002 with the development of the Marigold Shopping Center.

Appendix B of the Sage report provides the details of a wetland delineation and preliminary jurisdictional determination evaluation performed on the terrace that runs on the McBride parcel adjacent to the ephemeral drainage that runs just offsite along the northern property boundary of the McBride parcel.

There is evidence of overflow flooding wetland hydrology (drift lines of debris and sediment deposits) from the ephemeral drainage onto the McBride parcel on a terrace that runs along the drainage on the McBride property. The evaluation of soils indicated field indicators of hydric soils suggesting a regular flooding regime over time during the wet season. The upper reach of the terrace was dominated by Harding grass (Phalaris aquatica), teasel (Dipsacus sativus), soft chess (Bromus hordaceous), rabbitsfoot grass (Polypogon sp.), and bristly ox-tongue (Helminthotheca echioides) that does not represent a wetland vegetation community.

While some level of overland flow appears to occur, with the exception of the bulrush patch, the ephemeral nature of the drainage overflow does not manifest a definitive wetland plant community. However, given several years of below normal rainfall at the time of the delineation in 2014, this area was treated as problem area wetland. As such, based on the presence of hydric soils and wetland hydrology, approximately 0.19 acre (8,166 square feet) of jurisdictional seasonal wetland occurs on the bench above the ephemeral drainage along the northern property boundary on the McBride parcel. Figures JD-1 and JD-2 in Appendix A of the Sage report show the location and extent of wetlands delineated adjacent to the ephemeral drainage as described above.

The ephemeral drainage meets Orcutt Creek at the northwest corner of the McBride property becoming Orcutt Creek that exhibits a distinct bed, bank and channel. As described above, this reach of Orcutt Creek is choked with non-native grasses, forbs, and shrubs. Orcutt Creek has been in its current alignment as a tributary drainage since as far back as 1937. Given it flows through a sequence of creeks to San Luis Obispo Creek and the Pacific Ocean, Orcutt Creek is considered a tributary jurisdictional water of the U.S./State. The Ordinary High-Water Mark (OHWM) and top of bank are essentially the same along this reach representing the federal and state jurisdictional limits respectively. Approximately 0.23 acre of jurisdictional waters of the U.S./State are associated with Orcutt Creek through the project area.

The botanical surveys resulted in no observations of any rare, threatened, or endangered plant species within the project site. Further, the observable and identifiable plants, disturbed soil surface from over 70 years of human use on the site is further evidence the site does not support any special-status plants. A field survey by Sage in 2018 confirmed that site conditions are unchanged since the 2014 floristic inventory and rare plant survey.

Given the urban setting with a limited diversity of non-native grassland species, and the ephemeral nature of drainage along the north property line, the project site does not support suitable habitat for any special status wildlife species. Therefore, no impacts from site development are anticipated.

a, b) Implementation of the proposed project would result in impacts to vegetation and wildlife utilizing disturbed non-native annual grassland habitat from the development of the site. Tree removal and ground disturbance, even to the ruderal annual grassland habitat, could impact nesting birds if conducted during the nesting season. This would be considered a potentially significant impact. Mitigation Measure BIO-1 is required to reduce potential impacts to a less than significant level. Less than significant impact with mitigation incorporated.

c) Development of access from Broad Street along the north project boundary would impact approximately 0.19 acre of seasonal wetland habitat associated with the ephemeral drainage. This would be considered a potentially significant impact without mitigation. Mitigation Measures MM BIO-1, BIO-2 and BIO-3 are required to reduce potential impacts to a less than significant level.

d) The proposed project includes creek restoration consistent with policies in the AASP for creeks which are in degraded condition. The project also would not remove protected trees and includes substantial plantings within the development plan and as a part of the restoration component of the project. The project does not conflict with local policies or ordinances regarding tree preservation or protection of biological resources. Less than significant impact.

e, f) The project site is not part of a local, regional, or state habitat conservation plan and therefore would have not have an impact. The site does not contain any heritage trees or any biological resources that are protected by local policies or ordinances. No impact.

Conclusion: Less Than Significant with Required Mitigation Incorporated (for items a, b and c). Less Than Significant without mitigation for the remaining items.

Mitigation Measures. The following mitigation measures are required to avoid, minimize and compensate for potentially significant impacts on biological resources. With mitigation, impacts would be reduced to a less than significant level. Note that possible additional conditions that may be required by resource regulatory agencies through their permitting processes would be outside the CEQA process. However, the CEQA analysis and mitigation measures below provide the necessary and appropriate direction for those agencies as they conduct their independent permitting processes.

BIO-1. Vegetation Removal Timing. Vegetation removal and initial site disturbance for any project elements shall be conducted between September 1st and January 31st outside of the nesting season for birds. If vegetation removal is planned for the bird nesting season (February 1st to August 31st), then preconstruction nesting bird surveys shall be required to determine if any active nests would be impacted by project construction. If no active nests are found, and vegetation removal is conducted within 5 days of the survey and is done continuously, then no further survey work shall be required. Additional surveys during the nesting season shall be conducted as needed if there is any break in vegetation removal, grading and/or construction lasting more than 5 days. If any active nests are found that would be impacted by vegetation removal, grading and/or construction, then the nest sites shall be avoided with the establishment of a non-disturbance buffer zone around active nests as determined by a qualified biologist. Nest sites shall be avoided and protected within the non-disturbance buffer zone until the young are no longer reliant on the nest site for survival (have fledged) as determined by a qualified biologist. All workers shall receive training on good housekeeping practices during construction that will discourage nests from being established within the work area (e.g., cover stored pipe ends, cover all equipment being used daily, etc.) A qualified biologist shall regularly walk the construction area to look for nest starts and review site for good housekeeping practices. As such, avoiding disturbance or take of an active nest would reduce potential impacts on nesting birds to a less-than-significant level.

BIO-2. Clean Water Act Permitting. The applicant shall obtain Clean Water Act (CWA) regulatory compliance in the form of a permit from the U.S. Army Corps of Engineers (Corps) or written documentation from the Corps that no permit would be required for the proposed road crossing. Should a permit be required, the applicant shall implement all the terms and conditions of the permit to the satisfaction of the Corps. Corps permits and authorizations require applicants to demonstrate that the proposed project has been designed and will be implemented in a manner that avoids and minimizes impacts on aquatic resources to the extent practicable. Compliance with Corps permitting would also include obtaining and CWA 401 Water Quality Certification from the Regional Water Quality Control Board (RWQCB). In addition, the Corps and RWQCB may require compensatory mitigation for unavoidable permanent impacts on waters of the U.S./State to achieve the goal of a no net loss of wetland values and functions. As such, with implementation of the 3:1 ratio of creek enhancement mitigation plantings and regulatory compliance would reduce potential impacts on waters of the U.S. to a less than significant level.

BIO-3. **Streambed Alteration Agreement.** The applicant shall obtain compliance with Section 1602 of the California Fish and Game Code (Streambed Alteration Agreements) in the form of a completed Streambed Alteration Agreement or written documentation from the CDFW that no agreement would be required for the proposed road crossing. Should an agreement be required, the property owners shall implement all the terms and conditions of the agreement to the satisfaction of the CDFG. The CDFG Streambed Alteration Agreement process encourages applicants to demonstrate that the proposed project has been designed and will be implemented in a manner that avoids and minimizes impacts in the stream zone. In addition, CDFG may require compensatory mitigation for unavoidable permanent impacts on waters of the State. As such, with implementation of the 3:1 ratio of creek enhancement mitigation plantings and regulatory compliance would reduce potential impacts on waters of the U.S. to a less than significant level.

Issues, Discussion and Supporting Information Sources Northwest Corner Mixed-Use (NKT): SBDV-1483-2018 ARCH-1486-2018, SPEC-1492-2018, EID-1484-2018	Sources	Potentially Significant Issues	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
5. CULTURAL RESOURCES. Would the project:					
a) Cause a substantial adverse change in the significance of a historic resource? (See CEQA Guidelines 15064.5)	12,23, 24,25			X	
b) Cause a substantial adverse change in the significance of an archaeological resource? (See CEQA Guidelines 15064.5)	12,24, 25,36		X		
c) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	12,24, 25			X	
d) Disturb any human remains, including those interred outside of formal cemeteries?	26, 36		X		

Pre-Historic Setting: As outlined in the City's LUCE Update EIR, archaeological evidence demonstrates that Native American groups (including the Chumash) have occupied the Central Coast for at least 10,000 years, and that Native American use of the central coast region may have begun during the late Pleistocene, as early as 9000 B.C., demonstrating that historical resources began their accumulation on the central coast during the prehistoric era. The City of San Luis Obispo is located within the area historically occupied by the Obispeño Chumash, the northernmost of the Chumash people of California. The Obispeño Chumash occupied much of San Luis Obispo County, including the Arroyo Grande area, and from the Santa Maria River north to approximately Point Estero. The earliest evidence of human occupation in the region comes from archaeological sites along the coast.

Historic Resource Setting: The area of San Luis Obispo became colonialized by the Spanish Incursion initially in 1542, with the first official settlement on Chumash Territory occurring in 1772, when the Mission San Luis Obispo de Tolosa was established. By the 1870s (after the earliest arrivals of Chinese immigrants in 1869), a Chinatown district had been established in the downtown area near Palm and Morro Street. By 1875, 2,500 residents were documented in a 4-square mile area around what is now the City of San Luis Obispo. By 1901, the City was served by the Pacific Coast Railway and mainline Southern Pacific, and in 1903 the California Polytechnic State University was established. The last era of growth generally lasted from 1945 to the present. Many of the residential subdivisions in the Foothill and Laguna Lake area were developed between 1945 and 1970 and the city's population increased by 53% during this time.

Central Coast Archaeological Research Consultants (CCARC), April 2018 Analysis (Attachment 5): The purpose of this study was to determine if there are cultural resources within the study area, pursuant to the California Environmental Quality Act (CEQA) of 1970, as amended, (Sections 21083.2 and 21084.1) and Sections 5020 through 5024 of the Public Resources Code which mandates public agencies to consider the effects of projects on historic properties. These regulations require public agencies to identify the environmental impacts of proposed undertakings, determine if the impacts will be significant and identify alternatives and mitigation measures that will substantially reduce or eliminate significant impacts to the environment. The CCARC study also adheres to the standards established by the San Luis Obispo County Department of Planning and Building, "A Guide to Archaeology and Historic Resources".

Archival research focused on primary and secondary sources to develop a general historic context and lot-specific information for the immediate project area. To identify previously recorded archaeological and historical sites, the author of this report reviewed archaeological site records, site location base maps, GIS layers and cultural resources survey and excavation reports on file at the Central Coast Information Center (CCIC), University of California, Santa Barbara. Records search included information on all surveys within a 0.25-mile radius of the current project area and sites within a 0.5-mile radius. In addition to this research effort, CCRAC consulted the National Register of Historic Places (NRHP) via the National Register Information Service (NRIS), the official on-line database of the NRHP; the California Inventory of Historic Resources (California 1976); and the California Historical Landmarks (California 1995). The comprehensive records search revealed the current study area has not been surveyed, and no cultural resources are within or in the immediate vicinity of current study survey area. Over 29 cultural resources studies have been conducted within a 0.25-mile radius, the majority of which are for small lot surveys, land use planning, and infrastructure development. Of the five documented surveys and adjacent to the current study area (Bertrando 2013; Conway 1999, 2004, 2005; Mikkelsen et al. 2001), no cultural resources were discovered within or in the vicinity of the 365 Prado Road survey area. Three studies (i.e., Conway 1999, 2004; Mikkelsen et al. 2001) overlap with the current study area, and the documents reveal no resources were identified on a highly modified landform. Gibson's (1993, 2001) intensive surveys in the Tank Farm road region also failed to identify cultural resources. Additionally, the author of this report has

conducted three studies in the general vicinity of the study area, and knowledge on the current survey area suggests a low likelihood of archaeological deposits within the project area. Three prehistoric archaeological sites (CA-SLO-785, -1427, and -2044) are recorded within the 0.5-miles of the project area, on a landforms that has been subject to severe alteration during construction of residential buildings, roads, landscaping, and utilities. The closest site is CA-SLO-1427 (four mortar cups) is situated approximately 450 meters north (Dills 1990). Approximately 525 meters to the southeast (along Route 227) is CA-SLO-2044, a highly disturbed, redeposited marine shell scatter. (Mikkelsen et al. 2001) CA-SLO-785 (a spare marine shell scatter) is situated approximately 575 meters southeast (Dills 1994). Also in the same vicinity of the project area is the expansive Union Oil Company Tank Farm (P-40-041195) which consists of an extensive oil tank farm and associated infrastructure (Conway 2008). A thorough review of the reports on file at the CCIC revealed that no archaeological materials associated with these sites have been found on the surface or during construction adjacent to the current Prado Road project.

In an effort to insure the Northern Chumash community is apprised of the project, CCARC called individuals that had expressed an interest to CCARC in the current undertaking. The proposed project was reviewed, and CCARC provided the results of the records search and field survey of the project area. Prior to the field study Fred Collins, representative of the Northern Chumash Tribal Council was contacted (20 March 2018). Mr. Collins was the only Tribal representative to return CCARC calls (on 21 and 22 March 2018), and a collaborative conversation resulted in no cultural resources concerns within the project area.

Evaluation

Although located within an area of moderate archaeological sensitivity − archival research, previous surveys, initial consultation with the Northern Chumash and an intensive archaeological field survey of the project area located at the Northwest Corner of Broad Street and Tank Farm Road San Luis Obispo, California identified no cultural resources. No further archaeological work is required or recommended within the acreage studied during this survey.

a) The project site is not designated or listed as a historic resource and not located within a historic district. There are no historic structures on the site. Less than significant impact.

b) Although no known archaeological resources were found on the site through survey work, and the potential for finding such resources is low, there is always the potential that unknown resources be discovered through site grading and construction activities. No further archaeological work is recommended per the CCARC cultural resources survey. In the event cultural resources or human resources are discovered, mitigation measures CR-1 and CR-2 are required. Impacts would be less than significant with prescribed mitigation.

c) The project site is located in an area that does not contain any unique geological feature and possesses no known unique paleontological resources. No further archaeological work is recommended per the CCARC cultural resources survey. Impacts to paleontological resources would be less than significant.

d) The project site is not located within a designated burial sensitivity area and the project is not considered an archaeologically sensitive site as described in the CCARC study (Attachment 5) or the City's Archaeological Resource Preservation Program Guidelines. No further archaeological work is recommended per the CCARC cultural resources survey. Mitigation measures CR-1 and CR-2 would ensure that any previously unknown human remains that could be uncovered would be properly mitigated to a less than significant level.

Mitigation Measures
The following measures would mitigate potential impacts to as-yet-undiscovered cultural resources to a less than significant level.

CR-1. Halt Work Order for Discovery of Previously Unidentified Cultural Resources. In the event that historical or archaeological remains are discovered during earth disturbing activities associated with the project, an immediate halt work order shall be issued and the Community Development Director shall be notified. A qualified archaeologist shall conduct an assessment of the resources and formulate proper mitigation measures, if necessary. After the find has been appropriately mitigated, work in the area may resume. A Chumash representative shall monitor any mitigation excavation associated with Native American materials.

Issues, Discussion and Supporting Information Sources Northwest Corner Mixed-Use (NKT): SBDV-1483-2018 ARCH-1486-2018, SPEC-1492-2018, EID-1484-2018	Sources	Potentially Significant Issues	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact

CR-2. **Halt Work Order for Discovery of Human Remains.** In the event that human remains are exposed during earth disturbing activities associated with the project, an immediate halt work order shall be issued and the Community Development Director shall be notified. State Health and Safety Code Section 7050.5 requires that no further disturbance of the site or any nearby area reasonably suspected to overlie adjacent human remains shall occur until the County Coroner has made the necessary findings as to origin and disposition pursuant to Public Resources Code Section 5097.98. If the remains are determined to be of Native American descent, the coroner shall notify the Native American Heritage Commission within 24-hours.

Notices regarding local tribal consultation outreach per AB 52 have been provided. To date one reply has been made from a tribal representative requesting further clarification on the surface surveys conducted by the applicant's archaeology consultants. No additional comments have been received.

Conclusion: Less Than Significant with Mitigation Incorporated.

6. GEOLOGY AND SOILS. Would the project:					
a) Expose people or structures to potential substantial adverse effects, including risk of loss, injury or death involving:					
I. Rupture of a known earthquake fault, as delineated in 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? Refer to Division of Mines and Geology Special Publication 42.	4,17, 29			X	
II. Strong seismic ground shaking?	4,17			X	
III. Seismic-related ground failure, including liquefaction?	4,17			X	
IV. Landslides or mudflows?	4,17			X	
b) Result in substantial soil erosion or the loss of topsoil?	17,29			X	
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 landslides, lateral spreading, subsidence, liquefaction, or collapse?	4,17			X	
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?	4,14			X	
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?	4,14, 17				X

Setting and Evaluation

As discussed in the City's 2014 LUCE Update EIR, San Luis Obispo lies within the southern Coast Range Geomorphic Province. This province lies between the Central Valley of California and the Pacific Ocean and extends from Oregon to northern Santa Barbara County. The Coast Range province is structurally complex and is comprised of sub-parallel northwest-southeast trending faults, folds, and mountain ranges.

Rock types in the San Luis Obispo area are mainly comprised of volcanic, metavolcanics, and a mixture of serpentinite and greywacke sandstone. These rocks are highly fractured and are part of the Mesozoic aged Franciscan Formation. Intrusive and extrusive volcanic deposits of Tertiary age and marine sedimentary deposits of the Miocene aged Monterey Formation are also found in the area. The most distinctive geomorphological feature of the San Luis Obispo area is the series of Tertiary aged volcanic plugs (remnants of volcanoes) which extend from the City of San Luis Obispo northwesterly to Morro Bay. Hollister Peak, Bishop Peak, Cerro San Luis Obispo, Islay Hill, and Morro Rock are all comprised of these volcanic plugs.

Faulting and Seismic Activity: The predominant northwest-southeast trending structures of the Coast Range Province are related to the San Andreas Fault Transform Boundary. Other faults in the San Luis Obispo area that are considered active or

potentially active include the San Juan Fault, the East and West Huasna Faults, the Nacimiento Fault Zone, the Oceano Fault, the Oceanic Fault, Cambria Fault, the Edna Fault, the Hosgri Fault, and the Los Osos Fault. The East and West Huasna Faults, the Nacimiento Fault Zone, the Cambria Fault, and the Edna Fault have not yet been officially classified by the California Division of Mines and Geology.

The Alquist-Priolo Earthquake Fault Zone (formerly known as a Special Studies Zone) is an area within 500 feet from a known active fault trace that has been designated by the State Geologist. Per the Alquist-Priolo legislation, no structure for human occupancy is permitted on the trace of an active fault. The portion of the Alquist-Priolo fault zone closest to the city is located near the southern flank of the Los Osos Valley, northwest of Laguna Lake, but lies just outside of the city limits.

Seismically Induced Ground Acceleration: Seismically induced ground acceleration is the shaking motion that is produced by an earthquake. Probabilistic modeling is done to predict future ground accelerations, taking into consideration design basis earthquake ground motion, applicable to residential or commercial, or upper-bound earthquake ground motion, applied to public use facilities like schools or hospitals.

Landslides: Landslides occur when the underlying support can no longer maintain the load of material above it, causing a slope failure. Ground shaking and landslide hazards are mapped by the City and are shown in the General Plan. Much of the development in San Luis Obispo is in valleys, where there is low potential for slope instability. However, the city contains extensive hillsides. Several are underlain by the rocks of the Franciscan group, which is a source of significant slope instability. The actual risk of slope instability is identified by investigation of specific sites, including subsurface sampling, by qualified professionals. The building code requires site-specific investigations and design proposals by qualified professionals in areas that are susceptible to slope instability and landslides.

Liquefaction: Liquefaction is defined as the transformation of a granular material from a solid state to a liquefied state as a consequence of increased pore water pressure. As a result, structures built on this material can sink into the alluvium, buried structures may rise to the surface or materials on sloped surfaces may run downhill. Other effects of liquefaction include lateral spread, flow failures, ground oscillations, and loss of bearing strength. Liquefaction is intrinsically linked with the depth of groundwater below the site and the types of sediments underlying an area.

The soils in the San Luis Obispo area that are most susceptible to ground shaking, and which contain shallow ground water, are the ones most likely to have a potential for settlement and for liquefaction. The actual risk of settlement or liquefaction is identified by investigation of specific sites, including subsurface sampling, by qualified professionals. Previous investigations have found that the risk of settlement for new construction can be reduced to an acceptable level through careful site preparation and proper foundation design, and that the actual risk of liquefaction is low.

Differential Settlement: Differential settlement is the downward movement of the land surface resulting from the compression of void space in underlying soils. This compression can occur naturally with the accumulation of sediments over porous alluvial soils within river valleys. Settlement can also result from human activities including improperly placed artificial fill, and structures built on soils or bedrock materials with differential settlement rates. This phenomenon can alter local drainage patterns and result in structural damage. Portions of the City have been identified as possibly being underlain by soft organic soils, resulting in a high potential for settlement (General Plan Safety Element).

Subsidence: Ground subsidence occurs where underlying geologic materials (typically loosely consolidated surficial silt, sand, and gravel) undergo a change from looser to tighter compaction. As a result, the ground surface subsides (lowers). Where compaction increases (either naturally, or due to human activity), the geologic materials become denser. As a result, the ground surface overlying the compacting subsurface materials subsides as the underlying geologic materials settle. Ground subsidence can occur under several different conditions, including:

- Ground-water withdrawal (water is removed from pore space as the water table drops, causing the ground surface to settle)
- Tectonic subsidence (ground surface is warped or dropped lower due to geologic factors such as faulting or folding); and
- Earthquake-induced shaking causes sediment liquefaction, which in turn can lead to ground-surface subsidence.

Expansive Soils: Expansive soils are soils that are generally clayey, swell when wetted and shrink when dried. Wetting can occur in a number of ways (i.e., absorption from the air, rainfall, groundwater fluctuations, lawn watering, broken water or

sewer lines, etc.). Soil expansion can cause subtle damage that can reduce structural integrity. Portions of the city are known to exhibit the soil types (refer to General Plan Safety Element) identified as having a moderate to high potential for expansion.

Site Specific Analysis (Reference Source 17): The subject sites include gradually sloping conditions with scattered trees and a stockpile of soil from earlier earth moving activity. Subsurface investigations reveal a silty clayey sand material, noted by the study authors as "Site Classification D", containing a medium range expansion classification, conforming to San Luis Obispo Building Codes. Perched groundwater was encountered in a thin gravel layer at approximately 9-12 feet in depth. Infiltration testing was also completed as part of the Geotechnical analysis. The analysis indicates that the site does not lie within identified Earthquake Fault Zones, but closest faults in the vicinity include Los Osos Fault (~2.8 miles) and San Luis Range Fault (~7.4 miles). Rinconada, Hosgri and San Andreas Faults are ~10, ~23 and ~58 miles distance respectively. The analysis concludes that liquefaction and landslide hazards at the site are minimal potential. A series of detailed geotechnical engineering recommendations are offered should the project proceed to the construction document phase, consistent with City codes and standards.

a, b, c, d) Although there are no fault lines on the project site or within close proximity, the site is located in an area of "High Seismic Hazards," specifically Seismic Zone D, which means that future buildings constructed on the site could be subjected to excessive ground shaking in the event of an earthquake. The soils engineering report states that the potential for seismic liquefaction of soils at the site is minimal. Structures are required to be designed in compliance with seismic design criteria established in the California Building Code for Seismic Zone D and City Codes require new structures be built to resist such shaking or to remain standing in an earthquake. Because the project will be required to conform with city and state regulations related to geologic safety, impacts are considered less than significant.

e) The subject site will be connected to the city's wastewater collection and disposal system and will therefore not impact septic or alternative waste disposal systems. No Impact.

Conclusion: Less than significant impact

7. GREENHOUSE GAS EMISSIONS. Would the project:					
a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?	13,20, 21,			X	
b) Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases.	13,20, 21,33			X	

Setting

In response to an increase in man-made GHG concentrations over the past 150 years, California has implemented legislation to reduce statewide emissions. Assembly Bill 32 (AB 32) codifies the Statewide goal of reducing emissions to 1990 levels by 2020 (essentially a 15% reduction below 2005 emission levels) and the adoption of regulations to require reporting and verification of statewide GHG emissions. Senate Bill 32 (SB 32) extends AB 32, requiring the State to further reduce GHGs to 40 percent below 1990 levels by 2030.

On December 14, 2017, the California Air Resources Board (ARB) adopted the 2017 Scoping Plan, which provides a framework for achieving the 2030 statewide target set by SB 32. The 2017 Scoping Plan does not provide project-level thresholds for land use development. Instead, it recommends that local governments adopt policies and locally-appropriate quantitative thresholds consistent with a statewide per capita goal of six metric tons (MT) CO_2e by 2030 and two MT CO_2e by 2050 (ARB 2017). As stated in the 2017 Scoping Plan, these goals may be appropriate for plan-level analyses (city, county, subregional, or regional level), but not for specific individual projects because they include all emissions sectors in the State.

Significance Thresholds
The California Environmental Quality Act (CEQA) Guidelines, Appendix G Environmental Checklist, includes the following two questions regarding assessment of GHG emissions:

- *Would the project generate GHG emissions, either directly or indirectly, that may have a significant impact on the environment?*

- *Would the project conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emission of GHGs?*

As stated in the CEQA Guidelines, these questions are "intended to encourage thoughtful assessment of impacts and do not necessarily represent thresholds of significance" (Title 14, Division 6, Chapter 3 Guidelines for Implementation of the CEQA, Appendix G, Environmental Checklist Form).

The City of San Luis Obispo has not adopted GHG emissions thresholds for use in CEQA documents.
According to the adopted SLOAPCD guidance, the following three quantitative thresholds may be used to evaluate the level of significance of GHG emissions impacts for residential and commercial projects:

1. A project would have a significant impact if it is not consistent with a qualified GHG reduction strategy that meets the requirements of the State CEQA Guidelines. If a project is consistent with a qualified GHG reduction strategy, it would not have a significant impact; OR, 2. Bright-Line Threshold. A project would have a significant impact if it would generate GHG emissions in excess of the "bright-line threshold" of 1,150 MT of CO2e per year; OR, 3. Efficiency Threshold. A project would have a significant impact if it would generate GHG emissions in excess of the efficiency threshold of 4.9 MT of CO2e per service population per year. The service population is defined as the number of residents plus employees for a given project.

The efficiency threshold is specifically intended to avoid penalizing large-scale plans or projects that incorporate emissions-reducing features and/or that are located in a manner that results in relatively low vehicle miles traveled. The City of San Luis Obispo Climate Action Plan (CAP), adopted in 2012, serves as the City's qualified GHG reduction strategy. The GHG-reducing policy provisions contained in the CAP were prepared with the purpose of complying with the requirements of AB 32 and achieving the goals of the AB 32 Scoping Plan, which have a horizon year of 2020. Therefore, the City's CAP is not considered a qualified GHG reduction strategy for assessing the significance of GHG emissions generated by projects with a horizon year post-2020. Therefore, to assess the proposed project, the SLOAPCD GHG thresholds were reduced by 40 percent to account for the continued reductions required by 2030 under SB 32. Therefore, the bright line threshold was reduced to 1,035 MT CO2e and the efficiency threshold was reduced to 4.41 MT of CO2e per service population for assessing 2022 (Attachment 7, Rincon GHG Analysis, Technical Memorandum).

Evaluation
Based on the methodology summarized in "Methodology and Assumptions", the primary sources of direct and indirect GHG emissions have been calculated for year 2022. Table 4 summarizes the project's GHG emissions.

Table 4. Year 2022 Annual GHG Emissions

Emission Source	Year 2022 GHG Emissions (MT of CO_2e)
Construction[1]	73.10
Area Sources	2.2
Energy Use	302.4
Mobile Sources	1,283.4
Solid Waste Disposal	65.8
Water Use	25.2
Total	1,739.9
Service Population	417
GHG Emissions per Service Population	**4.17**

See Attachment 2 for modeling results.

[1] Construction emission were amortized over a 25 year period per SLOAPCD guidance.

a) As shown in the above table, annual emissions associated with implementation of the proposed project would be 4.17 MT of CO_2e per service person, which would not exceed the significance threshold of 4.41 MT of CO_2e per service person. Less than significant impact.

b) The City of San Luis Obispo CAP serves as a qualified GHG reduction strategy consistent with *State CEQA Guidelines*. The CAP outlines a course of action to improve environmental, social, and economic sustainability and includes six emission reductions strategies: 1) buildings, 2) renewable energy, 3) transportation and land use, 4) water, 5) solid waste, and 6) parks and open space. A project is considered consistent with the City's CAP if it includes provisions to further the emissions reduction goals in the Plan. Measures and goals from the CAP include transportation and land use goals that promote residential developments in close proximity to transit development and commercial areas to reduce the need for commuting, promoting mixed–use development, and to implement water conservation techniques. The proposed project would locate mixed-use development in close proximity to stops on the SLO Transit 1A (Johnson/Tank Farm) route, as well as commercial business park and industrial uses south of Tank Farm and east of Broad Street. The project would not conflict with any of the goals, policies, and programs of the CAP, and is therefore considered to be consistent with the CAP.

Conclusion: Less than significant impact.

8. HAZARDS AND HAZARDOUS MATERIALS. Would the project:					
a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	4,9			X	
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?	2,4,9			X	
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	9,10			X	
d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section	9,31				X

65962.5 and, as a result, it would 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?	1,4,27 43			X	
f) For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area?	1,4			X	
g) Impair implementation of, or physically interfere with, the adopted emergency response plan or emergency evacuation plan?	4,27			X	
h) 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 residents are intermixed with wildlands?	4,9,27			X	

Evaluation

As described in the City's 2014 LUCE Update EIR, the analysis of hazards and hazardous material impacts relates to hazards regarding safety risks posed by airport flight patterns, impeding of adopted emergency response/evacuation plans, and wildland fires where wildlands are adjacent to urbanized areas; and hazardous materials or substances regarding routine transport or disposal of substances, explosion or release of substances, and emissions or handling of substances within one-quarter mile of an existing or planned school. The following is a brief outline of the primary identified hazards:

Fire Hazards: Fires have the potential to cause significant losses to life, property, and the environment. Urban fire hazards result from the materials that make up the built environment, the size and organization of structures, and spacing of buildings. Additional factors that can accelerate fire hazards are availability of emergency access, available water volume and pressure for fire suppression, and response time for fire fighters. Fire hazard severity in rural areas, including areas on the edge between urban and rural land (commonly called the wildland interface), are highly influenced by the slope of the landscape and site vegetation and climate. This risk is somewhat amplified by the native, Mediterranean vegetation common to the rural setting in which the City is located that has evolved to rely on wildfires for its ecological sustainability. Where wildland fires may be a threat, plant fuels are often managed by replacement planting, grazing, plowing, or mechanical clearing.

Hazardous Materials: Hazardous materials are defined as substances with physical and chemical properties of ignitability, corrosivity, reactivity, or toxicity which may pose a threat to human health or the environment. This includes, for example, chemical materials such as petroleum products, solvents, pesticides, herbicides, paints, metals, asbestos, and other regulated chemical materials. Additionally, hazards include known historical spills, leaks, illegal dumping, or other methods of release of hazardous materials to soil, sediment, groundwater, or surface water. If a historical release exists, then there is a risk associated with disturbing the historical release area. The potential for risks associated with hazardous materials are varied regionally. The primary risk concerns identified by the City, as stipulated in the City's General Plan Safety Element, include radiation hazards and the transportation of hazardous materials in and around the city. Most of these incidents are related to the increasing frequency of transport of chemicals over roadways, railways or through industrial accidents. Highway 101 and a rail corridor are major transportation corridors through the San Luis Obispo area.

Airport Hazards: The San Luis Obispo County Airport provides commuter, charter, and private aviation service to the area. The primary hazard associated with land uses near the airport is the risk of aircraft incidents on approach and take-off. Aircraft flight operations are determined largely by the physical layout of the airport and rules of the Federal Aviation Administration. The County manages activities on the airport property through the Airport Land Use Commission (ALUC). As the means of fulfilling these basic obligations, the ALUC must prepare and adopt Airport Land Use Plans (ALUPs) for each airport within their jurisdiction. The policies in the ALUP are intended to minimize the public's exposure to excessive noise and safety hazards while providing for the orderly expansion of airports (Public Utility Code Section 21670(a)(2). The ALUC has developed an ALUP for the San Luis Obispo County Regional Airport that was first adopted in 1973, was updated in May 2005 and is

currently being updated. The ALUP has identified safety zones with associated land use density and intensity restrictions. The ALUP defines these as:

- Runway Protection Zones – Areas immediately adjacent to the ends of each active runway, within which the level of aviation safety risk is very high and in which, consequently, structures are prohibited and human activities are restricted to those which require only very low levels of occupancy.
- Safety Areas S-1 a through c – The area within the vicinity of which aircraft operate frequently or in conditions of reduced visibility at altitudes less than 500 feet above ground level (AGL).
- Safety Area S-2 – The area within the vicinity of which aircraft operate frequently or in conditions of reduced visibility at altitudes between 501 and 1000 feet above ground level (AGL). Because aircraft in Area S-2 are at greater altitude and are less densely concentrated than in other portions of the Airport Planning Area, the overall level of aviation safety risk is considered to be lower than that in Area S-1 or the Runway Protection Zones.

a) The proposed project would not create a significant hazard to the public or to the environment through the routine transport, use, or disposal of hazardous materials. Construction of the proposed project would be required to comply with applicable building, health, fire, and safety codes. Hazardous materials would be used in varying amounts during construction and occupancy of the project. Construction and maintenance activities would use hazardous materials such as fuels (gasoline and diesel), oils, and lubricants; paints and paint thinners; glues; cleaners (which could include solvents and corrosives in addition to soaps and detergents); and possibly pesticides and herbicides. The amount of materials used would be small, so the project would not create a significant hazard to the public or to the environment through the routine transport, use, or disposal of hazardous materials, as such uses would have to comply with applicable federal, state, and local regulations, including but not limited to Titles 8 and 22 of the CCR, the Uniform Fire Code, and Chapter 6.95 of the California Health and Safety Code. With respect to operation of the project, it is not anticipated any of the uses allowed on site would generate significant amounts of hazardous materials. This issue would be considered a less than significant impact.

b) The proposed project uses would not result in the routine transport, use, disposal, handling, or emission of any hazardous materials that would create a significant hazard to the public or to the environment. Implementation of Title 49, Parts 171–180, of the Code of Federal Regulations and stipulations in the General Plan Safety Element would reduce any impacts associated with the potential for accidental release during construction or occupancy of the proposed project or by transporters picking up or delivering hazardous materials to the project site. These regulations establish standards by which hazardous materials would be transported, within and adjacent to the proposed project. Where transport of these materials occurs on roads, the California Highway Patrol is the responsible agency for enforcement of regulations.

Compliance with existing regulations would ensure impacts related to hazardous materials exposure would be less than significant.

c) The proposed project is a commercial and mixed-use residential development with parking and associated amenities and is not located within ¼ mile of a school. The proposed project a small-scale commercial and residential use that would not result in the routine transport, use, disposal, handling, or emission of any hazardous materials that would create a significant hazard to the public or to the environment, therefore this is considered a less than significant impact.

d) The project site is not on a parcel included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 (DTSC 2012) and, as a result, would not create a significant hazard to the public or the environment. No impact.

e, f) The project site is located in the vicinity of the San Luis Obispo County Regional Airport and the County Airport Land Use Plan (ALUP). The project site is subject to the City's Airport Overlay Zone (AOZ) which allows development based on the development standards for the zone (Table 10, Zoning Regulations). Because the proposed project includes an amendment to the Airport Area Specific Plan, the project was referred to the Airport Land Use Commission for a determination of consistency. On August 15, 2018 and again on September 19, 2018 the SLO County Airport Land Use Commission reviewed the proposed project for consistency with the ALUP. On September 19th the ALUC found the proposed project consistent with the ALUP based on a series of findings and conditions that would render the project consistent with the Airport Land Use Plan (Attachment 6). With incorporation of all conditions from the ALUC impacts will be less than significant impact in terms of safety hazards to those living and working in the project.

g, h) The Fire Marshal has reviewed the design of the project and determined that the project would not interfere with any emergency response plan or emergency evacuation plans. The proposed project site is not within or adjacent to a wildland area and will not expose people or structures to a significant risk of loss, injury, or death. Less than significant impact

Conclusion: Less than significant impact

9. HYDROLOGY AND WATER QUALITY. Would the project:					
a) Violate any water quality standards or waste discharge requirements?	5,9, 15			X	
b) Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g. The production rate of pre-existing nearby wells would drop to a level which would not support existing land uses for which permits have been granted)?	5,9, 15,17			X	
c) Substantially alter the existing drainage pattern of the site or area in a manner which would result in substantial erosion or siltation onsite or offsite?	5,9, 15,17			X	
d) Substantially alter the existing drainage pattern of the site or area in a manner which would result in substantial flooding onsite or offsite?	5,9, 15,17			X	
e) 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?	5,9, 15,17			X	
f) Otherwise substantially degrade water quality?	5,9			X	
g) Place housing within a 100-year flood hazard area as mapped on a Federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?	5,9, 15,17				X
h) Place within a 100-year flood hazard area structures which would impede or redirect flood flows?	5,9,17				X
i) Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam?	4,5,9, 17				X
j) Inundation by seiche, tsunami, or mudflow?	4,9,17				X

Evaluation

As discussed in the City's 2014 LUCE Update EIR, the project site is located within the San Luis Obispo Creek Hydrologic Subarea of the Estero Bay Hydrologic Unit, an area that corresponds to the coastal draining watersheds west of the Coastal Range. The Estero Bay Hydrologic Unit stretches roughly 80 miles between the Santa Maria River and the Monterey County line and includes numerous individual stream systems. Within the Estero Bay Hydrologic Unit, the San Luis Obispo Creek watershed drains approximately 84 square miles.

The City of San Luis Obispo is generally located within a low-lying valley centered on San Luis Obispo Creek. San Luis Obispo Creek is one of four major drainage features that create flood hazards in the city, with the others being Stenner Creek, Prefumo Creek, and Old Garden Creek. In addition, many minor waterways drain into these creeks, and these can also present

flood hazards. Because of the high surrounding hills and mountains in the area, the drainage sheds of these creeks are relatively small, but the steep slopes and high gradient can lead to intense, fast moving flood events in the city.

According to the Central Coast Regional Water Quality Control Board (Central Coast RWQCB), water quality in the San Luis Obispo Creek drainage system is generally considered to be good. However, the water quality fluctuates along with seasonal changes in flow rates. In summer months, when the flows decrease, and dilution is reduced, water quality decreases. According to the RWQCB Total Maximum Daily Load (TMDL) Project for San Luis Obispo Creek, the creek has been reported to exceed nutrient and pathogen levels.

Groundwater within the San Luis Obispo Valley Sub-basin flows toward the south-southwest, following the general gradient of surface topography. Groundwater within the San Luis Obispo area is considered suitable for agricultural water supply, municipal and domestic supply, and industrial use.

a, b) The project would not violate any water quality standards or waste discharge requirements or substantially degrade water quality because the project is required to comply with the Central Coast Regional Water Quality Control Board (RWQCB) requirements set forth in their Post-Construction Stormwater Management Requirements for Development Projects in the Central Coast Region. The project includes a Stormwater Control Plan (SWCP). Completion of this project would ensure that construction-related discharges are limited or adequately accommodated by properly engineered infrastructure design.

Because ongoing use of the project area would also increase the potential for discharge of chemicals, oils and fuels, and waste into nearby waterways; the requirement for the implementation of Best Management Practices (BMPs) must be established to greatly reduce the potential for unwanted runoff. Therefore, implementation of the BMPs on the project will reduce the impact to a less than significant level.

The project will be served by the City's sewer and water systems and will not deplete groundwater resources.

Conclusion: Less than significant impact

c, d, e, f) Construction of the proposed project would result in an increase of impervious surfaces that would cause the timing and amount of surface water runoff to increase. However, the project is subject to the revised City Storm Drain Master Plan/Waterway Management Plan that discusses the necessary improvements that would ensure adequate transmission and detention of storm water flow created by any new development. Physical improvement of the project site will be required to comply with the drainage requirements of the City's Waterways Management Plan. This plan was adopted for the purpose of ensuring water quality and proper drainage within the City's watershed. The Waterways Management Plan and Low Impact Development (LID) stormwater treatment requires that site development be designed so that post-development site drainage does not significantly exceed pre-development run-off. In addition, the project is required to comply with the City's engineering standards, water pollution control plan requirements, Post Construction Stormwater Requirements, and adopted building and grading codes for water quantity/quality analysis. Compliance with these requirements will ensure impacts are less than significant.

Conclusion: Less than significant impact

g, h, i) The project site is not within the boundaries of an area subject to inundation from flood waters in a 100-year storm per the Federal Flood Hazard Boundary or Flood Insurance Rate Map. The project will not impede or redirect the flow of any waters.

Conclusion: No Impact

j) The proposed development is outside the zone of impacts from seiche or tsunami, and the existing upslope projects do not generate significant storm water runoff such to create a potential for inundation by mudflow. No Impact

Conclusion: Less than significant impact

Issues, Discussion and Supporting Information Sources Northwest Corner Mixed-Use (NKT): SBDV-1483-2018 ARCH-1486-2018, SPEC-1492-2018, EID-1484-2018	Sources	Potentially Significant Issues	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
10. LAND USE AND PLANNING. Would the project:					
a) Physically divide an established community?	1,2,9, 11			X	
b) Conflict with applicable land use plan, policy, or regulation of an agency with jurisdiction over the project adopted for the purpose of avoiding or mitigating an environmental effect?	1,6,9, 10,11			X	
c) Conflict with any applicable habitat conservation plan or natural community conservation plans?	5,9, 10			X	

Evaluation

a) The site is currently undeveloped and does not contain an established community, nor would the site have the effect of dividing an established community on adjacent parcels or in the vicinity of the project site. The site is designated for land uses consistent with the proposed land use amendment to designate the AASP land use designation Community Commercial to be consistent with the existing zoning and General Plan Land use designation of the site. The site is designed to fit among existing and developing/planned commercial infill development surrounding it and will not physically divide an established community. Impacts would be less than significant.

b) The Land Use, Circulation, and Housing Elements of the City's General Plan, and the Zoning Ordinance, are the primary land use planning guidance documents for the development pattern of the City. The proposed specific plan amendment is consistent with the existing general plan land use designation and zoning for the property. The proposed project is also subject to the review of the Architectural Review Commission, Planning Commission, and will require final approval by the City Council. The following describes the project's consistency with key General Plan policies, as well as those of the City's Airport Area Specific Plan, as well as the Airport Land Use Plan as adopted by San Luis Obispo County.

As discussed below, the project would be potentially consistent with applicable City goals, policies and programs, although a final determination of consistency would be made by the City Council. Policy-related impacts are anticipated to be less than significant.

General Plan Policy Consistency
The 2014 General Plan establishes several community goals, policies and programs for development that relate to the proposed project site. These include:

- Special Focus Area #12
- Neighborhood Connections
- Mixed-Use Developments and Convenience
- Neighborhood Compatibility

The project's consistency with each is discussed below:

1. Special Focus Area #12 - General Plan Policy 8.13 provides that the subject site would be a mixed-use development, providing uses consistent with the "Community Commercial" and "Office" designations. This policy calls for a strong commercial presence at the corner of Tank Farm and Broad Street, and to emphasize creek protection and circulation connectivity as noted above in any land plan. The project was brought to the Planning Commission on June 13, 2018 for a conceptual policy review to receive early, conceptual comments on the project's potential consistency with the Special Focus Area policies. The applicant made several changes to the project following Planning Commission and Architectural Review in order to address their concerns, and to ensure consistency with this General Plan policy. These design features include:

- Articulated walkways have been added within and along the perimeter of the uses, as well as enhanced connections between the commercial uses and assisted living facility.
- Improvements have been made to the commercial service areas located along the central road access to better screen loading and unloading functions for the uses. This access has also been revised with a curvilinear drive and landscaping to minimize visibility from off-site.

- Pedestrian meeting areas/plazas have been added to the retail center and better connect to pedestrian and bicycle routes into the site.

2. Neighborhood Connections - General Plan Policies 2.2.4 and 2.2.5 discuss planning for connectivity both internally to a given project, and as that project relates to the larger neighborhood context. The subject site is located at the northwest corner of Tank Farm Road and Broad Street and provides pedestrian and bicycle connections to the nearby employment centers at MindBody and along the Broad Street corridor, and to retail services at the Marigold Shopping Center. Additionally, vehicle circulation internal to the project and to connect to adjoining development is enhanced, providing additional access options to motorists working or visiting the area. The internal access patterns for the site promote accessibility from off-site and facilitate internal access for visitors to the various retail and food service businesses proposed for the development. The adjacent Agera Grove mixed-use project would have access into the site via the bridge crossing Orcutt Creek. The project is consistent with these General Plan policies.

3. Mixed-Use Developments and Convenience - General Plan Policies 2.3.1 and 2.3.6 encourage mixed-use projects to integrate complementary uses close to one another, and to ultimately cut down on vehicle traffic by making these mixed-use projects accessible to other nearby neighborhoods. The design of the proposed project adheres to, and is consistent with, the General Plan policies encouraging retail shopping and food service options located close to employment centers, transportation corridors and resident needs.

4. Neighborhood Compatible Development - General Plan Policy 2.3.9 sets several goals for new development (specifically residential, but equally applicable to "infill" projects) within established neighborhoods. The vicinity of the proposed project includes a wide mix of commercial, office, professional, business park, manufacturing, industrial and residential uses. The proposed mixed-use project includes the potential for a mix of these uses as allowable land use types. Architectural design of the proposed project is also consistent with architectural stylings found in the nearby area. The project also incorporates many of these established architectural styles into a well-designed center that is compatible with scale and design of these neighborhoods. The project is consistent with this General Plan policy.

Airport Area Specific Plan (AASP) Consistency
First adopted by the City Council in 2005, the Airport Area Specific Plan (AASP) included a series of goals, policies and programs to comprehensively guide development of the Planning Area. Additional guidelines and development standards are included in the AASP, as well as infrastructure requirements and a plan for implementation of the Plan. In 2014 the AASP was updated to reflect current planning standards for the area.

Overall goals of the Specific Plan include:

- Provide a framework to move from County developments primarily focused on heavier industrial and manufacturing uses to a blend of these established uses, both inside and outside the City, with new uses focused on lighter industrial and manufacturing uses, professional and business park developments, employment centers, retailing services to support daytime customer demands and limited numbers of residential developments surrounding the Planning Area.
- Plan for proposed development, including annexations within the Planning Area, so that public facilities are developed concurrently with new development in a rational and cost- effective fashion.
- Expand the use of bicycles and pedestrians within the Plan Area as an alternative to increasing vehicular trips.
- Protect and enhance natural resources within the AASP, including emphasis on maintaining visual qualities of the surrounding hills and open space areas and protection of creek corridors, wetlands and habitat qualities.

The project as designed addresses each of these goals through its design, and is therefore consistent with the AASP.

San Luis Obispo County Airport Land Use Plan Consistency
On August 15, 2018 and again on September 19, 2018 the Airport Land Use Commission (ALUC) considered a referral of this project from the City. On September 19, 2018, the ALUC found the proposed project, including amendments to the City's AASP, were consistent with the County's ALUP.

c) The proposed project would not conflict with the provisions of an adopted habitat conservation plan, natural community conservation plan, or other approved local, regional, or state habitat conservation plan or natural community conservation plan. Less than significant impact

Conclusion: Less than significant impact

11. 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?	5,9,17				X
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?	5,9,17				X

Evaluation

a), b) No known mineral resources are present at the project site. Implementation of the proposed project would not result in the loss of availability of a known mineral resource. The project site is not designated by the general plan, specific plan, or other land use plans as a locally important mineral recovery site.

Conclusion: No Impact.

12. NOISE. Would the project result in:					
a) Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?	3,9, 10,11 40		X		
b) Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?	3,9, 10,11			X	
c) A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?	3,9, 10,11			X	
d) A substantial temporary, periodic, or permanent increase in ambient noise levels in the project vicinity above levels existing without the project?	3,9, 10,11 40		X		
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 expose people residing or working in the project area to excessive noise levels?	1,3,9, 10,11 40			X	
f) For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels?	3, 9,10 40			X	

Physical Setting

The project is located north of Tank Farm Road and west of Broad Street. These two arterial streets are the primary sources of ground transportation noise potentially impacting the site. The southwest corner of the site is closest to the San Luis Obispo County Regional Airport, a separate potential source of on-site noise. Each of these potential sources of noise was observed and measured to evaluate their contribution to on-site noise levels.

As analyzed in the City's LUCE Update EIR, a number of noise-sensitive land uses are present within the City, including various types of residential, schools, hospitals and care facilities, parks and recreation areas, hotels and transient lodging, and place of worship and libraries. Based on ambient noise level measurements throughout the City, major sources of noise include traffic noise on major roadways, passing trains, and aircraft overflights.

Regulatory Setting

City of San Luis Obispo General Plan Noise Element and Noise Guidebook
The Noise Element and Noise Guidebook (1996) of the City of San Luis Obispo General Plan uses modified land use compatibility standards recommended by the California Department of Health Services. The following Noise Element policies are applicable to the project and the local noise environment:

> ***Policy 1.4. New Transportation Noise Sources****. Noise created by new transportation noise sources, including road, railroad, and airport expansion projects, shall be mitigated to not exceed the levels specified in Table 4.10-3 for outdoor activity areas and indoor spaces of noise-sensitive land uses which were established before the new transportation noise source.*
> ***Policy 1.6. New Development and Stationary Noise Sources****. New development of noise-sensitive land uses may be permitted only where location or design allow the development to meet the standards of Table 4.10-4, for existing stationary noise sources.*

City of San Luis Obispo Municipal Code, Title 9, Chapter 9.12 (Noise Control)
Construction noise level limits set by the City are defined in section 9.12.050(6.a.), of the Municipal Code. Table 2 and Table 3 of the noise study included as Attachment 9 summarize the City's maximum allowable noise levels for short-term or long-term operation of mobile equipment and stationary equipment at residential properties. Where technically and economically feasible, the City requires that construction activities that use mobile or stationary equipment which may result in noise at residential properties be conducted so that maximum hourly sound levels from equipment at affected properties would not exceed noise levels presented in Error! Reference source not found. and **Error! Reference source not found.** depending on the duration of the activity.

Section 9.12.050(6.b.) of the Municipal Code limits the operation of nonscheduled, intermittent, short-term operation of mobile equipment associated with construction to a maximum hourly noise level of 85 dBA and the operation of repetitively scheduled and relatively long-term operations of stationary equipment associated with construction to a maximum hourly noise level of 75 dBA.

Operational vibration level limits set by the City are defined in section 9.12.050(7) or the Municipal Code. Section 9.12.050(7) limits operation vibration levels to the "perception threshold of an individual at or beyond the property boundary of the source if on private property or at one hundred fifty feet (forty-six meters) from the source if on a public space or public right-of-way." The SLOMC defines the perception threshold as a "motion velocity of 0.01" inches per second.

Methods of Assessment

Noise sources examined in this study are vehicular traffic along the two busy ground transportation corridors, as well as operations associated with the San Luis Obispo County Regional Airport. In addition, there are potential existing or future stationary noise sources from neighboring commercial activities along the south boundary of the site.

Existing sound levels were measured on the proposed site. SoundPLAN, an acoustic software sound level modeling tool, was used to generate sound level contours which were based on physical characteristics of the topography, measured sound level values, and traffic volume data. Sound level measurements were made on September 30, 2017 with two calibrated Type 1 Sound Level Meters. The two on-site sound level measurement locations are shown in Figure 7 of the 45dB Acoustics Report (Attachment 8). In addition, a second noise study to assess the project's potential operational impact on nearby sensitive resources was prepared by Rincon Consultants, and is included as Attachment 9. Please refer to this study for a discussion of the technical nature of sound and vibration. The results of this study form the basis for the conclusions of this MND. Key aspects of this study are summarized below.

Significance Thresholds

Construction Noise
Based on the duration of proposed construction activities and the Municipal Code, section 9.12.050(6), construction noise would be significant if:

- Noise levels exceed a maximum hourly noise level of 65 dBA L_{eq} when measured at the Hidden Hills Mobilelodge (mobile home park); or
- Construction noise exceeds a maximum hourly noise level of 75 dBA L_{eq} at a commercial property.

Construction Vibration
The City has adopted a vibration threshold of 0.01 in/sec PPV. However, the City has not adopted a significance threshold to assess vibration impacts during construction. Therefore, the Caltrans *Transportation and Construction Vibration Guidance Manual* (2013) and the FTA *Transit Noise and Vibration Impact Assessment Manual* (2018) are used to evaluate potential construction vibration impacts related to both potential building damage and human annoyance. Based on the Caltrans and FHWA criteria, construction vibration impacts would be significant if vibration levels exceeds 0.5 in/sec PPV for residential structures and 1.0 in/sec PPV for commercial and industrial structures, which are the limits where minor architectural damage may occur to each type of buildings. Human annoyance impacts would occur if vibration levels from long-term operations exceeded 68 VdB (equal to 0.01 in/sec PPV) at a residence or if a transient source, such as construction, exceeds 94 VdB at any occupied structure.

On-site Operational Noise
According to the SLOMC, Section 9.12.060, operational noise from on-site noise level source would result in a significant impact if the project would exceed the City noise levels limits at the property line of affected land use as defined in Table 5 of the Noise Study included as Attachment 9.

Off-site Traffic Noise
Off-site project noise (i.e., roadway noise) would result in a significant impact if the project would cause the traffic noise level measured at the property of affected uses to increase by 5 Ldn if the existing or future noise level would be below the "normally unacceptable" noise level for the affected land use category as identified in Table 3 of the Noise Study included as Attachment 9, or 3 Ldn if the existing or future noise level exceeds the "normally unacceptable" noise level for the affected land use category.

a) Exterior and interior noise thresholds can be achieved through application of standard building techniques, with the single exception of the Assisted Living Facility. The existing and future sound levels at the south elevation of the Assisted Living Facility and at the east side of the building facing the loading dock area at Building 1, will require noise mitigation to ensure interior habitable spaces facing south do not exceed an annual CNEL of 45 dBA. The mitigation will most likely be wall, window and door assemblies with an enhanced Sound Transmission Class rating to resist the street noise coming from Tank Farm Road. Mitigation measure N-1 is required to ensure impacts are less than significant.

b) Increases in groundborne vibration levels attributable to the proposed project would be primarily associated with short-term construction-related activities. A quantitative assessment of potential vibration impacts from construction activities, such as blasting, pile-driving, vibratory compaction, demolition, drilling, or excavation, are conducted using the equations developed by Caltrans and the FTA (Caltrans 2013b, FTA 2018). Certain types of construction equipment can generate high levels of groundborne vibration. Table 5 shows typical vibration levels for various pieces of construction equipment used in the assessment of construction vibration (FTA 2018).

Table 5. Typical Vibration Levels during Construction Activities

Equipment	in/sec PPV at 25 ft.	Approximate L_v VdB at 25 ft.
Pile Driver		
Upper	1.518	112
Typical	0.644	104
Large bulldozer	0.089	87
Loaded trucks	0.076	86
Jackhammer	0.035	79
Small bulldozer	0.003	58

Source: FTA 2018

Table 6 shows estimated groundborne vibration levels from construction equipment that would result in the highest vibration levels. Vibration impacts are assessed based on the distance from the location of vibration-intensive construction activities, conservatively assumed to be at edge of the project site, to the edge of nearby structures. Therefore, equipment was anticipated to operate at a distance of 250 feet from existing residences within the Hidden Hills Mobilelodge.

Table 6. Vibration Levels at Sensitive Receivers

		Existing Residences (250 feet)	
Equipment		in/sec PPV	VdB
Pile Driver (impact)	Upper range	0.121	90
	Typical	0.052	82
Large Bulldozer		0.007	65
Loaded trucks		0.006	61
Jack hammer		0.003	57
Threshold		**0.5**	**94**
Threshold Exceeded?		**No**	**No**

See Appendix D of the Rincon Consultants Noise Study (Attachment 9) for vibration analysis worksheet.

As shown, groundborne vibration from typical construction equipment is not estimated to exceed the threshold of 0.5 in/sec PPV at an existing residence. Similarly, typical construction equipemnt would not exceed the threshold of 94 vdB at any occupied structure. The project does not include any substantial long-term vibration sources. Therefore, the project would not expose local vibration sensitive receivers to excessive vibration levels and vibration impacts would be less than significant.

c) There are two primary sources of long-term operational noise associated with the project. The first would be from onsite activity related to community retail, restaurant, office and residential uses. The second primary source would be increased traffic generated by the project. These issues are discussed below, and fully analyzed in the Noise Study included as Attachment 9.

On-site Operational Noise

The proposed residential project would require periodic trash hauling services. However, the project site is located in a developed area and would be surrounded by multi-family residential and commercial uses that require similar trash hauling services. Therefore, as trash trucks are already a common occurrence in the project vicinity, trash services would not result in a noticeable increase in ambient noise levels above levels existing without the project.

The project would include outdoor patio space for the private use residents. Operational noise associated with outdoor use area would generally be limited to conversations and would be shielded by the proposed buildings. These noise-generating activities would result in a negligible change to existing noise levels. Noise from conversation would also be an intermittent and temporary noise source. Therefore, noise impacts related to outdoor seating areas would be less than significant.
The project would include rooftop heating, ventilation, and air conditioning (HVAC) equipment. Typically, HVAC equipment is provided at a rate of 1-ton of nominal cooling/heating per 600 square feet. Various sizes of HVAC units would be required to meet the needs of the different proposed uses. Based on the type of development and density of development in the project area, it is anticipated the HVAC units would be roof mounted. The HVAC would be approximately three feet above the roof level.

A loading dock would be located at the western side of Building 1. The loading dock would be screened with the solid barrier. The loading dock was modeled 1.5 meters above ground level. All on-site noise sources were modeled as a cumulative operational scenario. Table 9 of the attached Noise Study (Attachment 9) provides a summary of the noise levels at each receiver shown with the noise level contours in Figure 6 of the study. Detailed modeling inputs and out puts are included in Appendix C of the Noise Study.

As shown in Table 9 of the Noise Study, project operations would not generate noise levels in excess of the City noise level limits. Additionally, noise levels generated by on-site noise levels would not substantially increase ambient noise levels at the surrounding properties. Therefore, on-site noise sources would result in less than significant noise impacts.

Off-site Traffic Noise Impacts
The proposed project would generate new vehicle trips and incrementally increase traffic on area roadways. A project would result in a significant off-site traffic noise impact if it would cause the ambient noise level measured at the property line of affected uses to increase by 3 CNEL to or within the "normally unacceptable" or "clearly unacceptable" category as identified in Table 4 of the Noise Study (Attachment 9), or by 5 CNEL or more if existing or future noise levels are below the normally actable category. Based on trip generation estimates, the project would result in a maximum increase of 1,930 ADT on local roadways. Existing traffic on Tank Farm Road is approximately 20,709 ADT between Broad Street and Santa Fe Road. Existing traffic on Broad Street is 28,396 ADT between Tank Farm Road and Industrial Way and 22,944 between Tank Farm Road and Fuller Road. Adding the full 1,930 ADT to Tank Farm Road or Broad Street would result in a less than 1 CNEL increase in traffic noise levels along any affected roadway.

Based on the noise compatibility analysis, traffic volumes can be assumed to increase by 1 to 2 percent annually. Broad Street and Tank Farm Road were assumed to increase 1.5 percent annually. This would result in a 2040 ADT of 38,820 and 27,735 ADT, for Broad Street and Tank Farm Road, respectively. Adding the project's volumes to these volumes would result in less than 1 CNEL increases along all affected roadways and noise generation from the project would not be considered cumulatively considerable.

The project would increase existing traffic noise levels on Broad Street and Tank Farm Road by less than 1 CNEL. Therefore, off-site traffic noise would not exceed the City's thresholds and off-site traffic noise impacts would be less than significant. In addition, the project was the subject of a noise and land use compatibility analysis prepared by 45 dB (Attachment 8), which determined the project would be compatible with the existing and future noise environment.

d) Construction activity would result in temporary increases in ambient noise levels in the project area on an intermittent basis and, as such, would expose surrounding sensitive receivers to increased noise levels. Any increase in noise levels at off-site receivers during construction of the proposed project would be temporary in nature and would not generate continuously high noise levels, although occasional single-event disturbances from construction would be possible. In addition, construction noise would typically be higher during the heavier periods of initial construction (i.e., demolition and grading work) and reduced in the later construction phases (i.e., interior building construction) because the physical structure of the proposed project would break line-of-sight noise transmission from the construction area to the nearby sensitive receivers. Furthermore, noise levels would fluctuate depending on the construction phase, equipment type and duration of use, distance between the noise source and receiver, and presence or absence of noise attenuation barriers.

The nearest residential receivers from the proposed construction are residences associated with the Hidden Hills Mobilelodge mobile home park, approximately 350 feet to the southwest of the center of proposed construction activities for the residential facility, which would be the closest long-term construction activity. Mobile home parks are considered multiple family residential land uses. The nearest commercial uses are located adjacent to the north of the project approximately 300 feet from the center of construction activity.

The FHWA Roadway Construction Noise Model (RCNM) was used to estimate noise levels from construction equipment at local residential receivers. RCNM provides reference noise levels for standard construction equipment, with an attenuation of 6 dBA per doubling of distance for stationary equipment. Each phase of construction has a specific equipment mix. The maximum hourly L_{eq} of each phase is determined by combining the L_{eq} contributions from each piece of equipment used in that phase (FTA 2018). Construction phases would include demolition, site preparation, grading, building construction, architectural coating, and paving of the project site.

In typical construction projects, grading activities generate the highest noise levels because grading involves the largest equipment and covers the greatest area. For assessment purposes, and to be conservative, the loudest hour has been used for assessment. The loudest hour of construction would typically occur during site preparation and foundation excavation. Based on the project construction schedule and proposed structures it is anticipated that a maximum of four large pieces of construction equipment would be active at the same time in the same hour under maximum load. For modeling, two bulldozers, a frontend loader, and a scrapper are used represent the loudest pieces of equipment that would be active simultaneously. Based on the FHWA *Highway Construction Noise Handbook* (2008), the maximum hourly noise level from all four pieces results in a combined noise level 108.2 L_{eq} at 3 feet (refer to Appendix D for RCNM results). Table 7 shows typical construction noise levels associated with the use of heavy construction equipment during site preparation and foundation excavation at distances of 50, 300, and 350 feet from construction activity.

Table 7. Typical Noise Levels Generated by Construction Equipment

Construction Equipment	Noise Level 50 feet (dBA L_{max} / L_{eq})	Noise Level 300 feet (dBA L_{max} / L_{eq})	Noise Level 350 feet (dBA L_{max} / L_{eq})
Bulldozer	81.7 / 77.7	66.1 / 62.1	64.8 / 60.8
Bulldozer	81.7 / 77.7	66.1 / 62.1	64.8 / 60.8
Front End Loader	79.1 / 75.1	63.5 / 59.6	62.2 / 58.2
Scraper	83.6 / 79.6	68.0 / 64.0	66.7 / 62.7
Total	**83.6 / 83.8**	**68.0 / 68.3**	**66.7 / 66.9**

RCNM results are included in Appendix D of the Rincon Consultants Noise Study (Attachment 9)

Source: Roadway Construction Noise Model (RCNM); individual equipment noise levels based on FTA Transit Noise and Vibration Impact Assessment Manual (2018).

Based on the RCNM results, maximum hourly noise levels during project construction, which would occur during grading and foundation excavation, were calculated to be 67 dBA L_{eq} at the mobile home park, which would exceed the City's construction noise standard of 65 dBA for multiple-family residential land uses. Construction activity maximum hourly noise levels would attenuate to 68 dBA L_{eq} at the commercial uses located to the north of the project site, which would not exceed the City's maximum hourly noise level limit of 75 dBA L_{eq} for commercial uses. Since the estimated noise levels during construction would exceed the applicable City noise standard for multiple-family residential land uses, the temporary noise impact would be potentially significant. Mitigation Measures N-2 and N-3 are required to reduce construction noise levels to comply with City's standards.

e, f) The project is not within the vicinity of a private airstrip. The project is located in the vicinity of the San Luis Obispo County Regional Airport and is subject to the County Airport Land Use Plan. The 45db acoustics sound study (Attachment 8) did not locate the subject site within existing or projected noise contours for the airport that would necessitate specific

mitigation measures beyond standard Uniform Building Code and City Noise Ordinance standards for temporary and on-going noise impact thresholds. According to the 45dB Acoustics report, use of standard noise insulating building techniques for the Assisted Living Facility south facing wall(s) would mitigate interior noise levels. Impacts would be less than significant.

Conclusion: Less than significant impact with mitigation for short-term construction noise impacts (N-2 & N-3) and interior habitable spaces (N-1).

Mitigation Measures

N-1. Sound Wall and or Special Building Considerations South Elevation Assisted Living Facility. At the time of submittal of construction plans for the assisted living facility, an acoustical engineering report/analysis will be submitted detailing construction techniques for noise mitigation to ensure interior habitable spaces facing south and to the east facing the loading dock area at Building 1, do not exceed annual CNEL = 45 dBA. The mitigation will most likely be wall, window and door assemblies, or a combination of these, with an enhanced Sound Transmission Class rating to resist the street noise coming from Tank Farm Road.

Plan Requirements and Timing. Prior to issuance of building permits, the acoustical engineering report will be required by Community Development Department staff to verify interior noise levels will not exceed 45 dBA, and any requirements will be clearly noted on all plans for building construction.

The following measures would mitigate potential short-term construction noise impacts to a less than significant level.

Implementation of Mitigation Measures N-2 and N-3 would require use of construction equipment best management practices, including shielding stationary equipment, temporary sound barriers between the construction site and the mobile home park to the west, and limiting construction activity to daytime hours when people are typically awake. Mitigation Measure N-3 would require nearby residential receptors to be notified of future construction activities at the site. Acoustic shielding, sound blankets, and other construction noise best management practices can reduce noise levels from individual pieces of construction equipment by 5-10 dBA. Temporary sound barriers used to fully block line-of-sight noise transmission from the construction area to nearby sensitive receivers can reduce noise from construction equipment by up to 10 dBA. Construction noticing and noise complaint procedures ensure that nearby sensitive land uses would have the opportunity to alert the City's Community Development Department of construction noise issues. Therefore, implementation of Mitigation Measures N-2 and N-3 would ensure that noise levels would not exceed the stationary equipment noise standards in the City of San Luis Obispo Municipal Code, Title 9, Chapter 9.12 (Noise Control).

N-2. Construction Equipment Best Management Practices. For all construction activity at the project site that exceeds 60 dBA at the property line with the mobile home park to the west, construction equipment noise attenuation techniques shall be employed to ensure that noise levels are maintained within levels allowed by the City of San Luis Obispo Municipal Code, Title 9, Chapter 9.12 (Noise Control). Such techniques shall include:

- Sound blankets on noise-generating equipment.
- Stationary construction equipment that generates noise levels above 60 dBA at the project boundaries shall be shielded with barriers that meet a sound transmission class (a rating of how well noise barriers attenuate sound) of 25.
- All diesel equipment shall be operated with closed engine doors and shall be equipped with factory-recommended mufflers.
- For stationary equipment, the applicant shall designate equipment areas with appropriate acoustic shielding on building and grading plans. Equipment and shielding shall be installed prior to construction and remain in the designated location throughout construction activities.
- Electrical power shall be used to power air compressors and similar power tools.

- The movement of construction-related vehicles, with the exception of passenger vehicles, along roadways adjacent to sensitive receptors shall be limited to the hours between 7:00 AM and 7:00 PM, Monday through Saturday. No movement of heavy equipment shall occur on Sundays or official holidays (e.g., Thanksgiving, Labor Day).

- As needed, temporary sound barriers shall be constructed between the construction site and the mobile home park to the west.

N-3. Neighboring Property Owner Notification and Construction Noise Complaints. The contractor shall inform the property owner and current tenants at the time of construction of the mobile home park to the west of the project site of proposed construction timelines and noise complaint procedures to minimize potential annoyance related to construction noise. Proof of mailing the notices shall be provided to the Community Development Department before the City issues a zoning clearance. Signs shall be in place before beginning of and throughout grading and construction activities. Noise-related complaints shall be directed to the City's Community Development Department.

Plan Requirements and Timing**.** Construction plans shall note construction hours, truck routes, and construction Best Management Practices (BMPs) and shall be submitted to the City for approval prior to grading and building permit issuance for each project phase. BMPs shall be identified and described for submittal to the City for review and approval prior to building or grading permit issuance. BMPs shall be adhered to for the duration of the project. The applicant shall provide and post signs stating these restrictions at construction site entries. Signs shall be posted prior to commencement of construction and maintained throughout construction. Schedule and neighboring property owner notification mailing list shall be submitted 10 days prior to initiation of any earth movement. The Community Development department shall confirm that construction noise reduction measures are incorporated in plans prior to approval of grading/building permit issuance.

All construction workers shall be briefed at a pre-construction meeting on construction hour limitations and how, why, and where BMP measures are to be implemented. A workday schedule will be adhered to for the duration of construction for all phases.

Monitoring**.** City staff shall ensure compliance throughout all construction phases. Building inspectors and permit compliance staff shall periodically inspect the site for compliance with activity schedules and respond to complaints.

13. POPULATION AND HOUSING. Would the project:					
a) Induce substantial population growth in an area, either directly (for example by proposing new homes or businesses) or indirectly (for example, through extension of roads or other infrastructure)?	2,6,9, 35,43			X	
b) Displace substantial numbers of existing housing or people necessitating the construction of replacement housing elsewhere?	1,6,9			X	
c) Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?	6,9				X

Evaluation

a) The project site is already designated for commercial and mixed uses on the site. The proposed project site was already planned for uses on the site consistent with the Community Commercial Zoning and Special Focus Area designations adopted for the site with the 2014 Land Use and Circulation Element update. In addition, the site is surrounded by existing urban development within the City, and will not require new roadways or other infrastructure that might otherwise be considered growth-inducing. Therefore, the impact of inducing substantial population growth to the planning area would be less than significant.

b, c) The project site contains one vacant residence, which would be replaced as a result of the proposed project. The project will not result displace any existing residents, since there are none. There would be no impact with regard to population displacement, and a less than significant impact with respect to the displacement of existing housing.

Conclusion: Less than significant impact.

14. PUBLIC SERVICES. Would the project result in substantial adverse physical impacts associated with the provision, or need, of new or physically altered government 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 public services:

a)	Fire protection?	9,12			X	
b)	Police protection?	9,12			X	
c)	Schools?	9,12			X	
d)	Parks?	12			X	
e)	Roads and other transportation infrastructure?	2,9,12			X	
f)	Other public facilities?	12			X	

Evaluation

a) The project site is within the existing service area of the SLOFD. The closest fire station to the project site is City Fire Station 3, located at 1280 Laurel Lane, approximately two miles northeast of the project site. The City has a mutual aid agreement with CALFIRE which allows for additional fire or emergency assistance when needed, CALFIRE Fire Station 21 is located approximated 1 mile to the southeast. New development would be subject to the SLOFD standards and California Fire Code in all proposed buildings, including installation of fire hydrants, building sprinklers, provision of adequate water supply and pressure, placement of fire extinguishers, provision of adequate fire access to buildings, and other requirements. The City's Fire Master Plan (FMP) discusses current and future operations and concludes that the City does not have enough primary neighborhood fire stations to deliver suburban response times to all outer areas, including the AASP. Since the FMP's preparation in 2009, increasing population and new development have been further pressure on the department's ability to respond to requested services. The 2016 San Luis Obispo Fire Department Master Plan requires construction of a new fire station in the southern area of the City when the southern area of the City reaches 90 percent buildout. The project will be subject to impact fees pursuant to City Council adopted amendments the Capital Facilities Fee Program to pay for acquisition and construction of a new fire station in the southern area of the City. The impact would be less than significant.

b, d, e) The AASP and LUCE EIRs determined that implementation and buildout of the AASP will not result in any significant impacts related to any of the above-listed services due to the ability to offset service needs through the City's Development Impact Fee program established via the City General Plan and/or infrastructure requirements of project proponents as projects occur. Since the proposed development is consistent with anticipated development in the Land Use Element as a Special Focus area, development will not result in any adverse impacts to these services. The project will not result in substantial adverse physical impacts associated with the provision of, or need for new or physically altered government facilities, the construction of which might have the potential to cause significant environmental impacts. The project is subject to City established Development Impact Fees that are charged in conjunction with approval of development projects to offset costs associated with increases in demand of public services. Thus, the impact is less than significant.

c) The State has the authority to collect fees at the time of building permits to offset the costs to finance school site acquisition and school construction, and said fees, when collected by local school districts, are deemed by State law to provide adequate mitigation for school facility requirements. Section 65955 of the Government Code prohibits the City from denying a subdivision or collecting any fees beyond those required by the school district to mitigate effects associated with inadequate school facilities. Any increases in demand on school facilities caused by the project are considered to be mitigated by the district's collection of adopted fees at the time of building permit issuance for each residence and commercial building. This impacts would be less than significant.

Conclusion: Less than significant impact.

15. RECREATION. Would the project:					
a) Increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?	35			X	
b) Include recreational facilities or require the construction or expansion of recreational facilities, which might have an adverse physical effect on the environment?	35			X	

Setting

There are 26 parks in the City of San Luis Obispo, including eight community parks, ten neighborhood parks, and eight mini parks. Collectively, these parks include approximately 152 acres of parkland, of which 34 acres are neighborhood parks. In addition to parks, the City owns or manages approximately 7,000 acres of open space within and adjacent to San Luis Obispo. This open space provides recreational opportunities such as fishing, hiking, and biking trails. Existing recreational facilities near the project site include the Damon-Garcia Sports Complex directly north of the project site, and E.A. French Park approximately a half mile east of the site. Damon-Garcia Sports Complex is a Community Park open space area available by reservation containing soccer fields, picnic area, and a large open space. E.A. French Park is a neighborhood park with amenities/activities such as an outdoor barbeque area, basketball court, picnic tables, tennis courts, playgrounds, and open space.

Evaluation

a, b) The project includes retail commercial and assisted living facility components which are considered commercial land uses. Accordingly, the project is not subject to payment of parkland in-lieu fees as required in 16.22.050 through 16.22.100 of the City Municipal Code which are intended to offset potential demand that would arise through new residential development. Therefore, the project is not anticipated to result in increased use of recreational facilities such that there would be substantial physical deterioration or acceleration of recreational facilities, and the project does not include recreational facilities which could have a physical effect on the environment. The impact would be less than significant.

Conclusion: Less than significant impact

16. TRANSPORTATION/TRAFFIC. Would the project:					
a) Conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit?	2,9, 10,22, 35,36 41		X		
b) Conflict with an applicable congestion management program, including, but not limited to level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways?	1,2, 4,9,35 36,41		X		
c) Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?	9,10, 36			X	
d) Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g. farm equipment)?	2,9, 22,32			X	
e) Result in inadequate emergency access?	4,9			X	

f) Conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities?	2,9			X	

The applicant submitted a Multimodal Transportation Impact Study prepared by Central Coast Transportation Consulting, February 2018 (Attachment 10). This study evaluates the potential transportation impacts of the mixed-use project. Nine intersections were evaluated during the weekday morning (7-9 AM) and weekday evening (4-6 PM) time periods under Existing and Cumulative conditions with and without the project. The project is expected to generate 1,930 daily trips, 67 AM peak hour trips, and 130 PM peak hour trips.

Thresholds of Significance

Significant impacts to transportation facilities are identified under the following circumstances:

For Unsignalized intersections, if Project traffic causes an intersection operating at LOS A, B, C, or D to degrade to unacceptable traffic conditions of LOS E or F; and the volume-demand-to-capacity ratio (V/C), which compares roadway demand (vehicle volumes) with roadway supply (roadway capacity), is increased by 0.01 or more and signal warrants are met; or the project buildout causes or exacerbates 95th percentile turning movement queues exceeding available turn pocket capacity. For Signalized Intersections if project traffic causes an intersection operating at an acceptable LOS D or better to degrade to unacceptable traffic conditions, and the V/C ratio is increased by 0.01 or more; or the project buildout causes or exacerbates 95th percentile turning movement queues exceeding available turn pocket capacity.

- For segments, if project traffic causes segment operation level of service degradation as follows:
- For bicycles, a segment operating at LOS A, B, C, or D to degrade to LOS E or F.
- For pedestrians, a segment operating at LOS A, B, or C to degrade to LOS D, E, or F.
- For vehicles, segments operating at LOS A, B, C, or D to degrade to LOS E or F and an increase of the V/C ratio by .01 or more.
- For transit service, a segment operating at LOS A, B, C, or D to degrade to LOS E or F; or a segment with a baseline LOS E or F to degrade in a contextually significant way.

Site Access and On-Site Circulation
On-site circulation deficiencies would occur if project designs fail to meet appropriate standards, fail to provide adequate truck access or would result in hazardous conditions.

The Westmont and NWC Tank Farm/Broad sites share access to Broad Street (via Industrial Way and Tank Farm Road (via Mindbody traffic signal). New limited access driveways are proposed on Broad Street (right-in/right-out/left-in only) and Tank Farm Road (right-in/right-out only).

Existing + Project Intersection Operations
Tank Farm Road/MindBody Traffic Signal: with the addition of the project, this intersection operates unacceptably during the PM peak hour. Project traffic increases critical queues by at least one vehicle length. Providing a second westbound through lane on Tank Farm Road consistent with the cross section in the Airport Area Specific Plan would result in acceptable operations. Provide a second westbound through lane on Tank Farm Road consistent with the cross section in the Airport Area Specific Plan.

Broad Street/Tank Farm Road Traffic Signal: The existing queue length for the eastbound left turn is near its capacity, and the addition of project traffic would increase the eastbound left turn queue by one to two vehicles. Most of the project traffic added to this movement comes from the 650 Tank Farm parcel going north on Broad Street. A vehicular connection from the 650 Tank Farm parcel to the Westmont site would allow use of the traffic signal at Industrial Way, thereby avoiding the impacted intersection, reducing the eastbound left turn queue, and improving site circulation. Alternatively, the eastbound left turn queue at Broad Street/Tank Farm Road could be reduced to acceptable levels by providing a second southbound left turn lane. This may require a slight widening of the southbound approach of Broad Street.

No other new deficiencies were noted with the addition of project traffic to existing conditions.

Segment Operations

Auto: The westbound segment of Tank Farm Road from Santa Fe Road to Broad Street operates at LOS F during the PM peak hour because its volume to capacity ratio is greater than one, resulting in an automatic LOS F. The addition of project traffic does not change the auto LOS score. No other new deficiencies were noted with the addition of project traffic.

Pedestrian: The northbound segment of Broad Street from Orcutt Road to Industrial Way operates at LOS D during the PM peak hour both with and without the project due to the high vehicular volumes and percentage of vehicles turning at the downstream intersection. The addition of project traffic increases the LOS score by less than two percent and increases vehicular volumes by less than five percent. This is an insignificant change that would not substantively worsen pedestrian conditions.

Bicycle: No new bicycle deficiencies are reported.

Transit: Multiple study segments operate below the desired transit service level due to relatively infrequent service or the lack of bus stops on a specific segment. The addition of project traffic would not overburden or otherwise impact the transit network.

Cumulative + Project

The following intersections operate below the LOS D threshold for vehicles:

Tank Farm/South Higuera Street operates at LOS F during the AM peak hour and at LOS E during the PM peak hour. Queues exceed storage length during at least one peak hour on the westbound right, northbound right, and southbound left turning movements. Installing a second southbound left turn lane would improve operations to LOS D for the movement and LOS C for the approach and address this impact. This project is included in the City-wide impact fee program.

Tank Farm Road/Santa Fe Road operates at LOS F on the northbound approach. The northbound right turn queue length exceeds storage length during the AM and PM peak hours. Installation of a multi-lane roundabout is identified in the General Plan Circulation Element and the Airport Area Specific Plan. This project is included in the City-wide impact fee program.

Broad Street/Capitolio Way operates at LOS F during the PM peak hour. The westbound approach has a large delay due to the side street stop controlled intersection and the high volume of traffic along Broad Street. Capitolio Way is connected to both Orcutt Road and Industrial Way by Sacramento Drive, thereby providing an alternative access point for drivers seeking signalized access to Broad Street. No changes are recommended.

Broad Street/Industrial Way operates at LOS F during the PM peak hour due to the presence of long pedestrian crossing times across the north and south approaches. Without pedestrian actuation, the intersection operates acceptably at LOS D. The southbound left turn queue exceeds storage length during the PM peak hour. Converting the east and west approaches from split phasing to permissive phasing and restriping both approaches to provide dedicated left turn lanes and shared through/right turn lanes would result in LOS C operations. This project is not included in the Citywide impact fee program, therefore the project shall make a fair share contribution to these improvements.

Broad Street/Tank Farm Road operates at LOS F during the AM and PM peak hours due to high volumes from all approaches of the intersection. During at least one peak hour, queues exceed storage on the eastbound left, eastbound right, northbound left, and southbound right movements. Adding a second southbound left turn lane (addressed in Existing + project impacts and mitigation), adding a dedicated northbound right turn lane, and converting the westbound right turn lane to a shared through/right lane would improve conditions. However, while some queue lengths would be decreased, others would be increased. The City's Circulation Element EIR recommends establishing time-of-day timing plans at this intersection. These projects are included in the City-wide impact fee program.

The following intersections operate below the LOS C threshold for pedestrians:
Tank Farm Road/Santa Fe Road operates at LOS F during the AM and PM peak hours due to the presence of side street stop-controlled intersections and high volumes and speeds along Tank Farm Road. Installation of a multi-lane roundabout is identified in the General Plan Circulation Element and the Airport Area Specific Plan. This project is included in the City-wide impact fee program.

Broad Street/Capitolio Way operates at LOS F during the AM and PM peak hours due to the presence of side street stop-controlled intersections and high volumes and speeds along Broad Street. Pedestrians seeking to cross Broad Street would use one of the nearby signalized intersections with dedicated pedestrian phases.

Broad Street/Aero Vista Lane operates at LOS F during the AM and PM peak hours due to the presence of side street stop-controlled intersections and high volumes and speeds along Broad Street. Pedestrians seeking to cross Broad Street would use one of the nearby signalized intersections with dedicated pedestrian phases.

The following intersection operates below the LOS D threshold for bicycles:
Tank Farm Road/South Higuera Street operates at LOS E in the westbound direction during the PM peak hour. The addition of project traffic to would not degrade level of service in a contextually significant way. Therefore, this is an insignificant impact.

Segment Operations
Auto:
The following segments have a V/C ratio that is greater than one, resulting in an automatic LOS F, even though the LOS scores are acceptable. The addition of project traffic does not change the auto LOS, and the nearby intersections would constrain flow before the segments did, so the project would have an insignificant effect on these segments.

- Southbound Broad Street from Orcutt Road to Industrial Way – AM and PM
- Northbound Broad Street from Orcutt Road to Industrial Way – PM
- Southbound Broad Street from Industrial Way to Tank Farm Road – AM and PM
- Northbound Broad Street from Industrial Way to Tank Farm Road – PM
- Northbound Broad Street from Aero Vista Lane to Tank Farm Road – AM and PM
- Southbound Broad Street from Aero Vista Lane to Aero Drive – AM and PM
- Northbound Broad Street from South City Limits to Aero Drive – AM and PM
- Westbound Tank Farm from Santa Fe to Broad – PM

In addition to analysis above, generalized LOS thresholds were also applied to calculate Auto LOS on the segment of Tank Farm Road between Santa Fe Road and Old Windmill Lane to be consistent with the methods applied in the 2014 Circulation Element Update. Peak hour volumes between 2,406 and 3,224 vehicles correspond to LOS E operations.

Under Cumulative conditions the PM peak hour volume along the study segment is 2,418 vehicles which corresponds to LOS E. The 660 Tank Farm project adds 15 vehicles, for a total of 2,433 vehicles under Cumulative Plus Project conditions, also LOS E. The 660 Tank Farm project's proportional share is 0.62 percent (15/2,433=.0062). The project shall make a fair share contribution of 0.62 percent of the cost of widening Tank Farm Road to four lanes between Santa Fe Road and Old Windmill Lane.

Pedestrian:
Multiple segments do not have a pedestrian LOS reported due to the absence of pedestrian facilities, or the presence of discontinuous pedestrian facilities. Several segments operate unacceptably at LOS D due to high vehicular volumes and speeds. No mitigations are recommended for the segments with deficient pedestrian LOS scores. On each of these segments, the addition of project traffic increases the pedestrian LOS score by less than two percent and increases vehicular volumes by less than three percent. The addition of project traffic to would not degrade level of service in a contextually significant way. Therefore, this is an insignificant impact.
Bicycle: No bicycle deficiencies are reported.

Transit: Several segments operate below the transit LOS threshold due to infrequent service to the study segments. Given the relatively low boardings on stops in the area, the addition of project traffic to would not degrade level of service in a contextually significant way. Therefore, this is an insignificant impact.

In summary, the proposed project would add vehicular trips to streets that serve as entry/exit routes to the project site. These streets with the given improvements specified in the City's adopted planning documents will serve to accommodate the added vehicular traffic.

Evaluation

a, b) The subject project, as well as all other development that occurs in the future pursuant to the AASP and the City General Plan, will increase traffic in the area. The Circulation Element of the City General Plan identifies the essential primary road system that will be needed to accommodate development within the plan area and surrounding growth areas of the City. The LUCE Update EIR determined that the roadway plans of these planning documents are for the most part self-mitigating in that 1) Roadway alignments, road extensions, and new intersections are designed and will be built in response to traffic projected at build-out and, 2) Development projects in the AASP areas will also contribute their fair share either through adopted city-wide Traffic Impact Fees, improvements to the transportation network, assessments or dedications to specified roadway improvements, and a combination of one or more of these measures. The subject site is consistent with these requirements and will participate in its fair share of both on-site roadway improvements and fee payments for city-wide traffic improvement projects, in order to address project-specific and cumulative traffic impacts. As is reflected in the above discussion, with incorporation of mitigation measures noted below, which include payment of fair share fees and improvements to Tank Farm Road, impacts will be less than significant.

c, d) The project has been referred to the County of San Luis Obispo Airport Land Use Commission and found consistent with the Airport Land Use Plan. The Airport Area Specific Plan will require that the project provides roadways that are designed and developed in accordance with adopted City standards thereby assuring predetermined standards necessary to limit safety hazards and provide adequate emergency access. Less than significant impact.

e) The project is subject to the City's parking requirements as it is outlined in the AASP and Zoning Regulations for each land use. The project build-out is required to fulfill all necessary parking requirements as presented in the project plans. Less than significant impact.

f) The project provides improvements to implement the City adopted policies to encourage alternative means of transportation. The project includes pedestrian paths, bicycle paths and staging area and a mass transit bus stop with covered seating. These path systems, bicycle staging area and bus stop meet or exceed the requirements called for in the AASP. Less than significant impact

Conclusion: Less than significant impact with incorporation of mitigation measures.

Mitigation Measures. The following measures are required to mitigate potential impacts to a less than significant level:

T-1. Tank Farm Road from Broad through Project Site to Mindbody intersection. Provide a second westbound through lane on Tank Farm Road consistent with the cross section in the Airport Area Specific Plan. Provide two westbound lanes, bike lanes, and sidewalks consistent with the parkway arterial designation in the Airport Area Specific Plan.

T-2. Tank Farm Road from Old Windmill Lane to Santa Fe Road. The project shall make a fair share contribution of 0.62 percent of the cost of widening Tank Farm Road to four lanes between Santa Fe Road and Old Windmill Lane

T-3. Broad Street/Industrial Way. Fair Share project contributions to convert the east and west approaches from split phasing to permissive phasing and restriping both approaches to provide dedicated left turn lanes and shared through/right turn lanes.

T-4. Fair Share Contributions. The project applicant shall pay Citywide Traffic Impact Fees for the following project improvements:

- Tank Farm Road/Higuera Street: Install a second southbound left turn lane.

- Tank Farm Road/Santa Fe Road: Install a multi-lane roundabout.
- Broad Street/Tank Farm Road: Install a dedicated northbound right turn lane, convert the westbound right turn lane to a shared through/right lane, and establish time-of-day timing plans.

Conclusion: Less than significant impact with mitigation incorporated.

17. TRIBAL CULTURAL RESOURCES. Would the project cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code section 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:						
a)	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	12,23				X
b)	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 Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resources Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.	24,26, 36			X	

Evaluation

Central Coast Archaeological Research Consultants (CCARC) conducted site visits, records research and outreach to local tribal group as documented in their April 2018 Report. The results of their archival research, initial consultation with the Chumash community, and an intensive archaeological survey of the Northwest Corner of Broad and Tank Farm Road Archaeological Survey, identified no cultural resources. As a result, no further archaeological work was recommended within the acreage investigated during this study. In the unlikely event that buried cultural materials are encountered during construction, all ground disturbances will cease until a qualified archaeologist is contacted to evaluate the nature, integrity, and significance of the deposit.

On August 13, 2018, local Native American tribal groups were formally noticed that an Initial Study of Environmental Impact was being completed for the proposed project and invited to provide consultation on the proposed project. Notices regarding local tribal consultation outreach per AB 52 have been provided. To date one reply has been made from a tribal representative requesting further clarification on the surface surveys conducted by the applicant's archaeology consultants. No concerns were noted regarding cultural resources concerns within the project area. No additional comments have been received as of this date. Due to the amount of prior surface improvements and subsequent demolition and rebuilding since 1937, no surface indicators are anticipated at the site. Based on standard city conditions, in the unlikely event that any materials are encountered, protocols will be followed to notify and consult over any finds during construction (see Section 5: Cultural Resources for further discussion and Mitigation Measure CR-1).

a) The project site does not contain any structures that are listed or eligible for listing in the California Register of Historical Resources or local register as defined in Public Resources Section 5020.1(k). No impact.

b) The site does not contain any known resources considered significant by any California Native American tribe. As discussed in Section 5: Cultural Resources, Mitigation Measure CR-1 requires an archeological monitoring plan to be in place prior to any ground disturbances in the unlikely event that any materials are encountered. Therefore, with the proposed mitigation the project would have a less than significant impact.

Conclusion: Impacts are considered less than significant.

18. UTILITIES AND SERVICE SYSTEMS. Would the project:					
a) Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?	7,9, 16,30, 31			X	
b) Require or result in the construction or expansion of new water treatment, waste water treatment, water quality control, or storm drainage facilities, the construction of which could cause significant environmental effects?	7,9, 16,27, 33,34, 37			X	
c) Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	7,9, 16,27			X	
d) Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new and expanded water resources needed?	7,9, 16,37			X	
e) Result in a determination by the wastewater 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 commitment?	5,7,9, 16, 30,31			X	
f) Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?	5, 8, 9			X	
g) Comply with federal, state, and local statutes and regulations related to solid waste?	5, 8, 9			X	

Evaluation

Water: As discussed in the City's LUCE Update EIR, the City of San Luis Obispo Utilities Department provides potable and recycled water to the community and is responsible for water supply, treatment, distribution, and resource planning. The City is the sole water provider within the city limits and most of the City's water is supplied from multiple surface water sources. However, the City also uses groundwater to supplement surface water supplies and recycled water is used to supplement irrigation demand. With the update of the City's General Plan Water and Wastewater Element in 2018, the City Council reaffirmed the policy for a multi-source water supply. Consistent with the multi-source water supply concept, the City obtains water from five sources:

- Salinas Reservoir (Santa Margarita Lake) and Whale Rock Reservoir: Combined Safe Annual Yield 4,910 AF/year
- Nacimiento Reservoir: 5,482 AF/year dependable yield/ contractual limit
- Recycled water from the City's Water Resource Recovery Facility (WRRF): 238 AF/year

Wastewater: The wastewater system for the City includes facilities for wastewater collection and treatment. The City's collection system serves residential, commercial, and industrial customers. Sewer service is provided only to properties within the city limits, with the exception of a few properties located just outside of the city limits, Cal Poly San Luis Obispo, and the County of San Luis Obispo Airport. There are approximately 14,000 service connections.

The City's Water Resource Recovery Facility (WRRF) processes wastewater in accordance with the standards set by the State's RWQCB. The WRRF removes solids, reduces the amount of nutrients, and eliminates bacteria in the treated wastewater, which is then discharged to San Luis Obispo Creek. The WRRF has a current operational capacity of 5.1 million gallons per day (MGD), and is undergoing design for an average dry weather flow capacity of 5.4 million gallons per day (MGD) and a peak

wet weather flow capacity of 19 MGD upon completion of this upgrade. In 2017, annual average flows to the WRRF were approximately 3.30 MGD. http://www.slocity.org/Home/ShowDocument?id=10532

Solid Waste: The City's Utilities Department is responsible for administering an exclusive franchise agreement with San Luis Garbage Company to collect and dispose solid waste generated by residential, commercial, and industrial customers in San Luis Obispo. This agreement also includes curbside recycling, and green waste service. There are three solid waste disposal facilities within San Luis Obispo County. Most solid waste collected in the city is disposed of at the Cold Canyon Landfill. Cold Canyon Landfill is currently (2016) permitted to receive up to 1,650 tons of solid waste per day, with an estimated remaining capacity of 14,500,000 cubic yards (60.1 percent remaining capacity). In 2015, the Cold Canyon Landfill operator estimated the landfill is expected to reach capacity in 2040.

a, b, c, e) The proposed project would result in an incremental increase in demand on City infrastructure, including water, wastewater and storm water facilities. Annual water use is estimated at 24.45 acre feet/year. Daily wastewater generation is estimated to be 21,820 gallons per day. Development of the site is required to be served by City sewer and domestic and recycled water service, which have adequate capacity to serve the proposed project. Existing storm water facilities are present in the vicinity of the project site, and it is not anticipated the proposed project will result in the need for new facilities or expansion of existing facilities which could have significant environmental effects. The developer will be required to construct private sewer facilities to convey wastewater to the nearest public sewer on Tank Farm Road. The on-site sewer facilities will be required to be constructed according to the standards in the Uniform Plumbing Code and City standards. Impact fees are collected at the time building permits are issued to pay for wastewater collection infrastructure and capacity at the City's Water Resource Recovery Facility (WRRF). The fees are set at a level intended to offset the potential impacts of the project. This project has been reviewed by the City's Utilities Department and no resource/infrastructure deficiencies have been identified. Less than significant impact.

d) The proposed project would result in an incremental increase in demand on water supplies, as anticipated under the recent General Plan Update. As analyzed in the LUCE Update EIR, the City has sufficient water supplies for build-out of the City's General Plan. The incremental change created by the proposed project would be less than significant. This project has been reviewed by the City's Utilities Department and no resource/infrastructure deficiencies have been identified. Less than significant impact.

f), g) The Integrated Waste Management Act of 1989 (AB 939) requires each city and county in California to reduce the flow of materials to landfills by 50% (from 1989 levels) by 2000. The proposed project is required to reduce the waste stream generated by development consistent with the City's Conservation and Open Space Element policies to coordinate waste reduction and recycling efforts (COSE 5.5.3), and Development Standards for Solid Waste Services (available at http://www.slocity.org/home/showdocument?id=4384). A solid waste reduction plan for recycling discarded construction materials is a submittal requirement with the building permit application. The incremental additional waste stream generated by this project is not anticipated to create significant impacts to solid waste disposal. This impact would be considered less than significant.

Conclusion: Less Than Significant Impact.

19. MANDATORY FINDINGS OF SIGNIFICANCE.					
a) Does the project 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?			X		
Without mitigation, the project could have the potential to have adverse impacts on all of the issue areas identified herein. As discussed above, potential impacts to air quality, biological resources, cultural resources, noise, and transportation/traffic will be less than significant with incorporation of recommended mitigation measures.					
b) Does the project 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 the past projects, the effects of other current projects, and the effects of probable future projects)			X		
The impacts of the proposed project are individually limited and not considered "cumulatively considerable." The proposed project is consistent with the Land Use Element, Zoning, and Special Focus Area designation for the site. Cumulative impacts of developing this site were analyzed as a part of the Land Use and Circulation Element (LUCE) EIR. Although incremental changes in certain issue areas can be expected as a result of the proposed project, all environmental impacts that could occur as a result of the proposed project would be reduced to a less than significant level through compliance with existing regulations and incorporation of required mitigation measures as discussed in this Initial Study.					
c) Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?			X		
Implementation of the proposed project would result in no environmental effects that would cause substantial direct or indirect adverse effects on human beings, all environmental impacts that could occur as a result of the proposed project would be reduced to a less than significant level through compliance with existing regulations and incorporation of required mitigation measures as discussed in this Initial Study.					

20. EARLIER ANALYSES.
Earlier analysis may be used where, pursuant to the tiering, program EIR, or other CEQA process, one or more effects have been adequately analyzed in an earlier EIR or Negative Declaration. Section 15063 (c) (3) (D). In this case a discussion should identify the following items:
a) Earlier analysis used. Identify earlier analyses and state where they are available for review.
Airport Area Specific Plan (2014), City of San Luis Obispo Land Use and Circulation Element (LUCE) Update EIR, available for review at the City Community Development Department (919 Palm Street, San Luis Obispo, CA 93401), or at the following web site: http://www.slocity.org/government/department-directory/community-development/planning-zoning/general-plan
b) Impacts adequately addressed. Identify which effects from the above checklist were within the scope of and adequately analyzed in an earlier document pursuant to applicable legal standards, and state whether such effects were addressed by mitigation measures based on the earlier analysis.
Applicable excerpts, analysis and conclusions from the AASP and LUCE Update EIR have been added to each impact issue area discussion. Where project specific impacts and mitigation measures have been identified that are not addressed in these EIRs, original analysis has been provided and mitigation has been recommended to reduce impact levels as needed.
c) Mitigation measures. For effects that are "Less than Significant with Mitigation Incorporated," describe the mitigation measures which were incorporated or refined from the earlier document and the extent to which they address site-specific conditions of the project.

Issues, Discussion and Supporting Information Sources Northwest Corner Mixed-Use (NKT): SBDV-1483-2018 ARCH-1486-2018, SPEC-1492-2018, EID-1484-2018	Sources	Potentially Significant Issues	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact

N/A

21. SOURCE REFERENCES.	
1.	City of SLO General Plan Land Use Element, December 2014 and Final EIR, October 2014
2.	City of SLO General Plan Circulation Element, December 2014 and Final EIR, October 2014
3.	City of SLO General Plan Noise Element, May 1996
4.	City of SLO General Plan Safety Element, March 2012
5.	City of SLO General Plan Conservation & Open Space Element, April 2006
6.	City of SLO General Plan Housing Element, January 2015
7.	City of SLO General Plan Water and Wastewater Element, March 2018
8.	City of SLO Source Reduction and Recycling Element, on file in the Utilities Department
9.	City of SLO General Plan EIR 2014 for Update to the Land Use and Circulation Elements
10.	City of San Luis Obispo Municipal Code (which includes the City Zoning Regulations, Chapter 17)
11.	City of San Luis Obispo Community Design Guidelines, June 2010
12.	City of San Luis Obispo, Land Use Inventory Database
13.	City of SLO Climate Action Plan, August 2012
14.	2013 California Building Code
15.	City of SLO Waterways Management Plan
16.	Water Resources Status Report, July 2012, on file with in the Utilities Department
17.	Beacon Geotechnical Engineering Analyses (for Commercial and Assisted Living) each dated February 9, 2018
18.	Staff Knowledge
19.	Website of the Farmland Mapping and Monitoring Program of the California Resources Agency: http://www.consrv.ca.gov/dlrp/FMMP/
20.	CEQA Air Quality Handbook, Air Pollution Control District, April 2012
21.	Clean Air Plan for San Luis Obispo County, Air Pollution Control District, 2001
22.	Institute of Transportation Engineers, Trip Generation Manual, 9th Edition, on file in the Community Development Department
23.	City of San Luis Obispo, Historic Resource Preservation Guidelines, on file in the Community Development Department
24.	City of San Luis Obispo, Archaeological Resource Preservation Guidelines, on file in the Community Development Department
25.	City of San Luis Obispo, Historic Site Map
26.	City of San Luis Obispo Burial Sensitivity Map
27.	San Luis Obispo County Airport Land Use Plan
28.	Website of the California Environmental Protection Agency, Cortese List: https://calepa.ca.gov/SiteCleanup/CorteseList/
29.	Project Plans
30.	2012 Sanitary Sewer Flow Monitoring and Inflow/Infiltration Study
31.	2016 Wastewater Collection System Infrastructure Renewal Strategy
32.	City of San Luis Obispo Zoning Regulations, March 2015
33.	City of SLO Climate Action Plan, August 2012
34.	Final Potable Water Distribution System Operations Master Plan, December 2015
35.	Airport Area Specific Plan Updated 2014
36.	Central Coast Archeological Research Consultants Report, April 2018
37.	2015 Urban Water Management Plan, June 14, 2016
38.	Oasis Creek Setback Exhibit L-1, 10-3-2017
39.	Sage Institute Biological and Wetland Resources Assessment, 3-16-2018
40.	45dB Acoustics Residential & Commercial Projects Acoustical Assessment, 10-31-2017
41.	Central Coast Transportation Consulting, Multimodal Transportation Impact Study, 2-2018

42.	CAP Compliance Checklist
43.	Airport Land Use Commission Findings and Conditions of Consistency Staff Report 9-19-2018
44.	Technical Noise Analysis Report, Rincon Consultants, June 2019

Note: All documents listed above are available for review at the City of San Luis Obispo Community Development Department, 919 Palm Street, San Luis Obispo, California (805) 781-7101.

Attachments

1. General Plan, Rezone, and Specific Plan exhibit and associated proposed text amendments
2. Project plans (Includes Assisted Living Center, Commercial Shopping Center, Public Improvement Plans, and Vesting Tentative Tract #3115)
3. Biological Wetland Resource Assessment, Sage Institute Inc., August 28, 2014, updated March 16, 2018
4. Rincon Consultants, Inc. Air Quality Technical Memorandum, February 26, 2019
5. Central Coast Archaeological Research Consultants Cultural Resources Survey, April 2018
6. ALUC consistency determination, September 19, 2018
7. Rincon Consultants, Technical Memorandum (GHG analysis), April 1, 2019
8. 45 db Acoustical Assessment, October 31, 2017
9. Rincon Consultants, Inc. Technical Noise Analysis Report, June 2019
10. Multi-Modal Transportation Impact Study, November 2018

REQUIRED MITIGATION and MONITORING PROGRAMS

AIR QUALITY MITIGATION MEASURES (AND ADDITIONAL APCD REQUIREMENTS)

Construction Phase Mitigation

AQ-1. Standard Control Measures for Construction Equipment

The following standard air quality mitigation measures shall be implemented during the site preparation and grading phases of construction at the project site:

- Maintain all construction equipment in proper tune according to manufacturer's specifications;
- Fuel all off-road and portable diesel powered equipment with CARB-certified motor vehicle diesel fuel (non-taxed version suitable for use off-road);
- Comply with the State Off-Road Regulation;
- Use on-road heavy-duty trucks that meet the CARB's 2007 or cleaner certification standard for on-road heavy-duty diesel engines, and comply with the State On-Road Regulation;
- Construction or trucking companies with fleets that do not have engines in their fleet that meet the engine standards identified in the above two measures (e.g. captive or NO_X exempt area fleets) may be eligible by proving alternative compliance;
- All on and off-road diesel equipment shall not idle for more than 5 minutes. Signs shall be posted in the designated queuing areas and or job sites to remind drivers and operators of the 5 minute idling limit;

- Diesel idling within 500 feet of sensitive receptors shall not be not permitted;[7]
- Staging and queuing areas shall not be located within 500 feet of sensitive receptors;[6]
- Equipment shall be electrified when feasible;
- Gasoline-powered equipment shall be substituted in place of diesel-powered equipment, where feasible; and
- Alternatively-fueled construction equipment shall be used on-site where feasible, such as compressed natural gas, liquefied natural gas, propane or biodiesel.

AQ-2. Best Available Control Technology. Diesel construction equipment used during the site preparation and grading phases shall be equipped with CARB Tier 3 or Tier 4 certified off-road engines and 2010 on-road compliant engines.

In addition to the above stated mitigation measures, the APCD is requiring other construction phase and operational phase measures as described below which will be included as project conditions of approval.

Construction Phase:

Developmental Burning
APCD Rule 501 prohibits developmental burning of vegetative material within San Luis Obispo County. The project shall comply with this requirement.

Demolition Activities
Demolition activities can have potential negative air quality impacts, including issues surrounding proper handling, abatement, and disposal of asbestos-containing material (ACM). ACM could be encountered during the demolition or remodeling of existing structures. If this project will include any of these activities, then it may be subject to various regulatory jurisdictions, including the requirements stipulated in the National Emission Standard for Hazardous Air Pollutants (40CFR61, Subpart M - asbestos NESHAP). These requirements include but are not limited to:

- Written notification to the APCD, within at least 10 business days of activities commencing.
- Asbestos survey conducted by a Certified Asbestos Consultant.
- Applicable removal and disposal requirements of identified ACM.

Please contact the APCD Engineering & Compliance Division at 805-781-5912 or go to slocleanair.org/rules-regulations/asbestos.php for further information. To obtain a *Notification of Demolition and Renovation Form* go to the "Asbestos Forms" section of slocleanair.org/library/download-forms.php.

Naturally Occurring Asbestos
Naturally occurring asbestos (NOA) has been identified by the California Air Resources Board as a toxic air contaminant. Serpentine and ultramafic rocks are very common throughout California and may contain NOA. The following requirements apply because the project site is in a candidate area for NOA. The applicant shall ensure that a geologic evaluation is conducted to determine if the area disturbed is exempt from the CARB Air

[7] SLOAPCD recommends that diesel idling and staging/queuing areas be prohibited within 1,000 feet of sensitive receptors. However, these restrictions would be infeasible for the proposed project because the project site is approximately 850 feet in length, and the nearest sensitive receptors would be the planned residential units located on the parcel immediately adjacent to the project site's western boundary (650 Tank Farm Road). Therefore, the diesel idling and staging/queuing area restrictions has been reduced to 500 feet.

Toxics Control Measure (ATCM) for Construction, Grading, Quarrying, and Surface Mining Operations (17 CCR 93105) regulation. An exemption request must be filed with the APCD. If the site is not exempt from the requirements of the regulation, the applicant must comply with all requirements outlined in the Asbestos ATCM. This may include development of an Asbestos Dust Mitigation Plan and an Asbestos Health and Safety Program for approval by the APCD. More information on NOA can be found at slocleanair.org/rules-regulations/asbestos/noa.

Dust Control Measures

This project is greater than 4 acres and within 1,000 feet of sensitive receptors (residential units). Construction activities can generate fugitive dust, which could be a nuisance to residents and businesses in close proximity to the proposed construction site. Projects with grading areas that are greater than 4-acres or are within 1,000 feet of any sensitive receptor shall implement the following measures to manage fugitive dust emissions such that they do not exceed the APCD's 20% opacity limit (APCD Rule 401) or prompt nuisance violations (APCD Rule 402):

n. Reduce the amount of the disturbed area where possible;
o. Use of water trucks or sprinkler systems in sufficient quantities to prevent airborne dust from leaving the site and from exceeding the APCD's limit of 20% opacity for greater than 3 minutes in any 60-minute period. Increased watering frequency would be required whenever wind speeds exceed 15 mph. Reclaimed (non-potable) water should be used whenever possible. When drought conditions exist and water use is a concern, the contractor or builder should consider the use of an APCD-approved dust suppressant where feasible to reduce the amount of water used for dust control. Please refer to the following link from the San Joaquin Valley Air District for a list of potential dust suppressants: Products Available for Controlling Dust;
p. All dirt stock pile areas should be sprayed daily and covered with tarps or other dust barriers as needed;
q. Permanent dust control measures identified in the approved project revegetation and landscape plans should be implemented as soon as possible, following completion of any soil disturbing activities;
r. Exposed ground areas that are planned to be reworked at dates greater than one month after initial grading should be sown with a fast germinating, non-invasive grass seed and watered until vegetation is established;
s. All disturbed soil areas not subject to revegetation should be stabilized using approved chemical soil binders, jute netting, or other methods approved in advance by the APCD;
t. All roadways, driveways, sidewalks, etc. to be paved should be completed as soon as possible. In addition, building pads should be laid as soon as possible after grading unless seeding or soil binders are used;
u. Vehicle speed for all construction vehicles shall not exceed 15 mph on any unpaved surface at the construction site;
v. All trucks hauling dirt, sand, soil, or other loose materials are to be covered or should maintain at least two feet of freeboard (minimum vertical distance between top of load and top of trailer) in accordance with California Vehicle Code (CVC) Section 23114;
w. "Track-Out" is defined as sand or soil that adheres to and/or agglomerates on the exterior surfaces of motor vehicles and/or equipment (including tires) that may then fall onto any highway or street as described in CVC Section 23113 and California Water Code 13304. To prevent 'track out', designate access points and require all employees, subcontractors, and others to use them. Install and operate a 'track-out prevention device' where vehicles enter and exit unpaved roads onto paved streets. The 'track-out prevention device' can be any device or combination of devices that are effective at preventing track out, located at the point of intersection of an unpaved area and a paved road. Rumble strips or steel plate devices need periodic cleaning to be effective. If paved roadways accumulate tracked out soils, the track-out prevention device may need to be modified;
x. Sweep streets at the end of each day if visible soil material is carried onto adjacent paved roads. Water

sweepers shall be used with reclaimed water where feasible. Roads shall be pre-wetted prior to sweeping when feasible;

y. All PM_{10} mitigation measures required should be shown on grading and building plans; and
z. The contractor or builder shall designate a person or persons whose responsibility is to ensure any fugitive dust emissions do not result in a nuisance and to enhance the implementation of the mitigation measures as necessary to minimize dust complaints and reduce visible emissions below the APCD's limit of 20% opacity for greater than 3 minutes in any 60-minute period. Their duties shall include holidays and weekend periods when work may not be in progress (for example, wind-blown dust could be generated on an open dirt lot). The name and telephone number of such persons shall be provided to the APCD Compliance Division prior to the start of any grading, earthwork or demolition (Contact Tim Fuhs at 805-781-5912).

Construction Permit Requirements

Portable equipment 50 horsepower (hp) or greater used during construction activities may require California statewide portable equipment registration (issued by the California Air Resources Board) or an APCD permit. The following list is provided as a guide to equipment and operations that may have permitting requirements but should not be viewed as exclusive. For a more detailed listing, refer to the Technical Appendices, page 4-4, in the APCD's *CEQA Air Quality Handbook* (April 2012).

- Portable generators and equipment with engines that are 50 hp or greater;
- Electrical generation plants or the use of standby generators;
- Internal combustion engines;

Operational Phase:

Loading Dock Operations

In addition, because the truck loading dock portion of the project is within 1,000 feet of sensitive receptors (assisted care facility), the applicant shall comply with these more restrictive requirements to minimize impacts to nearby sensitive receptors.

- Staging and queuing areas shall not be located within 1,000 feet of sensitive receptors;
- Diesel idling within 1,000 feet of sensitive receptors shall not be permitted;
- Use of alternative fueled equipment and electrification of loading docks (e.g., electrical plug-ins for truck refrigeration units and electrification of loading equipment) is recommended; and
- Signs that specify the no idling areas must be posted and enforced at the site.

Residential Wood Combustion

Under APCD Rule 504, only APCD approved wood burning devices can be installed in new dwelling units. These devices include:

- All EPA-Certified Phase II wood burning devices;
- Catalytic wood burning devices which emit less than or equal to 4.1 grams per hour of particulate matter which are not EPA-Certified but have been verified by a nationally-recognized testing lab;
- Non-catalytic wood burning devices which emit less than or equal to 7.5 grams per hour of particulate matter which are not EPA-Certified but have been verified by a nationally-recognized testing lab;
- Pellet-fueled woodheaters; and
- Dedicated gas-fired fireplaces.

Operational Permit Requirements

Depending on the types of equipment that may be present at the site, operational sources may require APCD permits. The following list is provided as a guide to equipment and operations that may have permitting requirements and should not be viewed as exclusive. For a more detailed listing, refer to the Technical Appendix, page 4-4, in the APCD's *CEQA Air Quality Handbook* (April 2012).

- Portable generators and equipment with engines that are 50 hp or greater;
- Food and beverage preparation (primarily coffee roasters);
- Furniture and fixture products; and
- Dry cleaning.

Most facilities applying for an Authority to Construct or Permit to Operate with stationary diesel engines greater than 50 hp, should be prioritized or screened for facility wide health risk impacts. A diesel engine-only facility limited to 20 non-emergency operating hours per year or that has demonstrated to have overall diesel particulate emissions less than or equal to 2 lb/yr does not need to do additional health risk assessment.

Mitigation Measures AQ-1, AQ-2 and APCD Requirements Monitoring Program:

These conditions shall be noted on all project grading and building plans. The Building Inspector and Public Works Inspectors shall conduct field monitoring.

BIOLOGICAL RESOURCES MITIGATION MEASURES

BIO-1. Vegetation Removal Timing. Vegetation removal and initial site disturbance for any project elements shall be conducted between September 1st and January 31st outside of the nesting season for birds. If vegetation removal is planned for the bird nesting season (February 1st to August 31st), then preconstruction nesting bird surveys shall be required to determine if any active nests would be impacted by project construction. If no active nests are found and vegetation removal is conducted within 5 days of the survey and is done continuously, then no further survey work shall be required. Additional surveys during the nesting season shall be conducted as needed if there is any break in vegetation removal, grading and/or construction lasting more than 5 days. If any active nests are found that would be impacted by vegetation removal, grading and/or construction, then the nest sites shall be avoided with the establishment of a non-disturbance buffer zone around active nests as determined by a qualified biologist. Nest sites shall be avoided and protected within the non-disturbance buffer zone until the young are no longer reliant on the nest site for survival (have fledged) as determined by a qualified biologist. All workers shall receive training on good housekeeping practices during construction that will discourage nests from being established within the work area (e.g., cover stored pipe ends, cover all equipment being used daily, etc.) A qualified biologist shall regularly walk the construction area to look for nest starts and review site for good housekeeping practices. As such, avoiding disturbance or take of an active nest would reduce potential impacts on nesting birds to a less-than-significant level.

BIO-2. Clean Water Act Permitting. The applicant shall obtain Clean Water Act (CWA) regulatory compliance in the form of a permit from the U.S. Army Corps of Engineers (Corps) or written documentation from the Corps that no permit would be required for the proposed road crossing. Should a permit be required, the applicant shall implement all the terms and conditions of the permit to the satisfaction of the Corps. Corps permits and authorizations require applicants to demonstrate that the proposed project has been designed and will be implemented in a manner that avoids and minimizes impacts on aquatic resources to the extent practicable. Compliance with Corps permitting would also include obtaining and CWA 401 Water Quality Certification from the Regional Water Quality Control Board (RWQCB). In addition, the Corps and RWQCB may require compensatory mitigation for unavoidable permanent impacts on waters of the U.S./State to achieve the goal of a no net loss of wetland values and functions. As such, with implementation of the 3:1 ratio of creek enhancement

mitigation plantings and regulatory compliance would reduce potential impacts on waters of the U.S. to a less than significant level.

BIO-3. **Streambed Alteration Agreement.** The applicant shall obtain compliance with Section 1602 of the California Fish and Game Code (Streambed Alteration Agreements) in the form of a completed Streambed Alteration Agreement or written documentation from the CDFW that no agreement would be required for the proposed road crossing. Should an agreement be required, the property owners shall implement all the terms and conditions of the agreement to the satisfaction of the CDFG. The CDFG Streambed Alteration Agreement process encourages applicants to demonstrate that the proposed project has been designed and will be implemented in a manner that avoids and minimizes impacts in the stream zone. In addition, CDFG may require compensatory mitigation for unavoidable permanent impacts on waters of the State. As such, with implementation of the 3:1 ratio of creek enhancement mitigation plantings and regulatory compliance would reduce potential impacts on waters of the U.S. to a less than significant level.

Mitigation Measures B-1 through B-3 Monitoring Program:

Prior to issuance of any grading or building permits, Community Development Department staff will verify that necessary permitting and certification requirements have been met and that all improvement plans, landscaping plans and/or relevant construction permits include the required measures for mitigation plantings, creek enhancement, and any compensatory mitigation measures for impacts to Waters of the U.S. as required by the Corps of Engineers and RWQCB.

CULTURAL RESOURCES MITIGATION MEASURES

CR-1. Halt Work Order for Discovery of Previously Unidentified Cultural Resources. In the event that historical or archaeological remains are discovered during earth disturbing activities associated with the project, an immediate halt work order shall be issued and the Community Development Director shall be notified. A qualified archaeologist shall conduct an assessment of the resources and formulate proper mitigation measures, if necessary. After the find has been appropriately mitigated, work in the area may resume. A Chumash representative shall monitor any mitigation excavation associated with Native American materials.

CR-2. **Halt Work Order for Discovery of Human Remains.** In the event that human remains are exposed during earth disturbing activities associated with the project, an immediate halt work order shall be issued and the Community Development Director shall be notified. State Health and Safety Code Section 7050.5 requires that no further disturbance of the site or any nearby area reasonably suspected to overlie adjacent human remains shall occur until the County Coroner has made the necessary findings as to origin and disposition pursuant to Public Resources Code Section 5097.98. If the remains are determined to be of Native American descent, the coroner shall notify the Native American Heritage Commission within 24-hours.

Mitigation Measures CR-1 to CR-2 monitoring program:

Community Development Department staff will verify appropriate notes identifying requirements are listed prominently for contractor reference on applicable construction documents which involve significant ground disturbance including grading or trenching.

NOISE MITIGATION MEASURES

N-1 Sound Wall and/or Special Building Considerations South Elevation Assisted Living Facility. At the time of submittal of construction plans for the assisted living facility, an acoustical engineering report/analysis will be submitted detailing construction techniques for noise mitigation to ensure interior habitable spaces facing south and to the east facing the loading dock area at Building 1, do not exceed annual CNEL = 45 dBA. The mitigation will most likely be wall, window and door assemblies, or a combination of these, with an enhanced Sound Transmission Class rating to resist the street noise coming from Tank Farm Road.

Mitigation Measure N-1 monitoring program:

Prior to issuance of building permits, the acoustical engineering report will be required by Community Development Department staff to verify interior noise levels will not exceed 45 dBA, and any requirements will be clearly noted on all plans for building construction.

N-2. Construction Equipment Best Management Practices. For all construction activity at the project site that exceeds 60 dBA at the property line with the mobile home park to the west, construction equipment noise attenuation techniques shall be employed to ensure that noise levels are maintained within levels allowed by the City of San Luis Obispo Municipal Code, Title 9, Chapter 9.12 (Noise Control). Such techniques shall include:

- Sound blankets on noise-generating equipment.
- Stationary construction equipment that generates noise levels above 60 dBA at the project boundaries shall be shielded with barriers that meet a sound transmission class (a rating of how well noise barriers attenuate sound) of 25.
- All diesel equipment shall be operated with closed engine doors and shall be equipped with factory-recommended mufflers.
- For stationary equipment, the applicant shall designate equipment areas with appropriate acoustic shielding on building and grading plans. Equipment and shielding shall be installed prior to construction and remain in the designated location throughout construction activities.
- Electrical power shall be used to power air compressors and similar power tools.
- The movement of construction-related vehicles, with the exception of passenger vehicles, along roadways adjacent to sensitive receptors shall be limited to the hours between 7:00 AM and 7:00 PM, Monday through Saturday. No movement of heavy equipment shall occur on Sundays or official holidays (e.g., Thanksgiving, Labor Day).
- As needed, temporary sound barriers shall be constructed between the construction site and the mobile home park to the west.

N-3. Neighboring Property Owner Notification and Construction Noise Complaints. The contractor shall inform the property owner and current tenants at the time of construction of the mobile home park to the west of the project site of proposed construction timelines and noise complaint procedures to minimize potential annoyance related to construction noise. Proof of mailing the notices shall be provided to the Community Development Department before the City issues a zoning clearance. Signs shall be in place before beginning of and throughout grading and construction activities. Noise-related complaints shall be directed to the City's Community Development Department.

Mitigation Measures N-2 and N-3 monitoring program:

Plan Requirements and Timing**.** Construction plans shall note construction hours, truck routes, and construction Best Management Practices (BMPs) and shall be submitted to the City for approval prior to grading and building permit issuance for each project phase. BMPs shall be identified and described for submittal to the City for review and approval prior to building or grading permit issuance. BMPs shall be adhered to for the duration of the project. The applicant shall provide and post signs stating these restrictions at construction site entries. Signs shall be posted prior to commencement of construction and maintained throughout construction. Schedule and neighboring property owner notification mailing list shall be submitted 10 days prior to initiation of any earth movement. The Community Development department shall confirm that construction noise reduction measures are incorporated in plans prior to approval of grading/building permit issuance.

All construction workers shall be briefed at a pre-construction meeting on construction hour limitations and how, why, and where BMP measures are to be implemented. A workday schedule will be adhered to for the duration of construction for all phases.

Monitoring**.** City staff shall ensure compliance throughout all construction phases. Building inspectors and permit compliance staff shall periodically inspect the site for compliance with activity schedules and respond to complaints.

TRANSPORTATION MITIGATION MEASURES

T-1. Tank Farm Road from Broad through Project Site to Mindbody intersection. Provide a second westbound through lane on Tank Farm Road consistent with the cross section in the Airport Area Specific Plan. Provide two westbound lanes, bike lanes, and sidewalks consistent with the parkway arterial designation in the Airport Area Specific Plan.

T-2. Tank Farm Road from Old Windmill Lane to Santa Fe Road. The project shall make a fair share contribution of 0.62 percent of the cost of widening Tank Farm Road to four lanes between Santa Fe Road and Old Windmill Lane.

T-3. Broad Street/Industrial Way. Fair Share project contributions to convert the east and west approaches from split phasing to permissive phasing and restriping both approaches to provide dedicated left turn lanes and shared through/right turn lanes.

T-4. Fair Share Contributions. The project applicant shall pay Citywide Traffic Impact Fees for the following project improvements:

- Tank Farm Road/Higuera Street: Install a second southbound left turn lane.
- Tank Farm Road/Santa Fe Road: Install a multi-lane roundabout.
- Broad Street/Tank Farm Road: Install a dedicated northbound right turn lane, convert the westbound right turn lane to a shared through/right lane, and establish time-of-day timing plans.

Mitigation Measure T-1 monitoring program:

The Transportation Division of Public Works, and the Community Development Department will require that public improvements are completed prior to occupancy.

Mitigation Measures T-2, T-3, and T-4 monitoring program:

The Transportation Division of Public Works, and the Community Development Department will require that fair share contributions are paid prior to issuance of building permits.

GP Amendment, RZ, SPA
660 Tank Farm Road and 3985 Broad Street Attachment 1

DRAFT

AIRPORT AREA SPECIFIC PLAN AMENDMENTS
(SPEC-1482-2018)

NWC BROAD STREET AND TANK FARM ROAD MIXED-USE
A SHOPPING CENTER & ASSISTED LIVING FACILITY

3985 Broad Street & 660 Tank Farm Road, San Luis Obispo, CA

053-421-003, 053-421-004

20 July 2018; rev. 7 January 2019

I. INTRODUCTION

The Broad Street at Tank Farm Road Site is identified as a special focus area in the General Plan within the Airport Area Specific Plan ("AASP"). It is unique, and the only location in the AASP with this particular designation and zoning. Therefore, the proposed amendment utilizes the "Special Areas" section of the AASP Land Use chapter to identify and describe the special focus area; it's relationship to the General Plan and Specific Plan, and key development standards.

Pursuant to the submitted applications for the Mixed-Use development at 3985 Broad Street and 660 Tank Farm Road, the following excerpts from the Airport Area Specific Plan Chapter 4.0- Land Use include the proposed text amendments. Inserted text is **bold, blue and underlined**. Deleted text is **bold, red with strikethrough** (~~**strikethrough**~~).

II. AIRPORT AREA SPECIFIC PLAN CHAPTER 4.0 LAND USE

RELATIONSHIP TO THE GENERAL PLAN [Amend Table 4.2]

Table 4.2
San Luis Obispo Airport Area Specific Plan
LAND USE CONSISTENCY

General Plan Designation	Specific Plan Designation	Zone
Open Space	Open Space	C/OS-SP
Public Facility	Airport Facility	PF-SP
Business Park	Business Park	BP-SP
Services & Manufacturing	Service Commercial or Manufacturing	C-S-SP or M-SP
Medium-Density Residential	Medium-Density Residential	R-2-SP
Agriculture	Agriculture	AG-SP
Community Commercial (Special Focus Area #12)	**Community Commercial (Special Focus)**	**CC-SF**

SPECIAL AREAS [Insert text at end of section]

BROAD STREET AT TANK FARM ROAD SITE

The Broad Street at Tank Farm Road Site is identified in the General Plan Land Use Element and Map as a Special Focus Area #12[1], and is further iterated by a zoning designation of Community Commercial with Special Focus Overlay (C-C-SF).[2]

Development of this site shall be consistent with the General Plan description "Located at the northwest corner of Broad Street and Tank Farm Road, this approximate 10 acre site will be used as a mixed use site, providing for a mix of uses as described under the Community Commercial and Office designations. The site will provide a strong commercial presence at the intersection. Areas along the creek on the western edge of the site will be appropriately buffered to provide creek protections. Attention to connectivity, safety and comfort of bicycle and pedestrian circulation will be especially important in the development of this corner." Source: 2014 General Plan Land Use Element- (8.13) Special Focus Area.

The intent of the Office zone is to provide for offices and related functions close to medical facilities and the downtown, convenient to public transportation and related government and business services. The Office zone is also intended to provide for the continuation and development of residential uses where they will be compatible with neighboring offices. The Community Commercial zone is intended to provide for a wide range of retail sales and personal services within the context of distinctive, pedestrian-oriented shopping centers that serve customers and clients from all over the City.

The development plans and project description for this mixed-use area includes:

- **A retail shopping center with uses consistent with the Community Commercial and Office zones at the northwest corner of the Tank Farm Road and Broad Street intersection, and a residential assisted living facility located on the western portion of the property.**
- **North-south road connection from the signalized intersection of Tank Farm Road and Mindbody driveway to the drive aisle on SESLOC property to the north, that ultimately connects to Industrial Way.**
- **Enhancement of the creek and riparian habitat areas. Limited encroachment into the creek setback area may be necessary for the north-south road connection.**
- **The development shall comply with the following development standards**

Standard	C-C-SF Standard
Maximum Density	Pursuant to Airport Land Use Plan
Minimum Yards (Setbacks)	
Building to Broad and Tank Farm street frontage	15 feet
Parking lots to Broad and Tank Farm street frontage	10 feet

[1] See Land Use Element Map (December 2014) http://www.slocity.org/home/showdocument?id=5857
[2] See Zoning Map (January 2015) http://gis.slocity.org/Documents/ZoningMap2015.pdf

Parking lots to interior property lines and adjacent parcels	None
Building to interior property lines and adjacent parcels	None
Maximum Height	35 feet
Maximum coverage	75 percent
Maximum floor area ratio	2.0
Standard Lot Dimensions	See Tentative Tract Map 3115
Minimum Parking Requirements	
Assisted Living	1 space per every 5 beds (plus 1 space per 2 employees on shift
Bank and Credit Union	1 space per 300 SF
General Market (Grocer)	1 space per 250 SF
Office	1 space per 500 SF
Retail Sales and Personal Service	1 space per 300 SF
Restaurant	1 space per 100 SF of total restaurant area (including any food preparation/ service area)
Uses not listed	See Zoning Regulation requirements
Accessible, Clean Air, Motorcycle, Bike parking	See Zoning Regulation requirements

III. "CLEAN" TEXT

The following duplication of the proposed text amendment is provided in a "clean" format for review reference and formatting purposes.

RELATIONSHIP TO THE GENERAL PLAN

Table 4.2
San Luis Obispo Airport Area Specific Plan
LAND USE CONSISTENCY

General Plan Designation	Specific Plan Designation	Zone
Open Space	Open Space	C/OS-SP
Public Facility	Airport Facility	PF-SP
Business Park	Business Park	BP-SP
Services & Manufacturing	Service Commercial or Manufacturing	C-S-SP or M-SP
Medium-Density Residential	Medium-Density Residential	R-2-SP
Agriculture	Agriculture	AG-SP
Community Commercial (Special Focus Area #12)	Community Commercial (Special Focus)	CC-SF

SPECIAL AREAS

BROAD STREET AT TANK FARM ROAD SITE

The Broad Street at Tank Farm Road Site is identified in the General Plan Land Use Element and Map as a Special Focus Area #12[3], and is further iterated by a zoning designation of Community Commercial with Special Focus Overlay (C-C-SF).[4]

Development of this site shall be consistent with the General Plan description "Located at the northwest corner of Broad Street and Tank Farm Road, this approximate 10-acre site will be used as a mixed use site, providing for a mix of uses as described under the Community Commercial and Office designations. The site will provide a strong commercial presence at the intersection. Areas along the creek on the western edge of the site will be appropriately buffered to provide creek protections. Attention to connectivity, safety and comfort of bicycle and pedestrian circulation will be especially important in the development of this corner." Source: 2014 General Plan Land Use Element- (8.13) Special Focus Area.

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The development plans and project description for this mixed-use area includes:

- A retail shopping center with uses consistent with the Community Commercial and Office zones at the northwest corner of the Tank Farm Road and Broad Street intersection, and a residential assisted living facility located on the western portion of the property.
- North-south road connection from the signalized intersection of Tank Farm Road and Mindbody driveway to the drive aisle on SESLOC property to the north, that ultimately connects to Industrial Way.
- Enhancement of the creek and riparian habitat areas. Limited encroachment into the creek setback area may be necessary for the north-south road connection.
- The development shall comply with the following development standards

Standard	C-C-SF Standard
Maximum Density	Pursuant to Airport Land Use Plan
Minimum Yards (Setbacks) Building to Broad and Tank Farm street frontage	15 feet

[3] See Land Use Element Map (December 2014) http://www.slocity.org/home/showdocument?id=5857
[4] See Zoning Map (January 2015) http://gis.slocity.org/Documents/ZoningMap2015.pdf

Parking lots to Broad and Tank Farm street frontage	10 feet
Parking lots to interior property lines and adjacent parcels	None
Building to interior property lines and adjacent parcels	None
Maximum Height	35 feet
Maximum coverage	75 percent
Maximum floor area ratio	2.0
Standard Lot Dimensions	See Tentative Tract Map 3115
Minimum Parking Requirements	
Assisted Living	1 space per every 5 beds (plus 1 space per 2 employees on shift1 space per 300 SF
Bank and Credit Union	1 space per 300 SF
General Market (Grocer)	1 space per 250 SF
Office	1 space per 500 SF
Retail Sales and Personal Service	1 space per 300 SF
Restaurant	1 space per 100 SF of total restaurant area (including any food preparation/ service area)
	See Zoning Regulation requirements
Uses not listed	See Zoning Regulation requirements
Accessible, Clean Air, Motorcycle, Bike parking	

Attachment 2

MIXED USE ASSISTED LIVING DEVELOPMENT

MIXED USE COMMERCIAL SHOPPING CENTER

NWC BROAD STREET at TANK FARM ROAD

SAN LUIS OBISPO, CA 93401

PROPERTY INFORMATION

10.20 Acres
3985 Broad Street (053-421-003)
660 Tank Farm Road (053-421-004)

ZONING

Community Commercial Special Focus Overlay (C-C-SF)
Business Park with Specific Plan Overlay (BP-SP)

SCOPE OF WORK

A mixed-use development project comprised of general retail and senior assisted living facility. Includes 45,269 square feet of commercial building area, anchored by a 21,981 square foot grocer and five (5) other buildings make up the remaining 17,981 square feet for retail and restaurant uses. The assisted living facility is a two-story 133,655 square foot facility providing 111 assisted living suits and 28 memory care beds (constructed in two phases). Project includes a vesting tentative tract map 3115 for seven (7) lots , public improvements (with design exceptions), site improvements typical to new development, riparian and wetland enhancement, and an amendment to the Airport Area Specific Plan.

SUPPORTING DOCUMENTS, REPORTS AND ANALYSES PROVIDED WITH APPLICATION

A. Creek Setback Exhibit, Oasis Associates, Inc., 03 October 2017
B. Stormwater Control Plan, Bethel Engineering, 12 March 2018
  - Commercial Center
  - Westmont Assisted Living
C. Flood Control: Drainage Study, Bethel Engineering, 12 March 2018
  - Commercial Center
  - Westmont Senior Living
D. Public Improvement Plan Exception Exhibits A, B, & C, Bethel
E. Biological & Wetland Resource Assessment, Sage Institute 16 March 2018
F. Development Standards Comparison, Oasis Associates, Inc., 20 March 2018
G. Airport Land Use Commission Discussion Memo, Westmont Living, 28 July 2017
H. Preliminary Title Reports, Fidelity National Title Company, 27 September 2017
I. Acoustical Assessment, 45dB Acoustics, 31 October 2017
J. LEED Checklist (v4 for BD+C)
  - Commercial Shopping Center
  - Westmont of San Luis Obispo 30 January 2018
K. Determinant Project Schedule, 20 March 2018
L. Multimodal Transportation Impact Study, Central Coast Transportation Consulting, February 2018

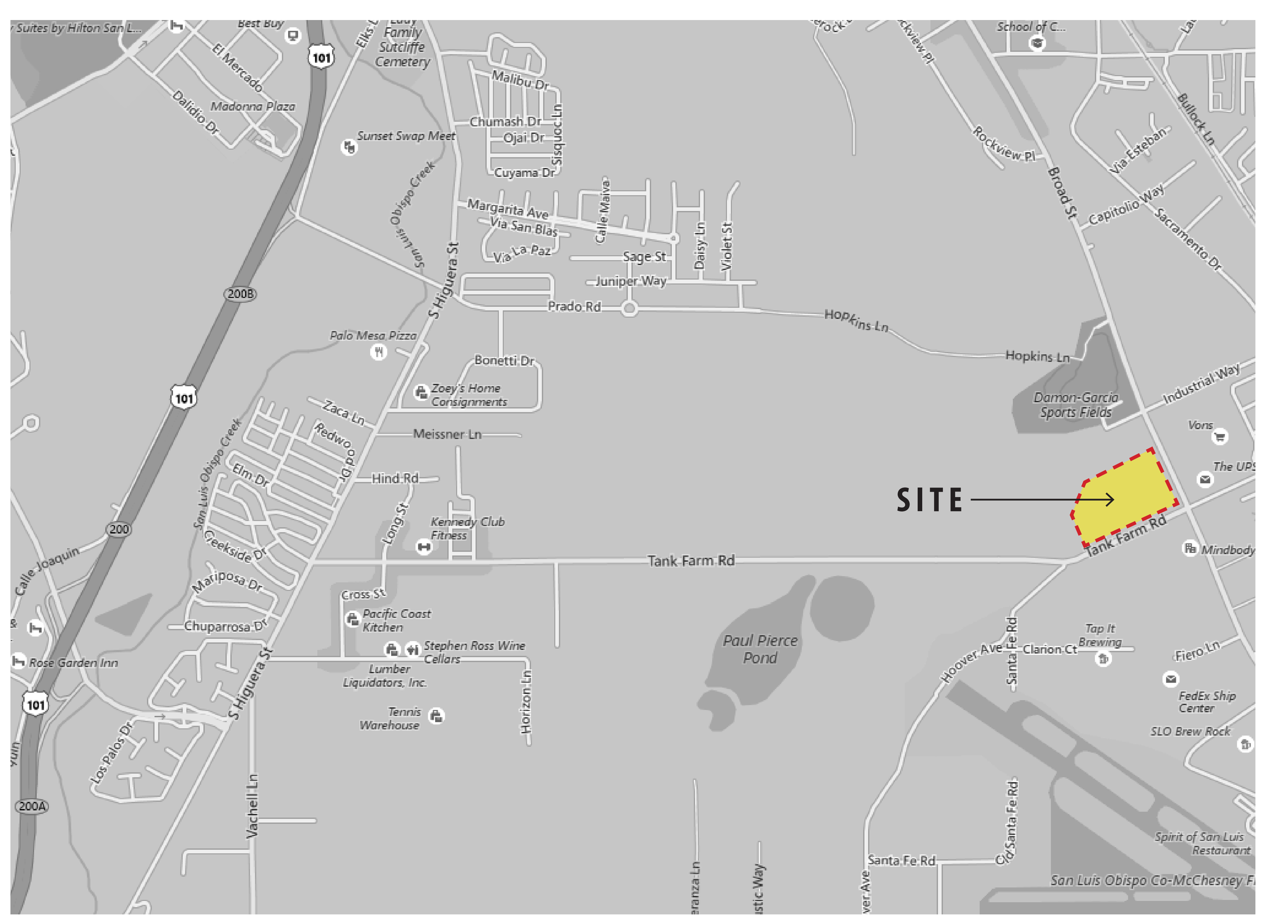
PROPERTY OWNER

NKT DEVELOPMENT, LLC
c/o Nick Tompkins
684 Higuera Street, Suite B
San Luis Obispo, CA 93401
(805)-541-9004

APPLICANT'S AGENT

OASIS ASSOCIATES, INC.
c/o C.M. Florence, AICP
& Emily Ewer, AICP
3427 Miguelito Court
San Luis Obispo, CA 93401
(805) 541-4509
cmf@oasisassoc.com
emily@oasisassoc.com

PROJECT LOCATION



MIXED USE COMMERCIAL SHOPPING CENTER

APPLICANT
NKT DEVELOPMENT, LLC
c/o Nick Tompkins
684 Higuera Street, Suite B
San Luis Obispo, CA 93401
(805)-541-9004

ARCHITECT
McKENTLY MALAK ARCHITECTS
c/o Ken McKently, AIA
35 Hugus Alley Ste 200
Pasadena, CA 91103
(626) 583-8348
ken@mckently.com

CIVIL ENGINEER
BETHEL ENGINEERING
c/o Lori Speer, PE
2624 Airpark Drive
Santa Maria, CA 93455
(805) 934-5767
lori@dbaengineers.com

LANDSCAPE ARCHITECT
SMP ENVIRONMENTAL DESIGN
c/o James L. Burrows
979 Osos Street, Suite B6,
San Luis Obispo, CA 93401
(805) 439-3209
jburrows@smpinc.net

ELECTRICAL ENGINEER
THOMA ELECTRIC, INC.
c/o James J. Dean
3562 Empleo Street Suite C
San Luis Obispo, CA 93401
(805) 543-3850
Jdean@thomaelec.com

MIXED USE ASSISTED LIVING CENTER

APPLICANT
WESTMONT DEVELOPMENT, LP
c/o Michael O'Rourke
7660 Fay Avenue, Ste M
La Jolla, CA 92037
(415) 317-9969

ARCHITECT
LENITY ARCHITECTURE
c/o Aaron Clark, AIA
3150 Kettle Court SE
Salem, OR 97301
(503) 399-1090
aaronc@lenityarchitecture.com

CIVIL ENGINEER
BETHEL ENGINEERING
c/o Lori Speer, PE
2624 Airpark Drive
Santa Maria, CA 93455
(805) 934-5767
lori@dbaengineers.com

LANDSCAPE ARCHITECT
LENITY ARCHITECTURE
c/o Brian Lind
3150 Kettle Court SE
Salem, OR 97301
(503) 399-1090
brianl@lenityarchitecture.com

BIOLOGIST
SAGE INSTITUTE, INC.
c/o David K. Wolff
1320 Van Beurden, Ste 202-D4
Los Osos, CA 93402
(805) 434-2804 x 102
dwolff@sageii.com

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Date: December 18, 2018

KEYNOTE LEGEND #

1 ENHANCED PAVING AT BUILDING ENTRY & PLAZAS
2 ENHANCED RIPARIAN CORRIDOR
3 OUTDOOR PLAZA SEATING AREA
4 TRAFFIC-CALMING WOONERF
5 PEDESTRIAN CONNECTION

ARC REVISION LEGEND #

A E-W PEDESTRIAN WALKWAY BETWEEN BUILDINGS 1 & 5
B N-S PEDESTRIAN WALKWAY BETWEEN BUILDINGS 4 & 5
C TRELLIS STRUCTURES ADDED ALONG PEDESTRIAN WALKWAYS
D BUILDING 6 SHIFTED TO PROVIDE ADDITIONAL PLAZA SPACE
E INCREASED N-S DRIVE AISLES BETWEEN BUILDINGS 2 & 3
F SIGNAGE MOVED FROM WALL TO CANOPY, ALL BUILDINGS
G DECOMPOSED GRANITE PATHWAY
H BICYCLE PARKING
I ENHANCED PAVEMENT AT PEDESTRIAN CONNECTIONS

SITE SECTION A-A - NOT TO SCALE

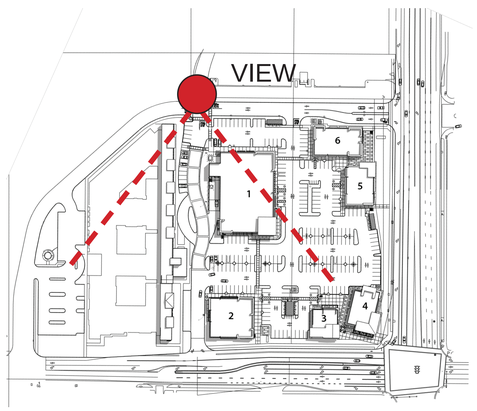
NWC TANK FARM & BROAD STREET
SAN LUIS OBISPO, CA

CONCEPTUAL SITE PLAN

SP-1
2/5/19

McKently Malak ARCHITECTS
lenity architecture
WESTMONT LIVING® inspired retirement living
OASIS ASSOCIATES LANDSCAPE ARCHITECTURE + PLANNING

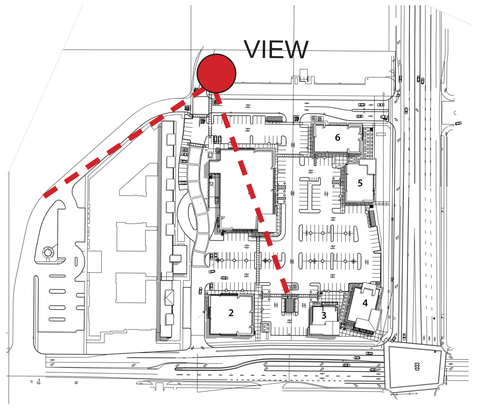
VIEW OF WOONERF STREET BEHIND BUILDING-1 LOOKING SOUTH



KEYPLAN

SP-2 Woonerf Rendering

VIEW OF WOONERF STREET BEHIND BUILDING-1 LOOKING SOUTHWEST



KEYPLAN

SP-3 Woonerf Rendering

NWC TANK FARM ROAD & BROAD STREET

SAN LUIS OBISPO, CALIFORNIA
NOVEMBER 14, 2018

OWNER / APPLICANT
NKT DEVELOPMENT, LLC
684 Higuera Street, Suite B
San Luis Obispo, CA 93401
T: 805.541.9004
Contact: Nick Tompkins
E-mail: nick@nktcommercial.com
Contact: Steve Simoulis
E-mail: steve@nktcommercial.com

CIVIL ENGINEER
Bethel Engineering
2624 Airpark Drive
Santa Maria, CA 93455
T: 805.934.5767
Contact: Lori Speer
E-mail: lori@dbaengineers.com

ELECTRICAL ENGINEER
Thoma Electric, Inc.
3562 Empleo Street, Suite C
San Luis Obispo, CA 93401
T: 805.543.3850
Contact: James J. Dean
E-mail: JDean@thomaelec.com

ARCHITECT
McKently Malak Architects
35 Hugus Alley, Suite 200
Pasadena, CA 91103
T: 626.583.8348
Contact: Ken Mckently
E-mail: ken@mckently.com

LANDSCAPE ARCHITECT
SMP Environmental Design
979 Osos Street., Suite B6
San Luis Obispo, CA 93401
T: 805.439.3209
Contact: James L. Burrows
E-mail: jburrows@smpinc.net

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A203	BUILDING-3 ELEVATIONS
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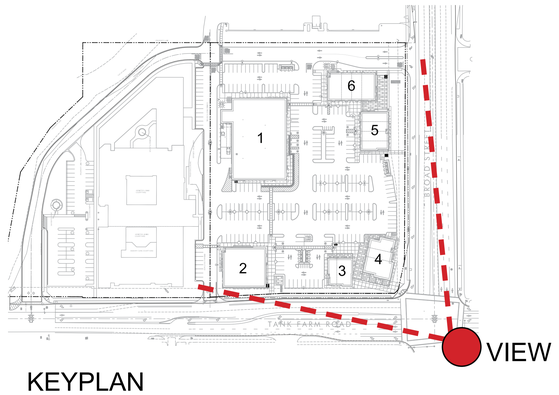
EPH-01	LIGHTING PLAN
IM-01	IMAGE REFERENCE
CM-01	COLOR MATERIAL BOARD

VIEW FROM TANK FARM ROAD AND BROAD STREET LOOKING NORTHWEST



KEYPLAN

CONCEPTUAL SUBJECT TO CHANGE

NKT COMMERCIAL, LLC
684 HIGUERA STREET, SUITE B, SAN LUIS OBISPO, CA 93401
T: 805.541.9094

NWC TANK FARM ROAD & BROAD STREET

San Luis Obispo, California

#	Description	Date
1	1ST SUBMITTAL	03.20.2018
2		
3		
4	2ND SUBMITTAL	11.14.2018

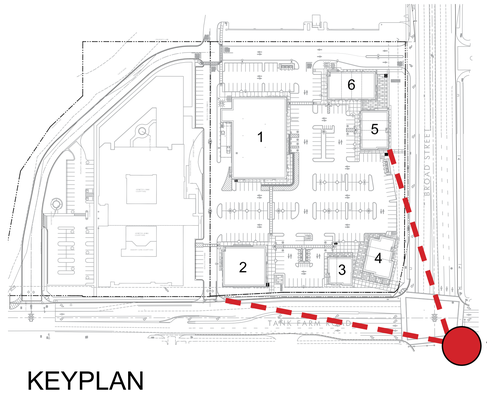
McKently Malak ARCHITECTS
35 Hugus Alley Suite 200
Pasadena, California 91103
T:626.583.8348 F:626.583.8387

COLOR RENDERING

03.20.2018 13215TMA

RE-01

VIEW FROM TANK FARM ROAD AND BROAD STREET LOOKING NORTHWEST



KEYPLAN

CONCEPTUAL SUBJECT TO CHANGE

NKT COMMERCIAL, LLC
684 HIGUERA STREET, SUITE B, SAN LUIS OBISPO, CA 93401
T: 805.541.9094

NWC TANK FARM ROAD & BROAD STREET

San Luis Obispo, California

#	Description	Date
1	1ST SUBMITTAL	03.20.2018
2		
3		
4	2ND SUBMITTAL	11.14.2018

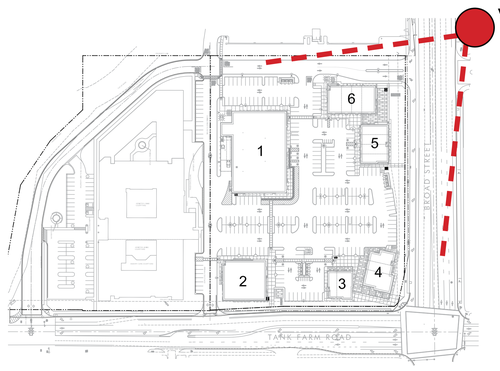
McKently Malak
ARCHITECTS
35 Hugus Alley Suite 200
Pasadena, California 91103
T:6265838348 F:6265833387

COLOR RENDERING

03.20.2018 13215TMA

RE-02

VIEW FROM BROAD STREET LOOKING SOUTHWEST



KEYPLAN

CONCEPTUAL SUBJECT TO CHANGE

NKT COMMERCIAL, LLC
684 HIGUERA STREET, SUITE B, SAN LUIS OBISPO, CA 93401
T: 805.541.9094

NWC TANK FARM ROAD & BROAD STREET

San Luis Obispo, California

#	Description	Date
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3		
4	2ND SUBMITTAL	11.14.2018

McKently Malak ARCHITECTS
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Pasadena, California 91103
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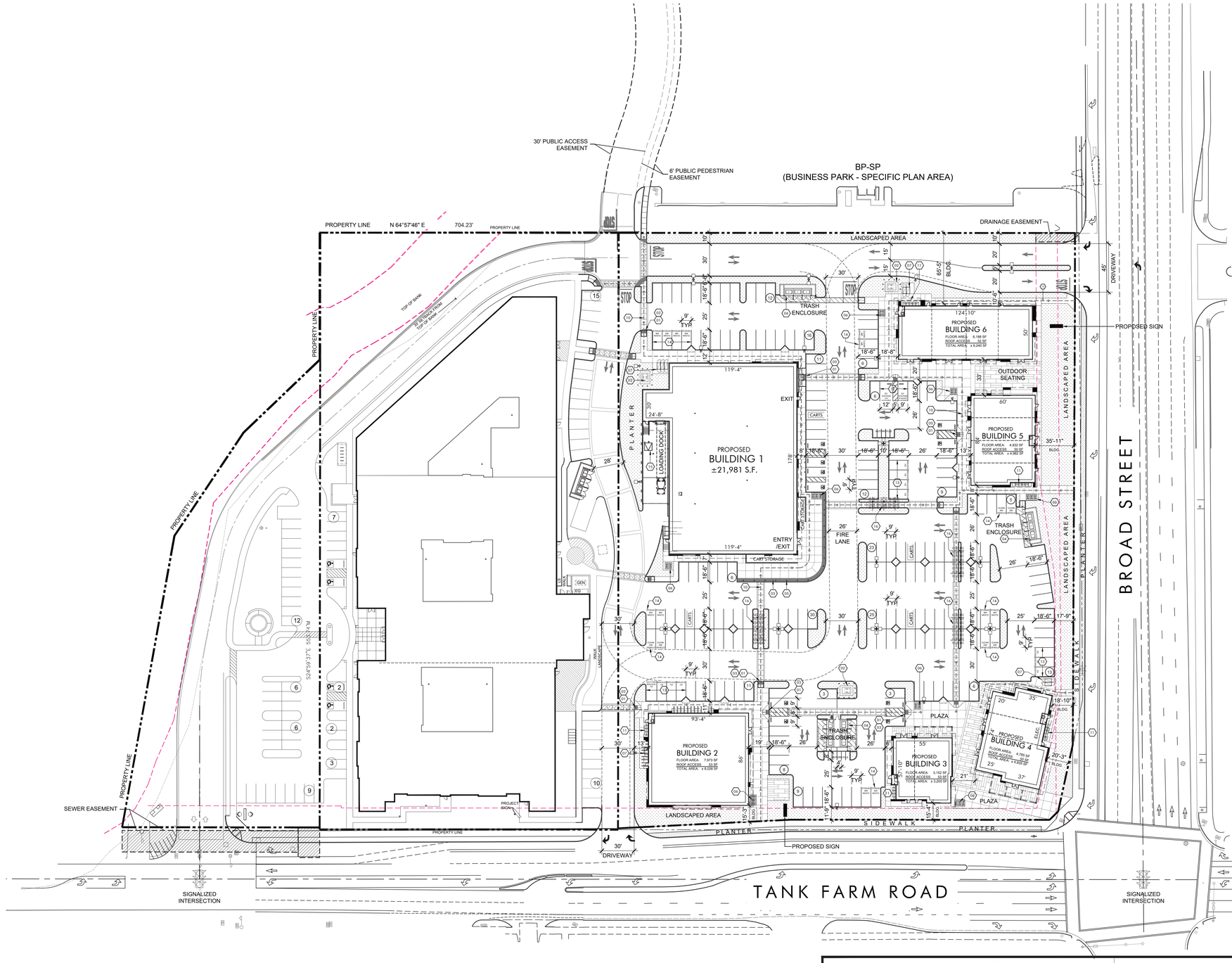
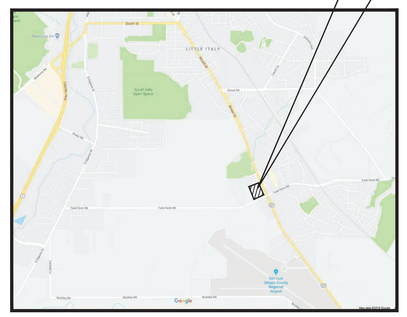
COLOR RENDERING

03.20.2018 13215TMA

RE-03



NWC BROAD STREET & TANK FARM ROAD
SAN LUIS OBISPO, CALIFORNIA



VICINITY MAP

NOT TO SCALE

NORTH

SITE DATA

ZONING

ZONING	COMMUNITY COMMERCIAL WITH SPECIAL FOCUS OVERLAY (C-C-SF)
APN(S)	053-421-003 053-421-004
JURISDICTION	CITY OF SAN LUIS OBISPO

SITE AREA

NET SITE AREA	±5.28 AC	±230,355 SF
GROSS SITE AREA	±5.42 AC	±236,348 SF

BUILDING DATA

BUILDING AREA	
BUILDING-1 (GROCERY)	±21,981 SF
BUILDING-2 (RETAIL)	±8,026 SF
BUILDING-3 (RETAIL)	±3,205 SF
BUILDING-4 (RESTAURANT)	±4,835 SF
BUILDING-5 (RESTAURANT)	±4,982 SF
BUILDING-6	±6,240 SF
RETAIL: ±3,240 SF	
RESTAURANT: ±3,000 SF	
TOTAL	±49,269 SF
F.A.R. (±49,269 S.F. / ±230,355 S.F.) =	0.21

PARKING DATA

REQUIRED PARKING IS PER SPECIFIC PLAN AMENDMENT.

PARKING PROVIDED	214 STALLS
PARKING RATIO	4.34 / 1,000 S.F.
STANDARD:	169 STALLS
HANDICAPPED:	10 STALLS
EV STATIONS:	13 STALLS
CLEAN AIR VEHICLES:	18 STALLS
MOTORCYCLE (4'X8')	11 STALLS
BIKE LOCKERS	8 LOCKERS FOR 16 BIKES
BIKE RACKS	20 RACKS FOR 40 BIKES

SITE LAYOUT DATA

MIN. DRIVE AISLE MIN. WIDTH	25'-0"
STANDARD PARKING STALL	9'-0" x 18'-6"

KEYNOTES

01 ACCESSIBLE CURB RAMP, REFER TO CIVIL DRAWINGS.
02 PROPOSED TRANSFORMER LOCATION, PROVIDE BOLLARDS AS REQUIRED BY POWER COMPANY. REFER TO CIVIL DWGS.
03 TRUNCATED DOMES.
04 TRASH ENCLOSURE.
05 BOLLARDS
06 BIKE RACK - PER CITY STANDARD 7930
07 BIKE LOCKER
08 PYLON SIGN
09 MONUMENT SIGN
10 PEDESTRIAN PATH OF TRAVEL
11 ELECTRIC SWITCHGEAR
12 EV STATION (ACCESSIBLE)
13 EV STATION (STANDARD)
14 CLEAN AIR STALLS
15 TRASH BIN
16 PEDESTRIAN TRELLIS

PROPOSED SITE PLAN

SCALE: 1" = 40'-0"

GRAPHIC SCALE

0 — 1 inch = 40 feet

CONCEPTUAL SUBJECT TO CHANGE

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NWC TANK FARM ROAD & BROAD STREET

San Luis Obispo, California

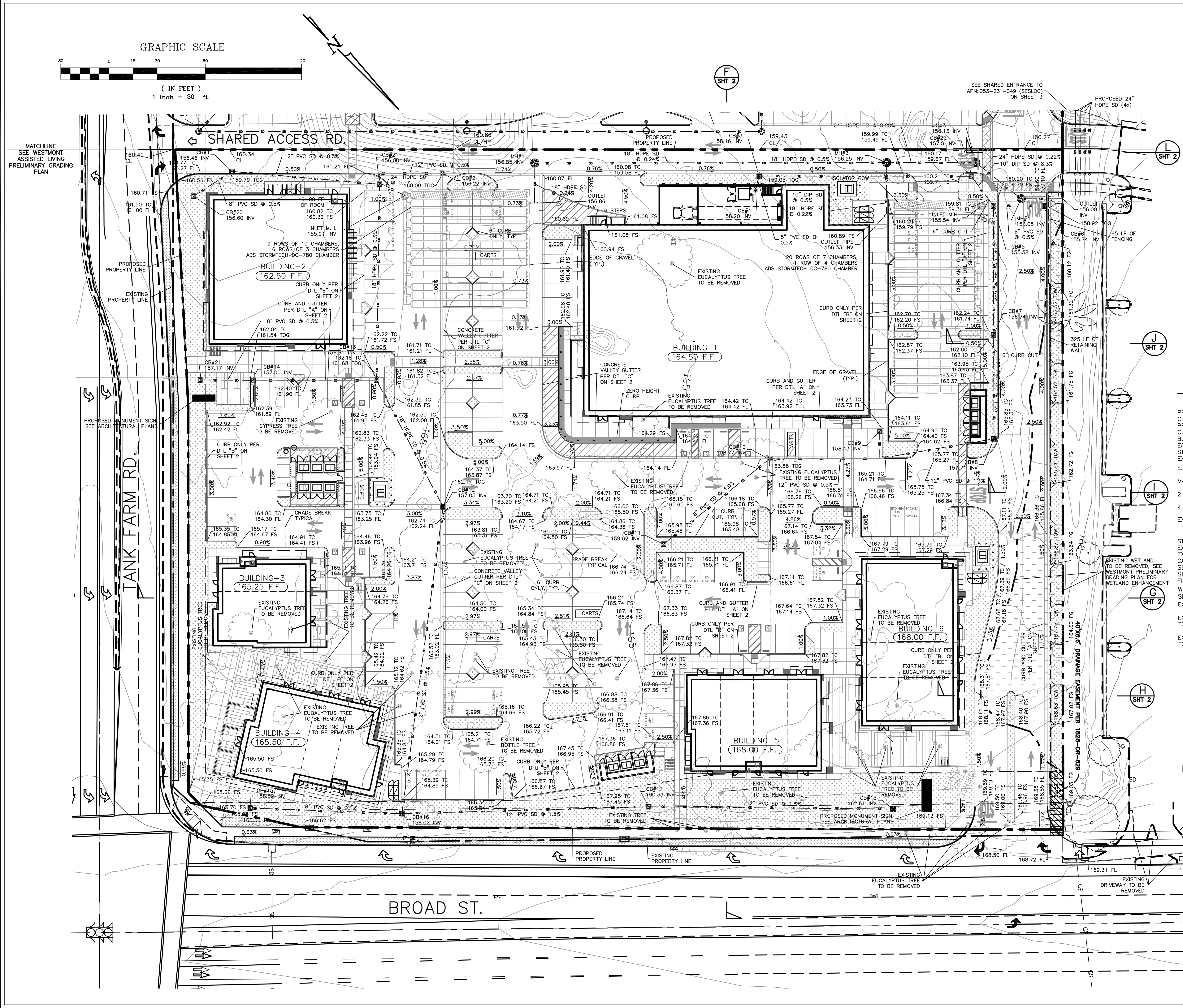
#	Description	Date
1	1ST SUBMITTAL	03.20.2018
2	BIKE RACKS	04.25.2018
3	REVISION	07.02.2018
4	2ND SUBMITTAL	11.14.2018
5	BIKE RACKS	12.11.2018

McKently Malak ARCHITECTS
35 Hugus Alley Suite 200
Pasadena, California 91103
T:626.583.8348 F:626.583.8387

SITE PLAN

03.20.2018 13215TMA

A-010



PROJECT INFORMATION

ASSESSOR'S PARCEL NUMBER: 053–421–003 & 053–421–004
EXISTING ZONING: BP
GROSS AREA: (5.42 AC) 236,348 S.F.
ZONING: C–C–SF & BP–SP

EARTHWORK QUANTITIES

RAW CUT:	21,142 C.Y. CUT
RAW FILL:	20,184 C.Y. FILL
	958 C.Y. NET FILL

BENCHMARK

THE BENCH MARK FOR THIS PROJECT IS A FOUND CITY OF SAN LUIS OBISPO BENCH MARK NUMBER 356, BEING LEAD AND TACK 4 FEET 3 INCHES EAST OF THE BCR AT THE CATCH BASIN AT THE SOUTHEASTERLY CURB OF TANK FARM ROAD AND BROAD STREET AS SHOWN.

ELEVATION=167.38' NAVD 88

BASIS OF BEARINGS

THE BASIS OF BEARINGS FOR THIS PROJECT IS BASED ON CALIFORNIA STATE PLANE ZONE 5, FROM FOUND CITY OF SAN LUIS HORIZONTAL CONTROL NETWORK MONUMENTS, NORTH AMERICAN DATUM 1983, EPOCH DATE:1991.35.

BEARING N 87° 56' 14" W BASED ON CITY HORIZONTAL CONTROL NETWORK MONUMENT NUMBERS 8100 AND 8101.

TO OBTAIN GROUND LEVEL DISTANCES MULTIPLY DISTANCES SHOWN BY 1.0000405

TO OBTAIN GEODETIC BEARINGS ROTATE GRID BEARING –1° 30' 23".

BASIN INFORMATION

THIS SITE INCLUDED IN A.P.N. 053–421–003 AND 053–421–004 DEVELOPMENT DESIGN. ADS STORMTECH UNDERGROUND STORAGE CHAMBERS HAVE BEEN PROPOSED FOR THIS SITE TO HANDLE THE SITES STORM WATER, THE STORAGE CHAMBER AREA IS A TOTAL OF 12,271 S.F.

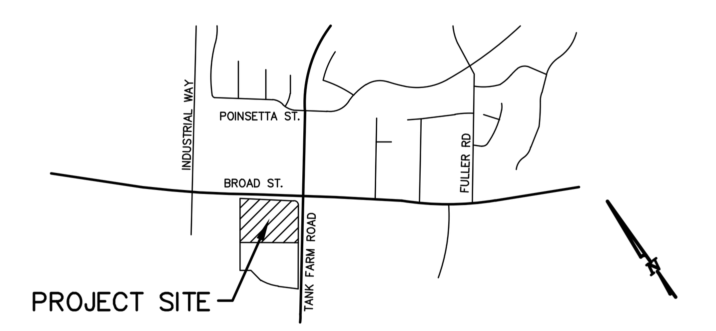
NOTE: PARCEL LINES NOT SHOWN FOR CLARITY, SEE PRELIMINARY COMPOSITE UTILITY PLAN, SHEET 3 OR VTTM 3115

NOTE: EXISTING NON–NATIVE SPECIES AND WILLOWS ON SITE TO BE REMOVED WITH PROPOSED DEVELOPMENT

LEGEND

- PROJECT BOUNDARY
- CENTERLINE
- PROPERTY LINE
- CURB LINE
- BUILDING SETBACKS
- EASEMENT LINE
- STORM DRAIN
- EXIST STORM DRAIN
- E.P./LIP OF GUTTER
- MASONRY WALL
- 2:1 SLOPE
- 4:1 SLOPE
- EXIST. CONTOURS (200)
- STORM DRAIN MANHOLE
- EXIST. S.D. MANHOLE
- EXIST FIRE HYDRANT
- CATCH BASIN
- SEWER CLEAN OUT
- SEWER MANHOLE
- FIRE HYDRANT
- WATER SERVICE
- SEWER LATERAL
- EXISTING GRADE (XXX)
- EXISTING TREE TO BE REMOVED
- EXISTING TREE TO REMAIN

ABBREVIATIONS	
TOP OF CURB	T.C.
FLOWLINE	F.L.
EDGE OF PAVEMENT	E.P.
ASPHALT CONCRETE	A.C.
HIGH POINT	H.P.
LOW POINT	L.P.
FINISHED GRADE	F.G.
BACK OF WALK	B.W.
GRADE BREAK	G.B.



VICINITY MAP
N.T.S.

BETHEL engineering
2624 Airpark Dr. Santa Maria, California 93455 (805) 934–5767

PROJECT TITLE: **NWC COMMERCIAL CENTER**

SHEET TITLE: PRELIMINARY GRADING PLAN

DESIGNED BY:	A.G.
DRAWN BY:	A.G.
CHECKED BY:	L.S.
APPROVED BY:	
SCALE:	1"=20'
DATE:	03/16/18
CITY SPECIFICATION NO.	
PLAN FILE NO. / LOCATION	
SHEET NO.	C-1

BETHEL engineering
2624 Airpark Dr. Santa Maria, California 93455 (805) 934–5767

CONCEPTUAL SUBJECT TO CHANGE

NKT COMMERCIAL, LLC
684 HIGUERA STREET, SUITE B, SAN LUIS OBISPO, CA 93401
T: 805.541.9094

NWC TANK FARM ROAD & BROAD STREET

San Luis Obispo, California

#	Description	Date
1	1ST SUBMITTAL	03.20.2018
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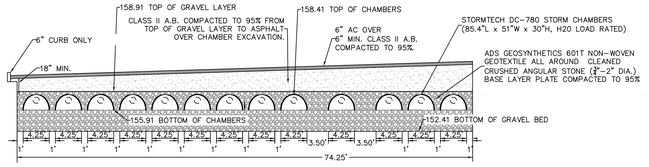
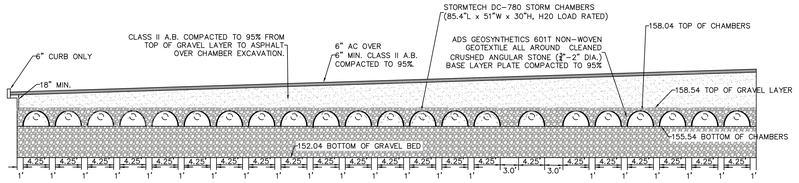
4	2ND SUBMITTAL	11.14.2018

McKently Malak ARCHITECTS
35 Hugus Alley Suite 200
Pasadena, California 91103
T:626.583.8348 F:626.583.8387

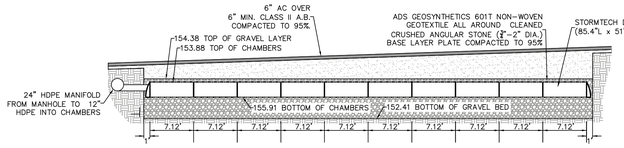
GRADING PLAN
03.20.2018 13215TMA
C-1



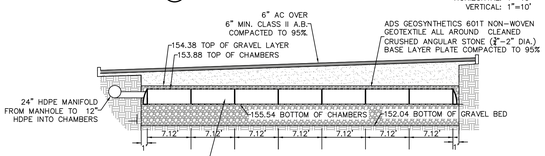
D1 UNDERGROUND STORAGE CHAMBERS SECTION
HORIZONTAL: 1"=10'
VERTICAL: 1"=10'



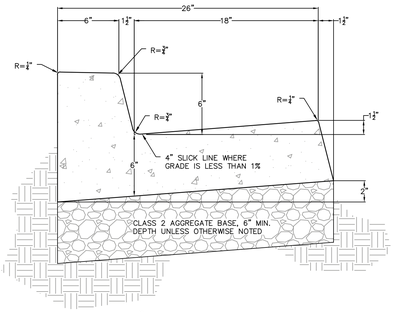
D2 UNDERGROUND STORAGE CHAMBERS SECTION
HORIZONTAL: 1"=10'
VERTICAL: 1"=10'



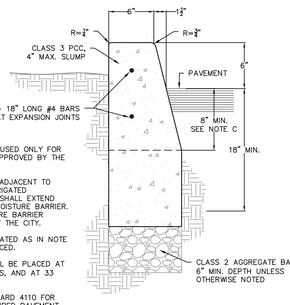
E1 UNDERGROUND STORAGE CHAMBERS SECTION
HORIZONTAL: 1"=10'
VERTICAL: 1"=10'



E2 UNDERGROUND STORAGE CHAMBERS SECTION
HORIZONTAL: 1"=10'
VERTICAL: 1"=10'



A 6" CURB AND GUTTER
N.T.S



GENERAL NOTES:

A. THIS SECTION IS TO BE USED ONLY FOR PARKING LOTS OR AS APPROVED BY THE CITY ENGINEER.

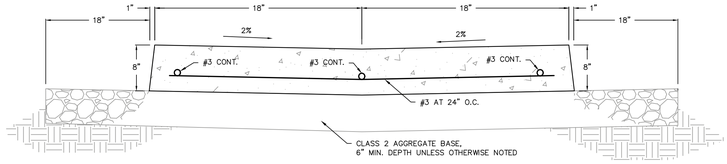
B. WHEN CURB IS PLACED ADJACENT TO EXISTING OR FUTURE IRRIGATED LANDSCAPE AREA, PCC SHALL EXTEND DOWN AS SHOWN FOR MOISTURE BARRIER. ANY ALTERNATE MOISTURE BARRIER SHALL BE APPROVED BY THE CITY.

C. WHEN CURB IS NOT LOCATED AS IN NOTE B, DEPTH MAY BE REDUCED.

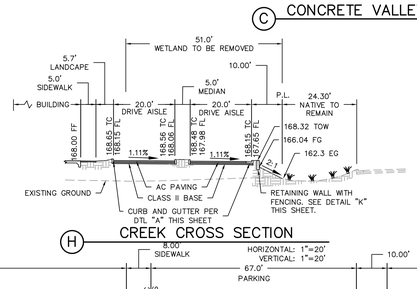
D. EXPANSION JOINTS SHALL BE PLACED AT CORNERS, BC'S AND EC'S, AND AT 33 FEET MAXIMUM SPACING.

E. SEE ENGINEERING STANDARD 4110 FOR NOTES REGARDING REQUIRED PAVEMENT REMOVAL AND REPAIR.

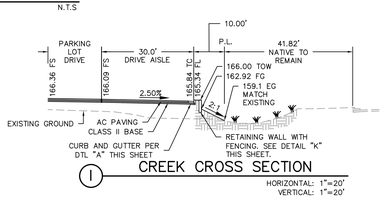
B 6" CURB ONLY
N.T.S



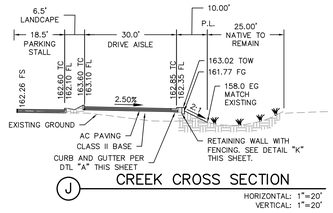
C CONCRETE VALLEY GUTTER
N.T.S



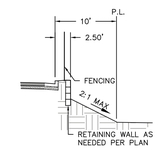
H CREEK CROSS SECTION
HORIZONTAL: 1"=20'
VERTICAL: 1"=20'



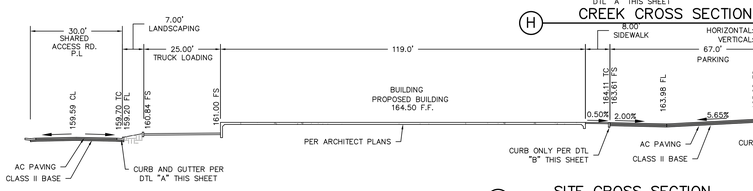
I CREEK CROSS SECTION
HORIZONTAL: 1"=20'
VERTICAL: 1"=20'



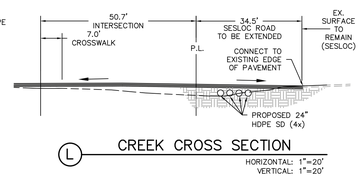
J CREEK CROSS SECTION
HORIZONTAL: 1"=20'
VERTICAL: 1"=20'



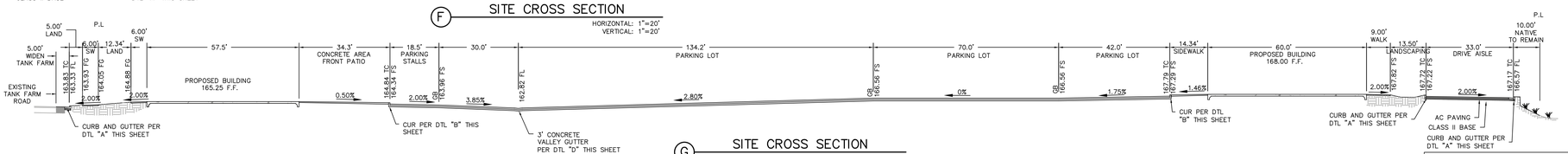
K RETAINING WALL WITH FENCING
NTS



G SITE CROSS SECTION
HORIZONTAL: 1"=20'
VERTICAL: 1"=20'



L CREEK CROSS SECTION
HORIZONTAL: 1"=20'
VERTICAL: 1"=20'



F SITE CROSS SECTION
HORIZONTAL: 1"=20'
VERTICAL: 1"=20'

BETHEL engineering
2624 Airpark Dr. Santa Maria,
California 93455 (805) 934-5767

PROJECT TITLE:
NWC COMMERCIAL CENTER

SHEET TITLE:
PRELIMINARY GRADING PLAN/ SECTIONS AND DETAILS

DESIGNED BY:	A.G.
DRAWN BY:	A.G.
CHECKED BY:	L.S.
APPROVED BY:	
SCALE:	1"=20'
DATE:	03/16/18
CITY SPECIFICATION NO.	
PLAN FILE NO. / LOCATION	
SHEET NO.	C-2

CONCEPTUAL SUBJECT TO CHANGE

NKT COMMERCIAL, LLC
684 HIGUERA STREET, SUITE B, SAN LUIS OBISPO, CA 93401
T: 805.541.9094

NWC TANK FARM ROAD & BROAD STREET

San Luis Obispo, California

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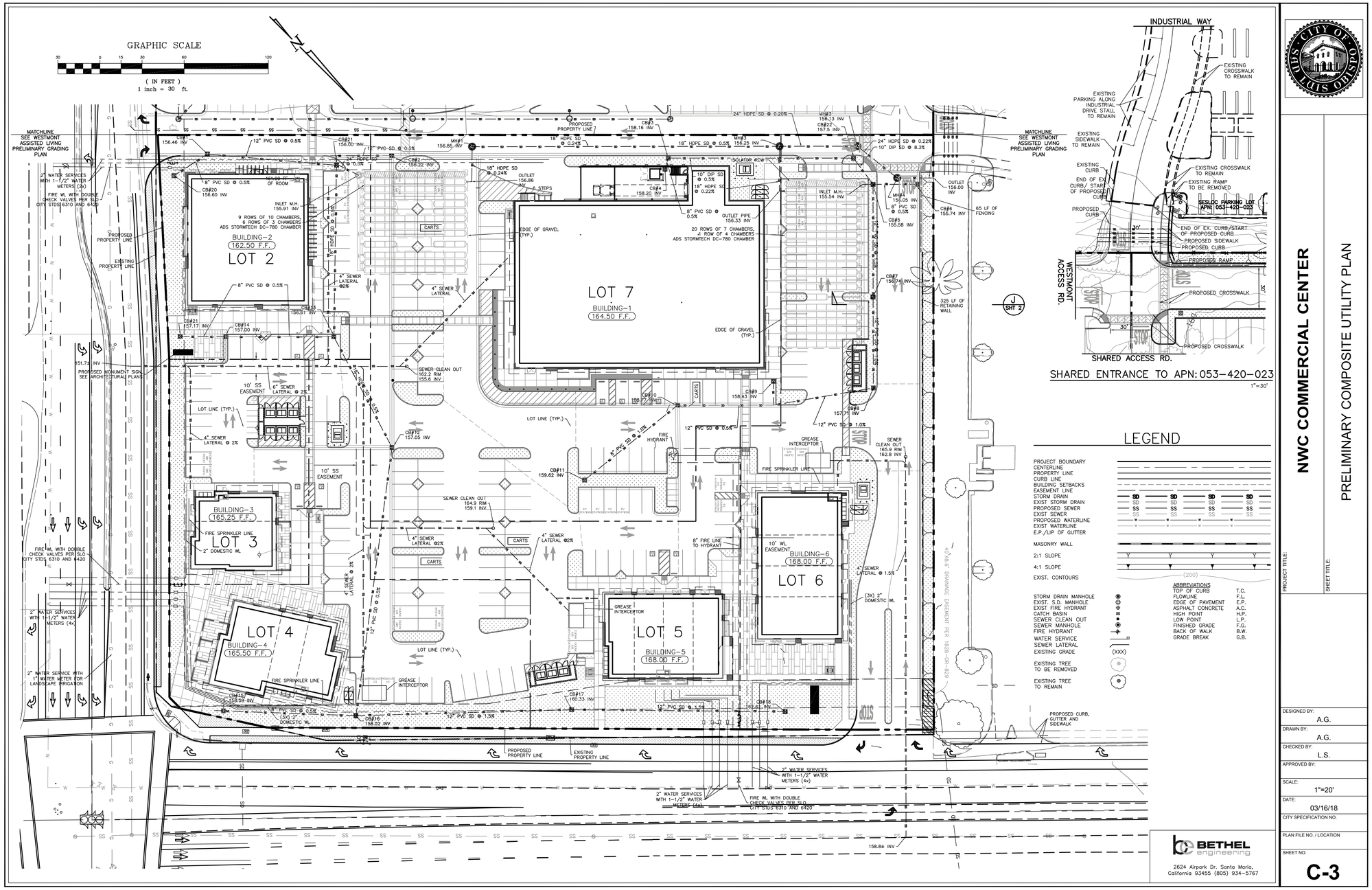
GRADING PLAN
03.20.2018 13215TMA
C-2



CITY OF SAN LUIS OBISPO

NWC COMMERCIAL CENTER

PRELIMINARY COMPOSITE UTILITY PLAN

PROJECT TITLE:

SHEET TITLE:

DESIGNED BY:	A.G.
DRAWN BY:	A.G.
CHECKED BY:	L.S.
APPROVED BY:	
SCALE:	1"=20'
DATE:	03/16/18
CITY SPECIFICATION NO.	
PLAN FILE NO. / LOCATION	
SHEET NO.	C-3

BETHEL engineering
2624 Airpark Dr. Santa Maria, California 93455 (805) 934-5767

CITY OF SAN LUIS OBISPO

BETHEL engineering
2624 Airpark Dr. Santa Maria, California 93455 (805) 934-5767

CONCEPTUAL SUBJECT TO CHANGE

NKT COMMERCIAL, LLC
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NWC TANK FARM ROAD & BROAD STREET

San Luis Obispo, California

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UTILITY PLAN

03.20.2018 13215TMA

C-3

CASSIA LEPTOPHYLLA/GOLDEN MEDALLION TREE

CERCIS OCCIDENTALIS / WESTERN REDBUD

ERIOBOTRYA DEFELXA / BRONZE LOQUAT

LAGERSTROEMIA INDICA 'NATCHEZ' / CRAPE MYRTLE

MELALEUCA QUINQUINERVIA / CAJEPUT TREE

TRISTANIOPSIS LAURINA / WATER GUM

PLANT LEGEND

	*WUCOLS RATING
STREET TREES - TANK FARM ROAD	
TRISTANIOPSIS LAURINA / WATER GUM	M
STREET TREES - BROAD STREET	
TRISTANIOPSIS LAURINA / WATER GUM	M
TREES	
CASSIA LEPTOPHYLLA / GOLDEN MEDALLION TREE	L
CERCIS OCCIDENTALIS / WESTERN REDBUD	L
ERIOBOTRYA DEFLEXA / BRONZE LOQUAT	L
LAGERSTROEMIA INDICA 'NACHEZ / CRAPE MYRTLE (WHITE)	L
MELALEUCA QUINQUINERVIA / CAJEPUT TREE	L
SHRUBS	
ANIGOZANTHOS 'BUSH RANGER' / RED KANGAROO PAW	L
ARBUTUS UNEDO 'COMPACTA/ DWARF STRAWBERRY TREE	L
ARCTOSTAPHYLOS DENSIFLORA 'HOWARD MCMINN' / MANZANITA	VL
CARPENTERIA CALIFORNICA / BUSH ANEMONE	L
CEANOTHUS 'CONCHA' / CONCHA WILD LILAC	L
CHONDROPETALUM TECTORUM / CAPE RUSH	L
EUONYMOUS JAP 'MICROPHYLLA VARIEGATA' / VAR BOXLEAF EUON.	L
JUNIPERUS SCOPULORUM 'SKYROCKET' / SKYROCKET JUNIPER	L
KNIPHOFIA UVARIA / RED HOT POKER	L
LEUCOPHYLLUM FRUTESCENS 'GREEN CLOUD' / TEXAS RANGER	L
MYRTUS COMMUNIS 'COMPACTA' / DWARF MYRTLE	L
PHORMIUM TENAX 'MAORI MAIDEN' / DWARF NEW ZEALAND FLAX	L
RHAMNUS CALIFORNICA 'MOUND SAN BRUNO' / DWARF COFFEEBERRY	L
ROSA FLORIBUNDA 'ICEBERG' / ICEBERG ROSE	M
ROSMARINUS OFFICINALIS 'TUSCAN BLUE' / ROSEMARY	L
SALVIA GREGGII 'CORAL' / CORAL AUTUMN SAGE	L
YUCCA GLORIOSA 'WALBRISTAR' / BRIGHT STAR YUCCA	L
GROUND COVER	
ARCTOSTAPHYLOS 'PACIFIC MIST' / PACIFIC MIST MANZANITA	L
BACCHARIS 'CENTENNIAL' / CENTENNIAL COYOTE BRUSH	VL
BOUGAINVILLEA 'ROSENKA' / BOUGAINVILLEA (ORANGE-PINK)	L
CAREX TUMULICOLA / BERKELEY SEDGE	L
CEANOTHUS GLORIOSUS 'ANCHOR BAY' / ANCHOR BAY CEANOTHUS	L
COPROSMA 'VERDE VISTA' / (NO COMMON NAME)	L
MYOPORUM PARVIFOLIUM 'PUTAH CREEK' / TRAILING MYOPORUM	L
ROSMARINUS OFFICINALIS 'HUNTINGTON CARPET' / (NCN)	L
GRASSES	
CALAMAGROSTIS ACUTIFLORA 'KARL FOERSTER'/FEATHER REED GRASS	L
FESTUCA MAIREI / ATLAS FESCUE	L
HELICTOTRICHON SEMPERVIRENS / BLUE OAT GRASS	L
LEYMUS CONDENSATUS 'CANYON PRINCE' / CANYON PRINCE WILD RYE	VL
MUHLENBERGIA CAPILLARIS / PINK MUHLY GRASS	L
MUHLENBERGIA RIGENS / DEER GRASS	L
NATIVE RIPARIAN RESTORATION SHRUBS	
BACCHARIS PILULARIS v. CONSANGUINEUM / COYOTE BRUSH	VL
DIPLICUS AURANTIACUS / STICKY MONKEYFLOWER	VL
HETEROMELES ARBUTIFOLIA / TOYON	VL
JUNCUS EFFUSUS / SOFT RUSH	L
RHAMNUS CALIFORNICA / COFFEEBERRY	L
ROSA CALIFORNICA / CALIFORNIA WILD ROSE	L
ZAUSCHNERIA CALIFORNICA / CALIFORNIA FUCHSIA	VL

MULCH
MULCH ALL GROUND COVER AND PLANTER AREAS WITH 3" MINIMUM LAYER 'WALK-ON' BARK.

LEGEND
VL = VERY LOW WATER USE
L = LOW WATER USE
M = MEDIUM WATER USE
H = HIGH WATER USE
G = GALLONS
B = BOX

"WATER-USE EVALUATION OF PLANT MATERIALS
WATER USE OF PROPOSED PLANTS HAVE BEEN EVALUATED USING THE "WATER USE CLASSIFICATION OF LANDSCAPE SPECIES" (WUCOLS IV, UNIVERSITY OF CALIFORNIA COOPERATIVE EXTENSION.)

GROUND COVERS

Arctostaphylos Pacific Mist

Baccharis Pigeon Point

Bougainvillea Rosenka

Carex divulsa

Ceanothus Anchor Bay

Coprosma Verde Vista

Myoporum Putah Creek

Rosmarinus Huntington Carpet

ACCENT SHRUBS and SUCCULENTS

Yucca gloriosa 'Walbristar'

NORTH

1" = 30'-0"
0 30 60 90 120

SMP
ENVIRONMENTAL DESIGN
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805.439.3209 · info@smpinc.net · www.smpinc.net
SMP# 742665

TREES

Cassia leptophylla

Cercis occidentalis

Eriobotrya deflexa

SHRUBS

Lagerstroemia indica Natchez

Melaleuca quinquinervia

Tristaniopsis laurina

Anigozanthos Bush Ranger

Arbutus unedo Compacta

Archtostaphylos Howard McM

Carpenteria californica

Ceanothus Concha

Chondropetalum tectorum

Euonymus Microphylla Var

Juniperus Skyrocket

Kniphofia uvaria

Leucophylum Green Cloud

Myrtus communis Compacta

Phormium Maiori Maiden

Rhamnus Mound San Bruno

Rosa floribunda Iceberg

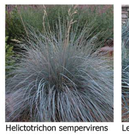
Rosmarinus Tuscan Blue

Salvia greggii

GRASSES

Calamagrostis Karl Foerster

Festuca mairei


Helictotrichon sempervirens

Leymus Canyon Prince

Muhlenbergia capillaris

Muhlenbergia rigens

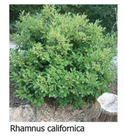
RIPARIAN RESTORATION SHRUBS

Baccharis pilularis

Diplacus aurantiacus

Heteromeles arbutifolia

Juncus effusus


Rhamnus californica

Rosa californica

Zauschneria californica

CONCEPTUAL SUBJECT TO CHANGE

NKT COMMERCIAL, LLC
684 HIGUERA STREET, SUITE B, SAN LUIS OBISPO, CA 93401
T: 805.541.9094

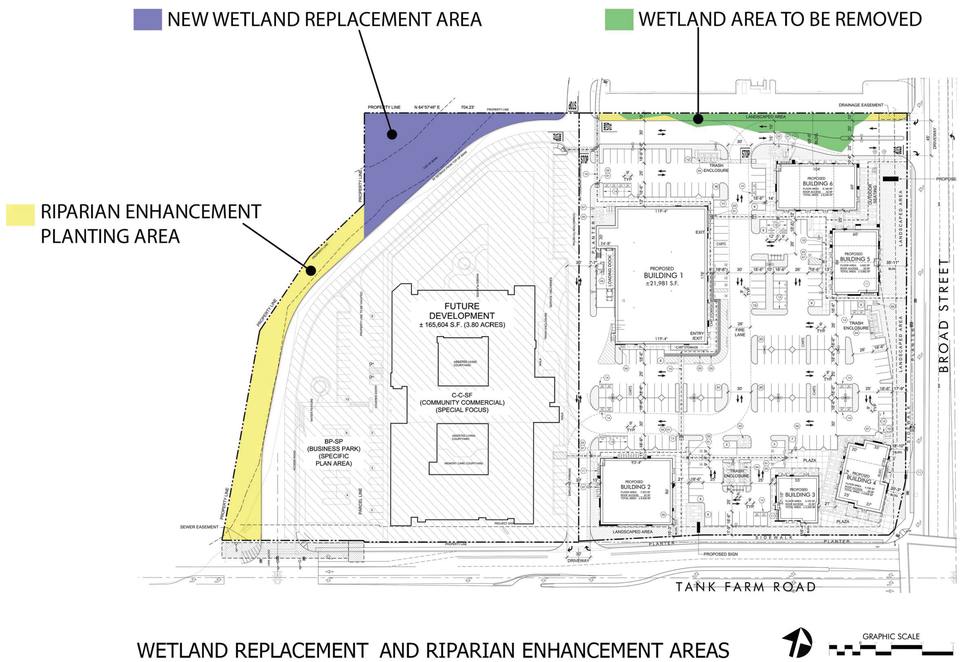
NWC TANK FARM ROAD & BROAD STREET

San Luis Obispo, California

#	Description	Date
1	1ST SUBMITTAL	03.20.2018
2		
3		
4	2ND SUBMITTAL	11.14.2018

McKently Malak ARCHITECTS
35 Hugus Alley Suite 200
Pasadena, California 91103
T:626.583.8348 F:626.583.8387

LANDSCAPE PLAN
03.20.2018 13215TMA
L1



WETLAND REPLACEMENT AND RIPARIAN ENHANCEMENT AREAS

Maximum Applied Water Allowance Calculations

Enter Value in Blue Cells

Tan Cells Show Results

San Luis Obispo

Type of Project	Non-residential	
ET_o of City from MWELO data	43.80	ET_o (inches/year)
	0	Overhead Landscape Area (ft^2)
	33,520	Drip Landscape Area (ft^2)
	0	SLA (ft^2)
Total Landscape Area	33,520	ft^2

Results:

(ETo) x (0.62) x [(ETAF x LA) + (1.0 - ETAF) x SLA]	409,621	Gallons per year
	548	HCF (Hundred Cubic Feet) per year
	1.26	Acre-feet per year

Estimated Total Water Use

Enter Values in Blue Cells

Tan Cells Show Results

Plant Water Use Type	Plant Factor
Very Low	0 - 0.1
Low	0.1 - 0.3
Medium	0.3 - 0.6
High	0.6 - 1.0

Hydrozone	Plant Water Use Type (s) (low, medium, high)	Plant Factor (PF)	Hydrozone Area (HA) (ft^2) Without SLA	Enter Irrigation Efficiency (IE)	(PF x HA (ft^2))/IE
Zone 1	low (trees)	0.30	520	0.81	193
Zone 2	low (shrubs)	0.20	33,000	0.81	8,148
Zone 3					
Zone 4					
Zone 5					
Zone 6					
Zone 7					
Zone 8					
Zone 9					
		HA Area	33,520		8,341
		SLA	0		0
		Total LA	33,520		

Results:
ETo x 0.62 x [((PF x HA)/IE) + SLA]

MAWA=	409,621		
ETWU=	226,501	Gallons	ETWU complies with MAWA
	303	HCF (Hundred Cubic Feet) per year	
	1	Acre-feet per year	

WATER CONSERVATION NOTES

The following water conservation techniques shall be employed in this Project:

- Water conserving plants, defined as "Low" in the "Water Use Classification of Landscape Species" (WUCOLS III, University of California Cooperative Extension), shall be utilized in 95% of the total plant area.
- Irrigation system shall be separated into distinct hydrozones based on plant material types, exposure and orientation.
- Soil amendments and mulch shall be utilized to improve water holding capacity of soil.
- Automatic irrigation system shall utilize "Smart Controller" technology with water budgeting feature to adjust water application based on soil moisture and/or local weather data.
- Recommendations shall be given for annual irrigation schedule.
- Lawn is not used.

STATEMENT OF WATER CONSERVING IRRIGATION DESIGN

The following principles of irrigation design utilized on this project are directed specifically as conserving water and improving the efficiency of the irrigation system:

- All irrigation shall be drip or dripline emitters. No overhead spray heads will be used.
- Irrigation hydrozones shall be adjusted according to water needs and weather.
- Utilization of irrigation system master valve.
- Utilization of irrigation system "Smart" controller with water budgeting feature.
- Utilization of irrigation system flow sensor.
- Utilization of rain shut-off device connected to irrigation controller.

To help maintain the irrigation efficiency as intended in the design, Irrigation system shall be tested and maintained on a monthly basis by the maintenance staff. An irrigation audit, in compliance with the State of California landscape water management program, shall be performed by a certified irrigation auditor prior to turnover of project and every 5 years thereafter.

McBride and Curry Properties

Compensatory Mitigation and Monitoring Plan Planting Palette

Scientific Name	Common Name	Spacing	Notes
Top of Bank Hinge Point (alternating patches)			
Carex barbarae	Santa Barbara sedge	3-foot centers	Cluster in 3's to 5's
Juncus patens	spreading rush	3-foot centers	Cluster in 3's to 5's
Leymus condensatus	giant wild rye	5-foot centers	Cluster in 3's to 5's
Muhlenbergia rigens	deer grass	5-foot centers	Cluster in 3's to 5's
35-foot Creek Setback			
Trees			
Quercus agrifolia	coast live oak	25 to 50-foot centers	Alternating pattern of trees
Platanus racemosa	western sycamore	25 to 50-foot centers	Alternating pattern of trees
Acer macrophyllum	big leaf maple	25 to 50-foot centers	Alternating pattern of trees
California black walnut	Juglans californica	25-foot centers	Alternating pattern of trees
Umbellularia californica	California bay	25-foot centers	Alternating pattern of trees
Shrubs			
Artimesia californica	California sagebrush	5-foot centers	Cluster in 3's to 5's
*Eriogonum fasciculatum**	California buckwheat	5-foot centers	Cluster in 3's to 5's
Frangula californica	California coffeeberry	5-foot centers	Cluster in 3's to 5's
Heteromeles arbutifolia	toyon	10-foot centers	Cluster in 3's to 5's
*Rosa californica**	California wild rose	3-foot centers	Cluster in 3's to 5's
*Rubus ursinus**	California blackberry	3-foot centers	Cluster in 3's to 5's
Salvia melifera	Black sage	5-foot centers	Cluster in 3's to 5's
*Plant adjacent to row of top of bank hinge point plantings			

Herbaceous Species Hydroseed (40 lbs./acre)			
Artemesia douglasiana	mugwort	5	
Bromus carinatus	California brome grass	5	
Elymus glaucus	blue wildrye	5	
Eschscholzia californica	California poppy	5	
Hordeum brachyantherum	meadow barley	5	
Leymus triticoides	beardless wild rye	3	
Lupinus bicolor	miniature lupine	3	
Lupinus nanus	sky lupine	4	
Stipa pulchra	Purple needlegrass	5	

SPECIFIC PLAN LANDSCAPE PLANTING CONCEPT

The landscape concept calls for the development of a consistent landscape character that is derived from the San Luis Obispo landscape. By using the natural and agricultural landscapes as paradigms for introduced landscape patterns and materials, new development will enhance both the physical and symbolic links to the land and its history.

The Plan emphasizes the use of native and naturalized plant species over the use of exotics, both to integrate the planning area with its surroundings, and to increase the sustainability of the introduced landscape. The use of plant species and planting patterns that reference the area's agricultural heritage will keep the area symbolically grounded in this tradition, as well as maintain an aesthetic connection with ongoing agricultural operations to the south and east.

LANDSCAPE PLANTING GUIDELINES

1. Street trees in the Airport Area should be planted to enhance the area's image, and create a strong sense of identity and unity regardless of the variety in land uses and architectural styles. (Landscape Guidelines #A)
2. Landscaping along streets and trails should employ a relatively simple palette of plants and other materials that is repeated throughout the area to create a sense of continuity and visual coherence. (Landscape Guidelines #B)
3. Native and naturalized plant species (plants that can easily survive local climatic and soil conditions) are favored over exotic species that require more water, higher maintenance, and are less compatible with the natural landscape. (Landscape Guidelines #D)
4. The use of specimen trees and ornamental species is appropriate to highlight the importance of building entries and distinguish them from the rest of the site landscape. (Landscape Guidelines #G)

LANDSCAPE BUILDING GUIDELINES

1. The use of lawn as a ground cover is generally discouraged because it requires disproportionately high amounts of water, energy and chemicals to maintain. (Landscape Guidelines #C)
2. Trees and taller plant species should be used to mitigate the scale of buildings and to screen unsightly and/or less interesting building features. (Landscape Guidelines #D)
3. Trees and shrubbery should be used to enhance microclimate conditions and water conservation by reducing ambient temperatures, shading outdoor gathering areas and hot south- and west-facing windows, and providing windbreaks. (Landscape Guidelines #E)
4. The use of ornamental species and specimen plants is most appropriate near buildings, particularly those areas most visible to the public such as entries, plazas, pathways, and outside windows. (Landscape Guidelines #F)

SPECIFIC PLAN GUIDELINES

1. Use low (approximately one meter in height) hedges, shrub masses or walls between parking areas and street frontages, and other parking areas, to screen parking lots. (Parking Guidelines #F)
2. For each parking lot, a single tree species should be used for all end-of-aisle planting islands, and that species, or one additional species, should be used for planter areas between stalls. (Parking Guidelines #G)
3. Transformers and other utility equipment that must be above ground should be screened with planting, berms, or with an enclosure. Exterior mounted utility equipment should be painted to blend with its surroundings. (Screening Guidelines #B)
4. Transformers, refuse stations, irrigation back-flow prevention devices and controllers, and other utilities should be located outside the street frontage setback and screened with landscaping or architectural treatments. (Screening Guidelines #D)

The Development shall connect to the City's reclaimed water system and shall use reclaimed water for landscape irrigation. (Mitigation Measure PS/U-9)

SMP
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SMP# 742665

CONCEPTUAL SUBJECT TO CHANGE

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San Luis Obispo, California

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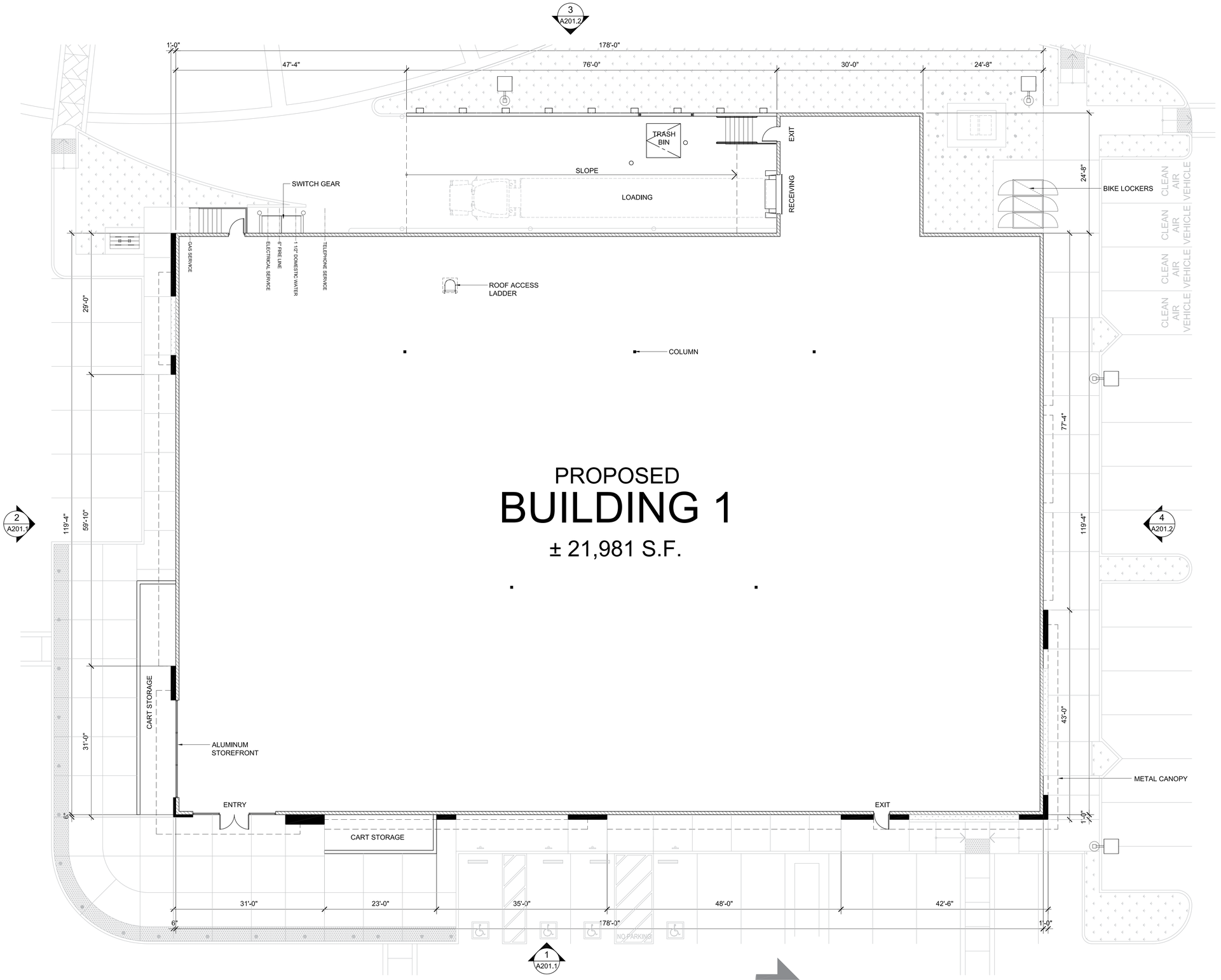
McKently Malak ARCHITECTS
35 Hugus Alley Suite 200
Pasadena, California 91103
T:6265838348 F:6265838387

LANDSCAPE PLAN

03.20.2018 13215TMA

L2



1 FLOOR PLAN
SCALE: 1/8" = 1'-0"

NORTH

BUILDING-1

CONCEPTUAL SUBJECT TO CHANGE

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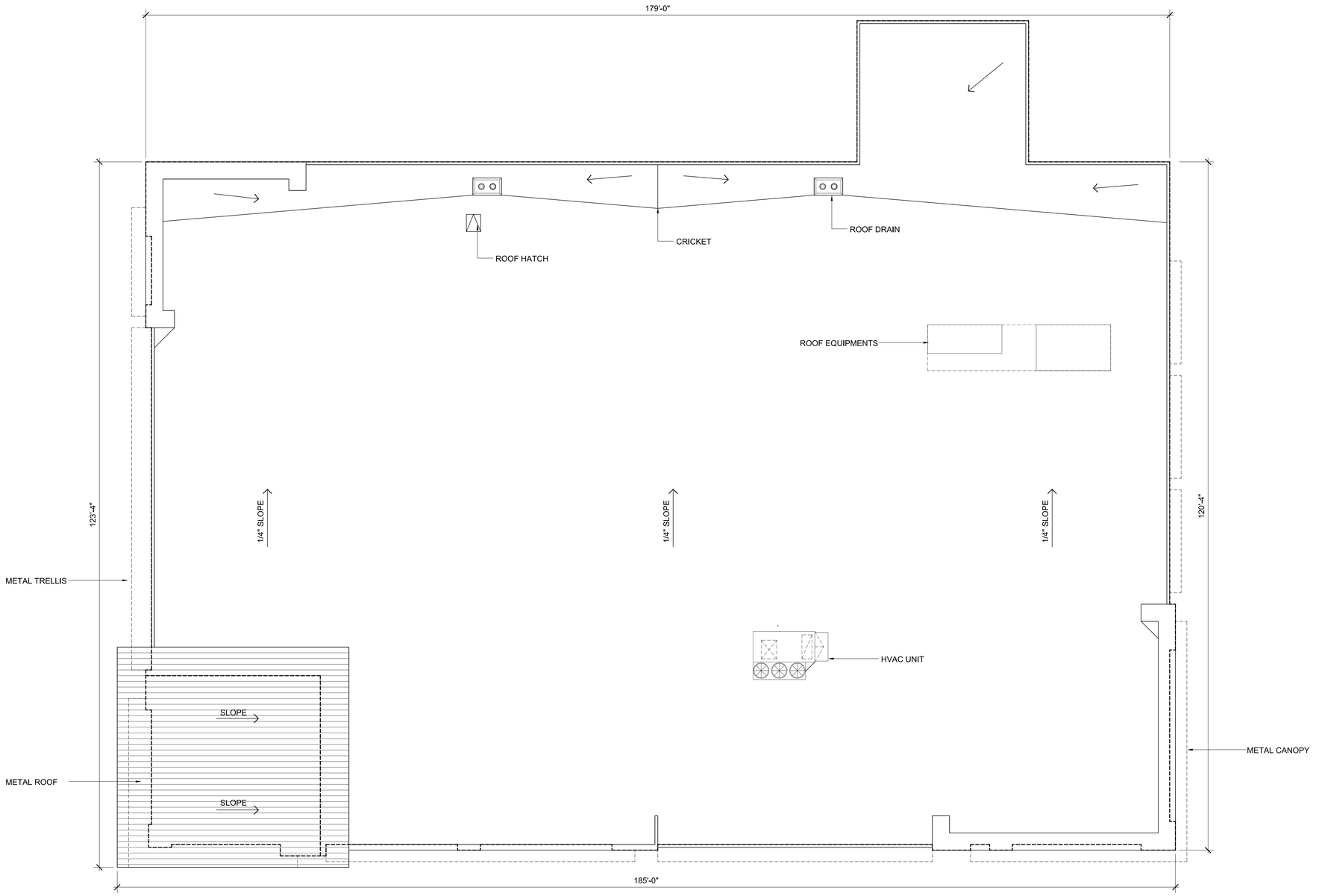
FLOOR PLAN
03.20.2018 13215TMA

A-101



NOTE: SEE ELEVATIONS FOR PARAPET HEIGHTS

1 ROOF PLAN
SCALE: 1/8" = 1'-0"

NORTH

BUILDING-1

CONCEPTUAL SUBJECT TO CHANGE

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NWC TANK FARM ROAD & BROAD STREET

San Luis Obispo, California

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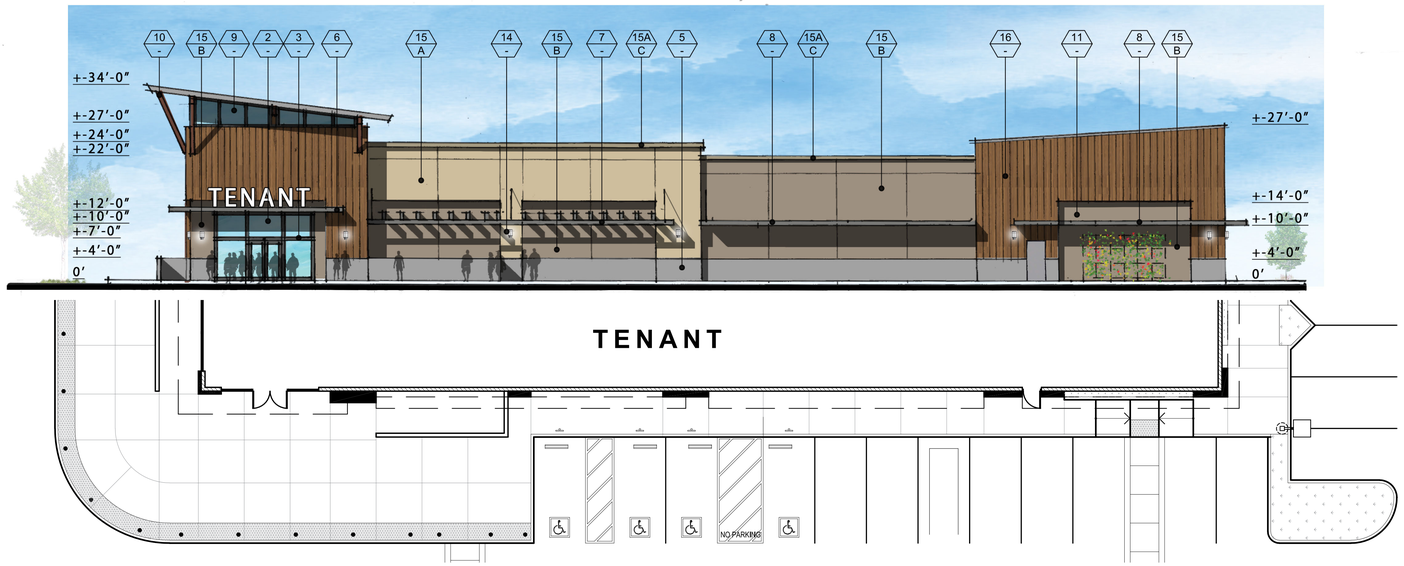
T:626.583.8348 F:626.583.8387

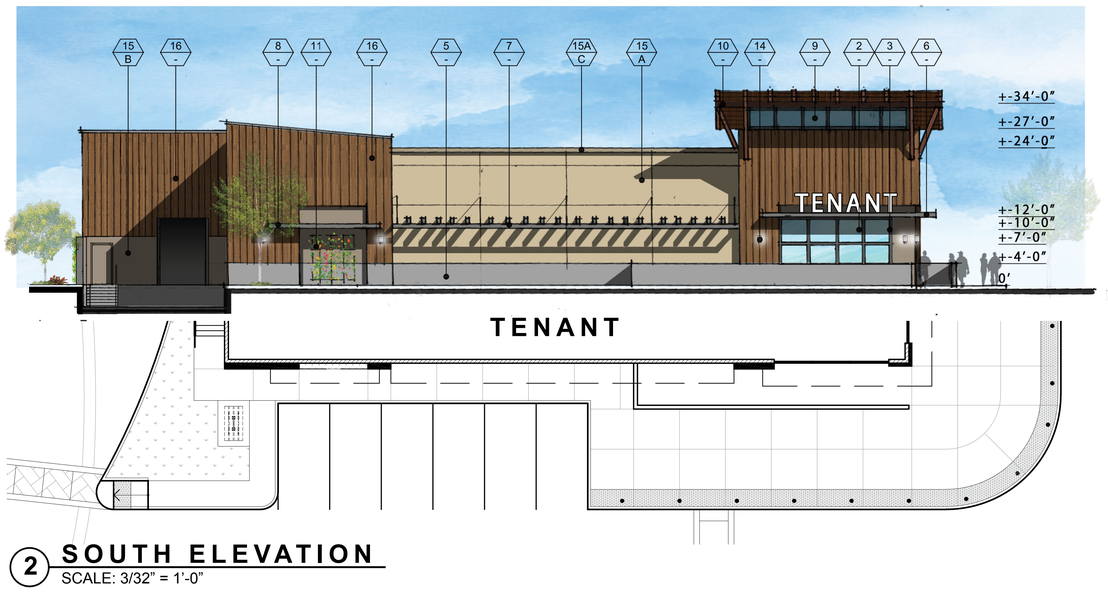
ROOF PLAN

03.20.2018 13215TMA

A-131



1 EAST ELEVATION
SCALE: 3/32" = 1'-0"



2 SOUTH ELEVATION
SCALE: 3/32" = 1'-0"

FINISH KEYNOTES

1 - STANDING SEAM METAL ROOF
MODEL: SCR-16 STANDING SEAM
COLOR: ZINC GRAY
BY: MORIN

2 - STOREFRONT GLASS
GLASS: 1" CLEAR FLOAT GLASS
BY: PPG

3 - STOREFRONT
FINISH: CLEAR ANODIZED ALUMINUM
BY: ARCADIA

4 - SIDING
MODEL: VINTAGE COLLECTION
COLOR: CYPRESS (70%), MAHOGANY (30%)
BY: AZEK

5 - TILE BASE
MODEL: COLORBODY PORCELAIN-INVOKE
COLOR: MYSTIC WAY ID02, 12"x24"
TILE GROUT: CUSTOM
PRODUCT-335 WINTER GRAY
BY: DALTILE

6 - METAL CANOPY
FINISH: PAINTED STEEL TUBE
COLOR: DE6369 LEGENDARY GRAY,
DUNN EDWARDS
BY: GENERAL CONTRACTOR

7 - METAL TRELLIS FRAME / INFILL
FINISH: PAINTED STEEL TUBE
COLOR: DE6369 LEGENDARY GRAY,
DUNN EDWARDS
BY: GENERAL CONTRACTOR

8 - METAL EYEBROW
FINISH: PAINTED STEEL TUBE
COLOR: DE6369 LEGENDARY GRAY,
DUNN EDWARDS
BY: GENERAL CONTRACTOR

9 - SPANDREL GLASS
COLOR: WARM GRAY
BY: VIRACON

10 - WOOD EAVES / KICKERS
FINISH: PAINTED-SEMI TRANSPARENT
COLOR: DEC 770 DRIFTING,
DUNN EDWARDS
BY: GENERAL CONTRACTOR

11 - WIRE GRID
BY: GENERAL CONTRACTOR

12 - WALL SCONCE
MODEL: LASER LED LAS5562 NF
COLOR: GRAY
BY: US ARCHITECTURAL LIGHTING

13 - PEDESTRIAN LIGHTS
MODEL: ECLIPSE MAXI-LED,
EC 811, POLE-PAA 512
COLOR: GUN METAL
BY: LUMINIS

14 - WALL SCONCE
MODEL: ECLIPSE MAXI-LED EC 852
COLOR: GUN METAL
BY: LUMINIS

15 - STUCCO
FINISH: SMOOTH STEEL TROWEL
BY: HIGHLAND STUCCO

15A - CORNICE
FINISH: SMOOTH STEEL TROWEL
COLOR: DET 637 SEAGULL WAIL
BY: HIGHLAND STUCCO

16 - BOARD & BATTEN SIDING
VERTICAL SIDING WITH 1"X3" VERTICAL
BATTENS @ 12" O.C.

PAINT COLORS

A - PAINT
COLOR: DET 637 SEAGULL WAIL
BY: DUNN EDWARDS

B - PAINT
COLOR: DEC 750 BISON BEIGE
BY: DUNN EDWARDS

C - PAINT
COLOR: DEC 751 ASH GRAY
BY: DUNN EDWARDS

D - PAINT
COLOR: DE 6369 LEGENDARY GRAY
BY: DUNN EDWARDS

E - PAINT
COLOR: DEC 770 DRIFTING
BY: DUNN EDWARDS

BUILDING-1
CONCEPTUAL SUBJECT TO CHANGE

NKT COMMERCIAL, LLC
684 HIGUERA STREET, SUITE B, SAN LUIS OBISPO, CA 93401
T: 805.541.9094

NWC TANK FARM ROAD & BROAD STREET
San Luis Obispo, California

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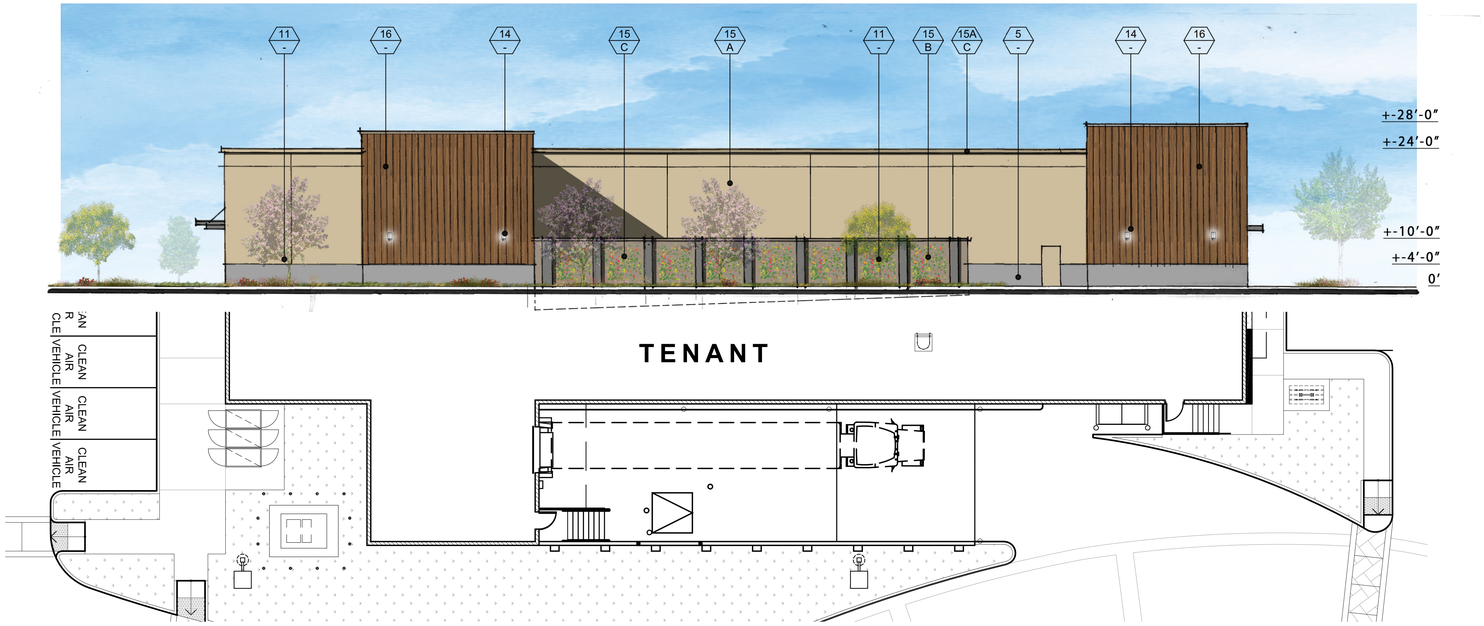
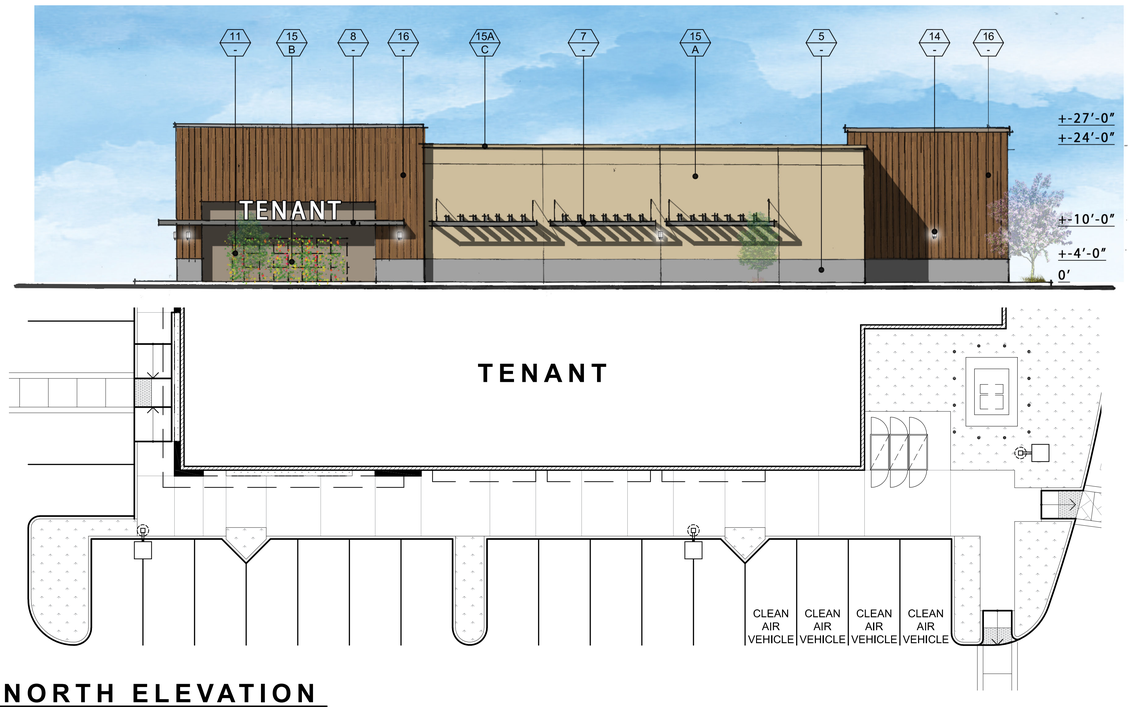
Pasadena, California 91103
T:626.583.8348 F:626.583.8387

ELEVATIONS
03.20.2018 13215TMA

A-201.1



3 WEST ELEVATION
SCALE: 3/32” = 1’-0”



4 NORTH ELEVATION
SCALE: 3/32” = 1’-0”

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COLOR: DEC 770 DRIFTING
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BUILDING-1
CONCEPTUAL SUBJECT TO CHANGE

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ELEVATIONS
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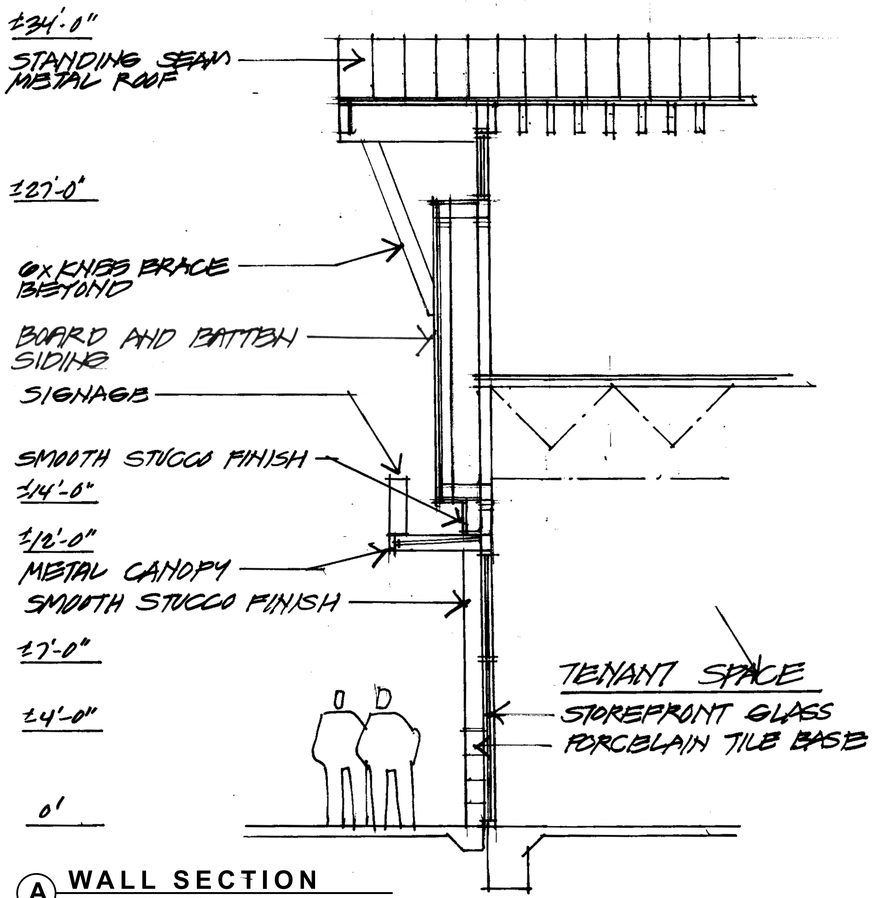
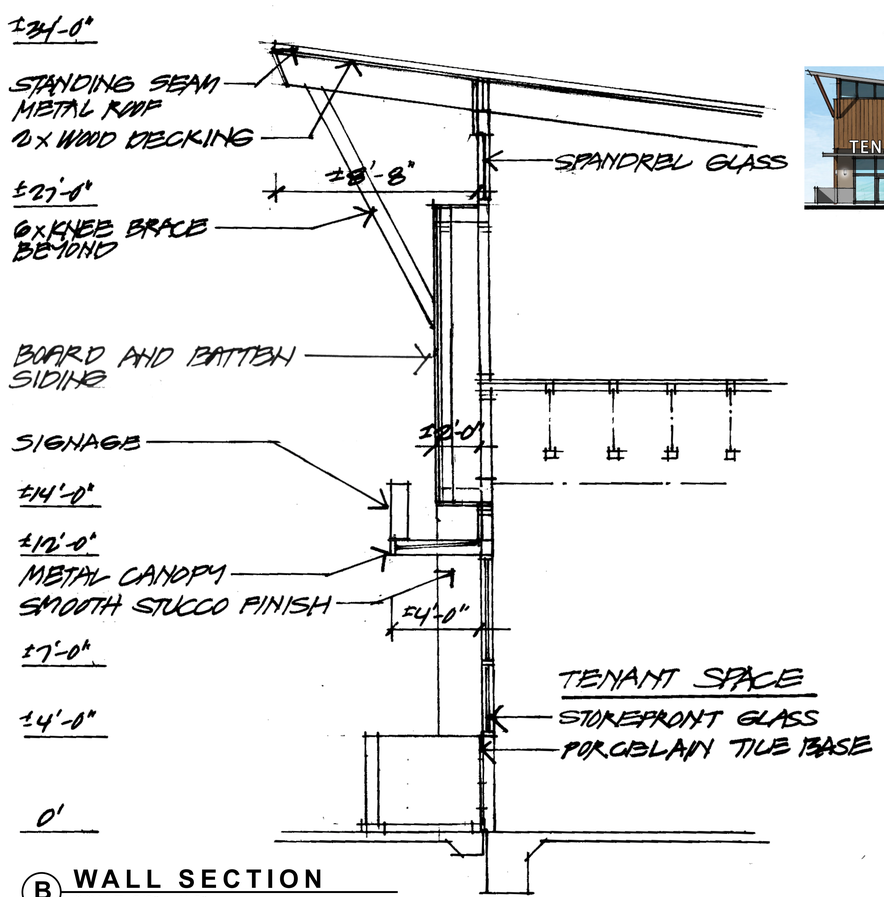
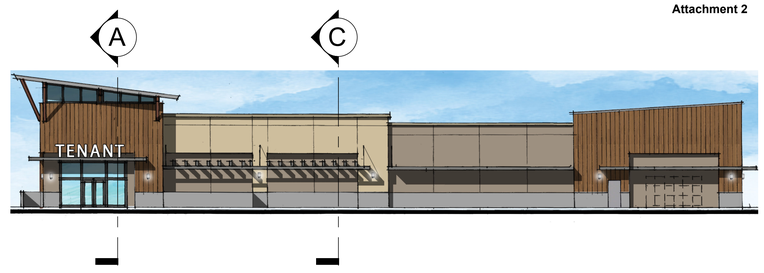
A-201.2



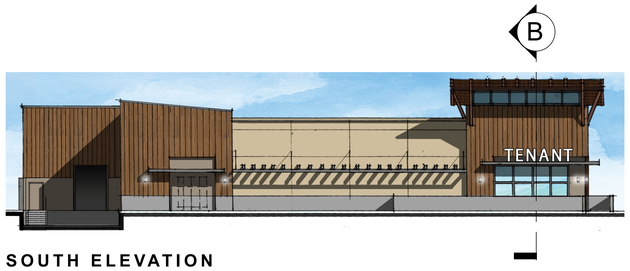
A **WALL SECTION**
SCALE: 3/8" = 1'-0"



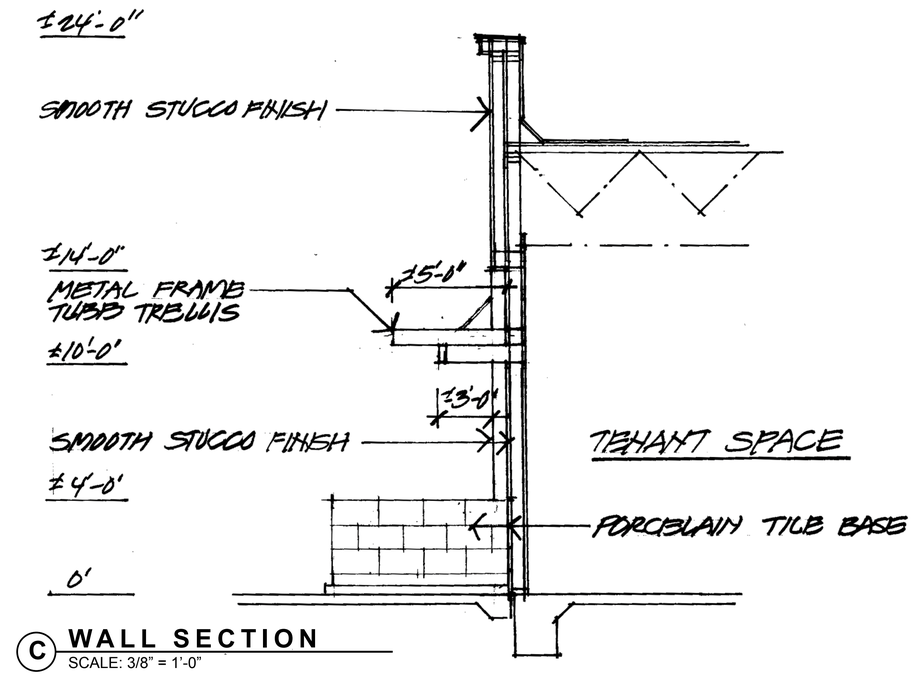
B **WALL SECTION**
SCALE: 3/8" = 1'-0"



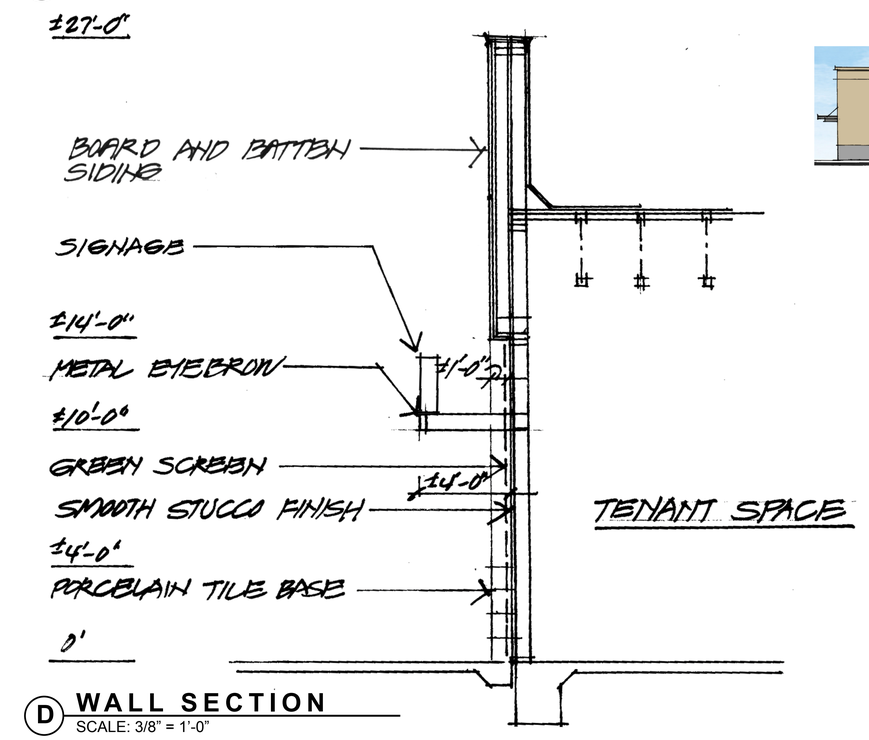
EAST ELEVATION



SOUTH ELEVATION

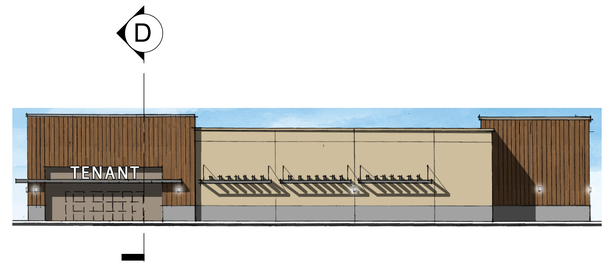


C **WALL SECTION**
SCALE: 3/8" = 1'-0"



D **WALL SECTION**
SCALE: 3/8" = 1'-0"

WEST ELEVATION



NORTH ELEVATION

BUILDING-1

CONCEPTUAL SUBJECT TO CHANGE

NKT COMMERCIAL, LLC
684 HIGUERA STREET, SUITE B, SAN LUIS OBISPO, CA 93401
T: 805.541.9094

NWC TANK FARM ROAD & BROAD STREET

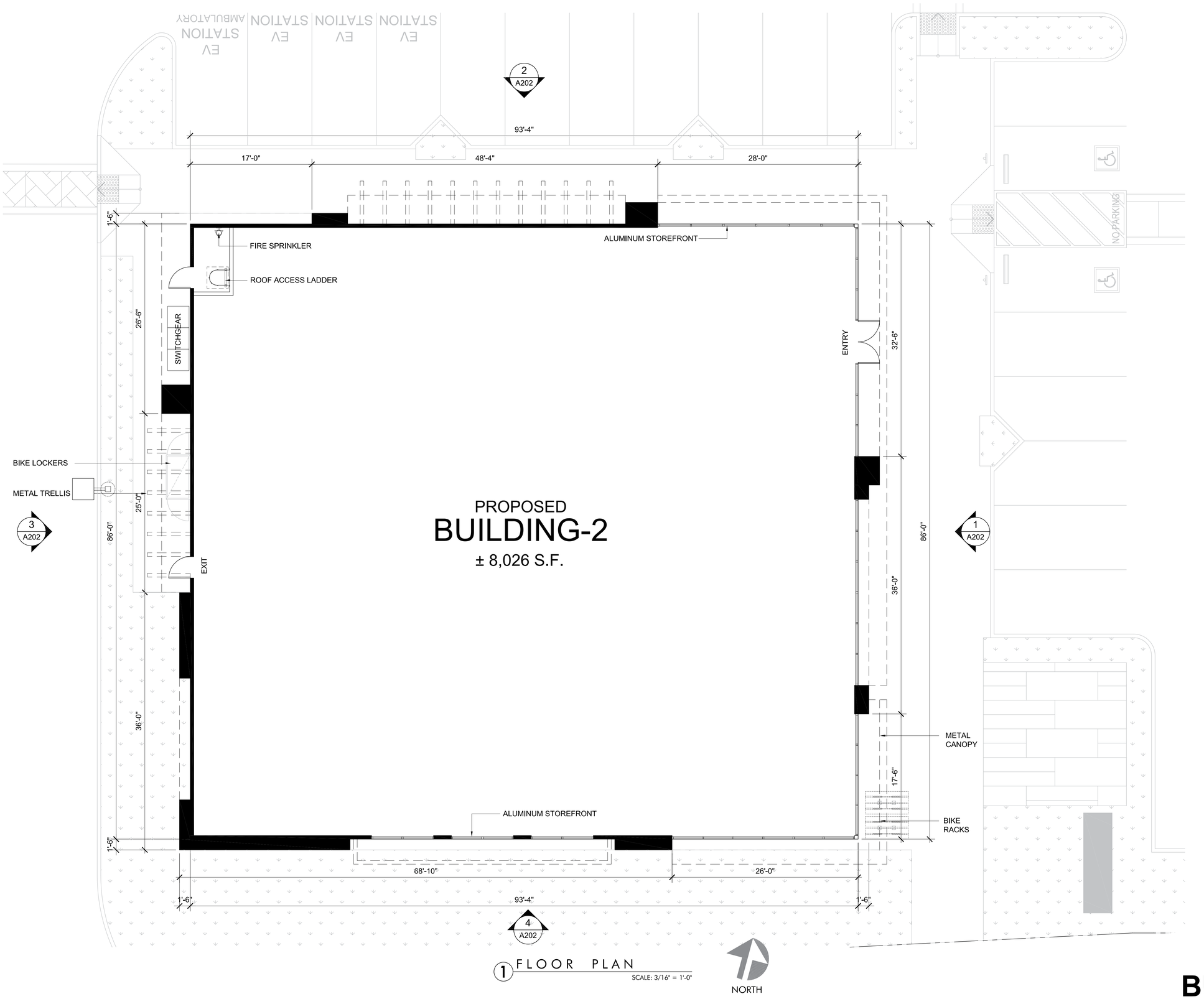
San Luis Obispo, California

#	Description	Date
1	1ST SUBMITTAL	03.20.2018
2		
3		
4	2ND SUBMITTAL	11.14.2018

McKently Malak ARCHITECTS
35 Hugus Alley Suite 200
Pasadena, California 91103
T:626.583.8348 F:626.583.8387

WALL SECTIONS
03.20.2018 13215TMA

A-301



1 FLOOR PLAN
SCALE: 3/16" = 1'-0"

NORTH

BUILDING-2

CONCEPTUAL SUBJECT TO CHANGE

NKT COMMERCIAL, LLC
684 HIGUERA STREET, SUITE B, SAN LUIS OBISPO, CA 93401
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NWC TANK FARM ROAD & BROAD STREET

San Luis Obispo, California

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35 Hugus Alley Suite 200
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T:626.583.8348 F:626.583.8387

FLOOR PLAN
03.20.2018 13215TMA

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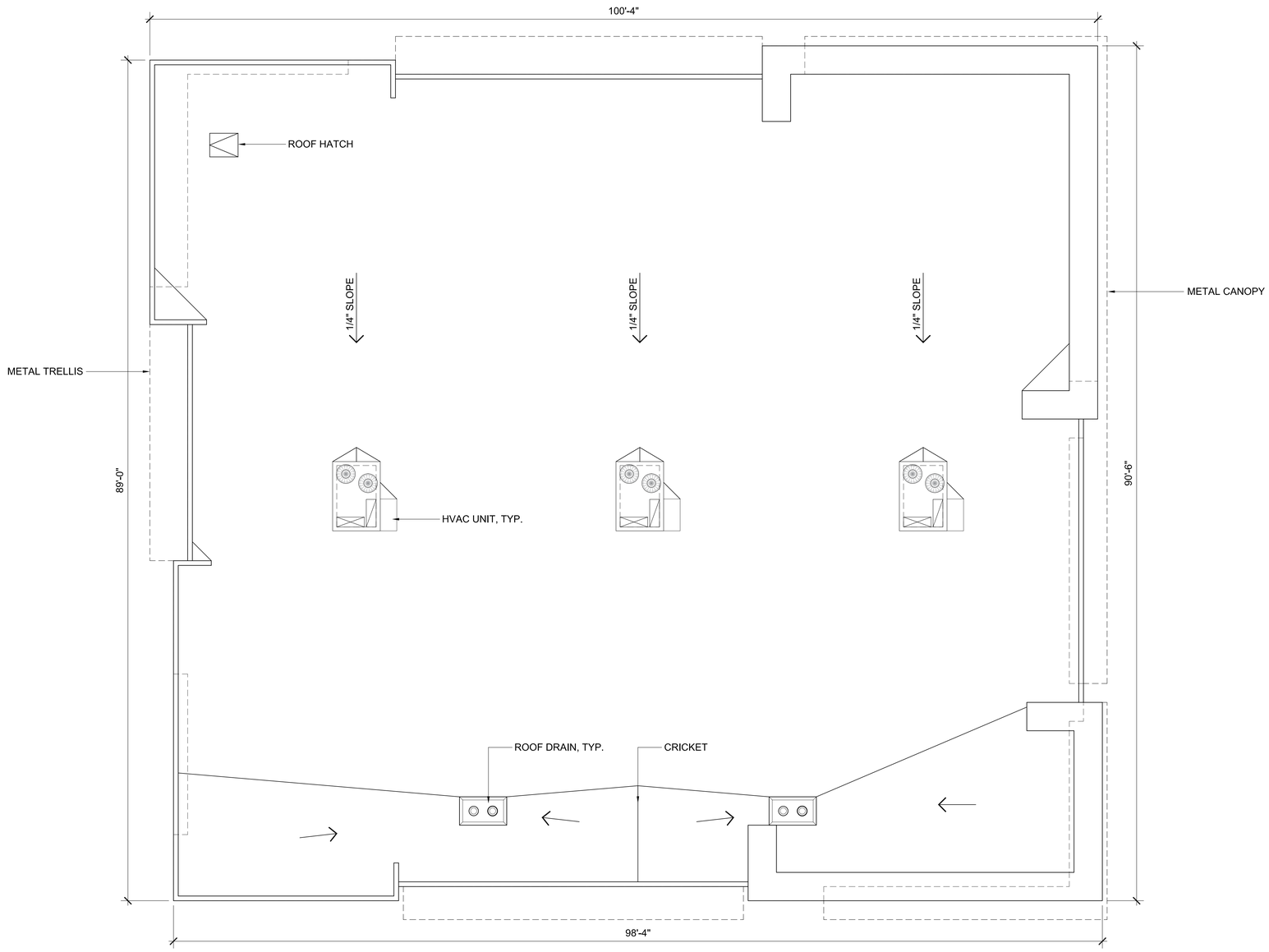

NOTE: SEE ELEVATIONS FOR PARAPET HEIGHTS

1 ROOF PLAN
SCALE: 3/16" = 1'-0"

NORTH

BUILDING-2

CONCEPTUAL SUBJECT TO CHANGE

NKT COMMERCIAL, LLC
684 HIGUERA STREET, SUITE B, SAN LUIS OBISPO, CA 93401
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NWC TANK FARM ROAD & BROAD STREET

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Pasadena, California 91103
T:626.583.8348 F:626.583.8387

ROOF PLAN
03.20.2018 13215TMA

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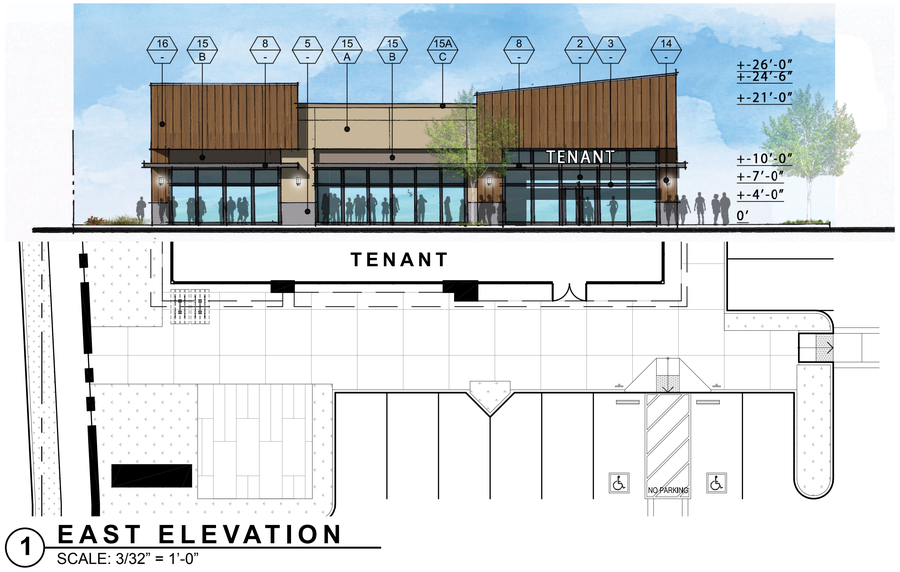
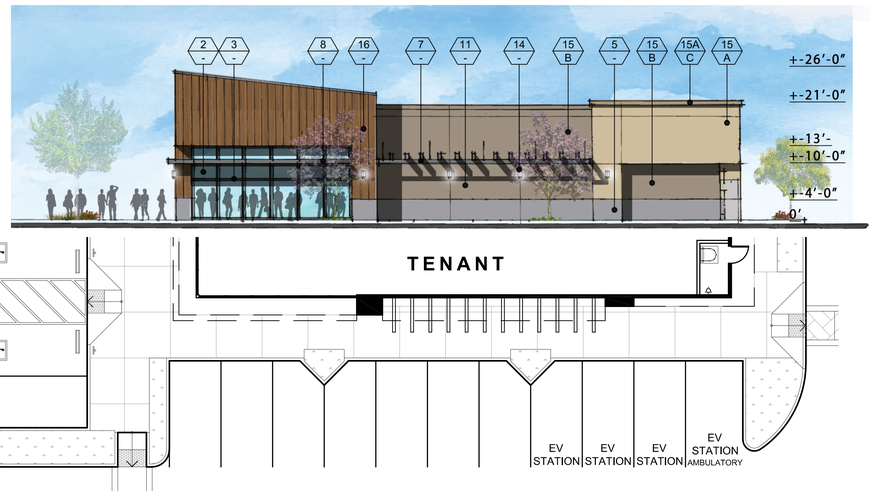
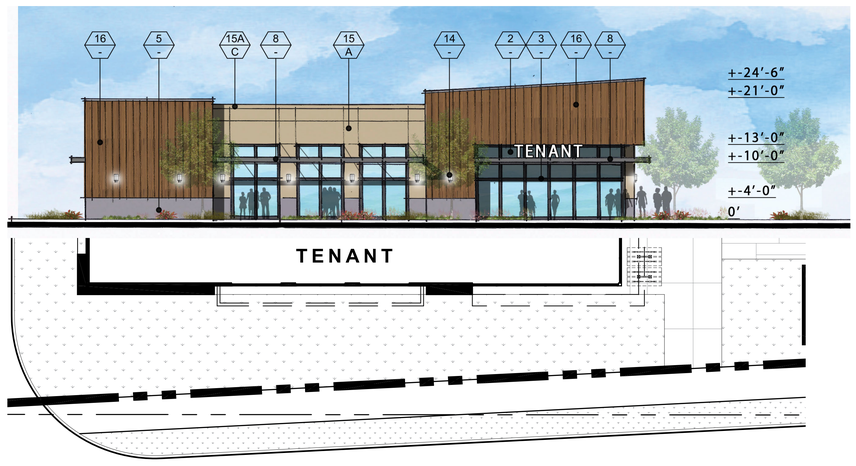


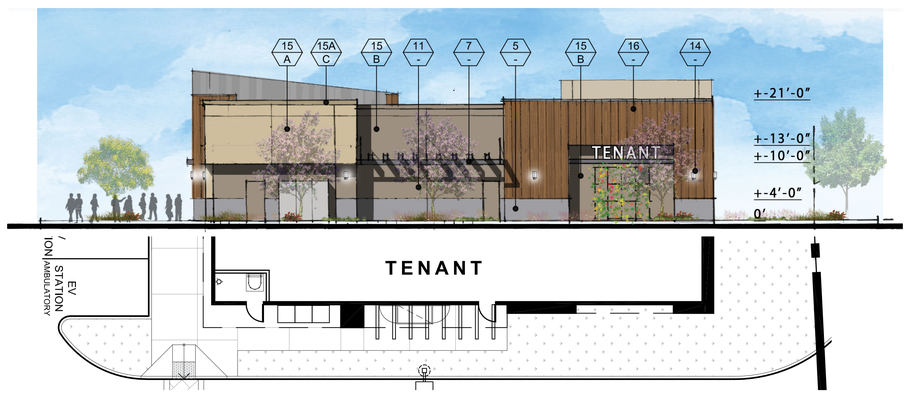
1 EAST ELEVATION
SCALE: 3/32” = 1’-0”



2 NORTH ELEVATION
SCALE: 3/32” = 1’-0”



4 SOUTH ELEVATION
SCALE: 3/32” = 1’-0”



3 WEST ELEVATION
SCALE: 3/32” = 1’-0”

FINISH KEYNOTES

1 - STANDING SEAM METAL ROOF
MODEL: SCR-16 STANDING SEAM
COLOR: ZINC GRAY
BY: MORIN

2 - STOREFRONT GLASS
GLASS: 1” CLEAR FLOAT GLASS
BY: PPG

3 - STOREFRONT
FINISH: CLEAR ANODIZED ALUMINUM
BY: ARCADIA

4 - SIDING
MODEL: VINTAGE COLLECTION
COLOR: CYPRESS (70%), MAHOGANY (30%)
BY: AZEK

5 - TILE BASE
MODEL: COLORBODY PORCELAIN-INVOKE
COLOR: MYSTIC WAY ID02, 12”x24”
TILE GROUT: CUSTOM
PRODUCT-335 WINTER GRAY
BY: DALTILE

6 - METAL CANOPY
FINISH: PAINTED STEEL TUBE
COLOR: DE6369 LEGENDARY GRAY, DUNN EDWARDS
BY: GENERAL CONTRACTOR

7 - METAL TRELLIS FRAME / INFILL
FINISH: PAINTED STEEL TUBE
COLOR: DE6369 LEGENDARY GRAY, DUNN EDWARDS
BY: GENERAL CONTRACTOR

8 - METAL EYEBROW
FINISH: PAINTED STEEL TUBE
COLOR: DE6369 LEGENDARY GRAY, DUNN EDWARDS
BY: GENERAL CONTRACTOR

9 - SPANDREL GLASS
COLOR: WARM GRAY
BY: VIRACON

10 - WOOD EAVES / KICKERS
FINISH: PAINTED-SEMI TRANSPARENT
COLOR: DEC 770 DRIFTING, DUNN EDWARDS
BY: GENERAL CONTRACTOR

11 - WIRE GRID
BY: GENERAL CONTRACTOR

12 - WALL SCONCE
MODEL: LASER LED LAS5562 NF
COLOR: GRAY
BY: US ARCHITECTURAL LIGHTING

13 - PEDESTRIAN LIGHTS
MODEL: ECLIPSE MAXI-LED, EC 811, POLE-PAA 512
COLOR: GUN METAL
BY: LUMINIS

14 - WALL SCONCE
MODEL: ECLIPSE MAXI-LED EC 852
COLOR: GUN METAL
BY: LUMINIS

15 - STUCCO
FINISH: SMOOTH STEEL TROWEL
BY: HIGHLAND STUCCO

15A - CORNICE
FINISH: SMOOTH STEEL TROWEL
COLOR: DET 637 SEAGULL WAIL
BY: HIGHLAND STUCCO

16 - BOARD & BATTEN SIDING
VERTICAL SIDING WITH 1”X3” VERTICAL BATTENS @ 12” O.C.

PAINT COLORS

A - PAINT
COLOR: DET 637 SEAGULL WAIL
BY: DUNN EDWARDS

B - PAINT
COLOR: DEC 750 BISON BEIGE
BY: DUNN EDWARDS

C - PAINT
COLOR: DEC 751 ASH GRAY
BY: DUNN EDWARDS

D - PAINT
COLOR: DE 6369 LEGENDARY GRAY
BY: DUNN EDWARDS

E - PAINT
COLOR: DEC 770 DRIFTING
BY: DUNN EDWARDS

BUILDING-2
CONCEPTUAL SUBJECT TO CHANGE

NKT COMMERCIAL, LLC
684 HIGUERA STREET, SUITE B, SAN LUIS OBISPO, CA 93401
T: 805.541.9094

NWC TANK FARM ROAD & BROAD STREET
San Luis Obispo, California

#	Description	Date
1	1ST SUBMITTAL	03.20.2018
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McKently Malak ARCHITECTS
35 Hugus Alley Suite 200
Pasadena, California 91103
T:626.583.8348 F:626.583.8387

ELEVATIONS
03.20.2018 13215TMA

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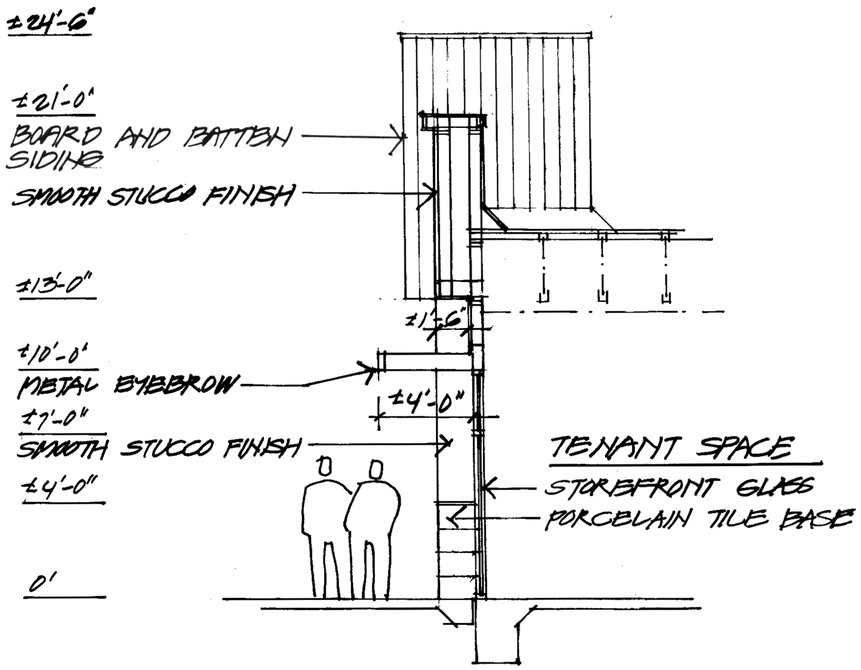
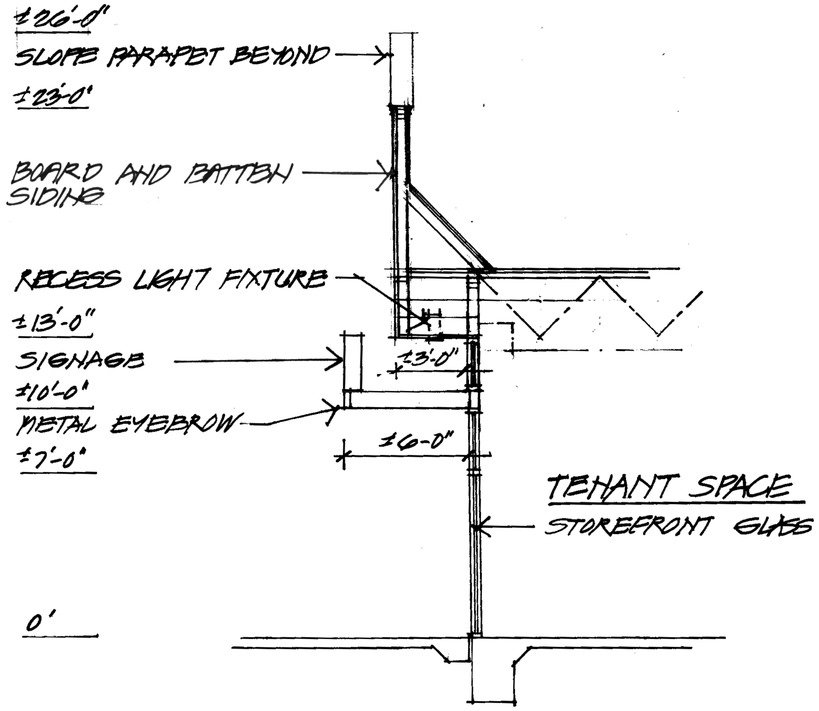
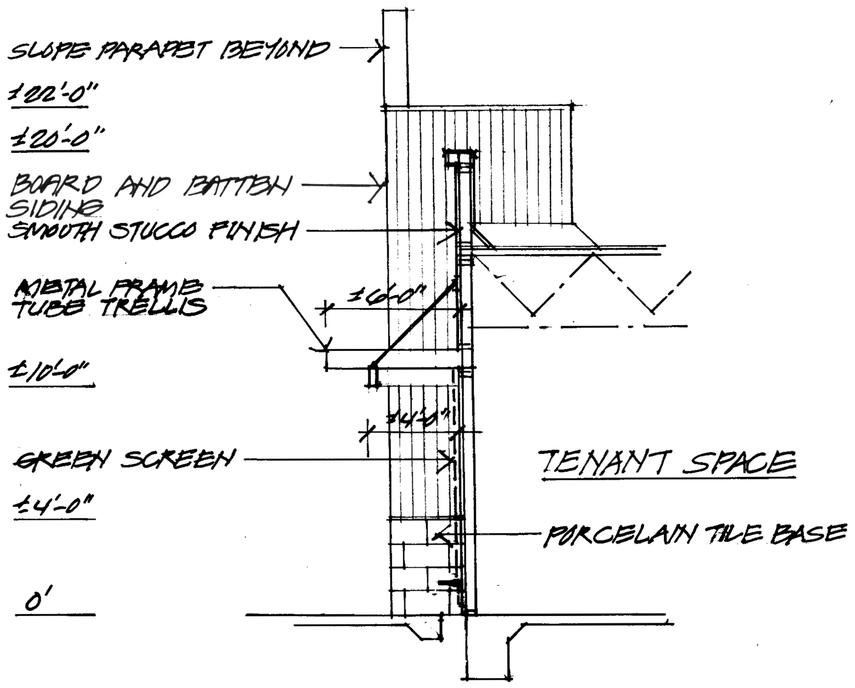


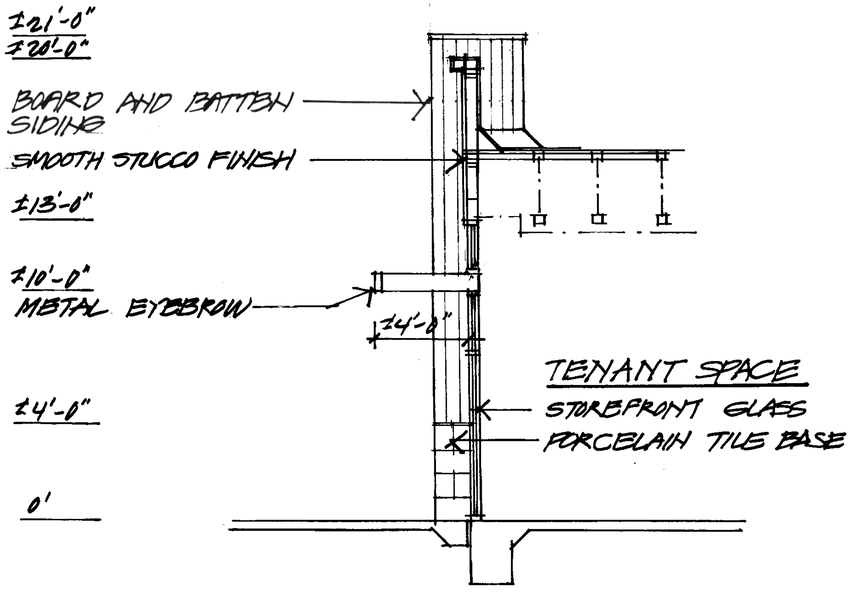
A WALL SECTION
SCALE: 3/8" = 1'-0"



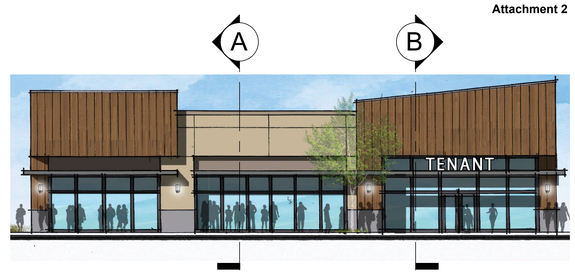
B WALL SECTION
SCALE: 3/8" = 1'-0"



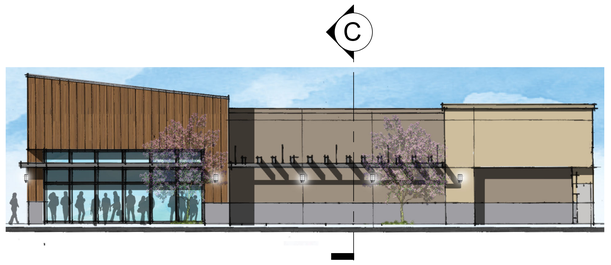
C WALL SECTION
SCALE: 3/8" = 1'-0"



D WALL SECTION
SCALE: 3/8" = 1'-0"



EAST ELEVATION



NORTH ELEVATION

WEST ELEVATION

SOUTH ELEVATION

BUILDING-2

CONCEPTUAL SUBJECT TO CHANGE

NKT COMMERCIAL, LLC
684 HIGUERA STREET, SUITE B, SAN LUIS OBISPO, CA 93401
T: 805.541.9094

NWC TANK FARM ROAD & BROAD STREET

San Luis Obispo, California

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McKently Malak ARCHITECTS
35 Hugus Alley Suite 200
Pasadena, California 91103
T:626.583.8348 F:626.583.8387

WALL SECTIONS
03.20.2018 13215TMA

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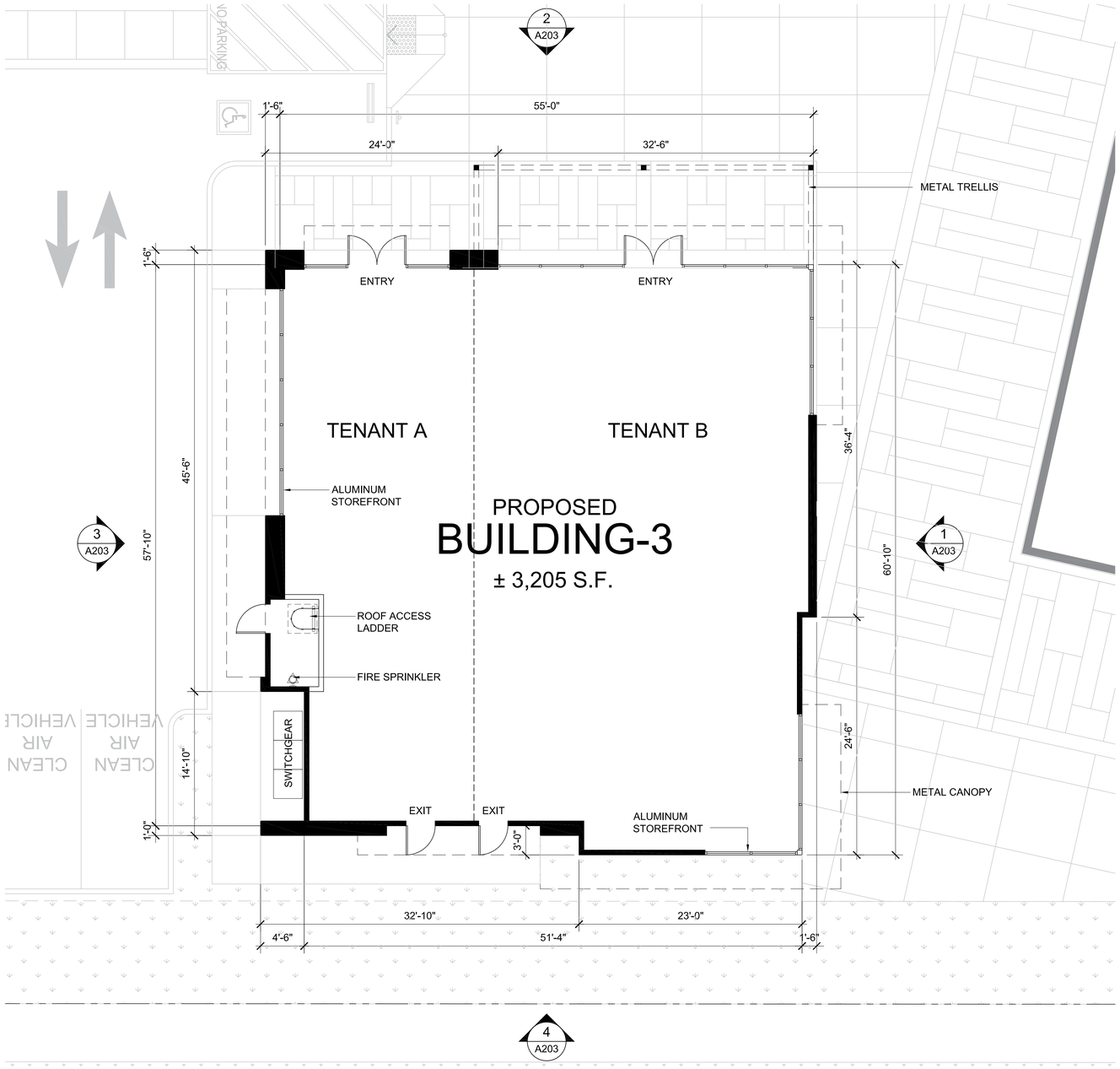

1 FLOOR PLAN
SCALE: 3/16" = 1'-0"

NORTH

BUILDING-3

CONCEPTUAL SUBJECT TO CHANGE

NKT COMMERCIAL, LLC
684 HIGUERA STREET, SUITE B, SAN LUIS OBISPO, CA 93401
T: 805.541.9094

NWC TANK FARM ROAD & BROAD STREET

San Luis Obispo, California

#	Description	Date
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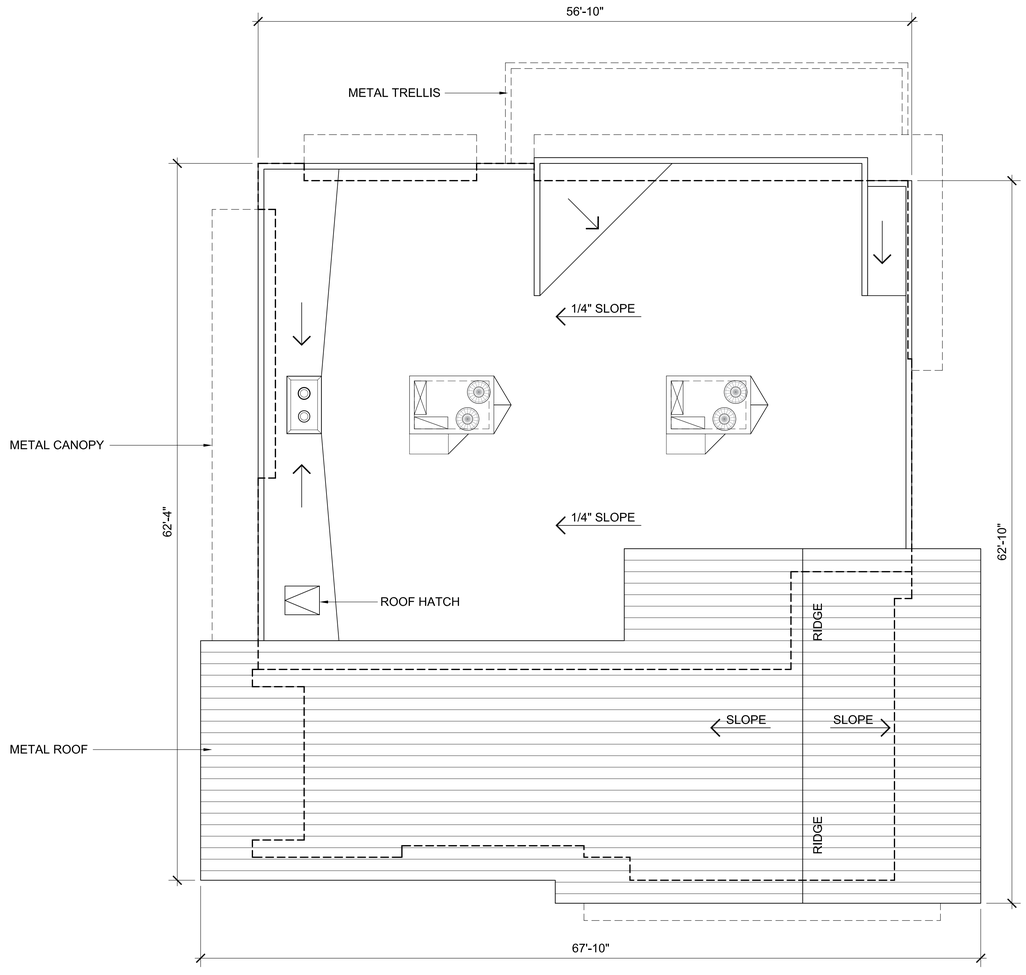
McKently Malak
ARCHITECTS
35 Hugus Alley Suite 200
Pasadena, California 91103
T:626.583.8348 F:626.583.8387

FLOOR PLAN

03.20.2018 13215TMA

A-103



1 ROOF PLAN
SCALE: 3/16" = 1'-0"

NORTH

NOTE: SEE ELEVATIONS FOR PARAPET HEIGHTS

BUILDING-3

CONCEPTUAL SUBJECT TO CHANGE

NKT COMMERCIAL, LLC
684 HIGUERA STREET, SUITE B, SAN LUIS OBISPO, CA 93401
T: 805.541.9094

NWC TANK FARM ROAD & BROAD STREET

San Luis Obispo, California

#	Description	Date
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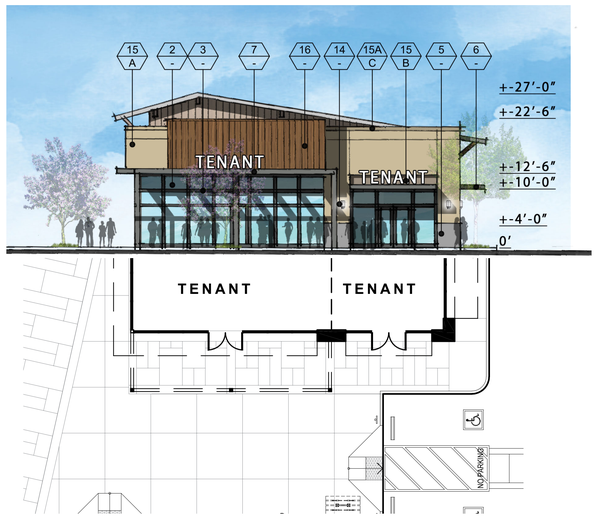
McKently Malak ARCHITECTS
35 Hugus Alley Suite 200
Pasadena, California 91103
T:626.583.8348 F:626.583.8387

ROOF PLAN

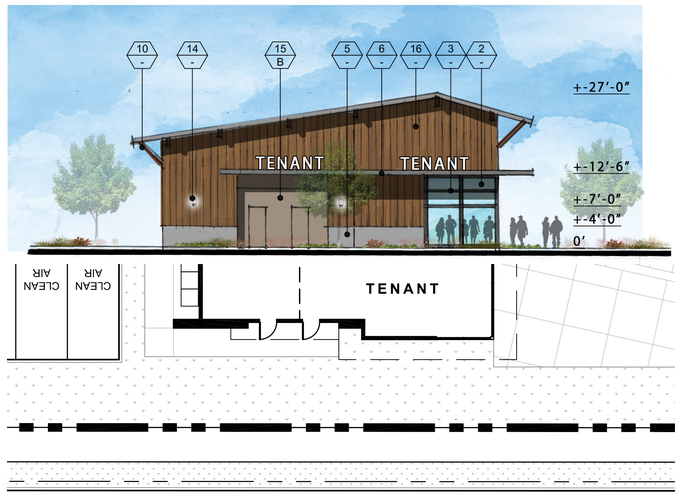
03.20.2018 13215TMA

A-133

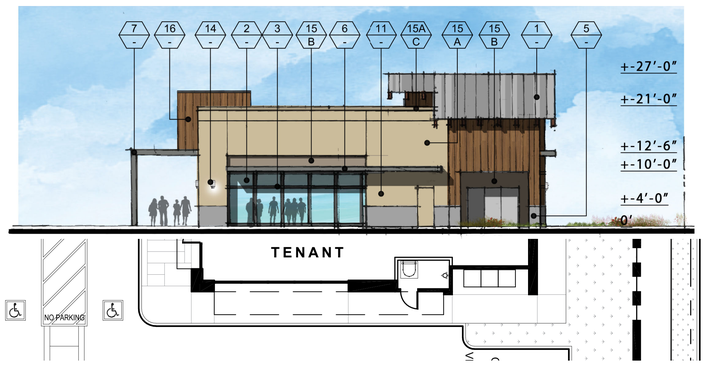
1 EAST ELEVATION
SCALE: 3/32" = 1'-0"



2 NORTH ELEVATION
SCALE: 3/32" = 1'-0"



4 SOUTH ELEVATION
SCALE: 3/32" = 1'-0"



3 WEST ELEVATION
SCALE: 3/32" = 1'-0"

FINISH KEYNOTES

1 - STANDING SEAM METAL ROOF
MODEL: SCR-16 STANDING SEAM
COLOR: ZINC GRAY
BY: MORIN

2 - STOREFRONT GLASS
GLASS: 1" CLEAR FLOAT GLASS
BY: PPG

3 - STOREFRONT
FINISH: CLEAR ANODIZED ALUMINUM
BY: ARCADIA

4 - SIDING
MODEL: VINTAGE COLLECTION
COLOR: CYPRESS (70%), MAHOGANY (30%)
BY: AZEK

5 - TILE BASE
MODEL: COLORBODY PORCELAIN-INVOKE
COLOR: MYSTIC WAY ID02, 12"x24"
TILE GROUT: CUSTOM
PRODUCT-335 WINTER GRAY
BY: DALTILE

6 - METAL CANOPY
FINISH: PAINTED STEEL TUBE
COLOR: DE6369 LEGENDARY GRAY, DUNN EDWARDS
BY: GENERAL CONTRACTOR

7 - METAL TRELLIS FRAME / INFILL
FINISH: PAINTED STEEL TUBE
COLOR: DE6369 LEGENDARY GRAY, DUNN EDWARDS
BY: GENERAL CONTRACTOR

8 - METAL EYEBROW
FINISH: PAINTED STEEL TUBE
COLOR: DE6369 LEGENDARY GRAY, DUNN EDWARDS
BY: GENERAL CONTRACTOR

9 - SPANDREL GLASS
COLOR: WARM GRAY
BY: VIRACON

10 - WOOD EAVES / KICKERS
FINISH: PAINTED-SEMI TRANSPARENT
COLOR: DEC 770 DRIFTING, DUNN EDWARDS
BY: GENERAL CONTRACTOR

11 - WIRE GRID
BY: GENERAL CONTRACTOR

12 - WALL SCONCE
MODEL: LASER LED LAS5562 NF
COLOR: GRAY
BY: US ARCHITECTURAL LIGHTING

13 - PEDESTRIAN LIGHTS
MODEL: ECLIPSE MAXI-LED, EC 811, POLE-PAA 512
COLOR: GUN METAL
BY: LUMINIS

14 - WALL SCONCE
MODEL: ECLIPSE MAXI-LED EC 852
COLOR: GUN METAL
BY: LUMINIS

15 - STUCCO
FINISH: SMOOTH STEEL TROWEL
BY: HIGHLAND STUCCO

15A - CORNICE
FINISH: SMOOTH STEEL TROWEL
COLOR: DET 637 SEAGULL WAIL
BY: HIGHLAND STUCCO

16 - BOARD & BATTEN SIDING
VERTICAL SIDING WITH 1"X3" VERTICAL BATTENS @ 12" O.C.

PAINT COLORS

A - PAINT
COLOR: DET 637 SEAGULL WAIL
BY: DUNN EDWARDS

B - PAINT
COLOR: DEC 750 BISON BEIGE
BY: DUNN EDWARDS

C - PAINT
COLOR: DEC 751 ASH GRAY
BY: DUNN EDWARDS

D - PAINT
COLOR: DE 6369 LEGENDARY GRAY
BY: DUNN EDWARDS

E - PAINT
COLOR: DEC 770 DRIFTING
BY: DUNN EDWARDS

BUILDING-3
CONCEPTUAL SUBJECT TO CHANGE

NKT COMMERCIAL, LLC
684 HIGUERA STREET, SUITE B, SAN LUIS OBISPO, CA 93401
T: 805.541.9094

NWC TANK FARM ROAD & BROAD STREET
San Luis Obispo, California

#	Description	Date
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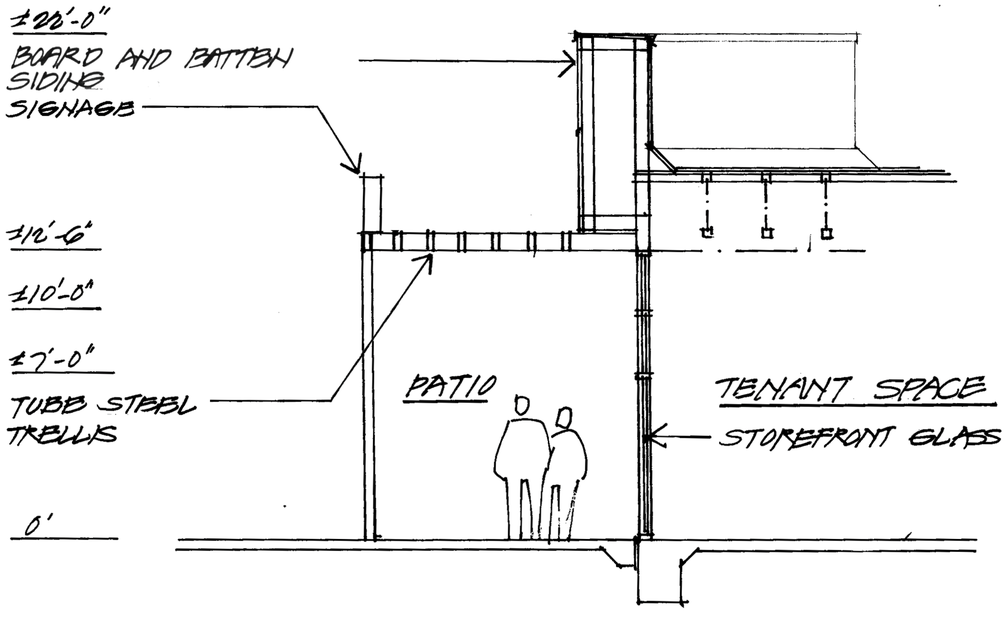
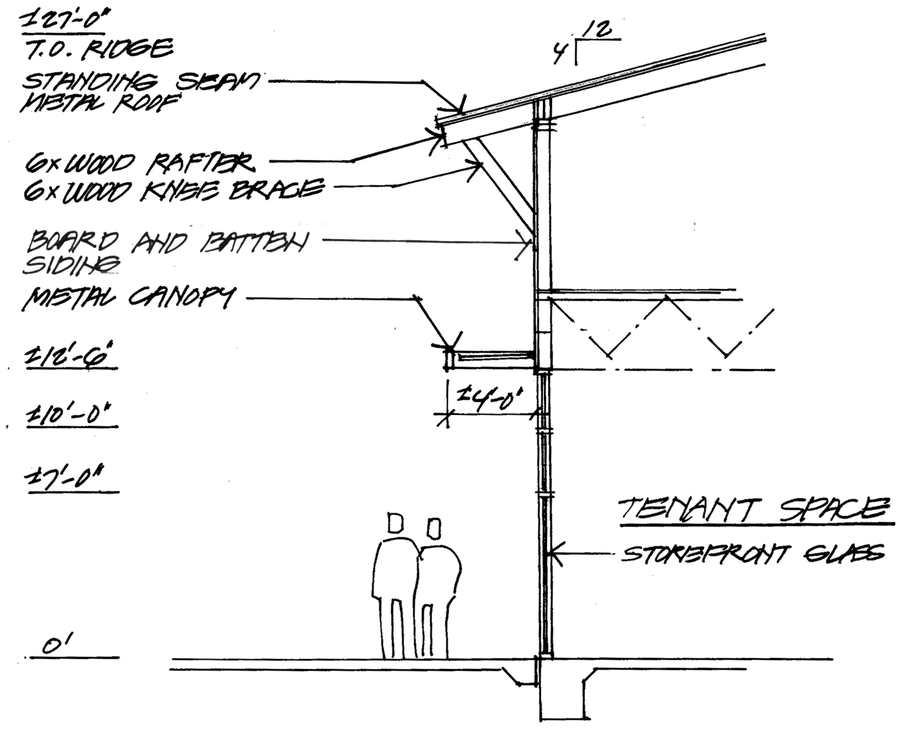
McKently Malak ARCHITECTS
35 Hugus Alley Suite 200
Pasadena, California 91103
T:626.583.8348 F:626.583.8387

ELEVATIONS
03.20.2018 13215TMA

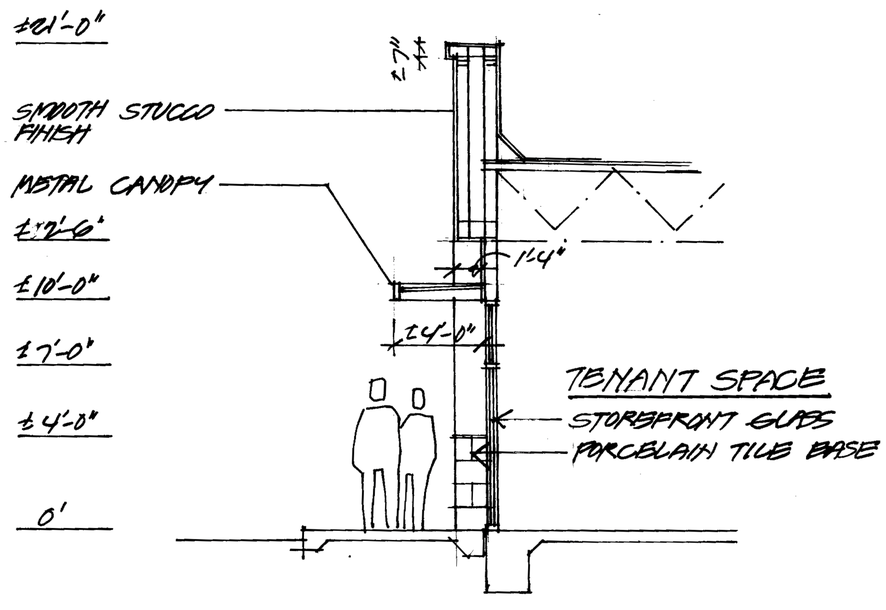
A-203



A WALL SECTION
SCALE: 3/8" = 1'-0"

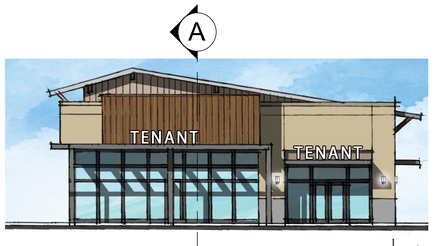


B WALL SECTION
SCALE: 3/8" = 1'-0"



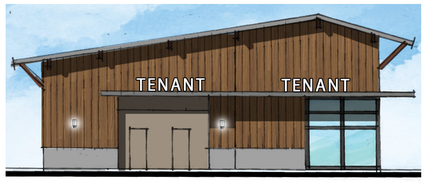
C WALL SECTION
SCALE: 3/8" = 1'-0"

EAST ELEVATION



NORTH ELEVATION

WEST ELEVATION



SOUTH ELEVATION

BUILDING-3
CONCEPTUAL SUBJECT TO CHANGE

NKT COMMERCIAL, LLC
684 HIGUERA STREET, SUITE B, SAN LUIS OBISPO, CA 93401
T: 805.541.9094

NWC TANK FARM ROAD & BROAD STREET
San Luis Obispo, California

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35 Hugus Alley Suite 200
Pasadena, California 91103
T:626.583.8348 F:626.583.8387

WALL SECTIONS
03.20.2018 13215TMA

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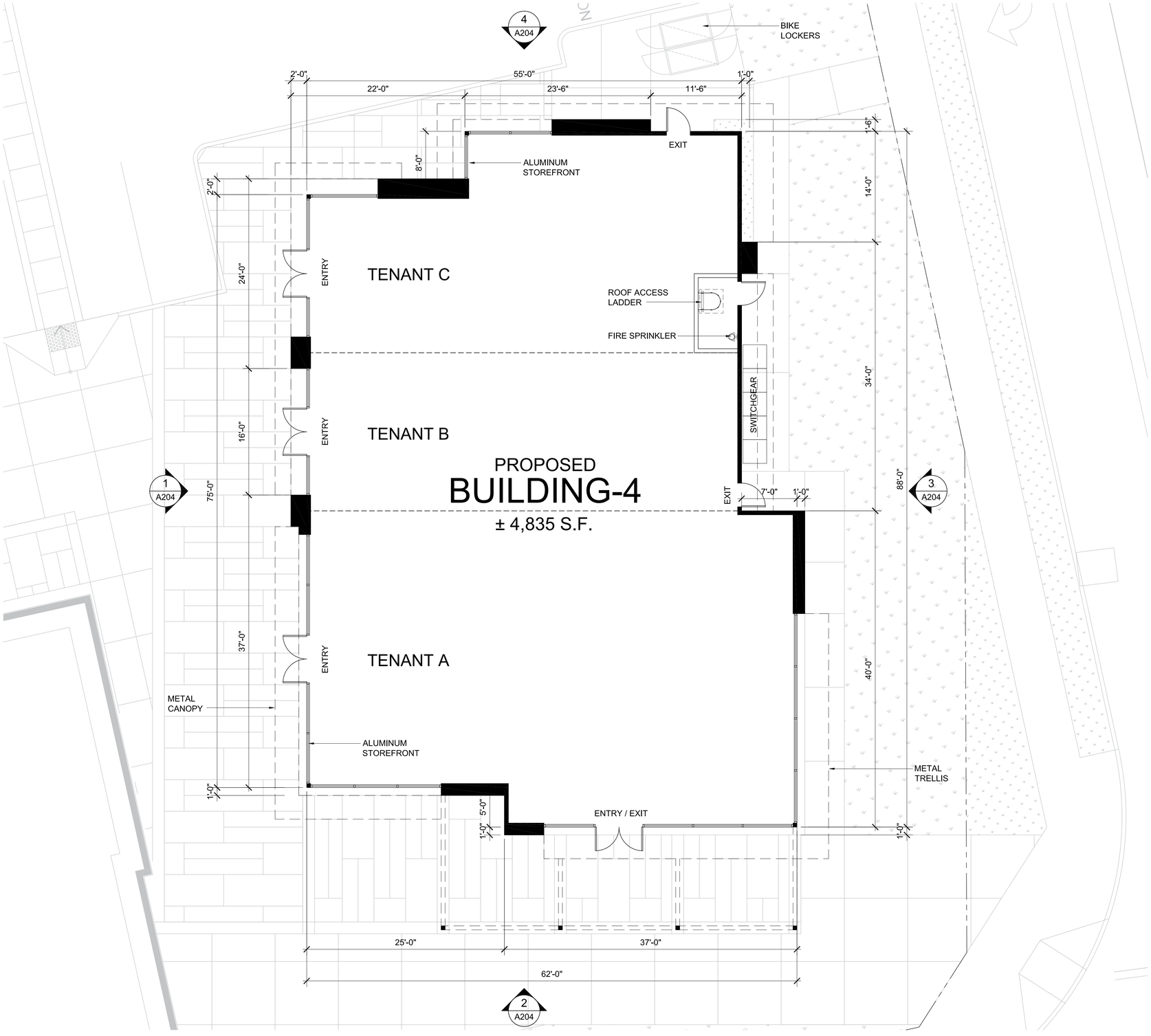

1 FLOOR PLAN
SCALE: 3/16" = 1'-0"

PP

BUILDING-4
CONCEPTUAL SUBJECT TO CHANGE

NKT COMMERCIAL, LLC
684 HIGUERA STREET, SUITE B, SAN LUIS OBISPO, CA 93401
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NWC TANK FARM ROAD & BROAD STREET
San Luis Obispo, California

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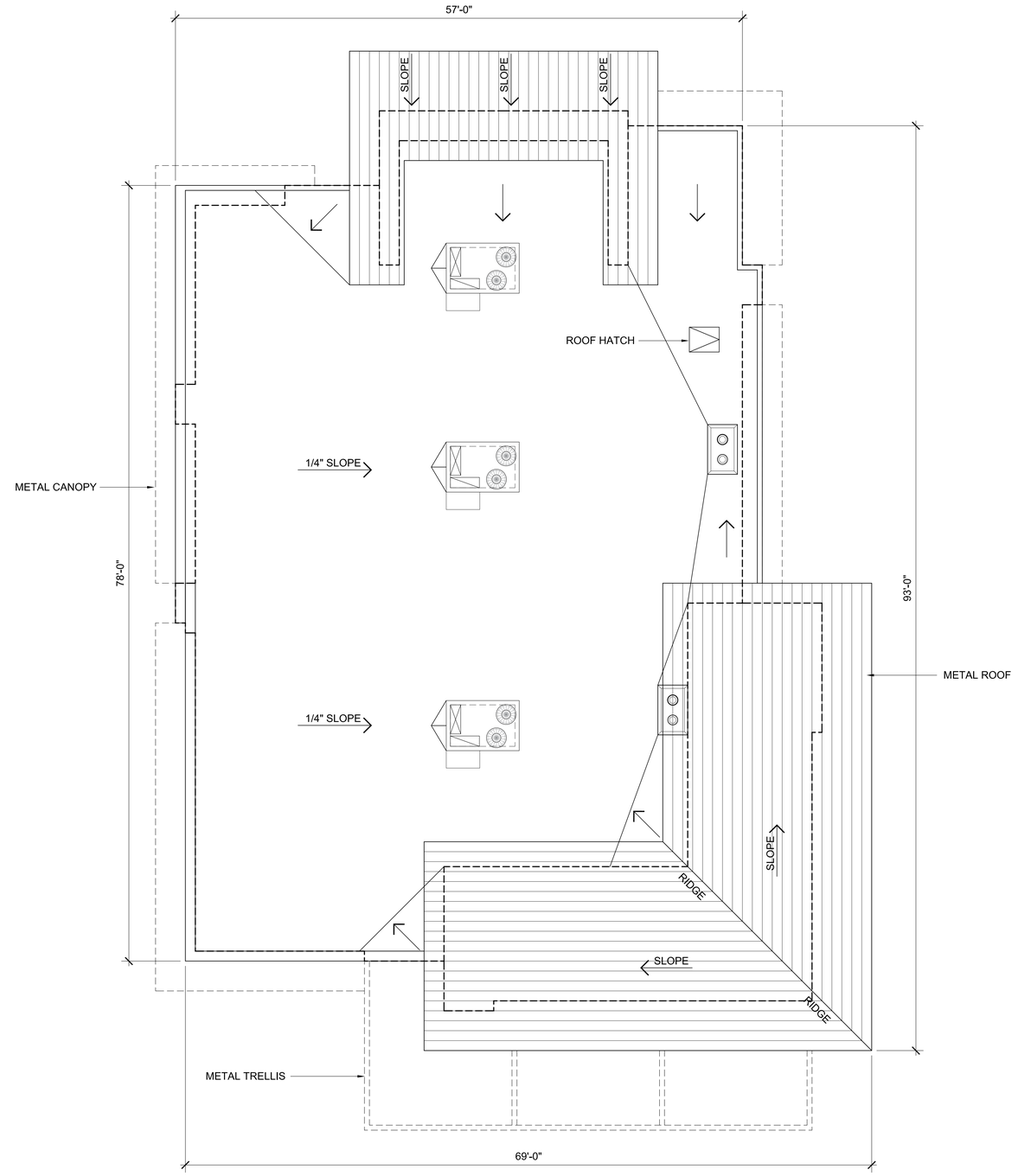
2		
3		
4	2ND SUBMITTAL	11.14.2018

McKently Malak
ARCHITECTS
35 Hugus Alley Suite 200
Pasadena, California 91103
T:626.583.8348 F:626.583.8387

FLOOR PLAN
03.20.2018 13215TMA

A-104



1 ROOF PLAN
SCALE: 3/16" = 1'-0"

NORTH

NOTE: SEE ELEVATIONS FOR PARAPET HEIGHTS

BUILDING-4

CONCEPTUAL SUBJECT TO CHANGE

NKT COMMERCIAL, LLC
684 HIGUERA STREET, SUITE B, SAN LUIS OBISPO, CA 93401
T: 805.541.9094

NWC TANK FARM ROAD & BROAD STREET

San Luis Obispo, California

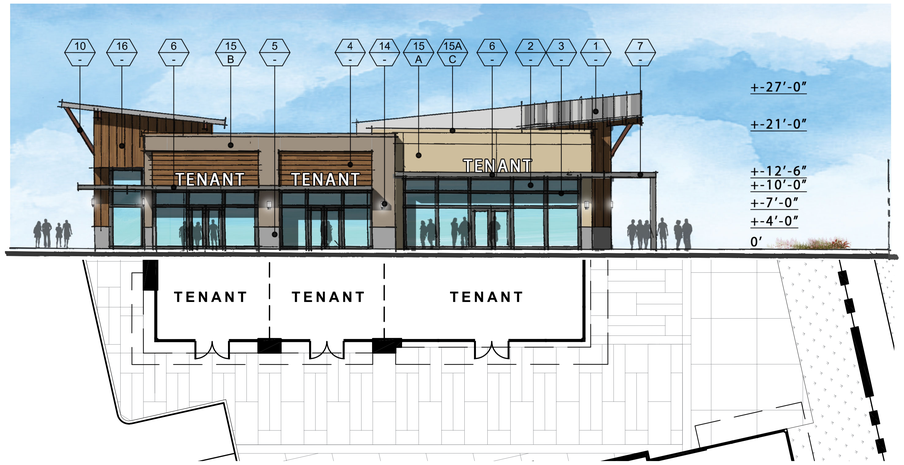
#	Description	Date
1	1ST SUBMITTAL	03.20.2018
2		
3		
4	2ND SUBMITTAL	11.14.2018

McKently Malak ARCHITECTS
35 Hugus Alley Suite 200
Pasadena, California 91103
T:626.583.8348 F:626.583.8387

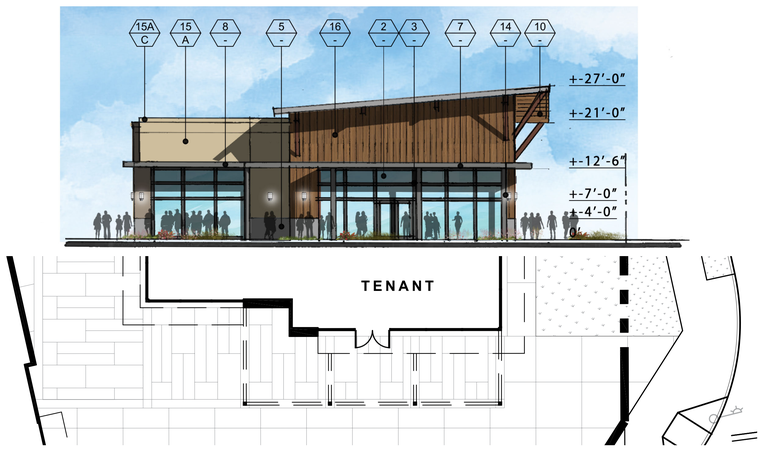
ROOF PLAN

03.20.2018 13215TMA

A-134

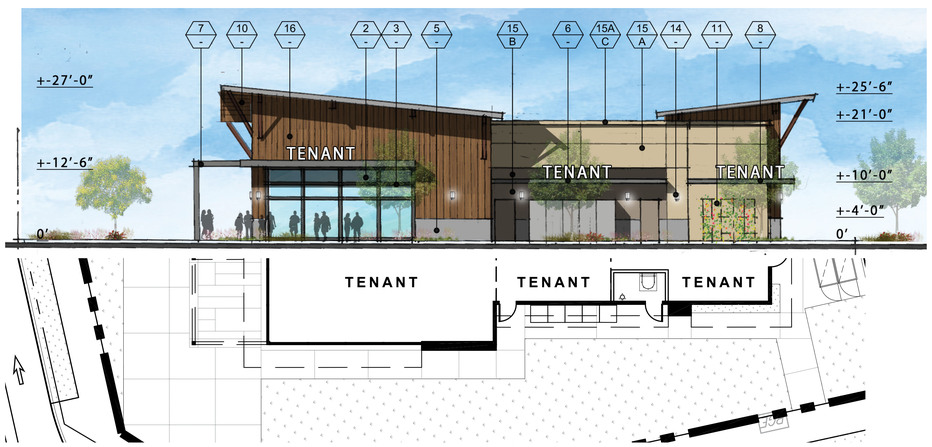


1 WEST ELEVATION
SCALE: 3/32" = 1'-0"



2 SOUTH ELEVATION
SCALE: 3/32" = 1'-0"

4 NORTH ELEVATION
SCALE: 3/32" = 1'-0"



3 EAST ELEVATION
SCALE: 3/32" = 1'-0"

FINISH KEYNOTES

1 - STANDING SEAM METAL ROOF
MODEL: SCR-16 STANDING SEAM
COLOR: ZINC GRAY
BY: MORIN

2 - STOREFRONT GLASS
GLASS: 1" CLEAR FLOAT GLASS
BY: PPG

3 - STOREFRONT
FINISH: CLEAR ANODIZED ALUMINUM
BY: ARCADIA

4 - SIDING
MODEL: VINTAGE COLLECTION
COLOR: CYPRESS (70%), MAHOGANY (30%)
BY: AZEK

5 - TILE BASE
MODEL: COLORBODY PORCELAIN-INVOKE
COLOR: MYSTIC WAY ID02, 12"x24"
TILE GROUT: CUSTOM
PRODUCT-335 WINTER GRAY
BY: DALTILE

6 - METAL CANOPY
FINISH: PAINTED STEEL TUBE
COLOR: DE6369 LEGENDARY GRAY,
DUNN EDWARDS
BY: GENERAL CONTRACTOR

7 - METAL TRELLIS FRAME / INFILL
FINISH: PAINTED STEEL TUBE
COLOR: DE6369 LEGENDARY GRAY,
DUNN EDWARDS
BY: GENERAL CONTRACTOR

8 - METAL EYEBROW
FINISH: PAINTED STEEL TUBE
COLOR: DE6369 LEGENDARY GRAY,
DUNN EDWARDS
BY: GENERAL CONTRACTOR

9 - SPANDREL GLASS
COLOR: WARM GRAY
BY: VIRACON

10 - WOOD EAVES / KICKERS
FINISH: PAINTED-SEMI TRANSPARENT
COLOR: DEC 770 DRIFTING,
DUNN EDWARDS
BY: GENERAL CONTRACTOR

11 - WIRE GRID
BY: GENERAL CONTRACTOR

12 - WALL SCONCE
MODEL: LASER LED LAS5562 NF
COLOR: GRAY
BY: US ARCHITECTURAL LIGHTING

13 - PEDESTRIAN LIGHTS
MODEL: ECLIPSE MAXI-LED,
EC 811, POLE-PAA 512
COLOR: GUN METAL
BY: LUMINIS

14 - WALL SCONCE
MODEL: ECLIPSE MAXI-LED EC 852
COLOR: GUN METAL
BY: LUMINIS

15 - STUCCO
FINISH: SMOOTH STEEL TROWEL
BY: HIGHLAND STUCCO

15A - CORNICE
FINISH: SMOOTH STEEL TROWEL
COLOR: DET 637 SEAGULL WAIL
BY: HIGHLAND STUCCO

16 - BOARD & BATTEN SIDING
VERTICAL SIDING WITH 1"X3" VERTICAL
BATTENS @ 12" O.C.

PAINT COLORS

A - PAINT
COLOR: DET 637 SEAGULL WAIL
BY: DUNN EDWARDS

B - PAINT
COLOR: DEC 750 BISON BEIGE
BY: DUNN EDWARDS

C - PAINT
COLOR: DEC 751 ASH GRAY
BY: DUNN EDWARDS

D - PAINT
COLOR: DE 6369 LEGENDARY GRAY
BY: DUNN EDWARDS

E - PAINT
COLOR: DEC 770 DRIFTING
BY: DUNN EDWARDS

BUILDING-4
CONCEPTUAL SUBJECT TO CHANGE

NKT COMMERCIAL, LLC
684 HIGUERA STREET, SUITE B, SAN LUIS OBISPO, CA 93401
T: 805.541.9094

NWC TANK FARM ROAD & BROAD STREET
San Luis Obispo, California

#	Description	Date
1	1ST SUBMITTAL	03.20.2018
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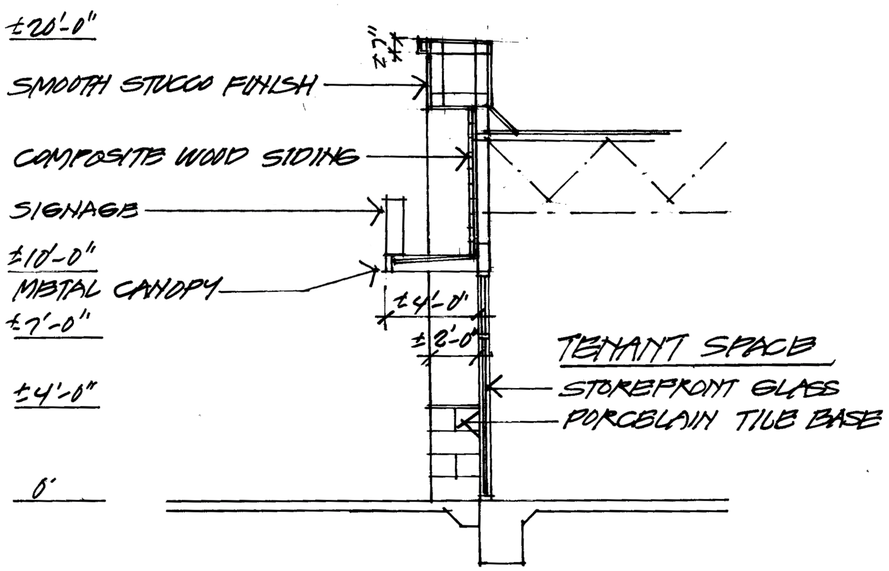
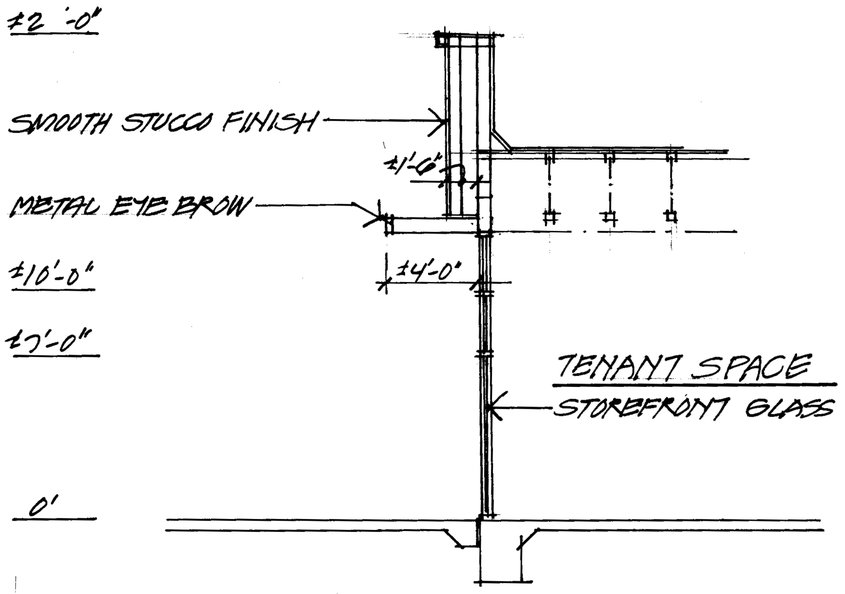
McKently Malak ARCHITECTS
35 Hugus Alley Suite 200
Pasadena, California 91103
T:626.583.8348 F:626.583.8387

ELEVATIONS
03.20.2018 13215TMA

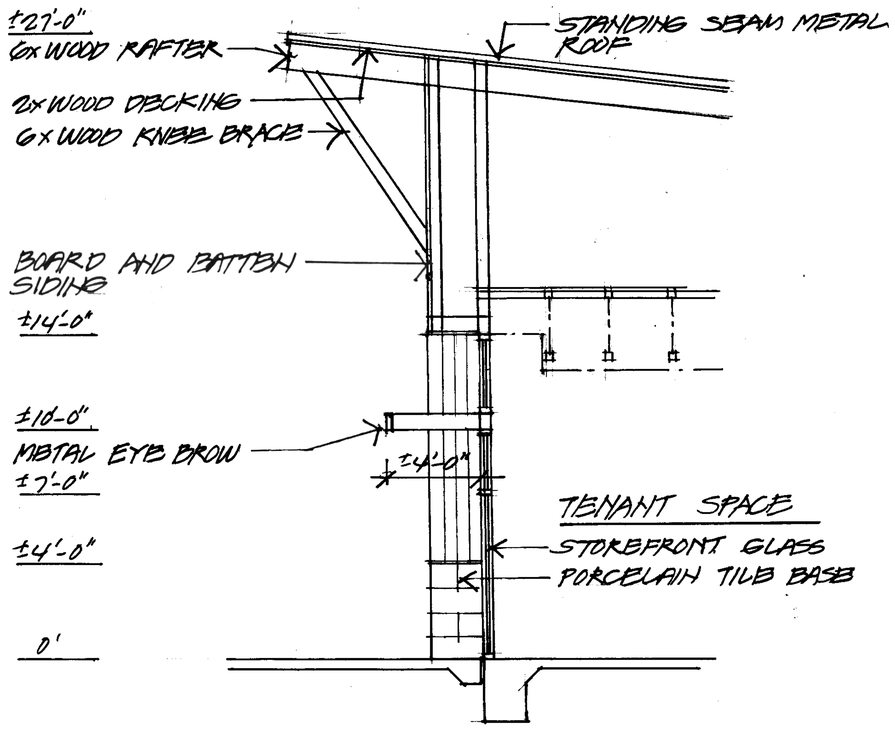
A-204



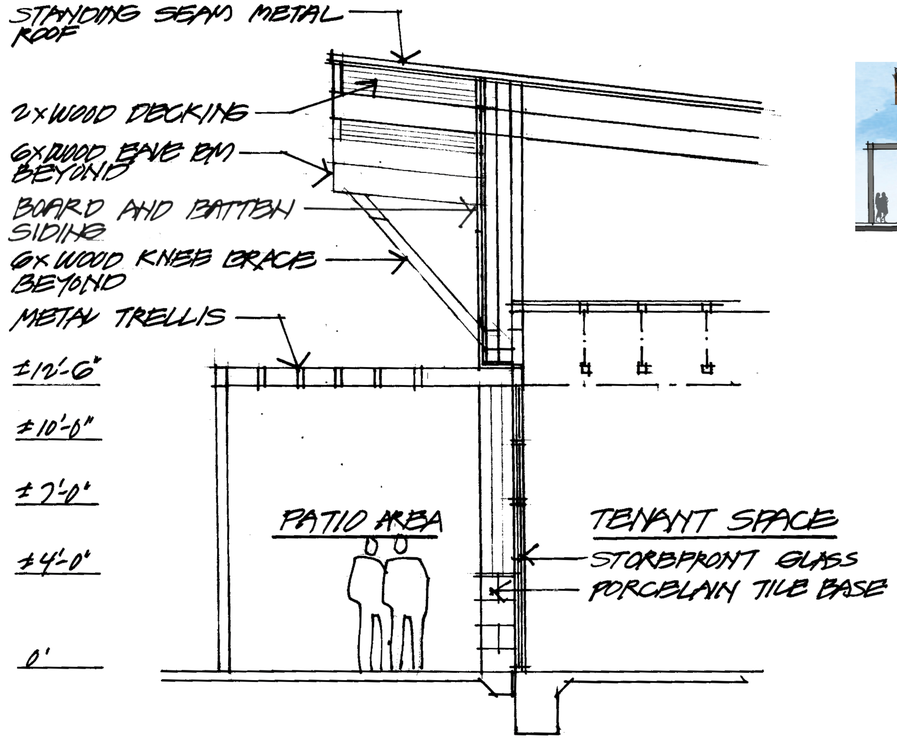
A WALL SECTION
SCALE: 3/8" = 1'-0"



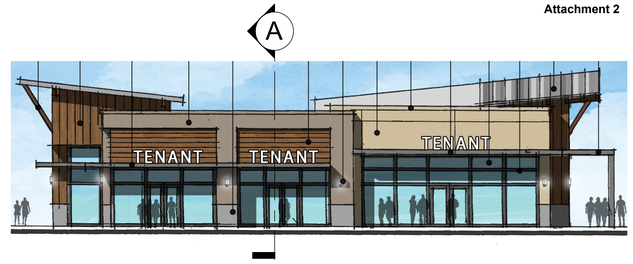
B WALL SECTION
SCALE: 3/8" = 1'-0"



C WALL SECTION
SCALE: 3/8" = 1'-0"



D WALL SECTION
SCALE: 3/8" = 1'-0"



WEST ELEVATION

SOUTH ELEVATION

EAST ELEVATION

NORTH ELEVATION

BUILDING-4
CONCEPTUAL SUBJECT TO CHANGE

NKT COMMERCIAL, LLC
684 HIGUERA STREET, SUITE B, SAN LUIS OBISPO, CA 93401
T: 805.541.9094

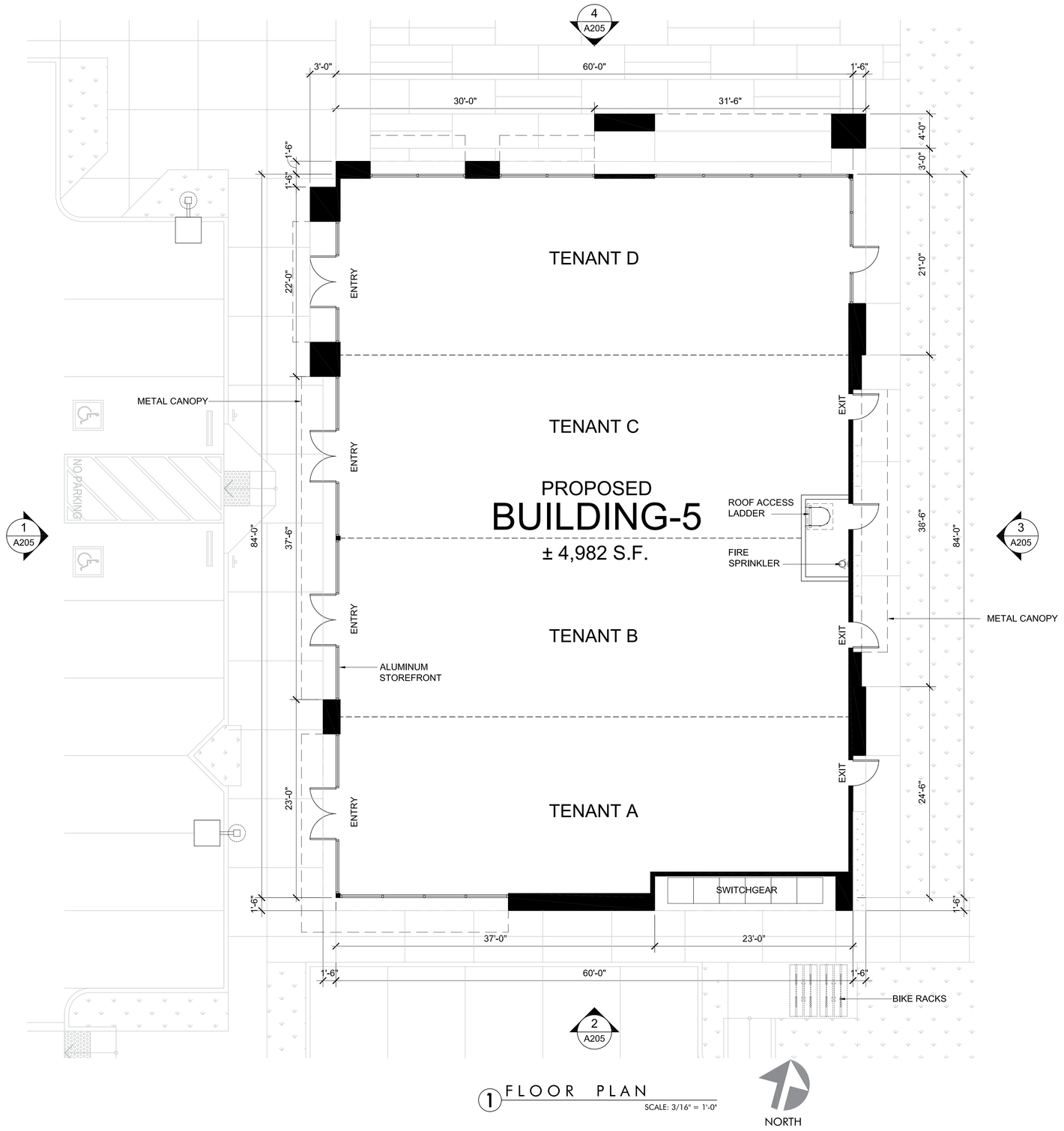
NWC TANK FARM ROAD & BROAD STREET
San Luis Obispo, California

#	Description	Date
1	1ST SUBMITTAL	03.20.2018
2		
3		
4	2ND SUBMITTAL	11.14.2018

McKently Malak ARCHITECTS
35 Hugus Alley Suite 200
Pasadena, California 91103
T:626.583.8348 F:626.583.8387

WALL SECTIONS
03.20.2018 13215TMA

A-304



1 FLOOR PLAN
SCALE: 3/16" = 1'-0"

BUILDING-5

CONCEPTUAL SUBJECT TO CHANGE

NKT COMMERCIAL, LLC
684 HIGUERA STREET, SUITE B, SAN LUIS OBISPO, CA 93401
T: 805.541.9094

NWC TANK FARM ROAD & BROAD STREET

San Luis Obispo, California

#	Description	Date
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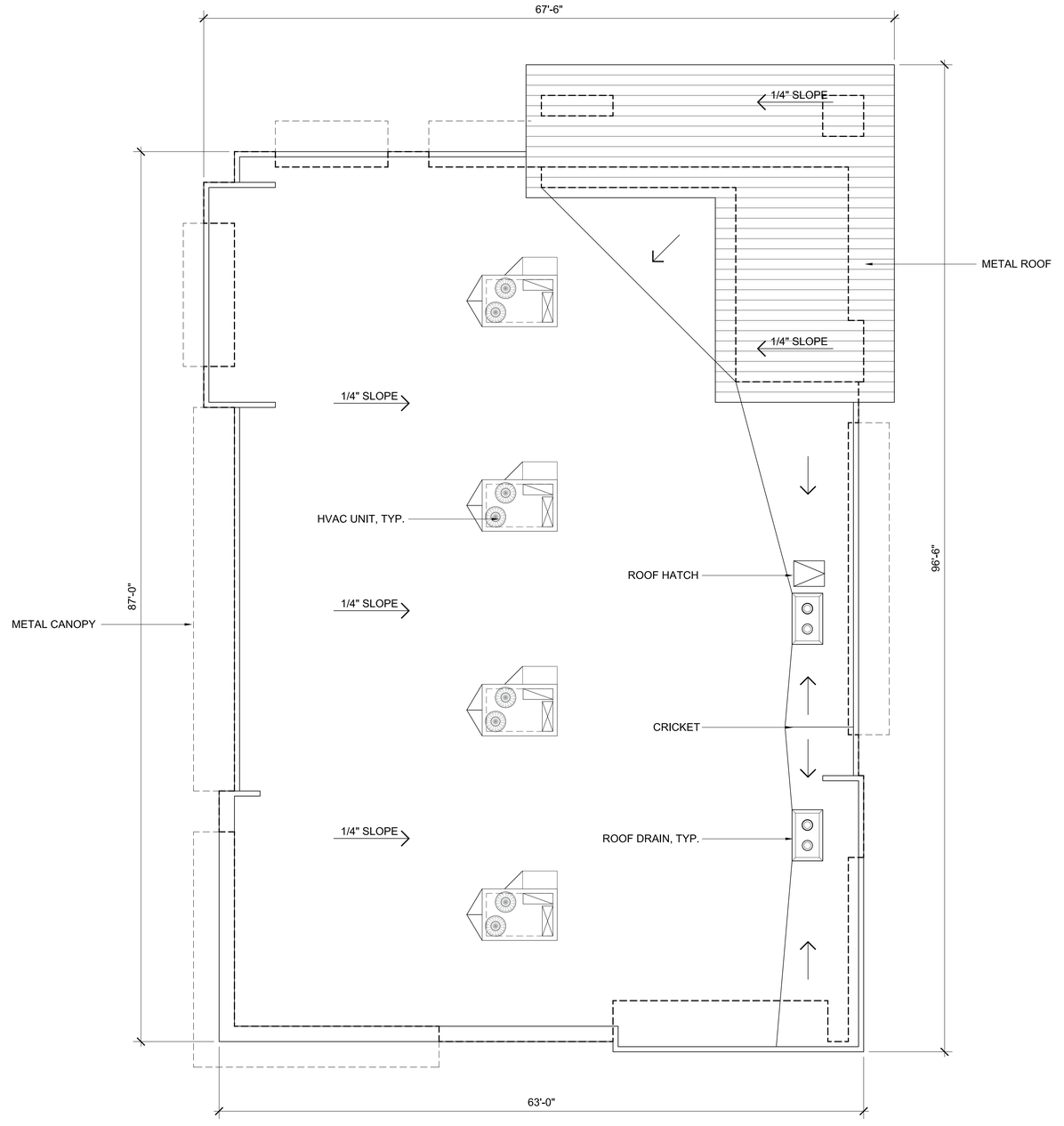
McKently Malak
ARCHITECTS
35 Hugus Alley Suite 200
Pasadena, California 91103
T:626.583.8348 F:626.583.8387

FLOOR PLAN
03.20.2018 13215TMA

A-105



1 ROOF PLAN
SCALE: 3/16" = 1'-0"

NORTH

NOTE: SEE ELEVATIONS FOR PARAPET HEIGHTS

BUILDING-5

CONCEPTUAL SUBJECT TO CHANGE

NKT COMMERCIAL, LLC
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NWC TANK FARM ROAD & BROAD STREET

San Luis Obispo, California

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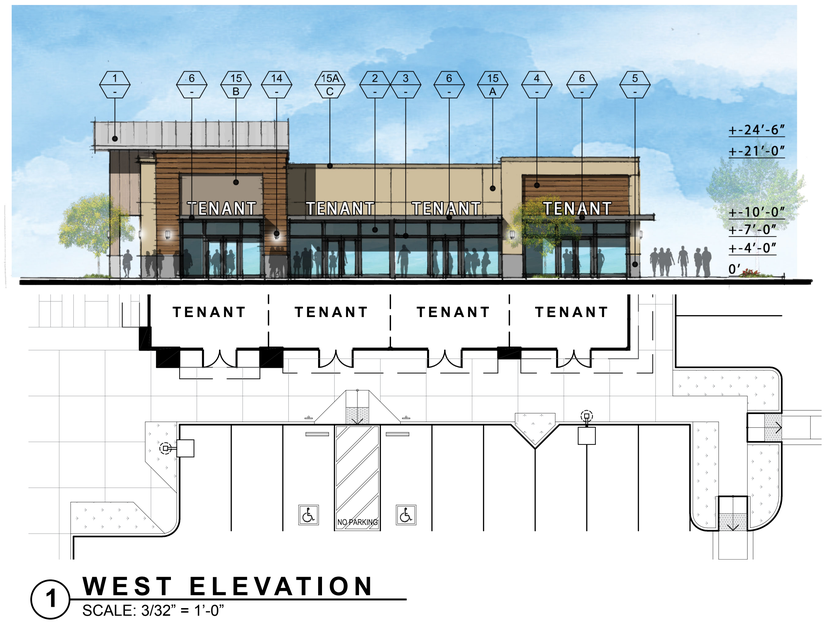
ROOF PLAN

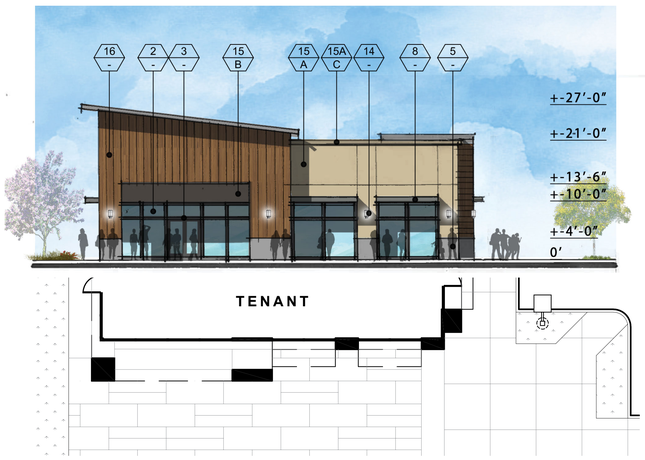
03.20.2018 13215TMA

A-135

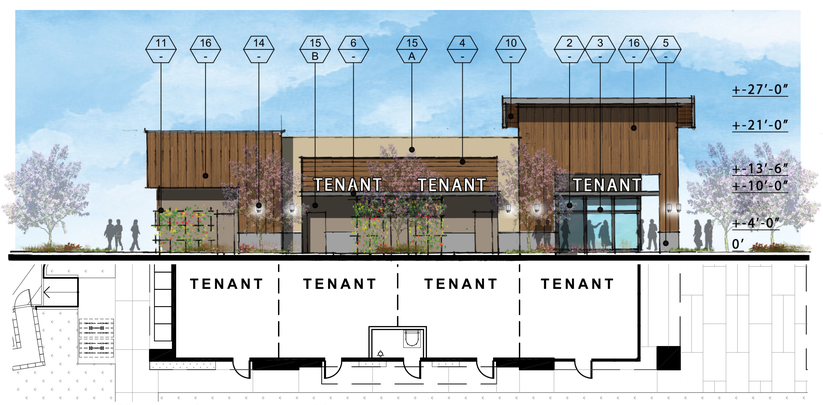


1 WEST ELEVATION
SCALE: 3/32" = 1'-0"

2 SOUTH ELEVATION
SCALE: 3/32" = 1'-0"



4 NORTH ELEVATION
SCALE: 3/32" = 1'-0"



3 EAST ELEVATION
SCALE: 3/32" = 1'-0"

FINISH KEYNOTES

1 — STANDING SEAM METAL ROOF
MODEL: SCR-16 STANDING SEAM
COLOR: ZINC GRAY
BY: MORIN

2 — STOREFRONT GLASS
GLASS: 1" CLEAR FLOAT GLASS
BY: PPG

3 — STOREFRONT
FINISH: CLEAR ANODIZED ALUMINUM
BY: ARCADIA

4 — SIDING
MODEL: VINTAGE COLLECTION
COLOR: CYPRESS (70%), MAHOGANY (30%)
BY: AZEK

5 — TILE BASE
MODEL: COLORBODY PORCELAIN-INVOKE
COLOR: MYSTIC WAY ID02, 12"x24"
TILE GROUT: CUSTOM
PRODUCT-335 WINTER GRAY
BY: DALTILE

6 — METAL CANOPY
FINISH: PAINTED STEEL TUBE
COLOR: DE6369 LEGENDARY GRAY, DUNN EDWARDS
BY: GENERAL CONTRACTOR

7 — METAL TRELLIS FRAME / INFILL
FINISH: PAINTED STEEL TUBE
COLOR: DE6369 LEGENDARY GRAY, DUNN EDWARDS
BY: GENERAL CONTRACTOR

8 — METAL EYEBROW
FINISH: PAINTED STEEL TUBE
COLOR: DE6369 LEGENDARY GRAY, DUNN EDWARDS
BY: GENERAL CONTRACTOR

9 — SPANDREL GLASS
COLOR: WARM GRAY
BY: VIRACON

10 — WOOD EAVES / KICKERS
FINISH: PAINTED-SEMI TRANSPARENT
COLOR: DEC 770 DRIFTING, DUNN EDWARDS
BY: GENERAL CONTRACTOR

11 — WIRE GRID
BY: GENERAL CONTRACTOR

12 — WALL SCONCE
MODEL: LASER LED LAS5562 NF
COLOR: GRAY
BY: US ARCHITECTURAL LIGHTING

13 — PEDESTRIAN LIGHTS
MODEL: ECLIPSE MAXI-LED, EC 811, POLE-PAA 512
COLOR: GUN METAL
BY: LUMINIS

14 — WALL SCONCE
MODEL: ECLIPSE MAXI-LED EC 852
COLOR: GUN METAL
BY: LUMINIS

15 — STUCCO
FINISH: SMOOTH STEEL TROWEL
BY: HIGHLAND STUCCO

15A — CORNICE
FINISH: SMOOTH STEEL TROWEL
COLOR: DET 637 SEAGULL WAIL
BY: HIGHLAND STUCCO

16 — BOARD & BATTEN SIDING
VERTICAL SIDING WITH 1"X3" VERTICAL BATTENS @ 12" O.C.

PAINT COLORS

A — PAINT
COLOR: DET 637 SEAGULL WAIL
BY: DUNN EDWARDS

B — PAINT
COLOR: DEC 750 BISON BEIGE
BY: DUNN EDWARDS

C — PAINT
COLOR: DEC 751 ASH GRAY
BY: DUNN EDWARDS

D — PAINT
COLOR: DE 6369 LEGENDARY GRAY
BY: DUNN EDWARDS

E — PAINT
COLOR: DEC 770 DRIFTING
BY: DUNN EDWARDS

BUILDING-5
CONCEPTUAL SUBJECT TO CHANGE

NKT COMMERCIAL, LLC
684 HIGUERA STREET, SUITE B, SAN LUIS OBISPO, CA 93401
T: 805.541.9094

NWC TANK FARM ROAD & BROAD STREET
San Luis Obispo, California

#	Description	Date
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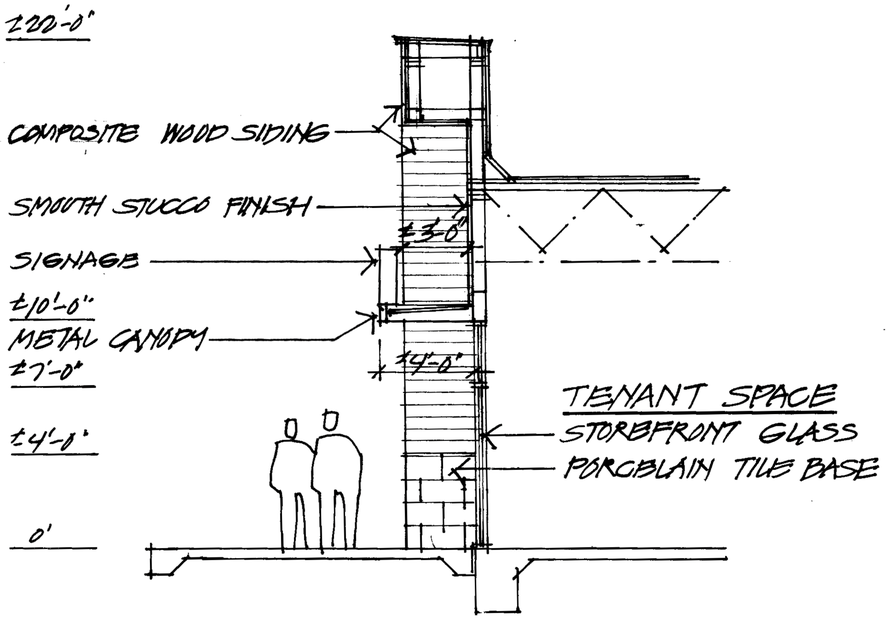
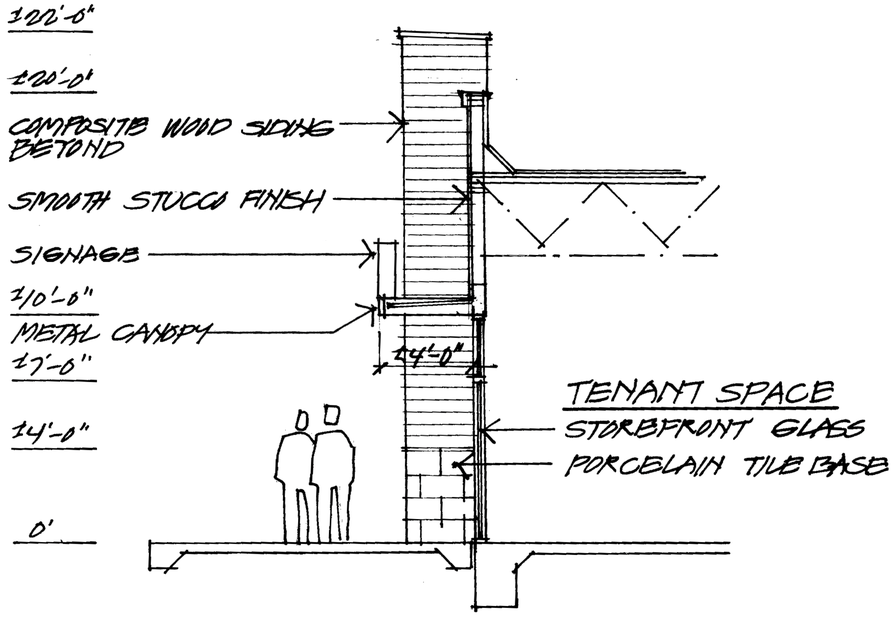
McKently Malak ARCHITECTS
35 Hugus Alley Suite 200
Pasadena, California 91103
T:626.583.8348 F:626.583.8387

ELEVATIONS
03.20.2018 13215TMA

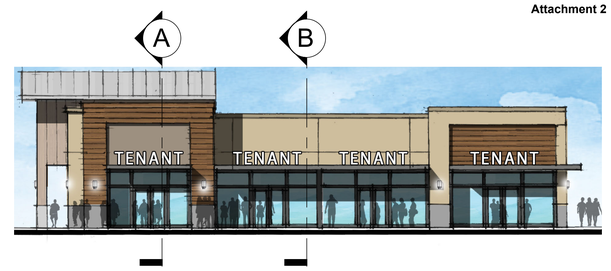
A-205



A WALL SECTION
SCALE: 3/8" = 1'-0"

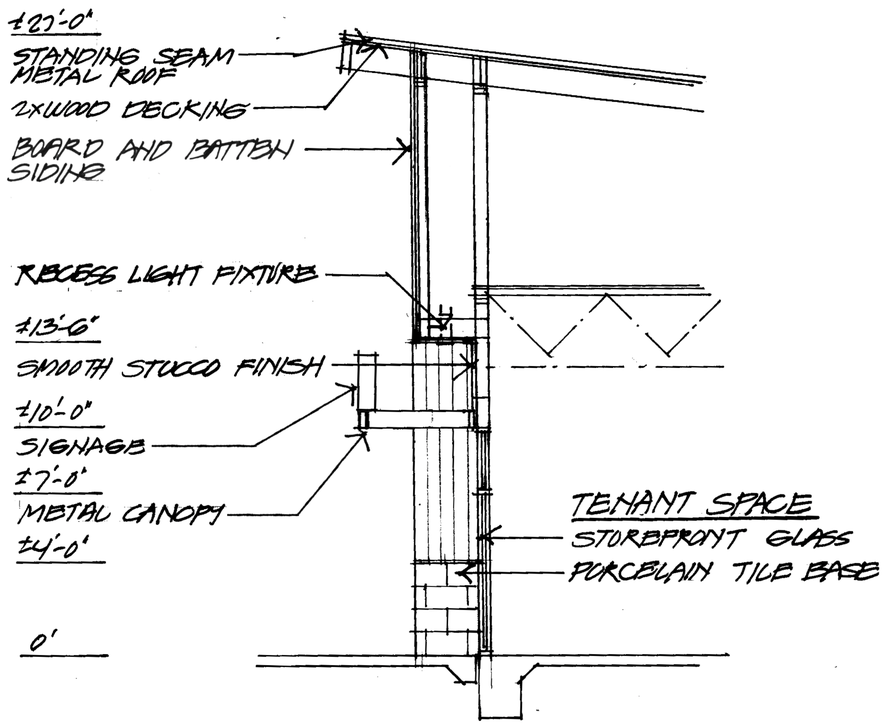


B WALL SECTION
SCALE: 3/8" = 1'-0"

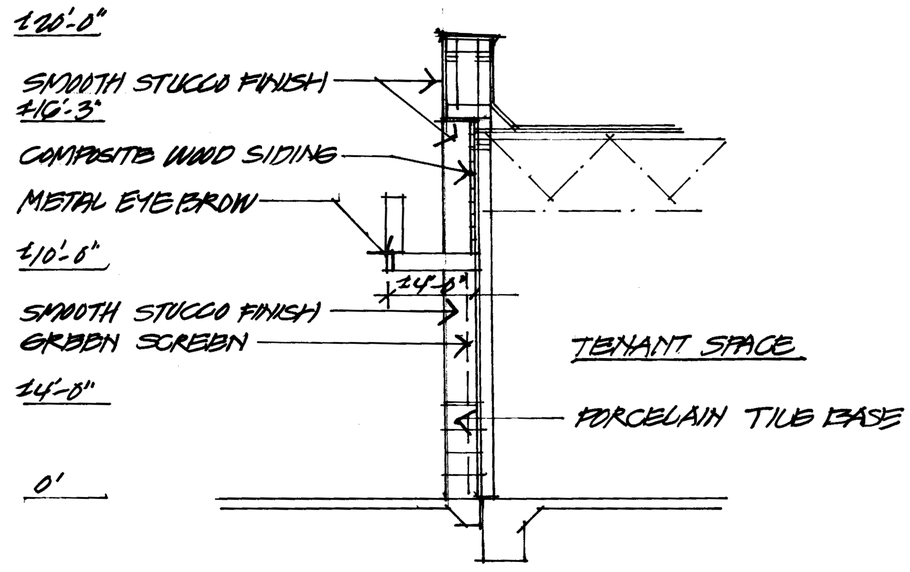


WEST ELEVATION

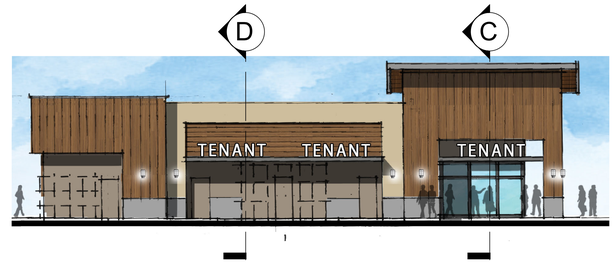
SOUTH ELEVATION



C WALL SECTION
SCALE: 3/8" = 1'-0"



D WALL SECTION
SCALE: 3/8" = 1'-0"



EAST ELEVATION

NORTH ELEVATION

BUILDING-5

CONCEPTUAL SUBJECT TO CHANGE

NKT COMMERCIAL, LLC
684 HIGUERA STREET, SUITE B, SAN LUIS OBISPO, CA 93401
T: 805.541.9094

NWC TANK FARM ROAD & BROAD STREET

San Luis Obispo, California

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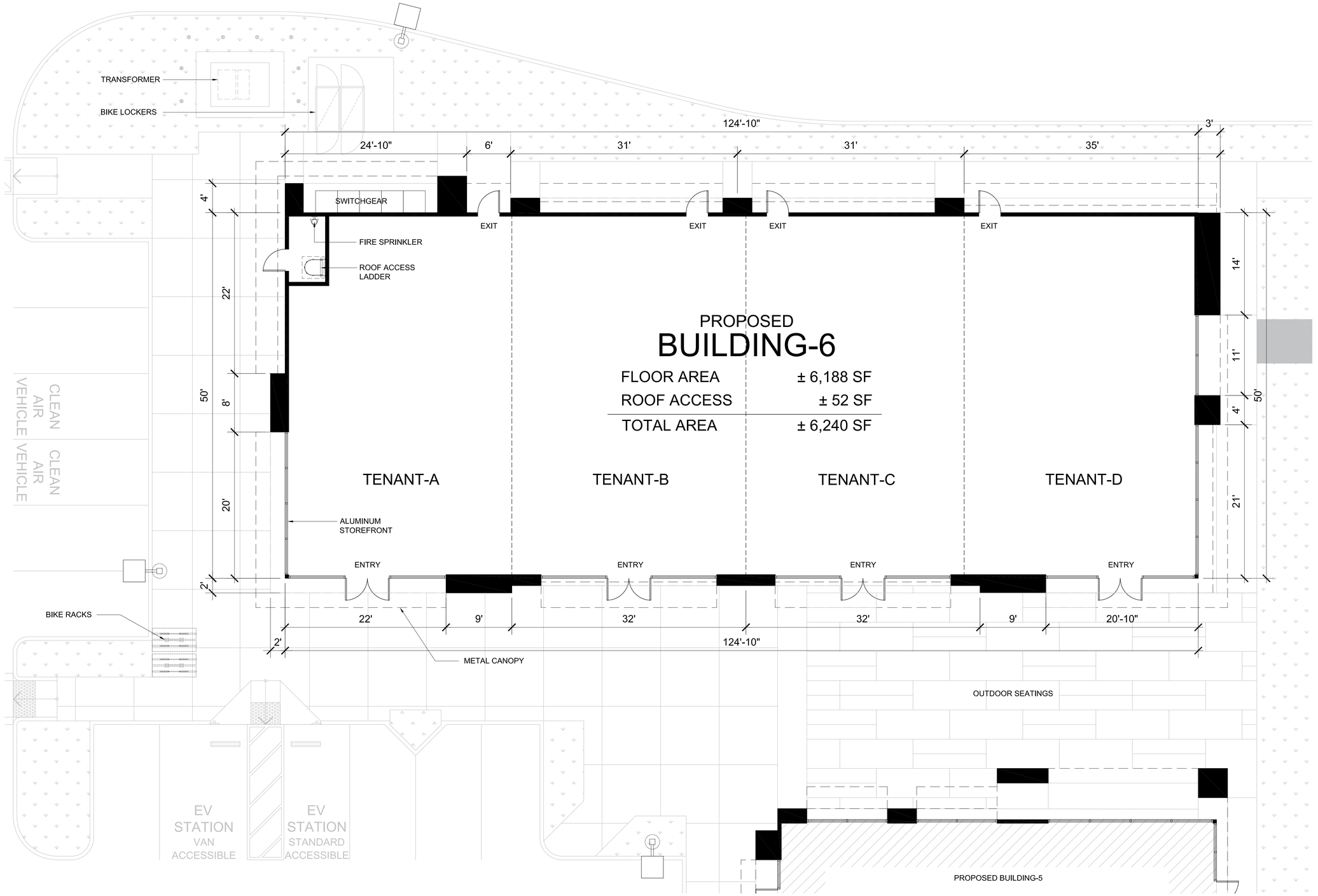
McKently Malak ARCHITECTS
35 Hugus Alley Suite 200
Pasadena, California 91103
T:626.583.8348 F:626.583.8387

WALL SECTIONS
03.20.2018 13215TMA

A-305



1 FLOOR PLAN
SCALE: 3/16" = 1'-0"

NORTH

BUILDING-6

CONCEPTUAL SUBJECT TO CHANGE

NKT COMMERCIAL, LLC
684 HIGUERA STREET, SUITE B, SAN LUIS OBISPO, CA 93401
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NWC TANK FARM ROAD & BROAD STREET

San Luis Obispo, California

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3		
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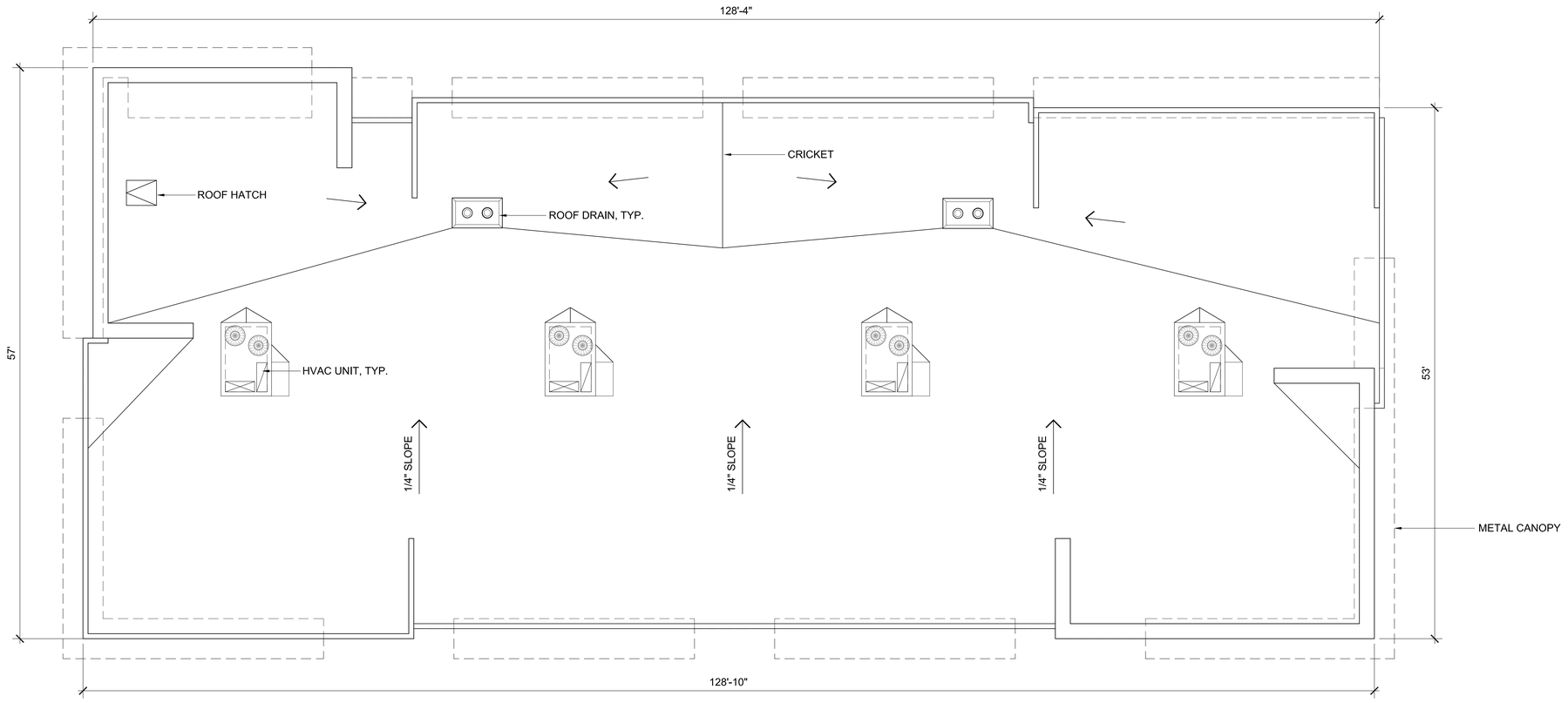
McKently Malak ARCHITECTS
35 Hugus Alley Suite 200
Pasadena, California 91103
T:626.583.8348 F:626.583.8387

FLOOR PLAN

03.20.2018 13215TMA

A-106



1 ROOF PLAN
SCALE: 3/16" = 1'-0"

NORTH

NOTE: SEE ELEVATIONS FOR PARAPET HEIGHTS

BUILDING-6

CONCEPTUAL SUBJECT TO CHANGE

NKT COMMERCIAL, LLC
684 HIGUERA STREET, SUITE B, SAN LUIS OBISPO, CA 93401
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NWC TANK FARM ROAD & BROAD STREET

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T:626.583.8348 F:626.583.8387

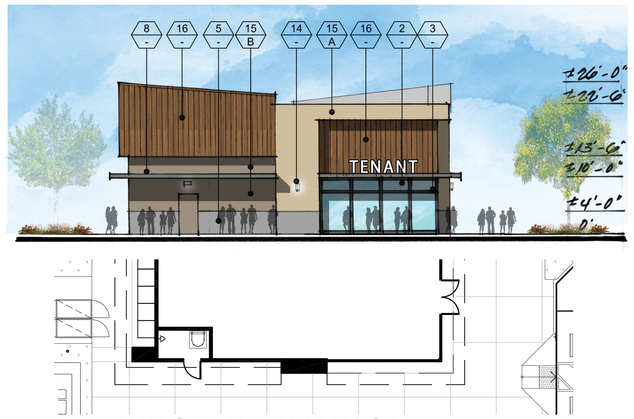
ROOF PLAN

03.20.2018 13215TMA

A-136

1 SOUTH ELEVATION
SCALE: 3/32" = 1'-0"

2 EAST ELEVATION
SCALE: 3/32" = 1'-0"



4 WEST ELEVATION
SCALE: 3/32" = 1'-0"

3 NORTH ELEVATION
SCALE: 3/32" = 1'-0"

FINISH KEYNOTES

1 - STANDING SEAM METAL ROOF
MODEL: SCR-16 STANDING SEAM
COLOR: ZINC GRAY
BY: MORIN

2 - STOREFRONT GLASS
GLASS: 1" CLEAR FLOAT GLASS
BY: PPG

3 - STOREFRONT
FINISH: CLEAR ANODIZED ALUMINUM
BY: ARCADIA

4 - SIDING
MODEL: VINTAGE COLLECTION
COLOR: CYPRESS (70%), MAHOGANY (30%)
BY: AZEK

5 - TILE BASE
MODEL: COLORBODY PORCELAIN-INVOKE
COLOR: MYSTIC WAY ID02, 12"x24"
TILE GROUT: CUSTOM
PRODUCT-335 WINTER GRAY
BY: DALTILE

6 - METAL CANOPY
FINISH: PAINTED STEEL TUBE
COLOR: DE6369 LEGENDARY GRAY, DUNN EDWARDS
BY: GENERAL CONTRACTOR

7 - METAL TRELLIS FRAME / INFILL
FINISH: PAINTED STEEL TUBE
COLOR: DE6369 LEGENDARY GRAY, DUNN EDWARDS
BY: GENERAL CONTRACTOR

8 - METAL EYEBROW
FINISH: PAINTED STEEL TUBE
COLOR: DE6369 LEGENDARY GRAY, DUNN EDWARDS
BY: GENERAL CONTRACTOR

9 - SPANDREL GLASS
COLOR: WARM GRAY
BY: VIRACON

10 - WOOD EAVES / KICKERS
FINISH: PAINTED-SEMI TRANSPARENT
COLOR: DEC 770 DRIFTING, DUNN EDWARDS
BY: GENERAL CONTRACTOR

11 - WIRE GRID
BY: GENERAL CONTRACTOR

12 - WALL SCONCE
MODEL: LASER LED LAS5562 NF
COLOR: GRAY
BY: US ARCHITECTURAL LIGHTING

13 - PEDESTRIAN LIGHTS
MODEL: ECLIPSE MAXI-LED, EC 811, POLE-PAA 512
COLOR: GUN METAL
BY: LUMINIS

14 - WALL SCONCE
MODEL: ECLIPSE MAXI-LED EC 852
COLOR: GUN METAL
BY: LUMINIS

15 - STUCCO
FINISH: SMOOTH STEEL TROWEL
BY: HIGHLAND STUCCO

15A - CORNICE
FINISH: SMOOTH STEEL TROWEL
COLOR: DET 637 SEAGULL WAIL
BY: HIGHLAND STUCCO

16 - BOARD & BATTEN SIDING
VERTICAL SIDING WITH 1"X3" VERTICAL BATTENS @ 12" O.C.

PAINT COLORS

A - PAINT
COLOR: DET 637 SEAGULL WAIL
BY: DUNN EDWARDS

B - PAINT
COLOR: DEC 750 BISON BEIGE
BY: DUNN EDWARDS

C - PAINT
COLOR: DEC 751 ASH GRAY
BY: DUNN EDWARDS

D - PAINT
COLOR: DE 6369 LEGENDARY GRAY
BY: DUNN EDWARDS

E - PAINT
COLOR: DEC 770 DRIFTING
BY: DUNN EDWARDS

BUILDING-6
CONCEPTUAL SUBJECT TO CHANGE

NKT COMMERCIAL, LLC
684 HIGUERA STREET, SUITE B, SAN LUIS OBISPO, CA 93401
T: 805.541.9094

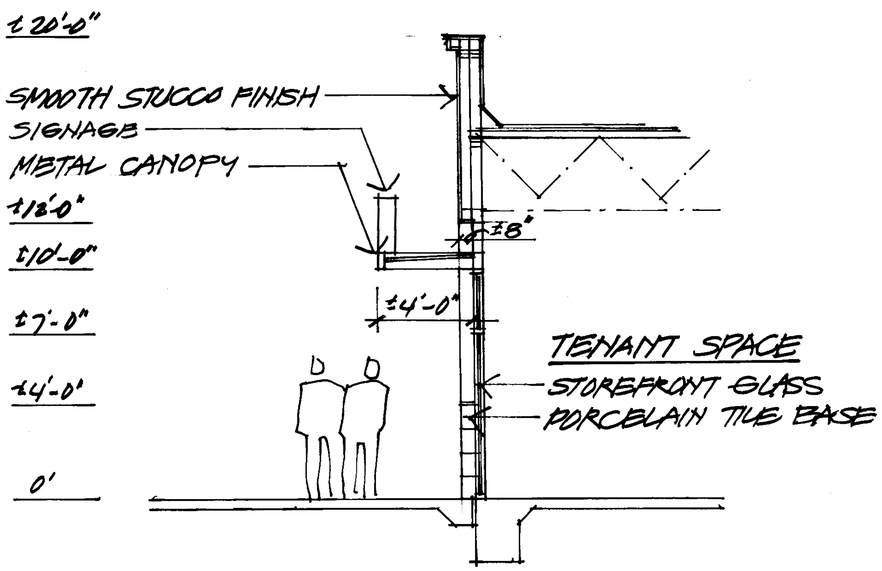
NWC TANK FARM ROAD & BROAD STREET
San Luis Obispo, California

#	Description	Date
1	1ST SUBMITTAL	03.20.2018
2		
3		
4	2ND SUBMITTAL	11.14.2018

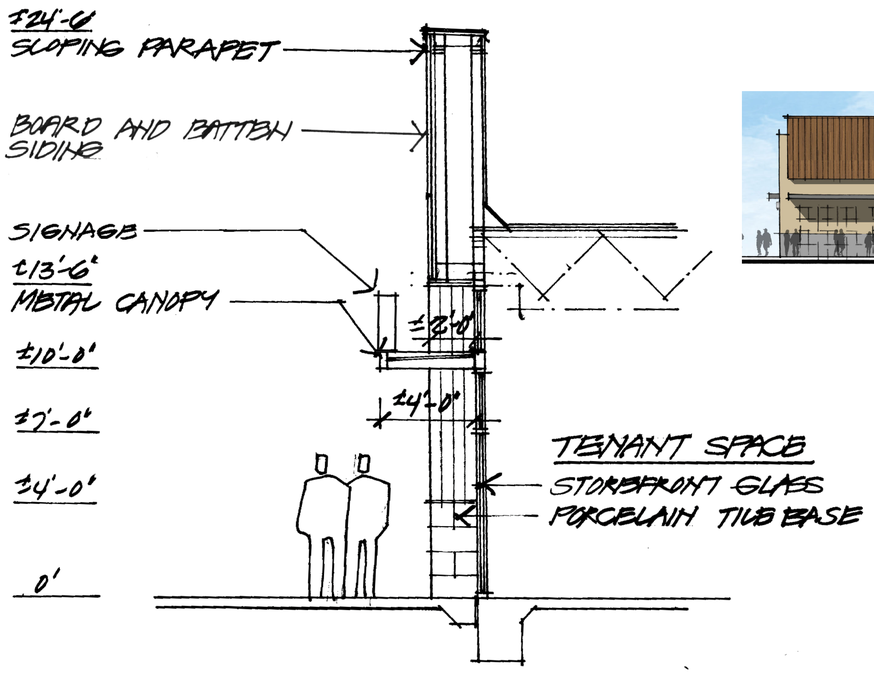
McKently Malak ARCHITECTS
35 Hugus Alley Suite 200
Pasadena, California 91103
T:626.583.8348 F:626.583.8387

ELEVATIONS
03.20.2018 13215TMA

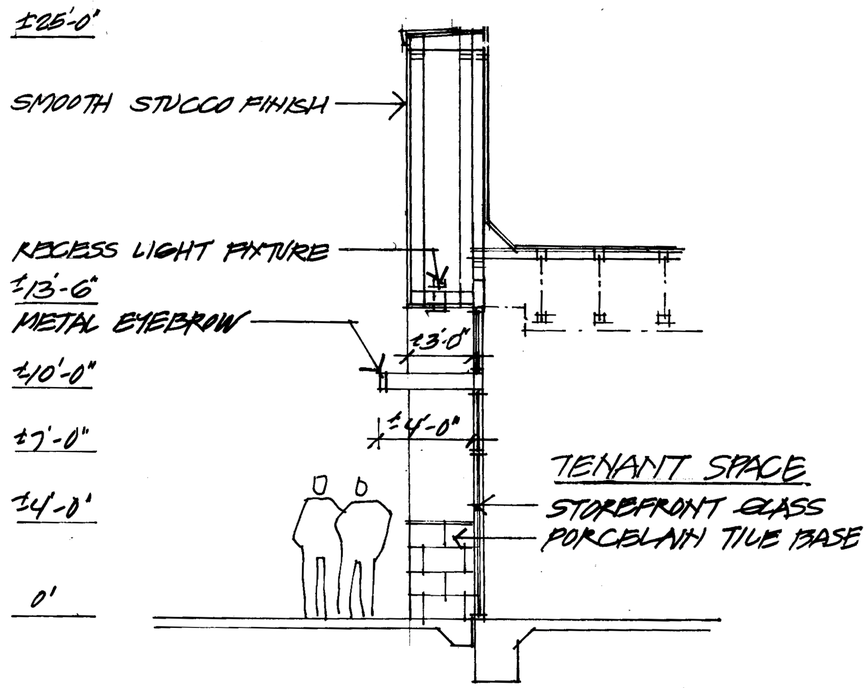
A-206



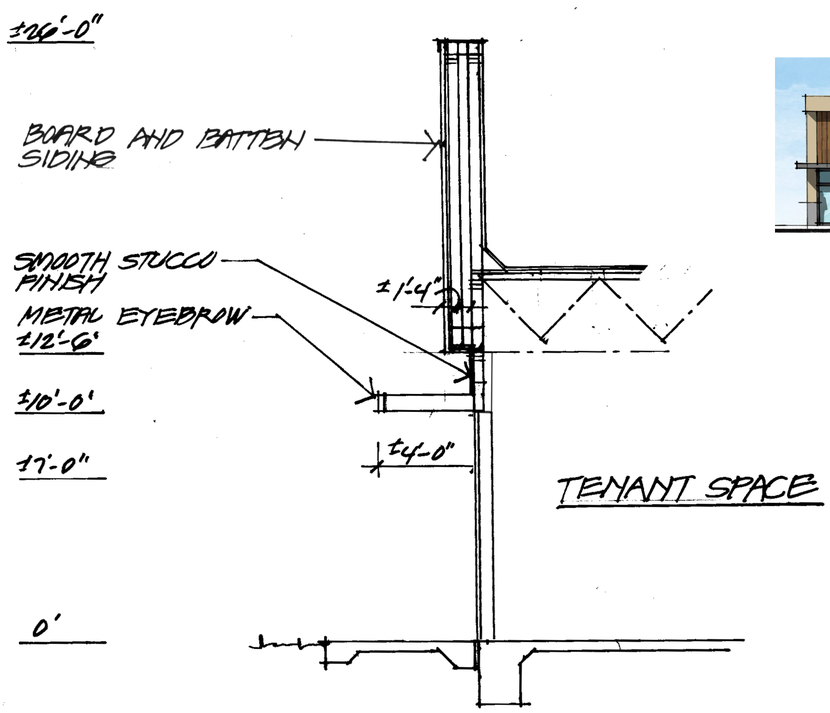
A **WALL SECTION**
SCALE: 3/8" = 1'-0"



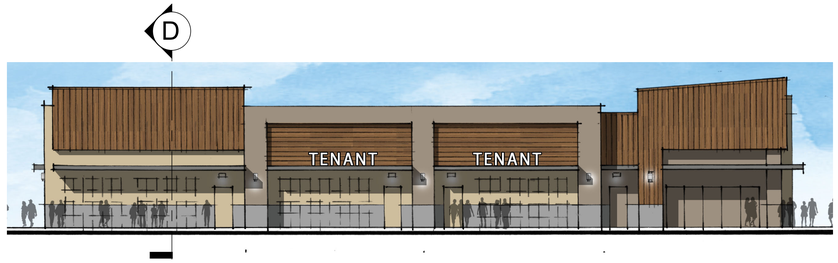
B **WALL SECTION**
SCALE: 3/8" = 1'-0"



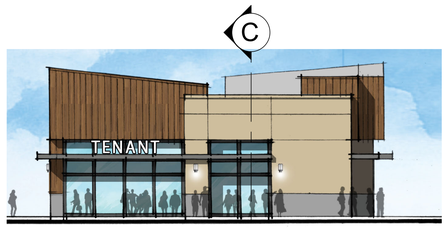
C **WALL SECTION**
SCALE: 3/8" = 1'-0"



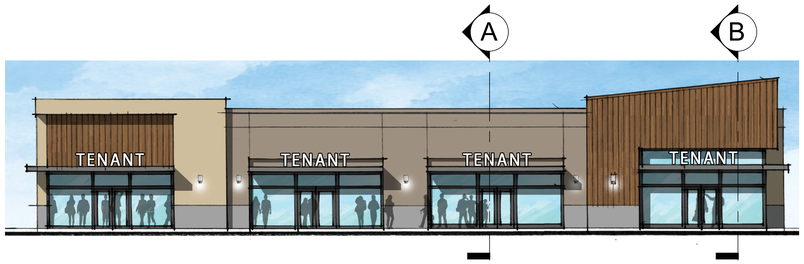
D **WALL SECTION**
SCALE: 3/8" = 1'-0"



NORTH ELEVATION



EAST ELEVATION



SOUTH ELEVATION

WEST ELEVATION

BUILDING-6

CONCEPTUAL SUBJECT TO CHANGE

NKT COMMERCIAL, LLC
684 HIGUERA STREET, SUITE B, SAN LUIS OBISPO, CA 93401
T: 805.541.9094

NWC TANK FARM ROAD & BROAD STREET

San Luis Obispo, California

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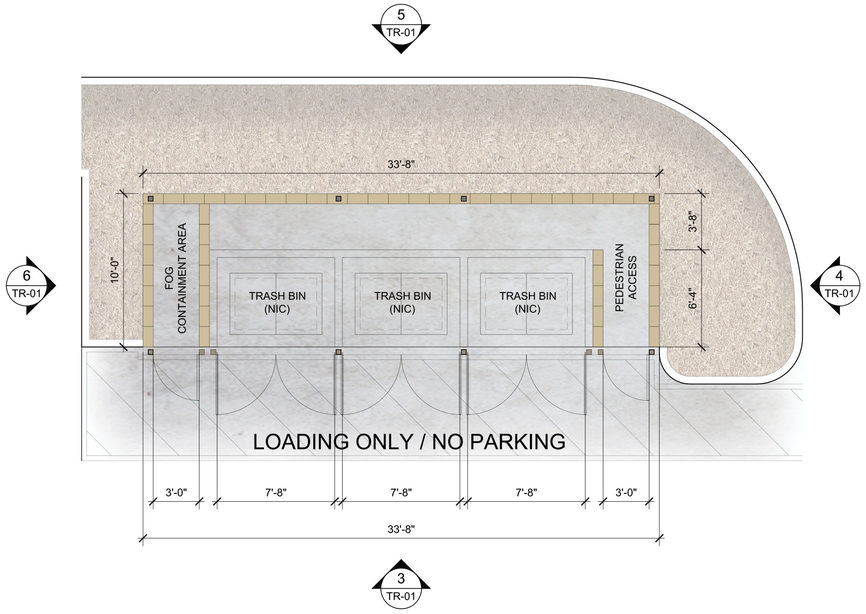
McKently Malak ARCHITECTS
35 Hugus Alley Suite 200
Pasadena, California 91103
T:626.583.8348 F:626.583.8387

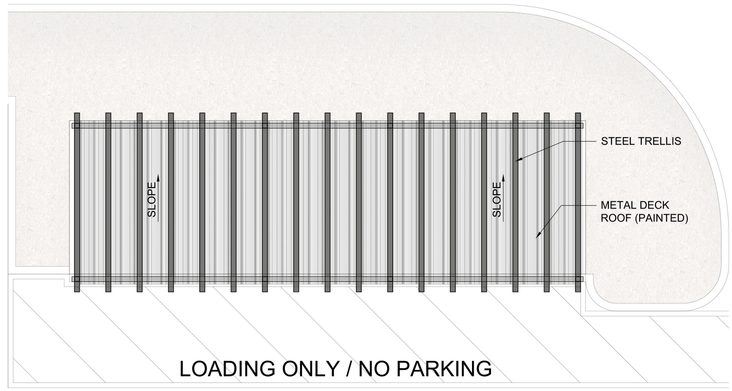
WALL SECTIONS
03.20.2018 13215TMA

A-306



1 TRASH ENCLOSURE - PLAN

SCALE: 1/4" = 1'-0"

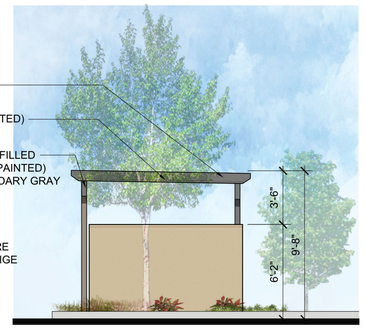


2 ROOF PLAN

SCALE: 1/4" = 1'-0"

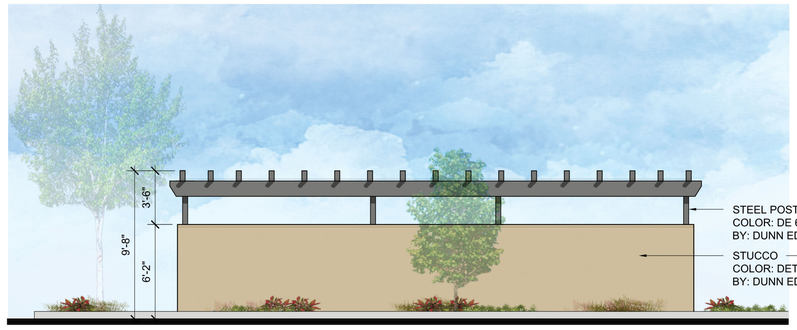
3 FRONT ELEVATION

SCALE: 1/4" = 1'-0"



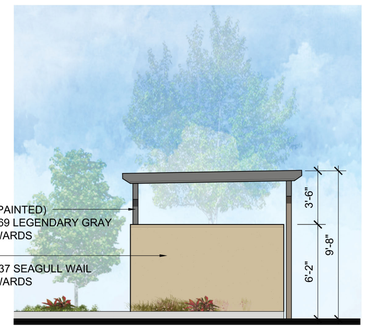
4 SIDE ELEVATION

SCALE: 1/4" = 1'-0"



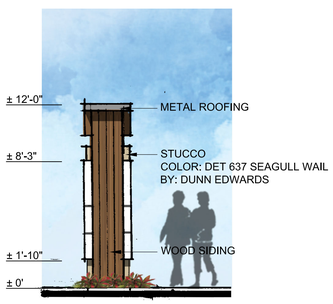
5 REAR ELEVATION

SCALE: 1/4" = 1'-0"



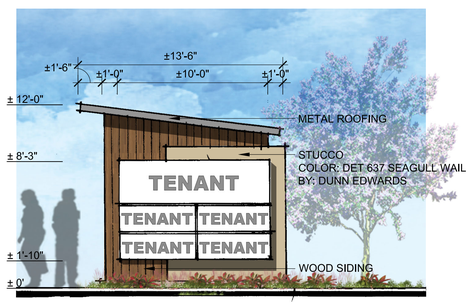
6 SIDE ELEVATION

SCALE: 1/4" = 1'-0"



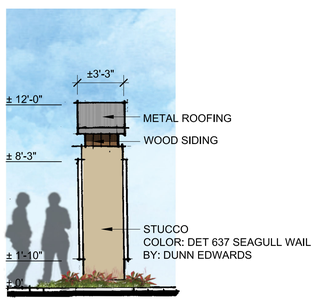
7 MONUMENT ELEVATION - SIDE

SCALE: 1/4" = 1'-0"



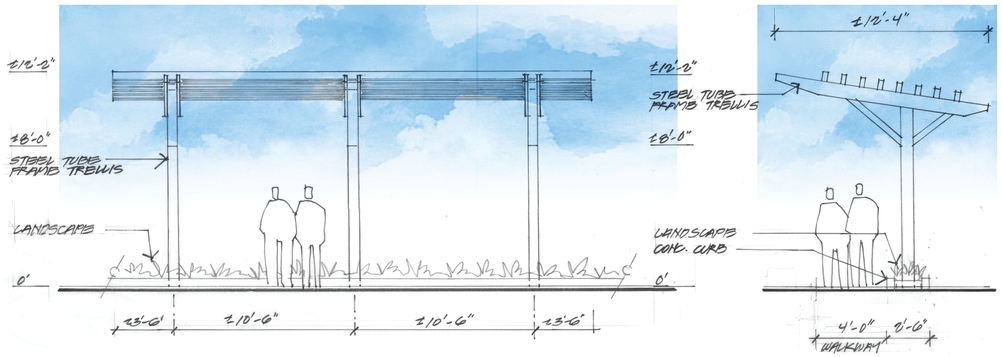
8 MONUMENT ELEVATION - FRONT

SCALE: 1/4" = 1'-0"



9 MONUMENT ELEVATION - SIDE

SCALE: 1/4" = 1'-0"



10 TRELLIS ELEVATIONS

SCALE: N.T.S.

CONCEPTUAL SUBJECT TO CHANGE

NKT COMMERCIAL, LLC
684 HIGUERA STREET, SUITE B, SAN LUIS OBISPO, CA 93401
T: 805.541.9094

NWC TANK FARM ROAD & BROAD STREET

San Luis Obispo, California

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McKently Malak ARCHITECTS
35 Hugus Alley Suite 200
Pasadena, California 91103
T:626.583.8348 F:626.583.8387

TRASH ENCLOSURE & MONUMENT SIGN

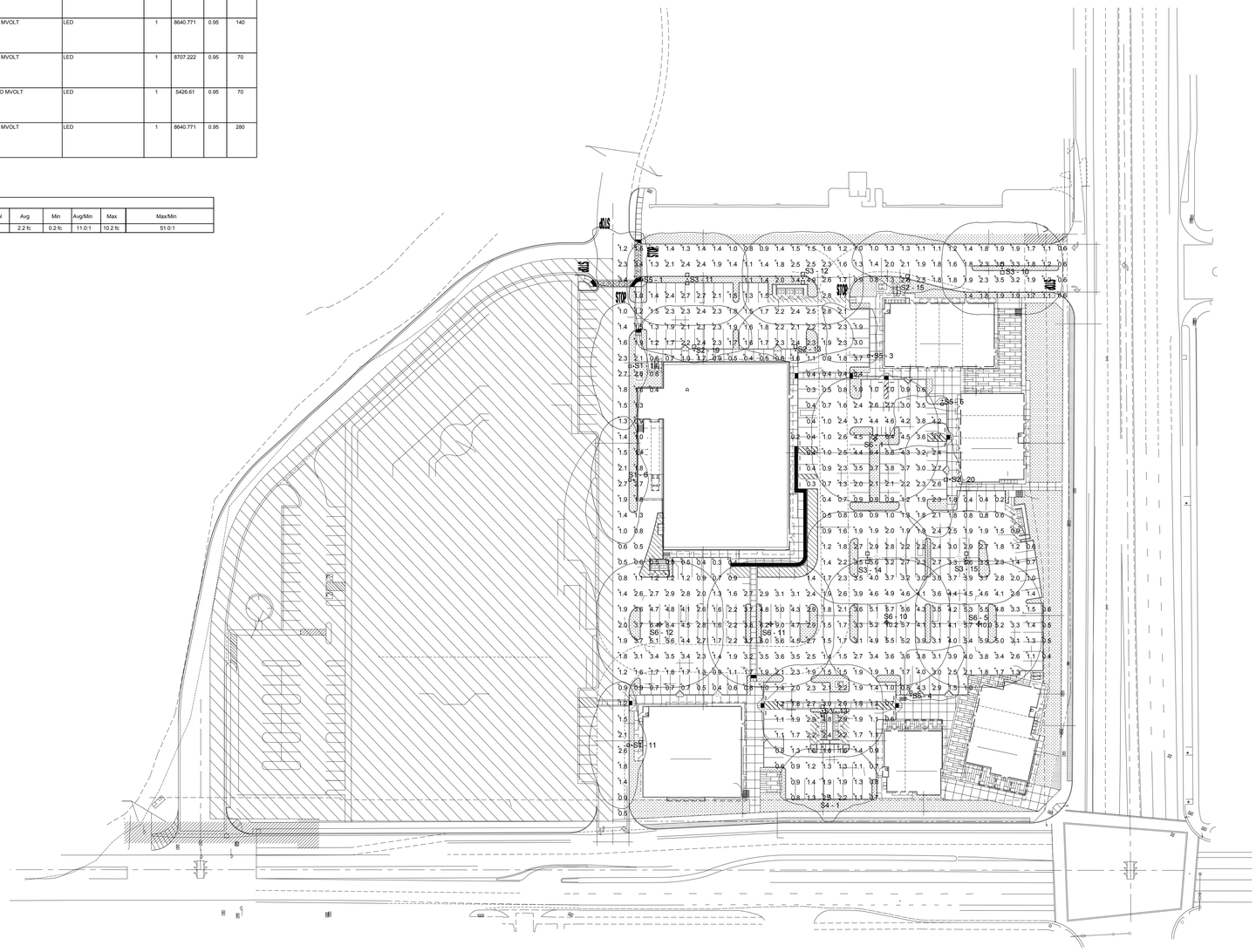
03.20.2018 13215TMA

TR-01

Schedule									
Symbol	Label	QTY	Manufacturer	Catalog Number	Description	Lamp	Number Lamps	Lumens per Lamp	LLF	Wattage
	S1	3	Lithonia Lighting	DSX1 LED P2 40K T2M MVOLT	DSX1 LED P2 40K T2M MVOLT	LED	1	8876.506	0.95	70
	S2	4	Lithonia Lighting	DSX1 LED P2 40K T3M MVOLT	DSX1 LED P2 40K T3M MVOLT	LED	1	8640.771	0.95	70
	S3	6	Lithonia Lighting	DSX1 LED P2 40K T3M MVOLT	DSX1 LED P2 40K T3M MVOLT	LED	1	8640.771	0.95	140
	S4	1	Lithonia Lighting	DSX1 LED P2 40K T4M MVOLT	DSX1 LED P2 40K T4M MVOLT	LED	1	8707.222	0.95	70
	S5	4	Lithonia Lighting	DSX1 LED P2 40K LCCO MVOLT	DSX1 LED P2 40K LCCO MVOLT	LED	1	5426.61	0.95	70
	S6	5	Lithonia Lighting	DSX1 LED P2 40K T3M MVOLT	DSX1 LED P2 40K T3M MVOLT	LED	1	8640.771	0.95	280

Luminaire Locations							
		Location					
No.	Label	X	Y	Z	MH	Tilt	Orientation
6	S1	-59.84	278.00	20.00	20.00	0.00	269.85
1	S4	126.57	-27.96	20.00	20.00	0.00	0.00
1	S5	-50.98	469.03	20.00	20.00	0.00	-90.00
3	S5	168.43	396.36	20.00	20.00	0.00	270.00
4	S5	205.16	71.54	20.00	20.00	0.00	0.00
5	S5	235.19	353.80	20.00	20.00	0.00	180.66
1	S6	170.87	317.03	20.00	20.00	0.00	89.74
	S6-1	172.44	317.04	20.00	20.00	0.00	89.74
	S6-2	170.88	315.47	20.00	20.00	0.00	179.74
	S6-3	169.31	317.02	20.00	20.00	0.00	269.74
	S6-4	170.87	318.60	20.00	20.00	0.00	-0.26
5	S6	269.81	140.10	20.00	20.00	0.00	179.74
	S6-1	269.82	138.53	20.00	20.00	0.00	179.74
	S6-2	268.24	140.09	20.00	20.00	0.00	269.74
	S6-3	269.80	141.66	20.00	20.00	0.00	-0.26
	S6-4	271.37	140.11	20.00	20.00	0.00	89.74
11	S1	-61.41	24.35	20.00	20.00	0.00	-90.00
14	S1	-59.84	386.65	20.00	20.00	0.00	269.85
13	S2	95.04	401.57	20.00	20.00	0.00	0.00
15	S2	201.15	468.75	20.00	20.00	0.00	10.75
19	S2	-1.81	401.57	20.00	20.00	0.00	0.00
20	S2	242.51	278.23	20.00	20.00	0.00	-90.00
10	S3	292.42	480.21	20.00	20.00	0.00	179.74
11	S3	-8.46	470.10	20.00	20.00	0.00	179.74
12	S3	101.89	470.81	20.00	20.00	0.00	179.74
13	S3	120.74	57.25	20.00	20.00	0.00	179.74
	S3-1	120.76	53.31	20.00	20.00	0.00	179.74
	S3-2	120.73	61.20	20.00	20.00	0.00	-0.26
14	S3	163.70	203.63	20.00	20.00	0.00	179.74
	S3-1	163.72	199.68	20.00	20.00	0.00	179.74
	S3-2	163.68	207.57	20.00	20.00	0.00	-0.26
15	S3	258.17	203.56	20.00	20.00	0.00	179.74
	S3-1	256.19	199.61	20.00	20.00	0.00	179.74
	S3-2	258.16	207.50	20.00	20.00	0.00	-0.26
10	S6	182.00	141.75	20.00	20.00	0.00	179.74
	S6-1	182.01	140.18	20.00	20.00	0.00	179.74
	S6-2	180.44	141.74	20.00	20.00	0.00	269.74
	S6-3	182.00	143.31	20.00	20.00	0.00	-0.26
	S6-4	183.57	141.75	20.00	20.00	0.00	89.74
11	S6	71.21	140.25	20.00	20.00	0.00	179.74
	S6-1	71.22	138.69	20.00	20.00	0.00	179.74
	S6-2	69.65	140.24	20.00	20.00	0.00	269.74
	S6-3	71.20	141.82	20.00	20.00	0.00	-0.26
	S6-4	72.78	140.26	20.00	20.00	0.00	89.74
12	S6	-34.60	139.84	20.00	20.00	0.00	179.74
	S6-1	-34.60	138.27	20.00	20.00	0.00	179.74
	S6-2	-36.17	139.83	20.00	20.00	0.00	269.74
	S6-3	-34.61	141.40	20.00	20.00	0.00	-0.26
	S6-4	-33.04	139.84	20.00	20.00	0.00	89.74

Statistics						
Description	Symbol	Avg	Min	Avg/Min	Max	Max/Min
SITE	+	2.2 fc	0.2 fc	11.0:1	10.2 fc	51.0:1



SITE LIGHTING PHOTOMETRIC PLAN

NORTH

SCALE: SCALE 1"=50'

REVISIONS: | BY:

REGISTERED PROFESSIONAL ENGINEER
WILLIAM A. THOMA
ELECTRICAL
STATE OF CALIFORNIA
EXPIRES: 6/30/19
THOMA #17-8027

thoma ENGINEERING
3562 EMPLEO ST., SUITE C
SAN LUIS OBISPO, CA 93401
PHONE: (805) 543-3850
FAX: (805) 543-3829
cad@thomaelec.com

JOB TITLE: BROAD AND TANK FARM SAN LUIS OBISPO CA

SHEET TITLE: SITE LIGHTING PHOTOMETRIC PLAN

DRAWN BY: M.B.
CHECKED BY: M.B.
DATE: March 9, 2018
SCALE: AS NOTED
SHEET: E-100

Mar 12, 2018 - 8:28am - mboxter - C:\Users\mboxter\appdata\local\temp\AcPublish_7820\E-100_SITE PHOTOMETRIC.dwg

thoma ENGINEERING
THOMA ELECTRIC, INC.
3562 EMPLEO ST., SUITE C
SAN LUIS OBISPO, CA 93401
PHONE: (805) 543-3850
FAX: (805) 543-3829
cad@thomaelec.com

CONCEPTUAL SUBJECT TO CHANGE

NKT COMMERCIAL, LLC
684 HIGUERA STREET, SUITE B, SAN LUIS OBISPO, CA 93401
T: 805.541.9094

NWC TANK FARM ROAD & BROAD STREET

San Luis Obispo, California

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35 Hugus Alley Suite 200
Pasadena, California 91103
T:626.583.8348 F:626.583.8387

LIGHTING PLAN
03.20.2018 13215TMA

EPH-01

CONCEPTUAL SUBJECT TO CHANGE

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NWC TANK FARM ROAD & BROAD STREET

San Luis Obispo, California

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IMAGE REFERENCE

03.20.2018 13215TMA

IM-01

A PAINT: DET 637 SEAGULL WAIL
BY: DUNN EDWARDS

B PAINT: DEC 750 BISON BEIGE
BY: DUNN EDWARDS

C PAINT: DEC 751 ASH GRAY
BY: DUNN EDWARDS

D PAINT: DE 6369 LEGENDARY GRAY
BY: DUNN EDWARDS

E PAINT: DEC 770 DRIFTING
BY: DUNN EDWARDS

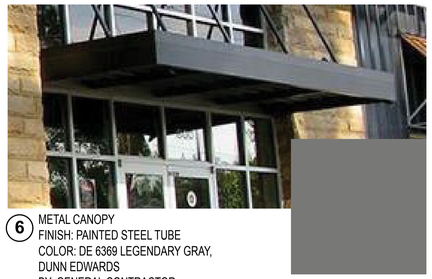
1 STANDING SEAM METAL ROOF
MODEL: SCR-16 STANDING SEAM
COLOR: ZINC GRAY
BY: MORIN

2 STOREFRONT GLASS
GLASS: 1" CLEAR FLOAT GLASS
BY: PPG

3 STOREFRONT
FINISH: CLEAR ANODIZED ALUMINUM
BY: ARCADIA

4 SIDING
MODEL: VINTAGE COLLECTION
COLOR: CYPRESS (70%), MAHOGANY (30%)
BY: AZEK

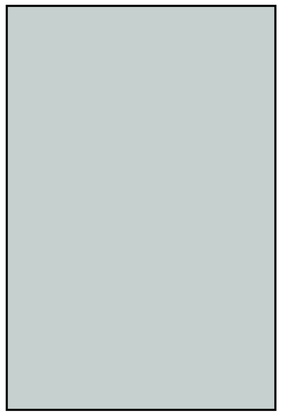
5 TILE BASE
MODEL: COLORBODY PORCELAIN-INVOKE
COLOR: MYSTIC WAY ID02, 12"x24"
TILE GROUT: CUSTOM PRODUCT-335 WINTER GRAY
BY: DALTILE



6 METAL CANOPY
FINISH: PAINTED STEEL TUBE
COLOR: DE 6369 LEGENDARY GRAY,
DUNN EDWARDS
BY: GENERAL CONTRACTOR

7 METAL TRELLIS FRAME / INFILL
FINISH: PAINTED STEEL TUBE
COLOR: DE 6369 LEGENDARY GRAY,
DUNN EDWARDS
BY: GENERAL CONTRACTOR

8 METAL EYEBROW
FINISH: PAINTED STEEL TUBE
COLOR: DE 6369 LEGENDARY GRAY,
DUNN EDWARDS
BY: GENERAL CONTRACTOR



9 SPANDREL GLASS
COLOR: WARM GRAY
BY: VIRACON

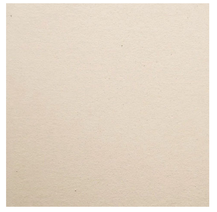
10 WOOD EAVES / KICKERS (FIRE-RETARDANT-TREATED
WHERE REQUIRED)
FINISH: PAINTED SEMI TRANSPARENT
COLOR: DEC 770 DRIFTING,
DUNN EDWARDS

11 WIRE GRID
BY: GENERAL CONTRACTOR

12 WALL SCONCE
MODEL: LASER LED LAS5562 NF
COLOR: GRAY
BY: US ARCHITECTURAL LIGHTING

13 PEDESTRIAN LIGHTS
MODEL: ECLIPSE MAXI-LED,
EC 811, POLE-PAA 512
COLOR: GUN METAL
BY: LUMINIS

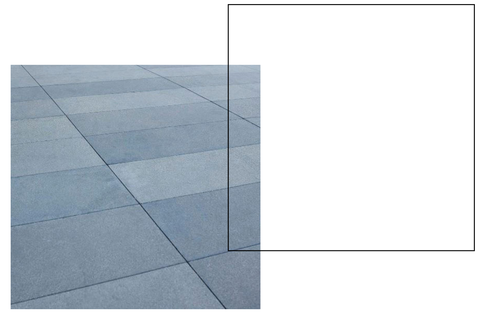
14 WALL SCONCE
MODEL: ECLIPSE MAXI-LED, EC 852
COLOR: GUN METAL
BY: LUMINIS



15 STUCCO
FINISH: SMOOTH STEEL TROWEL
BY: HIGHLAND STUCCO

15A CORNICE
FINISH: SMOOTH STEEL TROWEL
COLOR: DEC 751 ASH GRAY
BY: HIGHLAND STUCCO

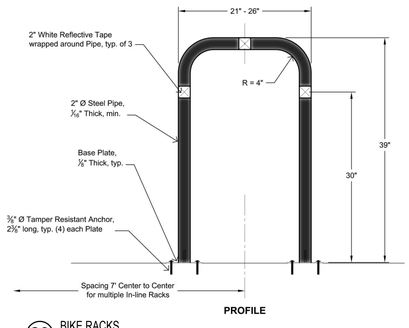
16 BOARD AND BATTEN VERTICAL SIDING
WITH 1"X3" VERTICAL BATTENS
FINISH: CEDARMILL COLOR: CHESTNUT BROWN
BY: HARDIE PANEL



17 DECORATIVE PAVERS
MODEL: CALARC LARGE SCALE
NARROW MODULAR PAVERS - 12"x18"
COLOR: 1413 PORCELAIN-SANDBLAST
BY: STEP STONE

18 CONCRETE PAVING
FINISH: MEDIUM BROOM FINISH, SAW CUT LINES
COLOR: NATURAL GRAY
BY: GENERAL CONTRACTOR

19 TRASH RECEPTACLES
MODEL: SDC-36
COLOR: BLACK
BY: VICTOR STANLEY



20 BIKE RACKS
MODEL: PER CITY STANDARDS
COLOR: INDUSTRIAL HIGH GLOSS POWDER-COATED
BY: CONTRACTOR

CONCEPTUAL SUBJECT TO CHANGE

NKT COMMERCIAL, LLC
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NWC TANK FARM ROAD & BROAD STREET

San Luis Obispo, California

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2	BIKE RACKS	04.25.2018
3		
4	2ND SUBMITTAL	11.14.2018

McKently Malak ARCHITECTS
35 Hugus Alley Suite 200
Pasadena, California 91103
T:626.583.8348 F:626.583.8387

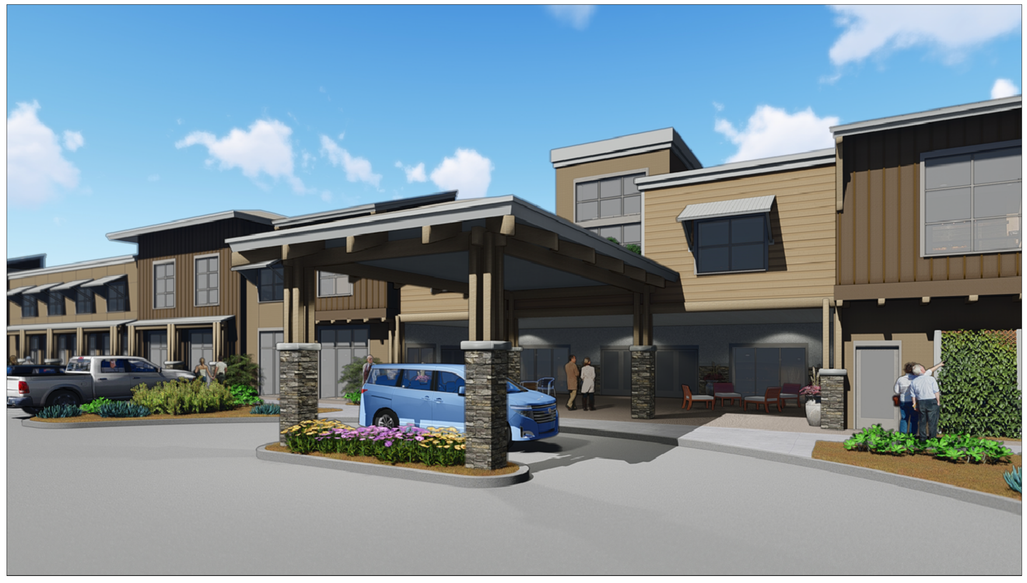
COLOR MATERIAL BOARD

03.20.2018 13215TMA

CM-01

SAN LUIS OBISPO, CA

ASSISTED LIVING AND MEMORY CARE FACILITY

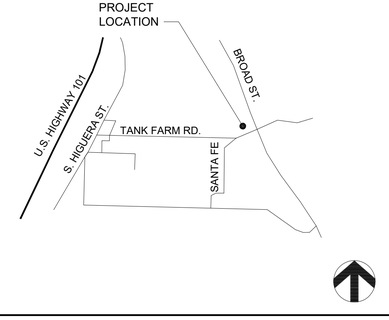


VIEW AT ENTRY

PROJECT DATA

SITE ADDRESS:	660 & 670 TANK FARM ROAD SAN LUIS OBISPO, CA 93401 TAX LOT# 053-421-004
PROPOSED USE:	RESIDENTIAL CARE FACILITY TYPE CONSTRUCTION: 5A OCCUPANCY: R2.1
APPLICANT:	WESTMONT DEVELOPMENT, LP 7660 FAY AVENUE, SUITE N LA JOLLA, CA 92037 PHONE: (415) 317-9969 Contact: Michael O'Rourke Andy Plant
OWNER:	NKT DEVELOPMENT, LLC. 684 HIGUERA ST., SUITE B SAN LUIS OBISPO, CA 93401 PHONE: (805) 541-9004 FAX: (805) 544-0394
DEVELOPMENT SERVICES/ ARCHITECT:	LENITY ARCHITECTURE 3150 KETTLE CT. SE SALEM, OR 97301 PHONE: (503) 399-1090 FAX. (503) 399-0565 Contact: Aaron Clark
LANDSCAPE ARCHITECT:	BRIAN LIND, LANDSCAPE ARCHITECT / LENITY ARCHITECTURE 3150 KETTLE CT. SE SALEM, OR 97301 PHONE: (503) 399-1090 FAX: (503) 399-0565 Contact: Brian Lind
CIVIL ENGINEER:	BETHEL ENGINEERING 2624 AIRPORT DRIVE SANTA MARIA, CA 93455 PHONE: (805) 934-5767 Contact: Russ Garrison
GEOTECHNICAL ENGINEER:	BEACON GEOTECHNICAL, INC P.O. BOX 4814 PASO ROBLES, CA 93447 PHONE: (805) 239-9457 Contact: Greg McKay

VICINITY MAP



DRAWING INDEX CONTINUED

ARCHITECTURAL

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A1.7	SITE DETAILS
A3.1	1ST FLOOR PLAN
A3.2	2ND FLOOR PLAN
A5.1	COLOR BOARD
A5.2	IMAGE REFERENCE
A6.0	BUILDING SECTIONS
A6.3	BUILDING ELEVATIONS

LANDSCAPE

L1	LANDSCAPE DEVELOPMENT PLAN
L2	COURTYARD LANDSCAPE DEVELOPMENT PLAN

ELECTRICAL

E1.1	SITE LIGHTING PLAN

RENDERINGS

1 OF 9	RENDERING 1
2 OF 9	RENDERING 2
3 OF 9	RENDERING 3
4 OF 9	RENDERING 4
5 OF 9	RENDERING 5
6 OF 9	RENDERING 6
7 OF 9	RENDERING 7
8 OF 9	RENDERING 8
9 OF 9	RENDERING 9

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SAN LUIS OBISPO, CALIFORNIA

COVER SHEET

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DATE
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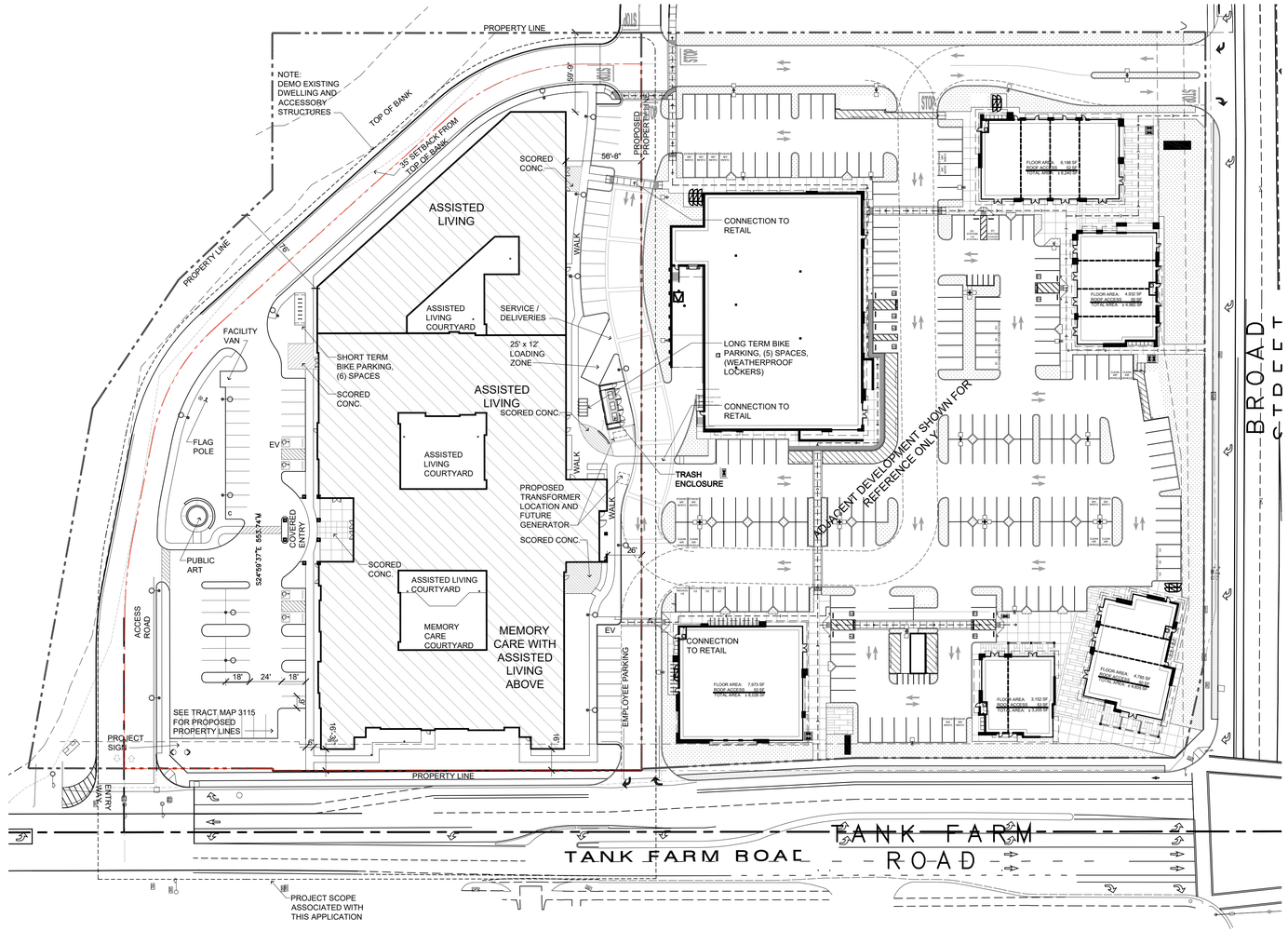

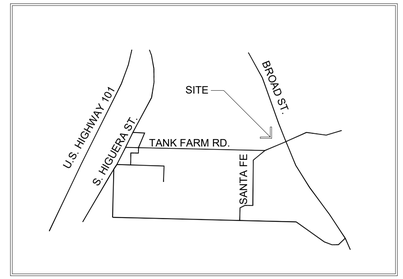

VICINITY MAP

SCALE: NOT TO SCALE

PROJECT DATA

SITE DATA:	PROPOSED
PROPERTY AREA: 3.80 ACRES	165,914 SQ. FT.
SITE AREA BREAKDOWN:	
BUILDING COVERAGE:	67,374 SQ.FT. (40.6%)
CURBS/PATIOS / WALKS:	22,104 SQ.FT. (13.3%)
DRIVES / PARKING:	46,978 SQ.FT. (28.3%)
OPEN SPACE:	29,458 SQ.FT. (17.8%)
TOTAL	165,914 SQ.FT. (100%)
IMPERVIOUS AREA:	136,456 SQ.FT.
PERVIOUS AREA:	29,458 SQ.FT.
PARKING BREAKDOWN:	
OPEN SPACES:	58
EMPLOYEE SPACES:	10
ACCESSIBLE SPACES:	4
TOTAL SPACES:	72
LONG TERM BIKE PARKING:	5
SHORT TERM BIKE PARKING:	6
TOTAL SPACES:	11
BUILDING:	
28 BED MEMORY CARE	
111 UNIT ASSISTED LIVING	
FIRST FLOOR:	67,374 SQ.FT.
SECOND FLOOR:	66,281 SQ.FT.
TOTAL:	133,655 SQ.FT

SITE PLAN

DATE: 11/29/2018
SCALE: 1" = 50'

0 25 50 100 150

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SITE PLAN

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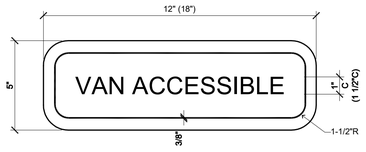

15 VAN ACCESSIBLE (PARKING SIGN)

SCALE: NOT TO SCALE

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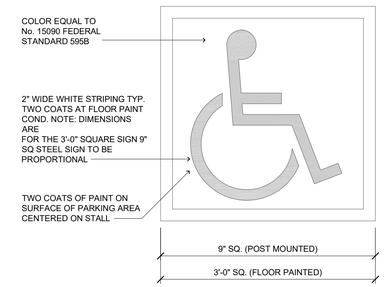
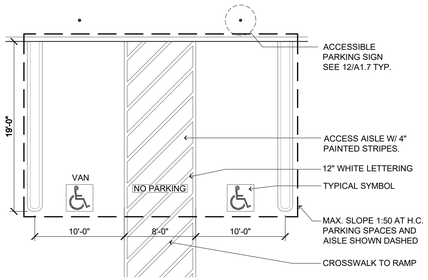
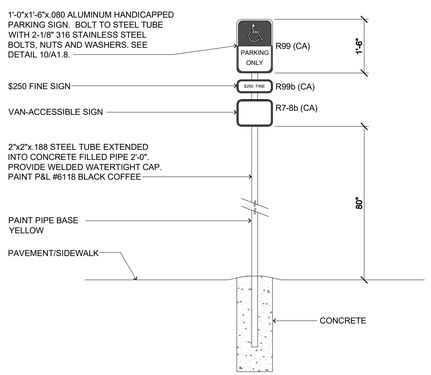




NOTES:

1. WHEN HEADER CURB IS USED IN LIEU OF WHEEL STOPS, SIDEWALK ABUTTING CURB MUST BE WIDENED BY 18" SO THAT THE TOTAL SIDEWALK WIDTH IS 62", ALLOWING FOR 44" MINIMUM CLEAR ACCESSIBLE ROUTE.
2. FOR COMPLETE DETAIL OF HANDICAPPED SIGN, REFER TO DETAIL.

HANDICAP SPACE STRIPING DETAIL



HANDICAP SIGNAGE DETAIL

NOTES:

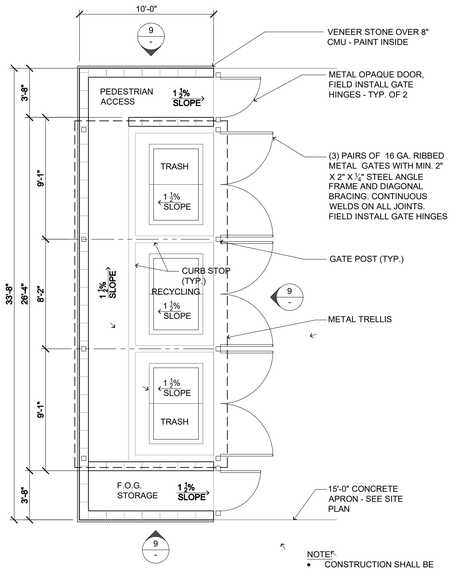
1. HANDICAPPED PARKING SIGN SHALL CONFORM WITH CURRENT STATE AND LOCAL AND FEDERAL CODES AND REGULATIONS.
2. ALL SIGNS SHALL BE DESIGNED TO WITHSTAND 120 M.P.H. WINDLOAD.

14 HANDICAP SIGN DETAIL

CALIFORNIA

SCALE: NOT TO SCALE

P:/WESTMONT LIVING/CA-SAN LUIS OBISPO/DETAILS/02840006CAL



NOTE:

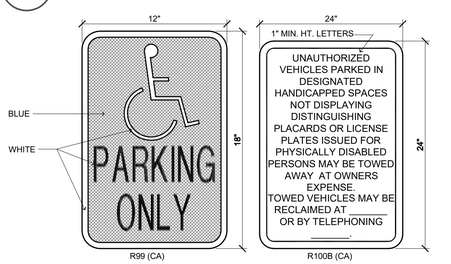
- CONSTRUCTION SHALL BE OF NON-COMBUSTABLE CONSTRUCTION
- ALL GATES TO BE PRE-MANUFACTURED
- GATES AND HINGES TO BE FIELD INSTALLED
- GATES WILL BE METAL AND OPAQUE

13 ENCLOSURE (TRASH & RECYCLING)

SCALE: 3/16" = 1'-0"

(SEPARATE PERMIT REQUIRED)

P:/WESTMONT LIVING/CA-LA MESA/DETAILS/02877021



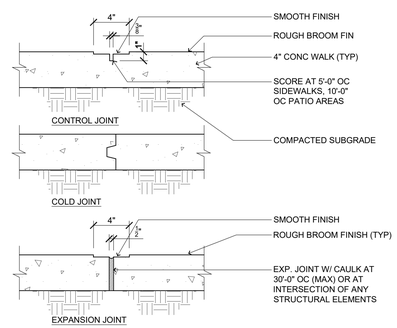
A STANDARD R7-8 ACCESSIBLE PARKING SIGN SHALL BE USED TO MARK EACH PARKING SPACE. MINIMUM SIGN SIZE SHALL BE 12"x18". ALL SIGNS MUST BE PERMANENTLY MOUNTED IN THE GROUND OR ON A WALL.

SHALL BE LOCATED ON A POST AT THE FRONT OF EACH PARKING SPACE. THE BOTTOM OF THE SIGN SHOULD BE A MAXIMUM HEIGHT OF SIX FEET FROM THE GROUND. IF THE PARKING SPACE IS HEADED INTO A BUILDING THE SIGN MAY BE FASTENED TO THE SIDE OF THE STRUCTURE.

12 PARKING SIGN (CALIFORNIA)

SCALE: NOT TO SCALE

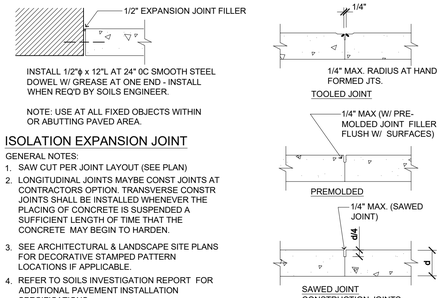
P:/WESTMONT LIVING/CA-SAN LUIS OBISPO/DETAILS/02840007



11 WALK/PATIO DETAIL (CONCRETE WALK JOINTS)

SCALE: 1 1/2" = 1'-0"

P:/WESTMONT LIVING/CA-SAN LUIS OBISPO/DETAILS/02520004



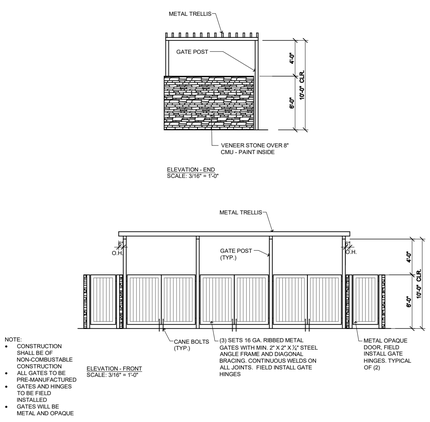
GENERAL NOTES:

1. SAW CUT PER JOINT LAYOUT (SEE PLAN)
2. LONGITUDINAL JOINTS MAYBE CONST. JOINTS AT CONTRACTORS OPTION. TRANSVERSE CONSTR JOINTS SHALL BE INSTALLED WHENEVER THE PLACING OF CONCRETE IS SUSPENDED A SUFFICIENT LENGTH OF TIME THAT THE CONCRETE MAY BEGIN TO HARDEN.
3. SEE ARCHITECTURAL & LANDSCAPE SITE PLANS FOR DECORATIVE STAMPED PATTERN LOCATIONS IF APPLICABLE.
4. REFER TO SOILS INVESTIGATION REPORT FOR ADDITIONAL PAVEMENT INSTALLATION SPECIFICATIONS.

10 TYPICAL JOINT CONSTRUCTION (ALTERNATE CONCRETE PARKING)

SCALE: 1 1/2" = 1'-0"

P:/WESTMONT LIVING/CA-SAN LUIS OBISPO/DETAILS/TYP-JOINT CONST-ALT CONC PARKING



NOTE:

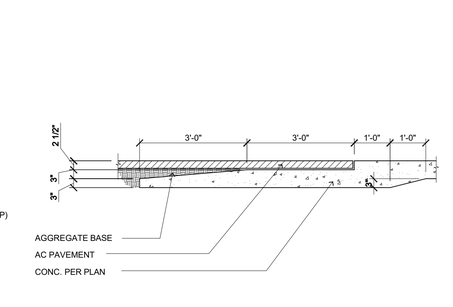
- CONSTRUCTION SHALL BE OF NON-COMBUSTABLE CONSTRUCTION
- ALL GATES TO BE PRE-MANUFACTURED
- GATES AND HINGES TO BE FIELD INSTALLED
- GATES WILL BE METAL AND OPAQUE

9 TRASH AND RECYCLING ENCLOSURE

(SEPARATE PERMIT REQUIRED)

SCALE: 1/8" = 1'-0"

P:/WESTMONT LIVING/CA-SAN LUIS OBISPO/DETAILS/TRASHELEV



8 PAVEMENT TRANSITION (PAVEMENT AND CONCRETE)

SCALE: 1/2"=1'-0"

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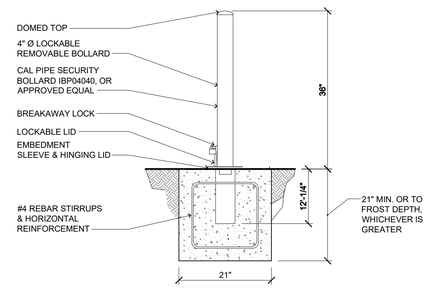


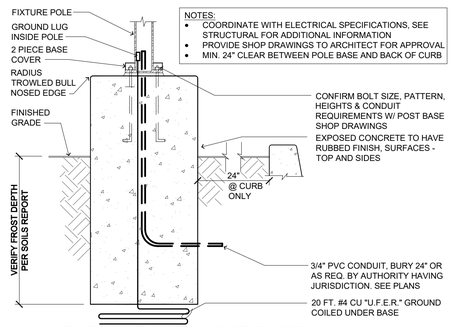
NOTES:

1. INSTALLATION TO BE COMPLETED IN ACCORDANCE WITH MANUFACTURER'S SPECIFICATIONS.

7 BOLLARD (LOCKABLE / REMOVABLE)

SCALE: N.T.S

P:/WESTMONT LIVING/CA-SAN LUIS OBISPO/DETAILS/02830022



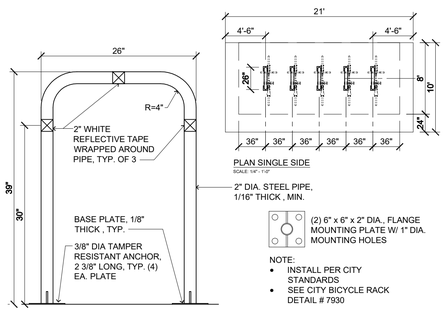
NOTES:

- COORDINATE WITH ELECTRICAL SPECIFICATIONS, SEE STRUCTURAL FOR ADDITIONAL INFORMATION
- PROVIDE SHOP DRAWINGS TO ARCHITECT FOR APPROVAL
- MIN. 24" CLEAR BETWEEN POLE BASE AND BACK OF CURB

6 PARKING LOT LIGHT BASE

SCALE: 3/4" = 1'-0"

P:/WESTMONT LIVING/CA-SAN LUIS OBISPO/DETAILS/02850001



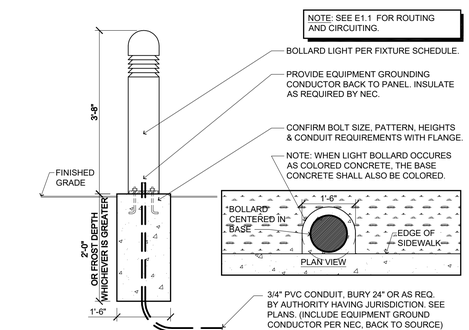
NOTE:

- INSTALL PER CITY STANDARDS
- SEE CITY BICYCLE RACK DETAIL # 7930

5 BIKE DOCK (SHORT TERM BIKE PARKING)

SCALE: 1/8" = 1'-0"

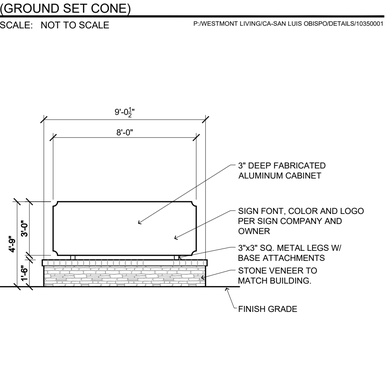
P:/WESTMONT LIVING/CA-SAN LUIS OBISPO/DETAILS/02830032PS



4 WALKWAY LIGHT BASE/POLE

SCALE: NTS

P:/WESTMONT LIVING/CA-SAN LUIS OBISPO/DETAILS/LANDSCAPE_BOLLARD



3 FLAG POLE (FOOTING DETAIL)

SCALE: NOT TO SCALE

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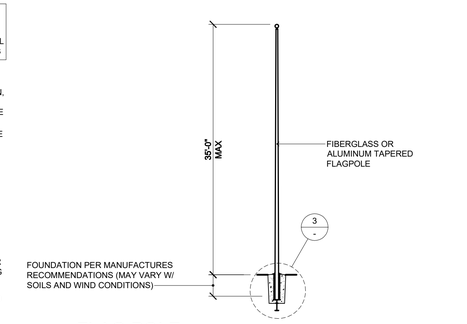

2 FLAG POLE (GROUND SET CONE)

SCALE: NOT TO SCALE

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1 PROJECT SIGN

SCALE: 1/4" = 1'-0"

P:/WESTMONT LIVING/CA-SAN LUIS OBISPO/DETAILS/SIGN/PROJ SIGN

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SITE DETAILS

DATE 11/29/18

REVISED DATE

SHEET A1.7

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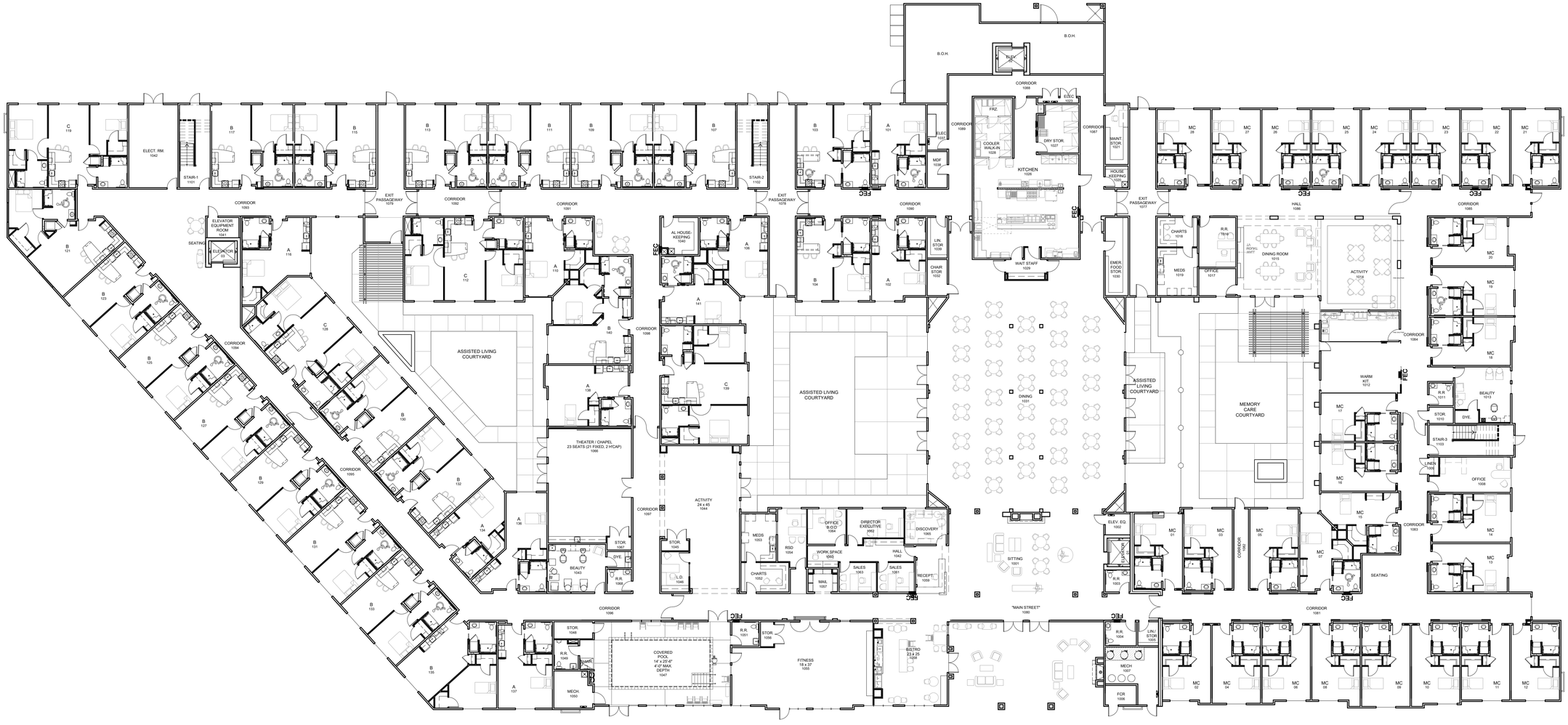
Attachment 2



BUILDING AREA

Level One	= 67,374 sq. ft.
Level Two	= 66,281 sq. ft.
TOTAL	= 133,655 sq. ft.

UNIT MIX - LEVEL ONE = 33

"A" Studio Units	= 10
"B" One Bedroom Units	= 19
"C" Two Bedroom Units	= 4

"MC" Studio Units = 28

TOTAL UNIT MIX

"A" Studio Units	= 32
"B" One Bedroom Units	= 68
"C" Two Bedroom Units	= 11
TOTAL	= 111

"MC" Studio Units = 28
GRAND TOTAL = 139

1ST FLOOR

SCALE: 1/16" = 1'-0"

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1ST FLOOR PLAN

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DATE 11/29/18

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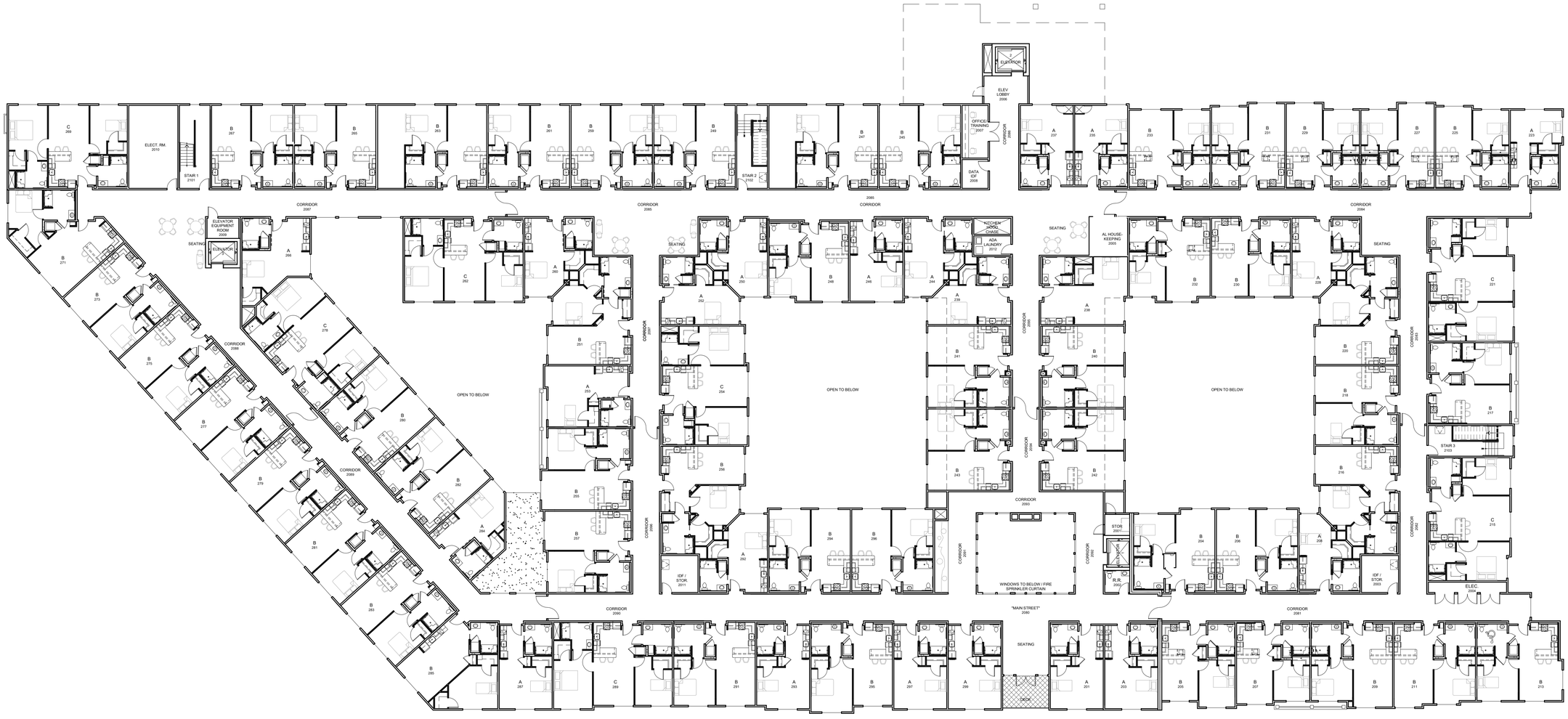
Attachment 2



UNIT MIX - LEVEL TWO

"A" Studio Units	= 22
"B" One Bedroom Units	= 49
"C" Two Bedroom Units	= 7
TOTAL LEVEL TWO	= 78

BUILDING AREA LEVEL TWO = 66,281 sq. ft.

2nd FLOOR

SCALE: 1/16" = 1'-0"

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2ND FLOOR PLAN

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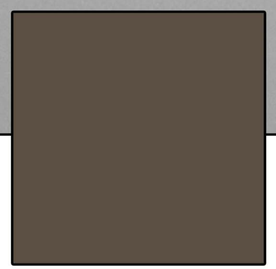
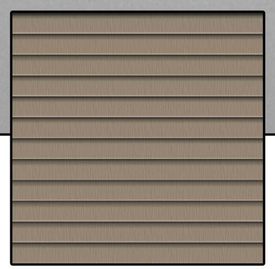
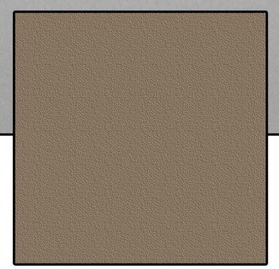


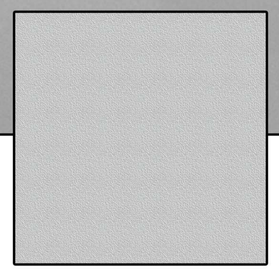
Board & Batten
Sherwin Williams
SW 7040 Smokehouse



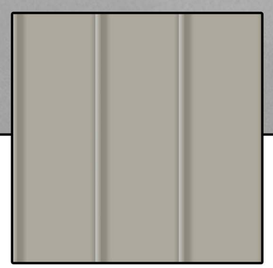
Lap Siding
Sherwin Williams
SW 7507 Stone Lion



Stucco 1
Sherwin Williams
SW 9117 Urban Jungle



Stucco 2 / Trim
Sherwin Williams
SW 7656 Rhinestone



Metal Roof
Sherwin Williams
SW 2844
Roycroft Mist Gray

Stone Veneer
Eastern Mountain
Ledge
Provo Canyon Grey

Wood Columns and
Beams
"Central Coastal Wood"

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MATERIALS AND COLORBOARD

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11/29/18

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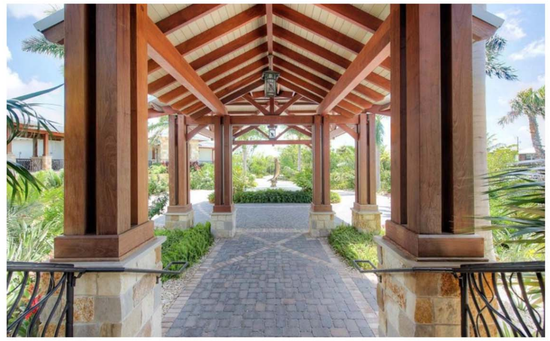
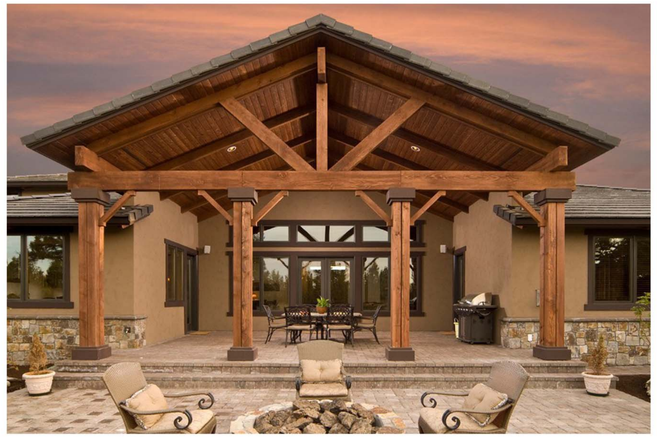
A5.1

Attachment 2





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A5.2

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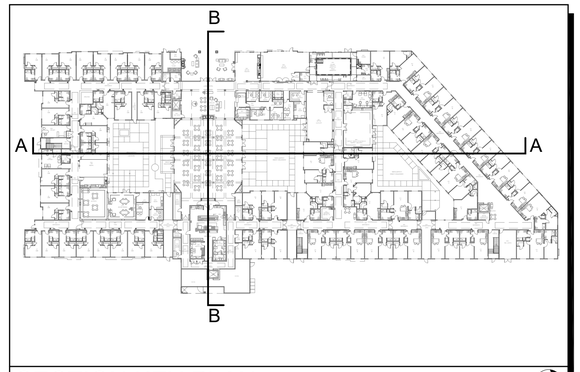
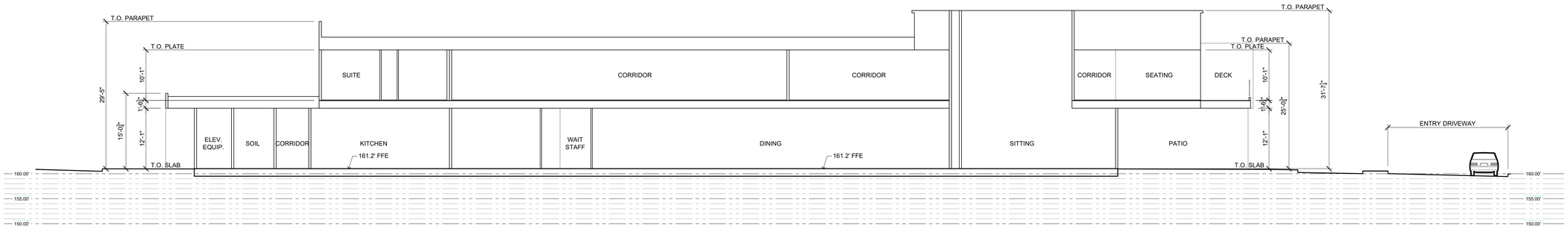


SECTION KEY PLAN

NOT TO SCALE



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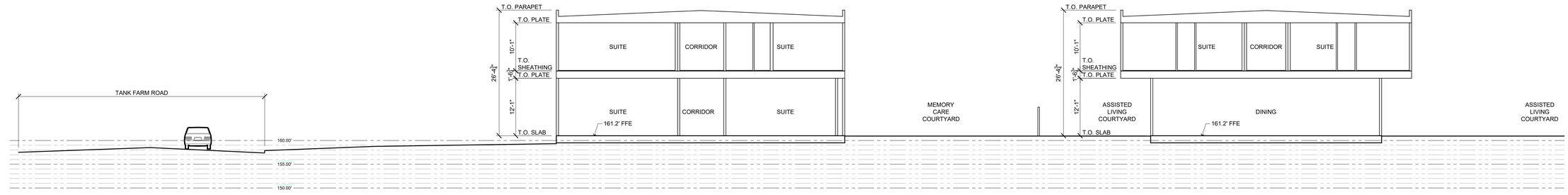
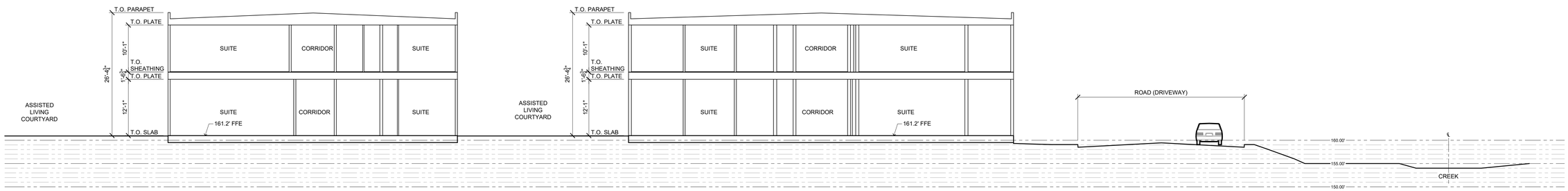
SCALE: 3/32" = 1'-0"





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SCALE: 3/32" = 1'-0"

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BUILDING SECTIONS

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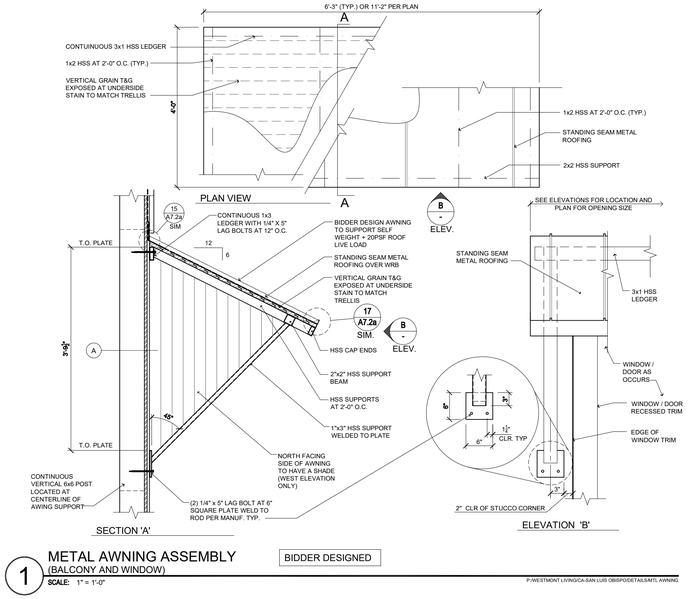
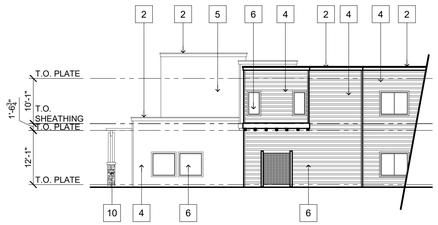


1 METAL AWNING ASSEMBLY (BALCONY AND WINDOW)

BIDDER DESIGNED

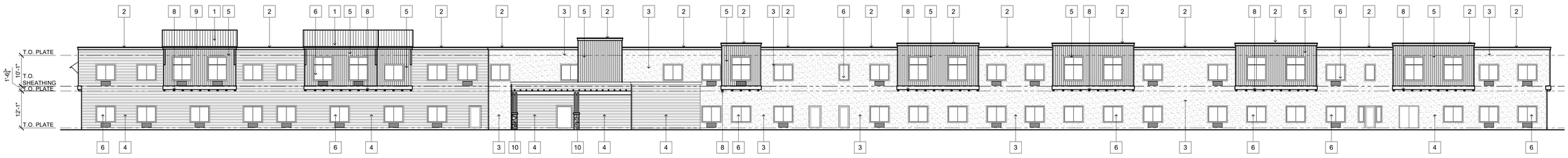
SCALE: 1" = 1'-0"

P:\WESTMONT LIVING\CA-SAN LUIS OBISPO\DETAILS\MTL AWNING



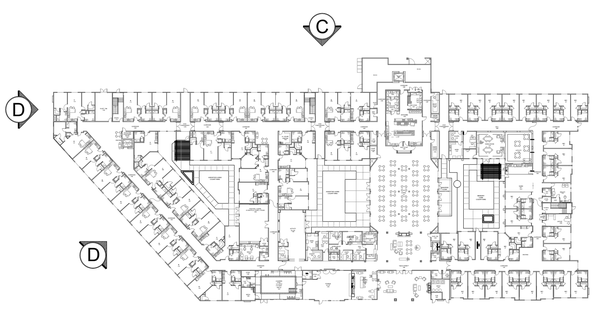
D NORTH ELEVATION

SCALE : 1/16"=1'-0"



C EAST ELEVATION

SCALE : 1/16"=1'-0"

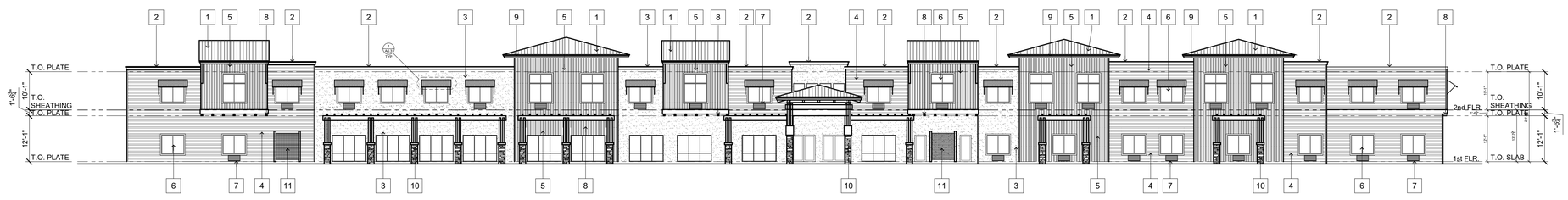


ELEVATION KEY PLAN

SCALE: N.T.S.

B SOUTH ELEVATION

SCALE : 1/16"=1'-0"



A WEST ELEVATION

SCALE : 1/16"=1'-0"

KEY NOTES

1 ROOF	= STANDING SEAM METAL ROOFING COLOR: SW 2844 ROYCROFT MIST GRAY
2 ROOF	= PARAPET HEIGHTS PER ELEVATIONS
3 SIDING	= STUCCO FINISH (MAIN BODY) MFR: OMEGA COLOR: SW 9117 URBAN JUNGLE
4 SIDING	= HARDIPLANK HORIZONTAL SIDING COLOR: SW 7507 STONE LION
5 SIDING	= BOARD AND BATT SIDING MFR: SHERWIN WILLIAMS COLOR: SW 7040 SMOKEHOUSE
6 WINDOW	= VINYL FRAMED INSULATED WINDOWS W/ TRIM COLOR: BEIGE
7 PTAC	= PTAC COLOR: TO MATCH ADJACENT BUILDING COLOR, TYP.
8 TRIM	= DECORATIVE CORBEL MFR: COLOR: WESTERN RED CEDAR: STAMPED / ALUMAWOOD
9 FASCIA	= FASCIA TRIM COLOR: SW 2844 ROYCROFT MIST GRAY
10 STONE	= CULTURED STONE VENEER: EASTERN MOUNTAIN LEDGE COLOR: PROVO CANYON GREY
11	= TRELLIS

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EXTERIOR BUILDING ELEVATIONS

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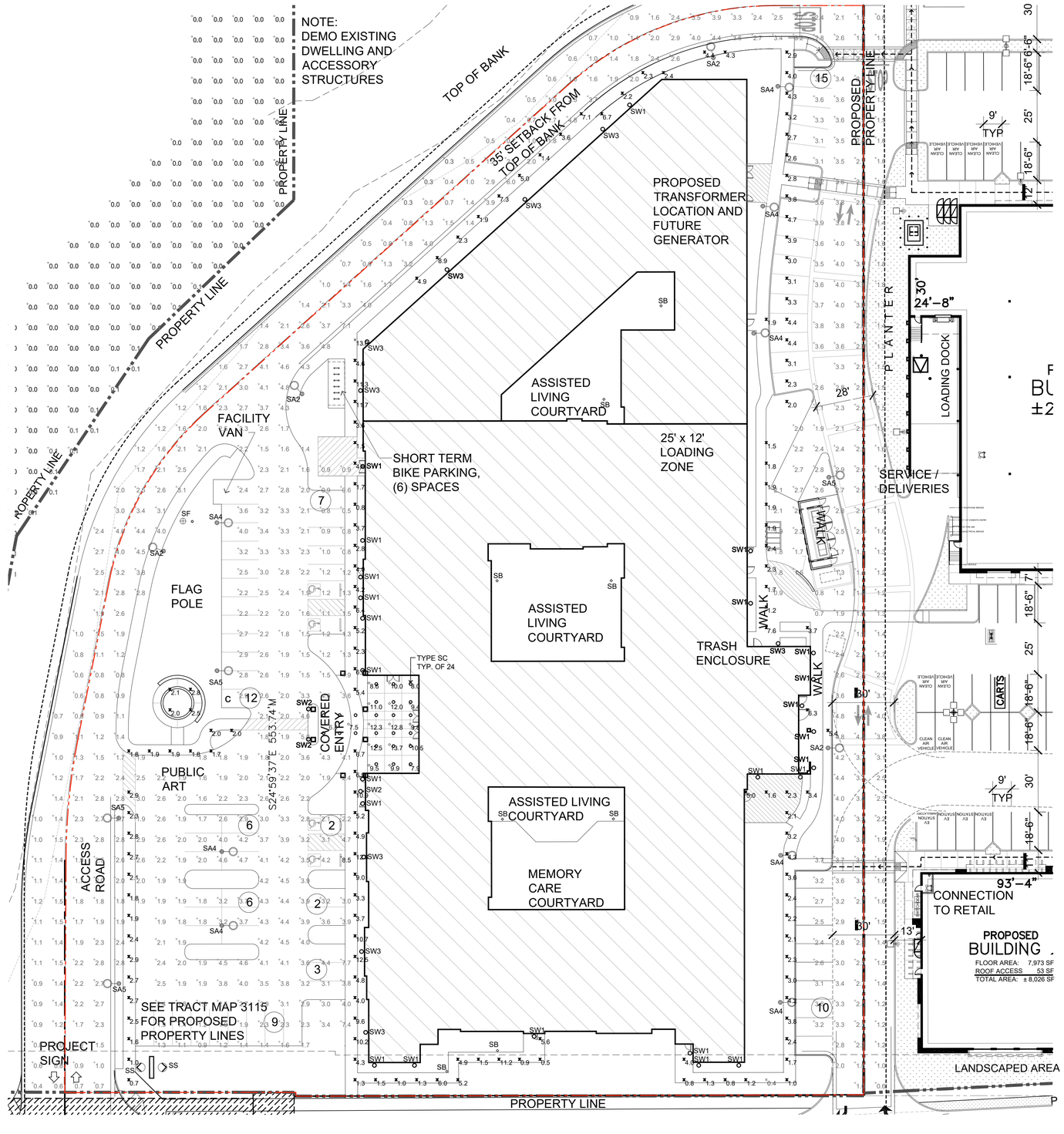
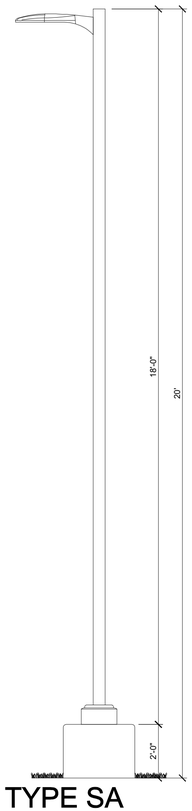


Schedule											
Label	Mount Height	Quantity	Manufacturer	Catalog Number	Description	Lamp	Number Lamps	Filename	Lumens Per Lamp	Light Loss Factor	Wattage
SA2	20'	4	Lithonia Lighting	DSX0 LED P6 40K T2M MVOLT HS	DSX0 LED P6 40K T2M MVOLT with houseside shield	LED	1	DSX0_LED_P6_40K_T2M_MVOLT_HS.ies	13054	0.95	134
SA4	20'	8	Lithonia Lighting	DSX0 LED P6 40K TFTM MVOLT HS	DSX0 LED P6 40K TFTM MVOLT with houseside shield	LED	1	DSX0_LED_P6_40K_TFTM_MVOLT_HS.ies	12465	0.95	134
SA5	20'	4	Lithonia Lighting	DSX0 LED P6 40K T5M MVOLT	DSX0 LED P6 40K T5M MVOLT	LED	1	DSX0_LED_P6_40K_T5M_MVOLT.ies	16575	0.95	134
SB	3'6"	8	Lithonia Lighting	DSXB LED 16C 530 40K SYM	D-SERIES BOLLARD WITH 16 4000K LEDS OPERATED AT 530mA AND SYMMETRIC DISTRIBUTION	LED	1	DSXB_LED_16C_530_40K_SYM.ies	2397	0.95	28
SC	Underside of Ceiling	33	COOPER LIGHTING - - HALO	SLD612940WH	HALO 6 INCH SURFACE LED DOWNLIGHT	LED	1	SLD612940WH.ies	1000	0.95	14.8
SF	1'	1	Lithonia Lighting	DSXF1 LED P1 40K NSP	DSXF1 LED P1 40K NSP	LED	1	DSXF1_LED_P1__40K_NSP.ies	2876	0.95	21
SS	1'	2	Lithonia Lighting	DSXF1 LED P1 40K MFL	DSXF1 LED P1 40K MFL	LED	1	DSXF1_LED_P1__40K_MFL.ies	2692	0.95	21
SW1	9'	34	WAC Lighting	WS-W20506	Wall Mount	LED	1	W20506-C14100003_IESNA2002.ies	866	0.95	16.8
SW2	11'	3	WAC Lighting	DS-WS05-F35S-WT	Wall Mount Tube	LED	1	DS-WS05-F35S-WT.IES	1453	0.95	23.8
SW3	14'	9	Lithonia Lighting	WST LED P3 40K VF MVOLT	WST LED, Performance package 3, 4000 K, visual comfort forward throw, MVOLT	LED	1	WST_LED_P3_40K_VF_MVOLT.ies	6609	0.95	50

Statistics						
Description	Symbol	Avg	Max	Min	Max/Min	Avg/Min
ENTRY	◇	10.1 fc	13.7 fc	6.4 fc	2.1:1	1.6:1
PARKING	+	2.3 fc	7.7 fc	0.3 fc	25.7:1	7.7:1
SIDEWALK	×	4.1 fc	13.0 fc	0.4 fc	32.5:1	10.3:1
Spill onto RZ	+	0.0 fc	0.3 fc	0.0 fc	NA	NA



TYPE SA
PARKING LOT
LED LIGHT POLE

SITE LIGHTING PHOTOMETRIC PLAN

SCALE: 1" = 30'

0 15 30 60 120

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ELECTRICAL SITE PLAN

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SHEET E1.1

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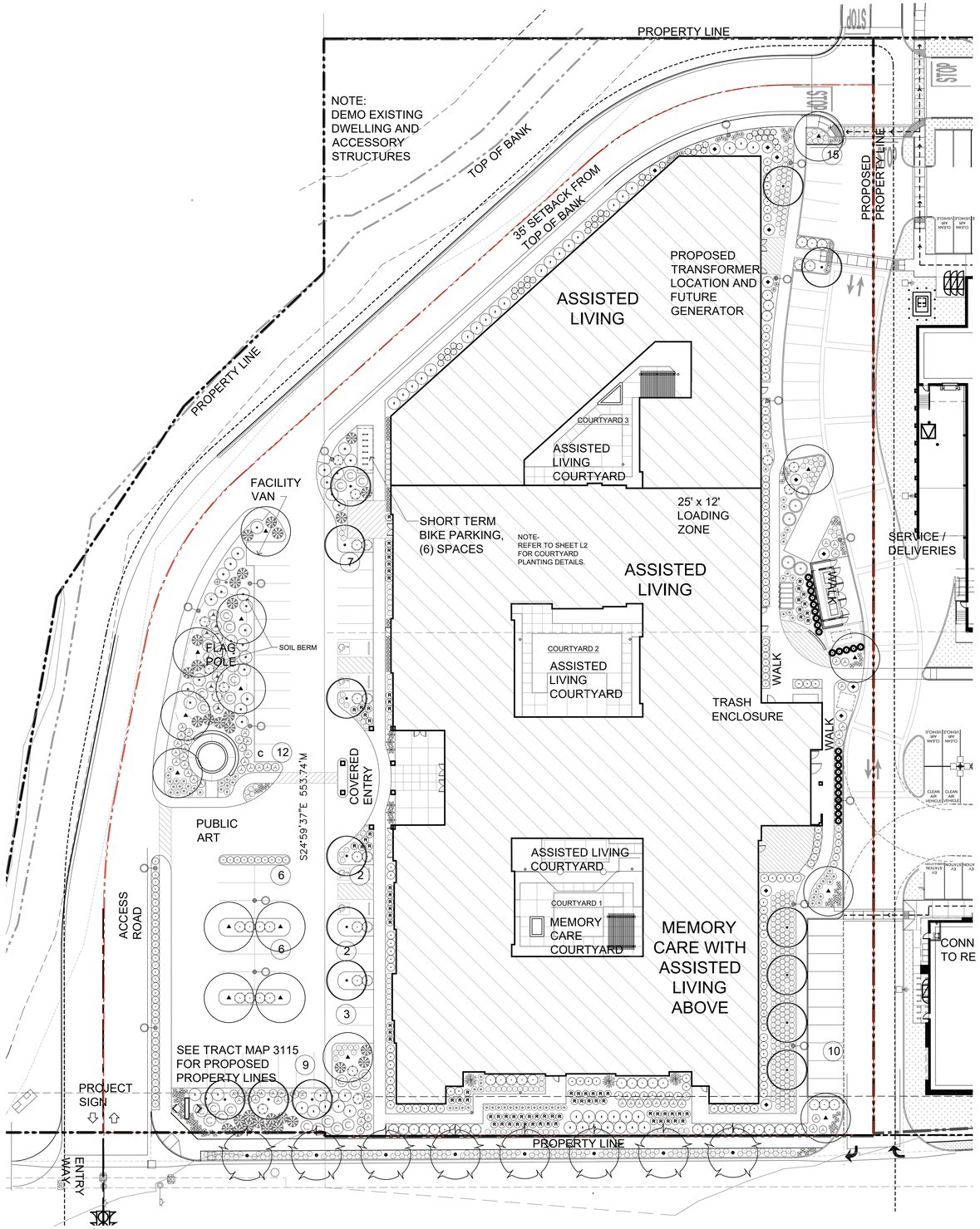

WATER USE CALCULATIONS

TOTAL SITE LANDSCAPE AREA = 29,458 s.f.

RIGHT-OF-WAY LANDSCAPE AREA = 1874 s.f.

TOTAL IRRIGATED LANDSCAPE AREA = 31,332 s.f.

MAXIMUM ANNUAL APPLIED WATER ALLOWANCE (MAAWA)

MAAWA (gallons)= (ETo) x (.62) x ((0.45 x LA) + (0.3 x SLA))

(43.80) x (.62) x ((0.45 x 31,332) + (0.3 x 0)) = MAAWA 382,883 gals.

ESTIMATED ANNUAL APPLIED WATER USE

(ETo) x (PF-Kc) x (HA) x (.62) / (IE)= EAAWU (HYDROZONE)

(43.80) x (0.05) x (1959) x (.62) / (1.0) = 2660 gals. EAAWU (VERY LOW- ARTIFICIAL TURF)

(43.80) x (0.2) x (19,048) x (.62) / (.81) = 127,720 gals. EAAWU (LOW HYDROZONES)

(43.80) x (0.2) x (1874) x (.62) / (.81) = 12,566 gals. EAAWU (LOW HYDROZONES- R.O.W.)

(43.80) x (0.5) x (8299) x (.62) / (.81) = 139,116 gals. EAAWU (MODERATE HYDROZONES)

(43.80) x (0.9) x (152) x (.62) / (.75) = 4953 gals. EAAWU (HIGH HYDROZONES)

EAAWU TOTAL (EATAWU): 287,015 gals.

EATAWU 287,015 gals. is less than MAAWA 382,883 gals.

NOTE- ETo used for this site in San Luis Obispo, CA = 43.80

PLANTING LEGEND

SYMBOLS	BOTANICAL NAME / COMMON NAME	QUANTITY	SIZE	WUCOLS I North-Central Coast
STREET TREES				
	Tristaniopsis laurina Water Gum	8	15 gal. Std.	Moderate
TREES				
	Cassia leptophylla Gold Medallion Tree	16	24" box Std.	Low
	Lagerstroemia 'Natchez' Natchez Hybrid Crape Myrtle	15	24" box Std.	Low
SHRUBS				
	Arbutus unedo 'Compacta' Compact Strawberry Tree	5	15 gal.	Low
	Carpenteria californica Bush Anemone	12	5 gal.	Low
	Euonymus japon.'Microphyllus Variegata' Variegated Box-leaf Euonymus	95	5 gal.	Low
	Juniperus scopulorum 'Skyrocket' Skyrocket Juniper	25	15 gal.	Low
	Myrtus communis 'Compacta' Compact Myrtle	59	5 gal.	Low
	Phlomis fruticosa Jerusalem Sage	13	5 gal.	Low
	Rhamnus californica 'Mound San Bruno' Coffeeberry	45	5 gal.	Low
	Rhaphiolepis indica 'Ballerina' Indian Hawthorn	76	5 gal.	Low
	Rosa floribunda 'Iceberg' Iceberg Rose	83	5 gal.	Moderate
	Salvia greggii 'Coral' Coral Autumn Sage	74	5 gal.	Low
GRASSES/PERENNIALS				
	Aspidistra elatior Cast Iron Plant	6	5 gal.	Moderate
	Helictotrichon sempervirens Blue Oat Grass	32	1 gal.	Low
	Lavandula angustifolia 'Twickel Purple' Dwarf English Lavender	68	1 gal.	Low
	Muhlenbergia capillaris Pink Muhly	31	1 gal.	Low
	Pennisetum alopecuroides 'Little Bunny' Little Bunny Fountain Grass	91	1 gal.	Low
	Phormium 'Maori Queen' Hybrid New Zealand Flax	3	5 gal.	Moderate
	Romneya coulteri Matilija Poppy	7	5 gal.	Very Low
GROUND COVERS				
	Ceanothus gloriosus 'Anchor Bay' California Lilac	25	5 gal.	Low
	Coprosma petriei 'Verde Vista' Creeping Coprosma	28	1 gal.	Low
	Mahonia repens Creeping Mahonia	40	1 gal.	Low
	Rosmarinus officin. 'Huntington Carpet' Trailing Rosemary	482	1 gal.	Low
	Artificial Turf DuPont Forever Lawn or equal			Very Low

NOTES

1. All landscape areas shall be irrigated with an automatic irrigation system utilizing SMART Technology with weather sensor.
2. Provide 2" min. layer of organic mulch in all planting beds.
3. Courtyard plant materials shown on Sheet L2 are not included in Planting Legend.

SPECIFIC PLAN CRITERIA

1. Provide a 36" high screen of cars between parking areas and street with an evergreen hedge/shrubs masses, wall or berm.

   Parking areas are screened with a 36" high evergreen hedge and shrub masses.

2. Provide screening of electrical transformers and equipment with evergreen shrubs or berm.

   All equipment is screened with evergreen shrubs.

3. Parking Lot Trees:

   A. Use single tree species at end planter islands with second tree species between islands as an option.

   Two tree species have been used in the parking lot planters.

   B. Provide "Orchard Style" planting in parking lot at a rate of 1 tree / 4 parking spaces.

   The parking lot does not have multiple rows of parking but an Orchard Style tree planting approach has been applied where feasible.

   73 spaces / 4= 18 required trees, 31 trees are proposed*

   * additional trees proposed to achieve 50% shade requirement at 10 years.

LICENSED LANDSCAPE ARCHITECT
BRIAN D. LIND No. 3847
EXP. 11 - 30 - 18
STATE OF CALIFORNIA

L1 Landscape Development Plan

DATE: 1/23/2018, rev. 3/7/2018, rev. 11/29/2018

SCALE: 1" = 30'

0 15 30 60 90

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LANDSCAPE
DEVELOPMENT
PLAN

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SHEET
L1

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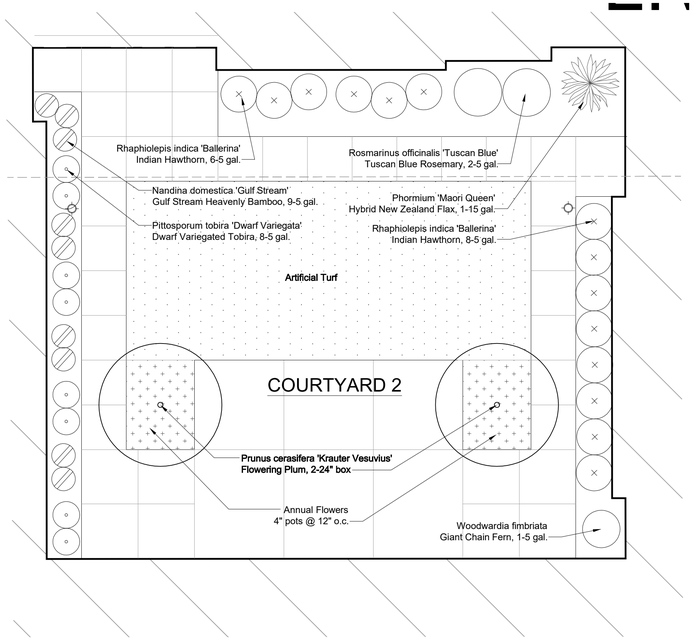
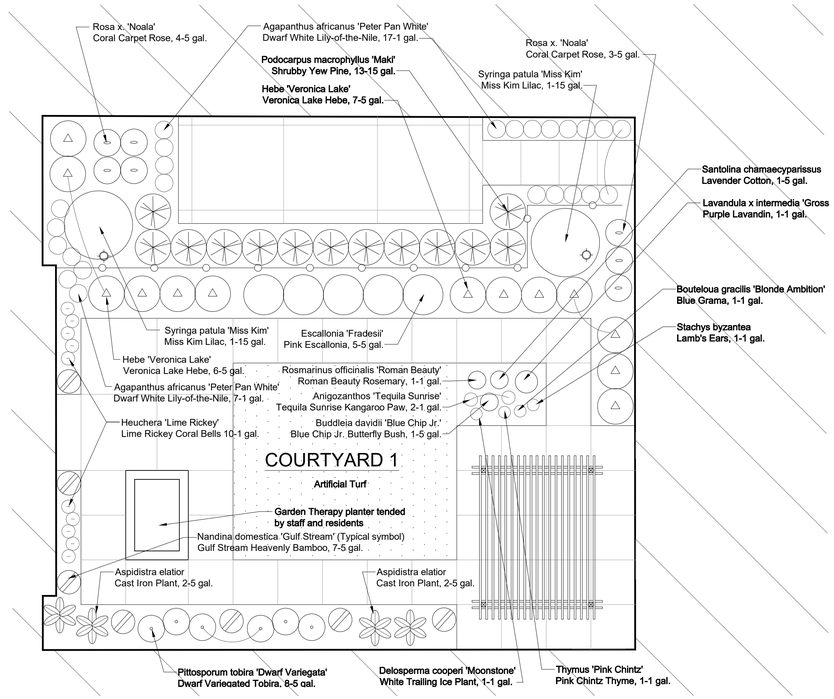
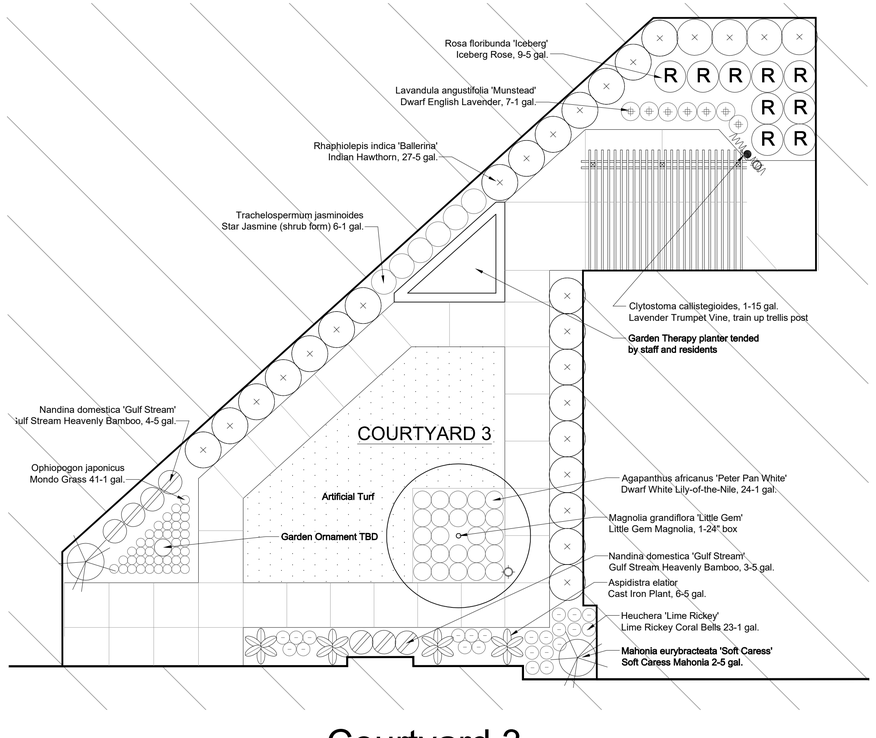


Courtyard 2



Courtyard 1



Courtyard 3

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EXP. 11 - 30 - 18
STATE OF CALIFORNIA

L2 Courtyard Landscape Plans

DATE: 1/23/2018, rev. 3/7/2018, rev. 11/29/2018
SCALE: 1" = 8'

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COURTYARD
LANDSCAPE
PLAN

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L2

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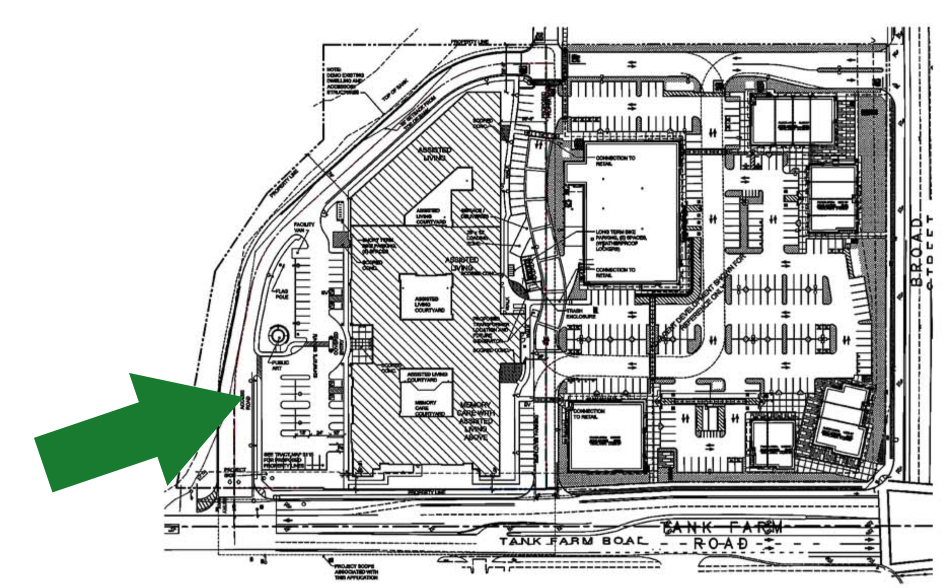

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SHEET 1 OF 9

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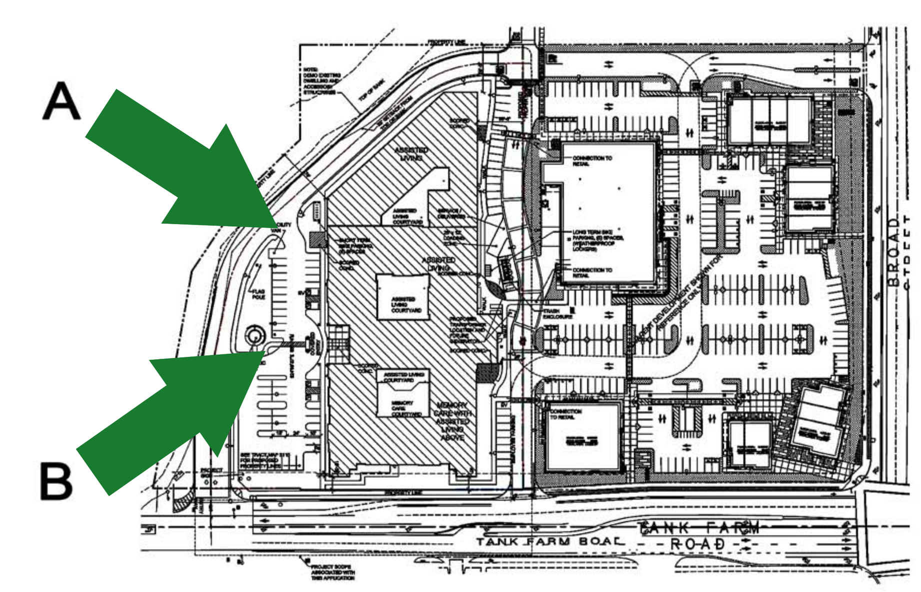
B



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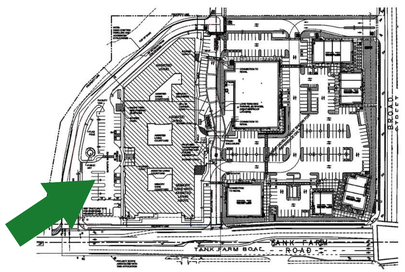

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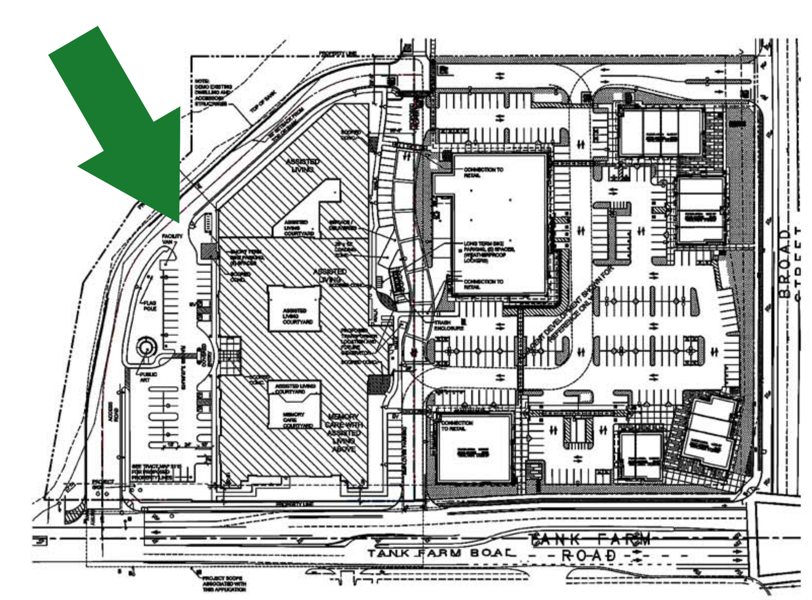

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SHEET
6 OF 9

save:3/16/2018 9:16 AM jamesm plot:11/13/2018 10:57 AM david locke file:p:\westmont living\ca-san luis obispo\prelim\renderings.dwg 2of9

A

C

B

lenity
architecture, inc.
3150 Kettle Court SE, Salem, Oregon 97301
p 503 399 1090 f 503 399 0565 w lenityarchitecture.com

WESTMONT LIVING
inspired retirement living

WESTMONT OF
SAN LUIS OBISPO
SAN LUIS OBISPO, CALIFORNIA

RENDERING

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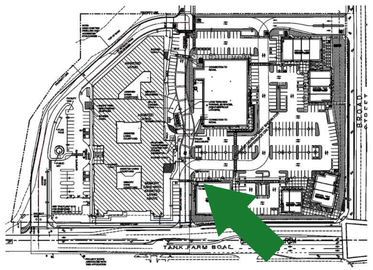
DATE
11/29/18

REVISED DATE

SHEET
7 OF 9

save:3/16/2018 9:18 AM jamesm plot:11/13/2018 10:27 AM david locke file:p:\westmont living\ca-san luis obispo\permit\rendering-dwg-2of9

Attachment 2



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DATE
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REVISED DATE

SHEET
8 OF 9

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SAN LUIS OBISPO, CALIFORNIA

RENDERING

DATE
11/29/18

REVISED DATE

SHEET
9 OF 9

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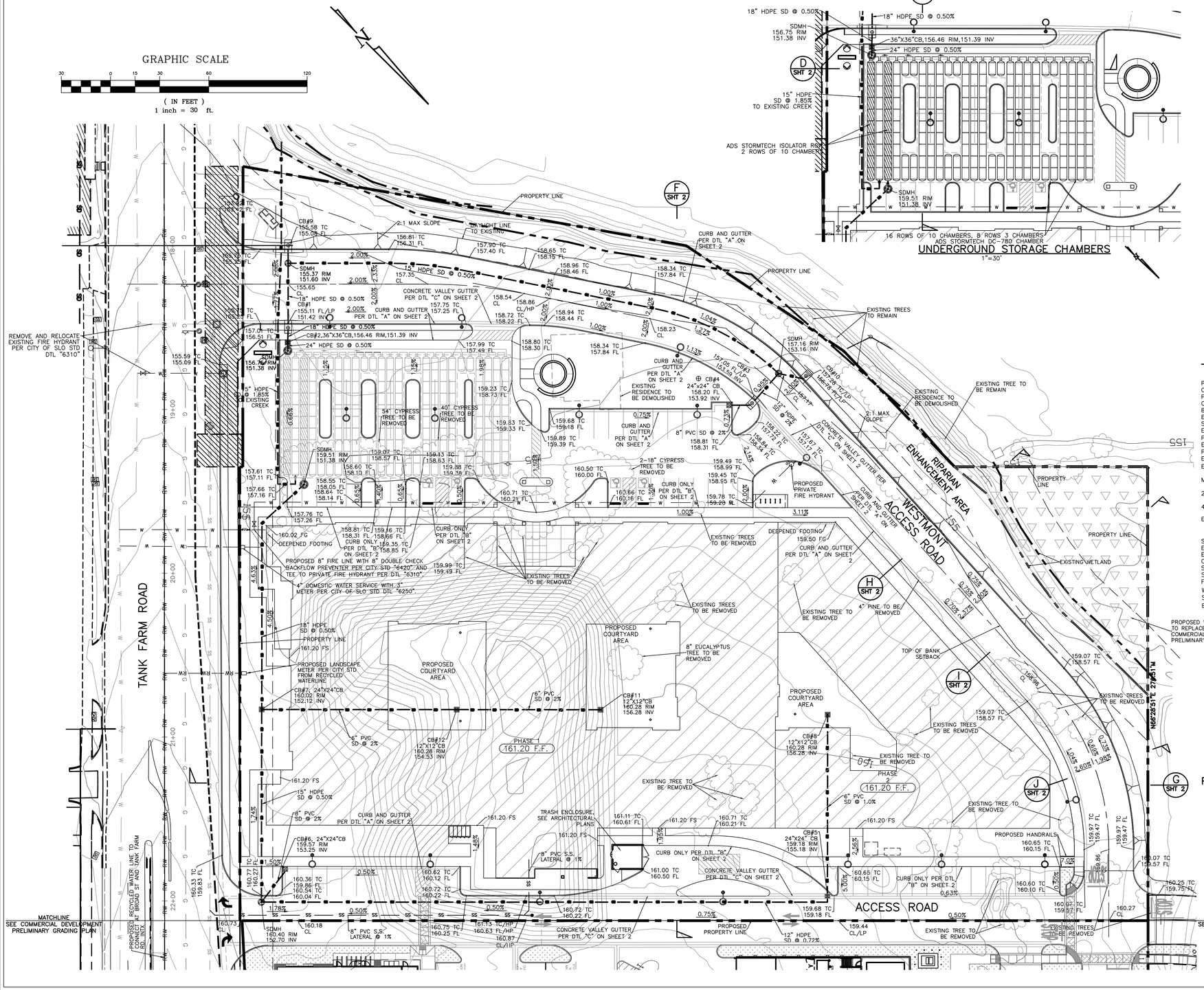
saved: 3/16/2018 9:16 AM jamsem plot: 11/13/2018 10:57 AM dawd locke file:p:\westmont living\ca-san luis obispo\preliminary\drawings.dwg 2of9

GRAPHIC SCALE

30 0 15 30 60 120

(IN FEET)
1 inch = 30 ft.



UNDERGROUND STORAGE CHAMBERS
1"=30'

PROJECT INFORMATION

ASSESSOR'S PARCEL NUMBER:	053-421-003 & 053-421-004
EXISTING ZONING:	BP-SP
GROSS AREA:	(4.79 AC) 208,756 S.F.
ZONING:	BP-SP

EARTHWORK QUANTITIES

RAW CUT:	25,453 C.Y. CUT
RAW FILL:	25,382 C.Y. FILL
	71 C.Y. NET FILL

BENCHMARK

THE BENCH MARK FOR THIS PROJECT IS A FOUND CITY OF SAN LUIS OBISPO BENCH MARK NUMBER 356, BEING LEAD AND TACK 4 FEET 3 INCHES EAST OF THE BCR AT THE CATCH BASIN AT THE SOUTHEASTERLY CURB OF TANK FARM ROAD AND BROAD STREET AS SHOWN.

ELEVATION=167.38' NAVD 88

BASIS OF BEARINGS

THE BASIS OF BEARINGS FOR THIS PROJECT IS BASED ON CALIFORNIA STATE PLANE ZONE 5, FROM FOUND CITY OF SAN LUIS HORIZONTAL CONTROL NETWORK MONUMENTS, NORTH AMERICAN DATUM 1983, EPOCH DATE:1991.35.

BEARING N 87° 56' 14" W BASED ON CITY HORIZONTAL CONTROL NETWORK MONUMENT NUMBERS 8100 AND 8101.

TO OBTAIN GROUND LEVEL DISTANCES MULTIPLY DISTANCES SHOWN BY 1.0000405

TO OBTAIN GEODETIC BEARINGS ROTATE GRID BEARING -1° 30' 23".

BASIN INFORMATION

THIS SITE INCLUDED IN A.P.N. 053-421-003 AND 053-421-004 DEVELOPMENT DESIGN. ADS STORMTECH UNDERGROUND STORAGE CHAMBERS HAVE BEEN PROPOSED FOR THIS SITE TO HANDLE THE SITES STORM WATER, THE STORAGE CHAMBER AREA IS A TOTAL OF 11,095 S.F.

NOTE: EXISTING RESIDENCE ON-SITE TO BE DEMOLISHED

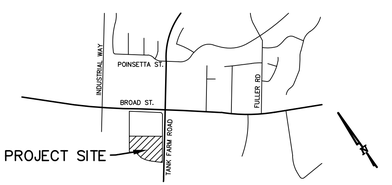
LEGEND

PROJECT BOUNDARY
CENTERLINE
PROPERTY LINE
CURB LINE
BUILDING SETBACKS
EASEMENT LINE
STORM DRAIN
EXIST STORM DRAIN
PROPOSED SEWER
EXIST SEWER
PROPOSED WATERLINE
EXIST WATERLINE
E.P./LIP OF GUTTER
MASONRY WALL
2:1 SLOPE
4:1 SLOPE
EXIST. CONTOURS (200)

STORM DRAIN MANHOLE	
EXIST. S.D. MANHOLE	
EXIST FIRE HYDRANT	
CATCH BASIN	
SEWER CLEAN OUT	
SEWER MANHOLE	
FIRE HYDRANT	
WATER SERVICE	
SEWER LATERAL	
EXISTING GRADE	(XXX)

ABBREVIATIONS

TOP OF CURB	T.C.		
FLOWLINE	F.L.		
EDGE OF PAVEMENT	E.P.		
ASPHALT CONCRETE	A.C.		
HIGH POINT	H.P.		
LOW POINT	L.P.		
FINISHED GRADE	F.G.		
BACK OF WALK	B.W.		
GRADE BREAK	G.B.		



VICINITY MAP
N.T.S.

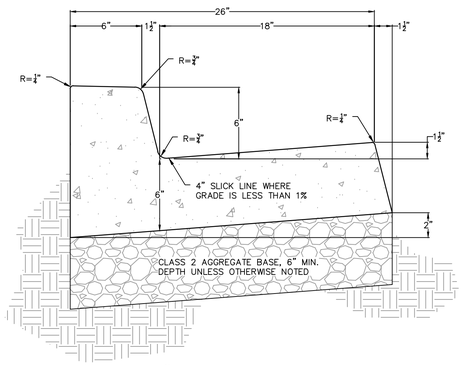
BETHEL engineering
2624 Airpark Dr. Santa Maria, California 93455 (805) 934-5767

CITY OF SAN LUIS OBISPO

PROJECT TITLE: WESTMONT ASSISTED LIVING

SHEET TITLE: PRELIMINARY GRADING PLAN

DESIGNED BY:	A.G.
DRAWN BY:	A.G.
CHECKED BY:	L.S.
APPROVED BY:	
SCALE:	1"=20'
DATE:	03/16/18
CITY SPECIFICATION NO.	
PLAN FILE NO. / LOCATION	
SHEET NO.	C-1W



A 6" CURB AND GUTTER
N.T.S

GENERAL NOTES:

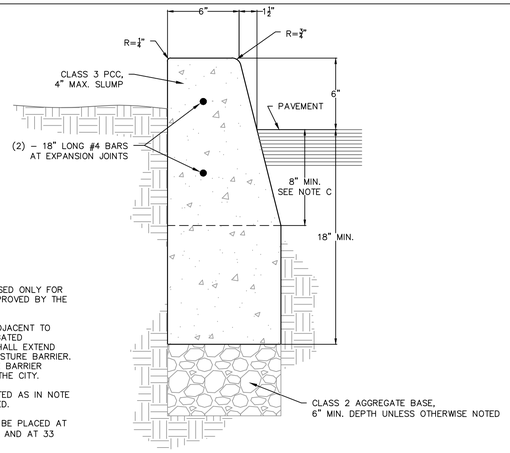
A. THIS SECTION IS TO BE USED ONLY FOR PARKING LOTS OR AS APPROVED BY THE CITY ENGINEER.

B. WHEN CURB IS PLACED ADJACENT TO EXISTING OR FUTURE IRRIGATED LANDSCAPE AREA, PCC SHALL EXTEND DOWN AS SHOWN FOR MOISTURE BARRIER. ANY ALTERNATE MOISTURE BARRIER SHALL BE APPROVED BY THE CITY.

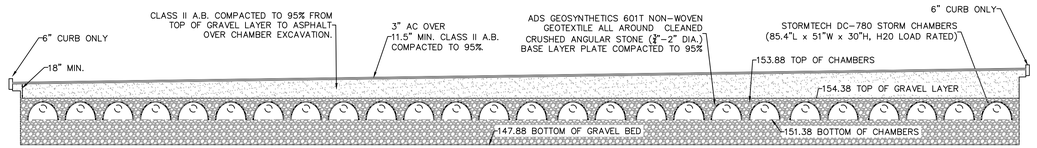
C. WHEN CURB IS NOT LOCATED AS IN NOTE B, DEPTH MAY BE REDUCED.

D. EXPANSION JOINTS SHALL BE PLACED AT CORNERS, BC'S AND EC'S, AND AT 33 FEET MAXIMUM SPACING.

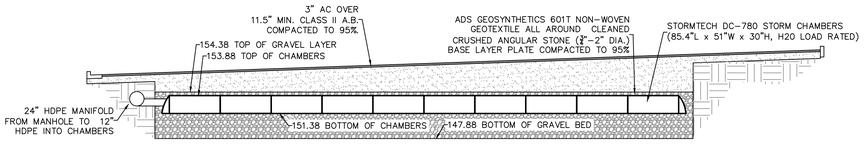
E. SEE ENGINEERING STANDARD 4110 FOR NOTES REGARDING REQUIRED PAVEMENT REMOVAL AND REPAIR.



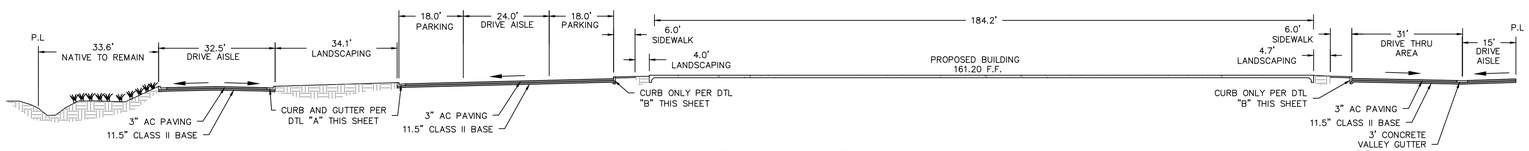
B 6" CURB ONLY
N.T.S



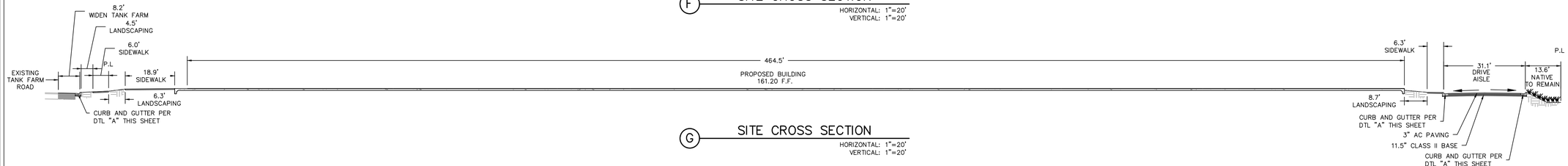
D UNDERGROUND STORAGE CHAMBERS SECTION
HORIZONTAL: 1"=10'
VERTICAL: 1"=10'



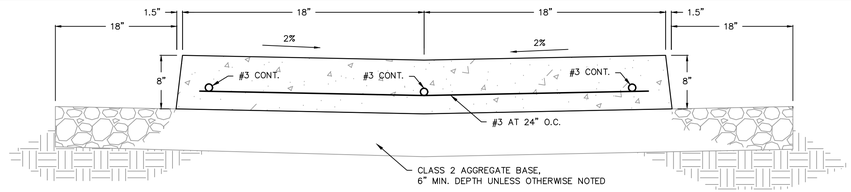
E UNDERGROUND STORAGE CHAMBERS SECTION
HORIZONTAL: 1"=10'



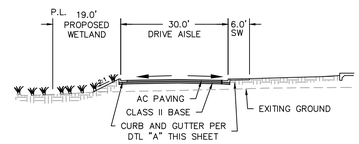
F SITE CROSS SECTION
HORIZONTAL: 1"=20'
VERTICAL: 1"=20'



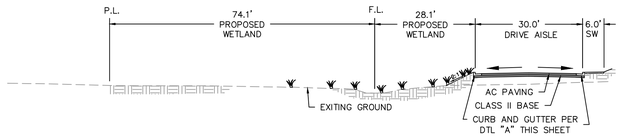
G SITE CROSS SECTION
HORIZONTAL: 1"=20'
VERTICAL: 1"=20'



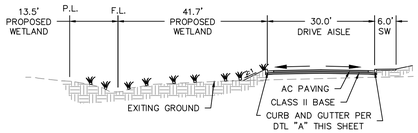
C CONCRETE VALLEY GUTTER
N.T.S



J WETLAND CROSS SECTION
HORIZONTAL: 1"=20'
VERTICAL: 1"=20'



I WETLAND CROSS SECTION
HORIZONTAL: 1"=20'
VERTICAL: 1"=20'



H WETLAND CROSS SECTION
HORIZONTAL: 1"=20'
VERTICAL: 1"=20'

CITY OF SAN LUIS OBISPO

WESTMONT ASSISTED LIVING

PROJECT TITLE:

SHEET TITLE: PRELIMINARY GRADING PLAN/ SECTIONS AND DETAILS

DESIGNED BY: A.G.
DRAWN BY: A.G.
CHECKED BY: L.S.
APPROVED BY:
SCALE: 1"=20'
DATE: 03/16/18
CITY SPECIFICATION NO.
PLAN FILE NO. / LOCATION
SHEET NO. **C-2W**

BETHEL engineering
2624 Airpark Dr. Santa Maria,
California 93455 (805) 934-5767

VESTING TENTATIVE TRACT MAP 3115

LEGEND

FUTURE CONST.		ASPHALT CONCRETE	A.C.
PROJECT BOUNDARY		BACK OF WALK	B.W.
CENTERLINE		EDGE OF PAVEMENT	E.P.
PROPERTY LINE		EXISTING	EX.
CURB LINE		FINISHED GRADE	F.G.
EXIST. CURB LINE		FLOW LINE	F.L.
ROW/EASEMENT LINE		GRADE BREAK	G.B.
STORM DRAIN	SD	HIGH POINT	H.P.
EXIST STORM DRAIN	SD	LOW POINT	L.P.
SEWER MAIN	SS	TOP OF CURB	T.C.
EXIST SEWER MAIN	SS		
WATER MAIN	W		
EXIST. WATER MAIN	W		
EXIST. CONTOURS	200		

EXISTING TREE TO BE REMOVED

EXISTING TREE TO REMAIN

PROJECT INFORMATION

PROPOSED PROJECT INFORMATION

NUMBER OF LOTS: 7
PROPOSED ZONING: CC–SF

LOT NO	AREA (SF)	(ACRES)
1	208,764	4.79
2	23,718	0.54
3	16,007	0.37
4	33,015	0.75
5	28,920	0.66
6	52,196	1.20
7	76,499	1.76

EXISTING PROJECT INFORMATION

ASSESSOR'S PARCEL NO.: 053–421–003
053–421–004
NUMBER OF PARCELS: 2
GROSS AREA: 10.20 AC
EXISTING ZONING: C–C–SF & BP–SP

F.I.R.M. INFORMATION

THIS PROJECT IS LOCATED IN FLOOD ZONE X WHICH IS DETERMINED TO BE OUTSIDE OF THE 0.2 PERCENT ANNUAL CHANCE FLOOD PLAIN.

UTILITIES

WATER:	CITY OF SAN LUIS OBISPO
WATERS:	CITY OF SAN LUIS OBISPO
ELECTRICITY:	PACIFIC GAS
GAS:	
TELEPHONE:	
CABLE TV:	

TOPOGRAPHIC SURVEY

MICHAEL B. STANTON,
PLS 5702
3563 SUELDO ST. UNIT Q
SAN LUIS OBISPO, CA 93401
(805)594–1960
DATED: ARPIL 16, 2014

LEGAL DESCRIPTION

ALL THAT REAL PROPERTY SITUATE IN THE CITY OF SAN LUIS OBISPO , COUNT OF SAN LUIS OBISPO, STATE OF CALIFORNIA BEING A PORTION OF LOT 57 OF THE SAN LUIS OBISPO SUBURBAN TRACT, SAID PORTION OF SAID LOT 57 BEING SHOWN ON A RECORD OF SURVEY RECORDED IN BOOK 67 OF RECORDS OF SURVEY AT PAGE 93 IN THE OFFICE OF THE COUNTY RECORDER OF SAID COUNTY, SAID PORTION OF SAID LOT 57 BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:

BEGINNING AT THE SOUTHEAST CORNER OF SAID LOT 57 AS SHOWN ON SAID RECORD OF SURVEY, SAID POINT BEING THE TRUE POINT OF BEGINNING; THENCE ALONG THE EASTERLY LINE OF SAID LOT AS SHOWN ON SAID RECORD OF SURVEY, NORTH 24°53'50"WEST, 462.07 FEET; THENCE LEAVING SAID EASTERLY LINE ALONG THE FOLLOWING COURSES: SOUTH 21°27'20" WEST, 97.84 FEET; SOUTH 8°55'32" WEST, 115.43 FEET; SOUTH 14°44'01" EAST, 275.02 FEET; SOUTH 24°52'08"EAST, 22.99 FEET TO A POINT ON THE EXISTING RIGHT OF WAY OF TANK FARM ROAD AS SHOWN ON SAID RECORD OF SURVEY; THENCE ALONG SAID RIGHT OF WAY ALONG THE FOLLOWING COURSES: NORTH 65°07'52"EAST, 163.59 FEET; SOUTH 24°53'50" EAST; NORTH 65°06'25"EAST, 20.00 FEET TO THE TRUE POINT OF BEGINNING.

SAID PROPERTY BEING DESCRIBED IN CERTIFICATE OF COMPLIANCE RECORDED JANUARY 13, 1999 AS INSTRUMENT NO.99–2652 OF OFFICIAL RECORDS

PROPOSED EASEMENTS

1. PURPOSE: PRIVATE WATERLINE EASEMENT
   IN FAVOR OF: LOT 7
   AFFECTING: LOT 2
2. PURPOSE: PRIVATE SANITARY SEWER EASEMENT
   IN FAVOR OF: LOTS 2, 4 AND 5
   AFFECTING: LOTS 3 AND 4
3. PURPOSE: PRIVATE WATERLINE EASEMENT
   IN FAVOR OF: LOTS 2, 3, 4, 5, 6 AND 7
   AFFECTING: LOTS 5, 6 AND 7
4. PURPOSE: PUBLIC ACCESS EASEMENT
   IN FAVOR OF: GENERAL PUBLIC
   AFFECTING: LOTS 1 AND 6

BASIS OF BEARING

THE BASIS OF BEARINGS FOR THIS PROJECT IS BASED ON CALIFORNIA STATE PLANE ZONE 5, FROM FOUND CITY OF SAN LUIS HORIZONTAL CONTROL NETWORK MONUMENTS, NORTH AMERICAN DATUM 1983, EPOCH DATE:1991.35.

BEARING N 87° 56' 14" W BASED ON CITY HORIZONTAL CONTROL NETWORK MONUMENT NUMBERS 8100 AND 8101.

TO OBTAIN GROUND LEVEL DISTANCES MULTIPLY DISTANCES SHOWN BY 1.0000405

TO OBTAIN GEODETIC BEARINGS ROTATE GRID BEARING –1° 30' 23".

OWNER/SUBDIVIDERS

053–421–003
ELLA LOUISE TOUCHSTONE, BY DEED RECORDED DECEMBER 28, 1976, AS TO AN UNDIVIDED 25% INTEREST
JOHANNAH MARY BRADLEY, BY DEED RECORDED DECEMBER 28, 1976, AS TO AN UNDIVIDED 25% INTEREST
NKT DEVELOPMENT, LLC, A CALIFORNIA LIMITED LIABILITY COMPANY, AS TO AN UNDIVIDED 50% INTEREST

053–421–004
NKT DEVELOPMENT, LLC, A CALIFORNIA LIMITED LIABILITY COMPANY

NOTES:

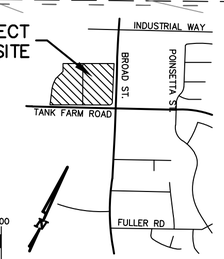
- SEE PRELIMINARY GRADING PLAN AND UTILITY MARCH 12, 2018 BY BETHEL ENGINEERING FOR PROPOSED DEVELOPMENT, GRADING, UTILITIES AND DRAINAGE INFORMATION
- RECIPROCAL ACCESS AND PARKING AGREEMENT TO BE RECORDED PER SEPARATE DOCUMENT

GRAPHIC SCALE

50 0 25 50 100 200

(IN FEET)

1 inch = 50 ft.



VICINITY MAP
N.T.S.

MARCH 16, 2018

REGISTERED PROFESSIONAL ENGINEER
LORI M. SPEED
LIC. NO. C 68449
CIVIL
STATE OF CALIFORNIA
FOR REVIEW

BETHEL engineering
2624 Airpark Drive,
Santa Maria CA 93455
(805) 934–5767

VESTING TENTATIVE TRACT MAP 3115

EXISTING EASEMENTS

1 GRANTED TO: STATE OF CALIFORNIA
PURPOSE: DRAINAGE, SLOPE AND UTILITY
RECORDED: APRIL 21, 1975
RECORDED NO.: INSTRUMENT NO. 11865, BOOK 1828, PAGE 829, OF OFFICIAL RECORDS
AFFECTS: AS DESCRIBED THEREIN

2 GRANTED TO: COUNTY OF SAN LUIS OBISPO
PURPOSE: AVIGATION EASEMENT
RECORDED: AUGUST 27, 1985
RECORDED NO.: INSTRUMENT NO. 48471, BOOK 2743, PAGE 308, OF OFFICIAL RECORDS
AFFECTS: AS DESCRIBED THEREIN

3 GRANTED TO: JUDY KORSMEYER; M JOYCE HOFFMAN, TRUSTEE OF THE M. JOYCE HOFFMAN TRUST DATED SEPTEMBER 23, 1997
PURPOSE: BELOW GROUND SEWER LINE
RECORDED: OCTOBER 14, 1997
RECORDED NO.: 1997-056436, OF OFFICIAL RECORDS
AFFECTS: AS DESCRIBED THEREIN

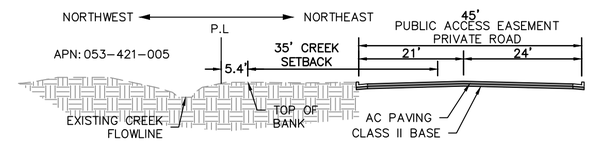
4 PURPOSE: PUBLIC ACCESS AND PEDESTRIAN EASEMENT
RECORDED: SEPTEMBER 17, 2014
RECORDED NO.: 2014038159 OF OFFICIAL RECORDS
AFFECTS: SAID LAND

5 GRANTED TO: M.JOYCE HOFFMAN
PURPOSE: SEWER PIPELINE
RECORDED: OCTOBER 14, 1997
RECORDED NO.: 1997056435, OF OFFICIAL RECORDS
AFFECTS: SAID LAND

6 GRANTED TO: HIDDEN HILLS MOBILELODGE, LLC
PURPOSE: SEWER PIPELINE
RECORDED: AUGUST 20, 1999
RECORDED NO.: 1999061071, OF OFFICIAL RECORDS
AFFECTS: SAID LAND

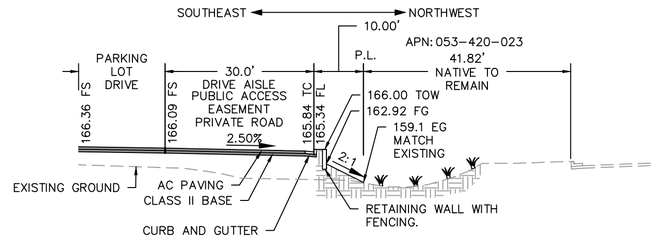
7 GRANTED TO: CITY OF SAN LUIS OBISPO
PURPOSE: SEWER FACILITIES
RECORDED: OCTOBER 8, 2008
RECORDED NO.: 2008050324, OF OFFICIAL RECORDS
AFFECTS: SAID LAND

8 EXECUTED BY: HIDDEN HILLS MOBILELODGE LLC
IN FAVOR OF: CITY OF SAN LUIS OBISPO
RECORDED: AUGUST 25, 2009
AFFECTS: 2009047771, OF OFFICIAL RECORDS



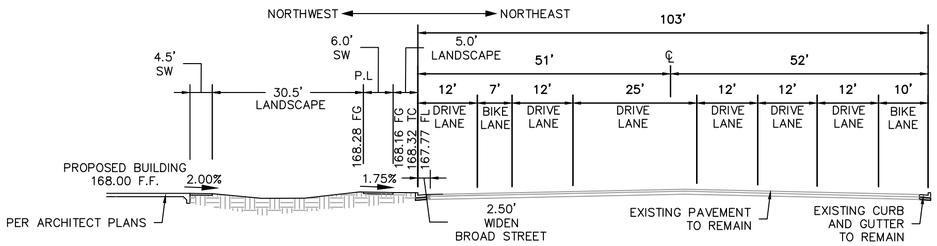
A WEST PROPERTY LINE

HORIZONTAL: 1"=20'
VERTICAL: 1"=20'



B CREEK CROSS SECTION

HORIZONTAL: 1"=20'
VERTICAL: 1"=20'



C BROAD STREET CROSS SECTION

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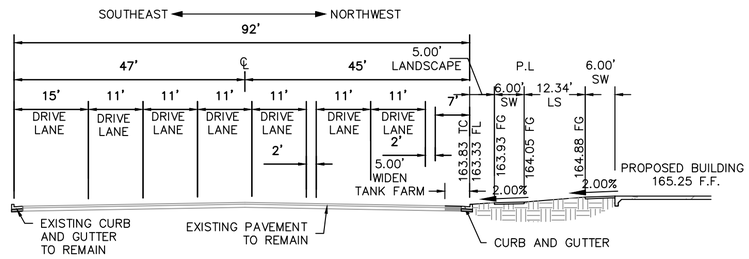
VERTICAL: 1"=20'



D TANK FARM CROSS SECTION

HORIZONTAL: 1"=20'
VERTICAL: 1"=20'

MARCH 16, 2018

REGISTERED PROFESSIONAL ENGINEER
LORI M. SPEECE
LIC. NO. 28449
CIVIL
STATE OF CALIFORNIA
FOR REVIEW ONLY

BETHEL engineering
2624 Airpark Drive,
Santa Maria CA 93455
(805) 934-5767

CONSTRUCTION PHASING PLAN

PHASE 1: MASS GRADING OF 10 ACRES
- INCLUDES CREEK CROSSING FOR INDUSTRIAL WAY ROAD EXTENSION
- EXCLUDES GRADING IN WETLAND AREA ON NORTH-EAST CORNER OF THE RETAIL SITE

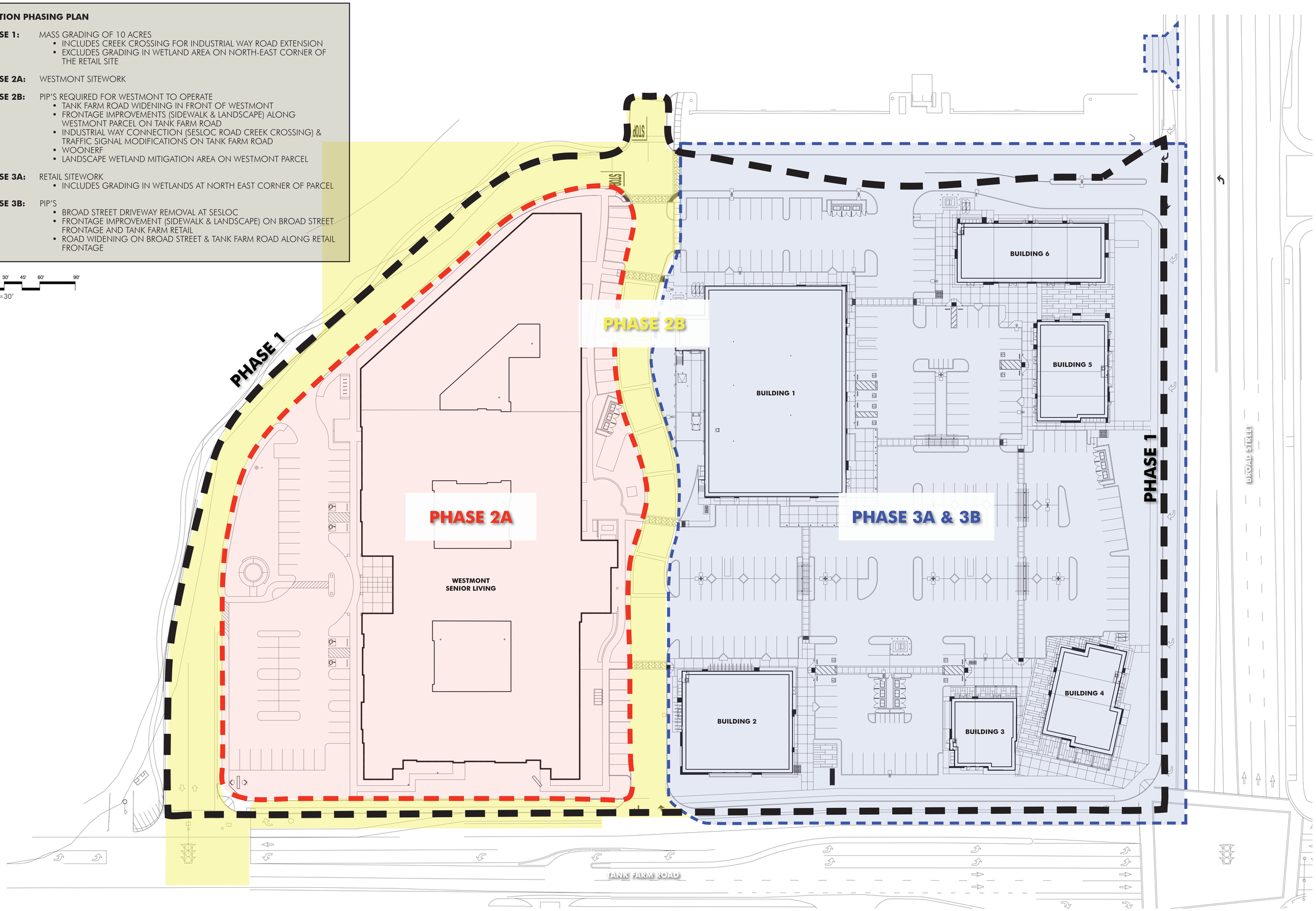
PHASE 2A: WESTMONT SITEWORK

PHASE 2B: PIP'S REQUIRED FOR WESTMONT TO OPERATE
- TANK FARM ROAD WIDENING IN FRONT OF WESTMONT
- FRONTAGE IMPROVEMENTS (SIDEWALK & LANDSCAPE) ALONG WESTMONT PARCEL ON TANK FARM ROAD
- INDUSTRIAL WAY CONNECTION (SESLOC ROAD CREEK CROSSING) & TRAFFIC SIGNAL MODIFICATIONS ON TANK FARM ROAD
- WOONERF
- LANDSCAPE WETLAND MITIGATION AREA ON WESTMONT PARCEL

PHASE 3A: RETAIL SITEWORK
- INCLUDES GRADING IN WETLANDS AT NORTH EAST CORNER OF PARCEL

PHASE 3B: PIP'S
- BROAD STREET DRIVEWAY REMOVAL AT SESLOC
- FRONTAGE IMPROVEMENT (SIDEWALK & LANDSCAPE) ON BROAD STREET FRONTAGE AND TANK FARM RETAIL
- ROAD WIDENING ON BROAD STREET & TANK FARM ROAD ALONG RETAIL FRONTAGE

0 15' 30' 45' 60' 90'
SCALE: 1"=30'



NWC TANK FARM & BROAD STREET
SAN LUIS OBISPO, CA

CONSTRUCTION PHASING PLAN

8
12/18/18

McKently Malak ARCHITECTS
lenity architecture
WESTMONT LIVING® inspired retirement living
OASIS ASSOCIATES LANDSCAPE ARCHITECTURE + PLANNING

Attachment 3

NWC BROAD STREET / TANK FARM ROAD MIXED-USE PROJECT

APNs 053-421-003 &-004

BIOLOGICAL AND WETLAND RESOURCES ASSESSMENT

August 28, 2014
Updated March 16, 2018

Prepared for:

NKT DEVELOPMENT, LLC
AND
OASIS ASSOCIATES, INC.

INC

Central Coast Office
1320 Van Beurden Drive, Suite 202-D4
Los Osos, CA 93402
tel 805.434.2804 fax 805.980.5886

www.sageii.com

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NWC BROAD STREET / TANK FARM ROAD MIXED-USE PROJECT BIOLOGICAL AND WETLAND RESOURCES ASSESSMENT

1.0 INTRODUCTION AND PURPOSE

Sage Institute, Inc. (SII) has completed this biological and wetland resources assessment (SII 2018 BA) to describe and map the existing conditions of the NWC Broad Street / Tank Farm Road Mixed-Use Project (proposed project) consisting of the combined approximately 10.6-acre± "McBride" and "Curry" properties, APNs 053-421-003 &-004, respectively. The proposed project includes development of the approximate 9.3-acre McBride parcel and 1.28-acre Curry parcel for commercial uses including site ingress/egress access from Broad Street, Tank Farm Road, and the recently constructed SESLOC development. The purpose of this biological assessment is to document existing conditions of the proposed project site and to evaluate the potential for any direct or indirect potentially significant impacts on biological or wetland resources or adverse effects on any rare, threatened, or endangered plant or wildlife species (special-status species). This report is intended to support the City of San Luis Obispo's environmental review process for the projects. Detailed maps and representative photographs of the properties showing the biological/wetland resources are included in Appendix A. The Wetland Delineation and Preliminary Jurisdictional Determination report is included as Appendix B.

SII conducted the initial biological and wetland resources field reconnaissance and data collection in 2014. The existing conditions documented at that time have been affirmed by SII in subsequent field surveys in both 2017 and 2018, as the site conditions and related biological resources are unchanged over that time period. Additionally, the top of creek bank was established, surveyed, and approved by the City's Natural Resource Manager in 2017.

1.1 PROJECT LOCATION

The proposed project site is composed of two parcels located at the northwest corner of Broad Street and Tank Farm Road in the City of San Luis Obispo. Figure 1 and Figure 2 in Appendix A provided regional and detailed location maps, respectively.

1.2 PROJECT DESCRIPTION

The proposed project includes the development of a retail shopping center and assisted living facility on two parcels located generally on the northwest corner of Broad Street and Tank Farm Road. Access to the project sites will be provided from both Broad Street and Tank Farm Road. Based upon circulation between the proposed projects and the existing SESLOC facility, located north of the subject properties, the Broad Street access will impact 0.19 acres of seasonal wetland. Included in the impact area is a new crossing of the ephemeral drainage required to provide access from the subject properties to the existing SESLOC facility.

Onsite enhancement of approximately 0.60 acre along the Orcutt Creek corridor is a part of the proposed project description and will mitigate for impacts to the 0.19-acre seasonal wetland and ephemeral drainage crossing at a 3:1 replacement ratio. The enhancement plan will also include removal of noxious invasive non-native herbaceous and woody species, while a new native plant planting program is proposed in the northwest corner and creek setback areas along Orcutt Creek. Table CMMP-1 below is a proposed list of creek enhancement plantings proposed as part of the project.

Table CMMP-1 McBride and Curry Properties Compensatory Mitigation and Monitoring Plan Creek Enhancement Planting Palette			
Scientific Name	**Common Name**	**Spacing**	**Notes**
Top of Bank Hinge Point (alternating patches)			
Carex barbarae	Santa Barbara sedge	3-foot centers	Cluster in 3's to 5's
Juncus patens	spreading rush	3-foot centers	Cluster in 3's to 5's
Leymus condensatus	giant wild rye	5-foot centers	Cluster in 3's to 5's
Muhlenbergia rigens	deer grass	5-foot centers	Cluster in 3's to 5's
35-foot Creek Setback			
Trees			
Quercus agrifolia	coast live oak	25 to 50-foot centers	Alternating tree pattern
Platanus racemosa	western sycamore	25 to 50-foot centers	Alternating tree pattern
Acer macrophyllum	big leaf maple	25 to 50-foot centers	Alternating tree pattern
California black walnut	Juglans californica	25-foot centers	Alternating tree pattern
Umbellularia californica	California bay	25-foot centers	Alternating tree pattern
Shrubs			
Artimesia californica	California sagebrush	5-foot centers	Cluster in 3's to 5's
*Eriogonum fasciculatum**	California buckwheat	5-foot centers	Cluster in 3's to 5's
Frangula californica	California coffeeberry	5-foot centers	Cluster in 3's to 5's
Heteromeles arbutifolia	toyon	10-foot centers	Cluster in 3's to 5's
*Rosa californica**	California wild rose	3-foot centers	Cluster in 3's to 5's
*Rubus ursinus**	California blackberry	3-foot centers	Cluster in 3's to 5's
Salvia melifera	Black sage	5-foot centers	Cluster in 3's to 5's
*Plant adjacent to row of top of bank hinge point plantings			
Herbaceous Species Hydroseed (40 lbs./acre)			
Artemesia douglasiana	mugwort	5	
Bromus carinatus	California brome grass	5	
Elymus glaucus	blue wildrye	5	
Eschscholzia californica	California poppy	5	
Hordeum brachyantherum	meadow barley	5	
Leymus triticoides	beardless wild rye	3	
Lupinus bicolor	miniature lupine	3	
Lupinus nanus	sky lupine	4	
Stipa pulchra	Purple needlegrass	5	

2.0 Existing Conditions

The McBride parcel proposed project site is zoned for commercial development that currently supports disturbed non-native annual grassland, non-native trees, and ruderal (previously disturbed) habitats. The majority of the site has been occupied in the past as recent as 2003 and dating back to at least 1937 with buildings and active equipment/materials storage. The site appears to have been idle from 2004 to present after buildings were removed and the surface was cleared leaving only the non-native trees. A temporary soil stockpile has been placed on the southwest corner of the property in 2014. An

ephemeral drainage enters the site through a 24-inch culvert in the northeast corner of the property and flows west to the confluence with Orcutt Creek in the northwest corner of the site, then veers southward as Orcutt Creek to a culvert under Tank Farm Road (Figure 2). The property is bordered by urban development on the north, east, and south sides with residential development to the west. The Curry parcel is developed and ruderal site with residence and storage yards dating back to at least 1959.

3.0 METHODS

SII conducted a review of available background information including the proposed project information, aerial photographs dating back to 1937, NRCS Soils Survey information, and a search and review of the current California Natural Diversity Data Base (CNDDB) within an approximate five-mile search radius of the proposed project site. The five-mile radius was used as the typical 10-mile search radius would have included areas well outside of the city limits that would not be relevant to this study in the urbanized City of San Luis Obispo. The CNDDB provided a list with mapped locations of special-status plant and wildlife species, as well as natural communities of special concern, that have been recorded within the region of the project site. The CNDDB records help focus the field survey efforts and evaluation of potential project effects on specific species or habitats.

SII Principal Ecologist David Wolff conducted field reconnaissance surveys of the proposed project site on May 20, July 10, and July 31, 2014; July 3, 2017; and February 22, 2018. The purpose of the field surveys was to document existing conditions within the project site in terms of habitat for plants and wildlife species, and the potential to support jurisdictional wetlands, riparian habitats, and/or waters of the U.S./State. Plant and wildlife species observed in the field were recorded. The field surveys included a thorough and complete springtime floristic inventory and rare plant survey in 2014 of observable and identifiable plants. The 2017 and 2018 field surveys affirmed conditions are unchanged from the 2014 initial field surveys. A wetland delineation and preliminary jurisdictional determination are summarized in Section 4.4 below and detailed in Appendix B to this report.

The study area habitat types were described by the aggregation of plants and wildlife based on the composition and structure of the dominant vegetation observed at the time the field reconnaissance was conducted. The determination of jurisdictional wetlands and/or waters of the U.S./State was made using the currently accepted U.S. Army Corps of Engineers (Corps) wetland delineation methodology and Clean Water Act Section 404 implementing regulations and guidance.

SII Principal Ecologist David Wolff reviewed the available background information, conducted all the field surveys, and is the primary author and principal in charge of report preparation. The survey data collected on plant and wildlife species and conclusions presented in this biological assessment are based on the methods and field reconnaissance conducted over the project site, as described above.

4.0 RESULTS

4.1 SOILS

The project site supports mostly Cropley clay soils mapping unit as shown in Figure 3. Given the past developed uses and ground clearing, the surface no longer appears to represent the natural surface material of this mapping unit. Aside from review of many years of aerial photography and a cursory view of the surface material during SII field surveys, no further analysis of the onsite soils was conducted as part of this study.

4.2 PLANT COMMUNITIES

The plant communities within the study area are generally described by the assemblages of observed plant species that occur together in the same area forming habitat types. Plant community descriptions are generally based on *A Manual of California Vegetation, 2nd Edition* (Sawyer et al. 2009). Plant names used in this report follow *The Jepson Manual, Vascular Plants of California, Second Edition Thoroughly Revised and Expanded* (Baldwin et al. 2012). The following describes the plant communities and habitat characteristics observed within the project site. The project site supports the following distinct plant communities: 1) disturbed non-native annual grassland with non-native trees; and 2) an ephemeral drainage with mostly herbaceous vegetation along with several willow trees, a patch of bulrush, and a non-native blackberry thicket. Orcutt Creek along the western edge of the project area is choked with non-native forbs and shrubs. Figure 4 provides a habitat map. Figure 6 provides a set of representative photographs of the existing conditions of the proposed project site. All plant species observed during the SII field surveys including rare plant survey are included in the text below.

DISTURBED NON-NATIVE ANNUAL GRASSLAND – The disturbed annual grassland habitat, is dominated by non-native annual grasses and herbaceous broadleaf plant species, along with very few native species. Disturbed non-native annual grassland habitat occurs as the dominant habitat type over the entire project site with the exception of the ephemeral drainage that runs along the north property border. The approximately 9.3-acres of disturbed annual grassland within the study area was observed to be very low in species diversity and dominated by a near pure stand of wild oats (*Avena barbata*). Other plant species observed in the non-native grassland habitat include, ripgut brome (*Bromus diandrus*), filaree (*Erodium cicutarium*), cheeseweed (*Sidalcea* sp.), fennel (*Foeniculum vulgare*), wild radish (*Raphanus sativus*), poison hemlock (*Conium maculatum*), harding grass (*Phalaris aquatica*), teasel (*Dipsacus sativus*), shortpod mustard (*Hirschfeldia incana*), bur-clover (*Medicago polymorpha*), milk thistle (*Silybum marianum*), narrow-leaf milkweed (*Asclepias fascicularis*), and bristly ox-tongue (*Helminthotheca echioides*). A few coyote brush shrubs (*Baccharis pilularis*) are scattered on the site along with non-native pine, cypress, acacia, and eucalyptus trees.

EPHEMERAL DRAINAGE & SEASONAL WETLAND – An ephemeral drainage swale and low-flow channel runs just offsite along the north property boundary from a 24-inch culvert under Broad Street at the northeast property corner to the confluence with Orcutt Creek, which then cuts across the northwest corner of the site. For the most part, the drainage channel runs outside the property adjacent to the northern border. It appears to sheet flow over some of the property along an upper terrace above the drainage but below the general elevation of the rest of the property. A small stand of arroyo willow (*Salix lasiolepis*) occurs at the northwest corner with one small isolated tree in the center of the drainage. A patch of bulrush (*Schoenoplectus* sp.), a Himalayan blackberry (*Rubus armeniacus*) thicket, and one Canary Island date palm (*Phoenix canariensis*) occur along the drainage. The upper terrace was dominated by Harding grass, teasel, soft chess, rabbitsfoot grass (*Polypogon* sp.), and bristly ox-tongue. A patch of yerba mansa (*Anemopsis californica*) is mostly offsite in the swale with a small amount encroaching onto the site along the property line. Orcutt Creek with an established bed, bank, and channel runs along the western property line and is choked with non-native Italian rye grass (*Festuca perennis*), harding grass, bristly ox-tongue, and castor bean (*Ricinus communis*) for most of its length. See Section 4.4 below, Figures JD-1, JD-2, and JD-3 in Appendix A, and the preliminary jurisdictional determination report included as Appendix B.

4.3 WILDLIFE

The mosaic of remnant patches of ruderal and vacant lands within the urbanized landscape on and around the project area can provide habitat for a variety of wildlife species that have become adapted to the urban environment such as raccoons, opossums, ground squirrels and other rodents, and reptiles. Even in urbanized areas, drainage corridors and trees can provide high quality habitat for a variety of wildlife species that have become adapted to the urban environment, but in particular to resident and migratory birds. Common birds observed during SII field surveys included the northern mockingbird, house finch, American goldfinch, and red-tailed hawk. Given that the site is surrounded by urban development, other wildlife use is likely limited with generally low wildlife values attributed to this disturbed site.

4.4 WATERS OF THE U.S., WATERS OF THE STATE & WETLANDS

The ephemeral drainage swale with low-flow channel is located just offsite adjacent to the northern property line of the McBride parcel. The limits were shown on the SESLOC grading plans as jurisdictional waters of the U.S., subject to U.S. Army Corps of Engineers (Corps), and waters of the State by the California Department of Fish and Wildlife (CDFW). Currently it appears that any source of hydrology for the ephemeral drainage is from a culvert outfall just offsite at the northeast corner of the McBride property from runoff from surrounding commercial and residential development. The drainage appears to become a prominent drainage feature between 1994 and 2002 with the development of the Marigold Shopping Center.

Appendix B provides the details of a wetland delineation and preliminary jurisdictional determination evaluation performed by SII on the terrace that runs on the McBride parcel adjacent to the ephemeral drainage that runs just offsite along the northern property boundary of the McBride parcel. The following summarizes the wetland delineation findings.

There is evidence of overflow flooding wetland hydrology (drift lines of debris and sediment deposits) from the ephemeral drainage onto the McBride parcel on a terrace that runs along the drainage on the McBride property. The evaluation of soils indicated field indicators of hydric soils suggesting a regular flooding regime over time during the wet season. The upper reach of the terrace was dominated by Harding grass (*Phalaris aquatica*), teasel (*Dipsacus sativus*), soft chess (*Bromus hordaceous*), rabbitsfoot grass (*Polypogon* sp.), and bristly ox-tongue (*Helminthotheca echioides*) that does not represent a wetland vegetation community.

While some level of overland flow appears to occur, with the exception of the bulrush patch, the ephemeral nature of the drainage overflow does not manifest a definitive wetland plant community. However, given several years of below normal rainfall at the time of the delineation in 2014, this area was treated as problem area wetland. As such, based on the presence of hydric soils and wetland hydrology, approximately 0.19 acre (8,166 square feet) of jurisdictional seasonal wetland occurs on the bench above the ephemeral drainage along the northern property boundary on the McBride parcel. Figures JD-1 and JD-2 in Appendix A show the location and extent wetlands delineated adjacent to the ephemeral drainage as described above.

The ephemeral drainage meets Orcutt Creek at the northwest corner of the McBride property becoming Orcutt Creek that exhibits a distinct bed, bank and channel. As described above, this reach of Orcutt Creek is choked with non-native grasses, forbs, and shrubs. Orcutt Creek has been in its current

alignment as a tributary drainage since as far back as 1937. Given it flows through a sequence of creeks to San Luis Obispo Creek and the Pacific Ocean, Orcutt Creek is considered a tributary jurisdictional waters of the U.S./State. The Ordinary High Water Mark (OHWM) and top of bank are essentially the same along this reach representing the federal and state jurisdictional limits respectively. Approximately 0.23 acre of jurisdictional waters of the U>S./State are associated with Orcutt Creek through the project area.

4.5 SPECIAL-STATUS SPECIES AND NATURAL COMMUNITIES OF SPECIAL CONCERN

Special-status species are those plants and animals listed, proposed for listing, or candidates for listing as threatened or endangered by the United States Fish and Wildlife Service (USFWS) or the National Marine Fisheries Service (NMFS) under the federal Endangered Species Act (FESA); those considered "species of concern" by the USFWS; those listed or proposed for listing as rare, threatened, or endangered by the CDFW under the California Endangered Species Act (CESA); animals designated as "Species of Special Concern" by the CDFW; and plants occurring on lists 1B, 2, and 4 of the CNPS *Inventory of Rare and Endangered Vascular Plants of California.* Natural Communities of Special Concern are habitat types considered rare and worthy of tracking in the California Natural Diversity Database (CNDDB) by the CNPS and CDFW because of their limited distribution or historic loss over time.

The search and review of the CNDDB revealed numerous historic and extant (presumed existing) occurrences of special-status plant and wildlife species within the five-mile search radius of the project site. A five-mile radius was selected, as a 10-mile CNDDB search radius would have captured a large area not relevant to the urbanized landscape surrounding the proposed project site. Figure 5 in Appendix A provides a map and and list of the CNDDB special-status plant and wildlife species recorded occurrences falling within the five-miles of the project site. The following briefly describes or summarizes the special-status species issues and observations or potential for occurrence on the project site.

4.5.1 Special-Status Botanical Resources

The CNDDB search revealed the recorded occurrences of 21 special-status plant species and three natural communities of special concern within a five-mile radius of the project site. While the CNDDB list is exhaustive, most of the species and natural communities are associated with undisturbed lands and specific soil types, such as serpentine outcrops or heavy clay soils, or specific habitat characteristics such as seasonal wetlands. While the ephemeral drainage swale supported wetland plants offsite and a bulrush patch onsite, it does not represent a freshwater marsh habitat as it only seasonally has surface water. The SII field surveys were conducted during the spring and summer 2014 and represent a thorough floristic inventory and rare plant survey for this highly disturbed site. The botanical surveys resulted in no observations of any rare, threatened, or endangered plant species within the project site. Further, the observable and identifiable plants, disturbed soil surface from over 70 years of human use on the site is further evidence the site does not support any special-status plants. Field survey in 2018 confirmed that site conditions are unchanged since the 2014 floristic inventory and rare plant survey.

4.5.2 Special-Status Wildlife

The CNDDB search revealed the recorded occurrences of 16 special-status wildlife species within the five-mile search radius of the project site. Special-status wildlife species known from the region evaluated for this study have specific habitat use requirements (i.e., terrestrial or aquatic). Given the

urban setting with a limited diversity of non-native grassland species, and the ephemeral nature of drainage along the north property line, the project site does not support suitable habitat for any special-status wildlife species. This conclusion is discussed further below.

Aquatic Species – The CNDDB has recorded occurrences of the steelhead (*Oncorhynchus mykiss*), California red-legged frog (*Rana draytonii*), foothill yellow-legged frog (*Rana boylii*), coast range newt (*Taricha torosa*), and western pond turtle (*Emys marmorata*) within the five-mile search radius. These are all highly aquatic species for all or a significant portion of their lifecycle and suitable habitat is not represented in the small remaining reach of the ephemeral drainage or Orcutt Creek. Vernal pool fairy shrimp (*Branchinecta lynchi*) require static seasonal pools, and the San Luis Obispo pyrg (a freshwater snail) requires aquatic habitat neither of which occur within the project site.

Upland Species – The CNDDB includes occurrences for the ferruginous hawk, a wide-ranging winter visitor and a historic occurrence of the western yellow-billed cuckoo that is no longer present. The compacted soils and human use of the site over time are unsuitable habitat for the American badger, coast horned lizard, northern California (silvery) legless lizard, or Atascadero June beetle. No evidence of these species was observed during SII field surveys. The burrowing owl has been observed wintering on the SLO Tank Farm but breeds further inland. The tricolored blackbird is associated with cattail/tule marshes that do not occur on the project site. Other resident and migratory birds such s the loggerhead shrike may use the onsite trees/shrubs for nesting, feeding, and roosting. The pallid bat and western mastiff bat are associated with crevices in rocks and caves not present on the project site. The disturbed urbanized upland site with compacted and altered soil profile, and long-term recent human use does not support habitat for any of the upland special-status species listed in the CNDDB.

5.0 Impact Assessment and Recommended Mitigation Measures

SII reviewed available background information and conducted multiple field surveys of the project site from 2014 to 2018 that included a floristic inventory and rare plant survey. The available data and field surveys provided sufficient information to establish existing conditions of the project site for plant and wildlife species, to evaluate potential project impacts on biological and wetland resources, and to identify any potentially significant impacts that may result from project implementation.

5.1 Impact Assessment

Implementation of the proposed project would result in impacts to vegetation and wildlife utilizing disturbed non-native annual grassland habitat from the development of the site. Tree removal and ground disturbance, even to the ruderal annual grassland habitat, could impact nesting birds if conducted during the nesting season. This would be considered a potentially significant impact. Development of access from Broad Street along the north project boundary would impact approximately 0.19 acre of seasonal wetland habitat associated with the ephemeral drainage. This would be considered a potentially significant impact.

5.2 Recommended Mitigation Measures

The following mitigation measures are recommended to avoid, minimize and compensate for potentially significant impacts on biological resources.

Nesting Birds–The proposed conversion of the disturbed annual grassland and tree removal may impact ground nesting and/or tree nesting bird species if activities are conducted during the nesting season typically February 1st to August 31st. To reduce potential impacts to nesting birds to a less than significant level, the following mitigation measures are recommended:

MM BIO-1: Vegetation removal and initial site disturbance for any project elements shall be conducted between September 1st and January 31st outside of the nesting season for birds. If vegetation removal is planned for the bird nesting season (February 1st to August 31st), then preconstruction nesting bird surveys shall be required to determine if any active nests would be impacted by project construction. If no active nests are found, then no further mitigation shall be required.

If any active nests are found that would be impacted by construction, then the nest sites shall be avoided with the establishment of a non-disturbance buffer zone around active nests as determined by a qualified biologist. Nest sites shall be avoided and protected with the non-disturbance buffer zone until the adults and young of the year are no longer reliant on the nest site for survival as determined by a qualified biologist. As such, avoiding disturbance or take of an active nest would reduce potential impacts on nesting birds to a less-than-significant level.

Seasonal Wetland Habitat and Waters of the U.S./State Impacts – Approximately 0.19 acre of seasonal wetland habitat would be impacted by construction of the new road access to the site from Broad Street. A road crossing of the ephemeral swale is needed for public access from the SESLOC development. This would result in fill of waters of the U.S./State and removal of an herbaceous seasonal wetland habitat that would require regulatory compliance from federal and state agencies. Impacts resulting in fill of waters of the U.S./State would be considered a potentially significant impact. The proposed project includes a creek enhancement planting plan as described above to offset impacts on the waters of the U.S./State. However, to affirm acceptable regulatory compliance to reduce potential impacts on waters of the U.S./State to a less than significant level, the following mitigation measures are recommended:

MM BIO-2: The applicant shall obtain Clean Water Act (CWA) regulatory compliance in the form of a permit from the Corps or written documentation from the Corps that no permit would be required for the proposed road crossing. Should a permit be required, the applicant shall implement all the terms and conditions of the permit to the satisfaction of the Corps. Corps permits and authorizations require applicants to demonstrate that the proposed project has been designed and will be implemented in a manner that avoids and minimizes impacts on aquatic resources to the extent practicable. Compliance with Corps permitting would also include obtaining and CWA 401 Water Quality Certification from the Regional Water Quality Control Board (RWQCB). In addition, the Corps and RWQCB may require compensatory mitigation for unavoidable permanent impacts on waters of the U.S./State to achieve the goal of a no net loss of wetland values and functions. As such, with implementation of the 3:1 ratio of creek enhancement mitigation plantings and regulatory compliance would reduce potential impacts on waters of the U.S. to a less-than-significant level.

MM BIO-4: The applicant shall obtain compliance with Section 1602 of the California Fish and Game Code (Streambed Alteration Agreements) in the form of a completed Streambed Alteration Agreement or written documentation from the CDFW that no agreement would be required for the proposed road crossing. Should an agreement be required, the property owners shall implement all the terms and conditions of the agreement to the satisfaction of the CDFG. The CDFG Streambed Alteration Agreement process encourages applicants to demonstrate that the proposed project has been designed and will be implemented in a manner that avoids and minimizes impacts in the stream zone. In addition, CDFG may require may require compensatory mitigation for unavoidable permanent impacts on waters of the State. As such, with implementation of the 3:1 ratio of creek enhancement mitigation plantings and regulatory compliance would reduce potential impacts on waters of the U.S. to a less-than-significant level.

6.0 CONCLUSIONS

Based on the findings described above establishing the existing conditions of biological and wetland resources within the project site, and incorporation of the recommended mitigation measures, implementation of the proposed project would not result in any substantial adverse effects on biological, botanical, wetland habitat resources. Therefore, with mitigation measures incorporated into the project, direct and indirect project impacts on biological resources would be considered less than significant.

7.0 REFERENCES

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Appendix A

Figures

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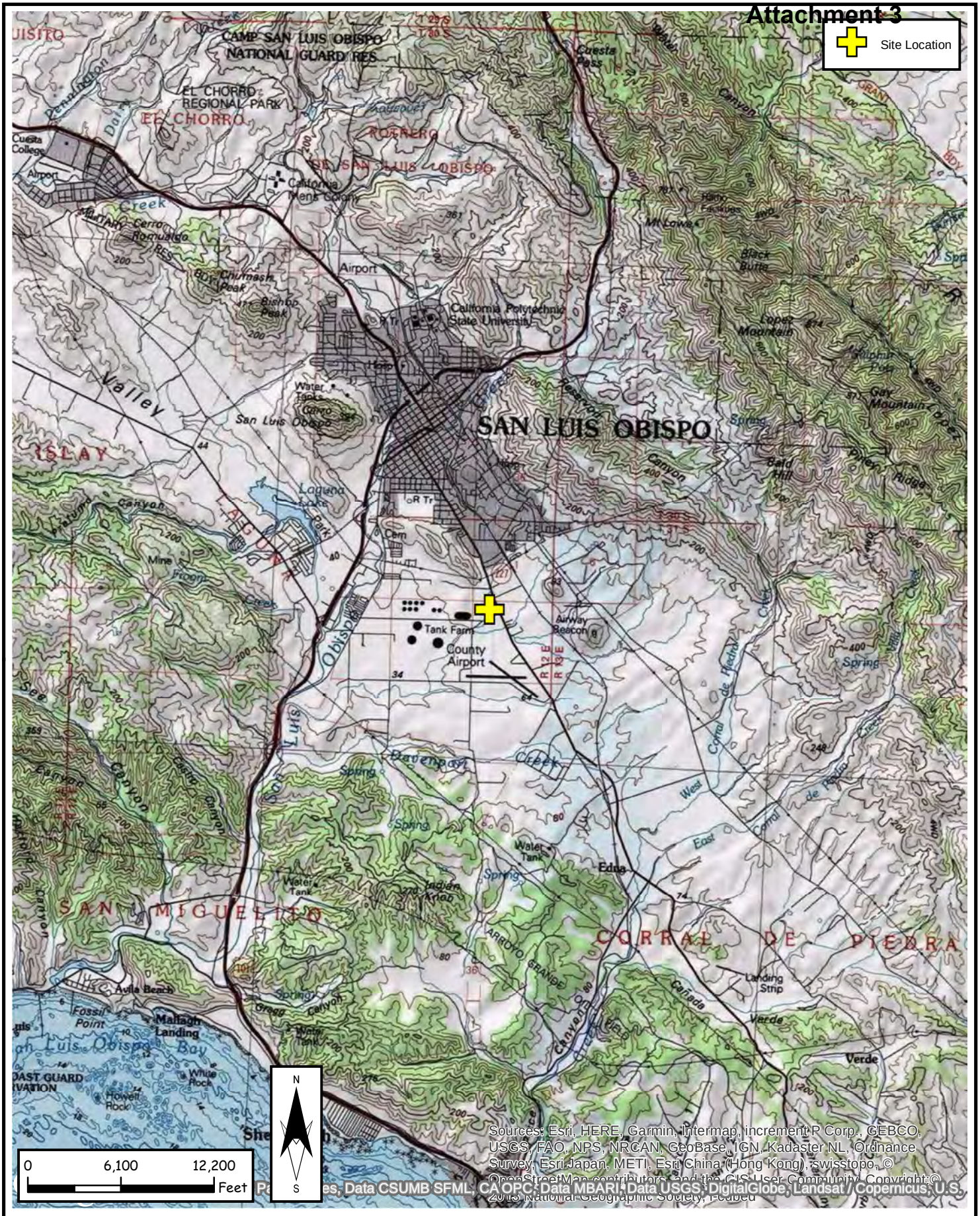
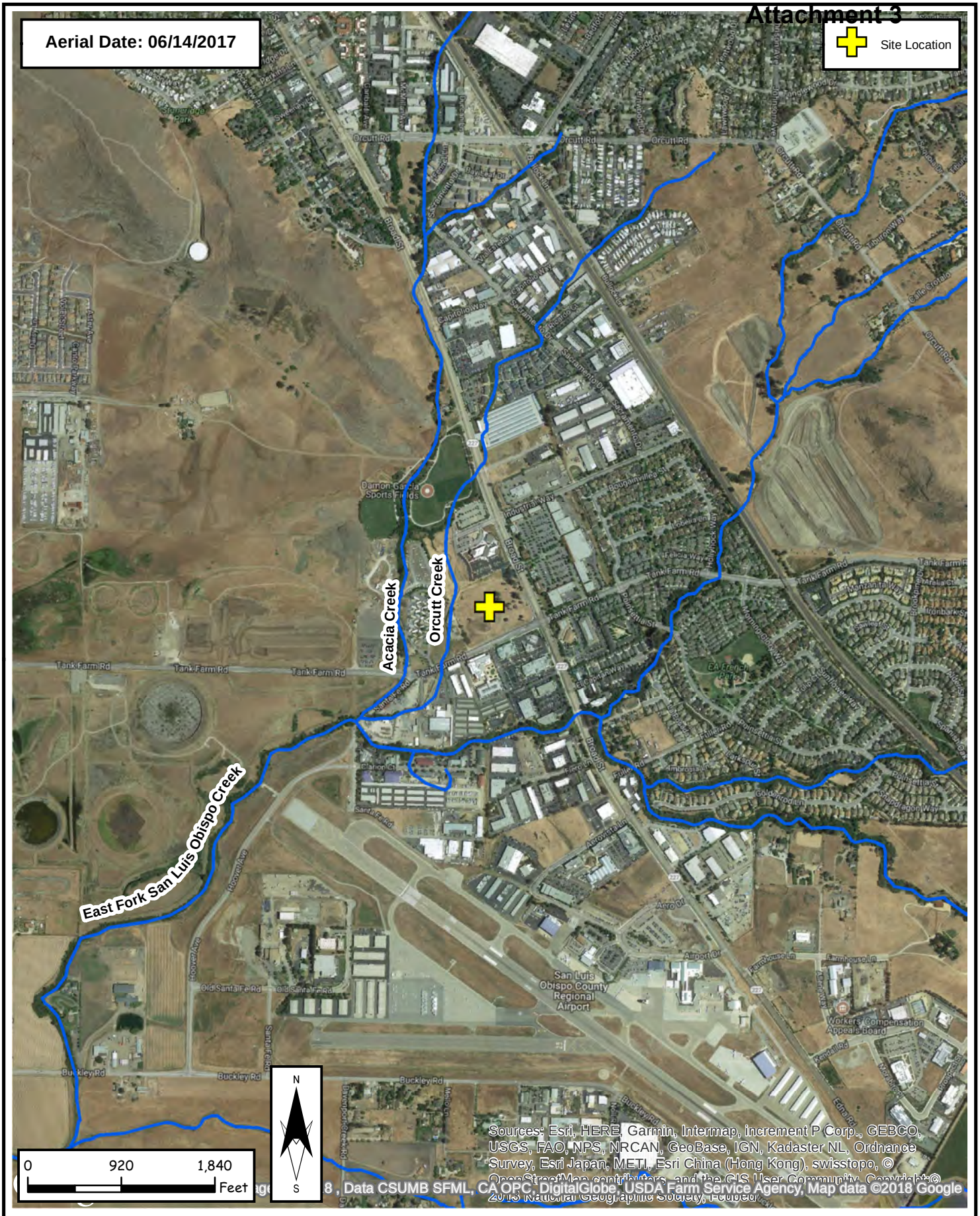
Attachment 3



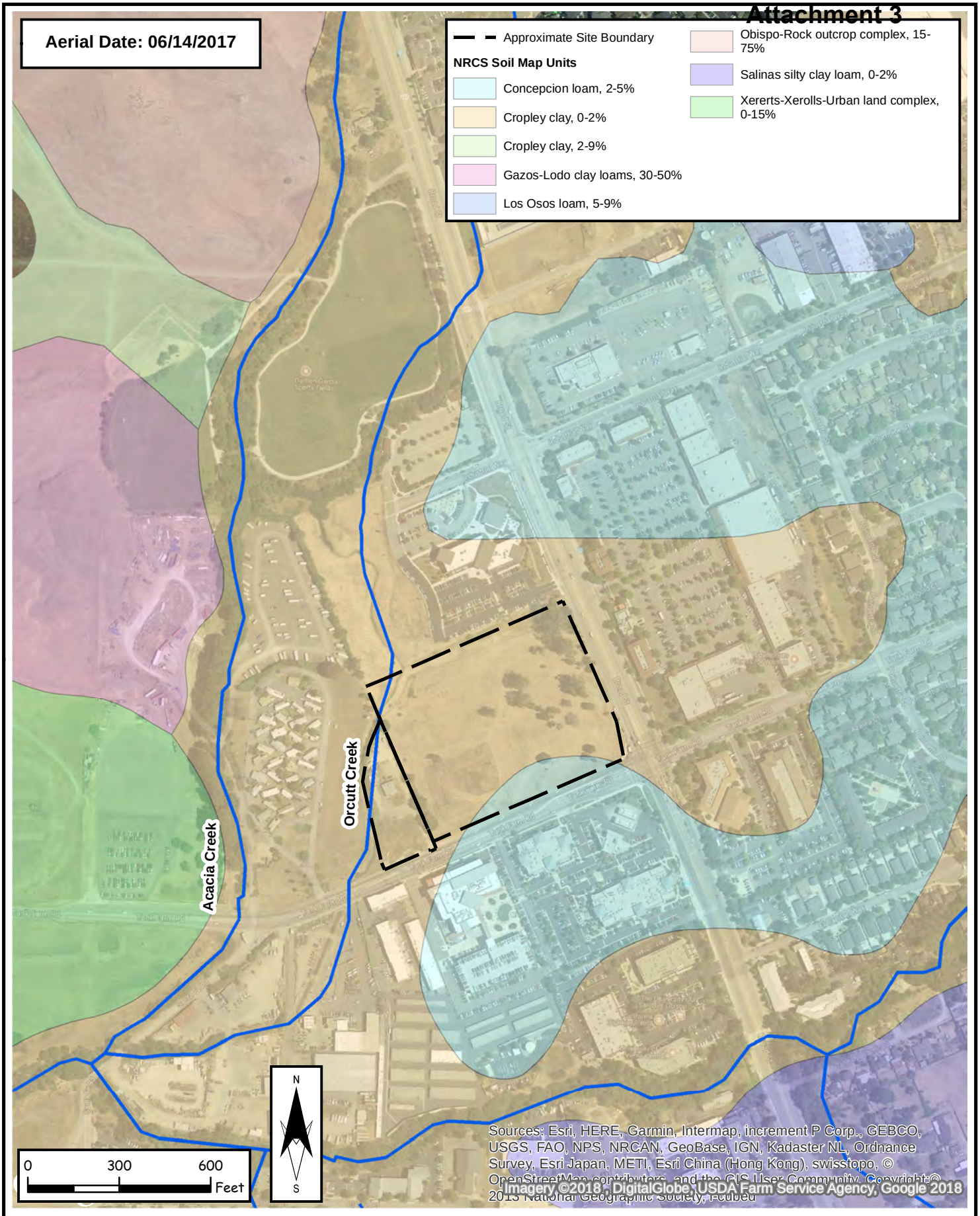
sage institute updated March 16, 2018	NWC Broad Street Tank Farm Road Mixed-Use Project	**Figure 1**
	Biological and Wetland Resources Assessment	Regional Location

Attachment 3



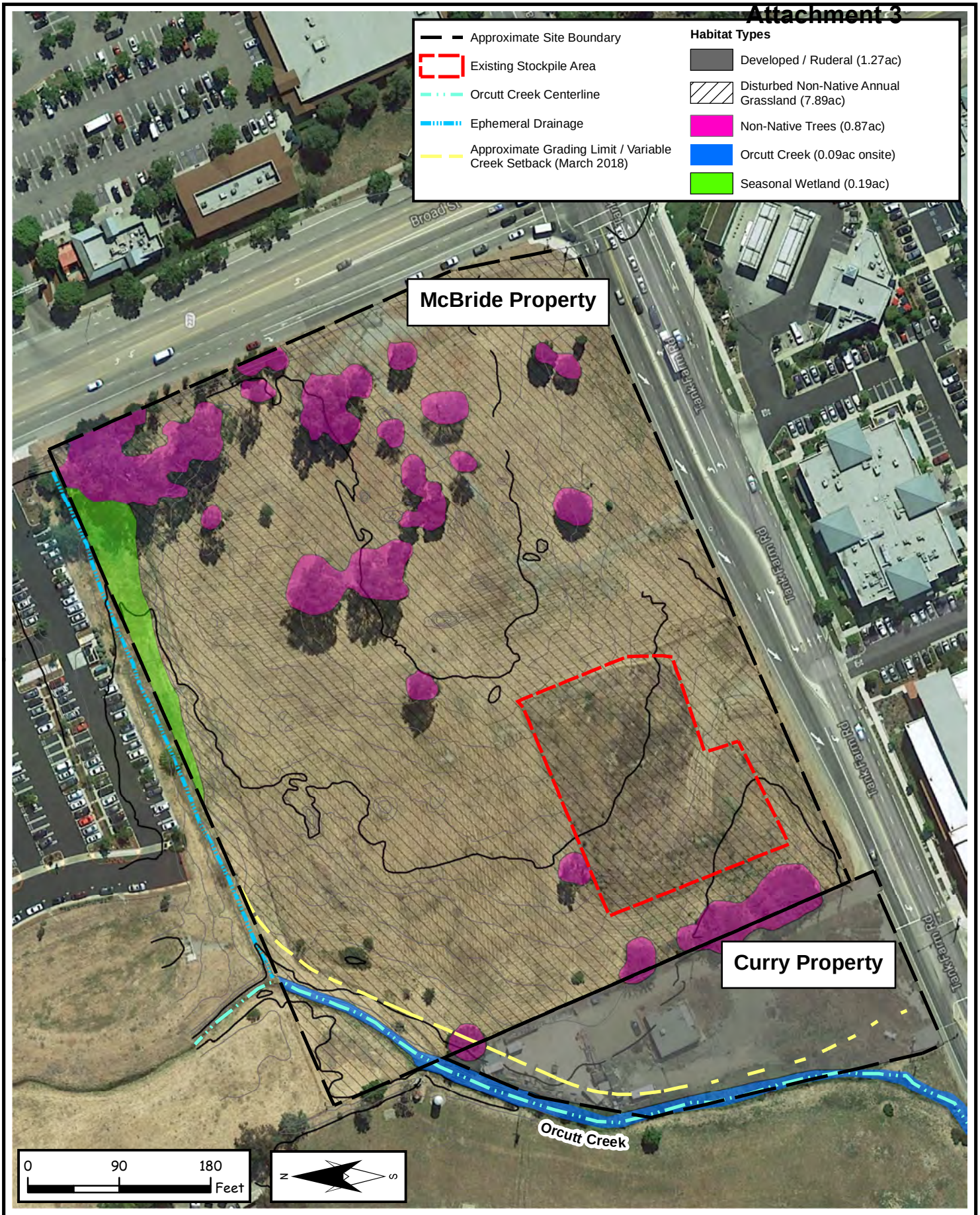
sage institute updated March 16, 2018	NWC Broad Street Tank Farm Road Mixed-Use Project	**Figure 2**
	Biological and Wetland Resources Assessment	Vicinity Aerial Overview

Attachment 3



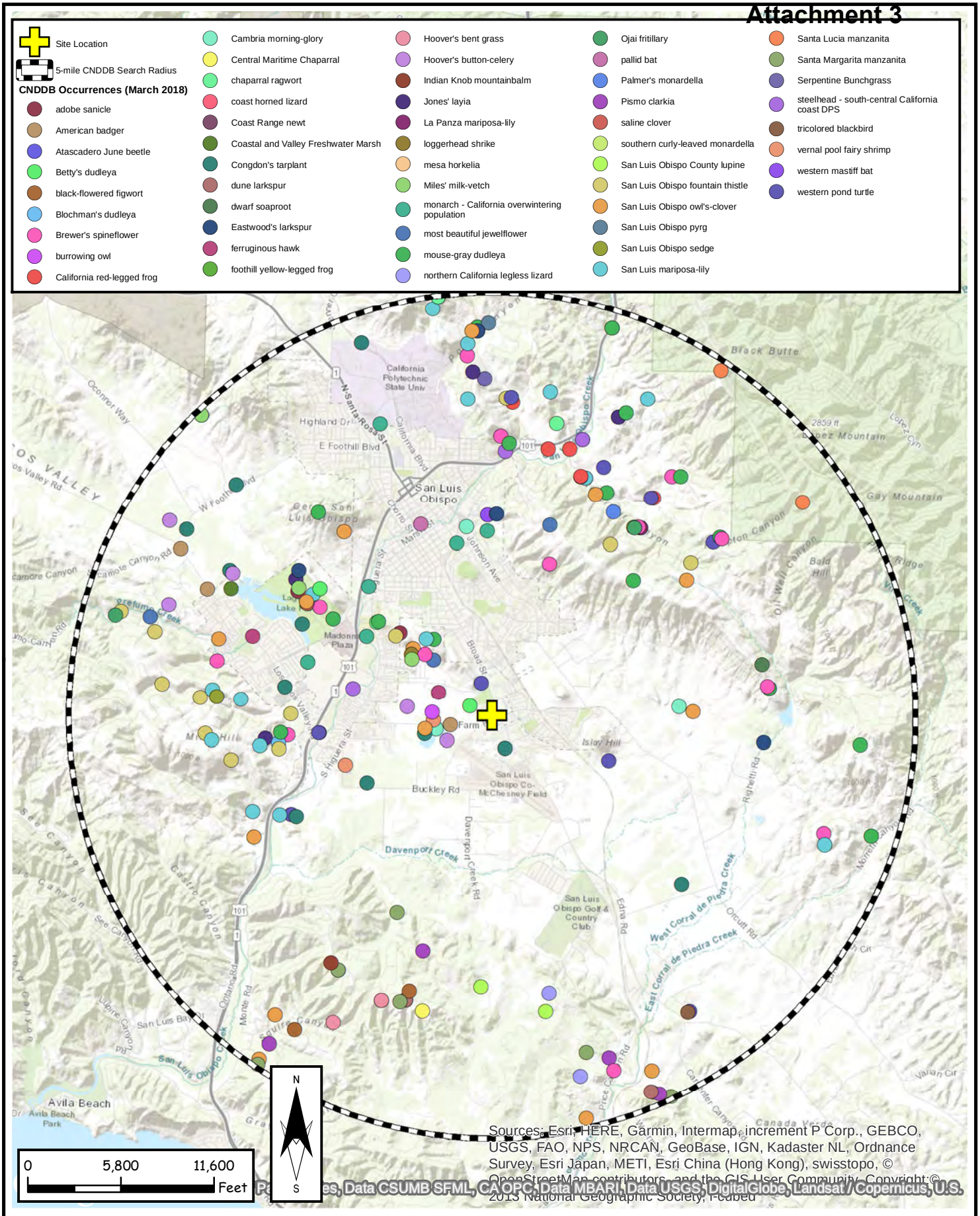
sage institute updated March 16, 2018	NWC Broad Street Tank Farm Road Mixed-Use Project	**Figure 3**
	Biological and Wetland Resources Assessment	NRCS Soils Map

Attachment 3



sage institute updated March 16, 2018	NWC Broad Street Tank Farm Road Mixed-Use Project	**Figure 4**
	Biological and Wetland Resources Assessment	Habitat Map

Attachment 3



sage institute inc
updated March 16, 2018

NWC Broad Street Tank Farm Road Mixed-Use Project

Biological and Wetland Resources Assessment

Figure 5

CNDDB Occurrences

Photo 1: View west from temporary stockpile at McBride parcel non-native annual grassland habitat, non-native trees, and Curry parcel storage yard (arrow). **5/20/2014**

Photo 2: View northeast across McBride parcel at non-native annual grassland habitat, non-native trees, and adjacent SESLOC buildings construction site to the north. **5/20/2014**

Photo 3: View east across McBride parcel at non-native annual grassland habitat, non-native trees, former building pads, intersection of Tank Farm Road and Broad Street. **5/20/2014**

Photo 4: View south at ruderal vegetation at temporary stockpile and MindBody building construction site across Tank Farm Road to the south. **5/20/2014**

Photo 5: View north at Curry parcel driveway from Tank Farm Road showing non-native ruderal grassalnd and developed residence/storage area. **7/31/2014**

Photo 6: View south at Curry parcel towards Tank Farm Road showing developed residence/storage yard. **7/31/2014**

Photo 7: View south (downstream) at confluence of ephemeral drainage and Orcutt Creek across the NW corner of the McBride parcel showing ruderal weedy vegetation along channel. **7/31/2014**

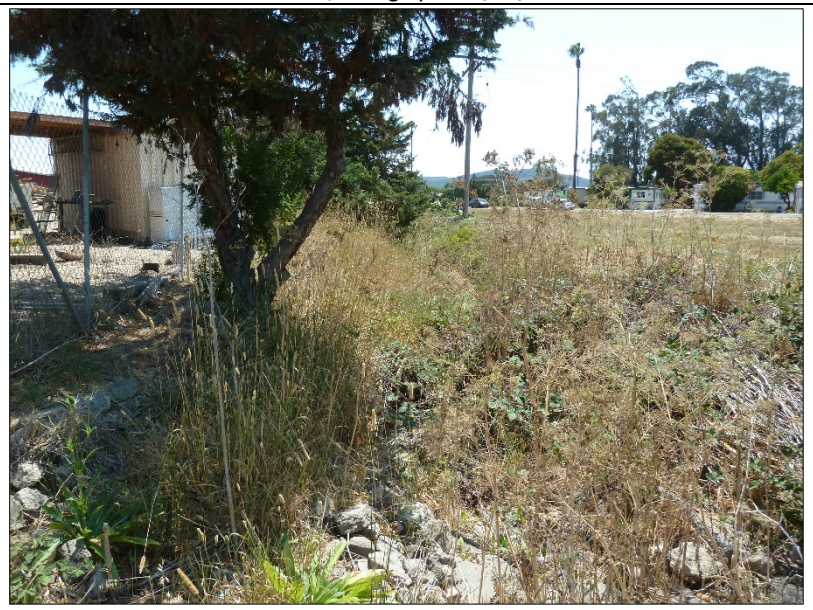


Photo 8: View south (downstream) at Orcutt Creek across the west side of the Curry parcel showing ruderal weedy vegetation and non-native trees/shrubs along channel. **7/31/2014**

Photo 9: View north (upstream) at Orcutt Creek from Tank Farm Road showing ruderal vegetation (bristly ox-tongue) in channel. **7/3/2017**

Photo 10: View north (upstream) at Orcutt Creek from Tank Farm Road showing ruderal vegetation in channel. **7/3/2017**

Photo 11: View west at wetland Data Point 1 (shovel) in overflow flooding area of ephemral drainage. **7/31/2014**

Photo 12: View south at wetland Data Point 2 (shovel) at bulrush patch in overflow flooding area of ephemral drainage. **7/31/2014**

Photo 13: View northwest at upland Data Point 3 (shovel) outside of overflow flooding area of ephemeral drainage. **7/31/2014**

Photo 14: View west at wetland Data Point 4 (shovel) at edge of overflow flooding area of offsite ephemeral drainage. Fenceline is property boundary. **7/31/2014**

Photo 15: View west at wetland Data Point 5 (shovel) within overflow flooding area of offsite ephemeral drainage. Fenceline is property boundary. **7/31/2014**

Photo 16: View west at upland Data Point 6 (shovel) in terrace area outside influence of offsite ephemeral drainage flooding. **7/31/2014**

Photo 17: View northeast upstream at seasonal wetland terrace adjacent to ephemeral drainage along northern property line. **2/22/2018**

Photo 18: View west downstream where seasonal wetland terrace tapers into the adjacent to ephemeral drainage along northern property line. **2/22/2018**

Photo 19: View southwest at Orcutt Creek channel and creek restoration area along creek and northwest corner of the project site. **2/22/2018**

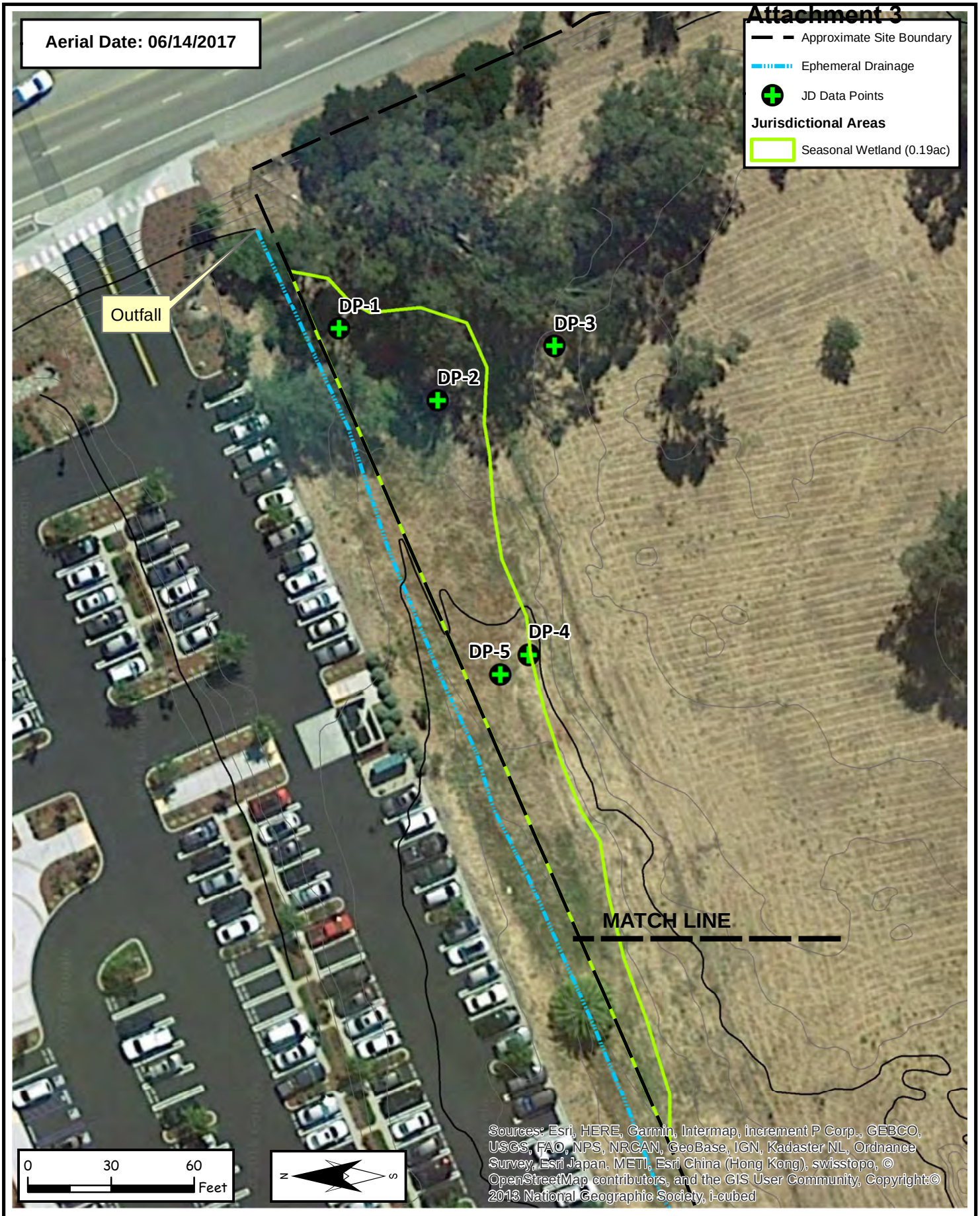
Photo 20: View northwest at developed/ruderal Curry Parcel along western property line with the McBride property. **2/22/2018**

Photo 21: View northeast at annual grassland across the McBride property at the SESLOC building facility along northern property line. **2/22/2018**

Photo 22: View east across McBride property at non-native annual grassland and non-native trees. **2/22/2018**

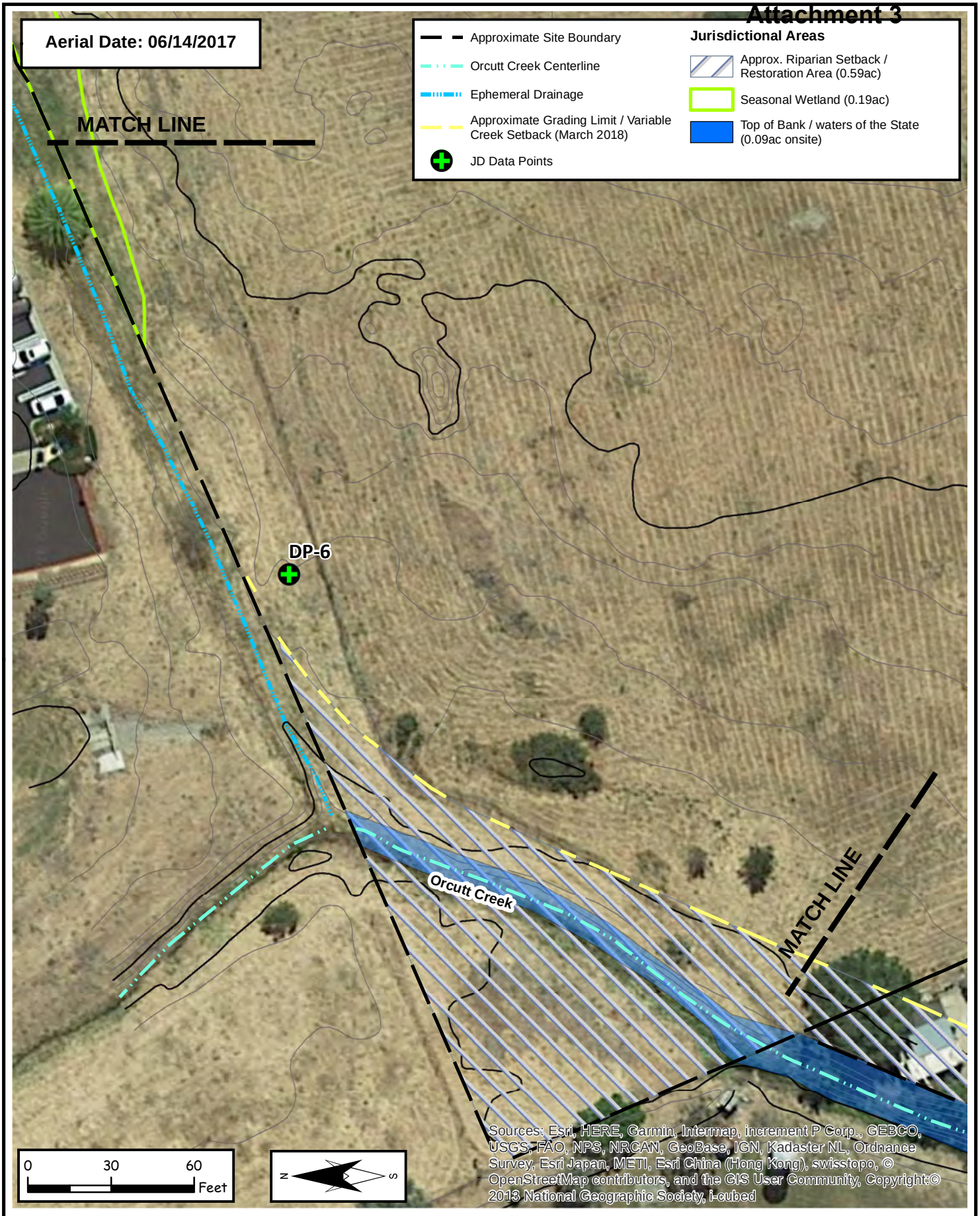
Photo 23: View south at annual grassland and stockpile on McBride property with MindBody building across Tank Farm Road in background. **2/22/2018**

Photo 24: View southeast across McBride property towards the intersection of Broad Street and Tank Farm Road from atop the stockpile. **2/22/2018**



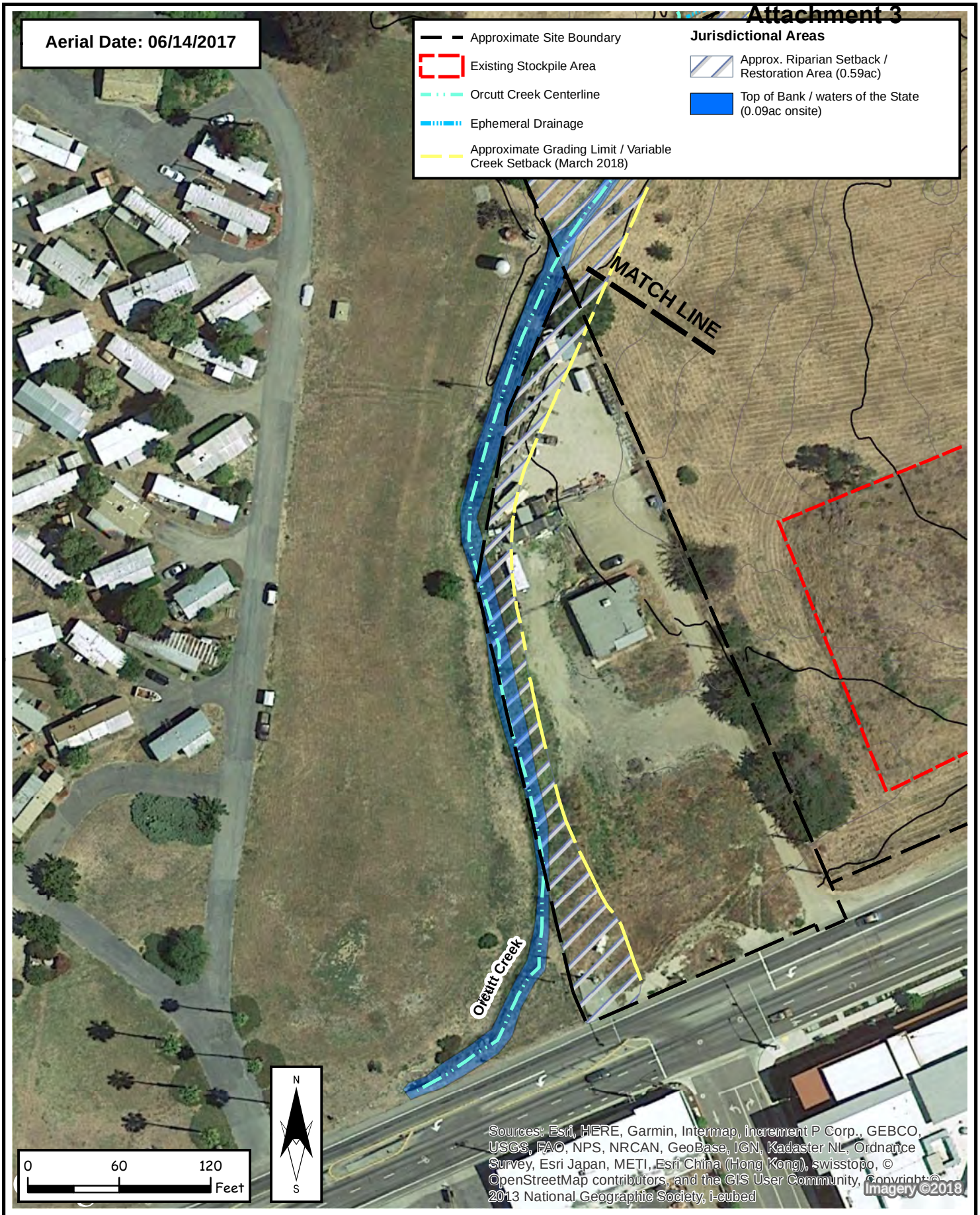
sage institute updated March 16, 2018	NWC Broad Street Tank Farm Road Mixed-Use Project	**JD-1**
	Biological and Wetland Resources Assessment	Jurisdictional Determination

Attachment 3



sage institute updated March 16, 2018	NWC Broad Street Tank Farm Road Mixed-Use Project	**JD-2**
	Biological and Wetland Resources Assessment	Jurisdictional Determination

Attachment 3



sage institute updated March 16, 2018	NWC Broad Street Tank Farm Road Mixed-Use Project	**JD-3**
	Biological and Wetland Resources Assessment	Jurisdictional Determination

Appendix B

Wetland Delineation and Preliminary Jurisdictional Determination

Attachment 3

NWC BROAD STREET / TANK FARM ROAD MIXED-USE PROJECT

APNs 053-421-003 &-004

APPENDIX B

WETLAND DELINEATION AND PRELIMINARY JURISDICTIONAL DETERMINATION

August 28, 2014
Updated
March 16, 2018

Prepared for:

NKT DEVELOPMENT, LLC
AND
OASIS ASSOCIATES, INC.

INC

Central Coast Office
1320 Van Beurden Drive, Suite 202-D4
Los Osos, CA 93402
tel 805.434.2804 fax 805.980.5886

www.sageii.com

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3.3 Seasonal Wetland B-3
4.0 Preliminary Jurisdictional Determination B-4
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Appendix A – Historic Aerial Photographs

Appendix B – Wetland Delineation Data Forms

Appendix B
NWC Broad Street / Tank Farm Road Mixed-Use Project
Wetland Delineation and Preliminary Jurisdictional Determination

1.0 Introduction and Purpose

The NWC Broad Street / Tank Farm Road Mixed-Use Project (proposed project) includes development of the combined approximately 10.6-acre sites for commercial uses. The purpose of this wetland delineation and preliminary jurisdictional determination is to document the methods and results for delineating the location and extent of potential jurisdictional wetlands and other waters of the U.S., and waters of the State within the proposed project boundaries. This wetland delineation is appended as supporting documentation to the existing conditions detailed in the March 16, 2018 *Biological and Wetland Resources Assessment* (2018 BA). Baseline conditions and jurisdictional limits are illustrated in the figures included above in Appendix A of the 2018 BA.

1.1 Project Location

The proposed project site is composed of two parcels located at the northwest corner of Broad Street and Tank Farm Road in the City of San Luis Obispo. Figure 1 and Figure 2 in Appendix A provided regional and detailed location maps respectively.

1.2 Project Description

The proposed project includes the development of a retail shopping center and assisted living facility on two parcels located generally on the northwest corner of Broad Street and Tank Farm Road. Access to the project sites will be provided from both Broad Street and Tank Farm Road. Based upon circulation between the proposed projects and the existing SESLOC facility located north of the subject properties, the Broad Street access will require impacts on 0.19 acre of seasonal wetland including an area for a new crossing of the ephemeral drainage required to provide access from the subject properties to the existing SESLOC facility.

Onsite enhancement of approximately 0.60 acre along the Orcutt Creek corridor is a part of the proposed project to mitigate for impacts to the 0.19-acre seasonal wetland and ephemeral drainage crossing at a 3:1 ratio. The enhancement plan will include removal of noxious invasive non-native herbaceous and woody species and a native plant planting program in the northwest corner and creek setback areas along Orcutt Creek. Table CMMP-1 in the 2018 BA provides a list of creek enhancement plantings proposed as part of the project.

2.0 Methods

SII Principal Ecologist and wetland specialist David Wolff collected and reviewed available background information and conducted wetland delineation field reconnaissance of the two properties on July 31, 2014. The February 22, 2018 field survey affirmed conditions are unchanged from the 2014 initial field surveys and wetland determination data collection. Available background information included multiple years of aerial photography dating back to 1937 and available soils survey information. The routine and

problem areas methodology detailed in the 1987 *U.S. Army Corps of Engineers Wetland Delineation Manual* (Corps Manual) were used as the basis to delineate waters of the U.S. including wetlands on the site. The basis of determining and recording indicators for hydrophytic vegetation, hydric soils, and wetland hydrology was the 2008 *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region (Version 2.0)* (Arid West Supplement). Both the Corps Manual (Section G – Problem Areas) and Arid West Supplement (Chapter 5 – Difficult Wetland Situations in the Arid West) were used for the determination and evaluation of normal circumstances, atypical situations, and problem area wetlands as needed. Field observations data were collected on vegetation, soils, and hydrology at the project site for recording on the Arid West Data Observation Form at six data points as shown on Figures JD-1 and JD-2 in Appendix A. Plant species wetland indicator status was based on the U.S. Army Corps of Engineers, State of California 2014 Wetland Plant List and updated by the most recent *State of California 2016 Wetland Plant List* (Lichvar, et.al. 2016). The centerline and top of bank of Orcutt Creek was field surveyed and mapped as shown on Figures JD-2 and JD-3 in Appendix A.

3.0 RESULTS

3.1 SETTING

The proposed project site is zoned for commercial development and currently supports disturbed non-native annual grassland and ruderal (previously disturbed) habitats. The majority of the site has been occupied in the past as recent as 2003 and dating back to at least 1937 with buildings and active equipment/materials storage. The site appears to have been idle between 2004 and 2018 when buildings were removed and the surface was cleared leaving only the non-native trees. A soil stockpile mound has been placed on the southwest corner of the property in 2014. An ephemeral drainage enters the site through a 24-inch culvert in the northeast corner of the property and flows west to the confluence with Orcutt Creek in the northwest corner of the McBride Property site. Orcutt Creek then flows southwesterly along the west edge of the Curry property to a culvert under Tank Farm Road. The property is bordered by urban development the north, east, and south sides with residential development to the west. The Curry parcel is developed and ruderal site with residence and storage yards dating back to at least 1959.

3.2 ORCUTT CREEK AND EPHEMERAL DRAINAGE ORIGIN

The review of aerial photographs dating back as far as 1937 show Orcutt Creek essentially in the same alignment through the two parcels as exists today. Exhibit 1 below provides a set of historic aerial photographs from 1937 to 2005. A short segment of Orcutt Creek upstream of the project site was permitted for realignment in 2003 for construction of the City of San Luis Obispo Damon-Garcia ball fields. Orcutt Creek flows through a culvert under Tank Farm Road southwest of the Curry parcel. Downstream of the Tank Farm Road culvert Orcutt Creek joins Acacia Creek briefly before becoming East Fork San Luis Obispo Creek that then joins San Luis Obispo Creek near Highway 101. As such, Orcutt Creek should be considered a jurisdictional tributary waters of the U.S. as shown on Figure 2, and Figures JD-2 and JD-3 in Appendix A.

The ephemeral drainage swale with low-flow channel is located just offsite adjacent to the northern property line of the McBride parcel. The limits were shown on the SESLOC grading plans as jurisdictional waters of the U.S., subject to U.S. Army Corps of Engineers (Corps), and waters of the State by the California Department of Fish and Wildlife (CDFW). Currently it appears that any source of hydrology for

the ephemeral drainage is from a culvert outfall just offsite at the northeast corner of the McBride property from runoff from surrounding commercial and residential development. The drainage appears to become a prominent drainage feature between 1994 and 2002 with the development of the Marigold Shopping Center (see Exhibit 1).

3.3 SEASONAL WETLAND

There is evidence of overflow flooding wetland hydrology (drift lines of debris and sediment deposits) from the ephemeral drainage onto the McBride parcel on a terrace that runs along the drainage on the McBride property. The evaluation and comparison of soils at six data point locations revealed field indicators of hydric soils on a portion of the terrace suggesting a regular flooding regime over time during the wet season (Data Points 1, 2, 4, and 5).

The apparent overflow supports a small stand of arroyo willow (*Salix lasiolepis*) at the northwest corner with one small isolated tree in the center of the drainage. Two patches of bulrush (*Schoenoplectus acutus*), a Himalayan blackberry (*Rubus armeniacus*) thicket, and one Canary Island date palm (*Phoenix canariensis*) occur along the drainage. The upper reach of the terrace was dominated by Harding grass (*Phalaris aquatica*), teasel (*Dipsacus sativus*), soft chess (*Bromus hordaceous*), rabbitsfoot grass (*Polypogon* sp.), and bristly ox-tongue (*Helminthotheca echioides*). The lower reach along the terrace characterized by Data Point 6 lacked the rabbitsfoot grass component, and did not have any indicators of hydric soils or wetland hydrology.

Harding grass and soft chess are facultative upland plants (FACU), and teasel is presumed upland (UPL) that does not have any wetland indicator status. The Himalayan blackberry is also a FAC plant but not considered in the dominance structure. There is some representation of rabbitsfoot grass that is a facultative wetland plant (FACW). To meet the wetland vegetation criteria, an area needs to be dominated by greater than 50 percent of obligate (OBL), facultative wetland (FACW), and/or facultative (FAC) wetland plants that is not the case here. Updates to from the 2016 wetland indicator plant list changed bristly ox-tongue from FACU to FAC but did not change the wetland vegetation determination as it did not shift to greater than 50 percent of dominant species.

To be considered a jurisdictional wetland under the Federal definition it must meet all three parameters of soils, hydrology, and vegetation. The overflow terrace has evidence of debris drift lines and sediment deposits that are wetland hydrology indicators. Soils test pits revealed low chroma matirix and a significant percentage of redox features considered field indicators of hydric soils. While some level of overland flow appears to occur, with the exception of the bulrush patch, the ephemeral nature of the drainage overflow does not manifest a definitive wetland plant community. However, given several years of below normal rainfall, this area was treated as problem area wetland. As such, based on the presence of hydric soils and wetland hydrology, approximately 0.19 acre (8,166 square feet) of jurisdictional wetland occurs on the bench above the ephemeral drainage along the northern property boundary of the McBride parcel. Figure JD-1 and JD-2 in Appendix A show the location and extent seasonal wetland delineated as described above. Field survey on February 22, 2018 confirmed that the topography of the seasonal wetland adjacent to the ephemeral drainage was unchanged maintaining the hydrologic regime as documented in 2014. See represented photographs of the wetland feature, ephemeral drainage, and Orcutt Creek provided Appendix A Figure 6.

4.0 PRELIMINARY JURISDICTIONAL DETERMINATION

U.S. Army Corps of Engineers Preliminary Jurisdictional Determination – Approximately 0.19 acre of seasonal wetland occurs on the overflow terrace along a portion of the northern property boundary of the McBride parcel adjacent to an offsite ephemeral drainage. This is based on application of the problem area methodology that considers evidence of hydric soils and wetland hydrology in the absence of meeting any definitive wetland vegetation criteria.

Orcutt Creek has been in its current alignment as a tributary drainage since as far back as 1937. Given it flows through a sequence of creeks to San Luis Obispo Creek and the Pacific Ocean, Orcutt Creek is considered a jurisdictional waters of the U.S.

California Fish and Game Code Section 1600 *et.seq.* Jurisdictional Determination – Based the evaluation of available background information and the field survey of the McBride and Curry parcels, Orcutt Creek exhibits a bed, bank, and channel that would fall under the 1600 jurisdiction of the California Department of Fish and Wildlife (CDFW). The overflow terrace wetland falls within the floodplain of the offsite ephemeral drainage but is not within a discernable bed, bank or channel. As such, it does not likely fall under CDFW 1600 jurisdiction. However, the CDFW may still exert jurisdiction on a case by case basis on areas within the floodplain of creeks and drainages.

5.0 REFERENCES

1. Baldwin, B.G., D.H. Goldman, D.J. Keil, R. Patterson, T.J. Rosatti, Editors. 2012. *The Jepson Manual, Vascular Plants of California, Second Edition Thoroughly Revised and Expanded*. UC Press.
2. Hickman, J.C., Editor. 1993. *The Jepson Manual, Higher Plants of California*. University of California Press.
3. Lichvar, R.W., D.L. Banks, W.N. Kirchner, and N.C. Melvin. 2016. The National Wetland Plant List: 2016 wetland ratings. Phytoneuron 2016-30: 1-17. Published 28 April 2016. ISSN 2153 733X
4. Sawyer, J.O., T. Keeler-Wolf, and J.M. Evens. 2009. *A Manual of California Vegetation, Second Edition*. California Native Plant Society Press, Sacramento.
5. U.S. Army Corps of Engineers. 2008. Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region (Version 2.0). September 2008.
6. U.S. Army Corps of Engineers. 1987. Corp of Engineers Wetlands Delineation Manual. January 1987.

EXHIBIT 1

HISTORICAL AERIAL PHOTOGRAPHS

Attachment 3

INQUIRY #: 2614784.5

YEAR: 1937

= 555'

N

Attachment 3

INQUIRY #: 2614784.5

YEAR: 1949

= 555'

N

Attachment 3

Attachment 3

INQUIRY #: 2614784.5

YEAR: 1965

N

= 333'

Attachment 3

Attachment 3

Attachment 3

INQUIRY #: 2614784.5

YEAR: 1994

N

= 666'

Attachment 3
INQUIRY #: 2614784.5
YEAR: 2002
= 666'
N

Attachment 3

EXHIBIT 2

WETLAND DELINEATION DATA FORMS

Attachment 3

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: McBride and Curry Property City/County: San Luis Obispo, San Luis Obispo Sampling Date: July 31, 2014

Applicant/Owner: NKT Development, LLC State: CA Sampling Point: DP-1

Investigator(s): David Wolff Section, Township, Range:

Landform (hillslope, terrace, etc.): Urban flat lands Local relief (concave, convex, none): floodplain Slope (%): < 3%

Subregion (LRR): LRRC Lat: 35.249700 Long: -120.644251 Datum: NAD83

Soil Map Unit Name: Cropley Clay NWI classification:

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks.)

Are Vegetation No, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐

Are Vegetation No, Soil No, or Hydrology Yes naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes ☒ No ☐ Hydric Soil Present? Yes ☒ No ☐ Wetland Hydrology Present? Yes ☒ No ☐	**Is the Sampled Area within a Wetland?** Yes ☒ No ☐

Remarks: Ephemeral drainage swale from from culvert outfall from urbanized watershed; prolonged low rainfall drought conditions

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: ____)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	= Total Cover		
Sapling/Shrub Stratum (Plot size: ____)			
1.			
2.			
3.			
4.			
5.			
	= Total Cover		
Herb Stratum (Plot size: 25'x25')			
1. Polypogon monspeliensis	60%	yes	FACW
2. Stipa miliacea var. miliacea	40%	yes	UPL
3. Epilobium ciliatum	10%	no	FACW
4. Lolium perenne	10%	no	FAC
5. Briza minor	5%	no	FAC
6.			
7.			
8.			
	= Total Cover		
Woody Vine Stratum (Plot size: ____)			
1.			
2.			
	= Total Cover		

% Bare Ground in Herb Stratum 20% % Cover of Biotic Crust 0%

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 50% (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species	x 1 =
FACW species 70	x 2 = 140
FAC species 15	x 3 = 45
FACU species	x 4 =
UPL species 40	x 5 = 200
Column Totals: 125 (A)	385 (B)

Prevalence Index = B/A = 3.0

Hydrophytic Vegetation Indicators:

- ☐ Dominance Test is >50%
- ☒ Prevalence Index is ≤3.0[1]
- ☐ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- ☐ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes ☒ No ☐**

Remarks:

Attachment 3

SOIL

Sampling Point: DP-1

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-8	N/A						Root/Gravel	gravely possible non-native matieral
8-14	10YR 3/1	100%	None				Clay	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5) (**LRR C**)
- ☐ 1 cm Muck (A9) (**LRR D**)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1)
- ☐ Loamy Gleyed Matrix (F2)
- ☒ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ☐ 1 cm Muck (A9) (**LRR C**)
- ☐ 2 cm Muck (A10) (**LRR B**)
- ☐ Reduced Vertic (F18)
- ☐ Red Parent Material (TF2)
- ☐ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ☒ No ☐

Remarks: Low Chroma matrix

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1) (**Non riverine**)
- ☐ Sediment Deposits (B2) (**Non riverine**)
- ☐ Drift Deposits (B3) (**Non riverine**)
- ☐ Surface Soil Cracks (B6)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Water-Stained Leaves (B9)
- ☐ Salt Crust (B11)
- ☐ Biotic Crust (B12)
- ☐ Aquatic Invertebrates (B13)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres along Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Thin Muck Surface (C7)
- ☐ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ☐ Water Marks (B1) (**Riverine**)
- ☒ Sediment Deposits (B2) **(Riverine)**
- ☒ Drift Deposits (B3) (**Riverine**)
- ☒ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Shallow Aquitard (D3)
- ☐ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes ☐ No ☒ Depth (inches): _____

Water Table Present? Yes ☐ No ☒ Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes ☐ No ☒ Depth (inches): _____

Wetland Hydrology Present? Yes ☒ No ☐

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks: Likely floodplain overflow from offsite culvert outfall and ephemeral drainage channel.

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: McBride and Curry Property City/County: San Luis Obispo, San Luis Obispo Sampling Date: July 31, 2014

Applicant/Owner: NKT Development, LLC State: CA Sampling Point: DP-2

Investigator(s): David Wolff Section, Township, Range:

Landform (hillslope, terrace, etc.): Urban flat lands Local relief (concave, convex, none): floodplain Slope (%): < 3%

Subregion (LRR): LRRC Lat: 35.249614 Long: -120.644370 Datum: NAD83

Soil Map Unit Name: Cropley Clay NWI classification:

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks.)

Are Vegetation No, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐

Are Vegetation No, Soil No, or Hydrology Yes naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes ☒ No ☐ Hydric Soil Present? Yes ☒ No ☐ Wetland Hydrology Present? Yes ☒ No ☐	**Is the Sampled Area within a Wetland?** Yes ☒ No ☐

Remarks: Ephemeral drainage swale from from culvert outfall from urbanized watershed; prolonged low rainfall drought conditions

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: ____)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	= Total Cover		
Sapling/Shrub Stratum (Plot size: ____)			
1.			
2.			
3.			
4.			
5.			
	= Total Cover		
Herb Stratum (Plot size: 25'x25')			
1. Schoenoplectus acutus	100%	yes	OBL
2.			
3.			
4.			
5.			
6.			
7.			
8.			
	= Total Cover		
Woody Vine Stratum (Plot size: ____)			
1.			
2.			
	= Total Cover		

% Bare Ground in Herb Stratum 0% % Cover of Biotic Crust 0%

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species	x 1 =
FACW species	x 2 =
FAC species	x 3 =
FACU species	x 4 =
UPL species	x 5 =
Column Totals: (A)	(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:

- ☒ Dominance Test is >50%
- ☐ Prevalence Index is ≤3.0[1]
- ☐ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- ☐ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes ☒ No ☐**

Remarks:

SOIL

Sampling Point: DP-2

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Redox Features Type[1]	Redox Features Loc[2]	Texture	Remarks
0-5"	10YR 3/1	100%	None				Blocky clay	
5"-12"	2.5Y 3/1	80%	7.5YR 4/6	20%	RM	PL	Clay loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5) (**LRR C**)
- ☐ 1 cm Muck (A9) (**LRR D**)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1)
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☒ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ☐ 1 cm Muck (A9) (**LRR C**)
- ☐ 2 cm Muck (A10) (**LRR B**)
- ☐ Reduced Vertic (F18)
- ☐ Red Parent Material (TF2)
- ☐ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** ☒ **No** ☐

Remarks: Low Chroma matrix with observable redox features

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1) (**Non riverine**)
- ☐ Sediment Deposits (B2) (**Non riverine**)
- ☐ Drift Deposits (B3) (**Non riverine**)
- ☒ Surface Soil Cracks (B6)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Water-Stained Leaves (B9)
- ☐ Salt Crust (B11)
- ☐ Biotic Crust (B12)
- ☐ Aquatic Invertebrates (B13)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres along Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Thin Muck Surface (C7)
- ☐ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ☐ Water Marks (B1) (**Riverine**)
- ☒ Sediment Deposits (B2) **(Riverine)**
- ☒ Drift Deposits (B3) (**Riverine**)
- ☒ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Shallow Aquitard (D3)
- ☐ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes ☐ No ☒ Depth (inches): _____

Water Table Present? Yes ☐ No ☒ Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes ☐ No ☒ Depth (inches): _____

Wetland Hydrology Present? **Yes** ☒ **No** ☐

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks: Likely floodplain overflow from offsite culvert outfall and ephemeral drainage channel.

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: McBride and Curry Property City/County: San Luis Obispo, San Luis Obispo Sampling Date: July 31, 2014

Applicant/Owner: NKT Development, LLC State: CA Sampling Point: DP-3

Investigator(s): David Wolff Section, Township, Range:

Landform (hillslope, terrace, etc.): Urban flat lands Local relief (concave, convex, none): floodplain Slope (%): < 3%

Subregion (LRR): LRRC Lat: 35.249501 Long: -120.644299 Datum: NAD83

Soil Map Unit Name: Cropley Clay NWI classification:

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks.)

Are Vegetation No, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐

Are Vegetation No, Soil No, or Hydrology Yes naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes ☐ No ☒ Hydric Soil Present? Yes ☐ No ☒ Wetland Hydrology Present? Yes ☐ No ☒	**Is the Sampled Area within a Wetland?** Yes ☐ No ☒

Remarks: Upland outside of floodplain overflow flooding from ephemeral drainage

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size:)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	= Total Cover		
Sapling/Shrub Stratum (Plot size:)			
1.			
2.			
3.			
4.			
5.			
	= Total Cover		
Herb Stratum (Plot size: 25'x25')			
1. Avena sativa	80%	yes	UPL
2. Lolium perenne	20%	yes	FAC
3. Phalaris aquatica	20%	yes	FACU
4.			
5.			
6.			
7.			
8.			
	120% = Total Cover		
Woody Vine Stratum (Plot size:)			
1.			
2.			
	= Total Cover		

% Bare Ground in Herb Stratum 0% % Cover of Biotic Crust 0%

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 33% (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species	x 1 =
FACW species	x 2 =
FAC species	x 3 =
FACU species	x 4 =
UPL species	x 5 =
Column Totals: (A)	(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:

- ☐ Dominance Test is >50%
- ☐ Prevalence Index is ≤3.0[1]
- ☐ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- ☐ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes** ☐ **No** ☒

Remarks: Less than 50% of the dominant species are wetland indicators.

Attachment 3

SOIL

Sampling Point: DP-3

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Redox Features Type[1]	Redox Features Loc[2]	Texture	Remarks
0-12"	10YR 3/2	100%	None				Clay loam	No redox features

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5) (**LRR C**)
- ☐ 1 cm Muck (A9) (**LRR D**)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1)
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ☐ 1 cm Muck (A9) (**LRR C**)
- ☐ 2 cm Muck (A10) (**LRR B**)
- ☐ Reduced Vertic (F18)
- ☐ Red Parent Material (TF2)
- ☐ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ☐ No ☒

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1) (**Non riverine**)
- ☐ Sediment Deposits (B2) (**Non riverine**)
- ☐ Drift Deposits (B3) (**Non riverine**)
- ☐ Surface Soil Cracks (B6)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Water-Stained Leaves (B9)
- ☐ Salt Crust (B11)
- ☐ Biotic Crust (B12)
- ☐ Aquatic Invertebrates (B13)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres along Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Thin Muck Surface (C7)
- ☐ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ☐ Water Marks (B1) (**Riverine**)
- ☐ Sediment Deposits (B2) **(Riverine)**
- ☐ Drift Deposits (B3) (**Riverine**)
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Shallow Aquitard (D3)
- ☐ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes ☐ No ☒ Depth (inches): _____

Water Table Present? Yes ☐ No ☒ Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes ☐ No ☒ Depth (inches): _____

Wetland Hydrology Present? Yes ☐ No ☒

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks: Uplands outside of floodplain overflow influence from offsite culvert outfal and ephemeral drainage channel.

Attachment 3

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: McBride and Curry Property City/County: San Luis Obispo, San Luis Obispo Sampling Date: July 31, 2014

Applicant/Owner: NKT Development, LLC State: CA Sampling Point: DP-4

Investigator(s): David Wolff Section, Township, Range:

Landform (hillslope, terrace, etc.): Urban flat lands Local relief (concave, convex, none): floodplain Slope (%): < 3%

Subregion (LRR): LRRC Lat: 35.249495 Long: -120.644604 Datum: NAD83

Soil Map Unit Name: Cropley Clay NWI classification:

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks.)

Are Vegetation No, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐

Are Vegetation No, Soil No, or Hydrology Yes naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes ☐ No ☒ Hydric Soil Present? Yes ☒ No ☐ Wetland Hydrology Present? Yes ☒ No ☐	**Is the Sampled Area within a Wetland?** Yes ☒ No ☐

Remarks: Charactarizes foodplain terrace overflow flooding from ephemeral drainage.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size:)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	= Total Cover		
Sapling/Shrub Stratum (Plot size:)			
1.			
2.			
3.			
4.			
5.			
	= Total Cover		
Herb Stratum (Plot size: 25'x25')			
1. Phalaris aquatica	80%	yes	FACU
2. Dipsacus sativus	20%	yes	UPL
3. Polypogon monspeliensis	20%	yes	FACW
4. Helminthotheca echioides	20%	yes	FAC
5.			
6.			
7.			
8.			
	140% = Total Cover		
Woody Vine Stratum (Plot size:)			
1.			
2.			
	= Total Cover		

% Bare Ground in Herb Stratum 0% % Cover of Biotic Crust 0%

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 50% (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species	x 1 =
FACW species	x 2 =
FAC species	x 3 =
FACU species	x 4 =
UPL species	x 5 =
Column Totals: (A)	(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:

- ☐ Dominance Test is >50%
- ☐ Prevalence Index is ≤3.0[1]
- ☐ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- ☒ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes** ☐ **No** ☒

Remarks: Not greater than 50% of dominant species are wetland indicators. Several years of low rainfall drought conditions may have affected the dominant vegetation.

SOIL

Sampling Point: DP-4

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-4"	Root zone							
4"-12"	10YR 3/1	70%	5YR 4/4	30%	RM	PL	Clay	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5) (**LRR C**)
- ☐ 1 cm Muck (A9) (**LRR D**)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1)
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☒ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ☐ 1 cm Muck (A9) (**LRR C**)
- ☐ 2 cm Muck (A10) (**LRR B**)
- ☐ Reduced Vertic (F18)
- ☐ Red Parent Material (TF2)
- ☐ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** ☒ **No** ☐

Remarks: High percentage of reduced matrix features.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1) (**Non riverine**)
- ☐ Sediment Deposits (B2) (**Non riverine**)
- ☐ Drift Deposits (B3) (**Non riverine**)
- ☐ Surface Soil Cracks (B6)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Water-Stained Leaves (B9)
- ☐ Salt Crust (B11)
- ☐ Biotic Crust (B12)
- ☐ Aquatic Invertebrates (B13)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres along Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Thin Muck Surface (C7)
- ☐ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ☐ Water Marks (B1) (**Riverine**)
- ☐ Sediment Deposits (B2) **(Riverine)**
- ☒ Drift Deposits (B3) (**Riverine**)
- ☒ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Shallow Aquitard (D3)
- ☐ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes ☐ No ☒ Depth (inches): _____

Water Table Present? Yes ☐ No ☒ Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes ☐ No ☒ Depth (inches): _____

Wetland Hydrology Present? **Yes** ☒ **No** ☐

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks: Floodplain terrace adjacent to offsite ephemeral drainage channel.

Attachment 3

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: McBride and Curry Property City/County: San Luis Obispo, San Luis Obispo Sampling Date: July 31, 2014

Applicant/Owner: NKT Development, LLC State: CA Sampling Point: DP-5

Investigator(s): David Wolff Section, Township, Range:

Landform (hillslope, terrace, etc.): Urban flat lands Local relief (concave, convex, none): floodplain Slope (%): < 3%

Subregion (LRR): LRRC Lat: 35.249531 Long: -120.644661 Datum: NAD83

Soil Map Unit Name: Cropley Clay NWI classification:

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks.)

Are Vegetation No, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐

Are Vegetation No, Soil No, or Hydrology Yes naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes ☐ No ☒ Hydric Soil Present? Yes ☒ No ☐ Wetland Hydrology Present? Yes ☒ No ☐	**Is the Sampled Area within a Wetland?** Yes ☒ No ☐

Remarks: Charactarizes foodplain terrace overflow flooding from ephemeral drainage.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size:)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	= Total Cover		
Sapling/Shrub Stratum (Plot size:)			
1.			
2.			
3.			
4.			
5.			
	= Total Cover		
Herb Stratum (Plot size: 25'x25')			
1. Phalaris aquatica	80%	yes	FACU
2. Dipsacus sativus	20%	yes	UPL
3. Polypogon monspeliensis	20%	yes	FACW
4. Helminthotheca echioides	20%	yes	FACU
5.			
6.			
7.			
8.			
	140% = Total Cover		
Woody Vine Stratum (Plot size:)			
1.			
2.			
	= Total Cover		

% Bare Ground in Herb Stratum 0% % Cover of Biotic Crust 0%

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 25% (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species	x 1 =
FACW species	x 2 =
FAC species	x 3 =
FACU species	x 4 =
UPL species	x 5 =
Column Totals: (A)	(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:

- ☐ Dominance Test is >50%
- ☐ Prevalence Index is ≤3.0[1]
- ☐ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- ☒ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes** ☐ **No** ☒

Remarks: Less than 50% of dominant species are wetland indicators. Several years of low rainfall drought conditions may have affected the dominant vegetation.

SOIL

Sampling Point: DP-5

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-4"	Root zone							
4"-12"	10YR 3/1	70%	5YR 4/4	30%	RM	PL	Clay	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5) (**LRR C**)
- ☐ 1 cm Muck (A9) (**LRR D**)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1)
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☒ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ☐ 1 cm Muck (A9) (**LRR C**)
- ☐ 2 cm Muck (A10) (**LRR B**)
- ☐ Reduced Vertic (F18)
- ☐ Red Parent Material (TF2)
- ☐ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** ☒ **No** ☐

Remarks: High percentage of reduced matrix features.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1) (**Non riverine**)
- ☐ Sediment Deposits (B2) (**Non riverine**)
- ☐ Drift Deposits (B3) (**Non riverine**)
- ☐ Surface Soil Cracks (B6)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Water-Stained Leaves (B9)
- ☐ Salt Crust (B11)
- ☐ Biotic Crust (B12)
- ☐ Aquatic Invertebrates (B13)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres along Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Thin Muck Surface (C7)
- ☐ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ☐ Water Marks (B1) (**Riverine**)
- ☐ Sediment Deposits (B2) **(Riverine)**
- ☒ Drift Deposits (B3) (**Riverine**)
- ☒ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Shallow Aquitard (D3)
- ☐ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes ☐ No ☒ Depth (inches): _____

Water Table Present? Yes ☐ No ☒ Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes ☐ No ☒ Depth (inches): _____

Wetland Hydrology Present? **Yes** ☒ **No** ☐

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks: Floodplain terrace adjacent to offsite ephemeral drainage channel.

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: McBride and Curry Property City/County: San Luis Obispo, San Luis Obispo Sampling Date: July 31, 2014

Applicant/Owner: NKT Development, LLC State: CA Sampling Point: DP-6

Investigator(s): David Wolff Section, Township, Range:

Landform (hillslope, terrace, etc.): Urban flat lands Local relief (concave, convex, none): floodplain Slope (%): < 3%

Subregion (LRR): LRRC Lat: 35.249208 Long: -120.64 Datum: NAD83

Soil Map Unit Name: Cropley Clay NWI classification:

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks.)

Are Vegetation No, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐

Are Vegetation No, Soil No, or Hydrology Yes naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes ☐ No ☒ Hydric Soil Present? Yes ☐ No ☒ Wetland Hydrology Present? Yes ☐ No ☒	**Is the Sampled Area within a Wetland?** Yes ☐ No ☒

Remarks: Charactarizes foodplain terrace overflow flooding from ephemeral drainage.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size:)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	= Total Cover		
Sapling/Shrub Stratum (Plot size:)			
1.			
2.			
3.			
4.			
5.			
	= Total Cover		
Herb Stratum (Plot size: 25'x25')			
1. Phalaris aquatica	70%	yes	FACU
2. Dipsacus sativus	30%	yes	UPL
3. Helminthotheca echioides	20%	yes	FAC
4.			
5.			
6.			
7.			
8.			
	120% = Total Cover		
Woody Vine Stratum (Plot size:)			
1.			
2.			
	= Total Cover		

% Bare Ground in Herb Stratum 0% % Cover of Biotic Crust 0%

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 33% (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species	x 1 =
FACW species	x 2 =
FAC species	x 3 =
FACU species	x 4 =
UPL species	x 5 =
Column Totals: (A)	(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:

- ☐ Dominance Test is >50%
- ☐ Prevalence Index is ≤3.0[1]
- ☐ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- ☒ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes** ☐ **No** ☒

Remarks: Less than 50% of dominant species are wetland indicators. Several years of low rainfall drought conditions may have affected the dominant vegetation.

Attachment 3

SOIL

Sampling Point: DP-6

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Redox Features Type[1]	Redox Features Loc[2]	Texture	Remarks
0-12"	10YR 4/4	100	None				Gravely	sandy loam

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5) (**LRR C**)
- ☐ 1 cm Muck (A9) (**LRR D**)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1)
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ☐ 1 cm Muck (A9) (**LRR C**)
- ☐ 2 cm Muck (A10) (**LRR B**)
- ☐ Reduced Vertic (F18)
- ☐ Red Parent Material (TF2)
- ☐ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ☐ No ☒

Remarks: No hydric soil indicators.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1) (**Non riverine**)
- ☐ Sediment Deposits (B2) (**Non riverine**)
- ☐ Drift Deposits (B3) (**Non riverine**)
- ☐ Surface Soil Cracks (B6)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Water-Stained Leaves (B9)
- ☐ Salt Crust (B11)
- ☐ Biotic Crust (B12)
- ☐ Aquatic Invertebrates (B13)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres along Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Thin Muck Surface (C7)
- ☐ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ☐ Water Marks (B1) (**Riverine**)
- ☐ Sediment Deposits (B2) **(Riverine)**
- ☐ Drift Deposits (B3) (**Riverine**)
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Shallow Aquitard (D3)
- ☐ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes ☐ No ☒ Depth (inches): _____

Water Table Present? Yes ☐ No ☒ Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes ☐ No ☒ Depth (inches): _____

Wetland Hydrology Present? Yes ☐ No ☒

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks: Terrace above ephemeral drainage lacking evidence of overflow flooding.

Rincon Consultants, Inc.

1530 Monterey Street, Suite D
San Luis Obispo, California 93401

805 547 0900 OFFICE AND FAX

info@rinconconsultants.com
www.rinconconsultants.com

February 26, 2019
Project No: 19-07096

Brian Leveille
City of San Luis Obispo Community Development
Long Range Planning
919 Palm Street
San Luis Obispo, California 93401

Subject: **Tank Farm Road Assisted Living Facility and Retail Project**
3985 Broad Street and 660 Tank Farm Road, San Luis Obispo, California 93401

Dear Mr. Leveille:

This technical memorandum analyzes the potential air quality impacts of the proposed assisted living facility and retail development on an approximately 10.24-acre project site located at 3985 Broad Street and 660 Tank Farm Road in San Luis Obispo, California (Assessor's Parcel Numbers 053-421-003 and 053-421-004). Rincon Consultants, Inc. (Rincon) prepared this memorandum under contract to the City of San Luis Obispo, in support of the environmental documentation being prepared pursuant to the California Environmental Quality Act (CEQA). The project is located in the South Central Coast Air Basin (SCCAB) under the jurisdiction of the San Luis Obispo Air Pollution Control District (SLOAPCD). This assessment is based on significance thresholds and methodologies in the SLOAPCD's 2012 *CEQA Air Quality Handbook* and 2017 "Clarification memorandum for the San Luis Obispo Air Pollution Control District's 2012 CEQA Air Quality Handbook."[1]

Project Description

The proposed project would involve construction of an approximately 133,655-square foot assisted living facility with 111 suites and 28 memory care beds, and six retail buildings with a total floor area of 45,269 square feet. The project would also include a surface parking lot with approximately 288 vehicle spaces and 67 bicycle parking spaces. The project site is bound by Tank Farm Road to the south, Broad Street to the east, commercial development to the north, and a partially-vacant mobile home park to the west.[2]

The following sections discuss the SLOAPCD regional thresholds, project impact analysis, and recommendations and conclusions related to air pollutant emissions from project construction and operation.

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[1] SLOAPCD. 2012. *CEQA Air Quality Handbook*. April 2012. Available at: http://www.slocleanair.org/images/cms/upload/files/CEQA_Handbook_2012_v1.pdf
____. 2017. "Clarification memorandum for the San Luis Obispo Air Pollution Control District's 2012 CEQA Air Quality Handbook." November 14, 2017. Available at: https://storage.googleapis.com/slocleanair-org/images/cms/upload/files/FINAL_Clarification%20Memorandum%2020172.pdf

[2] The mobile home park located at 650 Tank Farm is planned for redevelopment as a mixed-use development with 249 residential units and 17,500 square feet of commercial space. On completion, these planned residential units would be sensitive receptors.

Setting

The City of San Luis Obispo is in the San Luis Obispo County portion of the SCCAB, which is under the jurisdiction of SLOAPCD. SLOAPCD monitors air pollutant levels to assure that air quality standards are met, and if they are not met, develops strategies to meet the standards. Depending on whether the standards are met or exceeded, the air basin is classified as being in "attainment" or as "non-attainment." San Luis Obispo County is in non-attainment for the state 24-hour standard for particulate matter (PM_{10}) and the state eight-hour standard for ozone (O_3).[3]

The major sources of PM_{10} in the SCCAB are agricultural operations, vehicle dust, grading, and dust produced by high winds. Additional sources of particulate pollution include diesel exhaust; mineral extraction and production; combustion products from industry and motor vehicles; smoke from open burning; paved and unpaved roads; condensation of gaseous pollutants into liquid or solid particles; and wind-blown dust from soils disturbed by demolition and construction, agricultural operations, off-road vehicle recreation, and other activities. Ozone is a secondary pollutant that is formed by a reaction between nitrogen oxides (NO_X) and reactive organic gases (ROGs) in the presence of sunlight. Therefore, ozone levels are dependent on the amount of these precursors. In the SCCAB, the major sources of ROGs are motor vehicles, organic solvents, petroleum production, and pesticides. The major sources of NO_X are motor vehicles, public utility power generation, and fuel combustion by various industrial sources.[4]

Thresholds

The SLOAPCD *CEQA Air Quality Handbook* (2012) provides project-level air quality thresholds for project construction and operation. These project-level thresholds, described below, represent the levels at which a project's individual emissions of criteria air pollutants, precursors, or toxic air pollutants would result in a cumulatively considerable contribution to the SCCAB's existing air quality status. The project would result in a significant air quality impact if construction or operational emissions would exceed any of the thresholds described below.

Construction Emissions

The SLOAPCD has developed specific daily and quarterly quantitative thresholds that apply to construction projects within the SCCAB. Daily ROG and NO_X thresholds are for all projects, and daily diesel particulate matter (DPM) thresholds are for projects that would be completed in less than one quarter (90 days).[5] Quarterly ROG and NO_X, DPM, and PM_{10} thresholds are applicable to the project because construction would last for more than one quarter. The applicable thresholds from SLOAPCD's

[3] SLOACPD. 2016. *2015 Annual Air Quality Report*. September 2016. Available at: http://www.slocleanair.org/images/cms/upload/files/2015aqrt-FINAL.pdf

[4] SLOACPD. 2016. *2015 Annual Air Quality Report*. September 2016. Available at: http://www.slocleanair.org/images/cms/upload/files/2015aqrt-FINAL.pdf

[5] SLOAPCD. 2012. *CEQA Air Quality Handbook*. April 2012. Available at: http://www.slocleanair.org/images/cms/upload/files/CEQA_Handbook_2012_v1.pdf
____. 2017. "Clarification memorandum for the San Luis Obispo Air Pollution Control District's 2012 CEQA Air Quality Handbook." November 14, 2017. Available at: https://storage.googleapis.com/slocleanair-org/images/cms/upload/files/FINAL_Clarification%20Memorandum%2020172.pdf

CEQA Air Quality Handbook (2012) and "Clarification memorandum for the San Luis Obispo Air Pollution Control District's 2012 CEQA Air Quality Handbook" (2017) are described below.

ROG AND NO_X EMISSIONS

- **Daily.** Exceedance of the 137 pounds per day threshold requires Standard Mitigation Measures;
- **Quarterly – Tier 1.** Exceedance of the 2.5 tons per quarter threshold requires Standard Mitigation Measures and Best Available Control Technology (BACT) for construction equipment. Off-site mitigation may be required if feasible mitigation measures are not implemented, or if no mitigation measures are feasible for the project; and
- **Quarterly – Tier 2.** Exceedance of the 6.3 tons per quarter threshold requires Standard Mitigation Measures, BACT, implementation of a Construction Activity Management Plan (CAMP), and off-site mitigation.

DIESEL PARTICULATE MATTER (DPM) EMISSIONS

- **Quarterly – Tier 1.** For construction projects lasting more than one quarter, exceedance of the 0.13 tons per quarter threshold requires Standard Mitigation Measures, BACT for construction equipment; and
- **Quarterly – Tier 2**. For construction projects lasting more than one quarter, exceedance of the 0.32 ton per quarter threshold requires Standard Mitigation Measures, BACT, implementation of a CAMP, and off-site mitigation.

FUGITIVE PARTICULATE MATTER (PM_{10}), DUST EMISSIONS

- **Quarterly.** Exceedance of the 2.5 tons per quarter threshold requires Fugitive PM_{10} Mitigation Measures and may require the implementation of a CAMP.

Operational Emissions

SLOAPCD's long-term operational emission thresholds are summarized in Table 1.

Table 1 SLOAPCD Operational Emissions Significance Thresholds

Pollutant	Daily Thresholds (lbs/day)	Annual Thresholds (tons/year)
ROG + NO_X (combined)[1]	25	25
Diesel Particulate Matter (DPM)[1]	1.25	–
Fugitive Particulate Matter (PM_{10}), Dust	25	25
CO	550	–

[1] SLOAPCD specifies that CalEEMod winter emission outputs be compared to operational thresholds for these pollutants.

Source: SLOAPCD. 2012. *CEQA Air Quality Handbook*. April 2012. Available at: http://www.slocleanair.org/images/cms/upload/files/CEQA_Handbook_2012_v1.pdf

Methodology

SLOAPCD recommends the use of the most recent version of California Emissions Estimator Model (CalEEMod) (version 2016.3.2) to estimate construction and operational emissions of a project.

CalEEMod uses project-specific information, including the project's land uses, square footages for different uses, and location, to estimate a project's emissions. The emissions model for the project was based on buildout under the proposed project which would include an assisted living facility with 111 suites and 28 memory care beds and 45,269 square feet of retail and office space. Because the project site is undeveloped, no demolition would occur. CalEEMod default values for the SCCAB developed by SLOAPCD were used to determine construction equipment, while construction phase modeling was based on information provided by the applicant, as outlined below:

- Site Preparation: September 2019 – October 2019
- Grading: September 2019 – November 2019
- Building Construction: February 2020 – February 2022
- Asphalt Paving: August 2021 – December 2021
- Architectural Coating: August 2021 – December 2021

In addition, the emissions modeling assumes export of 1,029 cubic yards of soil to the site during the grading phase of project construction. The CalEEMod model file and output results are included as Attachments 1 and 2.

Operational emissions modeled include area, energy, and mobile source emissions (i.e., vehicle emissions). Area source emissions are generated by landscape maintenance equipment, consumer products, and architectural coatings. Emissions from energy are generated through the transport and use of electricity and natural gas. The following project design features, which would reduce energy usage, were included in CalEEMod using the "mitigation" tabs":

- Low-flow plumbing fixtures
- Energy-efficiency appliances
- Use of reclaimed water for outdoor irrigation

Mobile source emissions include emissions generated by trips to and from the project site. The trip generation rates applied for project were from the Institute of Traffic Engineers (ITE) 9th Edition for congregate care (assisted living) and regional shopping center (ITE codes 253 and 820, respectively) based on CalEEMod default values for the proposed land uses.

Impact Analysis

Construction Emissions

Temporary construction activities associated with development under the proposed project would generate criteria pollutant emissions (i.e., fugitive dust and ozone precursor emissions) as well as toxic air emissions (i.e., DPM emissions), which would contribute to the existing San Luis Obispo County non-attainment status for ozone and PM_{10}. Table 2 summarizes the estimated short-term emissions from construction. Table 2 shows maximum daily and quarterly emissions during construction compared to the applicable SLOAPCD construction emissions thresholds (see Attachments 1 and 2 for complete CalEEMod model file, results, and assumptions).

Table 2 Maximum Construction Emissions

	Daily (lbs/day)	Quarterly (tons/quarter)		
	ROG + NO_X (combined)	ROG + NO_X (combined)[1]	Fugitive PM_{10} (dust)[2]	DPM[2,3]
Maximum Construction Emissions	115.8	3.0	0.2	0.1
SLOAPCD Significance Threshold	137	2.5 (Tier 1)	2.5 (Tier 1)	0.13 (Tier 1)
Threshold Exceeded?	**No**	**Yes**	**No**	**No**

See Appendix A for CalEEMod results.

[1] The combined ROG and NO_X emissions were derived from the rolling maximum quarterly emissions for "ROG + NO_X" from CalEEMod.

[2] Quarterly emissions for Fugitive PM_{10} and DPM were calculated by dividing maximum annual construction emissions from CalEEMod by 4, since construction activities would extend for a duration exceeding 90 days, as recommended by SLOAPCD.

[3] The DPM estimations were derived from the "PM_{10} Exhaust" and "$PM_{2.5}$ Exhaust" output from CalEEMod as recommended by SLOAPCD. This estimation represents a worst case scenario because it includes other PM_{10} exhaust other than DPM.

As shown in Table 2, maximum construction emissions would not exceed the quarterly SLOAPCD thresholds for PM_{10} or DPM or the daily SLOAPCD threshold for ROG and NO_X. However, maximum quarterly construction emissions would exceed the quarterly SLOAPCD threshold for ROG and NO_X during the first quarter of construction, which includes the site preparation and grading phases. Therefore, temporary construction impacts related to emissions of ROG and NO_X would be potentially significant. See *Recommendations and Conclusions* for recommendations that would reduce this impact to a less than significant level.

Operational Emissions

Development of the proposed project would result in an increase in vehicle trips that would generate new criteria pollutant emissions in the SCCAB. In addition, operation of new land uses on the project site would result in ongoing emissions associated with natural gas use and area sources, such as landscaping, consumption of consumer products, and off-gassing from architectural coatings. Table 3 shows the daily and annual operational emissions associated with the development under the proposed project compared to the applicable SLOAPCD operational emissions thresholds (see Attachments 1 and 2 for complete CalEEMod model files, results, and assumptions). The analysis of operational emissions does not consider toxic air contaminants because the project does not include a stationary source of toxic air emissions that would impact adjacent sensitive receptors and the project site is not located close to a freeway or urban road with daily traffic volumes of greater than 100,000 vehicles.[6]

[6] The CARB *Air Quality and Land Use Handbook* (2005) recommends avoiding siting new sensitive land uses within 500 feet of a freeway or urban roads with 100,000 vehicles per day.

Table 3 Operational Emissions

	ROG + NO_X (combined)	Fugitive PM_{10} (dust)	DPM[1]	CO
Proposed Project Daily Emissions	23.5 lbs/day[2]	9.2 lbs/day	0.4 lb/day[2]	50.1 lbs/day
SLOAPCD Daily Threshold	25 lbs/day	25 lbs/day	1.25 lbs/day	550 lbs/day
Threshold Exceeded?	**No**	**No**	**No**	**No**
Proposed Project Annual Emissions	3.8 tons/year	1.4 tons/year	0.06 ton/year	7.7 tons/year
SLOAPCD Annual Threshold	25 tons/year	25 tons/year	n/a	n/a
Threshold Exceeded?	**No**	**No**	**n/a**	**n/a**

[1] DPM estimates were derived from the "PM_{10} Exhaust" and "$PM_{2.5}$ Exhaust" output from CalEEMod as recommended by SLOAPCD. This estimate represents a worst case scenario because it includes all PM_{10} exhaust.

[2] SLOAPCD specifies that CalEEMod winter emission outputs be compared to operational thresholds for these pollutants.
Note: All numbers may not sum exactly due to rounding.

As shown in Table 3, daily operational emissions associated with development under the proposed project would not exceed SLOAPCD operational daily and annual thresholds for ROG and NO_X, PM_{10}, DPM, or CO. Therefore, long-term operational emissions would be less than significant.

Recommendations and Conclusions

Recommendations

Construction-related air quality impacts during site preparation and grading would exceed the quarterly SLOAPCD threshold for ROG and NO_X during the first quarter of construction. Measures AQ-1 and AQ-2 are recommended to reduce this potential impact to a less than significant level. Measures AQ-1 and AQ-2 incorporate the standard construction equipment mitigation measures and BACT measures required by SLOAPCD for construction projects that exceed the 2.5 tons per quarter threshold for ROG and NO_X emissions. As discussed under *Thresholds*, because the project would not exceed the quarterly Tier 2 threshold of 6.3 tons per quarter for ROG and NO_X emissions, implementation of a Construction Activity Management Plan and off-site mitigation would not be required by SLOAPCD.

AQ-1 Standard Control Measures for Construction Equipment

The following standard air quality mitigation measures shall be implemented during the site preparation and grading phases of construction at the project site:

- Maintain all construction equipment in proper tune according to manufacturer's specifications;
- Fuel all off-road and portable diesel powered equipment with CARB-certified motor vehicle diesel fuel (non-taxed version suitable for use off-road);
- Comply with the State Off-Road Regulation;
- Use on-road heavy-duty trucks that meet the CARB's 2007 or cleaner certification standard for on-road heavy-duty diesel engines, and comply with the State On-Road Regulation;
- Construction or trucking companies with fleets that do not have engines in their fleet that meet the engine standards identified in the above two measures (e.g. captive or NO_X exempt area fleets) may be eligible by proving alternative compliance;

- All on and off-road diesel equipment shall not idle for more than 5 minutes. Signs shall be posted in the designated queuing areas and or job sites to remind drivers and operators of the 5 minute idling limit;
- Diesel idling within 500 feet of sensitive receptors shall not be not permitted;[7]
- Staging and queuing areas shall not be located within 500 feet of sensitive receptors;[6]
- Equipment shall be electrified when feasible;
- Gasoline-powered equipment shall be substituted in place of diesel-powered equipment, where feasible; and
- Alternatively-fueled construction equipment shall be used on-site where feasible, such as compressed natural gas, liquefied natural gas, propane or biodiesel.

AQ-2 Best Available Control Technology

Diesel construction equipment used during the site preparation and grading phases shall be equipped with CARB Tier 3 or Tier 4 certified off-road engines and 2010 on-road compliant engines.

REQUIREMENTS AND TIMING

Standard control measures and BACT measures for construction equipment shall be shown on grading and construction plans prior to issuance of permits.

MONITORING

The City of San Luis Obispo Community Development Department shall verify compliance prior to issuance of grading or construction permits. The Community Development Department shall site inspect to ensure construction activities are completed in accordance with approved construction equipment control measures and BACT measures.

SIGNIFICANCE AFTER MITIGATION

The standard construction equipment mitigation measures and BACT measures have been developed by SLOAPCD to enhance the consistency of projects with the goals and policies of the Clean Air Plan, and SLOAPCD has identified the measures as contributing to achieving and maintaining attainment of State and federal ambient air quality standards. SLOAPCD does not quantify the potential emission reductions achieved by these measures. However, CalEEMod is capable of estimating emissions reductions that would result from implementation of Measure AQ-2, which requires the use of minimum CARB Tier 3 certified off-road engines during the site preparation and grading phases. Table 4 summarizes mitigated maximum daily and quarterly emissions during construction compared to the applicable SLOAPCD construction emissions thresholds (see Attachments 1 and 2 for complete CalEEMod model file, results, and assumptions).

[7] SLOAPCD recommends that diesel idling and staging/queuing areas be prohibited within 1,000 feet of sensitive receptors. However, these restrictions would be infeasible for the proposed project because the project site is approximately 850 feet in length, and the nearest sensitive receptors would be the planned residential units located on the parcel immediately adjacent to the project site's western boundary (650 Tank Farm Road). Therefore, the diesel idling and staging/queuing area restrictions has been reduced to 500 feet.

Table 4 Mitigated Maximum Construction Emissions

	Daily (lbs/day)	Quarterly (tons/quarter)		
	ROG + NO_X (combined)	ROG + NO_X (combined)[1]	Fugitive PM_{10} (dust)[2]	DPM[2,3]
Mitigated Maximum Construction Emissions	65.8	1.7	0.2	0.1
SLOAPCD Significance Threshold	137	2.5 (Tier 1)	2.5 (Tier 1)	0.13 (Tier 1)
Threshold Exceeded?	**No**	**No**	**No**	**No**

See Appendix A for CalEEMod results.

[1] The combined ROG and NO_X emissions were derived from the rolling maximum quarterly emissions for "ROG + NO_X" from CalEEMod.

[2] Quarterly emissions for Fugitive PM_{10} and DPM were calculated by dividing maximum annual construction emissions from CalEEMod by 4, since construction activities would extend for a duration exceeding 90 days, as recommended by SLOAPCD.

[3] The DPM estimations were derived from the "PM_{10} Exhaust" and "$PM_{2.5}$ Exhaust" output from CalEEMod as recommended by SLOAPCD. This estimation represents a worst case scenario because it includes other PM_{10} exhaust other than DPM.

As shown in Table 4, implementation of Measure AQ-2 would reduce maximum quarterly emissions of ROG and NO_X to below the SLOAPCD significance threshold. Implementation of Measure AQ-1 would further reduce ROG and NO_X emissions. Therefore, implementation of Measures AQ-1 and AQ-2 during the site preparation and grading phases would reduce construction-related air quality impacts to a less than significant level.

Conclusion

As discussed under *Project Impacts*, construction-related emissions of ROG and NO_X would be reduced to below applicable thresholds with implementation of Measures AQ-1 and AQ-2. During the site preparation and grading phases, implementation of Measure AQ-1 would provide for the use of standard construction equipment control measures, and implementation of Measure AQ-2 would provide for the use of construction equipment equipped with minimum CARB Tier 3 certified engines and 2010 on-road compliant engines. No measures are recommended for operational emissions because the project's operational emissions would be below SLOAPCD thresholds and would therefore be less than significant.

Sincerely,
Rincon Consultants, Inc.

Chris Bersbach, MESM
Senior Environmental Planner

Richard Daulton, MURP
Principal/Vice President

Attachments

Attachment 1 CalEEMod Model File
Attachment 2 CalEEMod Modeling Results

Tank Farm Road Assisted Living and Retail Project - Mitigated

San Luis Obispo County APCD Air District, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Other Asphalt Surfaces	1.20	Acre	1.20	52,272.00	0
Parking Lot	288.00	Space	3.19	115,200.00	0
City Park	1.63	Acre	1.63	71,002.80	0
Congregate Care (Assisted Living)	139.00	Dwelling Unit	2.52	133,655.00	398
Regional Shopping Center	45.27	1000sqft	1.70	45,269.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	3.2	**Precipitation Freq (Days)**	44
Climate Zone	4			**Operational Year**	2022
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	641.35	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Tank Farm Road Assisted Living and Retail Project - Mitigated - San Luis Obispo County APCD Air District, Annual

Project Characteristics -

Land Use - Adjustments based on site plan. Other Asphalt Surfaces for circulation roadways. City Park for landscaping+sidewalk on west, north, and east.

Construction Phase - Construction schedule provided by applicant.

Grading -

Architectural Coating - 2016 CALGreen Building Code - 50 g/L for flat coatings and 100 g/L for traffic markings

Vehicle Trips - City park proxy for landscaping and sidewalk.

Area Coating - 2016 CALGreen Code - 50g/L for flat coatings and 100 g/L for traffic markings

Solid Waste -

Mobile Land Use Mitigation -

Energy Mitigation -

Water Mitigation -

Construction Off-road Equipment Mitigation - SLOAPCD BACT mitigation

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	EF_Nonresidential_Exterior	250.00	50.00
tblArchitecturalCoating	EF_Nonresidential_Interior	250.00	50.00
tblArchitecturalCoating	EF_Parking	150.00	100.00
tblArchitecturalCoating	EF_Residential_Exterior	250.00	50.00
tblArchitecturalCoating	EF_Residential_Interior	250.00	50.00
tblAreaCoating	Area_EF_Nonresidential_Exterior	250	50
tblAreaCoating	Area_EF_Nonresidential_Interior	250	50
tblAreaCoating	Area_EF_Parking	150	100
tblAreaCoating	Area_EF_Residential_Exterior	250	50
tblAreaCoating	Area_EF_Residential_Interior	250	50
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	4.00

tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	6.00
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstructionPhase	NumDays	20.00	110.00
tblConstructionPhase	NumDays	300.00	541.00
tblConstructionPhase	NumDays	30.00	65.00
tblConstructionPhase	NumDays	20.00	110.00
tblConstructionPhase	NumDays	10.00	44.00
tblGrading	MaterialExported	0.00	1,029.00
tblLandUse	LandUseSquareFeet	139,000.00	133,655.00
tblLandUse	LandUseSquareFeet	45,270.00	45,269.00
tblLandUse	LotAcreage	2.59	3.19
tblLandUse	LotAcreage	8.69	2.52
tblLandUse	LotAcreage	1.04	1.70
tblVehicleTrips	ST_TR	22.75	0.00
tblVehicleTrips	SU_TR	16.74	0.00
tblVehicleTrips	WD_TR	1.89	0.00

2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2019	0.2551	2.8019	1.6159	3.0000e-003	0.6906	0.1302	0.8208	0.3384	0.1198	0.4582	0.0000	269.8991	269.8991	0.0817	0.0000	271.9408
2020	0.3928	3.1536	3.1270	6.9600e-003	0.2805	0.1393	0.4197	0.0753	0.1310	0.2063	0.0000	623.9450	623.9450	0.0828	0.0000	626.0142
2021	1.0329	3.9382	4.2652	9.2000e-003	0.3370	0.1716	0.5086	0.0904	0.1609	0.2513	0.0000	821.7842	821.7842	0.1259	0.0000	824.9304
2022	0.0554	0.4473	0.4935	1.1600e-003	0.0481	0.0172	0.0653	0.0129	0.0161	0.0291	0.0000	104.3177	104.3177	0.0137	0.0000	104.6603
Maximum	**1.0329**	**3.9382**	**4.2652**	**9.2000e-003**	**0.6906**	**0.1716**	**0.8208**	**0.3384**	**0.1609**	**0.4582**	**0.0000**	**821.7842**	**821.7842**	**0.1259**	**0.0000**	**824.9304**

2.1 Overall Construction

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2019	0.0838	1.4525	1.7424	3.0000e-003	0.6906	0.0651	0.7557	0.3384	0.0644	0.4027	0.0000	269.8988	269.8988	0.0817	0.0000	271.9405
2020	0.3651	3.0769	3.1399	6.9600e-003	0.2805	0.1369	0.4173	0.0753	0.1308	0.2061	0.0000	623.9446	623.9446	0.0828	0.0000	626.0139
2021	1.0077	3.9017	4.2837	9.2000e-003	0.3370	0.1738	0.5108	0.0904	0.1652	0.2555	0.0000	821.7837	821.7837	0.1259	0.0000	824.9299
2022	0.0522	0.4494	0.4972	1.1600e-003	0.0481	0.0183	0.0664	0.0129	0.0175	0.0304	0.0000	104.3176	104.3176	0.0137	0.0000	104.6602
Maximum	**1.0077**	**3.9017**	**4.2837**	**9.2000e-003**	**0.6906**	**0.1738**	**0.7557**	**0.3384**	**0.1652**	**0.4027**	**0.0000**	**821.7837**	**821.7837**	**0.1259**	**0.0000**	**824.9299**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**13.09**	**14.12**	**-1.70**	**0.00**	**0.00**	**14.02**	**3.54**	**0.00**	**11.69**	**5.29**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	9-2-2019	12-1-2019	2.9852	1.5005
2	12-2-2019	3-1-2020	0.2972	0.2885
3	3-2-2020	6-1-2020	0.9719	0.9432
4	6-2-2020	9-1-2020	0.9696	0.9409
5	9-2-2020	12-1-2020	0.9638	0.9354
6	12-2-2020	3-1-2021	0.8973	0.8778
7	3-2-2021	6-1-2021	0.8833	0.8678
8	6-2-2021	9-1-2021	1.1733	1.1578

9	**9-2-2021**	**12-1-2021**	1.7343	1.7190
10	**12-2-2021**	**3-1-2022**	1.0902	1.0840
		Highest	2.9852	1.7190

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.8227	0.0219	1.8999	1.0000e-004		0.0105	0.0105		0.0105	0.0105	0.0000	3.1018	3.1018	3.0100e-003	0.0000	3.1771
Energy	7.0500e-003	0.0606	0.0280	3.8000e-004		4.8700e-003	4.8700e-003		4.8700e-003	4.8700e-003	0.0000	389.2549	389.2549	0.0158	4.2700e-003	390.9214
Mobile	0.5930	2.2575	5.7903	0.0153	1.3600	0.0162	1.3762	0.3641	0.0152	0.3793	0.0000	1,397.2599	1,397.2599	0.0605	0.0000	1,398.7729
Waste						0.0000	0.0000		0.0000	0.0000	35.4240	0.0000	35.4240	2.0935	0.0000	87.7613
Water						0.0000	0.0000		0.0000	0.0000	3.9370	29.4177	33.3547	0.4057	9.8200e-003	46.4246
Total	**1.4227**	**2.3400**	**7.7181**	**0.0157**	**1.3600**	**0.0316**	**1.3916**	**0.3641**	**0.0305**	**0.3946**	**39.3610**	**1,819.0343**	**1,858.3953**	**2.5785**	**0.0141**	**1,927.0573**

2.2 Overall Operational

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.8227	0.0219	1.8999	1.0000e-004		0.0105	0.0105		0.0105	0.0105	0.0000	3.1018	3.1018	3.0100e-003	0.0000	3.1771
Energy	7.0500e-003	0.0606	0.0280	3.8000e-004		4.8700e-003	4.8700e-003		4.8700e-003	4.8700e-003	0.0000	389.2549	389.2549	0.0158	4.2700e-003	390.9214
Mobile	0.5930	2.2575	5.7903	0.0153	1.3600	0.0162	1.3762	0.3641	0.0152	0.3793	0.0000	1,397.2599	1,397.2599	0.0605	0.0000	1,398.7729
Waste						0.0000	0.0000		0.0000	0.0000	35.4240	0.0000	35.4240	2.0935	0.0000	87.7613
Water						0.0000	0.0000		0.0000	0.0000	3.1496	21.5575	24.7071	0.3245	7.8400e-003	35.1552
Total	**1.4227**	**2.3400**	**7.7181**	**0.0157**	**1.3600**	**0.0316**	**1.3916**	**0.3641**	**0.0305**	**0.3946**	**38.5736**	**1,811.1741**	**1,849.7477**	**2.4973**	**0.0121**	**1,915.7880**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**2.00**	**0.43**	**0.47**	**3.15**	**14.05**	**0.58**

3.0 Construction Detail

Construction Phase

Tank Farm Road Assisted Living and Retail Project - Mitigated - San Luis Obispo County APCD Air District, Annual

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	9/2/2019	10/31/2019	5	44	
2	Grading	Grading	9/2/2019	11/29/2019	5	65	
3	Building Construction	Building Construction	2/3/2020	2/28/2022	5	541	
4	Paving	Paving	8/2/2021	12/31/2021	5	110	
5	Architectural Coating	Architectural Coating	8/2/2021	12/31/2021	5	110	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 162.5

Acres of Paving: 4.39

Residential Indoor: 270,651; Residential Outdoor: 90,217; Non-Residential Indoor: 67,904; Non-Residential Outdoor: 22,635; Striped Parking Area: 10,048 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Site Preparation	Rubber Tired Dozers	3	8.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Grading	Excavators	2	8.00	158	0.38
Grading	Graders	1	8.00	187	0.41
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Scrapers	2	8.00	367	0.48
Grading	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Building Construction	Cranes	1	7.00	231	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45
Paving	Pavers	2	8.00	130	0.42
Paving	Paving Equipment	2	8.00	132	0.36
Paving	Rollers	2	8.00	80	0.38
Architectural Coating	Air Compressors	1	6.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Site Preparation	7	18.00	0.00	0.00	13.00	5.00	20.00	LD_Mix	HDT_Mix	HHDT
Grading	8	20.00	0.00	129.00	13.00	5.00	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	215.00	61.00	0.00	13.00	5.00	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	13.00	5.00	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	43.00	0.00	0.00	13.00	5.00	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

3.2 Site Preparation - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.3975	0.0000	0.3975	0.2185	0.0000	0.2185	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0954	1.0026	0.4854	8.4000e-004		0.0526	0.0526		0.0484	0.0484	0.0000	75.1711	75.1711	0.0238	0.0000	75.7657
Total	**0.0954**	**1.0026**	**0.4854**	**8.4000e-004**	**0.3975**	**0.0526**	**0.4501**	**0.2185**	**0.0484**	**0.2669**	**0.0000**	**75.1711**	**75.1711**	**0.0238**	**0.0000**	**75.7657**

3.2 Site Preparation - 2019

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.9000e-003	1.7900e-003	0.0155	4.0000e-005	3.8100e-003	3.0000e-005	3.8400e-003	1.0100e-003	2.0000e-005	1.0400e-003	0.0000	3.2913	3.2913	1.2000e-004	0.0000	3.2943
Total	**1.9000e-003**	**1.7900e-003**	**0.0155**	**4.0000e-005**	**3.8100e-003**	**3.0000e-005**	**3.8400e-003**	**1.0100e-003**	**2.0000e-005**	**1.0400e-003**	**0.0000**	**3.2913**	**3.2913**	**1.2000e-004**	**0.0000**	**3.2943**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.3975	0.0000	0.3975	0.2185	0.0000	0.2185	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0252	0.4375	0.5039	8.4000e-004		0.0219	0.0219		0.0215	0.0215	0.0000	75.1710	75.1710	0.0238	0.0000	75.7656
Total	**0.0252**	**0.4375**	**0.5039**	**8.4000e-004**	**0.3975**	**0.0219**	**0.4193**	**0.2185**	**0.0215**	**0.2400**	**0.0000**	**75.1710**	**75.1710**	**0.0238**	**0.0000**	**75.7656**

3.2 Site Preparation - 2019

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.9000e-003	1.7900e-003	0.0155	4.0000e-005	3.8100e-003	3.0000e-005	3.8400e-003	1.0100e-003	2.0000e-005	1.0400e-003	0.0000	3.2913	3.2913	1.2000e-004	0.0000	3.2943
Total	**1.9000e-003**	**1.7900e-003**	**0.0155**	**4.0000e-005**	**3.8100e-003**	**3.0000e-005**	**3.8400e-003**	**1.0100e-003**	**2.0000e-005**	**1.0400e-003**	**0.0000**	**3.2913**	**3.2913**	**1.2000e-004**	**0.0000**	**3.2943**

3.3 Grading - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.2820	0.0000	0.2820	0.1169	0.0000	0.1169	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.1540	1.7719	1.0847	2.0200e-003		0.0774	0.0774		0.0712	0.0712	0.0000	181.0293	181.0293	0.0573	0.0000	182.4612
Total	**0.1540**	**1.7719**	**1.0847**	**2.0200e-003**	**0.2820**	**0.0774**	**0.3594**	**0.1169**	**0.0712**	**0.1881**	**0.0000**	**181.0293**	**181.0293**	**0.0573**	**0.0000**	**182.4612**

3.3 Grading - 2019

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	6.6000e-004	0.0227	4.9100e-003	5.0000e-005	1.1000e-003	1.3000e-004	1.2300e-003	3.0000e-004	1.3000e-004	4.3000e-004	0.0000	5.0052	5.0052	2.8000e-004	0.0000	5.0123
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.1200e-003	2.9300e-003	0.0254	6.0000e-005	6.2600e-003	4.0000e-005	6.3000e-003	1.6600e-003	4.0000e-005	1.7000e-003	0.0000	5.4023	5.4023	2.0000e-004	0.0000	5.4074
Total	**3.7800e-003**	**0.0256**	**0.0303**	**1.1000e-004**	**7.3600e-003**	**1.7000e-004**	**7.5300e-003**	**1.9600e-003**	**1.7000e-004**	**2.1300e-003**	**0.0000**	**10.4075**	**10.4075**	**4.8000e-004**	**0.0000**	**10.4196**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.2820	0.0000	0.2820	0.1169	0.0000	0.1169	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0530	0.9876	1.1926	2.0200e-003		0.0430	0.0430		0.0427	0.0427	0.0000	181.0291	181.0291	0.0573	0.0000	182.4610
Total	**0.0530**	**0.9876**	**1.1926**	**2.0200e-003**	**0.2820**	**0.0430**	**0.3250**	**0.1169**	**0.0427**	**0.1596**	**0.0000**	**181.0291**	**181.0291**	**0.0573**	**0.0000**	**182.4610**

3.3 Grading - 2019

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	6.6000e-004	0.0227	4.9100e-003	5.0000e-005	1.1000e-003	1.3000e-004	1.2300e-003	3.0000e-004	1.3000e-004	4.3000e-004	0.0000	5.0052	5.0052	2.8000e-004	0.0000	5.0123
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.1200e-003	2.9300e-003	0.0254	6.0000e-005	6.2600e-003	4.0000e-005	6.3000e-003	1.6600e-003	4.0000e-005	1.7000e-003	0.0000	5.4023	5.4023	2.0000e-004	0.0000	5.4074
Total	**3.7800e-003**	**0.0256**	**0.0303**	**1.1000e-004**	**7.3600e-003**	**1.7000e-004**	**7.5300e-003**	**1.9600e-003**	**1.7000e-004**	**2.1300e-003**	**0.0000**	**10.4075**	**10.4075**	**4.8000e-004**	**0.0000**	**10.4196**

3.4 Building Construction - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.2533	2.2927	2.0134	3.2200e-003		0.1335	0.1335		0.1255	0.1255	0.0000	276.7739	276.7739	0.0675	0.0000	278.4620
Total	**0.2533**	**2.2927**	**2.0134**	**3.2200e-003**		**0.1335**	**0.1335**		**0.1255**	**0.1255**	**0.0000**	**276.7739**	**276.7739**	**0.0675**	**0.0000**	**278.4620**

3.4 Building Construction - 2020

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0271	0.7588	0.2299	1.4500e-003	0.0331	4.1400e-003	0.0373	9.5700e-003	3.9600e-003	0.0135	0.0000	140.2416	140.2416	8.4400e-003	0.0000	140.4524
Worker	0.1124	0.1021	0.8837	2.2900e-003	0.2474	1.6200e-003	0.2490	0.0657	1.5000e-003	0.0672	0.0000	206.9295	206.9295	6.8100e-003	0.0000	207.0998
Total	**0.1395**	**0.8609**	**1.1136**	**3.7400e-003**	**0.2805**	**5.7600e-003**	**0.2862**	**0.0753**	**5.4600e-003**	**0.0808**	**0.0000**	**347.1710**	**347.1710**	**0.0153**	**0.0000**	**347.5522**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.2257	2.2160	2.0263	3.2200e-003		0.1311	0.1311		0.1253	0.1253	0.0000	276.7736	276.7736	0.0675	0.0000	278.4617
Total	**0.2257**	**2.2160**	**2.0263**	**3.2200e-003**		**0.1311**	**0.1311**		**0.1253**	**0.1253**	**0.0000**	**276.7736**	**276.7736**	**0.0675**	**0.0000**	**278.4617**

3.4 Building Construction - 2020

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0271	0.7588	0.2299	1.4500e-003	0.0331	4.1400e-003	0.0373	9.5700e-003	3.9600e-003	0.0135	0.0000	140.2416	140.2416	8.4400e-003	0.0000	140.4524
Worker	0.1124	0.1021	0.8837	2.2900e-003	0.2474	1.6200e-003	0.2490	0.0657	1.5000e-003	0.0672	0.0000	206.9295	206.9295	6.8100e-003	0.0000	207.0998
Total	**0.1395**	**0.8609**	**1.1136**	**3.7400e-003**	**0.2805**	**5.7600e-003**	**0.2862**	**0.0753**	**5.4600e-003**	**0.0808**	**0.0000**	**347.1710**	**347.1710**	**0.0153**	**0.0000**	**347.5522**

3.4 Building Construction - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.2481	2.2749	2.1631	3.5100e-003		0.1251	0.1251		0.1176	0.1176	0.0000	302.2867	302.2867	0.0729	0.0000	304.1099
Total	**0.2481**	**2.2749**	**2.1631**	**3.5100e-003**		**0.1251**	**0.1251**		**0.1176**	**0.1176**	**0.0000**	**302.2867**	**302.2867**	**0.0729**	**0.0000**	**304.1099**

3.4 Building Construction - 2021

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0243	0.7578	0.2220	1.5800e-003	0.0362	2.1600e-003	0.0383	0.0105	2.0700e-003	0.0125	0.0000	152.2328	152.2328	8.9800e-003	0.0000	152.4573
Worker	0.1144	0.0997	0.8747	2.4200e-003	0.2701	1.7200e-003	0.2718	0.0718	1.5800e-003	0.0734	0.0000	218.2758	218.2758	6.6100e-003	0.0000	218.4410
Total	**0.1386**	**0.8574**	**1.0967**	**4.0000e-003**	**0.3063**	**3.8800e-003**	**0.3102**	**0.0822**	**3.6500e-003**	**0.0859**	**0.0000**	**370.5086**	**370.5086**	**0.0156**	**0.0000**	**370.8983**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.2229	2.2384	2.1816	3.5100e-003		0.1273	0.1273		0.1218	0.1218	0.0000	302.2863	302.2863	0.0729	0.0000	304.1095
Total	**0.2229**	**2.2384**	**2.1816**	**3.5100e-003**		**0.1273**	**0.1273**		**0.1218**	**0.1218**	**0.0000**	**302.2863**	**302.2863**	**0.0729**	**0.0000**	**304.1095**

3.4 Building Construction - 2021

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0243	0.7578	0.2220	1.5800e-003	0.0362	2.1600e-003	0.0383	0.0105	2.0700e-003	0.0125	0.0000	152.2328	152.2328	8.9800e-003	0.0000	152.4573
Worker	0.1144	0.0997	0.8747	2.4200e-003	0.2701	1.7200e-003	0.2718	0.0718	1.5800e-003	0.0734	0.0000	218.2758	218.2758	6.6100e-003	0.0000	218.4410
Total	**0.1386**	**0.8574**	**1.0967**	**4.0000e-003**	**0.3063**	**3.8800e-003**	**0.3102**	**0.0822**	**3.6500e-003**	**0.0859**	**0.0000**	**370.5086**	**370.5086**	**0.0156**	**0.0000**	**370.8983**

3.4 Building Construction - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0350	0.3201	0.3355	5.5000e-004		0.0166	0.0166		0.0156	0.0156	0.0000	47.5037	47.5037	0.0114	0.0000	47.7882
Total	**0.0350**	**0.3201**	**0.3355**	**5.5000e-004**		**0.0166**	**0.0166**		**0.0156**	**0.0156**	**0.0000**	**47.5037**	**47.5037**	**0.0114**	**0.0000**	**47.7882**

3.4 Building Construction - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	3.5300e-003	0.1131	0.0322	2.5000e-004	5.6800e-003	3.0000e-004	5.9800e-003	1.6400e-003	2.9000e-004	1.9300e-003	0.0000	23.7511	23.7511	1.3900e-003	0.0000	23.7859
Worker	0.0169	0.0141	0.1259	3.7000e-004	0.0424	2.6000e-004	0.0427	0.0113	2.4000e-004	0.0115	0.0000	33.0629	33.0629	9.3000e-004	0.0000	33.0862
Total	**0.0204**	**0.1272**	**0.1581**	**6.2000e-004**	**0.0481**	**5.6000e-004**	**0.0487**	**0.0129**	**5.3000e-004**	**0.0135**	**0.0000**	**56.8140**	**56.8140**	**2.3200e-003**	**0.0000**	**56.8721**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0318	0.3222	0.3392	5.5000e-004		0.0177	0.0177		0.0170	0.0170	0.0000	47.5036	47.5036	0.0114	0.0000	47.7881
Total	**0.0318**	**0.3222**	**0.3392**	**5.5000e-004**		**0.0177**	**0.0177**		**0.0170**	**0.0170**	**0.0000**	**47.5036**	**47.5036**	**0.0114**	**0.0000**	**47.7881**

3.4 Building Construction - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	3.5300e-003	0.1131	0.0322	2.5000e-004	5.6800e-003	3.0000e-004	5.9800e-003	1.6400e-003	2.9000e-004	1.9300e-003	0.0000	23.7511	23.7511	1.3900e-003	0.0000	23.7859
Worker	0.0169	0.0141	0.1259	3.7000e-004	0.0424	2.6000e-004	0.0427	0.0113	2.4000e-004	0.0115	0.0000	33.0629	33.0629	9.3000e-004	0.0000	33.0862
Total	**0.0204**	**0.1272**	**0.1581**	**6.2000e-004**	**0.0481**	**5.6000e-004**	**0.0487**	**0.0129**	**5.3000e-004**	**0.0135**	**0.0000**	**56.8140**	**56.8140**	**2.3200e-003**	**0.0000**	**56.8721**

3.5 Paving - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0691	0.7106	0.8059	1.2500e-003		0.0373	0.0373		0.0343	0.0343	0.0000	110.1291	110.1291	0.0356	0.0000	111.0196
Paving	5.7500e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0748**	**0.7106**	**0.8059**	**1.2500e-003**		**0.0373**	**0.0373**		**0.0343**	**0.0343**	**0.0000**	**110.1291**	**110.1291**	**0.0356**	**0.0000**	**111.0196**

3.5 Paving - 2021

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.3600e-003	2.9300e-003	0.0257	7.0000e-005	7.9400e-003	5.0000e-005	7.9900e-003	2.1100e-003	5.0000e-005	2.1600e-003	0.0000	6.4182	6.4182	1.9000e-004	0.0000	6.4230
Total	**3.3600e-003**	**2.9300e-003**	**0.0257**	**7.0000e-005**	**7.9400e-003**	**5.0000e-005**	**7.9900e-003**	**2.1100e-003**	**5.0000e-005**	**2.1600e-003**	**0.0000**	**6.4182**	**6.4182**	**1.9000e-004**	**0.0000**	**6.4230**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0691	0.7106	0.8059	1.2500e-003		0.0373	0.0373		0.0343	0.0343	0.0000	110.1290	110.1290	0.0356	0.0000	111.0195
Paving	5.7500e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0748**	**0.7106**	**0.8059**	**1.2500e-003**		**0.0373**	**0.0373**		**0.0343**	**0.0343**	**0.0000**	**110.1290**	**110.1290**	**0.0356**	**0.0000**	**111.0195**

3.5 Paving - 2021

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.3600e-003	2.9300e-003	0.0257	7.0000e-005	7.9400e-003	5.0000e-005	7.9900e-003	2.1100e-003	5.0000e-005	2.1600e-003	0.0000	6.4182	6.4182	1.9000e-004	0.0000	6.4230
Total	**3.3600e-003**	**2.9300e-003**	**0.0257**	**7.0000e-005**	**7.9400e-003**	**5.0000e-005**	**7.9900e-003**	**2.1100e-003**	**5.0000e-005**	**2.1600e-003**	**0.0000**	**6.4182**	**6.4182**	**1.9000e-004**	**0.0000**	**6.4230**

3.6 Architectural Coating - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.5464					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0120	0.0840	0.1000	1.6000e-004		5.1800e-003	5.1800e-003		5.1800e-003	5.1800e-003	0.0000	14.0429	14.0429	9.6000e-004	0.0000	14.0670
Total	**0.5584**	**0.0840**	**0.1000**	**1.6000e-004**		**5.1800e-003**	**5.1800e-003**		**5.1800e-003**	**5.1800e-003**	**0.0000**	**14.0429**	**14.0429**	**9.6000e-004**	**0.0000**	**14.0670**

3.6 Architectural Coating - 2021

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	9.6400e-003	8.4000e-003	0.0737	2.0000e-004	0.0228	1.4000e-004	0.0229	6.0500e-003	1.3000e-004	6.1800e-003	0.0000	18.3987	18.3987	5.6000e-004	0.0000	18.4127
Total	**9.6400e-003**	**8.4000e-003**	**0.0737**	**2.0000e-004**	**0.0228**	**1.4000e-004**	**0.0229**	**6.0500e-003**	**1.3000e-004**	**6.1800e-003**	**0.0000**	**18.3987**	**18.3987**	**5.6000e-004**	**0.0000**	**18.4127**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.5464					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0120	0.0840	0.1000	1.6000e-004		5.1800e-003	5.1800e-003		5.1800e-003	5.1800e-003	0.0000	14.0429	14.0429	9.6000e-004	0.0000	14.0670
Total	**0.5584**	**0.0840**	**0.1000**	**1.6000e-004**		**5.1800e-003**	**5.1800e-003**		**5.1800e-003**	**5.1800e-003**	**0.0000**	**14.0429**	**14.0429**	**9.6000e-004**	**0.0000**	**14.0670**

3.6 Architectural Coating - 2021

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	9.6400e-003	8.4000e-003	0.0737	2.0000e-004	0.0228	1.4000e-004	0.0229	6.0500e-003	1.3000e-004	6.1800e-003	0.0000	18.3987	18.3987	5.6000e-004	0.0000	18.4127
Total	**9.6400e-003**	**8.4000e-003**	**0.0737**	**2.0000e-004**	**0.0228**	**1.4000e-004**	**0.0229**	**6.0500e-003**	**1.3000e-004**	**6.1800e-003**	**0.0000**	**18.3987**	**18.3987**	**5.6000e-004**	**0.0000**	**18.4127**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.5930	2.2575	5.7903	0.0153	1.3600	0.0162	1.3762	0.3641	0.0152	0.3793	0.0000	1,397.2599	1,397.2599	0.0605	0.0000	1,398.7729
Unmitigated	0.5930	2.2575	5.7903	0.0153	1.3600	0.0162	1.3762	0.3641	0.0152	0.3793	0.0000	1,397.2599	1,397.2599	0.0605	0.0000	1,398.7729

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
City Park	0.00	0.00	0.00		
Congregate Care (Assisted Living)	380.86	305.80	339.16	925,584	925,584
Other Asphalt Surfaces	0.00	0.00	0.00		
Parking Lot	0.00	0.00	0.00		
Regional Shopping Center	1,933.03	2,262.14	1142.61	2,695,948	2,695,948
Total	2,313.89	2,567.94	1,481.77	3,621,533	3,621,533

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
City Park	13.00	5.00	5.00	33.00	48.00	19.00	66	28	6
Congregate Care (Assisted	13.00	5.00	5.00	35.80	21.00	43.20	86	11	3
Other Asphalt Surfaces	13.00	5.00	5.00	0.00	0.00	0.00	0	0	0
Parking Lot	13.00	5.00	5.00	0.00	0.00	0.00	0	0	0
Regional Shopping Center	13.00	5.00	5.00	16.30	64.70	19.00	54	35	11

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
City Park	0.575581	0.029595	0.198288	0.120539	0.026172	0.006482	0.012911	0.019591	0.002354	0.001214	0.005068	0.000784	0.001422
Congregate Care (Assisted Living)	0.575581	0.029595	0.198288	0.120539	0.026172	0.006482	0.012911	0.019591	0.002354	0.001214	0.005068	0.000784	0.001422
Other Asphalt Surfaces	0.575581	0.029595	0.198288	0.120539	0.026172	0.006482	0.012911	0.019591	0.002354	0.001214	0.005068	0.000784	0.001422
Parking Lot	0.575581	0.029595	0.198288	0.120539	0.026172	0.006482	0.012911	0.019591	0.002354	0.001214	0.005068	0.000784	0.001422
Regional Shopping Center	0.575581	0.029595	0.198288	0.120539	0.026172	0.006482	0.012911	0.019591	0.002354	0.001214	0.005068	0.000784	0.001422

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	319.4459	319.4459	0.0144	2.9900e-003	320.6976
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	319.4459	319.4459	0.0144	2.9900e-003	320.6976
NaturalGas Mitigated	7.0500e-003	0.0606	0.0280	3.8000e-004		4.8700e-003	4.8700e-003		4.8700e-003	4.8700e-003	0.0000	69.8090	69.8090	1.3400e-003	1.2800e-003	70.2238
NaturalGas Unmitigated	7.0500e-003	0.0606	0.0280	3.8000e-004		4.8700e-003	4.8700e-003		4.8700e-003	4.8700e-003	0.0000	69.8090	69.8090	1.3400e-003	1.2800e-003	70.2238

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
City Park	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Congregate Care (Assisted Living)	1.20088e+006	6.4800e-003	0.0553	0.0236	3.5000e-004		4.4700e-003	4.4700e-003		4.4700e-003	4.4700e-003	0.0000	64.0837	64.0837	1.2300e-003	1.1700e-003	64.4645
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Regional Shopping Center	107288	5.8000e-004	5.2600e-003	4.4200e-003	3.0000e-005		4.0000e-004	4.0000e-004		4.0000e-004	4.0000e-004	0.0000	5.7253	5.7253	1.1000e-004	1.0000e-004	5.7593
Total		**7.0600e-003**	**0.0606**	**0.0280**	**3.8000e-004**		**4.8700e-003**	**4.8700e-003**		**4.8700e-003**	**4.8700e-003**	**0.0000**	**69.8090**	**69.8090**	**1.3400e-003**	**1.2700e-003**	**70.2238**

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
City Park	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Congregate Care (Assisted Living)	1.20088e+006	6.4800e-003	0.0553	0.0236	3.5000e-004		4.4700e-003	4.4700e-003		4.4700e-003	4.4700e-003	0.0000	64.0837	64.0837	1.2300e-003	1.1700e-003	64.4645
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Regional Shopping Center	107288	5.8000e-004	5.2600e-003	4.4200e-003	3.0000e-005		4.0000e-004	4.0000e-004		4.0000e-004	4.0000e-004	0.0000	5.7253	5.7253	1.1000e-004	1.0000e-004	5.7593
Total		**7.0600e-003**	**0.0606**	**0.0280**	**3.8000e-004**		**4.8700e-003**	**4.8700e-003**		**4.8700e-003**	**4.8700e-003**	**0.0000**	**69.8090**	**69.8090**	**1.3400e-003**	**1.2700e-003**	**70.2238**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
City Park	0	0.0000	0.0000	0.0000	0.0000
Congregate Care (Assisted Living)	573841	166.9368	7.5500e-003	1.5600e-003	167.5909
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Parking Lot	40320	11.7296	5.3000e-004	1.1000e-004	11.7755
Regional Shopping Center	483926	140.7795	6.3700e-003	1.3200e-003	141.3311
Total		**319.4459**	**0.0145**	**2.9900e-003**	**320.6976**

5.3 Energy by Land Use - Electricity

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
City Park	0	0.0000	0.0000	0.0000	0.0000
Congregate Care (Assisted Living)	573841	166.9368	7.5500e-003	1.5600e-003	167.5909
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Parking Lot	40320	11.7296	5.3000e-004	1.1000e-004	11.7755
Regional Shopping Center	483926	140.7795	6.3700e-003	1.3200e-003	141.3311
Total		**319.4459**	**0.0145**	**2.9900e-003**	**320.6976**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.8227	0.0219	1.8999	1.0000e-004		0.0105	0.0105		0.0105	0.0105	0.0000	3.1018	3.1018	3.0100e-003	0.0000	3.1771
Unmitigated	0.8227	0.0219	1.8999	1.0000e-004		0.0105	0.0105		0.0105	0.0105	0.0000	3.1018	3.1018	3.0100e-003	0.0000	3.1771

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0546					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.7103					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.0577	0.0219	1.8999	1.0000e-004		0.0105	0.0105		0.0105	0.0105	0.0000	3.1018	3.1018	3.0100e-003	0.0000	3.1771
Total	**0.8227**	**0.0219**	**1.8999**	**1.0000e-004**		**0.0105**	**0.0105**		**0.0105**	**0.0105**	**0.0000**	**3.1018**	**3.1018**	**3.0100e-003**	**0.0000**	**3.1771**

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0546					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.7103					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.0577	0.0219	1.8999	1.0000e-004		0.0105	0.0105		0.0105	0.0105	0.0000	3.1018	3.1018	3.0100e-003	0.0000	3.1771
Total	**0.8227**	**0.0219**	**1.8999**	**1.0000e-004**		**0.0105**	**0.0105**		**0.0105**	**0.0105**	**0.0000**	**3.1018**	**3.1018**	**3.0100e-003**	**0.0000**	**3.1771**

7.0 Water Detail

7.1 Mitigation Measures Water

Use Reclaimed Water

Install Low Flow Bathroom Faucet

Install Low Flow Kitchen Faucet

Install Low Flow Toilet

Install Low Flow Shower

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	24.7071	0.3245	7.8400e-003	35.1552
Unmitigated	33.3547	0.4057	9.8200e-003	46.4246

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
City Park	0 / 1.94211	1.9774	9.0000e-005	2.0000e-005	1.9852
Congregate Care (Assisted Living)	9.05641 / 5.70948	22.9424	0.2960	7.1600e-003	32.4751
Other Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Regional Shopping Center	3.35326 / 2.05523	8.4349	0.1096	2.6500e-003	11.9643
Total		**33.3547**	**0.4057**	**9.8300e-003**	**46.4246**

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
City Park	0 / 1.16527	1.1865	5.0000e-005	1.0000e-005	1.1911
Congregate Care (Assisted Living)	7.24513 / 3.42569	17.1913	0.2368	5.7100e-003	24.8129
Other Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Regional Shopping Center	2.68261 / 1.23314	6.3294	0.0877	2.1200e-003	9.1513
Total		**24.7071**	**0.3245**	**7.8400e-003**	**35.1552**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	35.4240	2.0935	0.0000	87.7613
Unmitigated	35.4240	2.0935	0.0000	87.7613

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
City Park	0.14	0.0284	1.6800e-003	0.0000	0.0704
Congregate Care (Assisted Living)	126.84	25.7474	1.5216	0.0000	63.7880
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Regional Shopping Center	47.53	9.6482	0.5702	0.0000	23.9029
Total		**35.4240**	**2.0935**	**0.0000**	**87.7614**

8.2 Waste by Land Use

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
City Park	0.14	0.0284	1.6800e-003	0.0000	0.0704
Congregate Care (Assisted Living)	126.84	25.7474	1.5216	0.0000	63.7880
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Regional Shopping Center	47.53	9.6482	0.5702	0.0000	23.9029
Total		**35.4240**	**2.0935**	**0.0000**	**87.7614**

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

Tank Farm Road Assisted Living and Retail Project - Mitigated

San Luis Obispo County APCD Air District, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Other Asphalt Surfaces	1.20	Acre	1.20	52,272.00	0
Parking Lot	288.00	Space	3.19	115,200.00	0
City Park	1.63	Acre	1.63	71,002.80	0
Congregate Care (Assisted Living)	139.00	Dwelling Unit	2.52	133,655.00	398
Regional Shopping Center	45.27	1000sqft	1.70	45,269.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	3.2	**Precipitation Freq (Days)**	44
Climate Zone	4			**Operational Year**	2022
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	641.35	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Adjustments based on site plan. Other Asphalt Surfaces for circulation roadways. City Park for landscaping+sidewalk on west, north, and east.

Construction Phase - Construction schedule provided by applicant.

Grading -

Architectural Coating - 2016 CALGreen Building Code - 50 g/L for flat coatings and 100 g/L for traffic markings

Vehicle Trips - City park proxy for landscaping and sidewalk.

Area Coating - 2016 CALGreen Code - 50g/L for flat coatings and 100 g/L for traffic markings

Solid Waste -

Mobile Land Use Mitigation -

Energy Mitigation -

Water Mitigation -

Construction Off-road Equipment Mitigation - SLOAPCD BACT mitigation

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	EF_Nonresidential_Exterior	250.00	50.00
tblArchitecturalCoating	EF_Nonresidential_Interior	250.00	50.00
tblArchitecturalCoating	EF_Parking	150.00	100.00
tblArchitecturalCoating	EF_Residential_Exterior	250.00	50.00
tblArchitecturalCoating	EF_Residential_Interior	250.00	50.00
tblAreaCoating	Area_EF_Nonresidential_Exterior	250	50
tblAreaCoating	Area_EF_Nonresidential_Interior	250	50
tblAreaCoating	Area_EF_Parking	150	100
tblAreaCoating	Area_EF_Residential_Exterior	250	50
tblAreaCoating	Area_EF_Residential_Interior	250	50
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	4.00

tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	6.00
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstructionPhase	NumDays	20.00	110.00
tblConstructionPhase	NumDays	300.00	541.00
tblConstructionPhase	NumDays	30.00	65.00
tblConstructionPhase	NumDays	20.00	110.00
tblConstructionPhase	NumDays	10.00	44.00
tblGrading	MaterialExported	0.00	1,029.00
tblLandUse	LandUseSquareFeet	139,000.00	133,655.00
tblLandUse	LandUseSquareFeet	45,270.00	45,269.00
tblLandUse	LotAcreage	2.59	3.19
tblLandUse	LotAcreage	8.69	2.52
tblLandUse	LotAcreage	1.04	1.70
tblVehicleTrips	ST_TR	22.75	0.00
tblVehicleTrips	SU_TR	16.74	0.00
tblVehicleTrips	WD_TR	1.89	0.00

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2019	9.2726	100.9300	57.1137	0.1052	27.1528	4.7796	31.9324	13.6367	4.3974	18.0341	0.0000	10,439.5161	10,439.5161	3.1571	0.0000	10,518.4437
2020	3.2606	26.2486	26.2844	0.0592	2.4087	1.1648	3.5735	0.6453	1.0956	1.7409	0.0000	5,849.7108	5,849.7108	0.7630	0.0000	5,868.7846
2021	14.6819	38.5150	43.4370	0.0894	2.9821	1.7633	4.7455	0.7974	1.6498	2.4472	0.0000	8,780.9751	8,780.9751	1.4957	0.0000	8,818.3688
2022	2.6768	21.7157	24.1903	0.0576	2.4088	0.8360	3.2448	0.6453	0.7865	1.4319	0.0000	5,698.4756	5,698.4756	0.7361	0.0000	5,716.8787
Maximum	**14.6819**	**100.9300**	**57.1137**	**0.1052**	**27.1528**	**4.7796**	**31.9324**	**13.6367**	**4.3974**	**18.0341**	**0.0000**	**10,439.5161**	**10,439.5161**	**3.1571**	**0.0000**	**10,518.4437**

2.1 Overall Construction (Maximum Daily Emission)

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2019	2.9729	51.1110	61.2762	0.1052	27.1528	2.3226	29.4754	13.6367	2.2968	15.9335	0.0000	10,439.5161	10,439.5161	3.1571	0.0000	10,518.4437
2020	3.0293	25.6062	26.3924	0.0592	2.4087	1.1448	3.5534	0.6453	1.0940	1.7392	0.0000	5,849.7108	5,849.7108	0.7630	0.0000	5,868.7846
2021	14.4891	38.2353	43.5788	0.0894	2.9821	1.7802	4.7624	0.7974	1.6822	2.4796	0.0000	8,780.9751	8,780.9751	1.4957	0.0000	8,818.3688
2022	2.5231	21.8175	24.3707	0.0576	2.4088	0.8904	3.2992	0.6453	0.8535	1.4988	0.0000	5,698.4756	5,698.4756	0.7361	0.0000	5,716.8787
Maximum	**14.4891**	**51.1110**	**61.2762**	**0.1052**	**27.1528**	**2.3226**	**29.4754**	**13.6367**	**2.2968**	**15.9335**	**0.0000**	**10,439.5161**	**10,439.5161**	**3.1571**	**0.0000**	**10,518.4437**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**23.01**	**27.02**	**-3.04**	**0.00**	**0.00**	**28.16**	**5.53**	**0.00**	**25.26**	**8.47**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	4.5413	0.1327	11.5144	6.1000e-004		0.0636	0.0636		0.0636	0.0636	0.0000	20.7223	20.7223	0.0201	0.0000	21.2252
Energy	0.0387	0.3320	0.1532	2.1100e-003		0.0267	0.0267		0.0267	0.0267		421.6506	421.6506	8.0800e-003	7.7300e-003	424.1563
Mobile	4.0847	14.1327	36.5604	0.1014	8.9688	0.1037	9.0726	2.3959	0.0973	2.4932		10,235.2330	10,235.2330	0.4257		10,245.8751
Total	**8.6646**	**14.5975**	**48.2280**	**0.1041**	**8.9688**	**0.1940**	**9.1628**	**2.3959**	**0.1875**	**2.5835**	**0.0000**	**10,677.6059**	**10,677.6059**	**0.4539**	**7.7300e-003**	**10,691.2566**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	4.5413	0.1327	11.5144	6.1000e-004		0.0636	0.0636		0.0636	0.0636	0.0000	20.7223	20.7223	0.0201	0.0000	21.2252
Energy	0.0387	0.3320	0.1532	2.1100e-003		0.0267	0.0267		0.0267	0.0267		421.6506	421.6506	8.0800e-003	7.7300e-003	424.1563
Mobile	4.0847	14.1327	36.5604	0.1014	8.9688	0.1037	9.0726	2.3959	0.0973	2.4932		10,235.2330	10,235.2330	0.4257		10,245.8751
Total	**8.6646**	**14.5975**	**48.2280**	**0.1041**	**8.9688**	**0.1940**	**9.1628**	**2.3959**	**0.1875**	**2.5835**	**0.0000**	**10,677.6059**	**10,677.6059**	**0.4539**	**7.7300e-003**	**10,691.2566**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	9/2/2019	10/31/2019	5	44	
2	Grading	Grading	9/2/2019	11/29/2019	5	65	
3	Building Construction	Building Construction	2/3/2020	2/28/2022	5	541	
4	Paving	Paving	8/2/2021	12/31/2021	5	110	
5	Architectural Coating	Architectural Coating	8/2/2021	12/31/2021	5	110	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 162.5

Acres of Paving: 4.39

Residential Indoor: 270,651; Residential Outdoor: 90,217; Non-Residential Indoor: 67,904; Non-Residential Outdoor: 22,635; Striped Parking Area: 10,048 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Site Preparation	Rubber Tired Dozers	3	8.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Grading	Excavators	2	8.00	158	0.38
Grading	Graders	1	8.00	187	0.41
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Scrapers	2	8.00	367	0.48
Grading	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Building Construction	Cranes	1	7.00	231	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45
Paving	Pavers	2	8.00	130	0.42
Paving	Paving Equipment	2	8.00	132	0.36
Paving	Rollers	2	8.00	80	0.38
Architectural Coating	Air Compressors	1	6.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Site Preparation	7	18.00	0.00	0.00	13.00	5.00	20.00	LD_Mix	HDT_Mix	HHDT
Grading	8	20.00	0.00	129.00	13.00	5.00	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	215.00	61.00	0.00	13.00	5.00	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	13.00	5.00	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	43.00	0.00	0.00	13.00	5.00	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

3.2 Site Preparation - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					18.0663	0.0000	18.0663	9.9307	0.0000	9.9307			0.0000			0.0000
Off-Road	4.3350	45.5727	22.0630	0.0380		2.3904	2.3904		2.1991	2.1991		3,766.4529	3,766.4529	1.1917		3,796.2445
Total	**4.3350**	**45.5727**	**22.0630**	**0.0380**	**18.0663**	**2.3904**	**20.4566**	**9.9307**	**2.1991**	**12.1298**		**3,766.4529**	**3,766.4529**	**1.1917**		**3,796.2445**

3.2 Site Preparation - 2019

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0846	0.0729	0.7233	1.7200e-003	0.1780	1.1800e-003	0.1791	0.0472	1.0900e-003	0.0483		171.6027	171.6027	6.3000e-003		171.7603
Total	**0.0846**	**0.0729**	**0.7233**	**1.7200e-003**	**0.1780**	**1.1800e-003**	**0.1791**	**0.0472**	**1.0900e-003**	**0.0483**		**171.6027**	**171.6027**	**6.3000e-003**		**171.7603**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					18.0663	0.0000	18.0663	9.9307	0.0000	9.9307			0.0000			0.0000
Off-Road	1.1445	19.8857	22.9065	0.0380		0.9931	0.9931		0.9761	0.9761	0.0000	3,766.4529	3,766.4529	1.1917		3,796.2445
Total	**1.1445**	**19.8857**	**22.9065**	**0.0380**	**18.0663**	**0.9931**	**19.0594**	**9.9307**	**0.9761**	**10.9068**	**0.0000**	**3,766.4529**	**3,766.4529**	**1.1917**		**3,796.2445**

3.2 Site Preparation - 2019

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0846	0.0729	0.7233	1.7200e-003	0.1780	1.1800e-003	0.1791	0.0472	1.0900e-003	0.0483		171.6027	171.6027	6.3000e-003		171.7603
Total	**0.0846**	**0.0729**	**0.7233**	**1.7200e-003**	**0.1780**	**1.1800e-003**	**0.1791**	**0.0472**	**1.0900e-003**	**0.0483**		**171.6027**	**171.6027**	**6.3000e-003**		**171.7603**

3.3 Grading - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					8.6763	0.0000	8.6763	3.5969	0.0000	3.5969			0.0000			0.0000
Off-Road	4.7389	54.5202	33.3768	0.0620		2.3827	2.3827		2.1920	2.1920		6,140.0195	6,140.0195	1.9426		6,188.5854
Total	**4.7389**	**54.5202**	**33.3768**	**0.0620**	**8.6763**	**2.3827**	**11.0589**	**3.5969**	**2.1920**	**5.7890**		**6,140.0195**	**6,140.0195**	**1.9426**		**6,188.5854**

3.3 Grading - 2019

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0202	0.6832	0.1469	1.5900e-003	0.0346	4.1100e-003	0.0387	9.4800e-003	3.9300e-003	0.0134		170.7713	170.7713	9.5000e-003		171.0087
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0940	0.0810	0.8037	1.9200e-003	0.1977	1.3100e-003	0.1990	0.0524	1.2100e-003	0.0537		190.6697	190.6697	7.0000e-003		190.8448
Total	**0.1141**	**0.7642**	**0.9506**	**3.5100e-003**	**0.2323**	**5.4200e-003**	**0.2378**	**0.0619**	**5.1400e-003**	**0.0671**		**361.4410**	**361.4410**	**0.0165**		**361.8535**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					8.6763	0.0000	8.6763	3.5969	0.0000	3.5969			0.0000			0.0000
Off-Road	1.6298	30.3882	36.6958	0.0620		1.3229	1.3229		1.3144	1.3144	0.0000	6,140.0195	6,140.0195	1.9426		6,188.5854
Total	**1.6298**	**30.3882**	**36.6958**	**0.0620**	**8.6763**	**1.3229**	**9.9991**	**3.5969**	**1.3144**	**4.9113**	**0.0000**	**6,140.0195**	**6,140.0195**	**1.9426**		**6,188.5854**

3.3 Grading - 2019

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0202	0.6832	0.1469	1.5900e-003	0.0346	4.1100e-003	0.0387	9.4800e-003	3.9300e-003	0.0134		170.7713	170.7713	9.5000e-003		171.0087
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0940	0.0810	0.8037	1.9200e-003	0.1977	1.3100e-003	0.1990	0.0524	1.2100e-003	0.0537		190.6697	190.6697	7.0000e-003		190.8448
Total	**0.1141**	**0.7642**	**0.9506**	**3.5100e-003**	**0.2323**	**5.4200e-003**	**0.2378**	**0.0619**	**5.1400e-003**	**0.0671**		**361.4410**	**361.4410**	**0.0165**		**361.8535**

3.4 Building Construction - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.1198	19.1860	16.8485	0.0269		1.1171	1.1171		1.0503	1.0503		2,553.0631	2,553.0631	0.6229		2,568.6345
Total	**2.1198**	**19.1860**	**16.8485**	**0.0269**		**1.1171**	**1.1171**		**1.0503**	**1.0503**		**2,553.0631**	**2,553.0631**	**0.6229**		**2,568.6345**

3.4 Building Construction - 2020

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.2212	6.2954	1.8041	0.0123	0.2832	0.0342	0.3173	0.0816	0.0327	0.1143		1,310.2901	1,310.2901	0.0753		1,312.1737
Worker	0.9196	0.7671	7.6318	0.0200	2.1255	0.0136	2.1391	0.5637	0.0125	0.5763		1,986.3577	1,986.3577	0.0648		1,987.9764
Total	**1.1408**	**7.0625**	**9.4359**	**0.0323**	**2.4087**	**0.0478**	**2.4564**	**0.6453**	**0.0452**	**0.6905**		**3,296.6478**	**3,296.6478**	**0.1401**		**3,300.1501**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.8885	18.5437	16.9566	0.0269		1.0970	1.0970		1.0487	1.0487	0.0000	2,553.0631	2,553.0631	0.6229		2,568.6345
Total	**1.8885**	**18.5437**	**16.9566**	**0.0269**		**1.0970**	**1.0970**		**1.0487**	**1.0487**	**0.0000**	**2,553.0631**	**2,553.0631**	**0.6229**		**2,568.6345**

3.4 Building Construction - 2020

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.2212	6.2954	1.8041	0.0123	0.2832	0.0342	0.3173	0.0816	0.0327	0.1143		1,310.2901	1,310.2901	0.0753		1,312.1737
Worker	0.9196	0.7671	7.6318	0.0200	2.1255	0.0136	2.1391	0.5637	0.0125	0.5763		1,986.3577	1,986.3577	0.0648		1,987.9764
Total	**1.1408**	**7.0625**	**9.4359**	**0.0323**	**2.4087**	**0.0478**	**2.4564**	**0.6453**	**0.0452**	**0.6905**		**3,296.6478**	**3,296.6478**	**0.1401**		**3,300.1501**

3.4 Building Construction - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.9009	17.4321	16.5752	0.0269		0.9586	0.9586		0.9013	0.9013		2,553.3639	2,553.3639	0.6160		2,568.7643
Total	**1.9009**	**17.4321**	**16.5752**	**0.0269**		**0.9586**	**0.9586**		**0.9013**	**0.9013**		**2,553.3639**	**2,553.3639**	**0.6160**		**2,568.7643**

3.4 Building Construction - 2021

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.1808	5.7658	1.5910	0.0122	0.2832	0.0162	0.2994	0.0816	0.0155	0.0970		1,302.6942	1,302.6942	0.0734		1,304.5292
Worker	0.8565	0.6861	6.9305	0.0193	2.1255	0.0132	2.1387	0.5637	0.0121	0.5759		1,918.6648	1,918.6648	0.0576		1,920.1053
Total	**1.0373**	**6.4519**	**8.5214**	**0.0315**	**2.4087**	**0.0293**	**2.4381**	**0.6453**	**0.0276**	**0.6729**		**3,221.3590**	**3,221.3590**	**0.1310**		**3,224.6345**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.7081	17.1525	16.7170	0.0269		0.9755	0.9755		0.9337	0.9337	0.0000	2,553.3639	2,553.3639	0.6160		2,568.7643
Total	**1.7081**	**17.1525**	**16.7170**	**0.0269**		**0.9755**	**0.9755**		**0.9337**	**0.9337**	**0.0000**	**2,553.3639**	**2,553.3639**	**0.6160**		**2,568.7643**

3.4 Building Construction - 2021

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.1808	5.7658	1.5910	0.0122	0.2832	0.0162	0.2994	0.0816	0.0155	0.0970		1,302.6942	1,302.6942	0.0734		1,304.5292
Worker	0.8565	0.6861	6.9305	0.0193	2.1255	0.0132	2.1387	0.5637	0.0121	0.5759		1,918.6648	1,918.6648	0.0576		1,920.1053
Total	**1.0373**	**6.4519**	**8.5214**	**0.0315**	**2.4087**	**0.0293**	**2.4381**	**0.6453**	**0.0276**	**0.6729**		**3,221.3590**	**3,221.3590**	**0.1310**		**3,224.6345**

3.4 Building Construction - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.7062	15.6156	16.3634	0.0269		0.8090	0.8090		0.7612	0.7612		2,554.3336	2,554.3336	0.6120		2,569.6322
Total	**1.7062**	**15.6156**	**16.3634**	**0.0269**		**0.8090**	**0.8090**		**0.7612**	**0.7612**		**2,554.3336**	**2,554.3336**	**0.6120**		**2,569.6322**

3.4 Building Construction - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.1672	5.4831	1.4673	0.0121	0.2833	0.0142	0.2975	0.0816	0.0136	0.0952		1,294.0810	1,294.0810	0.0725		1,295.8932
Worker	0.8034	0.6170	6.3596	0.0186	2.1255	0.0128	2.1383	0.5637	0.0118	0.5755		1,850.0610	1,850.0610	0.0517		1,851.3533
Total	**0.9706**	**6.1001**	**7.8269**	**0.0307**	**2.4088**	**0.0270**	**2.4358**	**0.6453**	**0.0254**	**0.6707**		**3,144.1420**	**3,144.1420**	**0.1242**		**3,147.2465**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.5525	15.7174	16.5438	0.0269		0.8634	0.8634		0.8281	0.8281	0.0000	2,554.3336	2,554.3336	0.6120		2,569.6322
Total	**1.5525**	**15.7174**	**16.5438**	**0.0269**		**0.8634**	**0.8634**		**0.8281**	**0.8281**	**0.0000**	**2,554.3336**	**2,554.3336**	**0.6120**		**2,569.6322**

3.4 Building Construction - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.1672	5.4831	1.4673	0.0121	0.2833	0.0142	0.2975	0.0816	0.0136	0.0952		1,294.0810	1,294.0810	0.0725		1,295.8932
Worker	0.8034	0.6170	6.3596	0.0186	2.1255	0.0128	2.1383	0.5637	0.0118	0.5755		1,850.0610	1,850.0610	0.0517		1,851.3533
Total	**0.9706**	**6.1001**	**7.8269**	**0.0307**	**2.4088**	**0.0270**	**2.4358**	**0.6453**	**0.0254**	**0.6707**		**3,144.1420**	**3,144.1420**	**0.1242**		**3,147.2465**

3.5 Paving - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.2556	12.9191	14.6532	0.0228		0.6777	0.6777		0.6235	0.6235		2,207.2109	2,207.2109	0.7139		2,225.0573
Paving	0.1046					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.3601**	**12.9191**	**14.6532**	**0.0228**		**0.6777**	**0.6777**		**0.6235**	**0.6235**		**2,207.2109**	**2,207.2109**	**0.7139**		**2,225.0573**

3.5 Paving - 2021

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0598	0.0479	0.4835	1.3400e-003	0.1483	9.2000e-004	0.1492	0.0393	8.5000e-004	0.0402		133.8603	133.8603	4.0200e-003		133.9608
Total	**0.0598**	**0.0479**	**0.4835**	**1.3400e-003**	**0.1483**	**9.2000e-004**	**0.1492**	**0.0393**	**8.5000e-004**	**0.0402**		**133.8603**	**133.8603**	**4.0200e-003**		**133.9608**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.2556	12.9191	14.6532	0.0228		0.6777	0.6777		0.6235	0.6235	0.0000	2,207.2109	2,207.2109	0.7139		2,225.0573
Paving	0.1046					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.3601**	**12.9191**	**14.6532**	**0.0228**		**0.6777**	**0.6777**		**0.6235**	**0.6235**	**0.0000**	**2,207.2109**	**2,207.2109**	**0.7139**		**2,225.0573**

3.5 Paving - 2021

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0598	0.0479	0.4835	1.3400e-003	0.1483	9.2000e-004	0.1492	0.0393	8.5000e-004	0.0402		133.8603	133.8603	4.0200e-003		133.9608
Total	**0.0598**	**0.0479**	**0.4835**	**1.3400e-003**	**0.1483**	**9.2000e-004**	**0.1492**	**0.0393**	**8.5000e-004**	**0.0402**		**133.8603**	**133.8603**	**4.0200e-003**		**133.9608**

3.6 Architectural Coating - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	9.9337					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2189	1.5268	1.8176	2.9700e-003		0.0941	0.0941		0.0941	0.0941		281.4481	281.4481	0.0193		281.9309
Total	**10.1526**	**1.5268**	**1.8176**	**2.9700e-003**		**0.0941**	**0.0941**		**0.0941**	**0.0941**		**281.4481**	**281.4481**	**0.0193**		**281.9309**

3.6 Architectural Coating - 2021

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.1713	0.1372	1.3861	3.8500e-003	0.4251	2.6300e-003	0.4277	0.1128	2.4300e-003	0.1152		383.7330	383.7330	0.0115		384.0211
Total	**0.1713**	**0.1372**	**1.3861**	**3.8500e-003**	**0.4251**	**2.6300e-003**	**0.4277**	**0.1128**	**2.4300e-003**	**0.1152**		**383.7330**	**383.7330**	**0.0115**		**384.0211**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	9.9337					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2189	1.5268	1.8176	2.9700e-003		0.0941	0.0941		0.0941	0.0941	0.0000	281.4481	281.4481	0.0193		281.9309
Total	**10.1526**	**1.5268**	**1.8176**	**2.9700e-003**		**0.0941**	**0.0941**		**0.0941**	**0.0941**	**0.0000**	**281.4481**	**281.4481**	**0.0193**		**281.9309**

3.6 Architectural Coating - 2021

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.1713	0.1372	1.3861	3.8500e-003	0.4251	2.6300e-003	0.4277	0.1128	2.4300e-003	0.1152		383.7330	383.7330	0.0115		384.0211
Total	**0.1713**	**0.1372**	**1.3861**	**3.8500e-003**	**0.4251**	**2.6300e-003**	**0.4277**	**0.1128**	**2.4300e-003**	**0.1152**		**383.7330**	**383.7330**	**0.0115**		**384.0211**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	4.0847	14.1327	36.5604	0.1014	8.9688	0.1037	9.0726	2.3959	0.0973	2.4932		10,235.2330	10,235.2330	0.4257		10,245.8751
Unmitigated	4.0847	14.1327	36.5604	0.1014	8.9688	0.1037	9.0726	2.3959	0.0973	2.4932		10,235.2330	10,235.2330	0.4257		10,245.8751

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
City Park	0.00	0.00	0.00		
Congregate Care (Assisted Living)	380.86	305.80	339.16	925,584	925,584
Other Asphalt Surfaces	0.00	0.00	0.00		
Parking Lot	0.00	0.00	0.00		
Regional Shopping Center	1,933.03	2,262.14	1142.61	2,695,948	2,695,948
Total	2,313.89	2,567.94	1,481.77	3,621,533	3,621,533

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
City Park	13.00	5.00	5.00	33.00	48.00	19.00	66	28	6
Congregate Care (Assisted	13.00	5.00	5.00	35.80	21.00	43.20	86	11	3
Other Asphalt Surfaces	13.00	5.00	5.00	0.00	0.00	0.00	0	0	0
Parking Lot	13.00	5.00	5.00	0.00	0.00	0.00	0	0	0
Regional Shopping Center	13.00	5.00	5.00	16.30	64.70	19.00	54	35	11

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
City Park	0.575581	0.029595	0.198288	0.120539	0.026172	0.006482	0.012911	0.019591	0.002354	0.001214	0.005068	0.000784	0.001422
Congregate Care (Assisted Living)	0.575581	0.029595	0.198288	0.120539	0.026172	0.006482	0.012911	0.019591	0.002354	0.001214	0.005068	0.000784	0.001422
Other Asphalt Surfaces	0.575581	0.029595	0.198288	0.120539	0.026172	0.006482	0.012911	0.019591	0.002354	0.001214	0.005068	0.000784	0.001422
Parking Lot	0.575581	0.029595	0.198288	0.120539	0.026172	0.006482	0.012911	0.019591	0.002354	0.001214	0.005068	0.000784	0.001422
Regional Shopping Center	0.575581	0.029595	0.198288	0.120539	0.026172	0.006482	0.012911	0.019591	0.002354	0.001214	0.005068	0.000784	0.001422

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.0387	0.3320	0.1532	2.1100e-003		0.0267	0.0267		0.0267	0.0267		421.6506	421.6506	8.0800e-003	7.7300e-003	424.1563
NaturalGas Unmitigated	0.0387	0.3320	0.1532	2.1100e-003		0.0267	0.0267		0.0267	0.0267		421.6506	421.6506	8.0800e-003	7.7300e-003	424.1563

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
City Park	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Congregate Care (Assisted Living)	3290.09	0.0355	0.3032	0.1290	1.9400e-003		0.0245	0.0245		0.0245	0.0245		387.0696	387.0696	7.4200e-003	7.1000e-003	389.3698
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Regional Shopping Center	293.938	3.1700e-003	0.0288	0.0242	1.7000e-004		2.1900e-003	2.1900e-003		2.1900e-003	2.1900e-003		34.5810	34.5810	6.6000e-004	6.3000e-004	34.7865
Total		**0.0387**	**0.3320**	**0.1532**	**2.1100e-003**		**0.0267**	**0.0267**		**0.0267**	**0.0267**		**421.6506**	**421.6506**	**8.0800e-003**	**7.7300e-003**	**424.1563**

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
City Park	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Congregate Care (Assisted Living)	3.29009	0.0355	0.3032	0.1290	1.9400e-003		0.0245	0.0245		0.0245	0.0245		387.0696	387.0696	7.4200e-003	7.1000e-003	389.3698
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Regional Shopping Center	0.293938	3.1700e-003	0.0288	0.0242	1.7000e-004		2.1900e-003	2.1900e-003		2.1900e-003	2.1900e-003		34.5810	34.5810	6.6000e-004	6.3000e-004	34.7865
Total		**0.0387**	**0.3320**	**0.1532**	**2.1100e-003**		**0.0267**	**0.0267**		**0.0267**	**0.0267**		**421.6506**	**421.6506**	**8.0800e-003**	**7.7300e-003**	**424.1563**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	4.5413	0.1327	11.5144	6.1000e-004		0.0636	0.0636		0.0636	0.0636	0.0000	20.7223	20.7223	0.0201	0.0000	21.2252
Unmitigated	4.5413	0.1327	11.5144	6.1000e-004		0.0636	0.0636		0.0636	0.0636	0.0000	20.7223	20.7223	0.0201	0.0000	21.2252

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.2994					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	3.8920					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.3499	0.1327	11.5144	6.1000e-004		0.0636	0.0636		0.0636	0.0636		20.7223	20.7223	0.0201		21.2252
Total	**4.5413**	**0.1327**	**11.5144**	**6.1000e-004**		**0.0636**	**0.0636**		**0.0636**	**0.0636**	**0.0000**	**20.7223**	**20.7223**	**0.0201**	**0.0000**	**21.2252**

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.2994					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	3.8920					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.3499	0.1327	11.5144	6.1000e-004		0.0636	0.0636		0.0636	0.0636		20.7223	20.7223	0.0201		21.2252
Total	**4.5413**	**0.1327**	**11.5144**	**6.1000e-004**		**0.0636**	**0.0636**		**0.0636**	**0.0636**	**0.0000**	**20.7223**	**20.7223**	**0.0201**	**0.0000**	**21.2252**

7.0 Water Detail

7.1 Mitigation Measures Water

Use Reclaimed Water

Install Low Flow Bathroom Faucet

Install Low Flow Kitchen Faucet

Install Low Flow Toilet

Install Low Flow Shower

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

Tank Farm Road Assisted Living and Retail Project - Mitigated

San Luis Obispo County APCD Air District, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Other Asphalt Surfaces	1.20	Acre	1.20	52,272.00	0
Parking Lot	288.00	Space	3.19	115,200.00	0
City Park	1.63	Acre	1.63	71,002.80	0
Congregate Care (Assisted Living)	139.00	Dwelling Unit	2.52	133,655.00	398
Regional Shopping Center	45.27	1000sqft	1.70	45,269.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	3.2	**Precipitation Freq (Days)**	44
Climate Zone	4			**Operational Year**	2022
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	641.35	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Adjustments based on site plan. Other Asphalt Surfaces for circulation roadways. City Park for landscaping+sidewalk on west, north, and east.

Construction Phase - Construction schedule provided by applicant.

Grading -

Architectural Coating - 2016 CALGreen Building Code - 50 g/L for flat coatings and 100 g/L for traffic markings

Vehicle Trips - City park proxy for landscaping and sidewalk.

Area Coating - 2016 CALGreen Code - 50g/L for flat coatings and 100 g/L for traffic markings

Solid Waste -

Mobile Land Use Mitigation -

Energy Mitigation -

Water Mitigation -

Construction Off-road Equipment Mitigation - SLOAPCD BACT mitigation

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	EF_Nonresidential_Exterior	250.00	50.00
tblArchitecturalCoating	EF_Nonresidential_Interior	250.00	50.00
tblArchitecturalCoating	EF_Parking	150.00	100.00
tblArchitecturalCoating	EF_Residential_Exterior	250.00	50.00
tblArchitecturalCoating	EF_Residential_Interior	250.00	50.00
tblAreaCoating	Area_EF_Nonresidential_Exterior	250	50
tblAreaCoating	Area_EF_Nonresidential_Interior	250	50
tblAreaCoating	Area_EF_Parking	150	100
tblAreaCoating	Area_EF_Residential_Exterior	250	50
tblAreaCoating	Area_EF_Residential_Interior	250	50
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	4.00

tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	6.00
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstructionPhase	NumDays	20.00	110.00
tblConstructionPhase	NumDays	300.00	541.00
tblConstructionPhase	NumDays	30.00	65.00
tblConstructionPhase	NumDays	20.00	110.00
tblConstructionPhase	NumDays	10.00	44.00
tblGrading	MaterialExported	0.00	1,029.00
tblLandUse	LandUseSquareFeet	139,000.00	133,655.00
tblLandUse	LandUseSquareFeet	45,270.00	45,269.00
tblLandUse	LotAcreage	2.59	3.19
tblLandUse	LotAcreage	8.69	2.52
tblLandUse	LotAcreage	1.04	1.70
tblVehicleTrips	ST_TR	22.75	0.00
tblVehicleTrips	SU_TR	16.74	0.00
tblVehicleTrips	WD_TR	1.89	0.00

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2019	9.2977	100.9562	57.0898	0.1050	27.1528	4.7797	31.9325	13.6367	4.3975	18.0342	0.0000	10,420.1656	10,420.1656	3.1571	0.0000	10,499.0927
2020	3.4020	26.3209	26.3048	0.0579	2.4087	1.1659	3.5746	0.6453	1.0966	1.7419	0.0000	5,717.1064	5,717.1064	0.7660	0.0000	5,736.2570
2021	14.8482	38.5946	43.3859	0.0879	2.9821	1.7643	4.7464	0.7974	1.6507	2.4481	0.0000	8,626.9204	8,626.9204	1.4984	0.0000	8,664.3796
2022	2.8042	21.7588	24.1844	0.0564	2.4088	0.8369	3.2457	0.6453	0.7874	1.4327	0.0000	5,571.5475	5,571.5475	0.7394	0.0000	5,590.0323
Maximum	**14.8482**	**100.9562**	**57.0898**	**0.1050**	**27.1528**	**4.7797**	**31.9325**	**13.6367**	**4.3975**	**18.0342**	**0.0000**	**10,420.1656**	**10,420.1656**	**3.1571**	**0.0000**	**10,499.0927**

2.1 Overall Construction (Maximum Daily Emission)

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2019	2.9980	51.1372	61.2523	0.1050	27.1528	2.3227	29.4755	13.6367	2.2968	15.9336	0.0000	10,420.1656	10,420.1656	3.1571	0.0000	10,499.0926
2020	3.1707	25.6785	26.4129	0.0579	2.4087	1.1458	3.5545	0.6453	1.0950	1.7403	0.0000	5,717.1064	5,717.1064	0.7660	0.0000	5,736.2570
2021	14.6554	38.3149	43.5277	0.0879	2.9821	1.7812	4.7633	0.7974	1.6831	2.4805	0.0000	8,626.9204	8,626.9204	1.4984	0.0000	8,664.3795
2022	2.6504	21.8606	24.3648	0.0564	2.4088	0.8913	3.3001	0.6453	0.8543	1.4996	0.0000	5,571.5475	5,571.5475	0.7394	0.0000	5,590.0323
Maximum	**14.6554**	**51.1372**	**61.2523**	**0.1050**	**27.1528**	**2.3227**	**29.4755**	**13.6367**	**2.2968**	**15.9336**	**0.0000**	**10,420.1656**	**10,420.1656**	**3.1571**	**0.0000**	**10,499.0926**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**22.66**	**26.99**	**-3.04**	**0.00**	**0.00**	**28.15**	**5.53**	**0.00**	**25.25**	**8.47**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	4.5413	0.1327	11.5144	6.1000e-004		0.0636	0.0636		0.0636	0.0636	0.0000	20.7223	20.7223	0.0201	0.0000	21.2252
Energy	0.0387	0.3320	0.1532	2.1100e-003		0.0267	0.0267		0.0267	0.0267		421.6506	421.6506	8.0800e-003	7.7300e-003	424.1563
Mobile	3.9384	14.5532	38.3967	0.0974	8.9688	0.1052	9.0740	2.3959	0.0987	2.4946		9,820.6397	9,820.6397	0.4383		9,831.5981
Total	**8.5183**	**15.0179**	**50.0643**	**0.1001**	**8.9688**	**0.1955**	**9.1643**	**2.3959**	**0.1889**	**2.5849**	**0.0000**	**10,263.0126**	**10,263.0126**	**0.4665**	**7.7300e-003**	**10,276.9796**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	4.5413	0.1327	11.5144	6.1000e-004		0.0636	0.0636		0.0636	0.0636	0.0000	20.7223	20.7223	0.0201	0.0000	21.2252
Energy	0.0387	0.3320	0.1532	2.1100e-003		0.0267	0.0267		0.0267	0.0267		421.6506	421.6506	8.0800e-003	7.7300e-003	424.1563
Mobile	3.9384	14.5532	38.3967	0.0974	8.9688	0.1052	9.0740	2.3959	0.0987	2.4946		9,820.6397	9,820.6397	0.4383		9,831.5981
Total	**8.5183**	**15.0179**	**50.0643**	**0.1001**	**8.9688**	**0.1955**	**9.1643**	**2.3959**	**0.1889**	**2.5849**	**0.0000**	**10,263.0126**	**10,263.0126**	**0.4665**	**7.7300e-003**	**10,276.9796**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	9/2/2019	10/31/2019	5	44	
2	Grading	Grading	9/2/2019	11/29/2019	5	65	
3	Building Construction	Building Construction	2/3/2020	2/28/2022	5	541	
4	Paving	Paving	8/2/2021	12/31/2021	5	110	
5	Architectural Coating	Architectural Coating	8/2/2021	12/31/2021	5	110	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 162.5

Acres of Paving: 4.39

Residential Indoor: 270,651; Residential Outdoor: 90,217; Non-Residential Indoor: 67,904; Non-Residential Outdoor: 22,635; Striped Parking Area: 10,048 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Site Preparation	Rubber Tired Dozers	3	8.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Grading	Excavators	2	8.00	158	0.38
Grading	Graders	1	8.00	187	0.41
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Scrapers	2	8.00	367	0.48
Grading	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Building Construction	Cranes	1	7.00	231	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45
Paving	Pavers	2	8.00	130	0.42
Paving	Paving Equipment	2	8.00	132	0.36
Paving	Rollers	2	8.00	80	0.38
Architectural Coating	Air Compressors	1	6.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Site Preparation	7	18.00	0.00	0.00	13.00	5.00	20.00	LD_Mix	HDT_Mix	HHDT
Grading	8	20.00	0.00	129.00	13.00	5.00	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	215.00	61.00	0.00	13.00	5.00	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	13.00	5.00	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	43.00	0.00	0.00	13.00	5.00	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

3.2 Site Preparation - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					18.0663	0.0000	18.0663	9.9307	0.0000	9.9307			0.0000			0.0000
Off-Road	4.3350	45.5727	22.0630	0.0380		2.3904	2.3904		2.1991	2.1991		3,766.4529	3,766.4529	1.1917		3,796.2445
Total	**4.3350**	**45.5727**	**22.0630**	**0.0380**	**18.0663**	**2.3904**	**20.4566**	**9.9307**	**2.1991**	**12.1298**		**3,766.4529**	**3,766.4529**	**1.1917**		**3,796.2445**

3.2 Site Preparation - 2019

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0962	0.0828	0.7075	1.6400e-003	0.1780	1.1800e-003	0.1791	0.0472	1.0900e-003	0.0483		163.5759	163.5759	6.1400e-003		163.7294
Total	**0.0962**	**0.0828**	**0.7075**	**1.6400e-003**	**0.1780**	**1.1800e-003**	**0.1791**	**0.0472**	**1.0900e-003**	**0.0483**		**163.5759**	**163.5759**	**6.1400e-003**		**163.7294**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					18.0663	0.0000	18.0663	9.9307	0.0000	9.9307			0.0000			0.0000
Off-Road	1.1445	19.8857	22.9065	0.0380		0.9931	0.9931		0.9761	0.9761	0.0000	3,766.4529	3,766.4529	1.1917		3,796.2445
Total	**1.1445**	**19.8857**	**22.9065**	**0.0380**	**18.0663**	**0.9931**	**19.0594**	**9.9307**	**0.9761**	**10.9068**	**0.0000**	**3,766.4529**	**3,766.4529**	**1.1917**		**3,796.2445**

3.2 Site Preparation - 2019

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0962	0.0828	0.7075	1.6400e-003	0.1780	1.1800e-003	0.1791	0.0472	1.0900e-003	0.0483		163.5759	163.5759	6.1400e-003		163.7294
Total	**0.0962**	**0.0828**	**0.7075**	**1.6400e-003**	**0.1780**	**1.1800e-003**	**0.1791**	**0.0472**	**1.0900e-003**	**0.0483**		**163.5759**	**163.5759**	**6.1400e-003**		**163.7294**

3.3 Grading - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					8.6763	0.0000	8.6763	3.5969	0.0000	3.5969			0.0000			0.0000
Off-Road	4.7389	54.5202	33.3768	0.0620		2.3827	2.3827		2.1920	2.1920		6,140.0195	6,140.0195	1.9426		6,188.5854
Total	**4.7389**	**54.5202**	**33.3768**	**0.0620**	**8.6763**	**2.3827**	**11.0589**	**3.5969**	**2.1920**	**5.7890**		**6,140.0195**	**6,140.0195**	**1.9426**		**6,188.5854**

3.3 Grading - 2019

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0207	0.6885	0.1564	1.5600e-003	0.0346	4.2000e-003	0.0388	9.4800e-003	4.0200e-003	0.0135		168.3664	168.3664	9.8200e-003		168.6118
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.1069	0.0920	0.7861	1.8300e-003	0.1977	1.3100e-003	0.1990	0.0524	1.2100e-003	0.0537		181.7510	181.7510	6.8200e-003		181.9215
Total	**0.1276**	**0.7805**	**0.9425**	**3.3900e-003**	**0.2323**	**5.5100e-003**	**0.2379**	**0.0619**	**5.2300e-003**	**0.0672**		**350.1174**	**350.1174**	**0.0166**		**350.5333**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					8.6763	0.0000	8.6763	3.5969	0.0000	3.5969			0.0000			0.0000
Off-Road	1.6298	30.3882	36.6958	0.0620		1.3229	1.3229		1.3144	1.3144	0.0000	6,140.0195	6,140.0195	1.9426		6,188.5854
Total	**1.6298**	**30.3882**	**36.6958**	**0.0620**	**8.6763**	**1.3229**	**9.9991**	**3.5969**	**1.3144**	**4.9113**	**0.0000**	**6,140.0195**	**6,140.0195**	**1.9426**		**6,188.5854**

3.3 Grading - 2019

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0207	0.6885	0.1564	1.5600e-003	0.0346	4.2000e-003	0.0388	9.4800e-003	4.0200e-003	0.0135		168.3664	168.3664	9.8200e-003		168.6118
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.1069	0.0920	0.7861	1.8300e-003	0.1977	1.3100e-003	0.1990	0.0524	1.2100e-003	0.0537		181.7510	181.7510	6.8200e-003		181.9215
Total	**0.1276**	**0.7805**	**0.9425**	**3.3900e-003**	**0.2323**	**5.5100e-003**	**0.2379**	**0.0619**	**5.2300e-003**	**0.0672**		**350.1174**	**350.1174**	**0.0166**		**350.5333**

3.4 Building Construction - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.1198	19.1860	16.8485	0.0269		1.1171	1.1171		1.0503	1.0503		2,553.0631	2,553.0631	0.6229		2,568.6345
Total	**2.1198**	**19.1860**	**16.8485**	**0.0269**		**1.1171**	**1.1171**		**1.0503**	**1.0503**		**2,553.0631**	**2,553.0631**	**0.6229**		**2,568.6345**

3.4 Building Construction - 2020

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.2339	6.2641	2.0314	0.0120	0.2832	0.0353	0.3184	0.0816	0.0337	0.1153		1,270.6949	1,270.6949	0.0806		1,272.7089
Worker	1.0482	0.8707	7.4249	0.0190	2.1255	0.0136	2.1391	0.5637	0.0125	0.5763		1,893.3484	1,893.3484	0.0626		1,894.9136
Total	**1.2822**	**7.1348**	**9.4563**	**0.0310**	**2.4087**	**0.0488**	**2.4575**	**0.6453**	**0.0463**	**0.6915**		**3,164.0433**	**3,164.0433**	**0.1432**		**3,167.6225**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.8885	18.5437	16.9566	0.0269		1.0970	1.0970		1.0487	1.0487	0.0000	2,553.0631	2,553.0631	0.6229		2,568.6345
Total	**1.8885**	**18.5437**	**16.9566**	**0.0269**		**1.0970**	**1.0970**		**1.0487**	**1.0487**	**0.0000**	**2,553.0631**	**2,553.0631**	**0.6229**		**2,568.6345**

3.4 Building Construction - 2020

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.2339	6.2641	2.0314	0.0120	0.2832	0.0353	0.3184	0.0816	0.0337	0.1153		1,270.6949	1,270.6949	0.0806		1,272.7089
Worker	1.0482	0.8707	7.4249	0.0190	2.1255	0.0136	2.1391	0.5637	0.0125	0.5763		1,893.3484	1,893.3484	0.0626		1,894.9136
Total	**1.2822**	**7.1348**	**9.4563**	**0.0310**	**2.4087**	**0.0488**	**2.4575**	**0.6453**	**0.0463**	**0.6915**		**3,164.0433**	**3,164.0433**	**0.1432**		**3,167.6225**

3.4 Building Construction - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.9009	17.4321	16.5752	0.0269		0.9586	0.9586		0.9013	0.9013		2,553.3639	2,553.3639	0.6160		2,568.7643
Total	**1.9009**	**17.4321**	**16.5752**	**0.0269**		**0.9586**	**0.9586**		**0.9013**	**0.9013**		**2,553.3639**	**2,553.3639**	**0.6160**		**2,568.7643**

3.4 Building Construction - 2021

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.1925	5.7281	1.8014	0.0119	0.2832	0.0171	0.3003	0.0816	0.0164	0.0980		1,262.7217	1,262.7217	0.0786		1,264.6867
Worker	0.9782	0.7785	6.7245	0.0184	2.1255	0.0132	2.1387	0.5637	0.0121	0.5759		1,828.8199	1,828.8199	0.0556		1,830.2094
Total	**1.1707**	**6.5066**	**8.5259**	**0.0302**	**2.4087**	**0.0303**	**2.4390**	**0.6453**	**0.0285**	**0.6738**		**3,091.5416**	**3,091.5416**	**0.1342**		**3,094.8962**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.7081	17.1525	16.7170	0.0269		0.9755	0.9755		0.9337	0.9337	0.0000	2,553.3639	2,553.3639	0.6160		2,568.7643
Total	**1.7081**	**17.1525**	**16.7170**	**0.0269**		**0.9755**	**0.9755**		**0.9337**	**0.9337**	**0.0000**	**2,553.3639**	**2,553.3639**	**0.6160**		**2,568.7643**

3.4 Building Construction - 2021

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.1925	5.7281	1.8014	0.0119	0.2832	0.0171	0.3003	0.0816	0.0164	0.0980		1,262.7217	1,262.7217	0.0786		1,264.6867
Worker	0.9782	0.7785	6.7245	0.0184	2.1255	0.0132	2.1387	0.5637	0.0121	0.5759		1,828.8199	1,828.8199	0.0556		1,830.2094
Total	**1.1707**	**6.5066**	**8.5259**	**0.0302**	**2.4087**	**0.0303**	**2.4390**	**0.6453**	**0.0285**	**0.6738**		**3,091.5416**	**3,091.5416**	**0.1342**		**3,094.8962**

3.4 Building Construction - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.7062	15.6156	16.3634	0.0269		0.8090	0.8090		0.7612	0.7612		2,554.3336	2,554.3336	0.6120		2,569.6322
Total	**1.7062**	**15.6156**	**16.3634**	**0.0269**		**0.8090**	**0.8090**		**0.7612**	**0.7612**		**2,554.3336**	**2,554.3336**	**0.6120**		**2,569.6322**

3.4 Building Construction - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.1781	5.4432	1.6653	0.0118	0.2833	0.0151	0.2984	0.0816	0.0144	0.0960		1,253.7593	1,253.7593	0.0777		1,255.7010
Worker	0.9199	0.6999	6.1557	0.0177	2.1255	0.0128	2.1383	0.5637	0.0118	0.5755		1,763.4547	1,763.4547	0.0498		1,764.6990
Total	**1.0980**	**6.1432**	**7.8210**	**0.0295**	**2.4088**	**0.0279**	**2.4367**	**0.6453**	**0.0262**	**0.6716**		**3,017.2140**	**3,017.2140**	**0.1275**		**3,020.4001**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.5525	15.7174	16.5438	0.0269		0.8634	0.8634		0.8281	0.8281	0.0000	2,554.3336	2,554.3336	0.6120		2,569.6322
Total	**1.5525**	**15.7174**	**16.5438**	**0.0269**		**0.8634**	**0.8634**		**0.8281**	**0.8281**	**0.0000**	**2,554.3336**	**2,554.3336**	**0.6120**		**2,569.6322**

3.4 Building Construction - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.1781	5.4432	1.6653	0.0118	0.2833	0.0151	0.2984	0.0816	0.0144	0.0960		1,253.7593	1,253.7593	0.0777		1,255.7010
Worker	0.9199	0.6999	6.1557	0.0177	2.1255	0.0128	2.1383	0.5637	0.0118	0.5755		1,763.4547	1,763.4547	0.0498		1,764.6990
Total	**1.0980**	**6.1432**	**7.8210**	**0.0295**	**2.4088**	**0.0279**	**2.4367**	**0.6453**	**0.0262**	**0.6716**		**3,017.2140**	**3,017.2140**	**0.1275**		**3,020.4001**

3.5 Paving - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.2556	12.9191	14.6532	0.0228		0.6777	0.6777		0.6235	0.6235		2,207.2109	2,207.2109	0.7139		2,225.0573
Paving	0.1046					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.3601**	**12.9191**	**14.6532**	**0.0228**		**0.6777**	**0.6777**		**0.6235**	**0.6235**		**2,207.2109**	**2,207.2109**	**0.7139**		**2,225.0573**

3.5 Paving - 2021

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0683	0.0543	0.4692	1.2800e-003	0.1483	9.2000e-004	0.1492	0.0393	8.5000e-004	0.0402		127.5921	127.5921	3.8800e-003		127.6890
Total	**0.0683**	**0.0543**	**0.4692**	**1.2800e-003**	**0.1483**	**9.2000e-004**	**0.1492**	**0.0393**	**8.5000e-004**	**0.0402**		**127.5921**	**127.5921**	**3.8800e-003**		**127.6890**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.2556	12.9191	14.6532	0.0228		0.6777	0.6777		0.6235	0.6235	0.0000	2,207.2109	2,207.2109	0.7139		2,225.0573
Paving	0.1046					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.3601**	**12.9191**	**14.6532**	**0.0228**		**0.6777**	**0.6777**		**0.6235**	**0.6235**	**0.0000**	**2,207.2109**	**2,207.2109**	**0.7139**		**2,225.0573**

3.5 Paving - 2021

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0683	0.0543	0.4692	1.2800e-003	0.1483	9.2000e-004	0.1492	0.0393	8.5000e-004	0.0402		127.5921	127.5921	3.8800e-003		127.6890
Total	**0.0683**	**0.0543**	**0.4692**	**1.2800e-003**	**0.1483**	**9.2000e-004**	**0.1492**	**0.0393**	**8.5000e-004**	**0.0402**		**127.5921**	**127.5921**	**3.8800e-003**		**127.6890**

3.6 Architectural Coating - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	9.9337					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2189	1.5268	1.8176	2.9700e-003		0.0941	0.0941		0.0941	0.0941		281.4481	281.4481	0.0193		281.9309
Total	**10.1526**	**1.5268**	**1.8176**	**2.9700e-003**		**0.0941**	**0.0941**		**0.0941**	**0.0941**		**281.4481**	**281.4481**	**0.0193**		**281.9309**

3.6 Architectural Coating - 2021

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.1956	0.1557	1.3449	3.6700e-003	0.4251	2.6300e-003	0.4277	0.1128	2.4300e-003	0.1152		365.7640	365.7640	0.0111		366.0419
Total	**0.1956**	**0.1557**	**1.3449**	**3.6700e-003**	**0.4251**	**2.6300e-003**	**0.4277**	**0.1128**	**2.4300e-003**	**0.1152**		**365.7640**	**365.7640**	**0.0111**		**366.0419**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	9.9337					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2189	1.5268	1.8176	2.9700e-003		0.0941	0.0941		0.0941	0.0941	0.0000	281.4481	281.4481	0.0193		281.9309
Total	**10.1526**	**1.5268**	**1.8176**	**2.9700e-003**		**0.0941**	**0.0941**		**0.0941**	**0.0941**	**0.0000**	**281.4481**	**281.4481**	**0.0193**		**281.9309**

3.6 Architectural Coating - 2021

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.1956	0.1557	1.3449	3.6700e-003	0.4251	2.6300e-003	0.4277	0.1128	2.4300e-003	0.1152		365.7640	365.7640	0.0111		366.0419
Total	**0.1956**	**0.1557**	**1.3449**	**3.6700e-003**	**0.4251**	**2.6300e-003**	**0.4277**	**0.1128**	**2.4300e-003**	**0.1152**		**365.7640**	**365.7640**	**0.0111**		**366.0419**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	3.9384	14.5532	38.3967	0.0974	8.9688	0.1052	9.0740	2.3959	0.0987	2.4946		9,820.6397	9,820.6397	0.4383		9,831.5981
Unmitigated	3.9384	14.5532	38.3967	0.0974	8.9688	0.1052	9.0740	2.3959	0.0987	2.4946		9,820.6397	9,820.6397	0.4383		9,831.5981

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
City Park	0.00	0.00	0.00		
Congregate Care (Assisted Living)	380.86	305.80	339.16	925,584	925,584
Other Asphalt Surfaces	0.00	0.00	0.00		
Parking Lot	0.00	0.00	0.00		
Regional Shopping Center	1,933.03	2,262.14	1142.61	2,695,948	2,695,948
Total	2,313.89	2,567.94	1,481.77	3,621,533	3,621,533

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
City Park	13.00	5.00	5.00	33.00	48.00	19.00	66	28	6
Congregate Care (Assisted	13.00	5.00	5.00	35.80	21.00	43.20	86	11	3
Other Asphalt Surfaces	13.00	5.00	5.00	0.00	0.00	0.00	0	0	0
Parking Lot	13.00	5.00	5.00	0.00	0.00	0.00	0	0	0
Regional Shopping Center	13.00	5.00	5.00	16.30	64.70	19.00	54	35	11

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
City Park	0.575581	0.029595	0.198288	0.120539	0.026172	0.006482	0.012911	0.019591	0.002354	0.001214	0.005068	0.000784	0.001422
Congregate Care (Assisted Living)	0.575581	0.029595	0.198288	0.120539	0.026172	0.006482	0.012911	0.019591	0.002354	0.001214	0.005068	0.000784	0.001422
Other Asphalt Surfaces	0.575581	0.029595	0.198288	0.120539	0.026172	0.006482	0.012911	0.019591	0.002354	0.001214	0.005068	0.000784	0.001422
Parking Lot	0.575581	0.029595	0.198288	0.120539	0.026172	0.006482	0.012911	0.019591	0.002354	0.001214	0.005068	0.000784	0.001422
Regional Shopping Center	0.575581	0.029595	0.198288	0.120539	0.026172	0.006482	0.012911	0.019591	0.002354	0.001214	0.005068	0.000784	0.001422

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.0387	0.3320	0.1532	2.1100e-003		0.0267	0.0267		0.0267	0.0267		421.6506	421.6506	8.0800e-003	7.7300e-003	424.1563
NaturalGas Unmitigated	0.0387	0.3320	0.1532	2.1100e-003		0.0267	0.0267		0.0267	0.0267		421.6506	421.6506	8.0800e-003	7.7300e-003	424.1563

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
City Park	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Congregate Care (Assisted Living)	3290.09	0.0355	0.3032	0.1290	1.9400e-003		0.0245	0.0245		0.0245	0.0245		387.0696	387.0696	7.4200e-003	7.1000e-003	389.3698
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Regional Shopping Center	293.938	3.1700e-003	0.0288	0.0242	1.7000e-004		2.1900e-003	2.1900e-003		2.1900e-003	2.1900e-003		34.5810	34.5810	6.6000e-004	6.3000e-004	34.7865
Total		**0.0387**	**0.3320**	**0.1532**	**2.1100e-003**		**0.0267**	**0.0267**		**0.0267**	**0.0267**		**421.6506**	**421.6506**	**8.0800e-003**	**7.7300e-003**	**424.1563**

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
City Park	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Congregate Care (Assisted Living)	3.29009	0.0355	0.3032	0.1290	1.9400e-003		0.0245	0.0245		0.0245	0.0245		387.0696	387.0696	7.4200e-003	7.1000e-003	389.3698
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Regional Shopping Center	0.293938	3.1700e-003	0.0288	0.0242	1.7000e-004		2.1900e-003	2.1900e-003		2.1900e-003	2.1900e-003		34.5810	34.5810	6.6000e-004	6.3000e-004	34.7865
Total		**0.0387**	**0.3320**	**0.1532**	**2.1100e-003**		**0.0267**	**0.0267**		**0.0267**	**0.0267**		**421.6506**	**421.6506**	**8.0800e-003**	**7.7300e-003**	**424.1563**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	4.5413	0.1327	11.5144	6.1000e-004		0.0636	0.0636		0.0636	0.0636	0.0000	20.7223	20.7223	0.0201	0.0000	21.2252
Unmitigated	4.5413	0.1327	11.5144	6.1000e-004		0.0636	0.0636		0.0636	0.0636	0.0000	20.7223	20.7223	0.0201	0.0000	21.2252

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.2994					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	3.8920					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.3499	0.1327	11.5144	6.1000e-004		0.0636	0.0636		0.0636	0.0636		20.7223	20.7223	0.0201		21.2252
Total	**4.5413**	**0.1327**	**11.5144**	**6.1000e-004**		**0.0636**	**0.0636**		**0.0636**	**0.0636**	**0.0000**	**20.7223**	**20.7223**	**0.0201**	**0.0000**	**21.2252**

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.2994					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	3.8920					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.3499	0.1327	11.5144	6.1000e-004		0.0636	0.0636		0.0636	0.0636		20.7223	20.7223	0.0201		21.2252
Total	**4.5413**	**0.1327**	**11.5144**	**6.1000e-004**		**0.0636**	**0.0636**		**0.0636**	**0.0636**	**0.0000**	**20.7223**	**20.7223**	**0.0201**	**0.0000**	**21.2252**

7.0 Water Detail

7.1 Mitigation Measures Water

Use Reclaimed Water

Install Low Flow Bathroom Faucet

Install Low Flow Kitchen Faucet

Install Low Flow Toilet

Install Low Flow Shower

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

CULTURAL RESOURCES SURVEY OF THE NORTHWEST CORNER OF BROAD STREET AND TANK FARM ROAD, SAN LUIS OBISPO, CALIFORNIA

April 2018

Prepared by:
Terry L. Joslin, Ph.D., RPA
Archaeologist
Central Coast Archaeological Research Consultants
491 Lawrence Drive
San Luis Obispo, California 93401

Prepared for:
C.M. Florence, ACIP Agent
Oasis Associates, Inc.
3427 Miguelito Ct.
San Luis Obispo, CA 93401

USGS Topographic Quadrangles: Pismo Beach and San Luis Obispo 7.5-Minute
Cultural Resources: None
Area: 10± acres

INTRODUCTION

On 21 March 2018 a request was made by Carol Florence − Oasis Associate, Inc., to conduct an archaeological study the Northwest Corner of Broad and Tank Farm Road Archaeological Survey, 660 Tank Farm Road and 3985 Broad Street, San Luis Obispo, California (APN 053-421-004 and 053-421-003). The study area is depicted on the attached Figure 1 survey map (topographic quadrangle), APN mapping, site plan, and photographs of the existing site condition.

The existing property includes a two-parcel, 10±-acre property, that contains a single-family residence at 660 Tank Farm Road (APN 053-421-004) (to be demolished, while 3985 Broad Street (APN 053-421-003) is currently vacant; an earlier development was demolished several years ago. The site topography is relatively level and currently supports non-native annual grassland and ruderal habitats. There is existing soil stockpile on the southern area, which is to be used for the site grading of the proposed development. The site's north and west boundaries are defined by drainage swales that flow west to the confluence with Orcutt Creek.

The undertaking proposes a mixed-use development project comprised of general retail and senior assisted living facility. As posed, this includes 45,269 square feet of commercial building area, anchored by a 21,981 square foot grocer and five other buildings make up the remaining 17,981 square feet for retail and restaurant uses. The assisted living facility is a two-story 133,655 square foot facility providing 111 assisted living suits and 28 memory care beds (constructed in two phases). The project includes a vesting tentative tract map 3115 for seven lots, public improvements (with design exceptions), site improvements typical to new development, riparian and wetland enhancement, and an amendment to the Airport Area Specific Plan.

The purpose of this study is to determine if there are cultural resources within the study area, pursuant to the California Environmental Quality Act (CEQA) of 1970, as amended, (Sections 21083.2 and 21084.1) and Sections 5020 through 5024 of the Public Resources Code which mandates public agencies to consider the effects of projects on historic properties. These regulations require public agencies to identify the environmental impacts of proposed undertakings, determine if the impacts will be significant and identify alternatives and mitigation measures that will substantially reduce or eliminate significant impacts to the environment. This study also adheres to the standards established by the San Luis Obispo County Department of Planning and Building, "A Guide to Archaeology and Historic Resources".

The author of this report holds a M.A. and Ph.D. in Anthropology, Archaeology emphases, from the University of California, Santa Barbara. She is also certified as a Register of Professional Archaeologist (prehistory) with over twenty five years of experience in archaeological research and cultural resources management.

Although located within an area of moderate archaeological sensitivity − archival research, previous surveys, initial consultation with the Northern Chumash and an intensive archaeological field survey of the project area located at the Northwest Corner of Broad Street and Tank Farm Road San Luis Obispo, California identified no cultural resources. No further archaeological work is required or recommended within the acreage studied during this survey.

PROJECT CONTEXT

NATURAL ENVIRONMENT

The study area is located on a level valley floor east of the Irish Hills in the modern San Luis Obispo community (Figure 1). This area is marked by a low lying landform approximately 140 feet above mean sea level, with a locally steep gradient from sea level to the crest of the San Luis Range (approximately 1000 feet above mean sea level) to the north and east. As a result, the survey area is situated in an area that was once marked with riparian, annual grasses, chaparral, and oak woodland habitats. The Pacific Ocean is less than nine miles southwest-southwest from the current study location. Rocky intertidal is the closest marine habitat.

San Luis Obispo and the general central California Coast are characterized by a Mediterranean climate, with cool, wet winters and warm, dry summers. Due to the moderating marine influence, seasonal temperature variability is minimal, with modest monthly mean temperatures fluctuating during a normal annual cycle. Summer (15° − 18° C) and winter (11° − 13° C) daily temperatures vary around 10° C (Schoenherr 1995). Most of the annual precipitation occurs during the winter months between December and March. The annual precipitation averages 46 cm (18 in), although above-average years have reached 89 cm (35 in). During summer months, coastal fog frequently blankets the coastline and provides modest moisture to plants.

The project location geology is represented by late Mesozonic sandstones and shales, early to mid-Cenozoic siltstones, igneous and intrusive rock, and Quaternary alluvium (Chipping 1987). Native soils within and in the project area are Cropley clay, very deep moderately well drained nearly level soil common in the area on alluvial fans and plains (Chipping 1987; US Department of Agriculture Conservation Service 1980). It forms on alluvial fans and plains.

Fresh water is readily available in the highly modified section of Orcutt Creek that bounds the western project area, and San Luis Obispo Creek which is situated approximately 2500 meters west. Additionally, small fresh water springs and seeps are located along the hillslopes to the north of the current study area.

The environments of the central California Coast are exceptionally productive, with an abundance of marine rocky intertidal, nearshore sandy bottoms, kelp beds, estuarine, and pelagic waters in addition to terrestrial resources. Resources include an array of estuarine, sandy-beach, rocky-shore, pelagic, and fresh-water fish species; a varied suite of sandy beach, open rocky coast, and estuarine adapted shellfish; several marine mammals including sea otters, sea lions, seals, dolphins and California gray whales; and a diverse assemblage of waterfowl and shore birds. Terrestrial fauna attracted to the rich riparian areas consist of animals such as elk, rabbit, deer, black bears, and various rodents such as mice, squirrels and gophers.

Vegetation zones in the project vicinity include riparian, annual grasses, chaparral, and oak woodland (Küchler 1977). Marsh and riparian habitats exist along Orcutt and San Luis Obispo creeks, and around the associated lagoons system. Plants in this environment include California bulrush, cattail, rush, and common spikerrush. The margins of the coastal and marsh environments are

composed primarily of coast live oak, this vegetation type covers the low-lying hills, and along with bay, elderberry, and blackberry, borders the creeks and drainages.

PREHISTORIC CONTEXT

Along the central California coast a suite of similar of cultural changes evident in the archaeological record, and often related to local and regional environmental changes, has framed the local chronology into six periods (Table 1; Jones et al. 2007; King 1990). To understand cultural patterns pertinent to the study area, the chronological sequence is briefly discussed here with regard to significant natural events and changes in behavioral strategies and technology reflected in subsistence and settlement patterns.

Table 1. Chronological Sequence of the California Central Coast.

PERIOD	TEMPORAL SPAN		HOLOCENE[a]
Late	700 B.P. – Historic	A.D. 1250 – 1769	Late
Middle/Late Transition	1000 – 700 cal BP	A.D. 1000 –1250	Late
Middle	3000 – 1000 cal BP	600 B.C. – A.D.1000	Late
Early	5500 – 3000 cal BP	3500 – 600 B.C.	Middle
Millingstone	10,000 – 5500 cal BP	8000 – 3500 B.C.	Early
Paleoindian	Pre–10,000 cal BP	Pre–8000 B.C.	Early

Paleoindian - Millingstone Period (10,000 to 5500 cal BP)

Once considered an anomaly characterized only by projectile points in private collections (Bertrando 2004), the central coast now has a well defined continuity of human coastal and nearshore adaptations over the past 10,000 years, with hints of occupation as early as 12,000 to 13,000 years ago (Jones et al. 2007; Jones et al. 2008a, 2008b). As suggested by the abundance of millingstones and high density of shellfish remains, the collection and processing of seeds and shellfish were important economic pursuits during the early Holocene. Except for interior locations, early Holocene sites along the central California Coast have components that contain shellfish assemblages that are dominated by estuarine and rocky intertidal species and they contain a limited range of marine fish compared to later periods. Significant information from the Cross Creek-Diablo Canyon complex has expanded our understanding of local central coast habitats. Jones et al. (2008a:195) suggest that by 10,000 years ago related, inter-dependant populations had distinctive settlement preferences, with inland people who made forays to the coast but specialized in hunting small game and collecting vegetal resources, and coastal inhabitants who exploited a wider variety of marine and terrestrial resources. To date, at least six coastal and pericoastal sites have radiocarbon dates Millingstone Period, some which extend into the Paleoindian Period.

Early Period (5500 to 3000 cal BP)

The diachronic continuity of artifact assemblages and local adaptations led Greenwood (1972) and later Jones (1993) to apply Rogers's (1929) term "Hunting" Culture to Early, Middle, and

Middle/Late Transition deposits along the central coast. The rise of new technology, particularly large quantities of stemmed and notched projectile points, and adaptive changes entailing greater emphasis on marine mammals and fish stimulated researchers to offer a range of explanations of cultural changes during this time. Favorable climatic conditions may have stimulated population growth, leading to subsistence intensification and giving rise to the adoption of mortars and pestles at the onset of the Early Period. This explanation seems possible, as researchers have suggested that the earliest mortars and pestles were not necessarily used for acorns (Glassow 1996). Perhaps mortars and pestles were used to process small terrestrial animals, shellfish, pulpy plant parts, as well as minerals such as ochre. Evidence of Early Period occupation on the central California Coast is extensive. Site distribution and radiocarbon date frequencies suggest that people during this interval may have been one of fairly mobile populations (Erlandson 1997; Glassow 1997; Joslin 2010).

Middle Period (3000 to 1000 cal BP)

Diagnostic assemblages of the Middle Period consist of a wider range and density of artifact types. Perhaps most significant is the innovation of the circular shell fishhook during this interval and an increase in the use of net sinkers (Jones et al. 2007), signaling an increased importance of marine fish. Bone tools and ornaments are relatively abundant and include needles, pins, awls, strigils, whistles, spatulas, gorge hooks, and antler tines. Based primarily on large samples of excavated material from two sites situated on the San Simeon Reef (CA-SLO-175 and SLO-267), Jones (2003) assigned these Middle Period artifacts to the Little Pico II Phase. Along the north-central coast, many of the subsistence-settlement trends set in motion during the Early Period continue into the Middle Period, including an increased use of mortars and pestles, a great significant focus on small schooling fish and sea otters and a decreased dependence on shellfish (Jones and Ferneau 2002). Subsistence pursuits in general appear to reflect a broad-spectrum diet with distinct signs of local resource intensification over time.

Middle/Late Transition Period (1000 to 700 cal BP)

Central California Coast populations experienced dramatic changes around the onset of the Middle/Late Transition, sometime after 1000 cal BP, evidenced in the increase use of arrow points, the disappearance of most stemmed points, and changes in bead types (Codding and Jones 2007; Jones et al. 2007:139). Along the San Luis Obispo Coast site frequencies decline during the Middle/Late Transition (Jones 1995, 2003; Jones and Ferneau 2002, Jones et al. 2008c). Archaeological sites dating to this interval are quite rare, limited to two known deposits along the San Simeon Reef: Arroyo de los Chinos (CA-SLO-273/274H) and Little Pico Creek (CA-SLO-175); consequently, our understanding of this interval is still unfolding. Recent research at single-component sites located on the open coastline the Coon Creek site (CA-SLO-9), south of Estero Bay, and the Ravine Site (CA-SLO-2563) demonstrates that some sites were occupied during this interval and provides significant new information (Codding and Jones 2007; Codding et al. 2009; Joslin 2010). In a synthesis of Morro Bay sites, Mikkelsen et al. (2000) proposed that the productive estuary may have served as refugium during this period of environmental disruption. Located just south of Morro Bay, the Coon Creek site was a year-round residential base, where people procured rocky intertidal fish, shellfish, marine

birds, marine mammals, and small terrestrial mammals with stemmed points, small leaf-shaped arrow points, notched line sinkers and circular shell fishhooks (Codding and Jones 2007).

Late Period (700 cal BP to Historic)

Compared to the Hunting Culture sites, Late Period assemblages are easily distinguished by new patterns of technology, subsistence, and settlement. Jones (1991) suggested that local populations along the coast recovered from the effects of the environmental changes during the Middle/Late Transition; however, they never returned to the maritime adaptations observed during the Middle Period. This contradicts earlier interpretations by Greenwood (1972, 1978), who argued for a more socially complex population reliant on littoral resources. The discovery of Late Period middens in Big Sur (Hildebrandt and Jones 1998; Wohlgemuth et al. 2002), San Simeon Reef (Joslin 2007; 2010), and Morro Bay (Joslin and Bertrando 2000) have improved our understanding of this interval prior to Spanish contact with local Chumash communities.

ETHNOGRAPHIC CONTEXT

At the time of Spanish contact speakers of the Obispeño language of the Chumash language family occupied the lands in the Pismo vicinity (Milliken and Johnson 2005:128, Figure 13). The project area is located south of the boundary of the Obispeño or Northern Chumash (to the south) and speakers of the putative Playano language and Salinan groups that resided to the north near Big Sur.

Ethnohistorical populations along the northern San Luis Obispo Coast practiced a hunting-gathering-fishing economy similar to most areas of precontact coastal California, where groups occupied a wide range of microenvironments and employed a diverse array of material culture to acquire resources. The division of labor for collecting and gathering these resources is generally expected to have followed general worldwide patterns of gender-specific tasks, in which women gathered, processed, and manufactured basketry and nets, and flake and bone tools, while men predominantly fished, hunted and manufactured associated procurement tools (Kroeber and Barrett 1960). The relative participation of men and women in various tasks associated with subsistence undoubtedly varied over the short term (e.g., in response to seasonal resource fluctuations) as well as over the long prehistory prior to contact. All social group members, including children, probably collected shellfish and small intertidal fish, to varying degrees of dietary importance (Bird and Bird 2000). Fishing was also an activity that, although primarily ascribed to men, also may have been accomplished by women, children, and elderly members of the groups. Nearshore netting and pole-poking presumably would be the focus of less mobile groups more tethered to land and a residential base, while male groups would have fished in the open sea locations.

Spanish explorers' descriptions of their encounters with Native Americans along the coast, including the number of individuals, village locations and whether or not they were abandoned villages and locations, and the activities in which people were engaged, provide key details about pre-contact settlement and subsistence systems (Jones 2003:30-33; Jones et al. 2008a:2287-2289; Milliken and Johnson 2005). A detailed analysis of ethnohistoric information collected by the 1767-1770 Portolá

expeditions on the distribution of Native populations shows clear patterns, notably a year-round presence on the coast by at least small groups over the course of seasons or multiple seasons (Jones et al. 2008a:2289).

HISTORIC CONTEXT

The current undertaking is in the vicinity of the large historic era archaeological site recorded as the Unocal Tank Farm Site (P-40-041195) (Conway 2008). During the records review, no evidence of historic use associated with the Unocal Tank Farm of the current project area was identified. Due to the low likelihood of encountering historic cultural resources, an expansive review of the local San Luis Obispo history is not provided here. For a detailed historic context, the reader is referred to primary sources such as Thompson and West (1883). Conway (2008) also provides historic information and photographs relative to the Unocal Tank Farm.

RECORDS SEARCH

Archival research focused on primary and secondary sources to develop a general historic context and lot-specific information for the immediate project area. To identify previously recorded archaeological and historical sites, the author of this report reviewed archaeological site records, site location base maps, GIS layers and cultural resources survey and excavation reports on file at the Central Coast Information Center (CCIC), University of California, Santa Barbara. On 29 March 2018 the author of this report conducted an in-house records search included information on all surveys within a 0.25-mile radius of the current project area and sites within a 0.5-mile radius.

In addition to this research effort, I consulted the National Register of Historic Places (NRHP) via the National Register Information Service (NRIS), the official on-line database of the NRHP; the *California Inventory of Historic Resources* (California 1976); and the *California Historical Landmarks* (California 1995). The comprehensive records search revealed the current study area has not been surveyed, and no cultural resources are within or in the immediate vicinity of current study survey area.

Over 29 cultural resources studies have been conducted within a 0.25-mile radius, the majority of which are for small lot surveys, land use planning, and infrastructure development. Of the five documented surveys and adjacent to the current study area (Bertrando 2013; Conway 1999, 2004, 2005; Mikkelsen et al. 2001), no cultural resources were discovered within or in the vicinity of the 365 Prado Road survey area. Three studies (i.e., Conway 1999, 2004; Mikkelsen et al. 2001) overlap with the current study area, and the documents reveal no resources were identified on a highly modified landform. Gibson's (1993, 2001) intensive surveys in the Tank Farm road region also failed to identify cultural resources. Additionally, the author of this report has conducted three studies in the general vicinity of the study area, and knowledge on the current survey area suggests a low likelihood of archaeological deposits within the project area.

Three prehistoric archaeological sites (CA-SLO-785, -1427, and -2044) are recorded within the 0.5-miles of the project area, on a landforms that has been subject to severe alteration during

construction of residential buildings, roads, landscaping, and utilities. The closest site is CA-SLO-1427 (four mortar cups) is situated approximately 450 meters north (Dills 1990). Approximately 525 meters to the southeast (along Route 227) is CA-SLO-2044, a highly disturbed, redeposited marine shell scatter. (Mikkelsen et al. 2001) CA-SLO-785 (a spare marine shell scatter) is situated approximately 575 meters southeast (Dills 1994). Also in the same vicinity of the project area is the expansive Union Oil Company Tank Farm (P-40-041195) which consists of an extensive oil tank farm and associated infrastructure (Conway 2008). A thorough review of the reports on file at the CCIC revealed that no archaeological materials associated with these sites have been found on the surface or during construction adjacent to the current 365 Prado Road project.

The first archaeological efforts along the San Luis Obispo County coastal region, including the Pismo Beach area between Point San Luis and the Santa Maria River, were initiated in 1874 by Paul Shumacher for the Smithsonian Institution. Schumacher (1875) traveled along the coastline and inland along permanent creeks or river drainages, namely the Cuyama River, Santa Maria River, Arroyo Grande-Los Berros Creek, and San Luis Obispo Creek. He mapped the location of shell heaps, caves, graves, and large settlements, excavating at a number of locations to recover collections for the Smithsonian.

Following Shumacher's work, a series of early exploration and surveys followed along the coast and coastal interiors. These included the French government scientific expedition was undertaken by Léon de Cessac and Phillip Mills Jones under the patronage of Phoebe Hearst to collect artifacts for the University of California, Museum of Anthropology.

CHUMASH CONSULTATION

In an effort to insure the Northern Chumash community is apprised of the project, I called individuals to that expressed an interest in the current undertaking. I explain the proposed project, and provide the results of the records search and field survey of the project area. Prior to the field study I called and left a phone message with Fred Collins, representative of the Northern Chumash Tribal Council (20 March 2018). He was the only one to return my calls on 21 and 22 March 2018, and a collaborative conversation resulted in no cultural resources concerns within the project area.

FIELD METHODS

On 4 April 2018, the author of this report conducted an intensive survey of the acreage at 660 Tank Farm Road and 3985 Broad Street, San Luis Obispo, California (APN 053-421-004 and 053-421-003). The properties are predominately vacant, with one single family home on the western margin. Tank Farm Road and Broad Street bound the property to the south and east, with metal fencing defining the area on all parameters. The location of the survey area is mapped on the attached Figure 1 Survey Area, APN mapping, associated plan layout, and presented in photographs. The entire survey area, was systematically walked in 5 meter transects. Open areas of exposed soils were inspected along the paved roads and in bioturbation that allowed for inspection of subsurface soils.

STUDY FINDINGS

The field investigation identified no prehistoric or historic cultural materials located within the Northwest Corner of Broad and Tank Farm Road Archaeological Survey. Although in an area characterized with moderate archaeological sensitivity, the landform has been severely altered during previous development, grading, and construction of fencing, in addition to the adjacent street construction and utility installation. Indicative of the previous ground alteration is a large soil stockpile on the southern survey area. The potential for intact archaeological deposits existing on the property is considered to be low. Surface soils are a culturally sterile clay loam, mixed with construction gravels and rubble. Ground surface visibility was poor (0-30%) in areas of invasive grasses, and improved to moderate to good (50-75%) were native soils were exposed in rodent back dirt and along the fence lines and a large mound of fill soils. On site vegetation is characterized as invasive grasses with small stands of Native California grasses and forb species, particular along the Orcutt Creek watercourse. The survey thus confirms the records search conducted at the Central Coast Information Center, and the previous archaeological studies in the vicinity, that found no evidence of archaeological material in adjacent projects.

SUMMARY AND CONCLUSION

Archival research, initial consultation with the Chumash community, and an intensive archaeological survey of the Northwest Corner of Broad and Tank Farm Road Archaeological Survey, 660 Tank Farm Road and 3985 Broad Street, San Luis Obispo, California (APN 053-421-004 and 053-421-003) identified no cultural resources. As a result, no further archaeological work is required or recommended within the acreage investigated during this study. In the unlikely event that buried cultural materials are encountered during construction, all ground disturbances will cease until a qualified archaeologist is contacted to evaluate the nature, integrity, and significance of the deposit.

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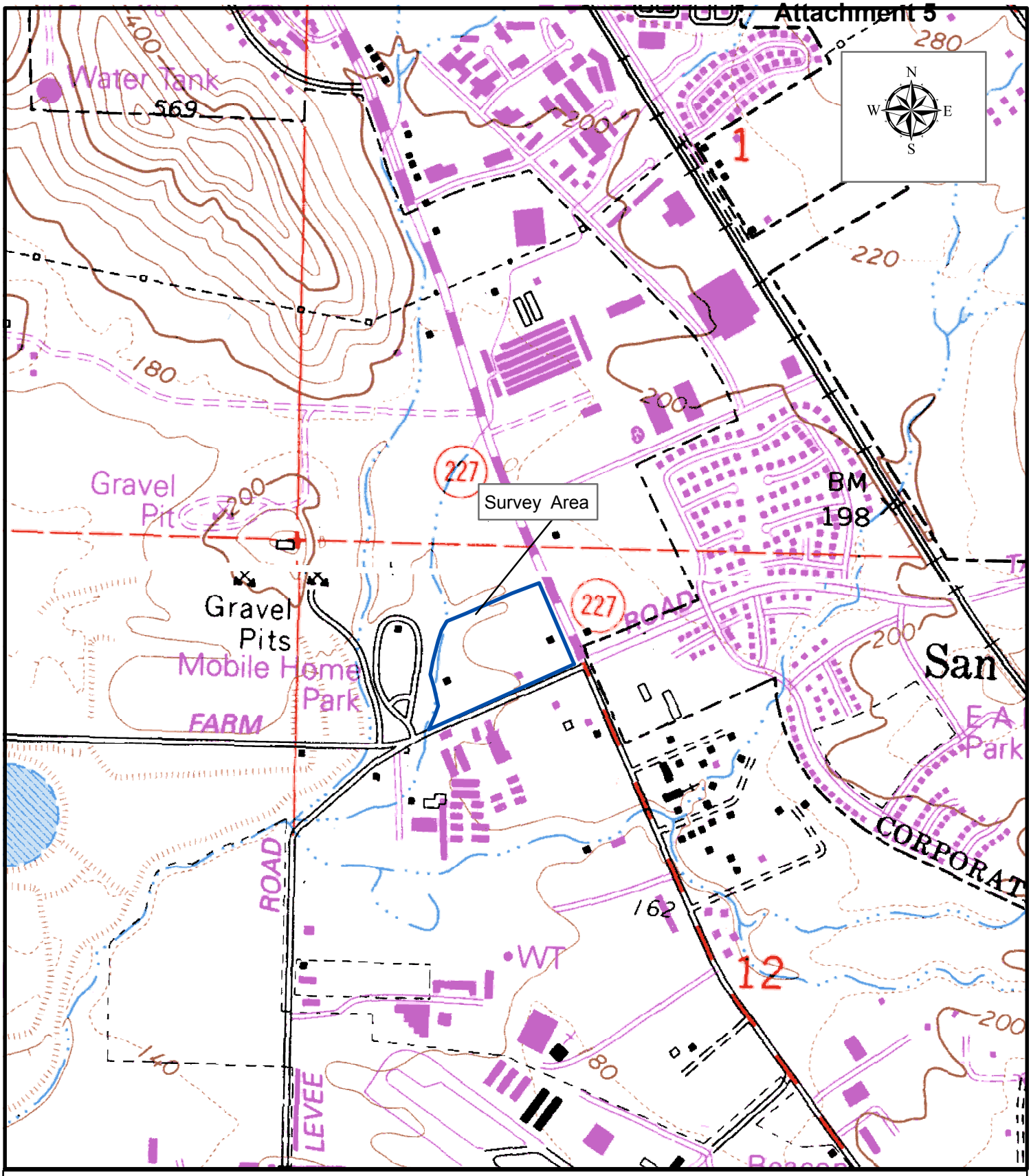


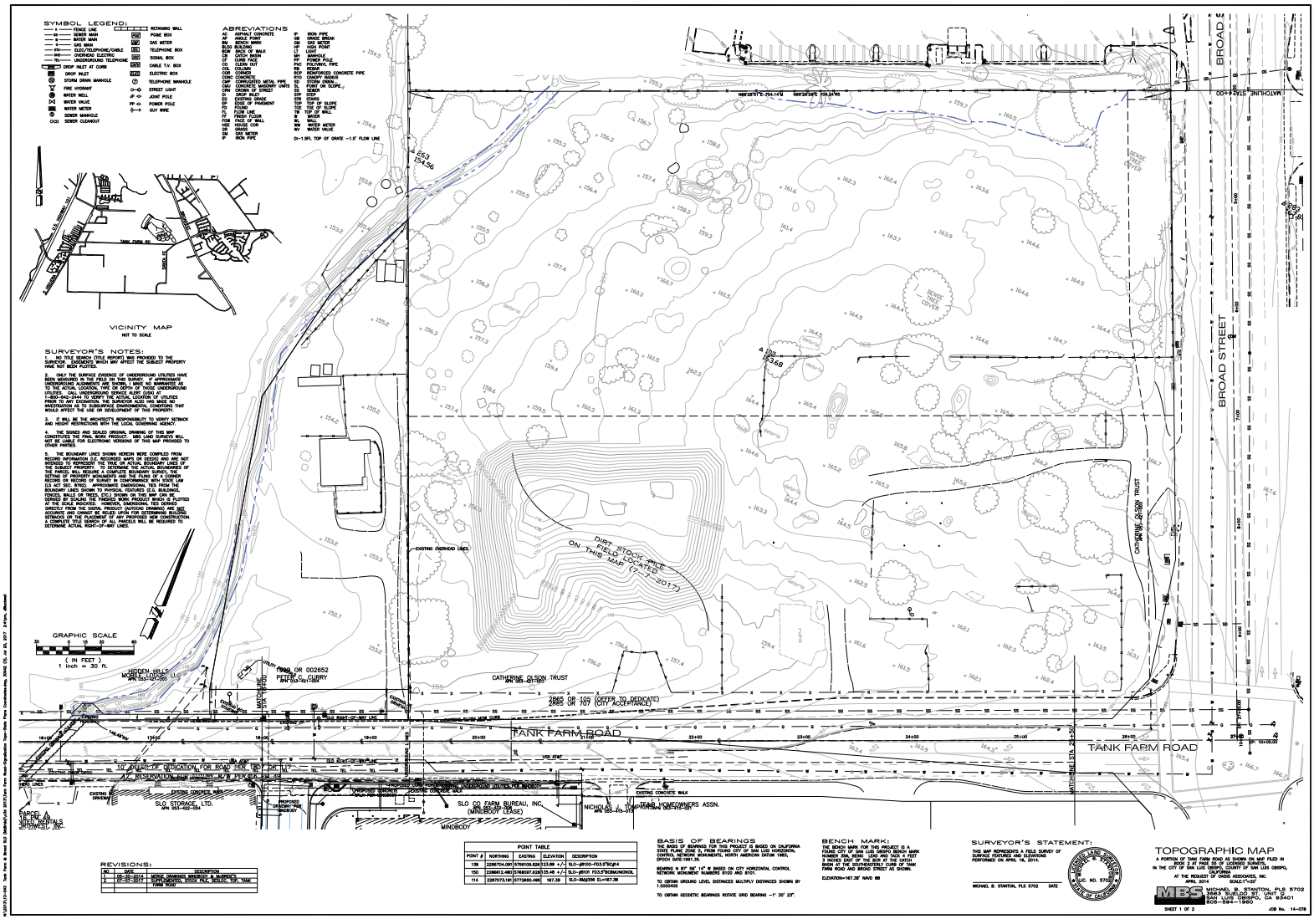
Figure 1. NWC of Broad and Tank Farm Road Archaeological Survey,
660 Tank Farm Road and 3985 Broad Street, San Luis Obispo, California.

0 425 850

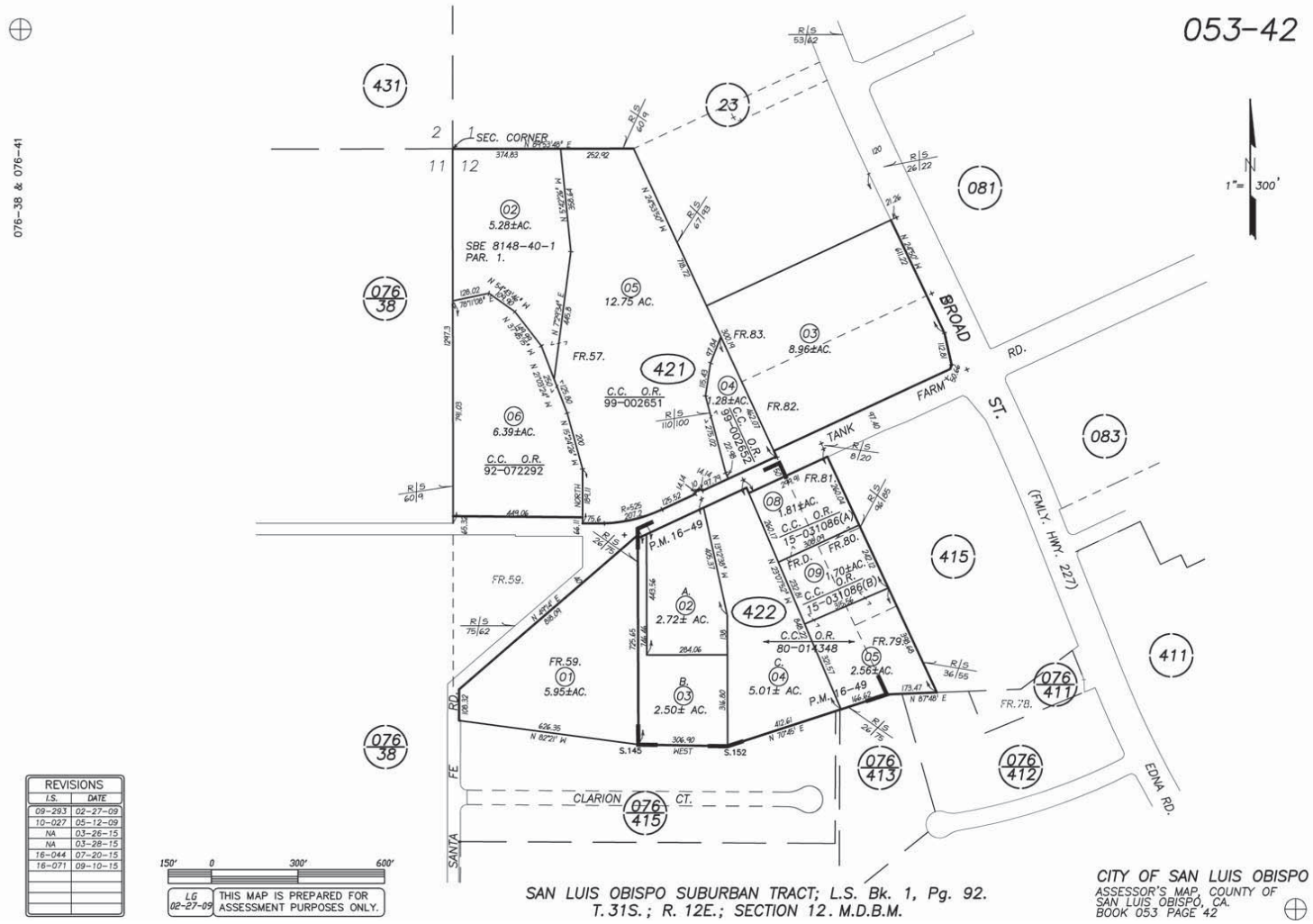
Meters

Source: San Luis Obispo 7.5' USGS Quadrangle (1965, 1979);Pismo Beach 7.5' USGS Quadrangle (1965, 1979).

Attachment 5



Attachment 5



Photograph 1. NWC of Broad and Tank Farm Road Survey Area – View Looking East.

Photograph 2. NWC of Broad and Tank Farm Road Survey Area – View Looking North.

Photograph 3. NWC of Broad and Tank Farm Road Survey Area – View Looking East.

Photograph 4. NWC of Broad and Tank Farm Road Survey Area– View LookingNorthwest.

Attachment 6

SAN LUIS OBISPO COUNTY

AIRPORT LAND USE COMMISSION

Chairman: Roger Oxborrow
Commissioners: Bill Borgsmiller
Michael Cripe
John Eichler
Craig Piper
Erich Schaefer
Allen Settle

NOTICE OF AIRPORT LAND USE COMMISSION ACTION

ALUC 2018-0002

HEARING DATE: September 19, 2018

RECOMMENDATION TO: City of San Luis Obispo

Continued hearing to consider a Mandatory Referral by the City of San Luis Obispo (City) for a determination of consistency or inconsistency for proposed amendments to the City's Airport Area Specific Plan (AASP) amendments, to implement the NWC Broad Street and Tank Farm Road Development Plan Project. The AASP encompasses approximately 1,500 acres in the City generally bounded by Prado Lane, south Higuera Street, Tank Farm Road, and Broad Street. The Project is located at 3985 Broad Street and 660 Tank Farm Road in the City. The Project is located in County of San Luis Obispo Regional Airport Land Use Plan (ALUP) Airport Safety Areas S-1c, and S-2. (Corrected to remove Area S-1b). [Continued from August 15, 2018]
Applicant: NKT Commercial, LLC & Westmont Living, Inc. City File # 1482-2018
City of San Luis Obispo Project Manager: Brian Leveille, Senior Planner

On **September 19, 2018**, the Airport Land Use Commission determined the amendments described above (Amendments) are ***consistent*** with the Airport Land Use Plan for the San Luis Obispo County Regional Airport (ALUP) under the authority of Section 2.7 of the ALUP based on the findings and subject to the conditions, attached hereto and incorporated herein by this reference, and referred the Amendments back to the City of San Luis Obispo.

If you have any questions regarding this matter, please contact me at (805) 781-1392.

Sincerely,

Theresa Braden, Secretary
Airport Land Use Commission

FINDINGS OF CONSISTENCY
NWC Broad Street and Tank Farm Road Development Plan

CONSISTENCY WITH STRICT APPLICATION OF ALUP POLICIES

For the reasons described in the Staff Report and subject to the Conditions of Consistency set forth below, the Amendments are consistent with the Specific Policies for Noise, Airspace Protection and Overflight as well as the Safety Policies *related to maximum density*.

CONSISTENCY WITH THE ALUP UNDER ALUP SECTION 2.7

Applicability of ALUP Section 2.7

a) The Amendments represent "unique circumstances" as described in Section 2.7 of the ALUP because the Project includes unique characteristics as described under the heading "Justification for Deviation from Strict Application of Specific Safety Policies under Authority of Section 2.7 of the ALUP" below.

b) The Amendments represent a "small-scale individual project" as described in Section 2.7 because the total acreage proposed for use within the S1-c Safety Area in a manner inconsistent with the strict application of the ALUP is 4.8 acres, and thus the area of inconsistency is of limited scope or extent.

c) The Amendments apply only to the property proposed to be occupied by the Project.

d) Based on representations by the Applicant and as conditioned in the attached Conditions of Consistency, no development other than the exact Project referred to and considered by the ALUC, *i.e.* the Project, may be established within the referral area without subsequent prior referral to the ALUC.

Justification for Deviation from Strict Application of Specific Safety Policies under Authority of Section 2.7

e) Safety. Notwithstanding any inconsistencies with the provisions of the ALUP related to impaired egress uses and the Land Use Compatibility Table, the Amendments are consistent with the ALUP, because they are consistent with the underlying policy of "reducing the potential severity of an aviation-related incident by prohibiting, in areas of aviation safety hazard, land uses characterized by a limited ability of occupants to evacuate an accident scene" as more specifically set forth below:

1. The assisted living facility includes a relatively low percentage of non-ambulatory residents compared with other impaired egress uses, such as nursing homes, which are primarily non-ambulatory; and

2. The assisted living facility includes a staff to resident ratio (approximately 1:8) that is higher than other impaired egress uses identified in the ALUP such as elementary and secondary schools (approximately 1:21.5); and

3. The assisted living facility is located where flight paths from the Airport do not generally cross based on ALUP Figure 10 (Aircraft Flight Paths), as well as confirmation from flight maneuvers from members of the ALUC, which render the

site outside the published higher crash potential from aircraft departing from or arriving at the Airport; and

4. The assisted living facility is a planned "shelter in place" facility, whereby employees and residents are trained with a Disaster and Emergency Manual that provides a comprehensive overview of disaster preparedness, and the facility includes a 72-hour supply of emergency food and water for residents, staff, and pets

The fact that the vast majority of daily life at the proposed assisted living facility takes place indoors and that the residents do not have an ownership interest in their units serves to further increase the consistency of the proposed use with the ALUP policies, particularly those related to noise.

ALUC CONDITIONS
NWC Broad Street and Tank Farm Road Development Plan

1. The City shall prepare conditions of approval to ensure that all applicable ALUP policies and aviation related development restrictions are enforced (Conditions of Approval), including but not limited to, those in Section 2.7 of the ALUP that require that no development other than **the Project** as specifically described to the ALUC in the Project Description of the Referral Letter dated July 25, 2018, the Development Plan and testimony by the Applicant during the ALUC hearing may be established without subsequent prior referral to the ALUC.

2. The Amendments shall apply only to the property currently proposed to be occupied by the Project, *i.e.* to the Project site.

3. The Amendments and Conditions of Approval shall limit non-residential density for the portion of the Project site within the S-1c Safety Area to 120 persons per acre.

4. The maximum height limit of structures on the site shall be consistent with City height requirements and shall not exceed 35 feet.

5. The assisted living facility shall meet interior noise exposure maximum standards in Table 4 and Section 4.3.3 of the ALUP and shall include noise mitigation in the form of a wall, and window and door assemblies with enhanced sound rating for noise from Tank Farm Road.

6. No structure, landscaping, apparatus, or other feature, whether temporary or permanent in nature shall constitute an obstruction to air navigation or a hazard to air navigation, as defined by the ALUP.

7. Any use is prohibited that may entail characteristics which would potentially interfere with the takeoff, landing, or maneuvering of aircraft at the Airport, including:

    - creation of electrical interference with navigation signals or radio communication between the aircraft and airport;
    - lighting which is difficult to distinguish from airport lighting;
    - glare in the eyes of pilots using the airport;
    - uses which attract birds and create bird strike hazards;
    - uses which produce visually significant quantities of smoke; and
    - uses which entail a risk of physical injury to operators or passengers of aircraft (e.g., exterior laser light demonstrations or shows).

8. Avigation easements shall be recorded for each property developed within the Project site prior to the issuance of any building permit or conditional use permit.

9. All owners, potential purchasers, occupants (whether as owners or renters), and potential occupants (whether as owners or renters) shall receive full and accurate disclosure concerning the noise, safety, or overflight impacts associated with Airport

operations prior to entering any contractual obligation to purchase, lease, rent, or otherwise occupy any property or properties within the Airport area.

10. To the best of its ability and consistent with its verbal and written representations, Applicant shall complete the additional noise mitigation measures set forth on page 23 of the September 19, 2018 hearing agenda packet, including, without limitation, sponsorship of an "Airport Ombudsman" in coordination with the developers of other projects recently referred to the ALUC and commonly known as the San Luis Ranch and Avila Ranch Projects.

Rincon Consultants, Inc.

1530 Monterey Street, Suite D
San Luis Obispo, California 93401

805 547 0900 OFFICE AND FAX

info@rinconconsultants.com
www.rinconconsultants.com

April 1, 2019
Project No: 19-07096

Brian Leveille
City of San Luis Obispo Community Development
Long Range Planning
919 Palm Street
San Luis Obispo, California 93401

Subject: **Tank Farm Road Assisted Living Facility and Retail Project**
3985 Broad Street and 660 Tank Farm Road, San Luis Obispo, California 93401

Dear Mr. Leveille:

This technical memorandum analyzes the potential greenhouse gas emissions impacts of the proposed assisted living facility and retail development on an approximately 10.24-acre project site located at 3985 Broad Street and 660 Tank Farm Road in San Luis Obispo, California (Assessor's Parcel Numbers 053-421-003 and 053-421-004). Rincon Consultants, Inc. (Rincon) prepared this memorandum under contract to the City of San Luis Obispo, in support of the environmental documentation being prepared pursuant to the California Environmental Quality Act (CEQA). The project is located in the South Central Coast Air Basin (SCCAB) under the jurisdiction of the San Luis Obispo Air Pollution Control District (SLOAPCD). This assessment is based on significance thresholds and methodologies in the SLOAPCD's 2012 *CEQA Air Quality Handbook* and 2012 *GHG Thresholds and Supporting Evidence*."[1]

Project Description

The proposed project would involve construction of an approximately 133,655-square foot assisted living facility with 111 suites and 28 memory care beds, and six retail buildings with a total floor area of 45,269 square feet. The project would also include a surface parking lot with approximately 288 vehicle spaces and 67 bicycle parking spaces. The project site is bound by Tank Farm Road to the south, Broad Street to the east, commercial development to the north, and a partially-vacant mobile home park to the west.[2] If approved, the project would begin construction in September 2019 and would be operational by March 2022.

The following sections discuss the SLOAPCD regional thresholds, project impact analysis, and recommendations and conclusions related to air pollutant emissions from project construction and operation.

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[1] SLOAPCD. 2012. *CEQA Air Quality Handbook*. April 2012. Available at: http://www.slocleanair.org/images/cms/upload/files/CEQA_Handbook_2012_v1.pdf
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[2] The mobile home park located at 650 Tank Farm is planned for redevelopment as a mixed-use development with 249 residential units and 17,500 square feet of commercial space. On completion, these planned residential units would be sensitive receptors.

Setting

Climate Change and Greenhouse Gases

Gases that absorb and re-emit infrared radiation in the atmosphere are called greenhouse gases (GHGs). The gases that are widely seen as the principal contributors to human-induced climate change include carbon dioxide (CO_2), methane (CH_4), nitrous oxides (N_2O), fluorinated gases such as hydrofluorocarbons (HFCs) and perfluorocarbons (PFCs), and sulfur hexafluoride (SF_6). Water vapor is excluded from the list of GHGs because it is short-lived in the atmosphere, and its atmospheric concentrations are largely determined by natural processes, such as oceanic evaporation.

GHGs are emitted by both natural processes and human activities. Of these gases, CO_2 and CH_4 are emitted in the greatest quantities from human activities. Emissions of CO_2 are largely by-products of fossil fuel combustion, whereas CH_4 results from off-gassing associated with agricultural practices and landfills.

Man-made GHGs, many of which have greater heat-absorption potential than CO_2, include fluorinated gases and SF_6.[3] Different types of GHGs have varying global warming potentials (GWPs). The GWP of a GHG is the potential of a gas or aerosol to trap heat in the atmosphere over a specified timescale (generally, 100 years). Because GHGs absorb different amounts of heat, a common reference gas (CO_2) is used to relate the amount of heat absorbed to the amount of the gas emissions, referred to as "carbon dioxide equivalent" (CO_2e), and is the amount of a GHG emitted multiplied by its GWP. Carbon dioxide has a 100-year GWP of one. By contrast, methane has a GWP of 25, meaning its global warming effect is 25 times greater than carbon dioxide on a molecule per molecule basis.[4]

Regulatory Setting

In response to an increase in man-made GHG concentrations over the past 150 years, California has implemented AB 32, the "California Global Warming Solutions Act of 2006." AB 32 codifies the Statewide goal of reducing emissions to 1990 levels by 2020 (essentially a 15% reduction below 2005 emission levels) and the adoption of regulations to require reporting and verification of statewide GHG emissions. Furthermore, on September 8, 2016, the governor signed Senate Bill 32 (SB 32) into law, which requires the State to further reduce GHGs to 40 percent below 1990 levels by 2030. SB 32 extends AB 32, directing the California Air Resources Board (CARB) to ensure that GHGs are reduced to 40 percent below the 1990 level by 2030.

On December 14, 2017, CARB adopted the 2017 Scoping Plan, which provides a framework for achieving the 2030 target. The 2017 Scoping Plan does not provide project-level thresholds for land use development. Instead, it recommends that local governments adopt policies and locally-appropriate quantitative thresholds consistent with a statewide per capita goal of six metric tons (MT) of CO_2e by 2030 and two MT of CO_2e by 2050. As stated in the 2017 Scoping Plan, these goals may be appropriate

[3] United States Environmental Protection Agency (U.S. EPA). 2018. Inventory of U.S. Greenhouse Gas Emissions and Sinks: 1990-2016. U. S. EPA #430-R-18-003. April 2018. Available at: https://www.epa.gov/sites/production/files/2018-01/documents/2018_complete_report.pdf

[4] Intergovernmental Panel on Climate Change (IPCC). 2007. Summary for Policymakers. In: Climate Change 2007: The Physical Science Basis. Contribution of Working Group I to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change.

for plan-level analyses (city, county, subregional, or regional level), but not for specific individual projects because they include all emissions sectors in the State.

Local Climate

The project site is located in the South Central Coast Air Basin (SCCAB), which includes all of San Luis Obispo, Santa Barbara, and Ventura counties. The climate of the Santa Barbara County area and all of the SCCAB is strongly influenced by its proximity to the Pacific Ocean and the location of the semi-permanent high pressure cell in the northeastern Pacific. The Mediterranean climate of the region produces moderate average temperatures, although extreme temperatures can be reached in the winter and summer.

Cool, humid marine air causes frequent fog and low clouds along the coast, generally during the night and morning hours in the late spring and early summer months. The project area is subject to a diurnal cycle in which daily onshore winds from the west and northwest are replaced by mild offshore breezes flowing from warm inland valleys during night and early morning hours. This alternating cycle can create a situation where suspended pollutants are swept offshore at night, and then carried back onshore the following day. Dispersion of pollutants is further degraded when the wind velocity for both day and nighttime breezes is low. The region is also subject to seasonal Santa Ana winds. These winds are typically hot, dry northerly winds which blow offshore at 15 to 20 miles per hour (mph), but can reach speeds in excess of 60 mph.

Two types of temperature inversions (warmer air on top of cooler air) are created in the area: subsidence and radiational. The subsidence inversion is a regional effect created by the Pacific high in which air is heated as it is compressed when it flows from the high pressure area to the low pressure areas inland. This type of inversion generally forms at about 1,000 to 2,000 feet and can occur throughout the year, but it is most evident during the summer months. Radiational, or surface, inversions are formed by the more rapid cooling of air near the ground during the night, especially during winter. This type of inversion is typically lower (0 to 500 feet at Vandenberg Air Force Base, for example) and is generally accompanied by stable air. Both types of inversions limit the dispersal of air pollutants within the regional airshed, with the more stable the air (low wind speeds, uniform temperatures), the lower the amount of pollutant dispersion.

Significance Criteria and Analysis Methodologies

Significance Thresholds

The California Environmental Quality Act (CEQA) Guidelines, Appendix G Environmental Checklist, includes the following two questions regarding assessment of GHG emissions:

- Would the project generate GHG emissions, either directly or indirectly, that may have a significant impact on the environment?
- Would the project conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emission of GHGs?

As stated in the CEQA Guidelines, these questions are “intended to encourage thoughtful assessment of impacts and do not necessarily represent thresholds of significance” (Title 14, Division 6, Chapter 3 Guidelines for Implementation of the CEQA, Appendix G, Environmental Checklist Form).

The CEQA Guidelines require lead agencies to adopt GHG thresholds of significance. When adopting these thresholds, the Guidelines allow lead agencies to develop their own significance thresholds and/or to consider thresholds of significance adopted or recommended by other public agencies, or recommended by experts, provided that the thresholds are supported by substantial evidence.

The City of San Luis Obispo has not adopted GHG emissions thresholds for use in CEQA documents. According to the adopted SLOAPCD guidance, the following three quantitative thresholds may be used to evaluate the level of significance of GHG emissions impacts for residential and commercial projects:

1. Qualified GHG Reductions Strategies. A project would have a significant impact if it is not consistent with a qualified GHG reduction strategy that meets the requirements of the State CEQA Guidelines. If a project is consistent with a qualified GHG reduction strategy, it would not have a significant impact; OR,
2. Bright-Line Threshold. A project would have a significant impact if it would generate GHG emissions in excess of the "bright-line threshold" of 1,150 MT of CO_2e per year; OR,
3. Efficiency Threshold. A project would have a significant impact if it would generate GHG emissions in excess of the efficiency threshold of 4.9 MT of CO_2e per service population per year. The service population is defined as the number of residents plus employees for a given project.

The efficiency threshold is specifically intended to avoid penalizing large-scale plans or projects that incorporate emissions-reducing features and/or that are located in a manner that results in relatively low vehicle miles traveled. The City of San Luis Obispo Climate Action Plan (CAP), adopted in 2012, serves as the City's qualified GHG reduction strategy. The GHG-reducing policy provisions contained in the CAP were prepared with the purpose of complying with the requirements of AB 32 and achieving the goals of the AB 32 Scoping Plan, which have a horizon year of 2020. Therefore, the City's CAP is not considered a qualified GHG reduction strategy for assessing the significance of GHG emissions generated by projects with a horizon year post-2020. Therefore, to assess the proposed project, the SLOAPCD GHG thresholds were reduced by 40 percent to account for the continued reductions required by 2030 under SB 32. Therefore, the bright line threshold was reduced to 1,035 MT CO_2e and the efficiency threshold was reduced to 4.41 MT of CO_2e per service population for assessing 2022.

Methodology and Assumptions

GHG emissions were estimated using CalEEMod, version 2016.3.2.[5] In brief, the model estimates GHG emissions by multiplying emission source intensity factors by estimated quantities of emission sources based on the land use information. All CalEEMod estimates are in terms of total MT of CO_2e.

Emission estimates were calculated for the three GHGs of primary concern (CO_2, CH_4, and N_2O) that would be emitted from the five primary operational sources that would be associated with buildout of the proposed project: mobile sources, area sources, energy use, water use, and solid waste disposal. GHG emissions were quantified and projected to year 2022.

Construction Emissions

Construction activities emit GHGs primarily though combustion of fuels (mostly diesel) in the engines of off-road construction equipment and through combustion of diesel and gasoline in on-road construction

[5] California Emissions Estimator Model, 2016.3.2. Available at: http://www.caleemod.com/

vehicles and in the commute vehicles of the construction workers. Smaller amounts of GHGs are also emitted indirectly through the energy use embodied in any water use for fugitive dust control and lighting for the construction activity. Every phase of the construction process, including demolition, grading, paving, and building, emits GHG emissions in volumes proportional to the quantity and type of construction equipment used. Heavier equipment typically emits more GHGs per hour of use than the lighter equipment because of their greater fuel consumption and engine design.

CalEEMod estimates construction emissions by multiplying the amount of time equipment is in operation by emission factors. Construction was assumed to begin in September 2019 and be complete by March 2022. Construction emissions were amortized over a 25 period per SLOAPCD guidelines.

Mobile Source Emissions

GHG emissions from vehicles are generated by the combustion of fossil fuels in vehicle engines. Vehicle emissions are calculated based on the vehicle type and the trip rate for each land use. The vehicle emission factors and fleet mix used in CalEEMod are derived from CARB's Emission Factors 2011 model, which includes GHG reductions achieved by implementation of Pavley I (Clean Car Standards) and the Low Carbon Fuel Standard and are thus considered in the calculation of standards for project emissions.

The trip generation rates applied for project were sourced from the Institute of Traffic Engineers (ITE) 9th Edition for congregate care (assisted living) and regional shopping center (ITE codes 253 and 820, respectively) based on CalEEMod default values for the proposed land uses.

Energy Use Emissions

As a result of the consumption of electricity and natural gas during project operation, GHGs are emitted on-site during the combustion of natural gas for space and water heating and off-site during the generation of electricity from fossil fuels in power plants. CalEEMod estimates GHG emissions from energy use by multiplying average rates of residential and non-residential energy consumption by the quantities of residential units and non-residential square footage entered in the land use module to obtain total projected energy use. This value is then multiplied by electricity and natural gas GHG emission factors applicable to the project location and utility provider.

Building energy use is typically divided into energy consumed by the built environment and energy consumed by uses that are independent of the building, such as plug-in appliances. Non-building energy use, or "plug-in energy use," can be further subdivided by specific end-use (refrigeration, cooking, office equipment, etc.). In California, Title 24 governs energy consumed by the built environment, mechanical systems, and some types of fixed lighting.

The project would be served by Pacific Gas & Electric (PG&E). Therefore, PG&E's specific energy intensity factors (i.e., the amount of CO_2, CH_4, and N_2O per kilowatt-hour) are used in the calculations of GHG emissions. PG&E currently has renewable energy procurement of 33.0 percent as of 2017[6]. Per SB 100, the statewide Renewable Portfolio Standard (RPS) Program requires electricity providers to increase procurement from eligible renewable energy sources to 33 percent by 2020 and 60 percent by 2030. However, the energy intensity factors included in CalEEMod are based on 2009 data by default at

[6] 2018 California Renewables Portfolio Standard Annual Report to the Legislature. Available at: http://www.cpuc.ca.gov/uploadedFiles/CPUC_Public_Website/Content/Utilities_and_Industries/Energy_-_Electricity_and_Natural_Gas/Renewables%20Portfolio%20Standard%20Annual%20Report%202018.pdf

which time PG&E had only achieved a 14.1 percent procurement of renewable energy[7]. To account for the continuing effects of the RPS, the energy intensity factors included in CalEEMod were reduced based on the percentage of renewables reported by PG&E. PG&E energy intensity factors that include this reduction are shown in Table 1.

Table 1 Pacific Gas & Electric Energy Intensity Factors

	2009 (lbs/MWh)	2020 (lbs/MWh)
Percent Procurement	14.1%	33.0%
Carbon dioxide (CO_2)	641.35	499.66
Methane (CH_4)	0.029	0.022
Nitrous oxide (N_2O)	0.006	0.005

Area Source Emissions

Area sources include GHG emissions that would occur from the use of landscaping equipment. The use of landscape equipment emits GHGs associated with the equipment's fuel combustion. The landscaping equipment emission values were derived from the 2011 Off-Road Equipment Inventory Model.

Water and Wastewater Emissions

The amount of water used and the amount of wastewater generated by a project generate indirect GHG emissions. These emissions are a result of the energy used to supply, convey, and treat water and wastewater. In addition to the indirect GHG emissions associated with energy use, the wastewater treatment process itself can directly emit both CH_4 and N_2O.

The indoor and outdoor water use consumption data for each land use subtype comes from the Pacific Institute's *Waste Not, Want Not: The Potential for Urban Water Conservation in California* (2003).[8] Based on that report, a percentage of total water consumption was dedicated to landscape irrigation, which is used to determine outdoor water use. Wastewater generation was similarly based on a reported percentage of total indoor water use.

New development would be subject to CalGreen, which requires a 20 percent increase in indoor water use efficiency. Thus, in order to account for compliance with CalGreen, a 20 percent reduction in indoor water use was included in the water consumption calculations for new development. The project would also use 100 percent recycled water for exterior areas.

In addition to water reductions associated with building code compliance and project design features, the GHG emissions from the energy used to transport the water for both existing and new development account for compliance with the RPS as discussed under "Energy Emissions".

Solid Waste Emissions

The disposal of solid waste produces GHG emissions from the transportation of waste, anaerobic decomposition in landfills, and incineration. To calculate the GHG emissions generated by solid waste

[7] California Public Utilities Commission (CPUC). Renewables Portfolio Standard Quarterly Report. 1st Quarter 2011. Available at: http://www.cpuc.ca.gov/WorkArea/DownloadAsset.aspx?id=5858

[8] California Emissions Estimator Model, User Guide, Appendix D. Available at: http://www.caleemod.com/

disposal, the total volume of solid waste was calculated using waste disposal rates identified by the California Department of Resources Recycling and Recovery (CalRecycle). The methods for quantifying GHG emissions from solid waste are based on the Intergovernmental Panel of Climate Change (IPCC) method, using the degradable organic content of waste. GHG emissions associated with the project's waste disposal were calculated using these parameters. According to a CalRecyle report to the Legislature, as of 2013 California had achieved a statewide 50 percent diversion of solid waste from landfills through "reduce/recycle/compost" programs[9]. However, AB 341 mandates that 75 percent of the solid waste generated be reduced, recycled, or composted by 2020. Therefore, to account for the continuing actions of recycling requirements under state law (i.e., AB 341), a 25 percent solid waste diversion rate was included in the modeled.

Service Population

The service population is defined as the number of residents plus employees for a given project. The number of residents was calculated assuming one person per memory care bed and 1.25 person per suite. The number of employees was calculated assuming 0.33 nurse/employee per resident (multiplied by three for 24-hour care) for the assisted living facility[10] and 2.5 employees per 1,000 square feet for the retail component[11]. Therefore, the proposed project would have a service population of 417.

Impact Analysis

GHG Emissions

As discussed under "Significance Thresholds," the project would result in a significant GHG impact if implementation of the proposed project would generate GHG emissions that exceed an annual efficiency threshold of 4.41 MT of CO_2E per service population.

Based on the methodology summarized in "Methodology and Assumptions", the primary sources of direct and indirect GHG emissions have been calculated for year 2022. Table 2 summarizes the project's GHG emissions. The complete model outputs for year 2022 GHG emission calculations are included in Attachment 1.

[9] CalRecycle. AB 341 Report to the Legislature, August 2015. Available at: https://www2.calrecycle.ca.gov/Publications/Download/1168

[10] City of San Diego. 2015. The Glen at Scripps Ranch Project Final Environmental Impact Report, Sch #:2013071013. October 30. . http://docs.sandiego.gov/citybulletin_publicnotices/CEQA/PN1300%20%23264823%20Draft%20EIR%20Part%202%20Date%203-30-15.pdf

[11] City Of Los Angeles. 2003. Final Master Environmental Impact Report For Corbin And Nordhoff Redevelopment Project Sch #: 2002051125. Available at: https://planning.lacity.org/eir/Corbin_Nordhoff/FINAL_MEIR/index.htm

Table 2 Year 2022 Annual GHG Emissions

Emission Source	Year 2022 GHG Emissions (MT of CO_2e)
Construction[1]	73.10
Area Sources	2.2
Energy Use	302.4
Mobile Sources	1,283.4
Solid Waste Disposal	65.8
Water Use	25.2
Total	1,739.9
Service Population	417
GHG Emissions per Service Population	**4.17**

See Attachment 2 for modeling results.
[1] Construction emission were amortized over a 25 year period per SLOAPCD guidance.

As shown in Table 2, annual GHG emissions associated with implementation of the proposed project would be 1,739.9 MT CO_2e, or 4.17 MT of CO_2e per service person, which would not exceed the significance threshold of 4.41 MT of CO_2e per service person.

Applicable Adopted Plans, Policies, and Regulations Intended to Reduce GHG Emissions

CAP Consistency

The City of San Luis Obispo CAP serves as a qualified GHG reduction strategy consistent with *State CEQA Guidelines*. The CAP outlines a course of action to improve environmental, social, and economic sustainability and includes six emission reductions strategies: 1) buildings, 2) renewable energy, 3) transportation and land use, 4) water, 5) solid waste, and 6) parks and open space. A project is considered consistent with the City's CAP if it includes provisions to further the emissions reduction goals in the Plan. Measures and goals from the CAP include transportation and land use goals that promote residential developments in close proximity to transit development and commercial areas to reduce the need for commuting, promoting mixed–use development, and to implement water conservation techniques. The proposed project would locate mixed-use development in close proximity to stops on the SLO Transit 1A (Johnson/Tank Farm) route, as well as commercial business park and industrial uses south of Tank Farm and east of Broad Street. The project would not conflict with any of the goals, policies, and programs of the CAP; therefore, the project would be consistent with the CAP.

2017 Scoping Plan

The 2017 Scoping Plan provides a framework for achieving the 2030 statewide emissions target codified by SB 32 and recommends that local governments adopt policies and locally-appropriate quantitative thresholds consistent with a statewide per capita goal of six MT CO_2e by 2030[12]. As discussed above, the project would not conflict with the goals of the locally-adopted GHG reduction strategy. Furthermore,

[12] California Air Resources Board (CARB). 2017. California's 2017 Climate Change Scoping Plan. December 14, 2017. Available at: https://www.arb.ca.gov/cc/scopingplan/scoping_plan_2017.pdf

the project's GHG emissions would not exceed the adjusted SLOAPCD GHG emissions threshold of 4.41 MT of CO_2e per service person in 2022, which was developed in light of the 2030 target of a 40 percent reduction below 2020 levels established by SB 32. Because the project would be consistent with SB 32, the project would also be consistent with the 2017 Scoping Plan, which was developed to achieve the statewide emissions target set by SB 32.

Conclusions

As summarized in Table 2, in year 2022, the proposed project would result in GHG emissions of 4.17 MT of CO_2e per service population annually. By emitting less than 4.41 MT of CO_2e per service population, the project's contribution of GHG emissions to cumulative statewide emissions would be less than cumulatively considerable. Therefore, the project's direct and indirect GHG emissions would have a less than significant impact on the environment. In addition, the project would not conflict with the goals and strategies of local and state plans, policies, and regulations adopted to reduce GHG emissions. Thus, impacts associated with applicable policies, plans, and regulations would be less than significant.

If you have any questions, please contact us at bmaddux@rinconconsultants.com or (805) 644-4455, extension 2038.

Sincerely,
Rincon Consultants, Inc.

William A. Maddux
Senior Environmental Scientist

Attachment

Attachment 1 GHG Modeling Results

Attachment 1
GHG Modeling Results

Tank Farm Road Assisted Living and Retail Project - Mitigated

San Luis Obispo County APCD Air District, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Other Asphalt Surfaces	1.20	Acre	1.20	52,272.00	0
Parking Lot	288.00	Space	3.19	115,200.00	0
City Park	1.63	Acre	1.63	71,002.80	0
Congregate Care (Assisted Living)	139.00	Dwelling Unit	2.52	133,655.00	398
Regional Shopping Center	45.27	1000sqft	1.70	45,269.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	3.2	**Precipitation Freq (Days)**	44
Climate Zone	4			**Operational Year**	2022
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	499.38	**CH4 Intensity (lb/MWhr)**	0.023	**N2O Intensity (lb/MWhr)**	0.005

1.3 User Entered Comments & Non-Default Data

Project Characteristics - PG&E was at 14% renewables in 2008 aaccording to the PG&E website, as of 2019 they had achieved 33% per the CEC.

Land Use - Adjustments based on site plan. Other Asphalt Surfaces for circulation roadways. City Park for landscaping+sidewalk on west, north, and east.

Construction Phase - Construction schedule provided by applicant.

Grading -

Architectural Coating - 2016 CALGreen Building Code - 50 g/L for flat coatings and 100 g/L for traffic markings

Vehicle Trips - City park proxy for landscaping and sidewalk.

Area Coating - 2016 CALGreen Code - 50g/L for flat coatings and 100 g/L for traffic markings

Energy Use - High efficacy lighting not inlcuded in CalEEMod Concregate Care 741.44-75%=185.36

Water And Wastewater - CalGreen Code -20% indoor water use 9,056,409.56-20%=7245127.65, 3,353,263.05-20%=2682610.44

Solid Waste - 25% waste diversion congregate Care 126.84-25%=95.13, Park 0.14-25%=0.105, and retail 47.53-25%=35.65

Construction Off-road Equipment Mitigation - SLOAPCD BACT mitigation

Mobile Land Use Mitigation -

Energy Mitigation -

Water Mitigation -

Waste Mitigation -

Area Mitigation -

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	EF_Nonresidential_Exterior	250.00	50.00
tblArchitecturalCoating	EF_Nonresidential_Interior	250.00	50.00
tblArchitecturalCoating	EF_Parking	150.00	100.00
tblArchitecturalCoating	EF_Residential_Exterior	250.00	50.00
tblArchitecturalCoating	EF_Residential_Interior	250.00	50.00
tblAreaCoating	Area_EF_Nonresidential_Exterior	250	50
tblAreaCoating	Area_EF_Nonresidential_Interior	250	50
tblAreaCoating	Area_EF_Parking	150	100
tblAreaCoating	Area_EF_Residential_Exterior	250	50

tblAreaCoating	Area_EF_Residential_Interior	250	50
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	4.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	6.00
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstructionPhase	NumDays	20.00	110.00
tblConstructionPhase	NumDays	300.00	541.00
tblConstructionPhase	NumDays	30.00	65.00
tblConstructionPhase	NumDays	20.00	110.00
tblConstructionPhase	NumDays	10.00	44.00
tblEnergyUse	LightingElect	741.44	185.36
tblGrading	MaterialExported	0.00	1,029.00
tblLandUse	LandUseSquareFeet	139,000.00	133,655.00
tblLandUse	LandUseSquareFeet	45,270.00	45,269.00
tblLandUse	LotAcreage	2.59	3.19
tblLandUse	LotAcreage	8.69	2.52
tblLandUse	LotAcreage	1.04	1.70
tblProjectCharacteristics	CH4IntensityFactor	0.029	0.023
tblProjectCharacteristics	CO2IntensityFactor	641.35	499.38
tblProjectCharacteristics	N2OIntensityFactor	0.006	0.005
tblSolidWaste	SolidWasteGenerationRate	0.14	0.11

tblSolidWaste	SolidWasteGenerationRate	126.84	95.13
tblSolidWaste	SolidWasteGenerationRate	47.53	35.65
tblVehicleTrips	ST_TR	22.75	0.00
tblVehicleTrips	SU_TR	16.74	0.00
tblVehicleTrips	WD_TR	1.89	0.00
tblWater	IndoorWaterUseRate	9,056,409.56	7,245,127.65
tblWater	IndoorWaterUseRate	3,353,263.05	2,682,610.44

2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2019	0.2551	2.8019	1.6159	3.0000e-003	0.6906	0.1302	0.8208	0.3384	0.1198	0.4582	0.0000	269.8991	269.8991	0.0817	0.0000	271.9408
2020	0.3928	3.1536	3.1270	6.9600e-003	0.2805	0.1393	0.4197	0.0753	0.1310	0.2063	0.0000	623.9450	623.9450	0.0828	0.0000	626.0142
2021	1.0329	3.9382	4.2652	9.2000e-003	0.3370	0.1716	0.5086	0.0904	0.1609	0.2513	0.0000	821.7842	821.7842	0.1259	0.0000	824.9304
2022	0.0554	0.4473	0.4935	1.1600e-003	0.0481	0.0172	0.0653	0.0129	0.0161	0.0291	0.0000	104.3177	104.3177	0.0137	0.0000	104.6603
Maximum	**1.0329**	**3.9382**	**4.2652**	**9.2000e-003**	**0.6906**	**0.1716**	**0.8208**	**0.3384**	**0.1609**	**0.4582**	**0.0000**	**821.7842**	**821.7842**	**0.1259**	**0.0000**	**824.9304**

2.1 Overall Construction

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2019	0.0838	1.4525	1.7424	3.0000e-003	0.6906	0.0651	0.7557	0.3384	0.0644	0.4027	0.0000	269.8988	269.8988	0.0817	0.0000	271.9405
2020	0.3651	3.0769	3.1399	6.9600e-003	0.2805	0.1369	0.4173	0.0753	0.1308	0.2061	0.0000	623.9446	623.9446	0.0828	0.0000	626.0139
2021	1.0077	3.9017	4.2837	9.2000e-003	0.3370	0.1738	0.5108	0.0904	0.1652	0.2555	0.0000	821.7837	821.7837	0.1259	0.0000	824.9299
2022	0.0522	0.4494	0.4972	1.1600e-003	0.0481	0.0183	0.0664	0.0129	0.0175	0.0304	0.0000	104.3176	104.3176	0.0137	0.0000	104.6602
Maximum	**1.0077**	**3.9017**	**4.2837**	**9.2000e-003**	**0.6906**	**0.1738**	**0.7557**	**0.3384**	**0.1652**	**0.4027**	**0.0000**	**821.7837**	**821.7837**	**0.1259**	**0.0000**	**824.9299**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**13.09**	**14.12**	**-1.70**	**0.00**	**0.00**	**14.02**	**3.54**	**0.00**	**11.69**	**5.29**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	**9-2-2019**	**12-1-2019**	2.9852	1.5005
2	**12-2-2019**	**3-1-2020**	0.2972	0.2885
3	**3-2-2020**	**6-1-2020**	0.9719	0.9432
4	**6-2-2020**	**9-1-2020**	0.9696	0.9409
5	**9-2-2020**	**12-1-2020**	0.9638	0.9354
6	**12-2-2020**	**3-1-2021**	0.8973	0.8778
7	**3-2-2021**	**6-1-2021**	0.8833	0.8678
8	**6-2-2021**	**9-1-2021**	1.1733	1.1578

9	**9-2-2021**	**12-1-2021**	1.7343	1.7190
10	**12-2-2021**	**3-1-2022**	1.0902	1.0840
		Highest	2.9852	1.7190

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.8227	0.0219	1.8999	1.0000e-004		0.0105	0.0105		0.0105	0.0105	0.0000	3.1018	3.1018	3.0100e-003	0.0000	3.1771
Energy	7.0500e-003	0.0606	0.0280	3.8000e-004		4.8700e-003	4.8700e-003		4.8700e-003	4.8700e-003	0.0000	301.0335	301.0335	0.0120	3.5900e-003	302.4044
Mobile	0.5930	2.2575	5.7903	0.0153	1.3600	0.0162	1.3762	0.3641	0.0152	0.3793	0.0000	1,397.2599	1,397.2599	0.0605	0.0000	1,398.7729
Waste						0.0000	0.0000		0.0000	0.0000	26.5695	0.0000	26.5695	1.5702	0.0000	65.8248
Water						0.0000	0.0000		0.0000	0.0000	3.1496	19.8637	23.0134	0.3244	7.8400e-003	33.4591
Total	**1.4227**	**2.3400**	**7.7181**	**0.0157**	**1.3600**	**0.0316**	**1.3916**	**0.3641**	**0.0305**	**0.3946**	**29.7191**	**1,721.2589**	**1,750.9780**	**1.9701**	**0.0114**	**1,803.6384**

2.2 Overall Operational

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.8227	0.0219	1.8999	1.0000e-004		0.0105	0.0105		0.0105	0.0105	0.0000	3.1018	3.1018	3.0100e-003	0.0000	3.1771
Energy	7.0500e-003	0.0606	0.0280	3.8000e-004		4.8700e-003	4.8700e-003		4.8700e-003	4.8700e-003	0.0000	301.0335	301.0335	0.0120	3.5900e-003	302.4044
Mobile	0.5764	2.1237	5.3941	0.0138	1.2118	0.0147	1.2265	0.3244	0.0138	0.3382	0.0000	1,258.3677	1,258.3677	0.0562	0.0000	1,259.7714
Waste						0.0000	0.0000		0.0000	0.0000	26.5695	0.0000	26.5695	1.5702	0.0000	65.8248
Water						0.0000	0.0000		0.0000	0.0000	2.5197	14.3519	16.8716	0.2595	6.2500e-003	25.2218
Total	**1.4061**	**2.2062**	**7.3219**	**0.0142**	**1.2118**	**0.0301**	**1.2419**	**0.3244**	**0.0292**	**0.3536**	**29.0892**	**1,576.8549**	**1,605.9440**	**1.9008**	**9.8400e-003**	**1,656.3996**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**1.17**	**5.72**	**5.13**	**9.59**	**10.90**	**4.63**	**10.76**	**10.90**	**4.49**	**10.40**	**2.12**	**8.39**	**8.28**	**3.52**	**13.91**	**8.16**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	9/2/2019	10/31/2019	5	44	
2	Grading	Grading	9/2/2019	11/29/2019	5	65	
3	Building Construction	Building Construction	2/3/2020	2/28/2022	5	541	
4	Paving	Paving	8/2/2021	12/31/2021	5	110	
5	Architectural Coating	Architectural Coating	8/2/2021	12/31/2021	5	110	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 162.5

Acres of Paving: 4.39

Residential Indoor: 270,651; Residential Outdoor: 90,217; Non-Residential Indoor: 67,904; Non-Residential Outdoor: 22,635; Striped Parking Area: 10,048 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Site Preparation	Rubber Tired Dozers	3	8.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Grading	Excavators	2	8.00	158	0.38
Grading	Graders	1	8.00	187	0.41
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Scrapers	2	8.00	367	0.48
Grading	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Building Construction	Cranes	1	7.00	231	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45
Paving	Pavers	2	8.00	130	0.42
Paving	Paving Equipment	2	8.00	132	0.36
Paving	Rollers	2	8.00	80	0.38
Architectural Coating	Air Compressors	1	6.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Site Preparation	7	18.00	0.00	0.00	13.00	5.00	20.00	LD_Mix	HDT_Mix	HHDT
Grading	8	20.00	0.00	129.00	13.00	5.00	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	215.00	61.00	0.00	13.00	5.00	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	13.00	5.00	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	43.00	0.00	0.00	13.00	5.00	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

3.2 Site Preparation - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.3975	0.0000	0.3975	0.2185	0.0000	0.2185	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0954	1.0026	0.4854	8.4000e-004		0.0526	0.0526		0.0484	0.0484	0.0000	75.1711	75.1711	0.0238	0.0000	75.7657
Total	**0.0954**	**1.0026**	**0.4854**	**8.4000e-004**	**0.3975**	**0.0526**	**0.4501**	**0.2185**	**0.0484**	**0.2669**	**0.0000**	**75.1711**	**75.1711**	**0.0238**	**0.0000**	**75.7657**

3.2 Site Preparation - 2019

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.9000e-003	1.7900e-003	0.0155	4.0000e-005	3.8100e-003	3.0000e-005	3.8400e-003	1.0100e-003	2.0000e-005	1.0400e-003	0.0000	3.2913	3.2913	1.2000e-004	0.0000	3.2943
Total	**1.9000e-003**	**1.7900e-003**	**0.0155**	**4.0000e-005**	**3.8100e-003**	**3.0000e-005**	**3.8400e-003**	**1.0100e-003**	**2.0000e-005**	**1.0400e-003**	**0.0000**	**3.2913**	**3.2913**	**1.2000e-004**	**0.0000**	**3.2943**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.3975	0.0000	0.3975	0.2185	0.0000	0.2185	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0252	0.4375	0.5039	8.4000e-004		0.0219	0.0219		0.0215	0.0215	0.0000	75.1710	75.1710	0.0238	0.0000	75.7656
Total	**0.0252**	**0.4375**	**0.5039**	**8.4000e-004**	**0.3975**	**0.0219**	**0.4193**	**0.2185**	**0.0215**	**0.2400**	**0.0000**	**75.1710**	**75.1710**	**0.0238**	**0.0000**	**75.7656**

3.2 Site Preparation - 2019

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.9000e-003	1.7900e-003	0.0155	4.0000e-005	3.8100e-003	3.0000e-005	3.8400e-003	1.0100e-003	2.0000e-005	1.0400e-003	0.0000	3.2913	3.2913	1.2000e-004	0.0000	3.2943
Total	**1.9000e-003**	**1.7900e-003**	**0.0155**	**4.0000e-005**	**3.8100e-003**	**3.0000e-005**	**3.8400e-003**	**1.0100e-003**	**2.0000e-005**	**1.0400e-003**	**0.0000**	**3.2913**	**3.2913**	**1.2000e-004**	**0.0000**	**3.2943**

3.3 Grading - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.2820	0.0000	0.2820	0.1169	0.0000	0.1169	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.1540	1.7719	1.0847	2.0200e-003		0.0774	0.0774		0.0712	0.0712	0.0000	181.0293	181.0293	0.0573	0.0000	182.4612
Total	**0.1540**	**1.7719**	**1.0847**	**2.0200e-003**	**0.2820**	**0.0774**	**0.3594**	**0.1169**	**0.0712**	**0.1881**	**0.0000**	**181.0293**	**181.0293**	**0.0573**	**0.0000**	**182.4612**

3.3 Grading - 2019

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	6.6000e-004	0.0227	4.9100e-003	5.0000e-005	1.1000e-003	1.3000e-004	1.2300e-003	3.0000e-004	1.3000e-004	4.3000e-004	0.0000	5.0052	5.0052	2.8000e-004	0.0000	5.0123
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.1200e-003	2.9300e-003	0.0254	6.0000e-005	6.2600e-003	4.0000e-005	6.3000e-003	1.6600e-003	4.0000e-005	1.7000e-003	0.0000	5.4023	5.4023	2.0000e-004	0.0000	5.4074
Total	**3.7800e-003**	**0.0256**	**0.0303**	**1.1000e-004**	**7.3600e-003**	**1.7000e-004**	**7.5300e-003**	**1.9600e-003**	**1.7000e-004**	**2.1300e-003**	**0.0000**	**10.4075**	**10.4075**	**4.8000e-004**	**0.0000**	**10.4196**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.2820	0.0000	0.2820	0.1169	0.0000	0.1169	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0530	0.9876	1.1926	2.0200e-003		0.0430	0.0430		0.0427	0.0427	0.0000	181.0291	181.0291	0.0573	0.0000	182.4610
Total	**0.0530**	**0.9876**	**1.1926**	**2.0200e-003**	**0.2820**	**0.0430**	**0.3250**	**0.1169**	**0.0427**	**0.1596**	**0.0000**	**181.0291**	**181.0291**	**0.0573**	**0.0000**	**182.4610**

3.3 Grading - 2019

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	6.6000e-004	0.0227	4.9100e-003	5.0000e-005	1.1000e-003	1.3000e-004	1.2300e-003	3.0000e-004	1.3000e-004	4.3000e-004	0.0000	5.0052	5.0052	2.8000e-004	0.0000	5.0123
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.1200e-003	2.9300e-003	0.0254	6.0000e-005	6.2600e-003	4.0000e-005	6.3000e-003	1.6600e-003	4.0000e-005	1.7000e-003	0.0000	5.4023	5.4023	2.0000e-004	0.0000	5.4074
Total	**3.7800e-003**	**0.0256**	**0.0303**	**1.1000e-004**	**7.3600e-003**	**1.7000e-004**	**7.5300e-003**	**1.9600e-003**	**1.7000e-004**	**2.1300e-003**	**0.0000**	**10.4075**	**10.4075**	**4.8000e-004**	**0.0000**	**10.4196**

3.4 Building Construction - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.2533	2.2927	2.0134	3.2200e-003		0.1335	0.1335		0.1255	0.1255	0.0000	276.7739	276.7739	0.0675	0.0000	278.4620
Total	**0.2533**	**2.2927**	**2.0134**	**3.2200e-003**		**0.1335**	**0.1335**		**0.1255**	**0.1255**	**0.0000**	**276.7739**	**276.7739**	**0.0675**	**0.0000**	**278.4620**

3.4 Building Construction - 2020

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0271	0.7588	0.2299	1.4500e-003	0.0331	4.1400e-003	0.0373	9.5700e-003	3.9600e-003	0.0135	0.0000	140.2416	140.2416	8.4400e-003	0.0000	140.4524
Worker	0.1124	0.1021	0.8837	2.2900e-003	0.2474	1.6200e-003	0.2490	0.0657	1.5000e-003	0.0672	0.0000	206.9295	206.9295	6.8100e-003	0.0000	207.0998
Total	**0.1395**	**0.8609**	**1.1136**	**3.7400e-003**	**0.2805**	**5.7600e-003**	**0.2862**	**0.0753**	**5.4600e-003**	**0.0808**	**0.0000**	**347.1710**	**347.1710**	**0.0153**	**0.0000**	**347.5522**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.2257	2.2160	2.0263	3.2200e-003		0.1311	0.1311		0.1253	0.1253	0.0000	276.7736	276.7736	0.0675	0.0000	278.4617
Total	**0.2257**	**2.2160**	**2.0263**	**3.2200e-003**		**0.1311**	**0.1311**		**0.1253**	**0.1253**	**0.0000**	**276.7736**	**276.7736**	**0.0675**	**0.0000**	**278.4617**

3.4 Building Construction - 2020

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0271	0.7588	0.2299	1.4500e-003	0.0331	4.1400e-003	0.0373	9.5700e-003	3.9600e-003	0.0135	0.0000	140.2416	140.2416	8.4400e-003	0.0000	140.4524
Worker	0.1124	0.1021	0.8837	2.2900e-003	0.2474	1.6200e-003	0.2490	0.0657	1.5000e-003	0.0672	0.0000	206.9295	206.9295	6.8100e-003	0.0000	207.0998
Total	**0.1395**	**0.8609**	**1.1136**	**3.7400e-003**	**0.2805**	**5.7600e-003**	**0.2862**	**0.0753**	**5.4600e-003**	**0.0808**	**0.0000**	**347.1710**	**347.1710**	**0.0153**	**0.0000**	**347.5522**

3.4 Building Construction - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.2481	2.2749	2.1631	3.5100e-003		0.1251	0.1251		0.1176	0.1176	0.0000	302.2867	302.2867	0.0729	0.0000	304.1099
Total	**0.2481**	**2.2749**	**2.1631**	**3.5100e-003**		**0.1251**	**0.1251**		**0.1176**	**0.1176**	**0.0000**	**302.2867**	**302.2867**	**0.0729**	**0.0000**	**304.1099**

3.4 Building Construction - 2021

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0243	0.7578	0.2220	1.5800e-003	0.0362	2.1600e-003	0.0383	0.0105	2.0700e-003	0.0125	0.0000	152.2328	152.2328	8.9800e-003	0.0000	152.4573
Worker	0.1144	0.0997	0.8747	2.4200e-003	0.2701	1.7200e-003	0.2718	0.0718	1.5800e-003	0.0734	0.0000	218.2758	218.2758	6.6100e-003	0.0000	218.4410
Total	**0.1386**	**0.8574**	**1.0967**	**4.0000e-003**	**0.3063**	**3.8800e-003**	**0.3102**	**0.0822**	**3.6500e-003**	**0.0859**	**0.0000**	**370.5086**	**370.5086**	**0.0156**	**0.0000**	**370.8983**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.2229	2.2384	2.1816	3.5100e-003		0.1273	0.1273		0.1218	0.1218	0.0000	302.2863	302.2863	0.0729	0.0000	304.1095
Total	**0.2229**	**2.2384**	**2.1816**	**3.5100e-003**		**0.1273**	**0.1273**		**0.1218**	**0.1218**	**0.0000**	**302.2863**	**302.2863**	**0.0729**	**0.0000**	**304.1095**

3.4 Building Construction - 2021

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0243	0.7578	0.2220	1.5800e-003	0.0362	2.1600e-003	0.0383	0.0105	2.0700e-003	0.0125	0.0000	152.2328	152.2328	8.9800e-003	0.0000	152.4573
Worker	0.1144	0.0997	0.8747	2.4200e-003	0.2701	1.7200e-003	0.2718	0.0718	1.5800e-003	0.0734	0.0000	218.2758	218.2758	6.6100e-003	0.0000	218.4410
Total	**0.1386**	**0.8574**	**1.0967**	**4.0000e-003**	**0.3063**	**3.8800e-003**	**0.3102**	**0.0822**	**3.6500e-003**	**0.0859**	**0.0000**	**370.5086**	**370.5086**	**0.0156**	**0.0000**	**370.8983**

3.4 Building Construction - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0350	0.3201	0.3355	5.5000e-004		0.0166	0.0166		0.0156	0.0156	0.0000	47.5037	47.5037	0.0114	0.0000	47.7882
Total	**0.0350**	**0.3201**	**0.3355**	**5.5000e-004**		**0.0166**	**0.0166**		**0.0156**	**0.0156**	**0.0000**	**47.5037**	**47.5037**	**0.0114**	**0.0000**	**47.7882**

3.4 Building Construction - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	3.5300e-003	0.1131	0.0322	2.5000e-004	5.6800e-003	3.0000e-004	5.9800e-003	1.6400e-003	2.9000e-004	1.9300e-003	0.0000	23.7511	23.7511	1.3900e-003	0.0000	23.7859
Worker	0.0169	0.0141	0.1259	3.7000e-004	0.0424	2.6000e-004	0.0427	0.0113	2.4000e-004	0.0115	0.0000	33.0629	33.0629	9.3000e-004	0.0000	33.0862
Total	**0.0204**	**0.1272**	**0.1581**	**6.2000e-004**	**0.0481**	**5.6000e-004**	**0.0487**	**0.0129**	**5.3000e-004**	**0.0135**	**0.0000**	**56.8140**	**56.8140**	**2.3200e-003**	**0.0000**	**56.8721**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0318	0.3222	0.3392	5.5000e-004		0.0177	0.0177		0.0170	0.0170	0.0000	47.5036	47.5036	0.0114	0.0000	47.7881
Total	**0.0318**	**0.3222**	**0.3392**	**5.5000e-004**		**0.0177**	**0.0177**		**0.0170**	**0.0170**	**0.0000**	**47.5036**	**47.5036**	**0.0114**	**0.0000**	**47.7881**

3.4 Building Construction - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	3.5300e-003	0.1131	0.0322	2.5000e-004	5.6800e-003	3.0000e-004	5.9800e-003	1.6400e-003	2.9000e-004	1.9300e-003	0.0000	23.7511	23.7511	1.3900e-003	0.0000	23.7859
Worker	0.0169	0.0141	0.1259	3.7000e-004	0.0424	2.6000e-004	0.0427	0.0113	2.4000e-004	0.0115	0.0000	33.0629	33.0629	9.3000e-004	0.0000	33.0862
Total	**0.0204**	**0.1272**	**0.1581**	**6.2000e-004**	**0.0481**	**5.6000e-004**	**0.0487**	**0.0129**	**5.3000e-004**	**0.0135**	**0.0000**	**56.8140**	**56.8140**	**2.3200e-003**	**0.0000**	**56.8721**

3.5 Paving - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0691	0.7106	0.8059	1.2500e-003		0.0373	0.0373		0.0343	0.0343	0.0000	110.1291	110.1291	0.0356	0.0000	111.0196
Paving	5.7500e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0748**	**0.7106**	**0.8059**	**1.2500e-003**		**0.0373**	**0.0373**		**0.0343**	**0.0343**	**0.0000**	**110.1291**	**110.1291**	**0.0356**	**0.0000**	**111.0196**

3.5 Paving - 2021

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.3600e-003	2.9300e-003	0.0257	7.0000e-005	7.9400e-003	5.0000e-005	7.9900e-003	2.1100e-003	5.0000e-005	2.1600e-003	0.0000	6.4182	6.4182	1.9000e-004	0.0000	6.4230
Total	**3.3600e-003**	**2.9300e-003**	**0.0257**	**7.0000e-005**	**7.9400e-003**	**5.0000e-005**	**7.9900e-003**	**2.1100e-003**	**5.0000e-005**	**2.1600e-003**	**0.0000**	**6.4182**	**6.4182**	**1.9000e-004**	**0.0000**	**6.4230**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0691	0.7106	0.8059	1.2500e-003		0.0373	0.0373		0.0343	0.0343	0.0000	110.1290	110.1290	0.0356	0.0000	111.0195
Paving	5.7500e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0748**	**0.7106**	**0.8059**	**1.2500e-003**		**0.0373**	**0.0373**		**0.0343**	**0.0343**	**0.0000**	**110.1290**	**110.1290**	**0.0356**	**0.0000**	**111.0195**

3.5 Paving - 2021

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.3600e-003	2.9300e-003	0.0257	7.0000e-005	7.9400e-003	5.0000e-005	7.9900e-003	2.1100e-003	5.0000e-005	2.1600e-003	0.0000	6.4182	6.4182	1.9000e-004	0.0000	6.4230
Total	**3.3600e-003**	**2.9300e-003**	**0.0257**	**7.0000e-005**	**7.9400e-003**	**5.0000e-005**	**7.9900e-003**	**2.1100e-003**	**5.0000e-005**	**2.1600e-003**	**0.0000**	**6.4182**	**6.4182**	**1.9000e-004**	**0.0000**	**6.4230**

3.6 Architectural Coating - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.5464					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0120	0.0840	0.1000	1.6000e-004		5.1800e-003	5.1800e-003		5.1800e-003	5.1800e-003	0.0000	14.0429	14.0429	9.6000e-004	0.0000	14.0670
Total	**0.5584**	**0.0840**	**0.1000**	**1.6000e-004**		**5.1800e-003**	**5.1800e-003**		**5.1800e-003**	**5.1800e-003**	**0.0000**	**14.0429**	**14.0429**	**9.6000e-004**	**0.0000**	**14.0670**

3.6 Architectural Coating - 2021

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	9.6400e-003	8.4000e-003	0.0737	2.0000e-004	0.0228	1.4000e-004	0.0229	6.0500e-003	1.3000e-004	6.1800e-003	0.0000	18.3987	18.3987	5.6000e-004	0.0000	18.4127
Total	**9.6400e-003**	**8.4000e-003**	**0.0737**	**2.0000e-004**	**0.0228**	**1.4000e-004**	**0.0229**	**6.0500e-003**	**1.3000e-004**	**6.1800e-003**	**0.0000**	**18.3987**	**18.3987**	**5.6000e-004**	**0.0000**	**18.4127**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.5464					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0120	0.0840	0.1000	1.6000e-004		5.1800e-003	5.1800e-003		5.1800e-003	5.1800e-003	0.0000	14.0429	14.0429	9.6000e-004	0.0000	14.0670
Total	**0.5584**	**0.0840**	**0.1000**	**1.6000e-004**		**5.1800e-003**	**5.1800e-003**		**5.1800e-003**	**5.1800e-003**	**0.0000**	**14.0429**	**14.0429**	**9.6000e-004**	**0.0000**	**14.0670**

3.6 Architectural Coating - 2021

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	9.6400e-003	8.4000e-003	0.0737	2.0000e-004	0.0228	1.4000e-004	0.0229	6.0500e-003	1.3000e-004	6.1800e-003	0.0000	18.3987	18.3987	5.6000e-004	0.0000	18.4127
Total	**9.6400e-003**	**8.4000e-003**	**0.0737**	**2.0000e-004**	**0.0228**	**1.4000e-004**	**0.0229**	**6.0500e-003**	**1.3000e-004**	**6.1800e-003**	**0.0000**	**18.3987**	**18.3987**	**5.6000e-004**	**0.0000**	**18.4127**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

Increase Density

Increase Diversity

Increase Transit Accessibility

Integrate Below Market Rate Housing

Improve Pedestrian Network

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.5764	2.1237	5.3941	0.0138	1.2118	0.0147	1.2265	0.3244	0.0138	0.3382	0.0000	1,258.3677	1,258.3677	0.0562	0.0000	1,259.7714
Unmitigated	0.5930	2.2575	5.7903	0.0153	1.3600	0.0162	1.3762	0.3641	0.0152	0.3793	0.0000	1,397.2599	1,397.2599	0.0605	0.0000	1,398.7729

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
City Park	0.00	0.00	0.00		
Congregate Care (Assisted Living)	380.86	305.80	339.16	925,584	824,696
Other Asphalt Surfaces	0.00	0.00	0.00		
Parking Lot	0.00	0.00	0.00		
Regional Shopping Center	1,933.03	2,262.14	1142.61	2,695,948	2,402,090
Total	2,313.89	2,567.94	1,481.77	3,621,533	3,226,786

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
City Park	13.00	5.00	5.00	33.00	48.00	19.00	66	28	6
Congregate Care (Assisted	13.00	5.00	5.00	35.80	21.00	43.20	86	11	3
Other Asphalt Surfaces	13.00	5.00	5.00	0.00	0.00	0.00	0	0	0
Parking Lot	13.00	5.00	5.00	0.00	0.00	0.00	0	0	0
Regional Shopping Center	13.00	5.00	5.00	16.30	64.70	19.00	54	35	11

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
City Park	0.575581	0.029595	0.198288	0.120539	0.026172	0.006482	0.012911	0.019591	0.002354	0.001214	0.005068	0.000784	0.001422
Congregate Care (Assisted Living)	0.575581	0.029595	0.198288	0.120539	0.026172	0.006482	0.012911	0.019591	0.002354	0.001214	0.005068	0.000784	0.001422
Other Asphalt Surfaces	0.575581	0.029595	0.198288	0.120539	0.026172	0.006482	0.012911	0.019591	0.002354	0.001214	0.005068	0.000784	0.001422
Parking Lot	0.575581	0.029595	0.198288	0.120539	0.026172	0.006482	0.012911	0.019591	0.002354	0.001214	0.005068	0.000784	0.001422
Regional Shopping Center	0.575581	0.029595	0.198288	0.120539	0.026172	0.006482	0.012911	0.019591	0.002354	0.001214	0.005068	0.000784	0.001422

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	231.2245	231.2245	0.0107	2.3200e-003	232.1806
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	231.2245	231.2245	0.0107	2.3200e-003	232.1806
NaturalGas Mitigated	7.0500e-003	0.0606	0.0280	3.8000e-004		4.8700e-003	4.8700e-003		4.8700e-003	4.8700e-003	0.0000	69.8090	69.8090	1.3400e-003	1.2800e-003	70.2238
NaturalGas Unmitigated	7.0500e-003	0.0606	0.0280	3.8000e-004		4.8700e-003	4.8700e-003		4.8700e-003	4.8700e-003	0.0000	69.8090	69.8090	1.3400e-003	1.2800e-003	70.2238

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
City Park	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Congregate Care (Assisted Living)	1.20088e+006	6.4800e-003	0.0553	0.0236	3.5000e-004		4.4700e-003	4.4700e-003		4.4700e-003	4.4700e-003	0.0000	64.0837	64.0837	1.2300e-003	1.1700e-003	64.4645
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Regional Shopping Center	107288	5.8000e-004	5.2600e-003	4.4200e-003	3.0000e-005		4.0000e-004	4.0000e-004		4.0000e-004	4.0000e-004	0.0000	5.7253	5.7253	1.1000e-004	1.0000e-004	5.7593
Total		**7.0600e-003**	**0.0606**	**0.0280**	**3.8000e-004**		**4.8700e-003**	**4.8700e-003**		**4.8700e-003**	**4.8700e-003**	**0.0000**	**69.8090**	**69.8090**	**1.3400e-003**	**1.2700e-003**	**70.2238**

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
City Park	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Congregate Care (Assisted Living)	1.20088e+006	6.4800e-003	0.0553	0.0236	3.5000e-004		4.4700e-003	4.4700e-003		4.4700e-003	4.4700e-003	0.0000	64.0837	64.0837	1.2300e-003	1.1700e-003	64.4645
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Regional Shopping Center	107288	5.8000e-004	5.2600e-003	4.4200e-003	3.0000e-005		4.0000e-004	4.0000e-004		4.0000e-004	4.0000e-004	0.0000	5.7253	5.7253	1.1000e-004	1.0000e-004	5.7593
Total		**7.0600e-003**	**0.0606**	**0.0280**	**3.8000e-004**		**4.8700e-003**	**4.8700e-003**		**4.8700e-003**	**4.8700e-003**	**0.0000**	**69.8090**	**69.8090**	**1.3400e-003**	**1.2700e-003**	**70.2238**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
City Park	0	0.0000	0.0000	0.0000	0.0000
Congregate Care (Assisted Living)	496546	112.4750	5.1800e-003	1.1300e-003	112.9401
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Parking Lot	40320	9.1331	4.2000e-004	9.0000e-005	9.1709
Regional Shopping Center	483926	109.6164	5.0500e-003	1.1000e-003	110.0697
Total		**231.2245**	**0.0107**	**2.3200e-003**	**232.1806**

5.3 Energy by Land Use - Electricity

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
City Park	0	0.0000	0.0000	0.0000	0.0000
Congregate Care (Assisted Living)	496546	112.4750	5.1800e-003	1.1300e-003	112.9401
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Parking Lot	40320	9.1331	4.2000e-004	9.0000e-005	9.1709
Regional Shopping Center	483926	109.6164	5.0500e-003	1.1000e-003	110.0697
Total		**231.2245**	**0.0107**	**2.3200e-003**	**232.1806**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.8227	0.0219	1.8999	1.0000e-004		0.0105	0.0105		0.0105	0.0105	0.0000	3.1018	3.1018	3.0100e-003	0.0000	3.1771
Unmitigated	0.8227	0.0219	1.8999	1.0000e-004		0.0105	0.0105		0.0105	0.0105	0.0000	3.1018	3.1018	3.0100e-003	0.0000	3.1771

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0546					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.7103					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.0577	0.0219	1.8999	1.0000e-004		0.0105	0.0105		0.0105	0.0105	0.0000	3.1018	3.1018	3.0100e-003	0.0000	3.1771
Total	**0.8227**	**0.0219**	**1.8999**	**1.0000e-004**		**0.0105**	**0.0105**		**0.0105**	**0.0105**	**0.0000**	**3.1018**	**3.1018**	**3.0100e-003**	**0.0000**	**3.1771**

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0546					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.7103					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.0577	0.0219	1.8999	1.0000e-004		0.0105	0.0105		0.0105	0.0105	0.0000	3.1018	3.1018	3.0100e-003	0.0000	3.1771
Total	**0.8227**	**0.0219**	**1.8999**	**1.0000e-004**		**0.0105**	**0.0105**		**0.0105**	**0.0105**	**0.0000**	**3.1018**	**3.1018**	**3.0100e-003**	**0.0000**	**3.1771**

7.0 Water Detail

7.1 Mitigation Measures Water

Use Reclaimed Water

Install Low Flow Bathroom Faucet

Install Low Flow Kitchen Faucet

Install Low Flow Toilet

Install Low Flow Shower

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	16.8716	0.2595	6.2500e-003	25.2218
Unmitigated	23.0134	0.3244	7.8400e-003	33.4591

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
City Park	0 / 1.94211	1.5397	7.0000e-005	2.0000e-005	1.5461
Congregate Care (Assisted Living)	7.24513 / 5.70948	15.7052	0.2367	5.7100e-003	23.3239
Other Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Regional Shopping Center	2.68261 / 2.05523	5.7685	0.0876	2.1100e-003	8.5892
Total		**23.0134**	**0.3244**	**7.8400e-003**	**33.4591**

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
City Park	0 / 1.16527	0.9238	4.0000e-005	1.0000e-005	0.9277
Congregate Care (Assisted Living)	5.7961 / 3.42569	11.6589	0.1893	4.5600e-003	17.7501
Other Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Regional Shopping Center	2.14609 / 1.23314	4.2889	0.0701	1.6900e-003	6.5441
Total		**16.8716**	**0.2595**	**6.2600e-003**	**25.2218**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	26.5695	1.5702	0.0000	65.8248
Unmitigated	26.5695	1.5702	0.0000	65.8248

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
City Park	0.11	0.0223	1.3200e-003	0.0000	0.0553
Congregate Care (Assisted Living)	95.13	19.3105	1.1412	0.0000	47.8410
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Regional Shopping Center	35.65	7.2366	0.4277	0.0000	17.9284
Total		**26.5695**	**1.5702**	**0.0000**	**65.8248**

8.2 Waste by Land Use

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
City Park	0.11	0.0223	1.3200e-003	0.0000	0.0553
Congregate Care (Assisted Living)	95.13	19.3105	1.1412	0.0000	47.8410
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Regional Shopping Center	35.65	7.2366	0.4277	0.0000	17.9284
Total		**26.5695**	**1.5702**	**0.0000**	**65.8248**

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

N2O Operational GHG Emission Mobile Calculations

Project Code & Title: 19-07096,Tank Farm Road Assisted Living Facility and Retail Project

Vehicle Population Breakdown*	
232825	Gasoline vehicles
12777	Diesel vehicles
94.8%	Gasoline vehicle %
5.2%	Diesel vehicle %

VMT per Vehicle Type	
3226786	Project VMT (CalEEMod output)
3058923	Gasoline vehicle VMT
167863	Diesel vehicle VMT

Gasoline Vehicles	
94.8%	Gasoline vehicle %
2.12	Tons per year mobile NOX emissions (annual output in CalEEMod)
2.01	Gasoline vehicle tons per year NOX emissions
4.16%	Percentage to convert NOX emissions to N2O **
0.0838	Tons per year N2O emissions for gasoline vehicles
0.0760	Metric tons per year N2O emissions for gasoline vehicles

Diesel Vehicles	
0.3316	grams N2O per gallon of fuel for diesel vehicles**
17.26	Diesel average miles per gallon*
0.01921	grams per mile N2O for diesel vehicles
3224.2	grams per year N2O for diesel vehicles
0.0032242	Metric tons per year N2O emissions for diesel vehicles

CO2E Emissions from N2O	
0.0792	Metric tons per year from gasoline + diesel vehicles
298	GWP of N2O***
23.6	**CO2E emissions per year from N2O emissions from gasoline + diesel vehicles**

Sources
***Vehicle population source:** EMFAC2014 (v1.0.7) Emissions Inventory Region Type: District Region: San Luis Obispo Calendar Year: 2022 Season: Annual Vehicle Classification: EMFAC2011 Categories ****Methodology source:** EMFAC2011 Frequently Asked Questions https://www.arb.ca.gov/msei/emfac2011-faq.htm *****GWP source:** Intergovernmental Panel on Climate Change (IPCC). 2007. AR4 Climate Change 2007: The Physical Science Basis. Contrbution of Working Group I to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change.

45dB Acoustics
CONSULTANTS IN SOUND AND VIBRATION

David Lord, PhD dl@45dB.com
Sarah Taubitz, MSME st@45dB.com
(805) 704-8046
P.O. Box 1406
San Luis Obispo, CA 93406

October 31, 2017 Project 1758

RE:
Acoustical Assessment of Proposed
Residential & Commercial projects at
Northwest Corner, Tank Farm and Broad Street
San Luis Obispo, CA

Requested by:
NKT Commercial, LLC
684 Higuera St., Suite B
San Luis Obispo, CA 93423

1 Introduction

The subject of this assessment is the proposed development at the northwest corner of Tank Farm Road and Broad Street in San Luis Obispo, with regard to the potential impact of all surrounding noise sources.

Noise sources examined in this study are vehicular traffic along the two busy ground transportation corridors, as well as operations associated with the San Luis Obispo County Regional Airport. In addition, there are potential existing or future stationary noise sources from neighboring commercial activities along the south boundary of the site.

Existing sound levels were measured on the proposed site. SoundPLAN, an acoustic software sound level modeling tool, was used to generate sound level contours which were based on physical characteristics of the topography, measured sound level values, and traffic volume data.

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3 Location

The project is located north of Tank Farm Road and west of Broad Street. These two arterial streets are the primary sources ground transportation noise potentially impacting the site. The southwest corner of the site is closest to the San Luis Obispo County Regional Airport, a separate potential source of on-site noise. Another potential source of noise is the helicopter training flight path that passes over the site. Each of these potential sources of noise was observed and measured to evaluate their contribution to on-site noise levels. The general vicinity and configuration of the site are shown in Figure 1.

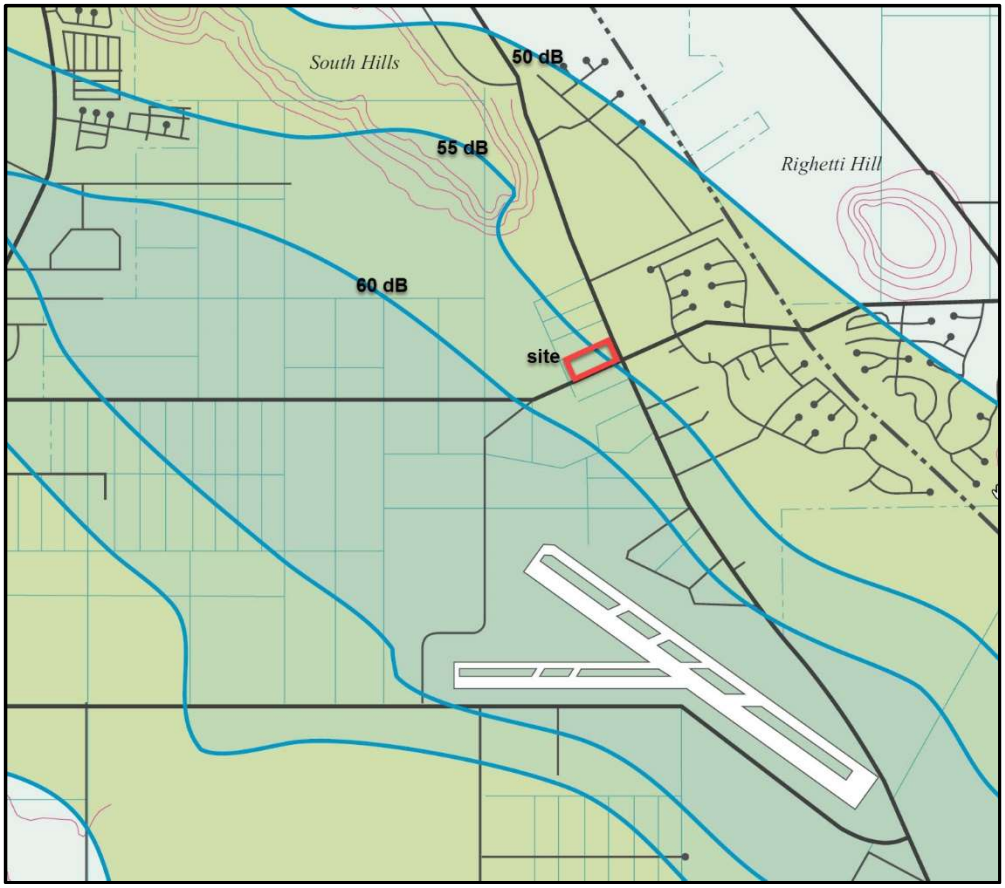
Figure 1: Vicinity map showing relationship of site to potential noise sources

3.1 Airport Sound Level

The California Airport Noise Regulations define airport noise compatibility as follows: "The level of noise acceptable to a reasonable person residing in the vicinity of an airport is established as a community noise equivalent level (CNEL) value of 65 dB for purposes of these regulations. This criterion level has been chosen for reasonable persons residing in urban residential areas where houses are of typical California construction and may have windows partially open. It has been selected with reference to speech, sleep and community reaction."

It is important to understand, however, that the compatibility criterion (i.e., 65 dB CNEL) identified in the Airport Noise regulations is only mandated for a few airports (less than a dozen) that have been formally declared to have a "noise problem", the regulations do not establish a mandatory criterion for evaluating the compatibility of proposed land use development around other airports. Airport noise contours in relation to the site are shown in Figure 2.

Figure 2: Airport Noise Contours in relation to the site, ALUP



The Equivalent Sound Level, abbreviated Leq, is a measure of the exposure resulting from the accumulation of sound levels over a particular period of interest; e.g., an hour, an eight-hour

school day, nighttime, or a full 24-hour day. The applicable period should always be identified or clearly understood when discussing the metric.

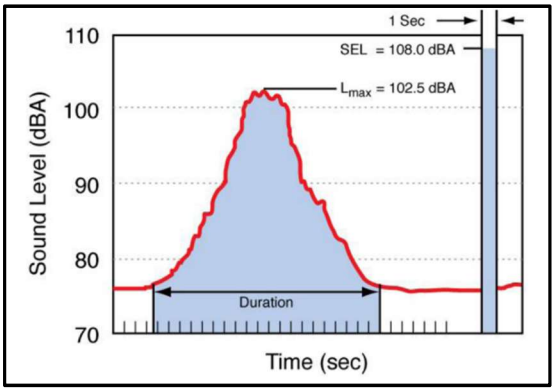
The Equivalent Sound Level may be thought of as a constant sound level over the period of interest that contains as much sound energy as the actual varying level. It is a way of assigning a single number to a time-varying sound level.

The Community Noise Equivalent Level (CNEL) is the Leq of the A-weighted noise level over a 24-hour period with a 5dB penalty applied to noise levels between 7 p.m. and 10 p.m. and a 10 dB penalty applied to noise levels between 10 p.m. and 7 a.m. CNEL is similar to Ldn. Sound levels resulting from aircraft operations at San Luis Obispo County Airport have been measured for this report as Leq sound equivalent level. The SEL or Sound Exposure Level, explained below is derived from Leq sound level data.

Refer to the Glossary at the end of this report for more definitions and terminology.

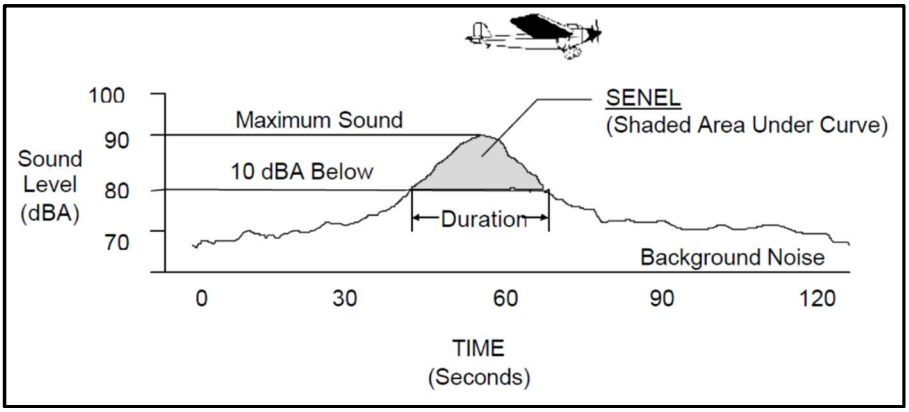
Sound Exposure Level: This metric is used to describe and measure aircraft flyover. The Sound Exposure Level, or SEL is a summation of the A-weighted sound energy over the entire duration of a noise event. SEL expresses the accumulated energy in terms of the one-second-long steady-state sound level that would contain the same amount of energy as the actual time-varying level. In simple terms, SEL "compresses" the energy into a single second. Figure 3 below depicts this compression:

Figure 3: Graphical depiction of a single event Sound Exposure Level



Single Event Noise Exposure Level, or SENEL: Caltrans Division of Aeronautics noise standards regulations require use of a measure called the Single Event Noise Exposure Level, or SENEL, to describe the cumulative noise exposure for an individual noise event, such as an aircraft flyover. SENEL is a very slight variation on SEL. Just like SEL, it is the one-second-long steady-state level that contains the same amount of energy as the actual time-varying level. However, unlike SEL, it is calculated only over the period when the level exceeds a selected threshold. Figure 4 illustrates the Single Event Noise Exposure Level.

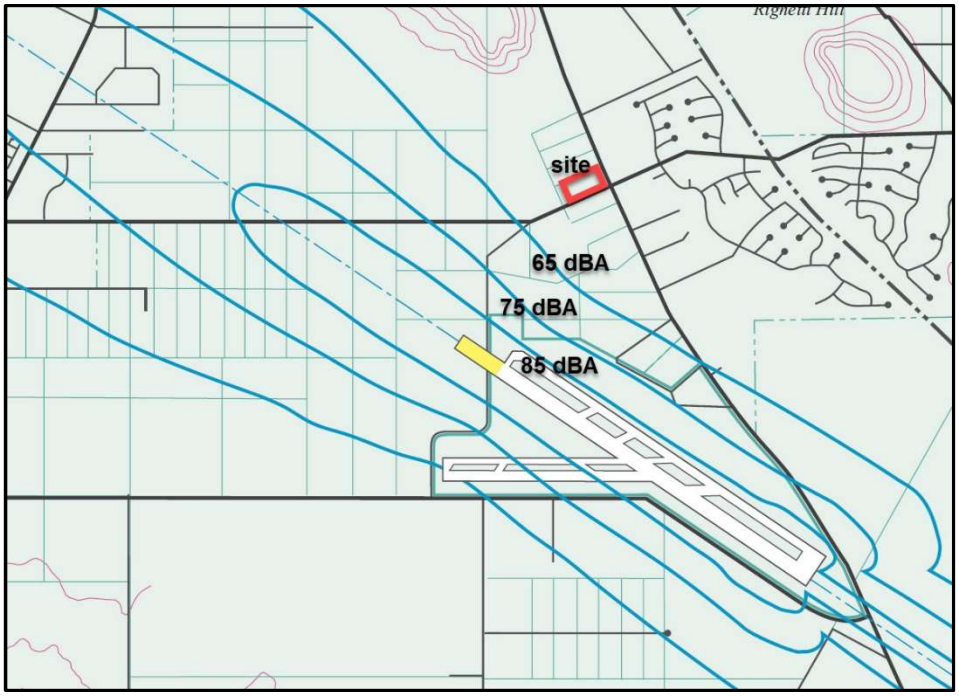
Figure 4: Description of Single Event Noise Exposure Level



Because of the normalization procedure, for most aircraft overflights, the SENEL is on the order of 7 to 12 dBA higher than the Lmax. SENEL measurements generally correlate well with the degree of annoyance generated by a noise event. The SENEL is also the mandated measure of noise for a single aircraft fly-over in California.

Single Event Noise contours for San Luis Obispo County Airport shown in the Airport Land Use Plan are shown Figure 5.

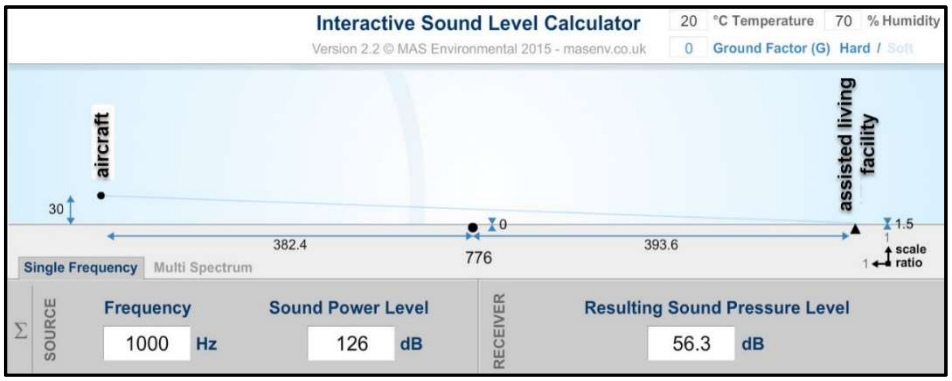
Figure 5: Single Event Noise Contours, ALUP



3.2 Calculated Airport SENEL

Calculated Single Event Noise Exposure Level for the loudest departing flight during a 24-hour measurement period is determined, based on the distance from the end-of-runway measurement point, illustrated by the graphic shown below in Figure 6. A departing jet aircraft was measured at 89 dB Lmax at the end of the runway; the SENEL is 103 dBA. Meanwhile, the edge of Assisted Living Facility on Tank Farm Road is 776 meters away and has an SENEL of 56.3 dBA.

Figure 6: Attenuation with distance from End of Runway to Assisted Living Facility



Along with single event metric SENEL, the 24-hour metric CNEL is also used to describe noise around airports. The U.S. Environmental Protection Agency identified CNEL as the most appropriate measure of evaluating airport noise based on the following considerations:

1. It is applicable to the evaluation of pervasive long-term noise in various defined areas and under various conditions over long periods of time.
2. It correlates well with known effects of noise on individuals and the public.
3. It is simple, practical, and accurate. In principal, it is useful for planning as well as for enforcement or monitoring purposes.
4. The required measurement equipment, with standard characteristics, is commercially available.
5. It is closely related to existing methods currently in use.

Representative values of CNEL in an urban environment range from a low of 40 to 45 dB in extremely quiet, isolated locations, to highs of 80 or 85 decibels immediately adjacent to a busy transportation route.

CNEL is typically in the range of 50 to 55 dB in a quiet suburban residential community and 60 to 65 decibels in an urban residential neighborhood.

3.1 Helicopter Flight Training

In general, helicopter operations at airports are a minor issue in terms of overall noise exposure, although they generate a more specific type of noise complaint due to the nature of helicopter flight paths at relatively low altitudes. An international helicopter flight training school operates

from San Luis Obispo County Regional Airport. In the year 2016, 22 pilots earned certification, which requires 70 to 200 hours of flight training for each pilot. During each year there are about 3,000 hours of helicopter operations in and around the airport. At an average 30 minutes per flight, this would potentially be 20 departures per day during 300 days of operation. Flight patterns during and after departure might mean that student training flights occasionally overfly the 760 Tank Farm Road site. The observed, estimated altitude of the overflights is about 500 to 1,000 feet above ground level.

The primary training aircraft is the Robinson model R22 helicopter, which is powered by a Lycoming O-320-A2B or a Lycoming O-320-B2C reciprocating engine. According to the type-certificate for this aircraft, a level overflight at an altitude of 492 ± 30 feet (150 ± 9 meters) creates a ground-level noise impact of 81 dB EPNL during the overflight. The duration of an overflight is typically 10 to 20 seconds, and may occur as many as ten times per day and only during daytime hours.

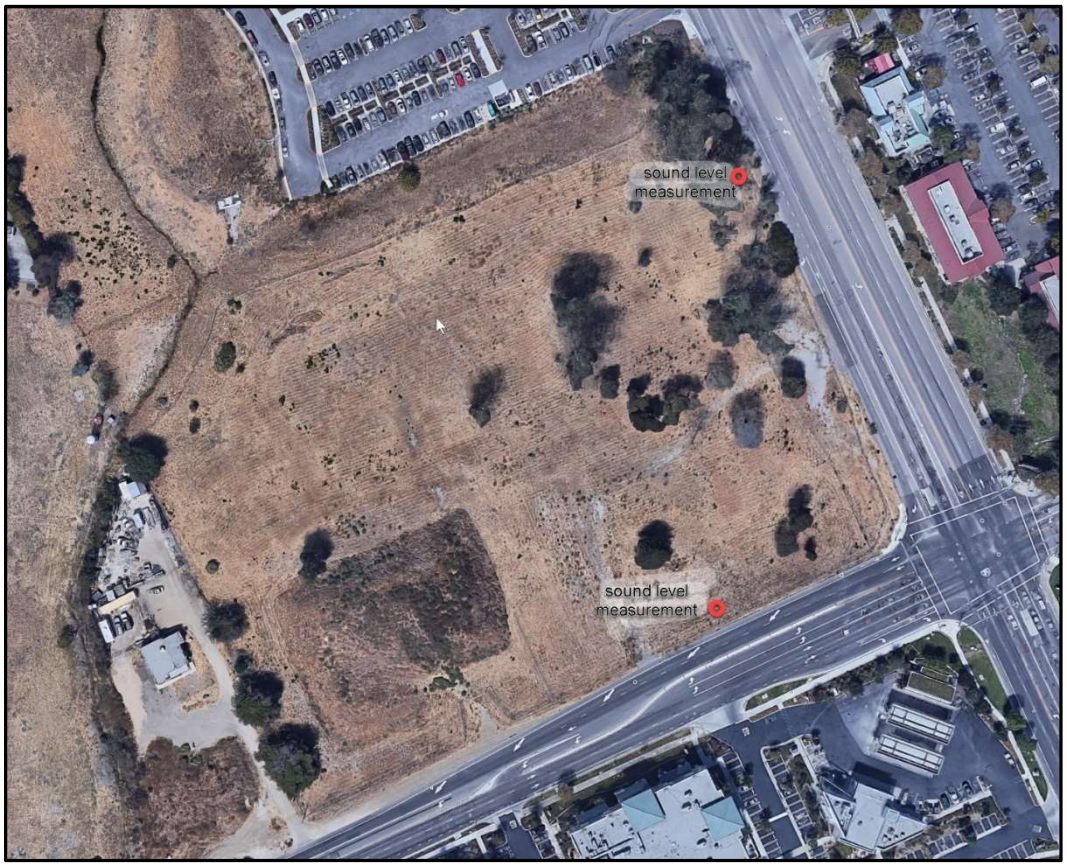
EPNL (effective perceived noise level) is a measurement value which recognizes the psychological annoyance of single event aircraft noise, taking into account duration of the overflight and predominant tonal components of the noise. The EPNL, specified in units of EPNdB, is a single number measure calculated from objective acoustic measurements in accordance with the procedures defined by the Federal Aviation Administration (FAA) and the American National Standards Institute (ANSI). EPNL is calculated from a time sequence of tone-adjusted perceived noise levels which are calculated from one-third octave band noise spectra. The tone adjustments are determined from one-third octave band spectra, by a procedure which estimates the extent of discrete frequency (tone) components from irregularities in the shape of the one-third octave band noise spectra.

Periodic helicopter overflights were observed and measured during this study, and are judged to have a less-than-significant impact on the site when duration and frequency are considered against the total background daytime wall of noise from Tank Farm Road and Broad Street traffic noise sources.

4 Sound Level Measurement

Sound level measurements were made on September 30, 2017 with two calibrated Type 1 Sound Level Meters. The two on-site sound level measurement locations are shown in Figure 7. Weather data including wind speed during the period of measurement is shown in Figure 23 in the Appendix to this report.

Figure 7: Location of on-site sound level measurements, September 30, 2017



The on-site sound level measurements are used to verify the SoundPLAN acoustic model of sound level contours across the site. The two stations plotted simultaneously yielded results that are superimposed and shown in Figure 8. Third Octave Band data was also collected. These data are important in evaluating sound transmission of traffic noise through building assemblies, such as walls, windows and roofs facing the noise source. Third Octave Band data for Tank Farm Road are shown in Figure 9. Third Octave Band data for Broad Street are shown in Figure 10.

Figure 8: Tank Farm Road and Broad Street simultaneous sound levels

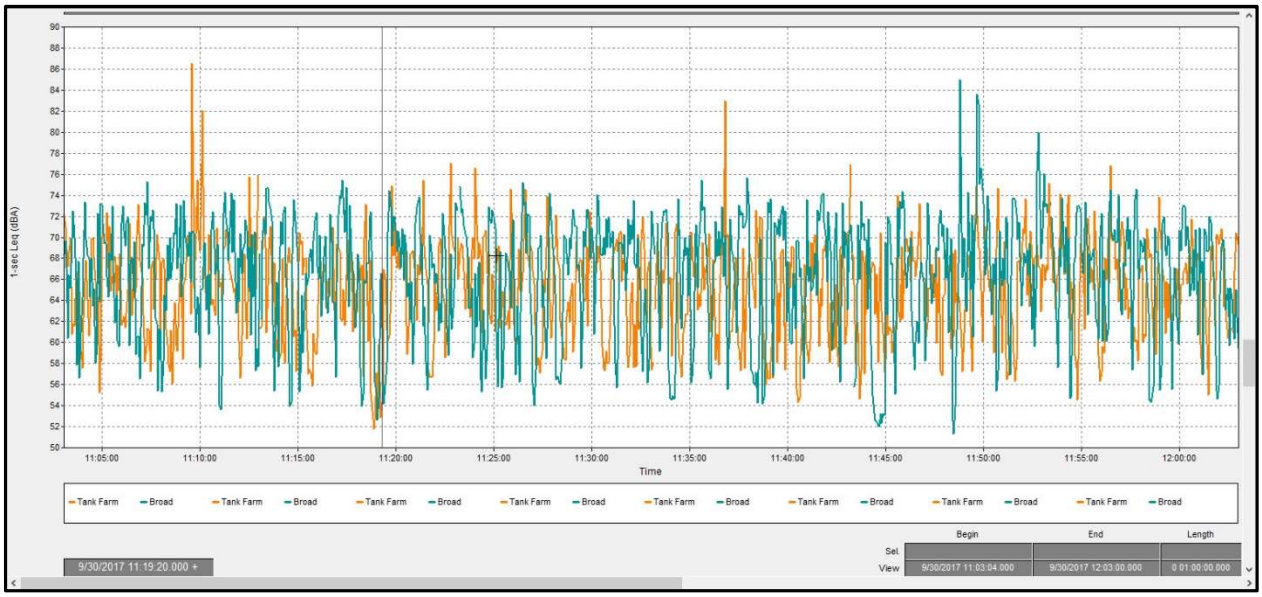


Figure 9: Third Octave Band sound levels, A-weighted, Tank Farm Road

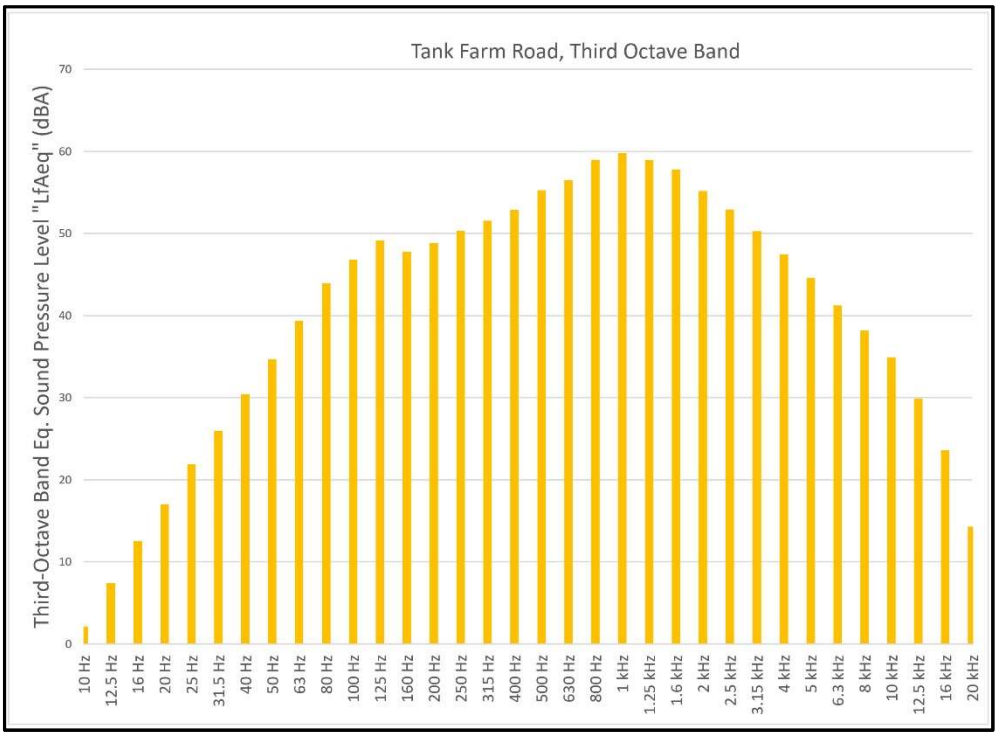
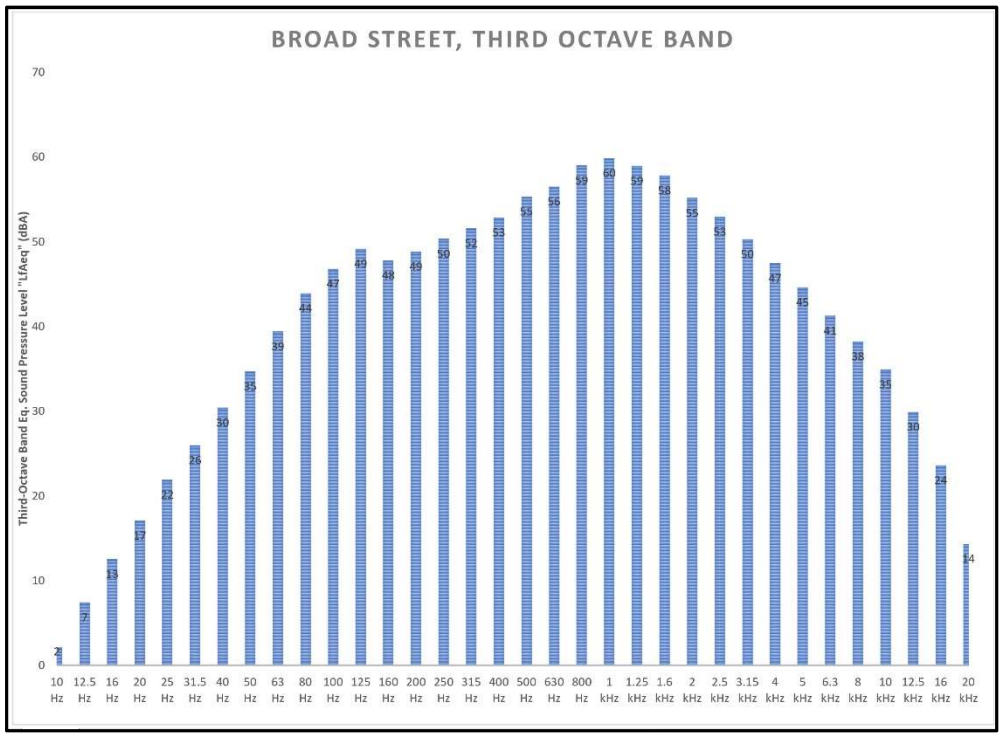


Figure 10: Third Octave Band sound levels, A-weighted, Broad Street



5 Site Sound Level Contours

A Sound Level Contour is a line on a map that represents equal levels of noise exposure. In this case, noise exposure is calculated and modeled as a CNEL value over a 24-hour period. SoundPLAN is the acoustics modeling software program used to calculate noise contours, based on topographic relationships of noise sources and noise receivers. Measured traffic flow and sound level values are used to verify the SoundPLAN generated contours. The following sound level contours depict sound level on the site under two major conditions.

Figure 11: Sound Level Contours at the northwest corner of Broad and Tank Farm Road with no project

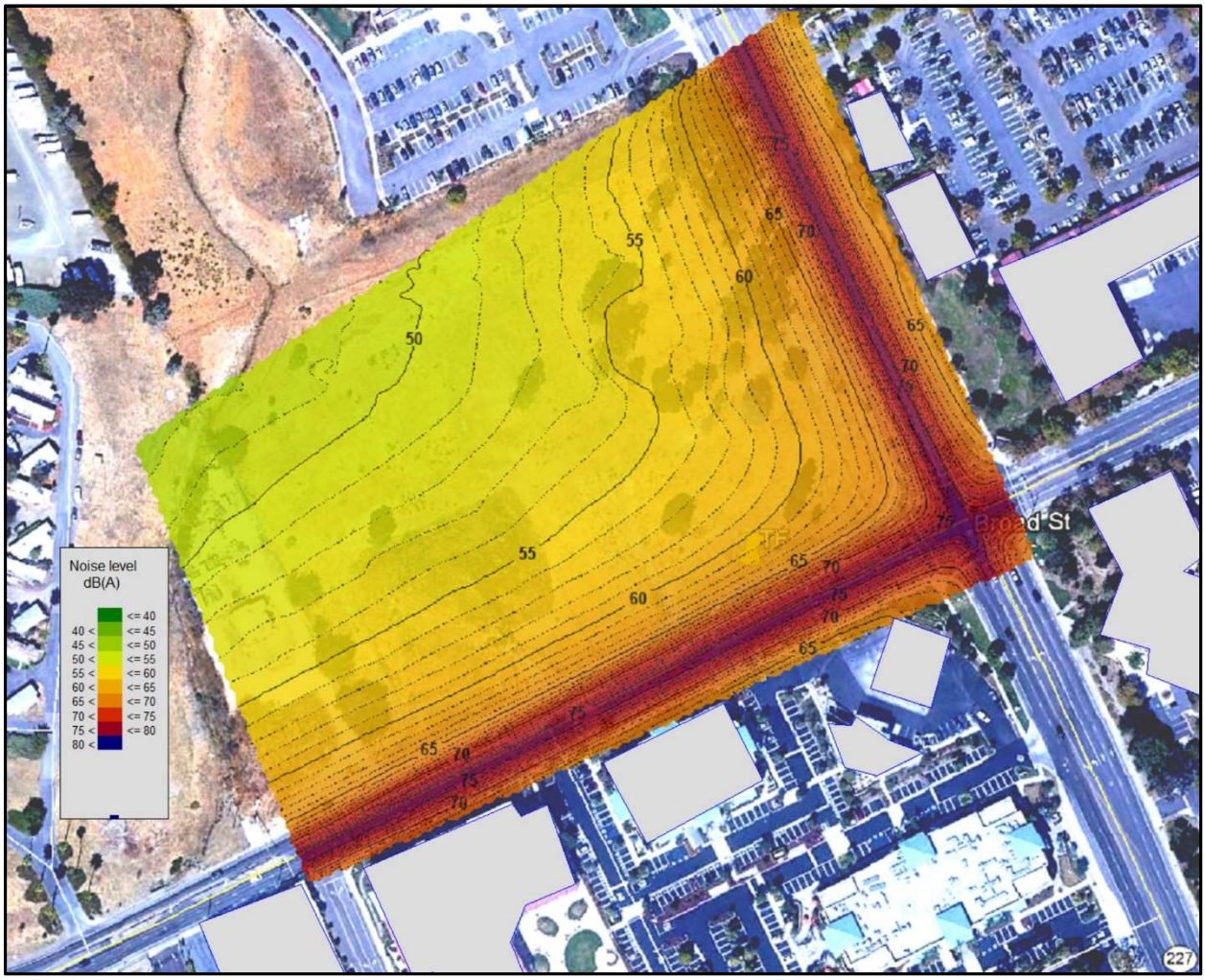


Figure 12: Sound Level Contours at NWC Broad and Tank Farm from Traffic Noise

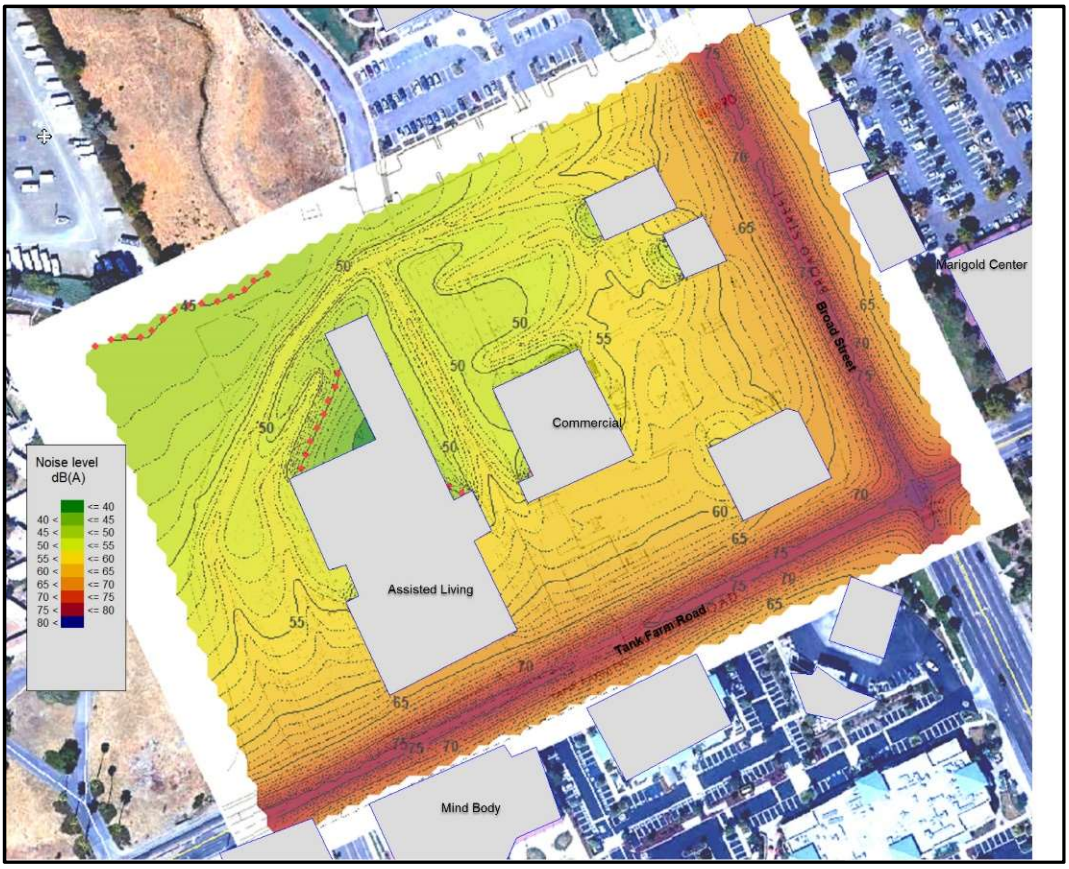
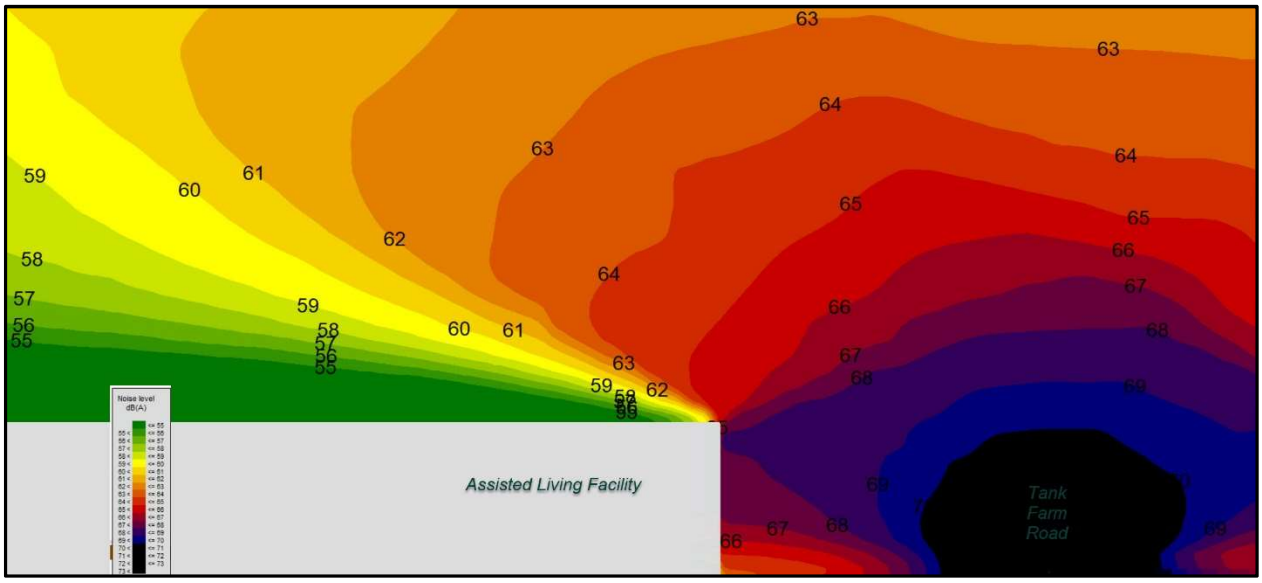


Figure 13**: Cross Section Noise Contours from Tank Farm Road toward Assisted Living Facility**



6 Contour Disparities

The difference between the sound level contours shown by the City in its 1996 Noise Element exhibit and the measured and modeled contemporaneous sound level contours presented in this report can be attributed to the difference in technology utilized in the 1990s and that used today.

In 1990, when the City's commissioned noise study was completed by Brown-Buntin Associates, the method for drawing sound level contours was based on a mathematical calculation of sound level at fixed and specific distances from the centerline of the roadway. The calculations ignored the effects of topography, shielding by buildings, ground surface variations, absorption and reflection. In 1990, sound level contours were drawn at a constant distance along major roads in the city that ended at the city limits. The calculations accommodated three vehicle types: autos, heavy trucks, and medium trucks at constant speeds. Described at the time, "the noise contour information prepared by the consultants and staff generally reflects conservative (worst case) assumptions, so significant noise exposure concerns are not likely to be omitted or understated."

Figure 14: 1990 Noise Contours from City of San Luis Obispo Noise Element of the General Plan

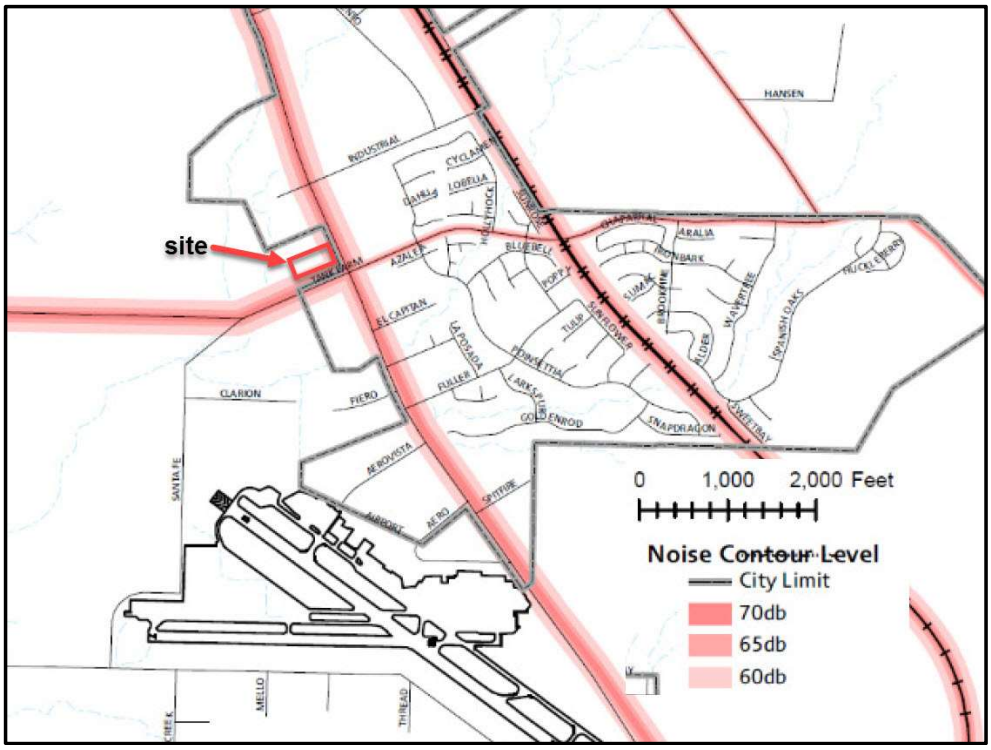
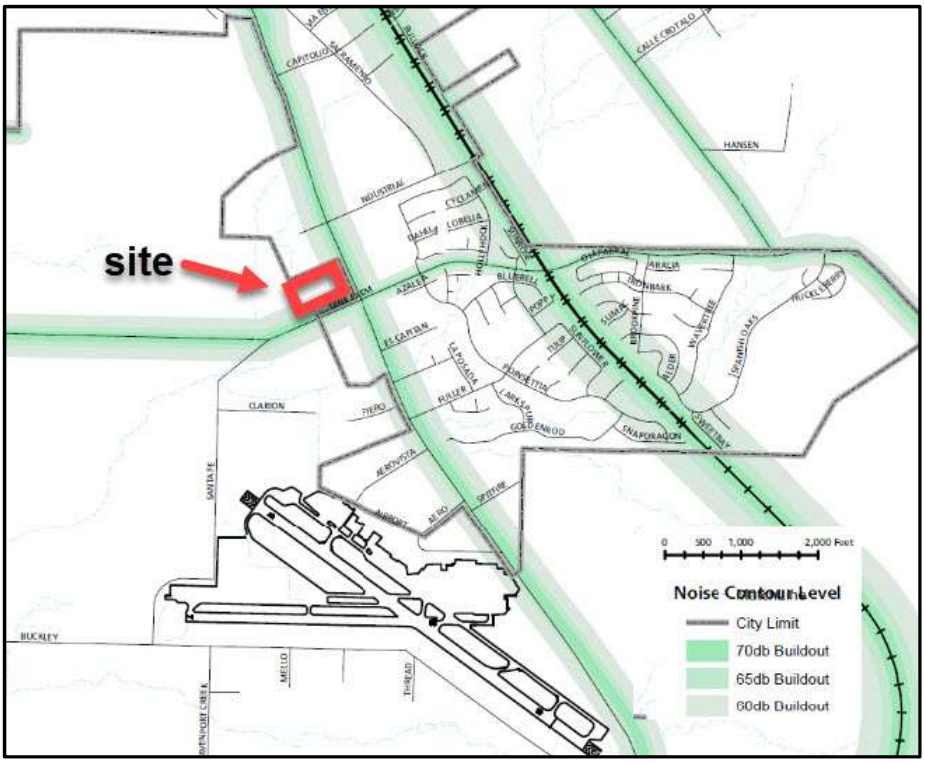


Figure 15: Buildout Noise Contours from City of San Luis Obispo Noise Element of the General Plan



In the present era, using contemporary sound level mapping techniques, there are measurable reflection and absorption effects and multiple variations due to terrain, ground absorption, reflection and blocking of sound by the built environment. Noise contours change as urban density and traffic patterns change. Contemporary sound level contours are an accurate and realistic representation of actual conditions.

7 Regulatory Setting

Noise is regulated at the federal, state and local levels through regulations, policies and/or local ordinances. Local policies are generally adaptations of federal and state guidelines, adjusted to prevailing local condition.

7.1 State Regulation

The State of California's *Guidelines for the Preparation and Content of Noise Element of the General Plan (1987)* makes reference to land use compatibility standards for community noise environments as developed by the California Department of Health Services, Office of Noise Control. Sound levels up to 65 Ldn or CNEL are determined to be normally acceptable for multi-family residential land uses. Sound levels up to 70 CNEL are normally acceptable for buildings containing professional offices or defined as business commercial.

All new Multi-Family housing must comply with California Code of Regulations (CCR)

Title 24. This is included in the California Building Code (CBC), Section 1207, "Sound Transmission" – which specifies the maximum level of interior noise due to exterior sources allowable for new residential developments.

7.2 Local Regulation

CCR Title 24 also defers to local requirements if applicable. The Noise Element of the City of San Luis Obispo General Plan specifies a maximum allowable interior noise level of 45 dBA Ldn for multi-family projects which is consistent with the above policies for interior noise, and also extends this requirement to new single-family dwellings. The City of San Luis Obispo Noise Element also states that 60 dBA Ldn or less is the exterior noise goal for outdoor common areas, defined as areas intended for the use and enjoyment of residents.

Guidelines for transportation noise exposure are contained in City of San Luis Obispo, General Plan Noise Element and Noise Guidebook (1996). The maximum noise exposure standards for noise-sensitive land uses are shown in Figure 16. The maximum noise exposure standards for noise-sensitive land uses due to traffic are shown in Figure 17.

Figure 16. Community Noise Exposure Ldn / CNEL

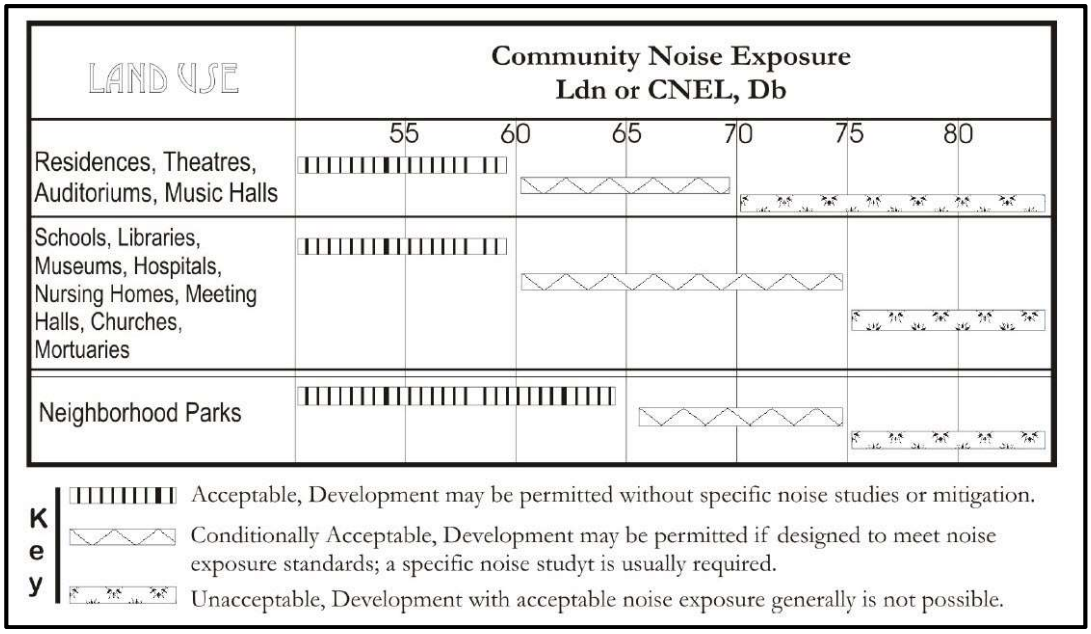


Figure 17. Maximum Exposure for Noise Sensitive Uses due to Traffic

	Outdoor Activity Areas[1]	Indoor Spaces		
Land Use	L_{dn} or CNEL, in dB	L_{dn} or CNEL, in dB	L_{eg} in db[2]	L_{max} in db[3]
Residences, hotels, motels, hospitals, nursing homes	60	45	-	60
Neighborhood parks	65	-	-	-

[1] *If the location of outdoor activity areas is not shown, the outdoor noise standard shall apply at the property line of the receiving land use.*

[2] *As determined for a typical worst-case hour during periods of use.*

[3] L_{max} *indoor standard applies only to railroad noise at locations south of Orcutt Road.*

8 Traffic Characteristics

This section examines the effects of traffic volume and traffic growth over the next 20 years and its effect on growth of sound level at the site.

8.1 Traffic Volume on Broad Street and on Tank Farm Road

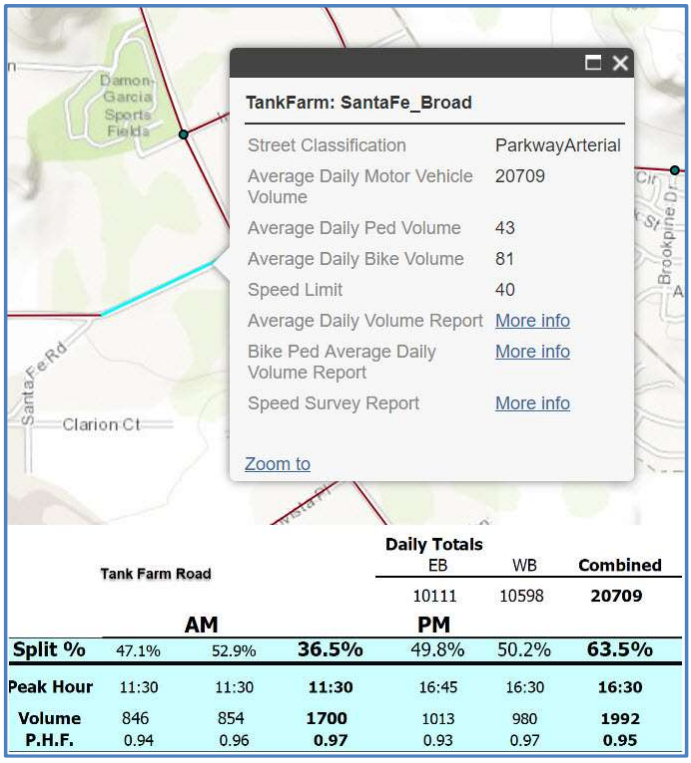
The City of San Luis Obispo Transportation and Planning Engineering Division counts selected intersections and segments every two years, and performs speed surveys as required by state law. This data is used for signal timing and other engineering studies. See the maps below for current traffic count information, available in PDF format.

Interactive traffic volumes for each of the streets bounding the project are found in Figure 18, and Figure 19.

8.1 Traffic Growth

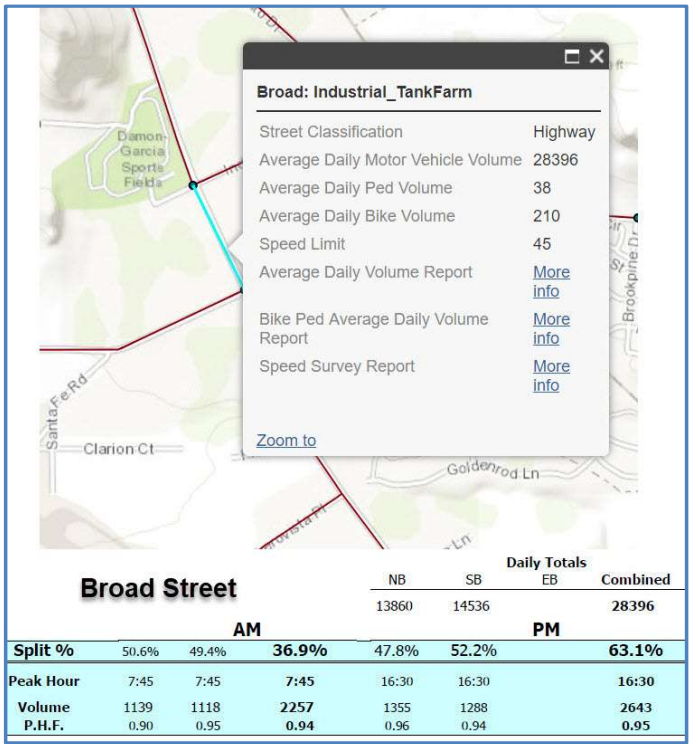
Federally funded projects and environmental reviews typically require the projection of traffic volumes 10–30 years in the future, typically assuming a 1%–2% annual growth in vehicle volume. In this report, we have assumed a 20-year period of growth to year 2037, at an annual growth rate of 1 percent (0.01) and an annual growth rate of 1.6 percent (0.016) for Tank Farm Road, as this street is closest to the proposed residential use, the Assisted Living Facility. The calculation in Figure 20 shows the result for Tank Farm Road at two different growth rates, 1% and 1.6%.

Figure 18: Traffic Volumes for Tank Farm Road, with 2-day average flow



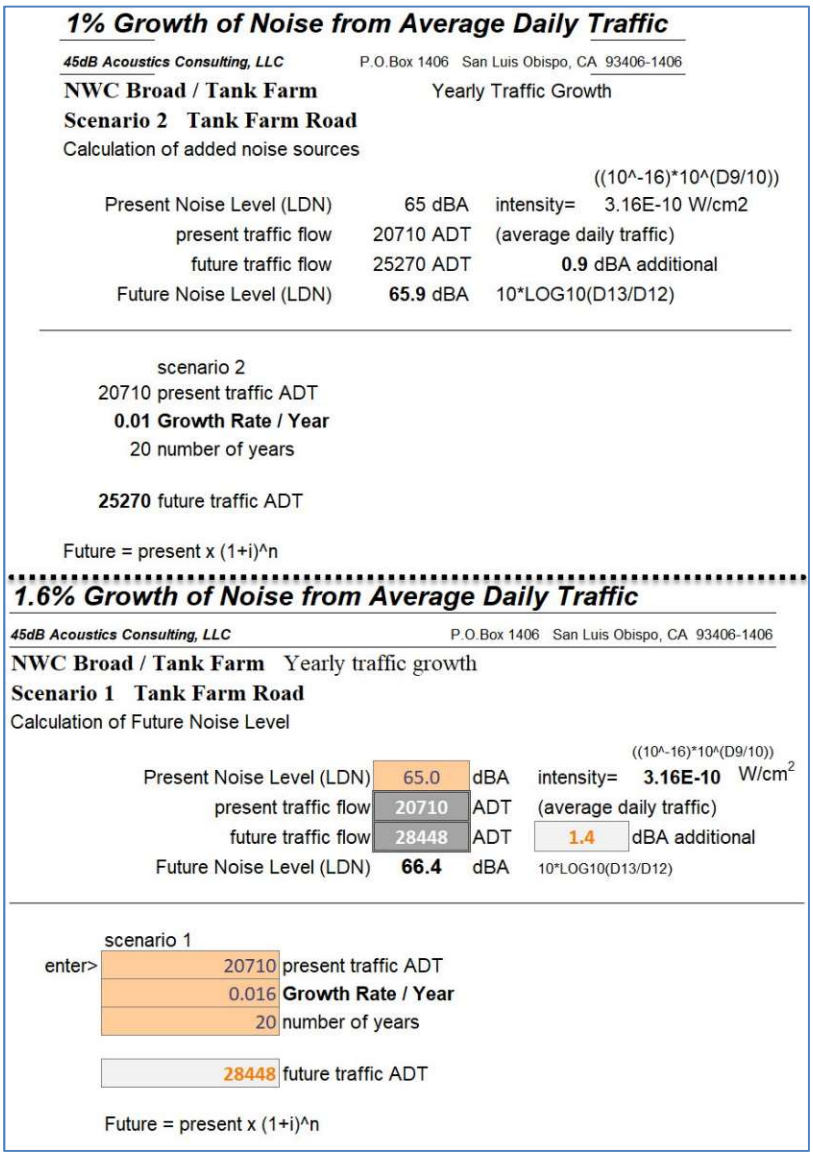
Tank Farm Road				Daily Totals EB	WB	Combined
				10111	10598	**20709**
	AM			**PM**		
Split %	47.1%	52.9%	**36.5%**	49.8%	50.2%	**63.5%**
Peak Hour	11:30	11:30	**11:30**	16:45	16:30	**16:30**
Volume	846	854	**1700**	1013	980	**1992**
P.H.F.	0.94	0.96	**0.97**	0.93	0.97	**0.95**

Figure 19: Traffic Volumes for Broad Street, with 2-day average flow



Broad Street				Daily Totals NB	SB	EB	Combined
				13860	14536		**28396**
	AM			**PM**			
Split %	50.6%	49.4%	**36.9%**	47.8%	52.2%		**63.1%**
Peak Hour	7:45	7:45	**7:45**	16:30	16:30		**16:30**
Volume	1139	1118	**2257**	1355	1288		**2643**
P.H.F.	0.90	0.95	**0.94**	0.96	0.94		**0.95**

Figure 20. Growth of Noise from Average Daily Traffic, Tank Farm Road



1% Growth of Noise from Average Daily Traffic

45dB Acoustics Consulting, LLC P.O.Box 1406 San Luis Obispo, CA 93406-1406

NWC Broad / Tank Farm Yearly Traffic Growth

Scenario 2 Tank Farm Road

Calculation of added noise sources

((10^-16)*10^(D9/10))

Present Noise Level (LDN)	65 dBA	intensity= 3.16E-10 W/cm2
present traffic flow	20710 ADT	(average daily traffic)
future traffic flow	25270 ADT	**0.9** dBA additional
Future Noise Level (LDN)	**65.9** dBA	10*LOG10(D13/D12)

scenario 2

20710 present traffic ADT

0.01 Growth Rate / Year

20 number of years

25270 future traffic ADT

Future = present x (1+i)^n

1.6% Growth of Noise from Average Daily Traffic

45dB Acoustics Consulting, LLC P.O.Box 1406 San Luis Obispo, CA 93406-1406

NWC Broad / Tank Farm Yearly traffic growth

Scenario 1 Tank Farm Road

Calculation of Future Noise Level

((10^-16)*10^(D9/10))

Present Noise Level (LDN)	65.0	dBA	intensity= **3.16E-10**	W/cm^2
present traffic flow	20710	ADT	(average daily traffic)	
future traffic flow	28448	ADT	1.4	dBA additional
Future Noise Level (LDN)	**66.4**	dBA	10*LOG10(D13/D12)	

scenario 1

enter> 20710 present traffic ADT

0.016 **Growth Rate / Year**

20 number of years

28448 future traffic ADT

Future = present x (1+i)^n

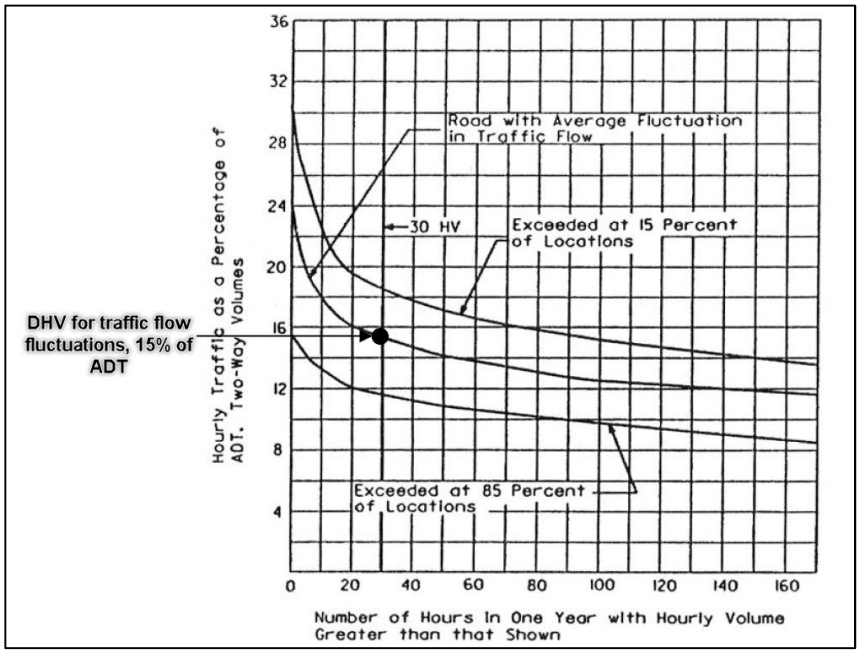
8.2 Traffic Flow and Sound Level

Consulting the book, *A Policy on Geometric Design of Highways and Streets*, helps to understand the issues in measuring sound level resulting from traffic flow. There are several descriptors of traffic flow from Average Daily Traffic (ADT) to Design Hourly Volume (DHV) of traffic on a road or highway. DHV is sometimes used as a benchmark for sound level measurements. However, the DHV is defined as the 30th highest hourly volume in the "design" year, whereas the Peak Hour Volume (PHV) is defined as the highest hourly volume during an average day.

Depending on the type of roadway, the PHV may be from 5 to 45 percent lower than the DHV.

The definition infers that if a highway or street is to adequately serve throughout its life, its physical capacity will only be exceeded for about 30 hours out of the total 8,760 hours in the "design" year. The choice of the 30th highest hourly volume is a long-held concept which stems from research published in *A Policy on Geometric Design of Highways and Streets (reference 1*.)

Figure 21. Relationship Between Peak-Hour and Average Daily Traffic Volumes.



Visually comparing the traffic flow trend lines above indicates that significant traffic flow changes occur at the inflection point of the 30th highest volume hour of the year. The difference in volume of traffic between the 1st highest hourly volume and the 30th increases rapidly. For the remainder of the hours between the 30th and the 170th, there is very little change in the slope of the curves. This indicates that *designing for that 30th hour* would cover the expected traffic volume at almost any given hour in a given day of a given week in a given month of a given year.

Noise impacts are measured during the one-hour period when the worst-case noise levels are expected to occur. This may or may not be the peak hour of traffic. That is, higher traffic volumes can lead to higher congestion and lower operating speeds. Since higher speeds lead to higher noise emissions from motor vehicles, the worst-case noise levels may occur in hours with lower volumes and higher speeds. In addition, vehicle mix may also change hourly. On many highways, the percentage of heavy trucks is reduced during peak hour. Since heavy trucks have greater sound emissions than passenger cars, vehicle mix is an important component in determining the peak hour of noise impact. shows Level of Service vs General Operating Conditions.

Figure 22. Level of Service vs General Operating Conditions

Level of Service	General Operating Conditions
A	Free flow
B	Reasonably free flow
C	Stable flow
D	Approaching unstable flow
E	Unstable flow
F	Forced or breakdown flow

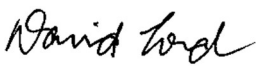
During the sound level measurement for this project, Level of Service (LOS) was observable and gives us confidence that we are measuring during a busy-but-not-congested time period. The LOS during the measurements was generally Level B to Level C and at one time became Level of Service D.

9 Conclusion

The measured and predicted sound levels affecting the proposed NWC Tank Farm Road and Broad Street project are primarily a result of transportation noise along the two arterial transportation routes. Airport noise levels at the site are considerably lower than traffic noise levels and are mostly inaudible at the southern and western boundary of the site. Future additional noise level from transportation sources at buildout will be less than three decibels, which is a barely noticeable difference, subjectively.

The existing and future sound levels at the south elevation of the Assisted Living Facility will require noise mitigation to insure interior habitable spaces facing south do not exceed annual CNEL = 45 dBA. The mitigation will most likely be wall, window and door assemblies with an enhanced Sound Transmission Class rating to resist the street noise coming from Tank Farm Road.

for 45dB Acoustics, LLC
David Lord, PhD



10 Glossary

A-Weighted Sound Level (dBA)
The sound pressure level in decibels as measured on a sound level meter using the internationally standardized A-weighting filter or as computed from sound spectral data to which A-weighting adjustments have been made. A-weighting de-emphasizes the low and very high frequency components of the sound in a manner similar to the response of the average human ear. A-weighted sound levels correlate well with subjective reactions of people to noise and are universally used for community noise evaluations.

Air-borne Sound
Sound that travels through the air, differentiated from structure-borne sound.

Ambient Sound Level
The prevailing general sound level existing at a location or in a space, which usually consists of a composite of sounds from many sources near and far. The ambient level is typically defined by the Leq level.

Background Sound Level
The underlying, ever-present lower level noise that remains in the absence of intrusive or intermittent sounds. Distant sources, such as Traffic, typically make up the background. The background level is generally defined by the L90 percentile noise level.

Community Noise Equivalent Level (CNEL)
The Leq of the A-weighted noise level over a 24-hour period with a 5 dB penalty applied to noise levels between 7 p.m. and 10 p.m. and a 10 dB penalty applied to noise levels between 10 p.m. and 7 a.m. CNEL is similar to Ldn.

Day-Night Sound Level (Ldn)
The Leq of the A-weighted noise level over a 24-hour period with a 10 dB penalty applied to noise levels between 10 p.m. and 7 a.m. Ldn is similar to CNEL.

Decibel (dB)
The decibel is a measure on a logarithmic scale of the magnitude of a particular quantity (such as sound pressure, sound power, sound intensity) with respect to a reference quantity.

DBA or dB(A)
A-weighted sound level. The ear does not respond equally to all frequencies, but is less sensitive at low and high frequencies than it is at medium or speech range frequencies. Thus, to obtain a single number representing the sound level of a noise containing a wide range of frequencies in a manner representative of the ear's response, it is necessary to reduce the effects of the low and high frequencies with respect to the medium frequencies. The resultant sound level is said to be A-weighted, and the units are dBA. The A-weighted sound level is also called the noise level.

Energy Equivalent Level (Leq)
Because sound levels can vary markedly in intensity over a short period of time, some method for describing either the average character of the sound or the statistical behavior of the variations must be utilized. Most commonly, one describes ambient sounds in terms of an average level that has the same acoustical energy as the summation of all the time-varying events. This energy-equivalent sound/noise descriptor is called Leq and the time period is specified, i.e., ten minutes, or one hour.

Field Sound Transmission Class (FSTC)
A single number rating similar to STC, except that the transmission loss values used to derive the FSTC are measured in the field. All sound transmitted from the source room to the receiving room is assumed to be through the separating wall or floor-ceiling assembly.

Outdoor-Indoor Transmission Class (OITC)
A single number classification, specified by the American Society for Testing and Materials (ASTM E 1332 issued 1994), that establishes the A-weighted sound level reduction provided by building facade components (walls, doors, windows, and combinations thereof), based upon a reference sound spectrum that is an average of typical air, road, and rail transportation sources. The OITC is the preferred rating when exterior façade components are exposed to a noise environment dominated by transportation sources.

Single Event Noise Exposure Level (SENEL)
The time-integrated A-weighted sound pressure level of a single aircraft flyover (which exceeds a threshold noise level) which is expressed by the level of an equivalent one-second duration reference signal.

Sound Transmission Class (STC)
STC is a single number rating, specified by the American Society for Testing and Materials, which can be used to measure the sound insulation properties for comparing the sound transmission capability, in decibels, of interior building partitions for noise sources such as speech, radio, and television. It is used extensively for rating sound insulation characteristics of building materials and products.

Structure-Borne Sound
Sound propagating through building structure. Rapidly fluctuating elastic waves in gypsum board, joists, studs, etc.

Subjective Loudness Level
In addition to precision measurement of sound level changes, there is a subjective characteristic which describes how most people respond to sound:

- A change in sound level of 3 dBA is *barely perceptible* by most listeners.
- A change in level of 6 dBA is *clearly perceptible*.
- A change of 10 dBA is perceived as being *twice* (or *half*) as loud.

11 Appendix

11.1 Sound level modeling

Sound level contours based on topographic data, reflection and absorption are generated for assessment using *SoundPLAN* noise simulation software. The software calculates sound attenuation of environmental noise around buildings. For this project, the land between the sources (road and airport operations) and receiver project boundary, is generally flat and partially paved. The modeling software calculates the sound field in accordance with ISO 9613-2 "Acoustics - Attenuation of sound during propagation outdoors, Part 2: General Method of Calculation." This standard states that "this part of ISO 9613 specifies an engineering method for calculating the attenuation of sound during propagation outdoors in order to predict the levels of environmental noise at a distance from a variety of sources. The method predicts the equivalent continuous A-weighted sound pressure level under meteorological conditions favorable to propagation from sources of known sound emissions."

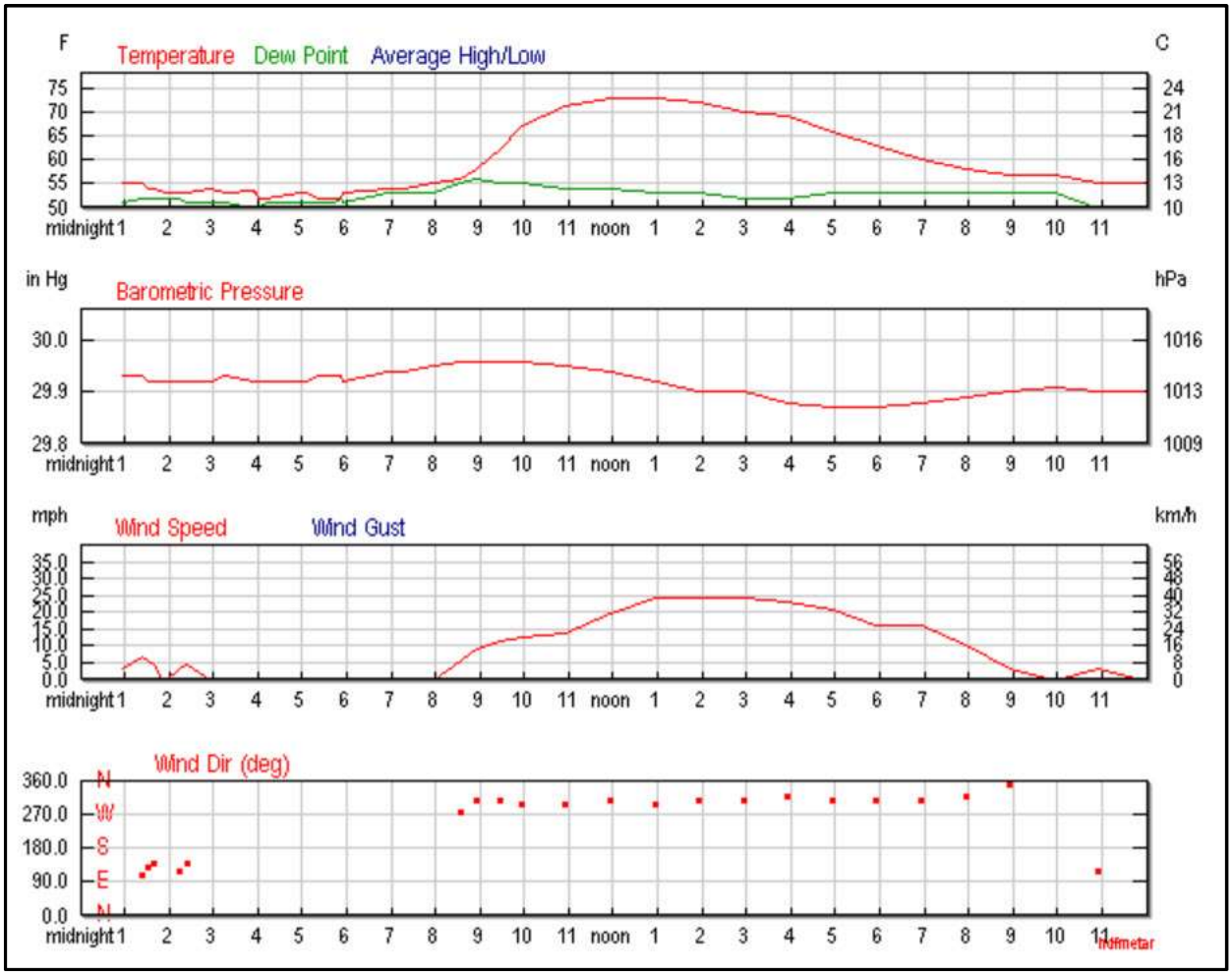
11.2 Sound Level Measurement

The protocol used for the sound level measurements is prescribed in detail by the American Society for Testing and Materials (ASTM) in their E 1014 publication. The procedures and standards in that document were met or exceeded for sound level measurements shown in this report. The standards of ASTM E 1014 are exceeded by using Type 1 (Class 1) sound level meters for all measurements in this report instead of less accurate Type 2 meters. Therefore, the precision of the measurements in this report is likely to be better than +/- 1 dB. The sound level meters used for measurements shown in this report are Norsonic Nor140 Sound Analyzers. These sound level meters meet all requirements of ANSI s1.4, IEC 651 for Class 1 accuracy. The sound level meters were calibrated before and after each sound level measurement. The measurement results from both sound level meters running simultaneously were compared and found to be in close agreement.

11.3 Wind Speed

Temperature, pressure and wind speed and direction data at San Luis Obispo County Regional Airport weather station are shown in Figure 23. During the measurement period from on September 30, 2017, the sky was essentially clear, and *at the measurement locations* the wind speed was generally less than 10 mph from the west and north. Wind speed above 12 mph has an increasing adverse effect on the accuracy of sound level measurements (reference: Federal Highway Administration, Noise Measurement).

Figure 23: September 30, 2017 Climate Data



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Tank Farm Road Assisted Living Facility and Retail Project 3985 Broad Street and 660 Tank Farm Road, San

Technical Noise Analysis Report

prepared for

City of San Luis Obispo
Community Development
919 Palm Street
San Luis Obispo, CA 93401-3218
Contact: Doug Davidson

prepared by

Rincon Consultants, Inc.
1530 Monterey Street, Suite D
San Luis Obispo, California 93401

June 2019

RINCON CONSULTANTS, INC.
Environmental Scientists | Planners | Engineers
rinconconsultants.com

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1 Project Description and Impact Summary

1.1 Introduction

This study analyzes the potential noise impacts of the proposed Tank Farm Road Assisted Living Facility and Retail Project (project) at 660 Tank Farm Road, in San Luis Obispo, California. Rincon Consultants, Inc. (Rincon) prepared this study under contract to the City of San Luis Obispo (City) for use by the City in support of the environmental documentation being prepared pursuant to the California Environmental Quality Act (CEQA). The purpose of this study is to analyze the project's noise impacts related to long-term operation of the project.

This analysis demonstrates that the project complies with all City noise standards. The conclusions of this study are summarized in Table 1.

Table 1 Summary of Impacts

Impact Statement	Proposed Project Level of Significance	Applicable Measures
Would the proposed project generate 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?	Less than significant (operation)	None
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 proposed project expose people residing or working in the project area to excessive noise levels?	No Impact	None

1.2 Project Summary

Project Location and Background

The project is located at 660 Tank Farm Road in San Luis Obispo, California (Assessor's Parcel Numbers 053-421-003 and 053-421-004). The total development area is 10.24 acres (446,054 square feet) and is identified as Special Focus Area 12 in the San Luis Obispo General Plan (City of San Luis Obispo 2014). See Figure 1 for the regional location.

Figure 1 Regional Location

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The project site is bordered by a commercial development to the northwest, a mobile home park (Hidden Hills Mobilelodge) to the southwest, Broad Street (Highway 227) to the northeast, and Tank Farm Road to the southeast. A redevelopment project including a mixed-use development of 249 residential units and 17,500 square feet of commercial space is proposed for the mobile home park located at 650 Tank Farm. There are commercial developments to the northeast across Broad Street, and to the southeast across Tank Farm Road. See Figure 2 for the project site vicinity.

Proposed Project

The project would involve construction of an approximately 133,655-square foot assisted living facility with 111 suites and 28 memory care beds, and six retail buildings with a total floor area of 45,269 square feet. The project would also include a surface parking lot with approximately 288 vehicle spaces and 67 bicycle parking spaces. See Figure 3 for the project site plan.

Figure 2 Project Site Location

Figure 3 Project Site Plan

Source: McKently Malak Architects

2 Background

2.1 Overview of Sound

Sound is a vibratory disturbance created by a moving or vibrating source, which is capable of being detected by the hearing organs. Noise is defined as sound that is loud, unpleasant, unexpected, or undesired and may therefore be classified as a more specific group of sounds. The effects of noise on people can include general annoyance, interference with speech communication, sleep disturbance, and, in the extreme, hearing impairment (Caltrans 2013).

Noise levels are commonly measured in decibels (dB) using the A-weighted (dBA) sound pressure level (SPL). The A-weighting scale is an adjustment to the actual SPLs to be consistent with that of human hearing response, which is most sensitive to frequencies around 4,000 Hertz and less sensitive to frequencies around and below 100 Hertz (Kinsler, et. al. 1999).

Decibels are measured on a logarithmic scale that quantifies sound intensity in a manner similar to the Richter scale used for earthquake magnitudes. Thus, a doubling of the energy of a noise source, such as doubling of traffic volume, would increase the noise level by 3 dB; a halving of the energy would result in a 3 dB decrease (Crocker 2007).

In technical terms, sound levels are described as either a “sound power level” or a “sound pressure level,” which while easily confused are two distinct characteristics of sound. Both share the same unit of measure, the dB. However, the sound power level, expressed as L_w, is the energy converted into sound by the source. As sound energy travels through the air, it creates a sound wave in the air that exerts pressure on receivers such as an eardrum or microphone, the SPL. Sound measurement instruments only measure SPL, and limits used in standards are generally SPL. Modeling uses the L_w of equipment to calculate the SPL at a distance.

Human perception of noise has no simple correlation with sound energy. The perception of sound is not linear in terms of dBA or in terms of sound energy. Two sources do not “sound twice as loud” as one source. It is widely accepted that the average healthy ear can barely perceive changes of 3 dBA, increase or decrease (i.e., 2x the sound energy); that a change of 5 dBA is readily perceptible (8x the sound energy); and that an increase (decrease) of 10 dBA sounds twice (half) as loud ((10.5x the sound energy) (Crocker 2007).

Sound changes both in level and frequency spectrum as it travels from the source to the receiver. The most obvious change is the decrease in level as the distance from the source increases. The manner in which noise reduces with distance depends on the important factors, including the type of sources, i.e., point or line, the path the sound will travel, site conditions and obstructions. Noise levels from a point source typically attenuate, or drop off, at a rate of 6 dBA per doubling of distance (6dBA/DD) (e.g., industrial machinery, ventilation units, etc.). Noise from a line source (e.g., roadway, pipeline, railroad, etc.) typically attenuates at about 3 dBA per doubling of distance (Caltrans 2013). The propagation of noise is also affected by the intervening ground, known as ground absorption. A hard site (such as parking lots or smooth bodies of water) receives no additional ground attenuation, and the changes in noise levels with distance (drop-off rate) are simply the geometric spreading of the source. A soft site (such as soft dirt, grass, or scattered bushes and trees) receives an additional ground attenuation value of 1.5 dBA per doubling of

distance (Caltrans 2013). Noise levels may also be reduced by intervening structures; the amount of attenuation provided by this "shielding" depends on the size of the object and the frequencies of the noise levels. Natural terrain features such as hills and dense woods, as well as man-made features such as buildings and walls, can significantly alter noise levels. Generally, any large structure blocking the line of sight will provide at least a 5-dBA reduction in source noise levels at the receiver (FHWA 2011).

Buildings also can substantially reduce exposure to noise. Based on the Federal Highway Administration's (FHWA) modern building construction generally provides an exterior-to-interior noise level reduction of 20 – 35 dBA with closed windows (FHWA 2011).

The impact of noise is not a function of loudness alone. The time of day when noise occurs and the duration of the noise are also important. In addition, most noise that lasts for more than a few seconds is variable in its intensity. Consequently, a variety of noise descriptors has been developed. One of the most frequently used noise metrics that considers both duration and intensity is the equivalent noise level (L_{eq}). The L_{eq} is defined as the single steady A-weighted level that is equivalent to the same amount of energy as that contained in the actual fluctuating levels over a period of time. Typically, L_{eq} is equivalent to a one-hour period, even when measured for shorter durations as the noise level of a 10-30 minute period would be the same as the hour if the noise source is relatively steady. L_{max} is the highest root mean squared (rms) SPL within the sampling period, and L_{min} is the lowest rms SPL within the measuring period (Crocker 2007).

Since noise that occurs at night tends to be more disturbing than that which occurs during the day. Community noise is usually measured using Day-Night Average Level (L_{dn} or DNL), which is a 24-hour average noise level with a +10 dBA penalty for noise occurring during nighttime (10:00 p.m. to 7:00 a.m.) hours, or Community Noise Equivalent Level (CNEL), which is the 24-hour average noise level with a +5 dBA penalty for noise occurring from 7:00 p.m. to 10:00 p.m. and a +10 dBA penalty for noise occurring from 10:00 p.m. to 7:00 a.m. (Caltrans 2013). Noise levels described by DNL and CNEL usually differ by about 0.5 dBA. The relationship between the peak hour L_{eq} value and the DNL/CNEL depends on the distribution of traffic during the daytime, evening, and nighttime. Quiet suburban areas typically have a CNEL in the range of 40 to 50 dBA, while areas near arterial streets are in the 50 to 70+ CNEL range. Normal conversational levels at 3 feet are in the 60 to 65-dBA L_{eq} range, and ambient noise levels greater than 65 dBA L_{eq} can interrupt conversations (FTA 2018).

2.2 Sensitive Receivers

Noise exposure goals for various types of land uses reflect the varying noise sensitivities associated with users of these land uses. The following land uses are typically considered noise-sensitive: single-family and multiple-family residences, long-term care facilities (including convalescent and retirement facilities), dormitories, motels, hotels, transient lodgings and other residential uses, houses of worship, hospitals, libraries, schools, auditoriums, concert halls, outdoor theaters, nature and wildlife preserves, and parks. The nearest existing noise sensitive receivers to the project site are existing and future residential land uses southwest of the project site within a mobile home park. The existing mobile home park is located 110 feet from the project boundary.

2.3 Project Noise Setting

The most common source of noise in the project site vicinity is vehicular traffic on Broad Street and Tank Farm Road. Traffic noise on these roadways control noise levels throughout the project area.

To determine ambient sound levels at and near the project site, sound level measurements were collected by Rincon on May 22, 2019 between the hours of 1:30 p.m. and 3:11 p.m. using an ANSI Type 2 integrating sound level meter. The noise meter was placed five feet above ground level, the approximate height of the average human ear.

Noise Measurement (NM) 1 was taken within the Hidden Hills Motorlodge mobile home park to sample the typical daytime noise levels. NM 2 was taken 50 feet from Broad Street, southwest of the project site, and based on City traffic count data, is representative of the loudest traffic noise levels experienced by noise sensitive land uses along this roadway. NM 3 was taken 50 feet north of Tank Farm Road, east of the project site, and based on City traffic count data, is representative of the loudest traffic noise levels along Tank Farm Road.

Figure 4 shows the noise measurement locations, while Table 2 summarizes noise measurement. Noise levels are provided in L_{eq} for the measurement period; L_{max} is also provided.

Table 2 Project Vicinity Sound Level Monitoring Results

#	Measurement Location	Sample Times	dBA L_{eq}	dBA L_{max}	Dominant Noise Source
1	Hidden Hills Motorlodge	1:29 - 1:58 p.m.	52.2	70.7	Traffic
2	50 feet south of Broad Street	2:16 - 2:35 p.m.	69.2	87.2	Traffic
3	50 feet east of Tank Farm Road	2:52 - 3:11 p.m.	64.9	78.9	Traffic

See Appendix A for noise monitoring data.

2.4 Regulatory Setting

City of San Luis Obispo General Plan Noise Element and Noise Guidebook

The City of San Luis Obispo General Plan Noise Element includes land use compatibility standards. The City's maximum noise exposure standards for noise-sensitive land uses (specific to transportation noise sources) are shown in Table 3.

Figure 4 Noise Measurement Location

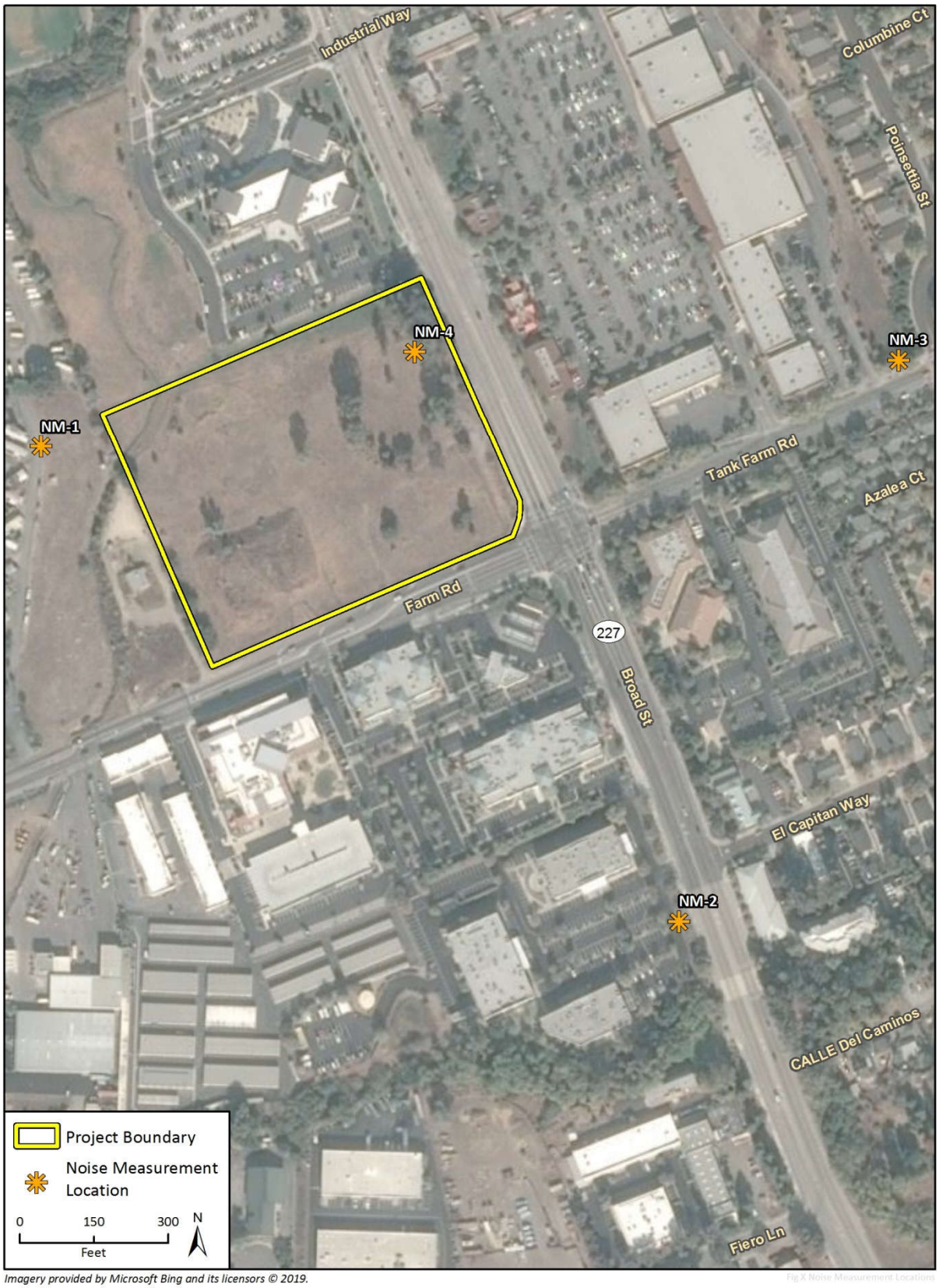

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Table 3 Maximum Noise Exposure for Noise-Sensitive Land Use Areas Due to Transportation Noise Sources

Land Use	Outdoor Activity Areas [1]	Interior Spaces	
	Ldn [2] or CNEL	Ldn [2] or CNEL	L_{eq} [3]
Residences, hotels, motels, hospitals, nursing homes	60	45	--
Theaters, auditoriums, music halls	--	--	35
Churches, meeting halls, office building, mortuaries	60	--	45
Schools, libraries, museums	--	--	45
Neighborhood parks	65	--	--
Playgrounds	70	--	--

1. If the location of outdoor activity areas is not shown, the outdoor noise standard shall apply at the property line of the receiving land use.
2. Ldn (day-night average sound level) is the energy-averaged sound level measured over a 24-hour period, with a 10-dB penalty assigned to noise events occurring between 10:00 PM and 7:00 AM and a 5-dB penalty assigned to noise events occurring between 7:00 PM and 10 PM.
3. L_{eq} (equivalent sound level) is the constant or single sound level containing the same total energy as a time-varying sound, over a certain time. If the location of outdoor activity areas is not shown, the outdoor noise standard shall apply at the property line of the receiving land use.
Source: City of San Luis Obispo General Plan, Noise Element 1996.

The City requires that noise generated by new stationary sources be mitigated so as not to exceed the exposure standards shown in Table 4 for noise-sensitive uses, as measured at the property line of the receiver.

Table 4 City Maximum Noise Exposure for Noise-Sensitive Land Use Areas Due to Stationary Noise Sources

	Daytime (7:00 AM to 10:00 PM)	Nighttime (10:00 PM to 7:00 AM)
Hourly L_{eq} in dB 1, 2	50	45
Maximum level in dB 1, 2	70	65
Maximum impulsive noise in dB 1, 3	65	60

1. As determined at the property line of the receiver. When determining effectiveness of noise mitigation measures, the standards may be applied on the receptor side of noise barriers or other property-line noise mitigation measures.
2. Sound level measurements shall be made with slow meter response.
3. Sound level measurements shall be made with fast meter response.
Source: City of San Luis Obispo General Plan Noise Element, 1996.

The City's Noise Element lists mitigation strategies in a descending order of preference. If preferred strategies are not implemented, it is the responsibility of the project applicant to demonstrate through a detailed noise study that the preferred approaches are either not effective or not practical, before considering other design criteria described in the General Plan. The City considers the following mitigation measures appropriate where existing sound levels significantly impact

noise-sensitive land uses, or where cumulative increases in sound levels resulting from new development significantly impact existing noise-sensitive land uses:

- Rerouting traffic onto streets that can maintain desired levels of service, consistent with the Circulation Element, and which do not adjoin noise-sensitive land uses.
- Rerouting trucks onto streets that do not adjoin noise-sensitive land uses.
- Constructing noise barriers.
- Reducing traffic speeds through street or intersection design methods.
- Retrofitting buildings with noise-reducing features.
- Establishing financial programs, such as low-cost loans to owners of a noise-impacted property, or developer fees to fund noise-mitigation or trip-reduction programs.

The City's maximum noise exposure standards for noise-sensitive land uses (specific to stationary noise sources) are shown in Table 4.

The following Noise Element policies are applicable to the project and the local noise environment:

> ***Policy 1.4.*** *New Transportation Noise Sources. Noise created by new transportation noise sources, including road, railroad, and airport expansion projects, shall be mitigated to not exceed the levels specified in Table 4 for outdoor activity areas and indoor spaces of noise-sensitive land uses which were established before the new transportation noise source.*
>
> ***Policy 1.6.*** *New Development and Stationary Noise Sources. New development of noise-sensitive land uses may be permitted only where location or design allow the development to meet the standards of Table 4, for existing stationary noise sources.*

City of San Luis Obispo Municipal Code, Title 9, Chapter 9.12 (Noise Control).

The San Luis Obispo Municipal Code (SLOMC) (§9.12.060) specifies noise standards for various categories of land use. These limits, shown in Table 5, would apply to long-term operation of the site. As shown in Table 6, these noise level standards are not to be exceeded more than 30 minutes in any one hour and noise levels are prohibited from exceeding the noise level standard plus 20 dBA for any period of time.

Table 5 Exterior Noise Limits

Zoning Designation	Time Period	Maximum Acceptable Noise Level (dBA)
Low- and Medium-Density Residential (R-1 and R-2); Conservation/Open Space (C/OS)	10:00 PM – 7:00 AM	50
	7:00 AM – 10:00 PM	55
Medium- and High-Density Residential (R-3 and R-4)	10:00 PM – 7:00 AM	50
	7:00 AM – 10:00 PM	55
Office and Public Facility (O and PF)	10:00 PM – 7:00 AM	55
	7:00 AM – 10:00 PM	60
Neighborhood, Retail, Community, Downtown and Tourist Commercial (C-N, C-R, C-C, C-D, C T)	10:00 PM – 7:00 AM	60
	7:00 AM – 10:00 PM	65
Service Commercial (C-S)	Any Time	70
Manufacturing (M)	Any Time	75

Source: City of San Luis Obispo Municipal Code Section 9.12.060

Table 6 Maximum Time Periods for Increased Noise Levels

Noise Standard for Existing Land Use	Maximum Time Period Allowed
+0 dBA	30 minutes/hour
+5 dBA	15 minutes/hour
+10 dBA	5 minutes/hour
+15 dBA	1 minute/hour
+20 dBA	Any time

Source: City of San Luis Obispo Municipal Code Section 9.12.060

Airport Land Use Plan for the San Luis Obispo County Regional Airport.

The San Luis Obispo County Regional ALUP details restrictions on development within the airport vicinity. As described in the ALUP, residential land uses, restaurants, and public assembly areas, among other items, exist as Extremely Noise Sensitive Land Uses. Applicable ALUP policies describe the noise conditions that may affect the project site. These conditions are shown below and described in Table 7.

> ***Policy N-1.*** *Would permit or fail to sufficiently prohibit establishment within the projected 60-dB CNEL contour of any extremely noise-sensitive land use.*
>
> ***Policy N-2.*** *Would permit or fail to sufficiently prohibit any extremely noise-sensitive land use within the projected 55-dB CNEL contour, with the exception of developments which meet the criteria delineated in Section 4.3.2.3 for designation as infill.*

Policy N-3. *Would permit or fail to sufficiently prohibit any moderately noise-sensitive land use within the projected 55-dB CNEL contour, with the exception of developments which meet the requirements for mitigation of interior noise levels specified in Table 4 and in Section 4.3.3.*

Policy N-4. *Would permit or fail to sufficiently prohibit, in any location which is within or adjacent to an area of demonstrated noise incompatibility or in an acoustic environment substantially similar to an area of demonstrated noise incompatibility:*

1. *Any new residential or other extremely noise-sensitive development*
2. *Any new moderately noise-sensitive development, unless adequate, specific, and detailed provisions are set forth to mitigate noise incompatibility between allowable or proposed noise-sensitive uses (including foreseeable outdoor activities) and airport operations.*

Table 7 Summary of Compatibility of Land Uses with CNEL Contours

Noise Environment	Extremely Noise-Sensitive Land Uses
Inside 60 dB CNEL contour	Prohibited
Between 55 and 60 dB CNEL contours	Allowable only within a Designated Residential Infill Area (with appropriate noise mitigation) or as a Small-Scale Residential Project
Outside 55 CNEL dB contour	Allowed

Source: Airport Land Use Commission, 2014.

3 Impact Analysis

3.1 Significance Thresholds

To determine whether a project would have a significant noise impact, Appendix G of the *CEQA Guidelines* requires consideration of whether a project would result in:

1. 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;
2. Be 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, expose people residing or working in the project area to excessive noise levels?

Land Use Compatibility

The City has adopted noise guidelines that provide the normally acceptable, conditionally acceptable, normally unacceptable, and clearly unacceptable noise levels for different land uses. The proposed project would include multi-family residences. Based on the City's noise compatibility matrix shown in Table 3. The project's noise and land use compatibility was evaluated under separate cover in the *Acoustical Assessment of Proposed Residential & Commercial projects at Northwest Corner, Tank Farm and Broad Street San Luis Obispo, CA*, prepared by 45 dB and dated October 31, 2017. Therefore, the significance of the project's land use and noise compatibility are not addressed in the flowing analysis.

On-site Operational Noise

According to the SLOMC, Section 9.12.060, operational noise from on-site noise level source would result in a significant impact if the project would exceed the City noise levels limits at the property line of affected land use as defined in Table 5.

Off-site Traffic Noise

Off-site project noise (i.e., roadway noise) would result in a significant impact if the project would cause the traffic noise level measured at the property of affected uses to increase by 5 Ldn if the existing or future noise level would be below the "normally unacceptable" noise level for the affected land use category as identified in Table 3, or 3 Ldn if the existing or future noise level exceeds the "normally unacceptable" noise level for the affected land use category.

3.2 Methodology

Off-site Traffic Noise

The project would generate vehicle trips, thereby increasing traffic on area roadways. As discussed above, to determine ambient noise levels at the project site and at nearby sensitive receivers, Rincon collected a sound level measurement on May 22, 2019 (see Table 2 and Appendix A).

The trip generation rates for the project are based on the project traffic impact analysis, *660 Tank Farm Mixed Use Project, Multimodal Transportation Study*, prepared by Central Coat Transportation Consulting dated November 2018 (traffic study). According to the traffic study, the project would generate a net increase of 1,930 trips on the local transportation system.

Roadway noise impacts were assessed on Broad Street and Tank Farm Road as it is anticipated most project related traffic would access the site from Tank Farm Road via Broad Street. Existing average daily traffic (ADT) volume on Broad Street is approximately 28,396 and 20,709 on Tank Farm Road based on city traffic count data (City of San Luis Obispo 2019).

On-site Noise

On-site noise sources were modeled with Sound Plan. Propagation of modeled stationary noise sources was based on ISO Standard 9613-2, "Attenuation of Sound during Propagation Outdoors, Part 2: General Method of Calculation." The assessment methodology assumes that all receivers would be downwind of stationary sources. This is a worst-case assumption for total noise impacts, since, in reality, only some receivers will be downwind at any one time.

The project would include people gathering and conversing in outdoor recreation areas and heating, air conditioning, and ventilation (HVAC) units. Noise model receivers were located at each property line of the off-site land uses. Please see Figure 5 for noise source and receiver locations. All receivers were modeled 5 feet above ground level, which is the height of the average human ear (Caltrans 2013).

It is not known at this time which manufacturer, brand, or model of HVAC units will be selected for use in the project. However, based on the square footages of each structure it is estimated that the proposed buildings would require approximately 304 tons of HVAC. However, more than one size of HVAC unit may be used to provide the necessary space conditioning. Based on a review of published noise level data for Trane and Carrier HVAC Units, sound power levels could range between 68 and 88 dBA L_w for units of between 5 and 20 tons. For purposes of assessing noise levels at property lines, units similar to what would be required have been identified and are provided in Table 8 with the sound power level used in the modeling. It is anticipated the project would use a combination of similar units. To be conservative, the project was modeled using single Carrier 38AUD25, unit as it would represent the highest potential noise level. HVAC specification sheets are included in Appendix B.

Table 8 Potential HVAC Models

Manufacturer/Model	Nominal HVAC Tons	Sound Power Level per Unit
Reem RA1325AJ1NA	2	75.5
Reem RA1336AJ1NA	3	72.4
Reem RA1360AJ1NA	5	77.7
Carrier 38AUD16	10	83
Carrier 38AUD25	20	85
See Appendix B		

All HVAC units were modeled as being three feet above the roof elevation. The HVAC units were assumed to operate at 100 percent of an hour.

Figure 5 Noise Sources and Receiver Locations

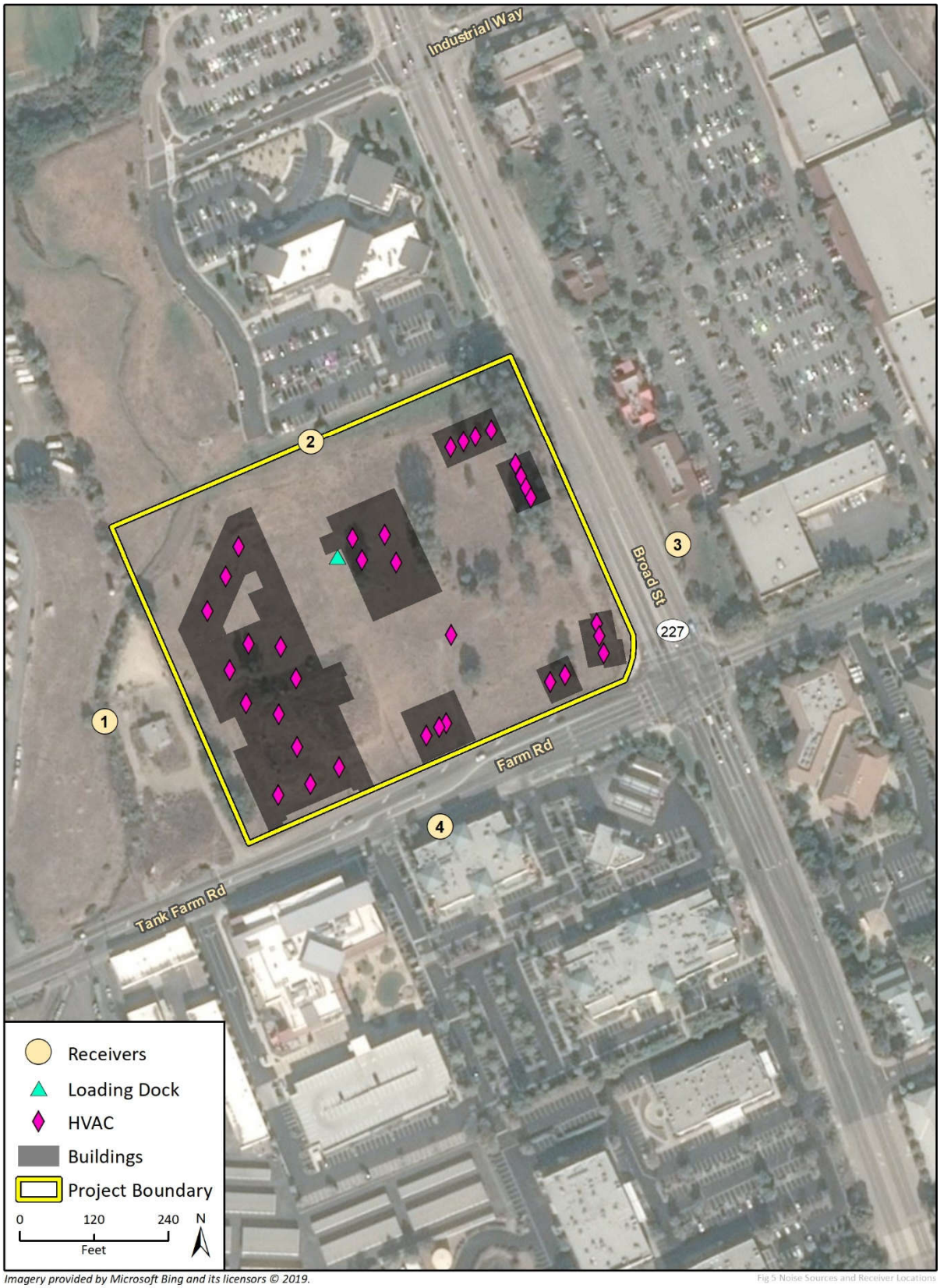

Fig 5 Noise Sources and Receiver Locations

The project includes loading docks in the rear of Buildings A–F. In order to evaluate noise from truck delivery, the analysis utilizes measurements of reference noise level taken at an Albertson's Shopping Center in San Diego, California, in 2011 (Ldn Consulting 2011). The measurements include truck drive-by noise, truck loading/unloading, and truck engine noise. The exterior noise levels for a single truck drive-by noise and a single truck's engine idling noise were measured at 66.5 dBA L_{eq} at a distance of 25 feet from the loading dock. The on-site maneuvering associated with the delivery trucks consists of the truck entering the site and traveling toward and backing into the loading dock. A truck would take approximately 5 minutes to drive in the site and position itself into a bay, 30 to 45 minutes to be unloaded or loaded, and another 5 minutes to exit the bay secure doors, complete necessary paperwork, and drive out of the site. This equates to 40 to 55 minutes that it would take for one truck to complete a delivery or pickup, therefore each loading dock is only anticipated to accommodate only one truck per hour. During the loading/unloading of the truck, the engine can only idle for 5 minutes in compliance with state air quality requirements. It was assumed that each truck engine would be operating for up to 15 minutes of the total time required during the delivery process (5 minutes at arrival, 5 minutes of idling, and 5 minutes at departure). Accounting for the limited time of operation, average hourly noise levels would equate to 60.5 dBA L_{eq} at a distance of 25 feet for each loading dock. The loading dock was modeled 1.5 meters above the ground.

Please see Figure 5 for locations of modeled sources.

3.3 Impact Analysis

CEQA Appendix G Noise Threshold 1

Would the proposed project generate 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? *(Less than Significant)*

On-site Operational Noise

The proposed residential project would require periodic trash hauling services. However, the project site is located in a developed area and would be surrounded by multi-family residential and commercial uses that require similar trash hauling services. Therefore, as trash trucks are already a common occurrence in the project vicinity, trash services would not result in a noticeable increase in ambient noise levels above levels existing without the project.

The project would include outdoor patio space for the private use residents. Operational noise associated with outdoor use area would generally be limited to conversations and would be shielded by the proposed buildings. These noise-generating activities would result in a negligible change to existing noise levels. Noise from conversation would also be an intermittent and temporary noise source. Therefore, noise impacts related to outdoor seating areas would be less than significant.

The project would include rooftop heating, ventilation, and air conditioning (HVAC) equipment. Typically, HVAC equipment is provided at a rate of 1-ton of nominal cooling/heating per 600 square feet. Various sizes of HVAC units would be required to meet the needs of the different proposed uses. Based on the type of development and density of development in the project area, it is anticipated the HVAC units would be roof mounted. The HVAC would be approximately three feet above the roof level.

A loading dock would be located at the western side of Building 1. The loading dock would be screened with the solid barrier. The loading dock was modeled 1.5 meters above ground level.

All on-site noise sources were modeled as a cumulative operational scenario. Table 9 provides a summary of the noise levels at each receiver shown with the noise level contours in Figure 6. Detailed modeling inputs and out puts are included in Appendix C.

Table 9 Noise Levels from On-site Operations

Receiver ID[1]	Location	Noise Level at Receiver[2] (dbA L_{eq})	Noise Level Limit	Does the Project Exceed Standard?
1	Hidden Hills Motorlodge	43	50	No
2	SESLOC	47	55	No
3	Shopping Center	45	60	No
4	Medical Offices	46	60	No

As shown in Table 9, project operations would not generate noise levels in excess of the City noise level limits. Additionally, noise levels generated by on-site noise levels would not substantially increase ambient noise levels at the surrounding properties. Therefore, on-site noise sources would result in less than significant noise impacts.

Off-site Traffic Noise Impacts

The proposed project would generate new vehicle trips and incrementally increase traffic on area roadways. A project would result in a significant off-site traffic noise impact if it would cause the ambient noise level measured at the property line of affected uses to increase by 3 CNEL to or within the "normally unacceptable" or "clearly unacceptable" category as identified in Table 4, or by 5 CNEL or more if existing or future noise levels are below the normally actable category. Based on trip generation estimates, the project would result in a maximum increase of 1,930 ADT on local roadways. Existing traffic on Tank Farm Road is approximately 20,709 ADT between Broad Street and Santa Fe Road. Existing traffic on Broad Street is 28,396 ADT between Tank Farm Road and Industrial Way and 22,944 between Tank Farm Road and Fuller Road. Adding the full 1,930 ADT to Tank Farm Road or Broad Street would result in a less than 1 CNEL increase in traffic noise levels along any affected roadway.

Based on the noise compatibility analysis, traffic volumes can be assumed to increase by 1 to 2 percent annually. Broad Street and Tank Farm Road were assumed to increase 1.5 percent annually. This would result in a 2040 ADT of 38,820 and 27,735 ADT, for Broad Street and Tank Farm Road, respectively. Adding the project's volumes to these volumes would result in less than 1 CNEL increases along all affected roadways and noise generation from the project would not be considered cumulatively considerable.

The project would increase existing traffic noise levels on Broad Street and Tank Farm Road by less than 1 CNEL. Therefore, off-site traffic noise would not exceed the City's thresholds and off-site traffic noise impacts would be less than significant.

Figure 6 On-site Operational Noise Level Contours

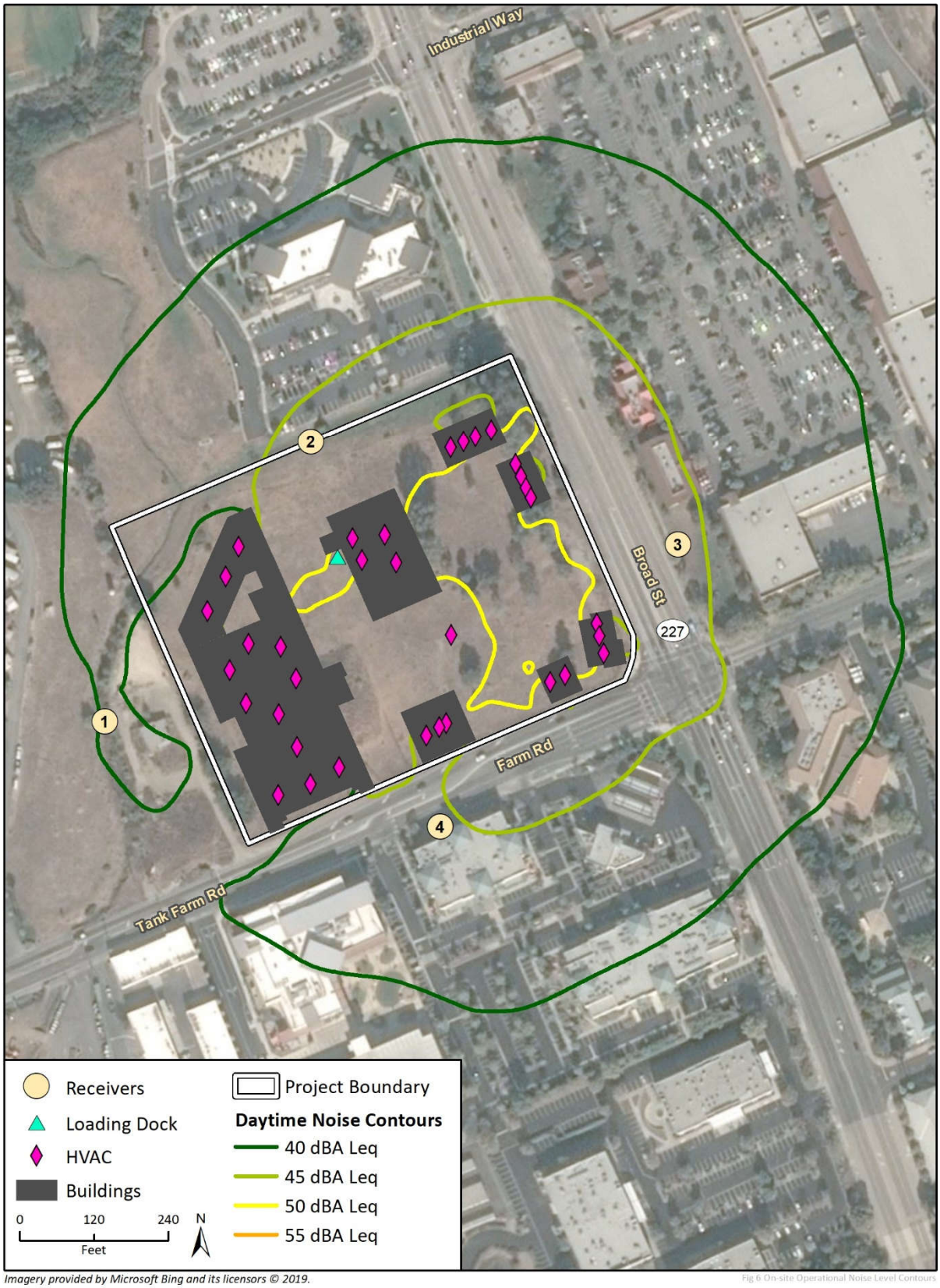

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Fig 6 On-site Operational Noise Level Contours

CEQA Appendix G Noise Threshold 3

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 proposed project expose people residing or working in the project area to excessive noise levels? *(No Impact)*

Airport Noise Impacts

The airport closest to the project site is the San Luis Obispo County Regional Airport, which is located approximately 0.4 mile south of the project site. The project site is within the City of San Luis Obispo Airport Area Specific Plan (AASP). As identified in the Airport Land Use Plan (ALUP) and in the San Luis Obispo General Plan Noise Element, the project site is outside the 60 dBA airport sound level contour, and within the 55 dBA airport sound level contour. Airport noise levels at the project site are lower than existing road traffic noise levels (refer to Table 2). In addition, the project site is not in close proximity to a private airport. Therefore, the project would not expose people residing or working in the project area to excessive noise levels from aircraft noise and no impact would occur.

4 Conclusions

As discussed above, off-site traffic noise impacts would be less than significant, and on-site operational noise impacts would be less than significant. Therefore, the project would result in a less than significant permanent increase in ambient noise levels due to project operation.

In addition, the project was the subject of a noise and land use compatibility analysis prepared by 45 dB, which determined the project would be compatible with the existing and future noise environment.

The project site is not located in the airport's 60 dBA noise contour and airport noise levels at the project site are lower than existing road traffic noise levels. Therefore, the project would not expose people residing or working in the project area to excessive noise levels from aircraft noise and no impact would occur.

5 References

California Department of Transportation (Caltrans). 2013a. Technical Noise Supplement to the Traffic Noise Analysis Protocol. (CT-HWANP-RT-13-069.25.2) September. Available at: http://www.dot.ca.gov/hq/env/noise/pub/TeNS_Sept_2013B.pdf

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Appendix A

Noise Measurement Data

- Freq Weight : A
- Time Weight : FAST
- Level Range : 40-100
- Max dB : 70.7 - 2019/05/22 13:37:31
- Level Range : 40-100
- SEL : 84.2
- Leq : 51.7
-

No.s	Date Time	(dB)
1	2019/05/22 13:29:04	47.5
2	2019/05/22 13:30:04	47.2
3	2019/05/22 13:31:04	50.4
4	2019/05/22 13:32:04	45.5
5	2019/05/22 13:33:04	45.3
6	2019/05/22 13:34:04	49.2
7	2019/05/22 13:35:04	47.8
8	2019/05/22 13:36:04	61.2
9	2019/05/22 13:37:04	48.3
10	2019/05/22 13:38:04	48.0
11	2019/05/22 13:39:04	47.1
12	2019/05/22 13:40:04	45.8
13	2019/05/22 13:41:04	45.6
14	2019/05/22 13:42:04	45.5
15	2019/05/22 13:43:04	51.3
16	2019/05/22 13:44:04	49.5
17	2019/05/22 13:45:04	45.8
18	2019/05/22 13:46:04	59.6
19	2019/05/22 13:47:04	51.9
20	2019/05/22 13:48:04	53.2
21	2019/05/22 13:49:04	48.8
22	2019/05/22 13:50:04	48.7
23	2019/05/22 13:51:04	48.5
24	2019/05/22 13:52:04	48.3
25	2019/05/22 13:53:04	47.5
26	2019/05/22 13:54:04	48.1
27	2019/05/22 13:55:04	50.2
28	2019/05/22 13:56:04	47.3
29	2019/05/22 13:57:04	46.1
30	2019/05/22 13:58:04	59.2

- Freq Weight : A
- Time Weight : FAST
- Level Range : 40-100
- Max dB : 87.2 - 2019/05/22 14:23:00
- Level Range : 40-100
- SEL : 100.7
- Leq : 70.0
-

No.s	Date Time	(dB)
1	2019/05/22 14:16:26	69.7
2	2019/05/22 14:17:26	55.6
3	2019/05/22 14:18:26	64.5
4	2019/05/22 14:19:26	67.8
5	2019/05/22 14:20:26	64.3
6	2019/05/22 14:21:26	73.2
7	2019/05/22 14:22:26	59.6
8	2019/05/22 14:23:26	63.0
9	2019/05/22 14:24:26	74.5
10	2019/05/22 14:25:26	67.9
11	2019/05/22 14:26:26	66.5
12	2019/05/22 14:27:26	60.7
13	2019/05/22 14:28:26	63.8
14	2019/05/22 14:29:26	61.7
15	2019/05/22 14:30:26	59.4
16	2019/05/22 14:31:26	68.7
17	2019/05/22 14:32:26	63.6
18	2019/05/22 14:33:26	75.9
19	2019/05/22 14:34:26	65.6
20	2019/05/22 14:35:26	73.9

- Freq Weight : A
- Time Weight : FAST
- Level Range : 40-100
- Max dB : 78.9 - 2019/05/22 15:11:23
- Level Range : 40-100
- SEL : 95.5
- Leq : 64.8
-

No.s	Date Time	(dB)
1	2019/05/22 14:52:18	68.5
2	2019/05/22 14:53:18	64.9
3	2019/05/22 14:54:18	55.9
4	2019/05/22 14:55:18	63.4
5	2019/05/22 14:56:18	67.1
6	2019/05/22 14:57:18	65.6
7	2019/05/22 14:58:18	57.9
8	2019/05/22 14:59:18	64.6
9	2019/05/22 15:00:18	65.9
10	2019/05/22 15:01:18	64.8
11	2019/05/22 15:02:18	64.5
12	2019/05/22 15:03:18	68.7
13	2019/05/22 15:04:18	65.7
14	2019/05/22 15:05:18	60.7
15	2019/05/22 15:06:18	68.8
16	2019/05/22 15:07:18	63.0
17	2019/05/22 15:08:18	63.7
18	2019/05/22 15:09:18	59.4
19	2019/05/22 15:10:18	57.4
20	2019/05/22 15:11:18	60.6

Appendix B

HVAC Specifications

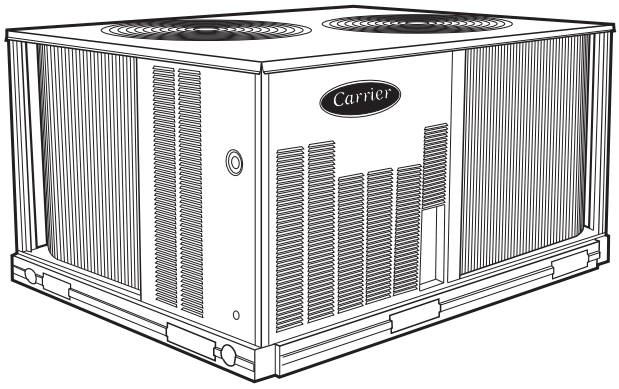
Attachment 9

38AUZ/D 50 Hz
Commercial Split Systems
Air Conditioning Condensing Units
18.3 kW to 59.2 kW

Carrier
turn to the experts

Product Data

Gemini



C09227

38AUZ07-08 shown

Certified to ISO 9001

Carrier's air-cooled air conditioning split systems:

- provide a logical solution for commercial needs
- have a rugged, dependable construction
- are available in single and circuit scroll compressor capacity control
- have cooling capability up to 52°C (125°F) ambient and down to 2°C (35°F) ambient standard

FEATURES/BENEFITS

These dependable outdoor air cooled condensing units match Carrier's indoor-air handlers to meet a wide selection of cooling solutions.

Constructed for long life

The 38AUZ single circuit and 38AUD dual circuit, scroll compressor models are designed and built to last. The high efficient designed outdoor coil construction allows for a more efficient design in a smaller cabinet size that utilizes an overall reduction in refrigerant charge. Where conditions require, special coil coating coil protection option is available. Cabinets are constructed of prepainted galvanized steel, delivering unparalleled protection from the environment. Inside and outside surfaces are protected to ensure long life, good looks, and reliable operation. Safety controls are used for enhanced system protection and reliability.

Each unit utilizes the Comfort Alert diagnostic and troubleshoot control system. This protects the units operation and provides valuable diagnostic information when required.

Factory-installed options (FIOPs)

Certified and pre-engineered factory-installed options (FIOPs) allow units to be installed in less time, thereby reducing installed cost. FIOPs include:

- low ambient controls which provide cooling operation down to -29°C (-20°F) ambient temperatures
- non-fused disconnect
- special coil coating coil protection
- louvered hail guard

MODEL NUMBER NOMENCLATURE

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
3	8	A	U	Z	A	0	7	A	0	A	9	–	0	A	0	A	0

Model Type
Commercial Air Cooled Cond. Unit
Puron® R–410A Refrigerant

Type of Coil
D = Dual Circuit
Z = Single Circuit

Refrigerant Options
A = Standard
B = Low Ambient Controls

Nominal Tonnage
07 = 18.3 kW (5.2 Tons)
08 = 23.2 kW (6.6 Tons)
12 = 29.1 kW (8.3 Tons)
14 = 35.2 kW (10.0 Tons)
16 = 45.8 kW (13.0 Tons)
25 = 59.2 kW (16.8 Tons)

Factory Assigned
A = Default

Factory Assigned
0 = Default

Coil Options (Condenser)
With Round Tube/Plate Fin Design
All models except 14 size (12.5 Ton)
A = Al/Cu Standard
B = Pre Coat Al/Cu
C = E–Coat Al/Cu
E = Cu/Cu
M = Al/Cu Standard with louvered hail guard
N = Pre Coat Al/Cu with louvered hail guard
P = E–Coat Al/Cu with louvered hail guard
R = Cu/Cu – Louvered hail guard
Coil Options (Condenser)
With All Aluminum – NOVATION Design (07–16 sizes)
G = Al/Al Standard
K = E–Coat Al/Al
T = Al/Al with louvered hail guard
W = E–Coat Al/Al with louvered hail guard

Voltage
9 = 400–3–50

Design Rev
– = Factory Assigned

Base Unit Controls
0 = Standard Electro–Mechanical Controls

Factory Assigned
A = Default

Service Options
0 = None

Electrical Options
A = None
C = Non–Fused Disconnect

Brand / Packaging
0 = Standard
1 = LTL

AHRI CAPACITY RATINGS

UNIT	COOLING STAGES	NOM. CAPACITY (TONS)	NET COOLING CAPACITY (MBH)	TOTAL POWER (kW)	EER
38AUZ07/40RU07	1	5	62.7	5.1	12.2
38AUZ08/40RU08	1	6.3	79.3	6.9	11.5
38AUD12/40RU12	2	8.3	103.0	8.2	12.6
38AUD14/40RU14	2	10.4	125.0	10.9	11.5
38AUD16/40RU16	2	12.5	162.0	13.5	12.0
38AUD25/40RU25	2	16.7	202.2	16.6	12.2

LEGEND

AHRI – Air Conditioning, Heating and Refrigeration Institute
ASHRAE – American Society of Heating, Refrigerating and Air Conditioning, Inc.
EER – Energy Efficiency Ratio
IEER – Integrated Energy Efficiency Ratio

NOTES

1. Rated in accordance with AHRI Standard 340/360, as appropriate.
2. Ratings are based on:
   Cooling Standard: 27°C (80°F) db, 19°C (67°F) wb indoor air temp and 35°C (95°F) db outdoor air temp.
3. All units comply with ASHRAE 90.1 Energy Standard for minimum EER and IEER requirements.

SOUND POWER LEVELS, dB

UNIT	COOLING STAGES	OUTDOOR SOUND (dB)								
		A–WEIGHTED	63	125	250	500	1000	2000	4000	8000
NOVATION – All Aluminum Coil Design										
38AUZ07	1	82	78.7	91.2	84.4	79.7	76.9	73.5	71.9	67.5
38AUZ08	1	81	81.7	89.7	82.6	77.6	74.4	70.3	68.0	64.2
38AUD12	2	78	79.2	81.1	78.4	75.0	72.9	68.2	66.4	68.2
38AUD14	2	79	76.2	78.6	78.1	75.1	75.2	71.4	67.9	65.1
38AUD16	2	80	90.3	81.8	78.0	76.7	75.2	70.5	66.4	61.9
RTPF – Round Tube/Plate Fin Coil Design										
38AUZ07	1	83	81.7	88.2	84.0	79.7	78.1	74.0	71.4	68.0
38AUZ08	1	83	81.7	88.2	84.0	79.7	78.1	74.0	71.4	68.0
38AUD12	2	80	76.0	79.9	79.8	77.4	75.6	69.8	67.8	66.4
38AUD16	2	83	86.7	81.2	78.9	80.4	78.0	74.2	70.2	65.0
38AUD25	2	85	91.0	85.0	80.0	86.0	79.0	73.0	68.0	63.0

NOTE: Outdoor sound data is measure in accordance with AHRI standard 270–2008.
LEGEND:
dB = Decibel

DIMENSIONS

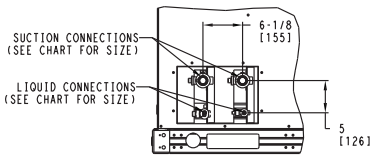
UNIT	STD. UNIT WT.		CORNER A		CORNER B		CORNER C		CORNER D		CENTER OF GRAVITY			UNIT HEIGHT
	KG.	LBS.	KG.	LBS.	KG.	LBS.	KG.	LBS.	KG.	LBS.	X	Y	Z	H
38AUZ-07 (MCHX)	149	328	58	128	31	68	28	62	32	70	21 [533.4]	19 [482.6]	13 [330.2]	42-3/8 [1076.0]
38AUZ-08 (MCHX)	160	353	63	138	33	72	29	65	35	78	19 [482.6]	23 [584.2]	13 [330.2]	42-3/8 [1076.0]
38AUD-12 (MCHX)	226	499	88	193	50	111	38	72	56	123	20 [508.0]	23 [584.2]	15 [381.0]	50-3/8 [1279.2]
38AUD-14 (MCHX)	229	505	86	190	40	88	34	76	68	151	20 [508.0]	24 [609.6]	15 [381.0]	50-3/8 [1279.2]
38AUZ-07 (RTPF)	176	389	64	141	44	96	28	62	41	91	18 [457.2]	24 [609.6]	21 [533.4]	42-3/8 [1076.0]
38AUZ-08 (RTPF)	177	391	64	142	44	96	28	62	41	91	18 [457.2]	24 [609.6]	21 [533.4]	42-3/8 [1076.0]
38AUD-12 (RTPF)	234	516	84	185	53	117	38	83	59	131	19 [482.6]	23 [584.2]	24 [609.6]	50-3/8 [1279.2]

CG CENTER OF GRAVITY

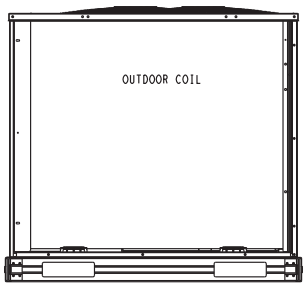
DIRECTION OF AIR FLOW

DIMENSIONS IN [ ] ARE IN MM

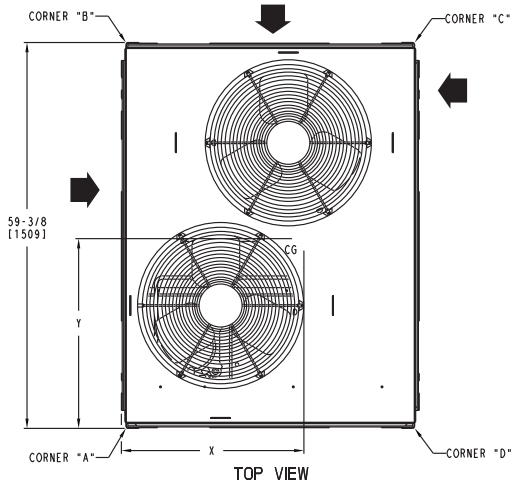
SERVICE VALVE CONNECTIONS		
UNIT	SUCTION	LIQUID
38AUZ07	1-1/8 [28.6]	3/8 [9.5]
38AUZ08	1-1/8 [28.6]	1/2 [12.7]
38AUD12	1-1/8 [28.6]	3/8 [9.5]
38AUD14	1-3/8 [34.9]	1/2 [12.7]

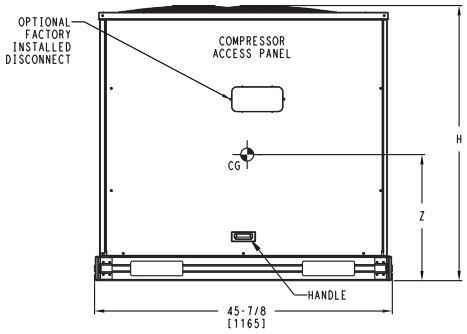


RIGHT SIDE VIEW
(FOR 38AUD SYSTEMS)

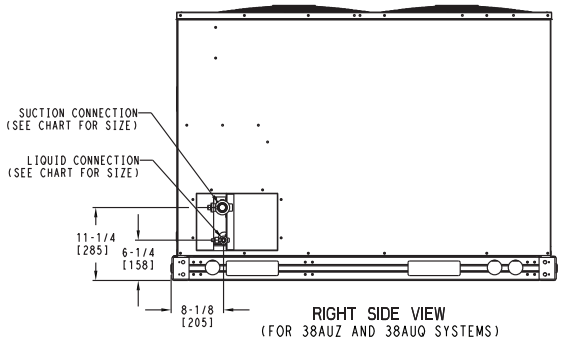


TOP VIEW

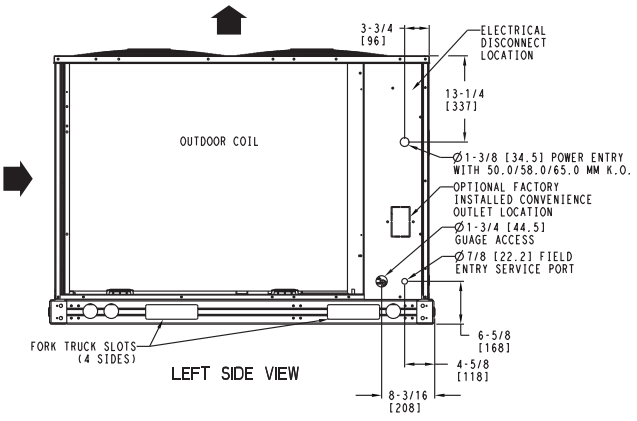




FRONT VIEW



RIGHT SIDE VIEW
(FOR 38AUZ AND 38AUQ SYSTEMS)



LEFT SIDE VIEW

NOTES:

1. MINIMUM CLEARANCE (LOCAL CODES OR JURISDICTION MAY PREVAIL):
   A. BOTTOM TO COMBUSTIBLE SURFACES: 0 INCHES.
   B. OUTDOOR COIL, FOR PROPER AIR FLOW: 36 INCHES ONE SIDE, 12 INCHES THE OTHER. THE SIDE GETTING THE GREATER CLEARANCE IS OPTIONAL.
   C. OVERHEAD: 60 INCHES, TO ASSURE PROPER OUTDOOR FAN OPERATION.
   D. BETWEEN UNITS: CONTROL BOX SIDE, 42 INCHES PER NEC.
   E. BETWEEN UNIT AND UNGROUNDED SURFACES: CONTROL BOX SIDE, 36 INCHES PER NEC.
   F. BETWEEN UNIT AND BLOCK OR CONCRETE WALLS AND OTHER GROUNDED SURFACES: CONTROL BOX SIDE, 42 INCHES PER NEC.
2. WITH EXCEPTION OF THE CLEARANCE FOR THE OUTDOOR COIL AS STATED IN NOTE 1B, A REMOVABLE FENCE OR BARRICADE REQUIRES NO CLEARANCE.
3. UNITS MAY BE INSTALLED ON COMBUSTIBLE FLOORS MADE FROM WOOD OR CLASS A, B OR C ROOF COVERING MATERIAL.

C10590

DIMENSIONS (cont.)

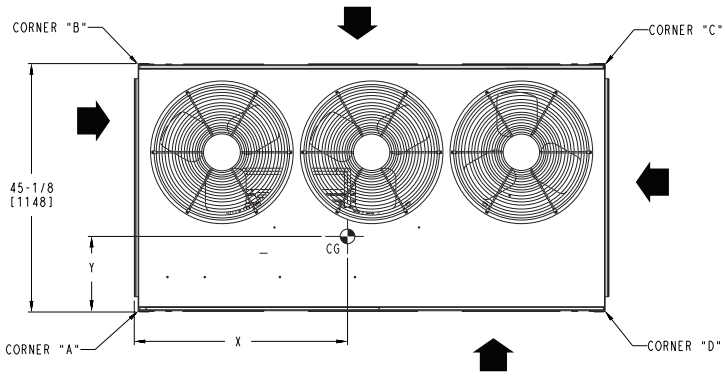
UNIT	STD. UNIT WT.		CORNER A		CORNER B		CORNER C		CORNER D		CENTER OF GRAVITY			UNIT HEIGHT
	KG.	LBS.	KG.	LBS.	KG.	LBS.	KG.	LBS.	KG.	LBS.	X	Y	Z	H
38AUD16 (MCHX)	288	633	100	220	61	134	61.5	135	65.5	144	38 [965.2]	19 [482.6]	15 [381]	50-3/8 [1279.2]
38AUD16 (RTPF)	332	731	107	237	78	172	61	135	84	186	38 [965.2]	19 [482.6]	17 [431.8]	50-3/8 [1279.2]

CG CENTER OF GRAVITY

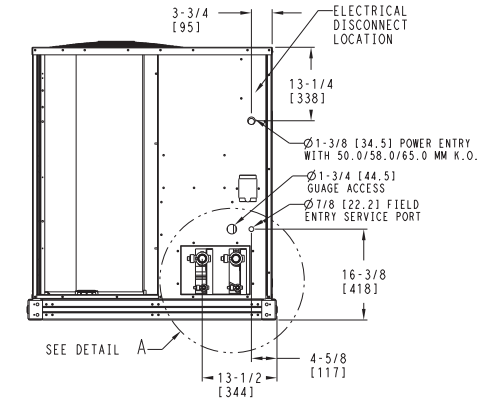
DIRECTION OF AIR FLOW

DIMENSIONS IN [ ] ARE IN MM

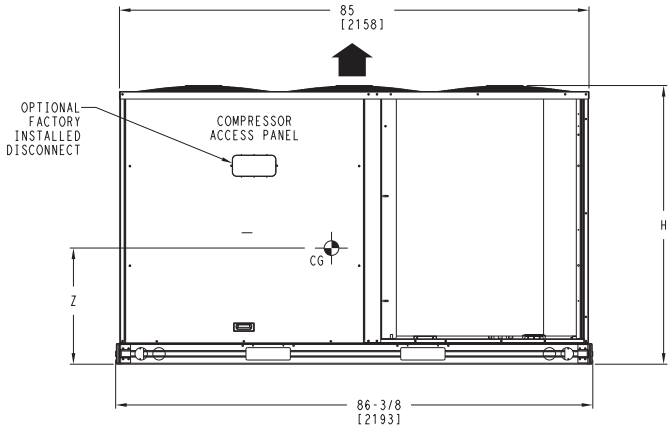
SERVICE VALVE CONNECTIONS			QTY
UNIT	SUCTION	LIQUID	
38AUD16	1-3/8 [34.9]	1/2 [12.7]	2 EA



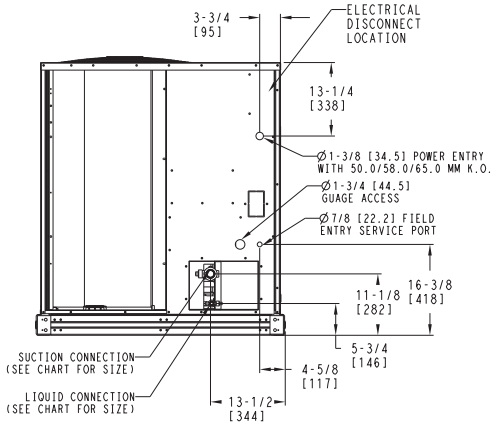
TOP VIEW



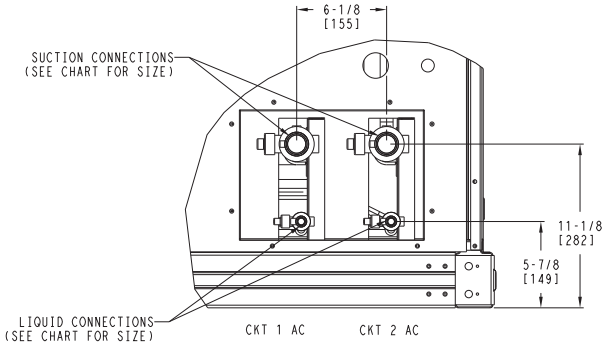
LEFT SIDE VIEW FOR 38AUD SYSTEMS



FRONT VIEW



LEFT SIDE VIEW



DETAIL A
(NOTE POSITION OF CKT 1)

NOTES:
1. MINIMUM CLEARANCE (LOCAL CODES OR JURISDICTION MAY PREVAIL):
   A. BOTTOM TO COMBUSTIBLE SURFACES: 0 INCHES.
   B. OUTDOOR COIL, FOR PROPER AIR FLOW: 36 INCHES ONE SIDE, 12 INCHES THE OTHER. THE SIDE GETTING THE GREATER CLEARANCE IS OPTIONAL.
   C. OVERHEAD: 60 INCHES, TO ASSURE PROPER OUTDOOR FAN OPERATION.
   D. BETWEEN UNITS: CONTROL BOX SIDE, 42 INCHES PER NEC.
   E. BETWEEN UNIT AND UNGROUNDED SURFACES: CONTROL BOX SIDE, 36 INCHES PER NEC.
   F. BETWEEN UNIT AND BLOCK OR CONCRETE WALLS AND OTHER GROUNDED SURFACES: CONTROL BOX SIDE, 42 INCHES PER NEC.
2. WITH EXCEPTION OF THE CLEARANCE FOR THE OUTDOOR COIL AS STATED IN NOTE 1B, A REMOVABLE FENCE OR BARRICADE REQUIRES NO CLEARANCE.
3. UNITS MAY BE INSTALLED ON COMBUSTIBLE FLOORS MADE FROM WOOD OR CLASS A, B OR C ROOF COVERING MATERIAL.

C10591

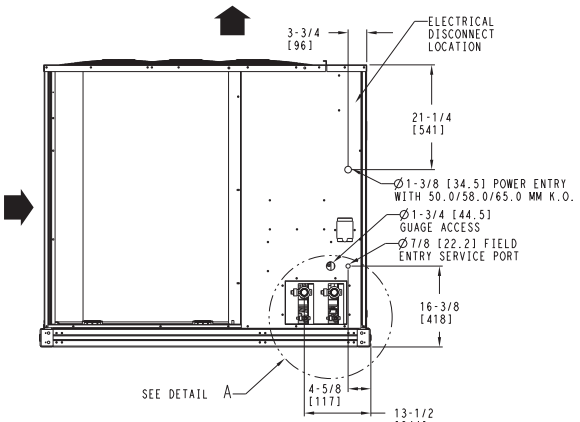
DIMENSIONS (cont.)

UNIT	STD. UNIT WT.		CORNER A		CORNER B		CORNER C		CORNER D		CENTER OF GRAVITY			UNIT HEIGHT
	KG.	LBS.	KG.	LBS.	KG.	LBS.	KG.	LBS.	KG.	LBS.	X	Y	Z	H
38AUD25 (RTPF)	444	978	163	360	85	188	67	147	128	283	38 [965.2]	23 [584.2]	17 [431.8]	50-3/8 [1279.2]

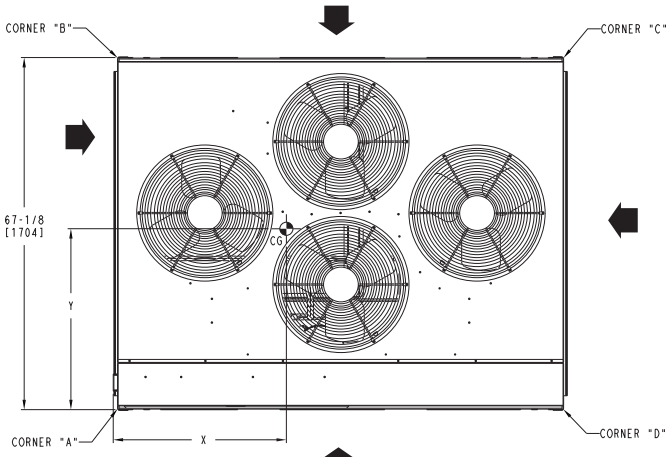
CG CENTER OF GRAVITY

DIRECTION OF AIR FLOW

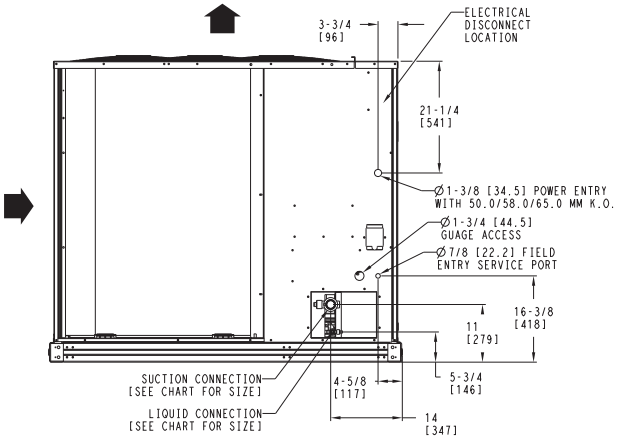
DIMENSIONS IN [ ] ARE IN MM



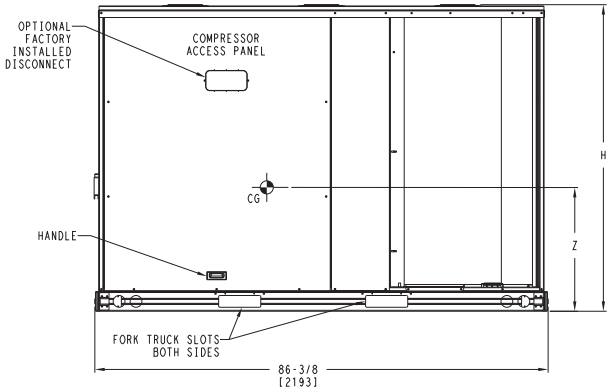
LEFT SIDE VIEW FOR 38AUD SYSTEMS



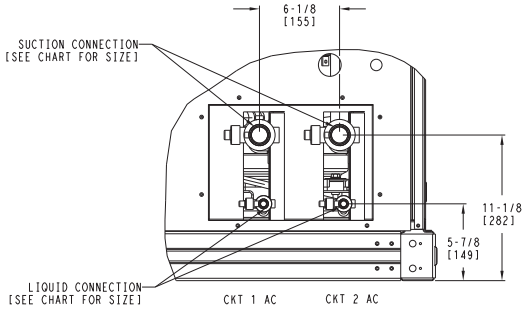
TOP VIEW



LEFT SIDE VIEW



FRONT VIEW



DETAIL A
(NOTE POSITION OF CKT 1)

NOTES:
1. MINIMUM CLEARANCE (LOCAL CODES OR JURISDICTION MAY PREVAIL):
   A. BOTTOM TO COMBUSTIBLE SURFACES: 0 INCHES.
   B. OUTDOOR COIL, FOR PROPER AIR FLOW: 36 INCHES ONE SIDE, 12 INCHES THE OTHER. THE SIDE GETTING THE GREATER CLEARANCE IS OPTIONAL.
   C. OVERHEAD: 60 INCHES, TO ASSURE PROPER OUTDOOR FAN OPERATION.
   D. BETWEEN UNITS: CONTROL BOX SIDE, 42 INCHES PER NEC.
   E. BETWEEN UNIT AND UNGROUNDED SURFACES: CONTROL BOX SIDE, 36 INCHES PER NEC.
   F. BETWEEN UNIT AND BLOCK OR CONCRETE WALLS AND OTHER GROUNDED SURFACES: CONTROL BOX SIDE, 42 INCHES PER NEC.
2. WITH EXCEPTION OF THE CLEARANCE FOR THE OUTDOOR COIL AS STATED IN NOTE 1B, A REMOVABLE FENCE OR BARRICADE REQUIRES NO CLEARANCE.
3. UNITS MAY BE INSTALLED ON COMBUSTIBLE FLOORS MADE FROM WOOD OR CLASS A, B OR C ROOF COVERING MATERIAL.

SERVICE VALVE CONNECTIONS			QTY
UNIT	SUCTION	LIQUID	
38AUD25	1-3/8 [34.9]	1/2 [12.7]	2 EA

C10592

The new degree of comfort.™

Rheem *Classic*® Series Air Conditioners

RA13 Series

Efficiencies 13-15.5 SEER/11.5-13 EER
Nominal Sizes 1½ to 5 Ton [5.28 to 17.6 kW]
Cooling Capacities 17.3 to 60.5 kBTU
[5.7 to 17.7 kW]

"Proper sizing and installation of equipment is critical to achieve optimal performance. Split system air conditioners and heat pumps must be matched with appropriate coil components to meet Energy Star. Ask your Contractor for details or visit www.energystar.gov."

- New composite base pan – dampens sound, captures louver panels, eliminates corrosion and reduces number of fasteners needed
- Powder coat paint system – for a long lasting professional finish
- Scroll compressor – uses 70% fewer moving parts for higher efficiency and increased reliability
- Modern cabinet aesthetics – increased curb appeal with visually appealing design
- Curved louver panels – provide ultimate coil protection, enhance cabinet strength, and increased cabinet rigidity
- Optimized fan orifice – optimizes airflow and reduces unit sound
- Rust resistant screws – confirmed through 1500-hour salt spray testing
- PlusOne™ **Expanded Valve Space** – 3"-4"-5" service valve space – provides a minimum working area of 27-square inches for easier access
- PlusOne™ **Triple Service Access** – 15" wide, industry leading corner service access – makes repairs easier and faster. The two fastener removable corner allows optimal access to internal unit components. Individual louver panels come out once fastener is removed, for faster coil cleaning and easier cabinet reassembly
- Diagnostic service window with two-fastener opening – provides access to the high and low pressure.
- External gauge port access – allows easy connection of "low-loss" gauge ports
- Single-row condenser coil – makes unit lighter and allows thorough coil cleaning to maintain "out of the box" performance
- 35% fewer cabinet fasteners and fastener-free base – allow for faster access to internal components and hassle-free panel removal
- Service trays – hold fasteners or caps during service calls
- QR code – provides technical information on demand for faster service calls
- Fan motor harness with extra long wires allows unit top to be removed without disconnecting fan wire.

Standard Feature Table

STANDARD FEATURES							
Feature	**18**	**24**	**30**	**36**	**42**	**48**	**60**
R-410a Refrigerant	√	√	√	√	√	√	√
Maximum SEER	15.1	15.0	15.5	15.1	14.5	14.5	14.0
Maximum EER	12.5	12.5	13.0	12.5	12.0	12.0	11.5
Scroll Compressor	√	√	√	√	√	√	√
Field Installed Filter Drier	√	√	√	√	√	√	√
Front Seating Service Valves	√	√	√	√	√	√	√
Internal Pressure Relief Valve	√	√	√	√	√	√	√
Internal Thermal Overload	√	√	√	√	√	√	√
Long Line capability	√	√	√	√	√	√	√
Low Ambient capability with Kit	√	√	√	√	√	√	√
3-4-5 Expanded Valve Space	√	√	√	√	√	√	√
Composite Basepan	√	√	√	√	√	√	√
2 Screw Control Box Access	√	√	√	√	√	√	√
15" Access to Internal Components	√	√	√	√	√	√	√
Quick release louver panel design	√	√	√	√	√	√	√
No fasteners to remove along bottom	√	√	√	√	√	√	√
Optimized Venturi Airflow	√	√	√	√	√	√	√
Single row condenser coil	√	√	√	√	√	√	√
Powder coated paint	√	√	√	√	√	√	√
Rust resistant screws	√	√	√	√	√	√	√
QR code	√	√	√	√	√	√	√
External gauge ports	√	√	√	√	√	√	√
Service trays	√	√	√	√	√	√	√

√ = Standard

Available SKUs

Available Models	Description
RA1318AJ1NA	*Classic*® Series 1 1/2 ton 13 SEER Single-Stage Air Conditioner-208/230/1/60
RA1324AJ1NA	*Classic*® Series 2 ton 13 SEER Single-Stage Air Conditioner-208/230/1/60
RA1330AJ1NA	*Classic*® Series 2 1/2 ton 13 SEER Single-Stage Air Conditioner-208/230/1/60
RA1336AJ1NA	*Classic*® Series 3 ton 13 SEER Single-Stage Air Conditioner-208/230/1/60
RA1342AJ1NA	*Classic*® Series 3 1/2 ton 13 SEER Single-Stage Air Conditioner-208/230/1/60
RA1348AJ1NA	*Classic*® Series 4 ton 13 SEER Single-Stage Air Conditioner-208/230/1/60
RA1360AJ1NA	*Classic*® Series 5 ton 13 SEER Single-Stage Air Conditioner-208/230/1/60
RA1318AJ1NB	*Classic*® Series 1 1/2 ton 13 SEER Single-Stage Air Conditioner w/ High/Low Pressure-208/230/1/60
RA1324AJ1NB	*Classic*® Series 2 ton 13 SEER Single-Stage Air Conditioner w/ High/Low Pressure-208/230/1/60
RA1330AJ1NB	*Classic*® Series 2 1/2 ton 13 SEER Single-Stage Air Conditioner w/ High/Low Pressure-208/230/1/60
RA1336AJ1NB	*Classic*® Series 3 ton 13 SEER Single-Stage Air Conditioner w/ High/Low Pressure-208/230/1/60
RA1342AJ1NB	*Classic*® Series 3 1/2 ton 13 SEER Single-Stage Air Conditioner w/ High/Low Pressure-208/230/1/60
RA1348AJ1NB	*Classic*® Series 4 ton 13 SEER Single-Stage Air Conditioner w/ High/Low Pressure-208/230/1/60
RA1360AJ1NB	*Classic*® Series 5 ton 13 SEER Single-Stage Air Conditioner w/ High/Low Pressure-208/230/1/60
RA1336AC1NB	*Classic*® Series 3 ton 13 SEER Single-Stage Air Conditioner w/ High/Low Pressure-208/230/3/60
RA1342AC1NB	*Classic*® Series 3 1/2 ton 13 SEER Single-Stage Air Conditioner w/ High/Low Pressure-208/230/3/60
RA1348AC1NB	*Classic*® Series 4 ton 13 SEER Single-Stage Air Conditioner w/ High/Low Pressure-208/230/3/60
RA1360AC1NB	*Classic*® Series 5 ton 13 SEER Single-Stage Air Conditioner w/ High/Low Pressure-208/230/3/60
RA1336AD1NB	*Classic*® Series 3 ton 13 SEER Single-Stage Air Conditioner w/ High/Low Pressure-460/3/60
RA1342AD1NB	*Classic*® Series 3 1/2 ton 13 SEER Single-Stage Air Conditioner w/ High/Low Pressure-460/3/60
RA1348AD1NB	*Classic*® Series 4 ton 13 SEER Single-Stage Air Conditioner w/ High/Low Pressure-460/3/60
RA1360AD1NB	*Classic*® Series 5 ton 13 SEER Single-Stage Air Conditioner w/ High/Low Pressure-460/3/60

Accessories

Model No.		RA1318	RA1324	RA1330	RA1336	RA1342	RA1348	RA1360
Compressor crankcase heater*		44-17402-44	44-17402-44	44-17402-44	44-17402-44	44-17402-45	44-17402-45	44-17402-45
Low ambient control		RXAD-A08	RXAD-A08	RXAD-A08	RXAD-A08	RXAD-A08	RXAD-A08	RXAD-A08
Compressor sound cover		68-23427-26	68-23427-26	68-23427-26	68-23427-26	68-23427-25	68-23427-25	68-23427-25
Compressor hard start kit		SK-A1	SK-A1	SK-A1	SK-A1	SK-A1	SK-A1	SK-A1
Compressor time delay		RXMD-B01	RXMD-B01	RXMD-B01	RXMD-B01	RXMD-B01	RXMD-B01	RXMD-B01
Low pressure control		RXAC-A07	RXAC-A07	RXAC-A07	RXAC-A07	RXAC-A07	RXAC-A07	RXAC-A07
High pressure control		RXAB-A07	RXAB-A07	RXAB-A07	RXAB-A07	RXAB-A07	RXAB-A07	RXAB-A07
Liquid Line Solenoid (24 VAC, 50/60 Hz)	Solenoid Valve	200RD2T3TVLC	200RD2T3TVLC	200RD2T3TVLC	200RD2T3TVLC	200RD2T3TVLC	200RD3T3TVLC	200RD3T3TVLC
	Solenoid Coil	61-AMG24V	61-AMG24V	61-AMG24V	61-AMG24V	61-AMG24V	61-AMG24V	61-AMG24V
Liquid Line Solenoid (120/240 VAC, 50/60 Hz)	Solenoid Valve	200RD2T3TVLC	200RD2T3TVLC	200RD2T3TVLC	200RD2T3TVLC	200RD2T3TVLC	200RD3T3TVLC	200RD3T3TVLC
	Solenoid Coil	61-AMG120/240V	61-AMG120/240V	61-AMG120/240V	61-AMG120/240V	61-AMG120/240V	61-AMG120/240V	61-AMG120/240V
Top Cap w/Label		91-101123-21	91-101123-21	91-101123-21	91-101123-21	91-101123-21	91-101123-21	91-101123-21
Heat Pump Riser 6 in.		686020	686020	686020	686020	686020	686020	686020

*Crankcase Heater recommended with Low Ambient Kit.

Weighted Sound Power Level (dBA)

RA13 Sound Power Level									
Model	Sound Power Level [dB(A)]	Full Octave Linear Sound Power Level dB - Center Frequency - Hz							
		125	250	500	1000	2000	4000	6300	8000
RA1318	71.9	52.1	58.3	61.5	61.1	57.0	54.2	51.0	48.7
RA1324	75.5	55.4	60.3	64.7	66.4	62.6	58.0	54.3	52.4
RA1330	73.6	49.7	62.6	64.6	63.1	60.3	54.8	49.4	47.6
RA1336	72.4	55.1	60.2	62.6	63.3	58.1	53.4	51.3	52.0
RA1342	72.7	48.9	56.1	62.9	62.2	61.1	55.2	51.9	50.2
RA1348	75.8	51.4	59.6	65.2	65.9	64.3	58.5	55.2	53.7
RA1360	77.7	51.7	60.9	66.9	70.4	63.5	57.4	55.4	53.8

NOTE: Tested in accordance with AHRI Standard 270-08 (not listed in AHRI)

Thermostats

200-Series *
Programmable

300-Series *
Deluxe
Programmable

400-Series *
Special Applications/
Programmable

500-Series *
Communicating/
Programmable

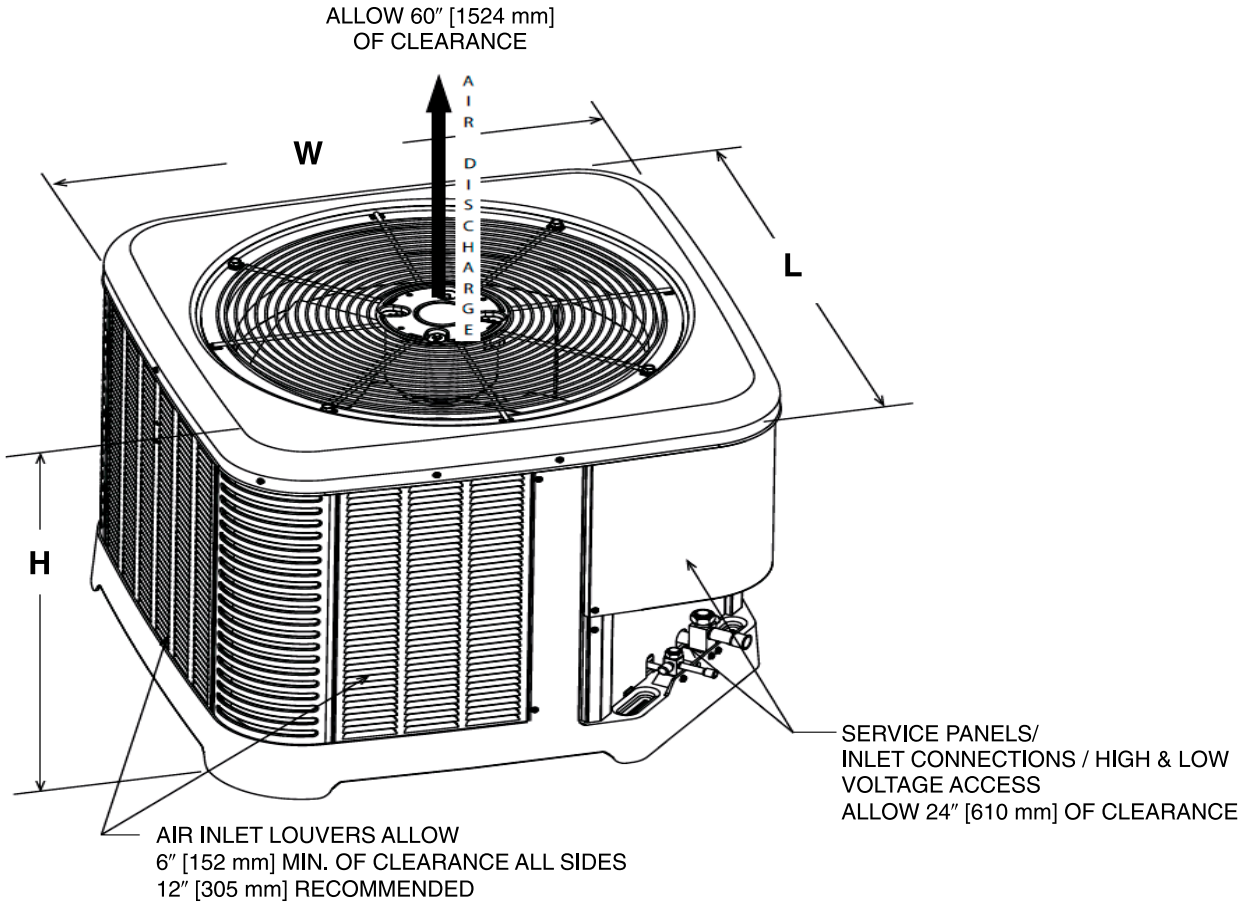
Brand		Descripter (3 Characters)	Series (3 Characters)	System (2 Characters)	Type (2 Characters)
RHC	-	TST	213	UN	MS
RHC=Rheem		TST=Thermostat	200=Programmable 300=Deluxe Programmable 400=Special Applications/ Programmable 500=Communicating/ Programmable	GE=Gas/Electric UN=Universal (AC/HP/GE) MD=Modulating Furnace DF=Dual Fuel CM=Communicating	SS=Single-Stage MS=Multi-Stage

** Photos are representative. Actual models may vary.*

For detailed thermostat match-up information, see specification sheet form number T11-001.

Unit Dimensions

MODEL NO.	OPERATING						SHIPPING					
	H (Height)		L (Length)		W (Width)		H (Height)		L (Length)		W (Width)	
	INCHES	mm	INCHES	mm	INCHES	mm	INCHES	mm	INCHES	mm	INCHES	mm
RA1318	27	685	29.75	755	29.75	755	28.75	730	32.38	822	32.38	822
RA1324	25	635	29.75	755	29.75	755	26.75	679	32.38	822	32.38	822
RA1330	25	635	29.75	755	29.75	755	26.75	679	32.38	822	32.38	822
RA1336	27	685	29.75	755	29.75	755	28.75	730	32.38	822	32.38	822
RA1342	31	787	29.75	755	29.75	755	32.75	831	32.38	822	32.38	822
RA1348	27	685	33.75	857	33.75	857	28.75	730	36.38	924	36.38	924
RA1360	31	787	35.75	908	35.75	908	32.75	831	38.38	974	38.38	974



[ ] Designates Metric Conversions

ST-A1226-02-00

Appendix C

SoundPLAN Input and Output Data

Tank Farm Road Mixed Use
Run info
Future on-site SPS

Project description

Project title: Tank Farm Road Mixed Use
Project No.: 19-07096
Project engineer: Maddux
Customer:

Description:

Run description

Calculation type: Single Point Sound
Title: Future on-site SPS
Group:
Run file: RunFile.runx
Result number: 1
Local calculation (ThreadCount=12)
Calculation start: 5/28/2019 1:32:15 PM
Calculation end: 5.28.2019 1:32:16 PM
Calculation time: 00:00:288 [m:s:ms]
No. of points: 4
No. of calculated points: 4
Kernel version: SoundPLAN 8.1 (4/8/2019) - 32 bit

Run parameters

Reflection order:	3	
Maximum reflection distance to receiver		200 m
Maximum reflection distance to source		50 m
Search radius	5000 m	
Weighting:	dB(A)	
Allowed tolerance (per individual source):	0.100 dB	
Create ground effect areas from road surfaces:		Yes

Standards:
- Industry: ISO 9613-2: 1996
- Air absorption: ISO 9613-1

regular ground effect (chapter 7.3.1), for sources without a spectrum automatically alternative ground effect
- Limitation of screening loss:
  - single/multiple 20.0 dB /25.0 dB
- Side diffraction: Outdated method (side paths also around terrain)
- Use Eqn (Abar=Dz-Max(Agr,0)) instead of Eqn (12) (Abar=Dz-Agr) for insertion loss
- Environment:
  - Air pressure 1013.3 mbar
  - rel. humidity 70.0 %
  - Temperature 10.0 °C
  - Meteo. corr. C0(7-22h)[dB]=0.0; C0(22-7h)[dB]=0.0;
  - Ignore Cmet for Lmax industry calculation: No
- Parameter for screening: C2=20.0
- Dissection parameters:

Tank Farm Road Mixed Use
Run info
Future on-site SPS

Minimal distance	1 m
Max. difference ground effect + diffraction	1.0 dB
Max. number of iterations	4
Attenuation	
Foliage:	ISO 9613-2
Built-up area:	ISO 9613-2
Industrial site:	ISO 9613-2
Assessment:	Day Night Level LDN

Reflection of "own" facade is suppressed

Geometry data

Future.sit	5/28/2019 1:30:20 PM
- contains:	
Building.geo	5/28/2019 11:28:06 AM
Geo-File1.geo	5/28/2019 11:03:34 AM
GNM.geo	5/28/2019 11:22:42 AM
HVAC.geo	5/28/2019 1:30:20 PM
Loading Dock.geo	5/28/2019 1:30:20 PM
Recivers.geo	5/28/2019 11:28:06 AM

Tank Farm Road Mixed Use
Assessed receiver levels
Future on-site SPS

2

Receiver	Usage	Fl	Dir		Leq,d	Leq,d,diff	
				dB(A)	dB(A)	dB	
168210,3906654	SCR	G			42.5		
168313,3906791	SCR	G			46.8		
168375,3906601	SCR	G			45.2		
168494,3906739	SCR	G			46.3		

Tank Farm Road Mixed Use
Octave spectra of the sources in dB(A) - Future on-site SPS

3

Name	Source type	l or A	Li	R'w	L'w	Lw	KI	KT	LwMax	DO-Wall	Day histogram	Emission spectrum	63Hz	125Hz	250Hz	500Hz	1kHz	2kHz	4kHz	8kHz	
		m,m²	dB(A)	dB	dB(A)	dB(A)	dB	dB	dB(A)	dB			dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	
	Point				85.2	85.2	0.0	0.0		0	HVAC_50%_Night	20 Ton	64.8	68.9	71.4	82.8	79.0	74.2	69.0	61.9	
	Point				85.2	85.2	0.0	0.0		0	HVAC_50%_Night	20 Ton	64.8	68.9	71.4	82.8	79.0	74.2	69.0	61.9	
	Point				85.2	85.2	0.0	0.0		0	HVAC_50%_Night	20 Ton	64.8	68.9	71.4	82.8	79.0	74.2	69.0	61.9	
	Point				85.2	85.2	0.0	0.0		0	HVAC_50%_Night	20 Ton	64.8	68.9	71.4	82.8	79.0	74.2	69.0	61.9	
	Point				87.8	87.8	0.0	0.0		0	HVAC_50%_Night	10 Ton	67.8	61.9	78.4	81.8	84.0	79.2	76.0	67.9	
	Point				87.8	87.8	0.0	0.0		0	HVAC_50%_Night	10 Ton	67.8	61.9	78.4	81.8	84.0	79.2	76.0	67.9	
	Point				85.2	85.2	0.0	0.0		0	HVAC_50%_Night	20 Ton	64.8	68.9	71.4	82.8	79.0	74.2	69.0	61.9	
	Point				85.2	85.2	0.0	0.0		0	HVAC_50%_Night	20 Ton	64.8	68.9	71.4	82.8	79.0	74.2	69.0	61.9	
	Point				85.2	85.2	0.0	0.0		0	HVAC_50%_Night	20 Ton	64.8	68.9	71.4	82.8	79.0	74.2	69.0	61.9	
	Point				85.2	85.2	0.0	0.0		0	HVAC_50%_Night	20 Ton	64.8	68.9	71.4	82.8	79.0	74.2	69.0	61.9	
	Point				85.2	85.2	0.0	0.0		0	HVAC_50%_Night	20 Ton	64.8	68.9	71.4	82.8	79.0	74.2	69.0	61.9	
	Point				85.2	85.2	0.0	0.0		0	HVAC_50%_Night	20 Ton	64.8	68.9	71.4	82.8	79.0	74.2	69.0	61.9	
	Point				80.0	80.0	0.0	0.0		0	HVAC_50%_Night	Truck: loading general cargo	47.0	57.0	64.0	70.0	73.0	74.0	74.0	72.0	
	Point				85.2	85.2	0.0	0.0		0	HVAC_50%_Night	20 Ton	64.8	68.9	71.4	82.8	79.0	74.2	69.0	61.9	
	Point				85.2	85.2	0.0	0.0		0	HVAC_50%_Night	20 Ton	64.8	68.9	71.4	82.8	79.0	74.2	69.0	61.9	
	Point				85.2	85.2	0.0	0.0		0	HVAC_50%_Night	20 Ton	64.8	68.9	71.4	82.8	79.0	74.2	69.0	61.9	
	Point				85.2	85.2	0.0	0.0		0	HVAC_50%_Night	20 Ton	64.8	68.9	71.4	82.8	79.0	74.2	69.0	61.9	
	Point				85.2	85.2	0.0	0.0		0	HVAC_50%_Night	20 Ton	64.8	68.9	71.4	82.8	79.0	74.2	69.0	61.9	
	Point				87.8	87.8	0.0	0.0		0	HVAC_50%_Night	10 Ton	67.8	61.9	78.4	81.8	84.0	79.2	76.0	67.9	
	Point				87.8	87.8	0.0	0.0		0	HVAC_50%_Night	10 Ton	67.8	61.9	78.4	81.8	84.0	79.2	76.0	67.9	
	Point				87.8	87.8	0.0	0.0		0	HVAC_50%_Night	10 Ton	67.8	61.9	78.4	81.8	84.0	79.2	76.0	67.9	
	Point				87.8	87.8	0.0	0.0		0	HVAC_50%_Night	10 Ton	67.8	61.9	78.4	81.8	84.0	79.2	76.0	67.9	
	Point				87.8	87.8	0.0	0.0		0	HVAC_50%_Night	10 Ton	67.8	61.9	78.4	81.8	84.0	79.2	76.0	67.9	
	Point				87.8	87.8	0.0	0.0		0	HVAC_50%_Night	10 Ton	67.8	61.9	78.4	81.8	84.0	79.2	76.0	67.9	
	Point				87.8	87.8	0.0	0.0		0	HVAC_50%_Night	10 Ton	67.8	61.9	78.4	81.8	84.0	79.2	76.0	67.9	
	Point				87.8	87.8	0.0	0.0		0	HVAC_50%_Night	10 Ton	67.8	61.9	78.4	81.8	84.0	79.2	76.0	67.9	
	Point				87.8	87.8	0.0	0.0		0	HVAC_50%_Night	10 Ton	67.8	61.9	78.4	81.8	84.0	79.2	76.0	67.9	
	Point				87.8	87.8	0.0	0.0		0	HVAC_50%_Night	10 Ton	67.8	61.9	78.4	81.8	84.0	79.2	76.0	67.9	
	Point				87.8	87.8	0.0	0.0		0	HVAC_50%_Night	10 Ton	67.8	61.9	78.4	81.8	84.0	79.2	76.0	67.9	
	Point				87.8	87.8	0.0	0.0		0	HVAC_50%_Night	10 Ton	67.8	61.9	78.4	81.8	84.0	79.2	76.0	67.9	
	Point				87.8	87.8	0.0	0.0		0	HVAC_50%_Night	10 Ton	67.8	61.9	78.4	81.8	84.0	79.2	76.0	67.9	
	Point				87.8	87.8	0.0	0.0		0	HVAC_50%_Night	10 Ton	67.8	61.9	78.4	81.8	84.0	79.2	76.0	67.9	
	Point				87.8	87.8	0.0	0.0		0	HVAC_50%_Night	10 Ton	67.8	61.9	78.4	81.8	84.0	79.2	76.0	67.9	
	Point				87.8	87.8	0.0	0.0		0	HVAC_50%_Night	10 Ton	67.8	61.9	78.4	81.8	84.0	79.2	76.0	67.9	
	Point				87.8	87.8	0.0	0.0		0	HVAC_50%_Night	10 Ton	67.8	61.9	78.4	81.8	84.0	79.2	76.0	67.9	

Tank Farm Road Mixed Use
Octave spectra of the sources in dB(A) - Future on-site SPS

3

Name	Source type	l or A m,m²	Li dB(A)	R'w dB	L'w dB(A)	Lw dB(A)	KI dB	KT dB	LwMax dB(A)	DO-Wall dB	Day histogram	Emission spectrum	63Hz dB(A)	125Hz dB(A)	250Hz dB(A)	500Hz dB(A)	1kHz dB(A)	2kHz dB(A)	4kHz dB(A)	8kHz dB(A)	
	Point				87.8	87.8	0.0	0.0		0	HVAC_50%_Night	10 Ton	67.8	61.9	78.4	81.8	84.0	79.2	76.0	67.9	
	Point				87.8	87.8	0.0	0.0		0	HVAC_50%_Night	10 Ton	67.8	61.9	78.4	81.8	84.0	79.2	76.0	67.9	
	Point				87.8	87.8	0.0	0.0		0	HVAC_50%_Night	10 Ton	67.8	61.9	78.4	81.8	84.0	79.2	76.0	67.9	
	Point				87.8	87.8	0.0	0.0		0	HVAC_50%_Night	10 Ton	67.8	61.9	78.4	81.8	84.0	79.2	76.0	67.9	
	Point				87.8	87.8	0.0	0.0		0	HVAC_50%_Night	10 Ton	67.8	61.9	78.4	81.8	84.0	79.2	76.0	67.9	

Attachment 10

660 Tank Farm Mixed Use Project

Multimodal Transportation Impact Study

Prepared For: City of San Luis Obispo

Central Coast Transportation Consulting

895 Napa Avenue, Suite A-6

Morro Bay, CA 93442

(805) 316-0101

November 2018

Executive Summary

This study evaluates the potential transportation impacts of the 660 Tank Farm mixed-use project located on the north side of Tank Farm Road between Broad Street and Santa Fe Road in the City of San Luis Obispo. The project proposes ten apartments, 130 beds in an assisted living facility, and 45,000 square feet of retail uses. Nine intersections were evaluated during the weekday morning (7-9 AM) and weekday evening (4-6 PM) time periods under Existing and Cumulative conditions. The 660 Tank Farm project is expected to generate a total of 1,930 new daily trips, 67 new AM peak hour trips, and 130 new PM peak hour trips. Impacts and mitigation measures are summarized below.

Existing Plus Project			
#	**Location**	**Impact**	**Mitigation Measure**
1	Broad / Tank Farm	Addition of project traffic extends EBL turning queue by one to two vehicles	Either provide vehicular connection from the 650 Tank Farm project to the 660 Tank Farm site to allow the 650 Tank Farm site to use Industrial Way to turn north onto Broad Street, or widen Broad Street and add a second SBL lane at the intersection
2	Mindbody road extension	Addition of project traffic will increase use of the Mindbody road extension adjacent to SESLOC.	Install a single-lane roundabout at the intersection of the Mindbody road extension adjacent to SESLOC on the north property line to encourage smooth traffic flow between the sites.
3	SESLOC RIRO driveway	Installation of the project driveway on Broad Street as proposed is too close to the existing SESLOC right-in/right-out driveway.	Eliminate the SESLOC RIRO driveway.
Cumulative Plus Project			
4	Tank Farm / South Higuera	Intersection operates unacceptably, and addition of project traffic increases V/C by 0.1	Install a second SBL turn lane.
5	Tank Farm / Santa Fe	Northbound approach operates at LOS F with and without the project.	Install a multi-lane roundabout.
6	Broad / Industrial	Operates at LOS F during the PM peak hour with and without the project due to long pedestrian crossing times and split phasing.	Convert east and west approaches from split phasing to permissive phasing and restripe both approaches to provide dedicated left turn lanes and shared through/right turn lanes.
7	Broad / Tank Farm	Operates at LOS F for both peak hours.	Add a second southbound left turn lane, add a dedicated northbound right turn lane, and convert the westbound right turn lane to a shared through/right lane. Establish time-of-day timing plans as recommended in the City's Circulation Element EIR.
8	Tank Farm between Santa Fe and Old Windmill	Operates at LOS E during PM peak hour.	Widen segment to four lanes.

Further details are provided in the body of this report.

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Appendix C: Segment LOS Calculation Sheets

Introduction

This study evaluates the potential transportation impacts of the 660 Tank Farm mixed-use project located on the north side of Tank Farm Road between Broad Street and Santa Fe Road in the City of San Luis Obispo. The project proposes ten apartments, 130 beds in an assisted living facility, and 45,000 square feet of retail uses. The project was formerly analyzed including the adjacent property (650 Tank Farm), which was subsequently analyzed as a stand-alone project. This study relies on that prior analysis to identify impacts.

The project's location and study intersections are shown on **Figure 1**, while **Figure 2** shows the project site plans. Study intersections were identified in consultation with City staff. The following intersections were analyzed during the weekday morning (7-9 AM) and evening (4-6 PM) time periods:

1. Tank Farm Road/South Higuera Street
2. Tank Farm Road/Long Street
3. Tank Farm Road/Santa Fe Road
4. Tank Farm Road/Mindbody Traffic Signal
5. Broad Street/Capitolio Way
6. Broad Street/Industrial Way
7. Broad Street/Tank Farm Road
8. Broad Street/Aero Vista Lane
9. Broad Street/Aero Drive

Vehicular, pedestrian, and bicycle levels of service are reported for each study intersection consistent with the City's Multimodal Transportation Impact Guidelines. The study segments were identified in consultation with City staff consistent with City policies. Four roadway segments were analyzed for bicycle, pedestrian, transit, and auto level of service during the AM and PM peak hours:

1. Tank Farm Road (Broad Street to Higuera Street)
2. Tank Farm Road (Broad Street to Orcutt Road)
3. Broad Street (Orcutt Road to Tank Farm Road)
4. Broad Street (Tank Farm Road to South City Limits)

The study locations were evaluated under these scenarios:

1. **Existing Conditions** reflects 2016 traffic counts and the existing transportation network.
2. **Existing Plus Project** adds Project-generated traffic to Existing Conditions volumes. Note that this scenario includes both the 650 and 660 Tank Farm projects, thereby slightly overstating project trips and associated impacts.
3. **Cumulative Plus Project** represents future traffic conditions reflective of the buildout of land uses in the area, including the proposed Project.

Each scenario is described in more detail in the appropriate chapter.

Figure 1: Project and Study Locations

Central Coast Transportation Consulting
Traffic Engineering & Transportation Planning

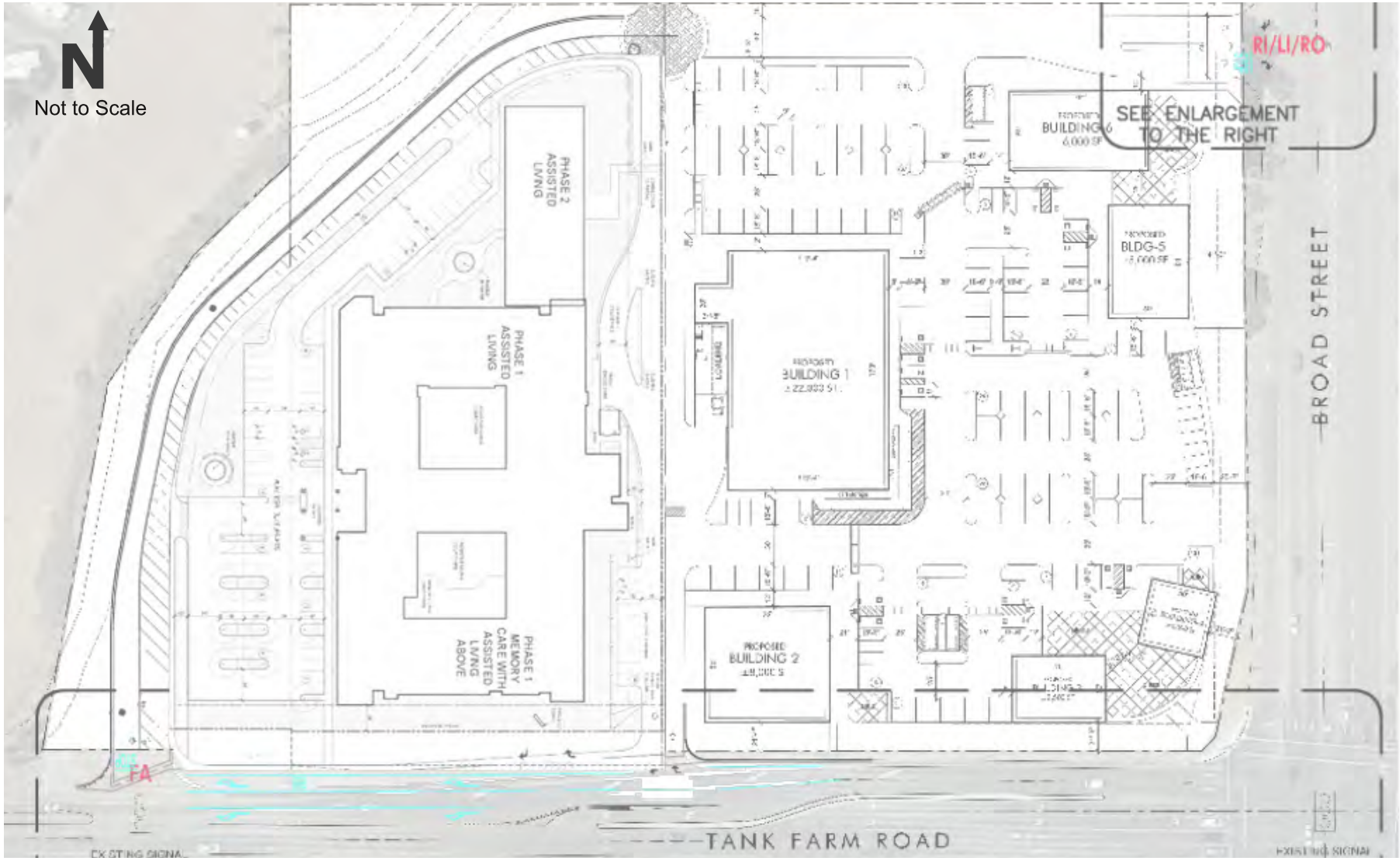
Legend:

- Project Sites
- (x) - Study Intersection

November 2018

660 Tank Farm TIS

Figure 2: Project Site Plan



Source: Bethel Engineering and lenity architects

Analysis Methods

The analysis approach was developed based on the City of San Luis Obispo's standards and policies. Facilities operated by the City of San Luis Obispo were evaluated using thresholds identified in the 2014 Circulation Element. Table 2 of the Circulation Element specifies that level of service (LOS) D or better operations shall be maintained for bicycle, transit, and vehicle modes in the study area. The minimum LOS standard for pedestrians is LOS C. The Circulation Element establishes priorities of each mode as presented in Table 1. Project impacts are considered significant if the project degrades a higher priority mode.

Table 1: Modal Priorities for Level of Service[1]

Priority	Residential Corridors & Neighborhoods	Commercial Corridors & Areas	Regional Arterial and Highway Corridors
1	Pedestrians	Vehicles	Vehicles
2	Bicycles	Bicycles	Transit
3	Vehicle	Transit	Bicycles
4	Transit	Pedestrians	Pedestrians

1. Source: Table 3 City of San Luis Obispo TIS Guidelines

Intersection Analysis

The level of service thresholds for intersections and the pedestrian, bicycle, and transit modes based on the 6th Edition Highway Capacity Manual (HCM) are presented in Table 2.

Table 2: Intersection Level of Service Thresholds

Signalized Intersections[1]		Two-Way Stop Sign Controlled[2]		Pedestrian and Bicycle Modes, Signal Control[3]		Pedestrian and Bicycle Modes, TWSC[4]	
Control Delay (sec/vehicle)	Level of Service	Control Delay (seconds/vehicle)	Level of Service	LOS Score	Level of Service	Control Delay (sec/ped)	Level of Service
≤ 10	A	≤ 10	A	≤ 1.5	A	≤ 5	A
> 10 - 20	B	> 10 - 15	B	>1.5 - 2.5	B	>5 - 10	B
> 20 - 35	C	> 15 - 25	C	>2.5 - 3.5	C	>10 - 20	C
> 35 - 55	D	> 25 - 35	D	>3.5 - 4.5	D	>20 - 30	D
> 55 - 80	E	> 35 - 50	E	> 4.5 - 5.5	E	>30 - 45	E
> 80	F	> 50 or v/c > 1	F	> 5.5	F	>45	F

1. Source: Exhibit 19-8 of the 6th Edition Highway Capacity Manual.
2. Source: Exhibit 20-2 of the 6th Edition Highway Capacity Manual.
3. Source: Exhibit 19-9 of the 6th Edition Highway Capacity Manual
4. Source: Exhibit 20-3 of the 6th Edition Highway Capacity Manual.

The study intersections were analyzed with the Synchro 10 software package applying the HCM 6th Edition methods.

Segment Analysis

The study roadway segments were evaluated for auto, transit, pedestrians, and bicycles using the LOS+ software, which applies the HCM 2010 methods. The LOS score thresholds are shown in Table 3.

Table 3: Roadway Segment Level of Service Thresholds	
Pedestrian, Bicycle, and Transit Modes, Segments[4]	
LOS Score	**Level of Service**
≤ 2.00	A
> 2.00-2.75	B
> 2.75-3.50	C
> 3.50-4.25	D
> 4.25-5.00	E
> 5.00	F
1. Source: Exhibits 16-5 and 16-6 of the 2010 Highway Capacity Manual, assuming 60 ft^2/p for pedestrian mode.	

The segment of Tank Farm Road between Old Windmill Road and Santa Fe Road was also evaluated using generalized LOS thresholds applied in the City's Circulation Element Update.

Thresholds of Significance

Significant impacts to transportation facilities are identified under the following circumstances:

Unsignalized intersections:

Project traffic causes an intersection operating at LOS A, B, C, or D to degrade to unacceptable traffic conditions of LOS E or F; and the volume-demand-to-capacity ratio (V/C), which compares roadway demand (vehicle volumes) with roadway supply (roadway capacity), is increased by 0.01 or more and signal warrants are met; or the project buildout causes or exacerbates 95th percentile turning movement queues exceeding available turn pocket capacity.

Signalized Intersections

Project traffic causes an intersection operating at an acceptable LOS D or better to degrade to unacceptable traffic conditions, and the V/C ratio is increased by 0.01 or more; or the project buildout causes or exacerbates 95th percentile turning movement queues exceeding available turn pocket capacity.

Segments:

Project traffic causes segment operation level of service degradation as follows:

- For bicycles, a segment operating at LOS A, B, C, or D to degrade to LOS E or F.
- For pedestrians, a segment operating at LOS A, B, or C to degrade to LOS D, E, or F.
- For vehicles, segments operating at LOS A, B, C, or D to degrade to LOS E or F and an increase of the V/C ratio by .01 or more.
- For transit service, a segment operating at LOS A, B, C, or D to degrade to LOS E or F; or a segment with a baseline LOS E or F to degrade in a contextually significant way.

The City's Multimodal Transportation Impact Study Guidelines allow discretion when identifying impacts to non-auto modes based on whether the impacts are contextually significant.

Existing Conditions

This section describes the existing transportation system and current operating conditions in the study area.

EXISTING ROADWAY NETWORK

Broad Street is a north-south, two-way road. North of its intersection with South Street and Santa Barbara Avenue, it is a 2-lane residential arterial street with a speed limit of 35 mph. This section of road functions as a main connection between residential areas and the downtown core. South of the Broad/South/Santa Barbara intersection, Broad Street is a 4-lane highway/regional route with a speed limit ranging from 40 mph at the north end of the segment to 45 mph at the southern end. This segment serves as a main route to and from the southern industrial and commercial centers to the downtown core and other regions.

Tank Farm Road is an east-west, 2- lane arterial road with a speed limit of 45 mph in the study area. Tank Farm Road serves a major connection from South Higuera Street to Broad Street, connecting residential with commercial and industrial areas.

Santa Fe Road is a two-lane, two-way commercial collector. Santa Fe Road connects Buckley Road and Hoover Ave to Tank Farm Road.

Industrial Way is a two-lane commercial collector with a speed limit of 40 mph. Industrial Way connects the commercial properties of Broad Street to the rest of the region via Broad Street. West of Broad Street Industrial Way serves Damon Garcia Park and a commercial development.

Aero Vista Lane is a two-lane, two-way highway/regional route with a speed limit of 25 mph. Aero Vista Lane links commercial properties to Broad street, which provides access to the airport region.

Aero Drive is a two-lane, two-way local road with a speed limit of 25 mph. Aero Drive serves as the primary access point for the San Luis Obispo County Regional Airport.

Capitolio Way is a two-lane, two-way commercial collector with a speed limit of 35 mph. It links commercial properties to Sacramento Drive and Broad Street.

Long Street is a two-lane, two-way local road. Long street connects Hind Lane to Tank Farm Road.

South Higuera Street is a north-south, 4-lane arterial with a speed limit of 45 mph in the study area. South Higuera Street serves as the primary north-south route on the east side of US 101 serving local traffic.

Mindbody Driveway is the main entrance serving the main campus of Mindbody, Inc., along with other businesses in the same business park.

EXISTING PEDESTRIAN AND BICYCLE FACILITIES

Pedestrian facilities include sidewalks, crosswalks, and pedestrian signals at signalized intersections. South of Rockview Place, Broad Street has a paved sidewalk only on the east side of the street. Broad Street between Tank Farm Road and Aero Vista Lane has a discontinuous sidewalk on the east side of the street. East of the Union Pacific Railroad overhead crossing, Tank Farm Road has a discontinuous sidewalk on its north side. West of Broad Street, Tank Farm Road has no sidewalks on the north side of the road, and between Santa Fe Road and Old Windmill Lane has no sidewalks on either side. All other study segments have paved sidewalks on both sides of the street.

The intersection of Tank Farm Road and Long Street, with stop control only on Long Street, does not have striped crosswalks for any pedestrian movements. The intersection of Tank Farm Road and Santa

Fe Road, with stop control only on Santa Fe Road, does not have striped crosswalks for any pedestrian movements. The signalized intersection of Tank Farm Road and the Mindbody driveway has no pedestrian phases or striped crosswalks. The intersection of Broad Street and Capitolio Way, with stop control only on Capitolio Way, does not have any striped crosswalks. The intersection of Broad Street and Aero Vista Lane, with stop control only on Aero Vista Lane, does not have any striped crosswalks. The signalized intersection of Broad Street and Aero Drive only has pedestrian phases for the north, east, and west legs. All other intersections have crosswalks on all legs.

Bicycle facilities in the study area consist of Class II bike lanes. A Class II bike lane provides a striped lane for one-way bicycle travel on the side of a street. Broad Street and Tank Farm Road both have Class II bike lanes on both sides of the road throughout the study segments.

EXISTING TRANSIT SERVICE

The San Luis Obispo Regional Transit Authority (RTA) and the City of San Luis Obispo Transit Division (SLO Transit) provide transit service to the study area. SLO Transit Routes 1 and 3 provide fixed-route service to the study area. RTA offers Dial-A-Ride curb to curb services within the city limits.

An acceptable transit LOS is primarily predicated on the presence of shelters and benches at bus stops, as well as the frequency and on-time performance of each route. If there are no bus stops on a segment, transit LOS is marked as N/A.

SLO Transit Route 1A passes through the vicinity of the project as it travels north and southbound along Broad Street. Route 1A services the Downtown Transit Center, the Orcutt Road/Johnson Avenue area and the San Luis Obispo County Regional Airport. It enters the vicinity of the project traveling westbound on Tank Farm Road, before turning south to serve the airport and going north on Broad Street to serve the Downtown Transit Center. It has stops at the airport near Aero Drive, Aero Vista Lane, Broad and Tank Farm (Marigold Center), Broad and Industrial, and stops to the north and south of Capitolio Way. It is important to note that the stops along Broad Street north of Tank Farm Road are located on the east side of Broad Street. Route 1A runs daily with hourly headways. Buses typically run from 6:15 AM to 10:00 PM on weekdays and from 8:15 AM to 8:00 PM on weekends.

SLO Transit implemented their latest Short-Range Transit Plan (SRTP) in mid-2017, so long-term boarding data is not available. Before implementation of the SRTP, Route 3 served stops around the Marigold shopping center, which is located on the northeast corner of the Tank Farm Road and Broad Street intersection. The SRTP notes that the stop at the Marigold center served 37 boardings and 10 alightings per day. The stop nearer to Capitolio Way was served 24 boardings and alightings per day.

EXISTING TRANSPORTATION CONDITIONS

This section is divided into the following subsections: 1) intersection operations, 2) segment operations.

1. Intersection Operations

Traffic counts were collected in 2016 by the City of San Luis Obispo as a part of their biannual traffic count data collection program, with the exceptions of Tank Farm Road/Long Street, Tank Farm Road/Santa Fe Road, Tank Farm Road/Mindbody Traffic Signal, and Broad Street/ Aero Vista Lane, which were collected independently in 2016 and 2017. Traffic count sheets are provided in Appendix A.

Figure 3 shows the Existing and Existing Plus Project peak hour traffic volumes. Table 4 shows the LOS for the study intersections and Table 5 summarizes the vehicular queuing, with detailed calculation sheets included in Appendix B.

Table 4: Existing Intersection Auto Levels of Service

Intersection	Peak Hour	V/C[1]	Delay[2] (sec/veh)	LOS
1. Tank Farm Road/South Higuera Street	AM	0.87	26.7	C
	PM	0.93	32.7	C
2. Tank Farm Road/Long Street	AM	0.19	1.9 (23.4)	- (C)
	PM	0.40	**3.8 (41.7)**	**- (E)**
3. Tank Farm Road/Santa Fe Road	AM	0.15	1.3 (20.5)	- (C)
	PM	0.57	**3.7 (39.6)**	**- (E)**
4. Tank Farm Road/MindBody Traffic Signal	AM	0.77	7.4	A
	PM	0.91	14.7	B
5. Broad Street/Capitolio Way	AM	0.20	1.0 (14.7)	- (B)
	PM	0.38	1.7 (23.5)	- (C)
6. Broad Street/Industrial Way	AM	0.79	13.5	B
	PM	0.97	26.9	C
7. Broad Street/Tank Farm Road	AM	0.87	38.2	D
	PM	0.88	43.8	D
8. Broad Street/Aero Vista Lane	AM	0.14	0.8 (19.9)	- (C)
	PM	0.47	2.1 (28.0)	- (D)
9. Broad Street/Aero Drive	AM	0.66	7.6	A
	PM	1.07	32.9	C

1. Volume to capacity ratio reported for worst movement.
2. HCM 6th average control delay in seconds per vehicle. For side-street-stop controlled intersections the worst
Note: Unacceptable operations shown in **bold** text.

The following intersections operate below the LOS D threshold for vehicles:

- Tank Farm Road/Long Street (#2): The southbound approach operates at LOS E during the PM peak hour due to long delays experienced by left-turning traffic.
- Tank Farm Road/Santa Fe Road (#3): The northbound approach operates at LOS E during the PM peak hour due to long delays experienced by left-turning traffic and high volumes on Tank Farm Road.

Tables 5 presents a summary of the existing queues for the study intersections. Existing queue calculations can be found in Appendix B.

Table 5: Existing Queue Summary

Intersection	Movement	Storage Length (ft)	Peak Hour	Existing 95th Percentile Queues (ft)[1]
1. Tank Farm Road/South Higuera Street	WBL	670	AM	125
			PM	#311
	WBR	250	AM	63
			PM	93
	NBR	140	AM	30
			PM	61
	SBL	165	AM	**#324**
			PM	**#471**
3. Tank Farm Road/Santa Fe Road	NBR	25	AM	7
			PM	31
4. Tank Farm Road/MindBody Traffic Signal	WBL	210	AM	42
			PM	20
	NBL	330	AM	24
			PM	#183
5. Broad Street/Capitolio Way	WBL	-	AM	3
			PM	16
6. Broad Street/Industrial Way	EBT/L	350	AM	18
			PM	67
	NBL	150	AM	63
			PM	#96
	SBL	150	AM	79
			PM	**#274**
7. Broad Street/Tank Farm Road	EBL	300	AM	145
			PM	#277
	EBR	90	AM	89
			PM	58
	WBL	150	AM	**#265**
			PM	**#273**
	NBL	290	AM	120
			PM	#210
	SBL	250	AM	95
			PM	#244
	SBR	300	AM	83
			PM	167
8. Broad Street/Aero Vista Lane	EBL	75	AM	11
			PM	51
9. Broad Street / Aero Drive	EBT/L	310	AM	32
			PM	83

1. Queue length that would not be exceeded 95 percent of the time.
# indicates that 95th percentile volume exceeds capacity, queue may be longer.
Bold indicates queue length longer than storage length.
Detailed queues provided in Appendix B.

The following instances of queue spillback or overcapacity movements are noted:

- Tank Farm Road/South Higuera Street (#1): The westbound left turning movement is over capacity and occasionally does not clear in a single cycle during the PM peak hour. The southbound left turning movement queues sometimes require more than one cycle to clear. The reported queues are longer than field-observed conditions due to the high vehicular volumes and the minimum green times required to serve pedestrians. There are relatively few pedestrian calls, so the intersection operates with shorter queues than shown in Table 5. However, some of the observed queues still exceeded the turn pocket lengths and did not clear within a cycle. Additionally, vehicles making a southbound left turning movement can utilize the two-way left turn lane to effectively extend the turn pocket without blocking through movements.
- Tank Farm Road/Santa Fe Road (#3): The northbound right queue exceeds the turn pocket slightly in the PM peak hour. The northbound approach is flared, without a marked turn pocket, so a pocket length of 25 feet was assumed for this analysis. However, the wide flare at this intersection prevents the right-turning queue from blocking left-turning traffic, even if queues slightly exceed 25 feet.
- Broad Street/Industrial Way (#6): In the PM peak hour, the southbound left turning movement is over capacity and the queue length exceeds the turn pocket length. At this location, the pedestrian walk and flashing don't walk times and split phasing dictate long cycle lengths on the east and westbound approaches, resulting in green times longer than are needed to serve the vehicular volumes. Traffic counts and field observations indicate that there are relatively few pedestrian crossings and the reported overcapacity queue operates acceptably in the field.
- Broad Street/Tank Farm Road (#7): In the PM peak hour, the eastbound left movement is over capacity. The westbound left movement is over capacity and exceeds the turn pocket length for both peak hours. The northbound and southbound left movements are over capacity during the PM peak hour. This intersection experiences high turning volumes, which results in queues for many turning movements.

Tables 6 and 7 show the existing pedestrian and bicycle LOS for the study intersections.

Table 6: Existing Intersection Pedestrian Levels of Service					
		AM Peak Hour		PM Peak Hour	
Intersection	Direction	LOS Score[2]	LOS[1]	LOS Score[4]	LOS[1]
1. Tank Farm Road/South Higuera Street	NB	2.83	C	3.05	C
	SB	2.69	C	3.02	C
	EB	1.98	B	2.00	B
	WB	2.68	C	2.85	C
2. Tank Farm Road/Long Street	EB	**>200**	**F**	**>200**	**F**
	WB	**>200**	**F**	**>200**	**F**
3. Tank Farm Road/Santa Fe Road	EB	18.70	C	**30.60**	**E**
	WB	**>200**	**F**	**>200**	**F**
4. Tank Farm Road/MindBody Traffic Signal	NB	1.98	B	2.03	B
	EB	2.56	C	2.79	C
	WB	2.58	C	2.74	C
5. Broad Street/Capitolio Way	NB	**>200**	**F**	**>200**	**F**
	SB	**>200**	**F**	**>200**	**F**
6. Broad Street/Industrial Way	NB	2.87	C	2.92	C
	SB	2.84	C	2.91	C
	EB	2.00	B	2.03	B
	WB	2.09	B	2.16	B
7. Broad Street/Tank Farm Road	NB	2.86	C	2.88	C
	SB	2.87	C	2.92	C
	EB	2.74	C	2.83	C
	WB	2.51	C	2.59	C
8. Broad Street/Aero Vista Lane	NB	**>200**	**F**	**>200**	**F**
	SB	**>200**	**F**	**>200**	**F**
9. Broad Street/Aero Drive	NB	2.70	C	2.68	C
	SB	2.71	C	2.70	C
	EB	1.98	B	2.01	B
	WB	1.97	B	1.97	B

1. HCM 6th pedestrian score and LOS.
2. HCM 6th reports pedestrian LOS at two-way stop controlled intersections in delay (seconds).

Pedestrian service levels exceed the acceptable levels at intersections 2, 3, 5, and 8 due to the presence of side-street stop controlled intersections. There are signalized intersections providing pedestrian signals near all of these locations. No other pedestrian deficiencies are reported.

Table 7: Existing Intersection Bicycle Levels of Service					
		AM Peak Hour		PM Peak Hour	
Intersection	Direction	LOS Score[2]	LOS[1]	LOS Score[4]	LOS[1]
1. Tank Farm Road/South Higuera Street	NB	3.41	C	3.60	D
	SB	3.04	C	3.47	C
	EB	3.12	C	3.10	C
	WB	3.55	D	4.44	D
2. Tank Farm Road/Long Street	EB	N/A		N/A	
	WB				
3. Tank Farm Road/Santa Fe Road	EB	N/A		N/A	
	WB				
4. Tank Farm Road/MindBody Traffic Signal	NB	2.51	C	2.87	C
	SB	-	-	-	-
	EB	2.89	C	3.10	C
	WB	4.13	D	4.50	D
5. Broad Street/Capitolio Way	NB	N/A		N/A	
	SB				
6. Broad Street/Industrial Way	NB	3.12	C	3.28	C
	SB	3.14	C	3.21	C
	EB	2.71	C	2.86	C
	WB	2.89	C	3.25	C
7. Broad Street/Tank Farm Road	NB	3.58	D	3.73	D
	SB	3.69	D	3.80	D
	EB	3.27	C	3.57	D
	WB	3.89	D	3.85	D
8. Broad Street/Aero Vista Lane	NB	N/A		N/A	
	SB				
9. Broad Street/Aero Drive	NB	3.43	C	2.89	C
	SB	2.85	C	3.28	C
	EB	2.70	C	2.90	C
	WB	2.71	C	2.76	C

1. HCM 6th bicycle score and LOS.

2. The HCM 6th does not establish LOS standards for bicycles at stop-controlled intersections.

No bicycle intersection LOS deficiencies are reported.

2. Segment Operations

Tables 8 and 9 show the existing segment operations during the AM and PM peak hours. The following deficiencies are reported:

- **Auto:** Multiple segments of Broad Street operate deficiently because their volume to capacity ratios are greater than one, which results in an automatic LOS F. The segment of westbound Tank Farm from Old Windmill Lane to Santa Fe Road (#1a) also operates unacceptably at LOS F during the PM peak hour due to a volume to capacity ratio greater than one. The remaining segments operate acceptably.
- **Pedestrian:** Multiple segments do not have a pedestrian LOS reported due to the absence of pedestrian facilities, or discontinuous pedestrian facilities. The segment of northbound Broad Street from Orcutt Road to Industrial Way (#3a) operates unacceptably at LOS D during the PM peak hour. This segment has a relatively wide sidewalk (over eight feet in most places) with narrower sections separated from the travel lanes by a landscaped buffer. This buffer was not included in the MMLOS analysis because it is discontinuous; however, coding even a one foot buffer improves this segment to LOS C. The remaining segments operate acceptably. The remaining segments with pedestrian facilities operate accpetably.
- **Bicycle:** All bicycle segments operate acceptably at LOS D or better.
- **Transit:** Multiple study segments operate below the desired transit service level due to relatively infrequent service or the lack of bus stops on a specific segment.

Table 8: Existing AM Segment MMLOS[1]

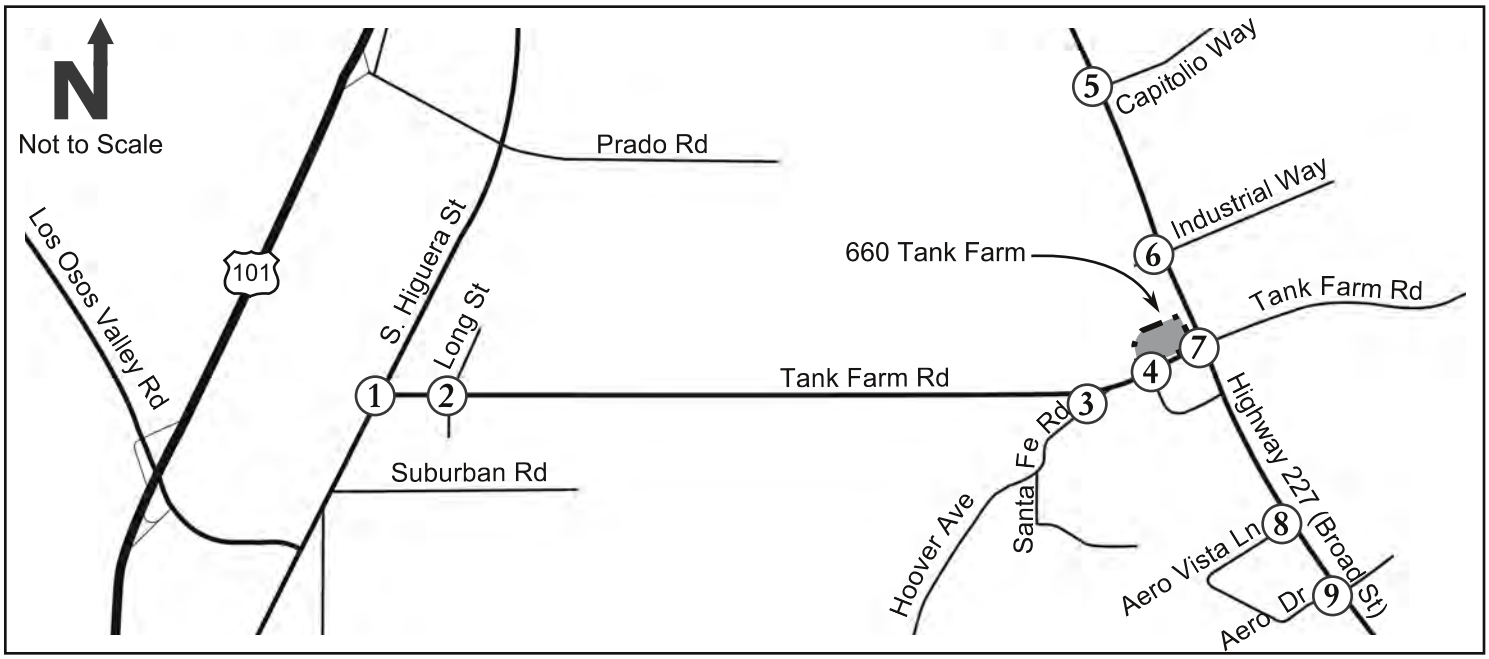
Segment	Direction	Auto		Pedestrian[2]		Bicycle		Transit[3]	
		Score	LOS[1]	Score	LOS	Score	LOS	Score	LOS
1a. Tank Farm Road - Old Windmill Lane to Santa Fe Road	EB	2.34	B	N/A	N/A	2.78	C	N/A	N/A
	WB	2.34	B	N/A	N/A	2.69	B	N/A	N/A
1b. Tank Farm Road - Santa Fe Road to Broad Street	EB	2.75	B	2.79	C	2.05	B	N/A	N/A
	WB	2.75	B	N/A	N/A	2.44	B	N/A	N/A
2a. Tank Farm Road - Broad Street to UPRR	EB	2.47	B	2.84	C	2.18	B	N/A	N/A
	WB	2.47	B	3.14	C	2.38	B	3.33	C
2b. Tank Farm Road - UPRR to Orcutt Road	EB	3.13	C	1.12	A	0.30	A	N/A	N/A
	WB	3.13	C	N/A	N/A	0.47	A	4.17	D
3a. Broad Street - Orcutt Road to Industrial Way	NB	2.14	B	3.14	C	2.21	B	**4.65**	**E**
	SB	2.14	B	N/A	N/A	2.09	B	N/A	N/A
3b. Broad Street - Industrial Way to Tank Farm Road	NB	2.14	B	2.83	C	2.09	B	**5.55**	**F**
	SB	**2.14**	**F**	N/A	N/A	2.06	B	N/A	N/A
4a. Broad Street - Tank Farm Road to Aero Vista Lane	NB	**2.52**	**F**	N/A	N/A	2.08	B	N/A	N/A
	SB	2.52	B	3.22	C	0.98	A	**4.69**	**E**
4b. Broad Street - Aero Vista Lane to Aero Drive	NB	2.14	B	2.89	C	1.24	A	N/A	N/A
	SB	2.14	B	2.18	B	0.92	A	N/A	N/A
4c. Broad Street - Aero Drive to South City Limits	NB	**2.93**	**F**	N/A	N/A	2.10	B	N/A	N/A
	SB	2.93	C	N/A	N/A	1.22	A	**5.70**	**F**

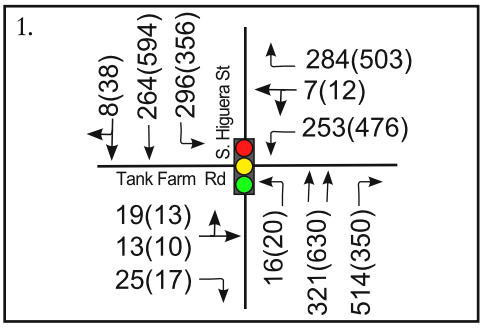
1. HCM 2010 LOS score and LOS.
2. LOS is not established for segments without a sidewalk.
3. LOS is not established for segments without a directional transit route.

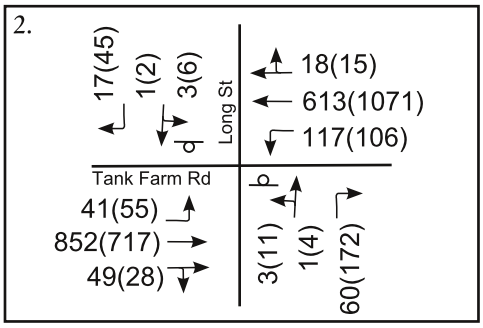
Table 9: Existing PM Segment MMLOS[1]									
		Auto		Pedestrian[2]		Bicycle		Transit[3]	
Segment	Direction	Score	LOS[1]	Score	LOS	Score	LOS	Score	LOS
1a. Tank Farm Road - Old	EB	2.34	B	N/A	N/A	2.80	C	N/A	N/A
Windmill Lane to Santa Fe Road	WB	2.34	B	N/A	N/A	2.92	C	N/A	N/A
1b. Tank Farm Road - Santa Fe	EB	2.75	B	3.11	C	2.20	B	N/A	N/A
Road to Broad Street	WB	2.75	B	N/A	N/A	2.57	B	N/A	N/A
2a. Tank Farm Road - Broad	EB	2.47	B	3.30	C	2.59	B	N/A	N/A
Street to UPRR	WB	2.47	B	3.13	C	2.37	B	3.32	C
2b. Tank Farm Road - UPRR to	EB	3.13	C	1.72	A	0.66	A	N/A	N/A
Orcutt Road	WB	3.13	C	N/A	N/A	0.33	A	4.14	D
3a. Broad Street - Orcutt Road to	NB	**2.14**	**F**	**3.64**	**D**	2.39	B	**4.71**	**E**
Industrial Way	SB	2.14	B	N/A	N/A	2.11	B	N/A	N/A
3b. Broad Street - Industrial Way	NB	2.14	B	2.80	C	2.11	B	**5.53**	**F**
to Tank Farm Road	SB	**2.14**	**F**	N/A	N/A	2.08	B	N/A	N/A
4a. Broad Street - Tank Farm	NB	**2.52**	**F**	N/A	N/A	2.06	B	N/A	N/A
Road to Aero Vista Lane	SB	2.52	B	3.38	C	1.05	A	**4.72**	**E**
4b. Broad Street - Aero Vista	NB	2.14	B	2.32	B	0.83	A	N/A	N/A
Lane to Aero Drive	SB	**2.14**	**F**	2.68	B	1.18	A	N/A	N/A
4c. Broad Street - Aero Drive to	NB	2.93	C	N/A	N/A	1.77	A	N/A	N/A
South City Limits	SB	2.93	C	N/A	N/A	1.53	A	**5.71**	**F**

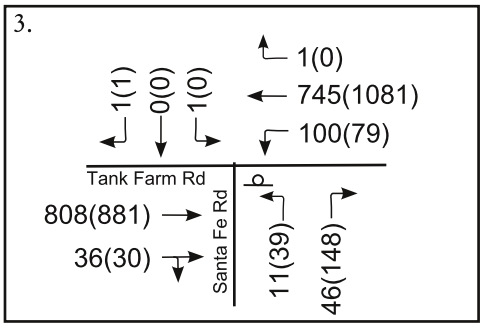
1. HCM 2010 LOS score and LOS.
2. LOS is not established for segments without a sidewalk.
3. LOS is not established for segments without a directional transit route.

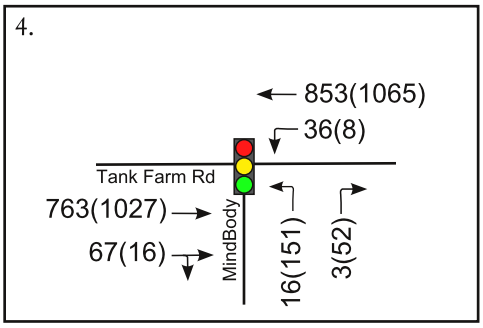
Figure 3: Existing Peak Hour Volumes and Lane Configurations

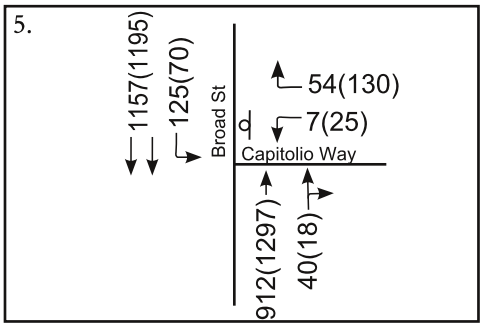


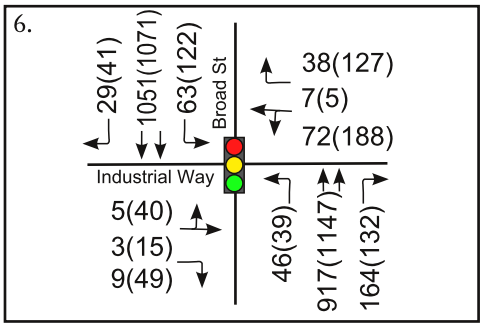


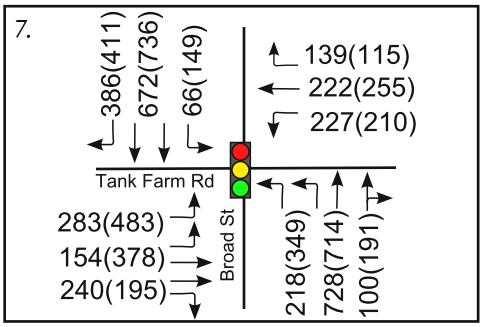


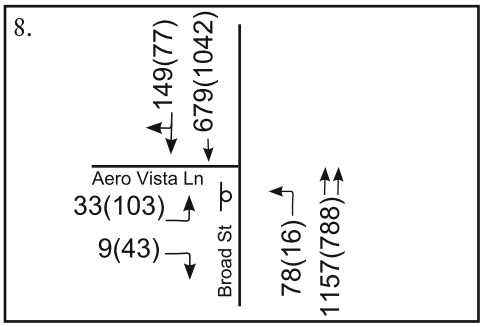


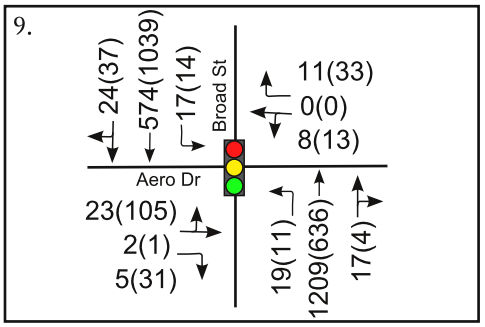












Legend:

xx(yy) - AM(PM) Peak Hour Traffic Volumes

- Project Site

- Traffic Signal

(X) - Study Intersection

- Stop Sign

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Existing Plus Project Conditions

This section evaluates the impacts of the proposed project on the surrounding transportation network.

PROJECT TRAFFIC ESTIMATES

The amount of project traffic affecting the study locations is estimated in three steps: trip generation, trip distribution, and trip assignment. Trip generation refers to the total number of trips generated by the site. Trip distribution identifies the general origins and destination of these trips, and trip assignment specifies the routes taken to reach these origins and destinations.

Trip Generation

The project's trip generation estimate was developed using weekday daily, AM peak hour, and PM peak hour data provided in the Institute of Transportation Engineers' (ITE) Trip Generation Manual. Table 10 shows the estimated trip generation from the proposed project.

Table 10: Weekday Vehicle Trip Generation

Land Use	Size	Unit[1]	Daily	AM			PM		
				In	Out	Total	In	Out	Total
Assisted Living (254)[6]	94	beds	250	8	5	13	9	12	21
Nursing Home (620)[7]	36	beds	99	3	3	6	3	5	8
Apartment (220)[2]	10	DU	67	1	4	5	4	2	6
Shopping Center (820)[3]	45	KSF	1,922	27	16	43	80	87	167
		Internal Trips	148	0	0	0	10	10	20
		Pass-By Trips[4]	260	0	0	0	26	26	52
		Net New Trips	***1,930***	***39***	***28***	***67***	***60***	***70***	***130***

1) DU = dwelling unit, KSF = thousand square feet

2) ITE Land Use Code #220, Apartment. Fitted curve equations used.

3) ITE Land Use Code #820, Shopping Center. Average rates used.

4) PM Peak Hour rate multiplied by a factor of 5 to determine daily trips.

5) PM Peak Hour rate multiplied by a factor of 10 to determine daily trips.

6) ITE Land Use Code #254, Assisted Living. Fitted curve equations used.

7) ITE Land Use Code #620, Nursing Home. Average rates used.

Source: ITE *Trip Generation Manual*, 9th Edition, 2012; CCTC, 2017.

The 660 Tank Farm project is expected to generate a total of 1,930 new daily trips, 67 new AM peak hour trips, and 130 new PM peak hour trips. Net new trips were found by taking the total daily, AM, and PM project generated trip totals and subtracting internal capture trips, and pass-by trips.

Trip Distribution and Assignment

Trip distribution and assignment for the project trips were estimated using a select zone procedure in the City's Travel Demand Model, refined based on the site plan and local knowledge. **Figure 4** shows the trip distribution percentages and project traffic assignment. **Figure 5** shows the Existing Plus Project volumes.

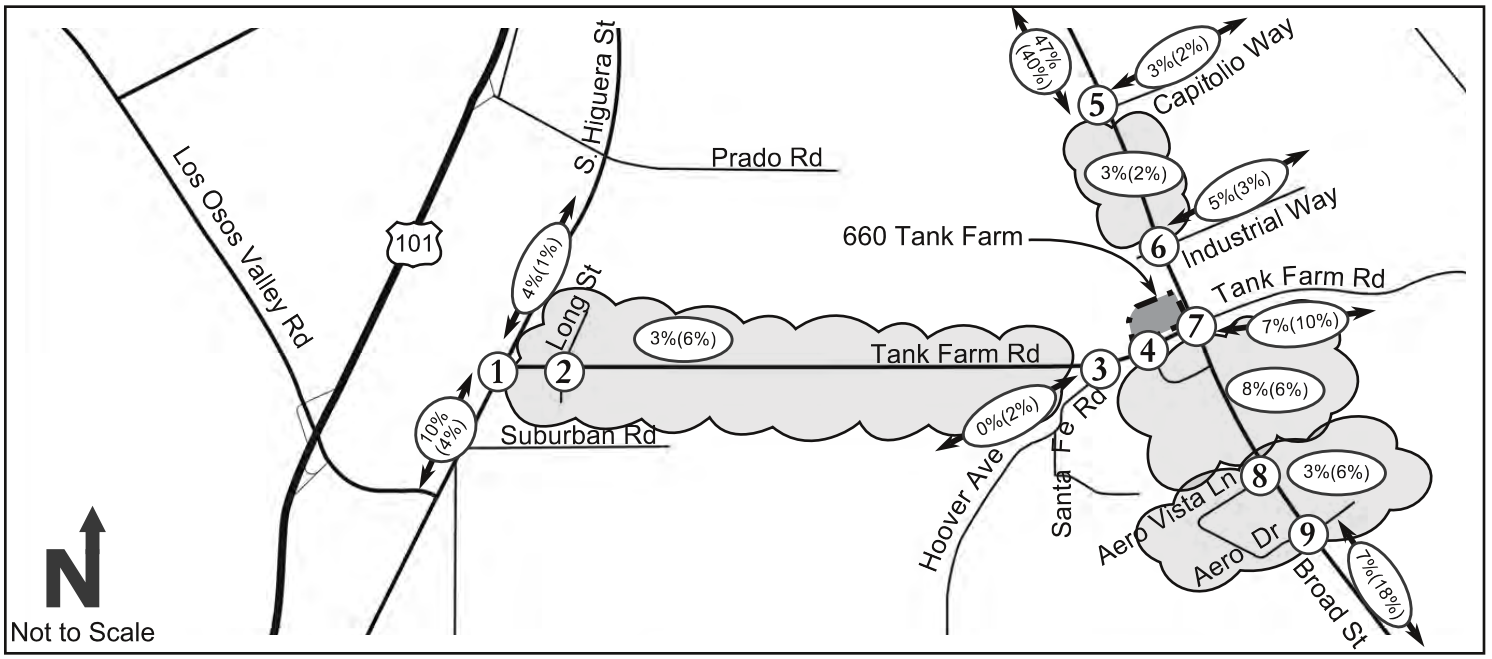
Planned Improvements

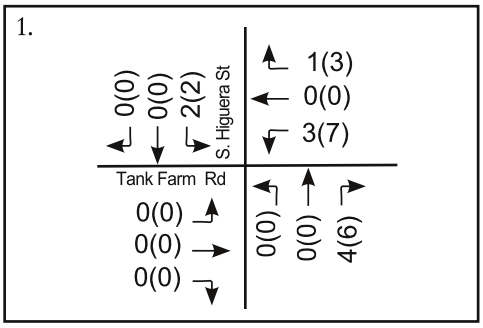
The current site plans do not show detailed dimensions of all frontage improvements. Consistent with the Airport Area Specific Plan (AASP), 6-foot sidewalks with a 5-foot landscaped buffer were assumed along the west side Broad Street adjacent to the project site. Inconsistent with the Airport Specific Plan, however, no continuous landscaped buffer is proposed along the north side of Tank Farm Road.

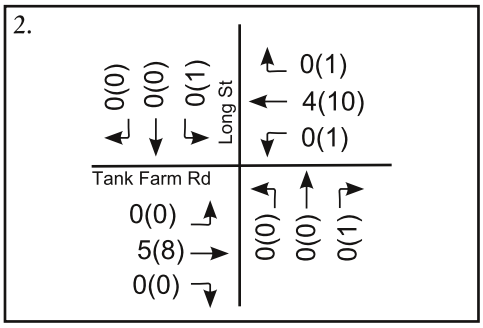
However, a sidewalk is proposed and was assumed to be 6 feet wide, the standard provided by the Airport Specific Plan.

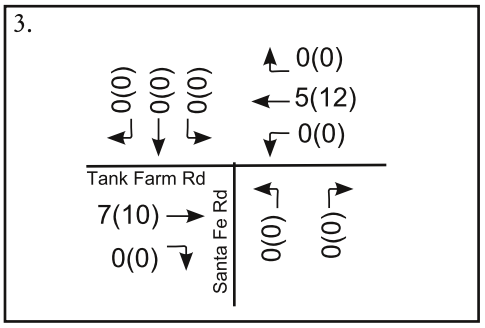
Site access is proposed via one full access driveway on the north leg of the Mindbody signal, one right-in right-out left-in driveway on Broad Street, and one right-in right-out driveway on Tank Farm Road, all of which would serve the commercial, assisted living and memory care land uses. These improvements and recommended access changes are discussed in detail in the Site Access and Circulation section of this report.

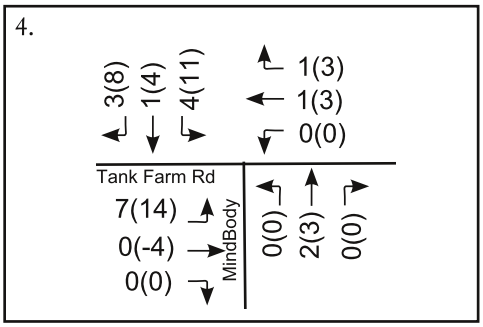
Figure 4: Project Trip Distribution and Existing Project Volumes

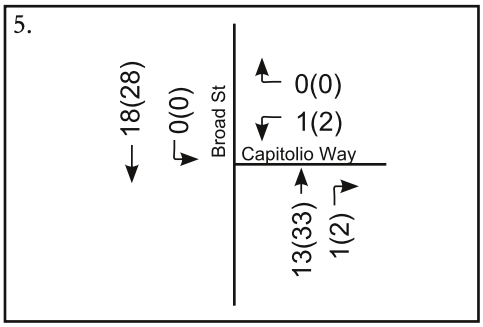


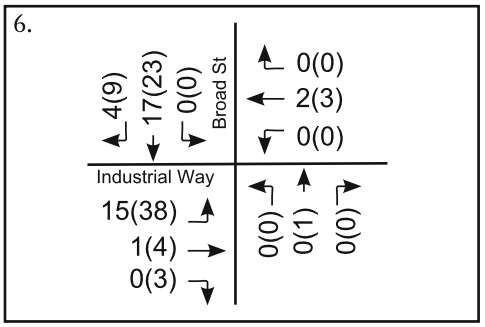


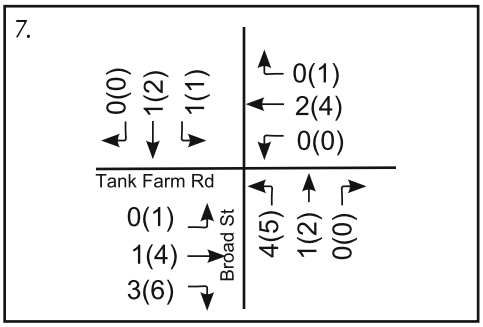


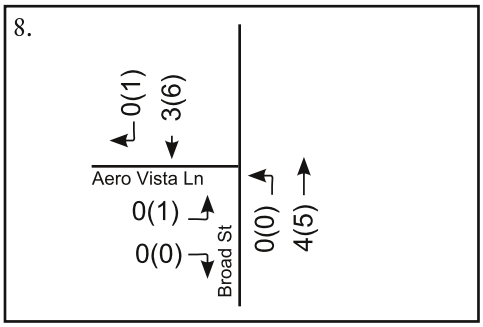


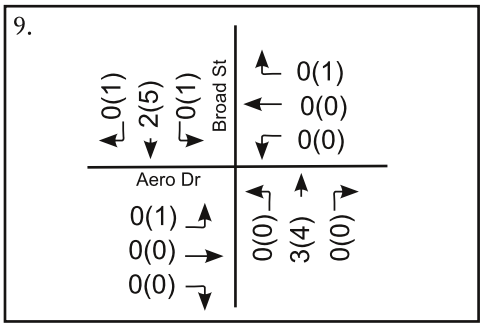












Legend:

xx(yy) - AM(PM) Peak Hour Traffic Volumes

(X) - Study Intersection

- Project Site

x%(y%) - Existing% (Cumulative %) Project Trip Distribution

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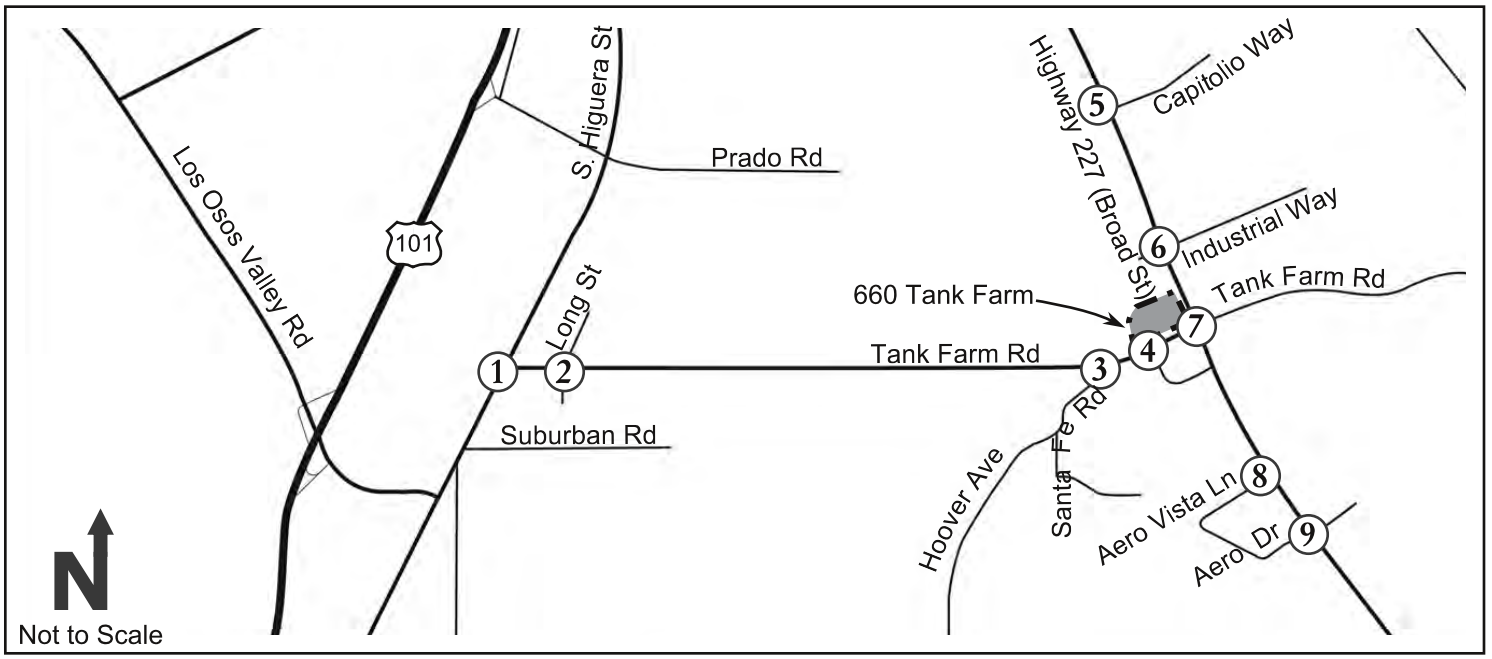
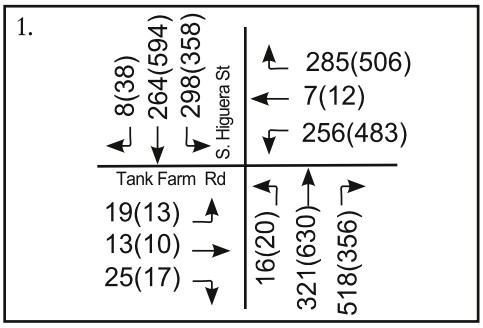
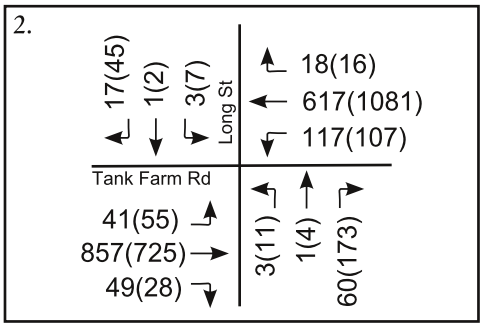
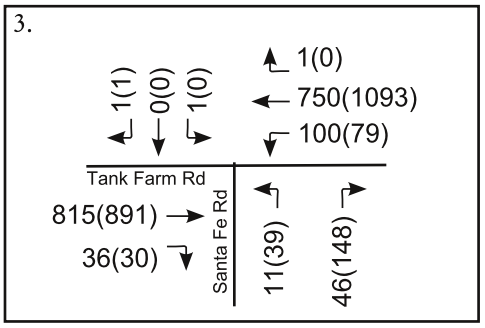
Figure 5: Existing Plus Project Volumes

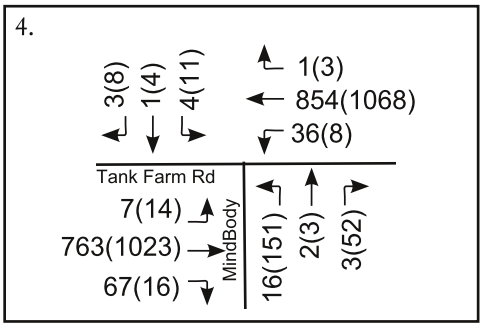
Attachment 10

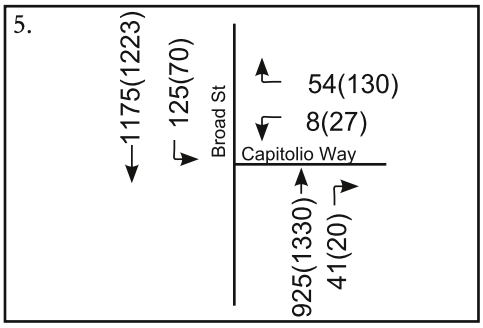


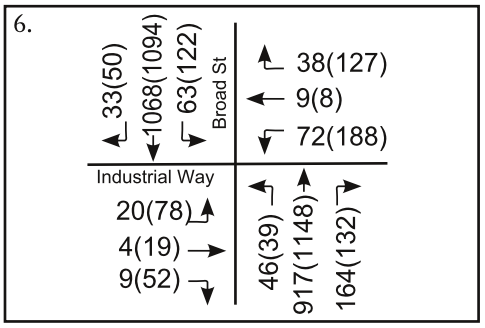


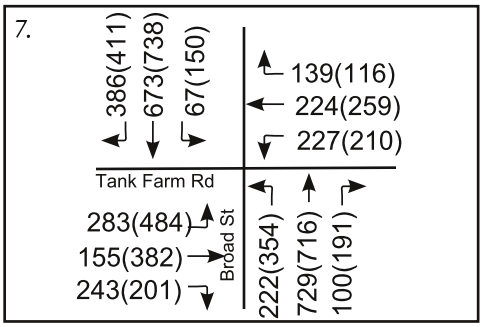


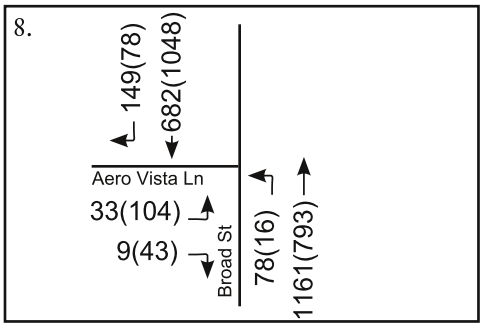


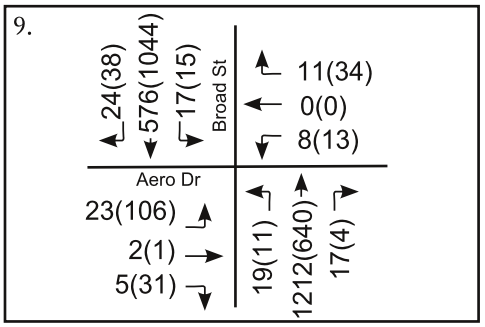












Legend:

xx(yy) - AM(PM) Peak Hour Traffic Volumes

(X) - Study Intersection

- Project Site

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EXISTING PLUS PROJECT IMPACT ANALYSIS

1. Intersection Operations

Figure 3 shows the Existing and Existing Plus Project peak hour traffic volumes. Table 11 shows the LOS for the study intersections and Table 12 summarizes the vehicular queuing under Existing Plus Project conditions, with detailed calculation sheets included in Appendix B. Note that Existing Plus Project conditions include both the 650 and 660 Tank Farm project trips.

Table 11: Existing and Existing Plus Project Intersection Auto Levels of Service

Intersection	Peak Hour	Existing			Existing + Project			
		V/C[1]	Delay[2] (sec/veh)	LOS	V/C[1]	V/C Delta	Delay[2] (sec/veh)	LOS
1. Tank Farm Road/South Higuera Street	AM	0.87	26.7	C	0.87	0.00	27.2	C
	PM	0.93	32.7	C	0.95	0.02	33.9	C
2. Tank Farm Road/Long Street	AM	0.19	1.9 (23.4)	- (C)	0.19	0.00	1.9 (24.1)	- (C)
	PM	0.40	**3.8 (41.7)**	**- (E)**	0.46	**0.06**	**4.3 (57.9)**	**- (F)**
3. Tank Farm Road/Santa Fe Road	AM	0.15	1.3 (20.5)	- (C)	0.15	0.00	1.2 (16.6)	- (C)
	PM	0.46	**3.7 (39.6)**	**- (E)**	0.48	0.02	2.7 (28.6)	- (D)
4. Tank Farm Road/MindBody Traffic Signal	AM	0.77	7.4	A	0.83	0.06	10.8	B
	PM	0.91	14.7	B	1.20	**0.29**	**65.1**	**E**
5. Broad Street/Capitolio Way	AM	0.20	1.0 (14.7)	- (B)	0.21	0.01	1.1 (15.8)	- (C)
	PM	0.38	1.7 (23.5)	- (C)	0.40	0.02	1.8 (26.1)	- (D)
6. Broad Street/Industrial Way	AM	0.79	13.5	B	0.79	0.00	14.2	B
	PM	0.97	26.9	C	1.02	0.05	32.3	C
7. Broad Street/Tank Farm Road	AM	0.87	38.2	D	0.87	0.00	39.4	D
	PM	0.88	43.8	D	0.89	0.01	46.4	D
8. Broad Street/Aero Vista Lane	AM	0.14	0.8 (19.9)	- (C)	0.15	0.01	0.8 (20.2)	- (C)
	PM	0.47	2.1 (28.0)	- (D)	0.49	0.02	2.1 (29.0)	- (D)
9. Broad Street/Aero Drive	AM	0.66	7.6	A	0.66	0.00	7.7	A
	PM	1.07	32.9	C	1.16	0.09	35.2	D

1. Volume to capacity ratio reported for worst movement.
2. HCM 6th average control delay in seconds per vehicle. For side-street-stop controlled intersections the worst approach's delay is reported in parentheses next to the overall intersection delay.
Note: Unacceptable operations shown in **bold** text.

The following intersection operates below the LOS D threshold for vehicles:

- Tank Farm Road/Long Street (#2): the side street approaches to this intersection operate unacceptably both with and without the project during the PM peak hour. A traffic signal is in final design for this location and is required as a condition of approval for a nearby project. Installation of a traffic signal would result in acceptable operations.
- Tank Farm Road/MindBody Traffic Signal (#4): with the addition of the project, this intersection operates unacceptably during the PM peak hour.

The remaining intersections operate at an acceptable service level.

Table 12 presents the key queues for the study intersections. Detailed queue and LOS results are provided in Appendix B.

Table 12: Summary Existing and Existing Plus Project Queues					
Intersection	**Movement**	**Storage Length (ft)**	**Peak Hour**	**Existing**	**Existing + Project**
				95th Percentile Queues (ft)[1]	
1. Tank Farm Road/South Higuera Street	WBL	670	AM	125	130
			PM	**#311**	**#323**
	WBR	250	AM	63	63
			PM	93	94
	NBR	140	AM	30	30
			PM	61	64
	SBL	165	AM	**#324**	**#328**
			PM	**#471**	**#482**
3. Tank Farm Road/Santa Fe Road	NBR	25	AM	7	7
			PM	31	33
4. Tank Farm Road/MindBody Traffic Signal	WBL	210	AM	42	56
			PM	20	23
	NBL	330	AM	24	35
			PM	#183	184
5. Broad Street/Capitolio Way	WBL	-	AM	3	5
			PM	16	22
6. Broad Street/Industrial Way	EBT/L	350	AM	18	38
			PM	67	106
	NBL	150	AM	63	64
			PM	#96	#96
	SBL	150	AM	79	#82
			PM	**#274**	**#274**
7. Broad Street/Tank Farm Road	EBL	300	AM	145	174
			PM	#277	**#316**
	EBR	90	AM	89	105
			PM	58	60
	WBL	150	AM	**#265**	**#266**
			PM	**#273**	**#278**
	NBL	290	AM	120	124
			PM	#210	#229
	SBL	250	AM	95	97
			PM	**#244**	**#249**
	SBR	300	AM	83	100
			PM	167	236
8. Broad Street/Aero Vista Lane	EBL	75	AM	11	11
			PM	51	55
9. Broad Street / Aero Drive	EBT/L	310	AM	32	32
			PM	83	86

1. Queue length that would not be exceeded 95 percent of the time.
# indicates that 95th percentile volume exceeds capacity, queue may be longer.

Bold indicates queue length longer than storage length.

The addition of project traffic increases critical queues by at least one vehicle length at the following intersection:

- Broad Street/Tank Farm Road (#7): The existing queue length for the eastbound left turn is near its capacity, and the addition of project traffic would increase the eastbound left turn queue by one to two vehicles. Most of the project traffic added to this movement comes from the 650 Tank Farm parcel going north on Broad Street.

Intersection Mitigations

- Tank Farm Road/Long Street (#2): Installation of a traffic signal would result in acceptable operations. This signal is currently in design as mitigation for another development project.
- Tank Farm Road/MindBody Traffic Signal (#4): Providing a second westbound through lane on Tank Farm Road consistent with the cross section in the Airport Area Specific Plan would result in acceptable operations.
- Broad Street/Tank Farm Road (#7): A vehicular connection from the 650 Tank Farm parcel to the Westmont site would allow use of the traffic signal at Industrial Way, thereby avoiding the impacted intersection, reducing the eastbound left turn queue, and improving site circulation. Alternatively, the eastbound left turn queue at Broad Street/Tank Farm Road could be reduced to acceptable levels by providing a second southbound left turn lane. This may require a slight widening of the southbound approach of Broad Street.

Tables 13 and 14 show the Existing and Existing Plus Project pedestrian and bicycle levels of service at the study intersections. Note that Existing Plus Project conditions include both the 650 and 660 Tank Farm project trips. The intersection of Tank Farm Road and Santa Fe Road (#3) changes from LOS C to LOS E with the addition of the project. This is due to the widening of Tank Farm Road at the project frontage. Crosswalks are available at the intersection of Tank Farm Road and Broad Street and there are currently very few pedestrians crossing Tank Farm Road at Santa Fe Road, so this change is not anticipated to impact pedestrians. No other new deficiencies are reported from Existing to Existing Plus Project conditions.

Table 13: Existing and Existing Plus Project Intersection Pedestrian Levels of Service						
			Existing		Existing + Project	
Intersection		Direction	LOS Score[1,2]	LOS[1]	LOS Score[1]	LOS[1]
1. Tank Farm Road/South Higuera Street	AM	NB	2.83	C	2.83	C
		SB	2.69	C	2.69	C
		EB	1.98	B	1.98	B
		WB	2.68	C	2.68	C
	PM	NB	3.05	C	3.05	C
		SB	3.02	C	3.02	C
		EB	2.00	B	2.00	B
		WB	2.85	C	2.86	C
2. Tank Farm Road/Long Street	AM	EB	>200	F	>200	F
		WB	>200	F	>200	F
	PM	EB	>200	F	>200	F
		WB	>200	F	>200	F
3. Tank Farm Road/Santa Fe Road	AM	EB	18.70	C	39.1	E
		WB	>200	F	>200	F
	PM	EB	30.60	E	85.6	F
		WB	>200	F	>200	F
4. Tank Farm Road/MindBody Traffic Signal	AM	NB	1.98	B	1.98	B
		EB	2.56	C	2.62	C
		WB	2.58	C	2.68	C
	PM	NB	2.03	B	2.04	B
		EB	2.79	C	2.81	C
		WB	2.74	C	2.82	C
5. Broad Street/Capitolio Way	AM	NB	>200	F	>200	F
		SB	>200	F	>200	F
	PM	NB	>200	F	>200	F
		SB	>200	F	>200	F
6. Broad Street/Industrial Way	AM	NB	2.87	C	2.88	C
		SB	2.84	C	2.85	C
		EB	2.00	B	2.00	B
		WB	2.09	B	2.09	B
	PM	NB	2.92	C	2.94	C
		SB	2.91	C	2.92	C
		EB	2.03	B	2.03	B
		WB	2.16	B	2.17	B
7. Broad Street/Tank Farm Road	AM	NB	2.86	C	2.86	C
		SB	2.87	C	2.88	C
		EB	2.74	C	2.75	C
		WB	2.51	C	2.51	C
	PM	NB	2.88	C	2.88	C
		SB	2.92	C	2.93	C
		EB	2.83	C	2.85	C
		WB	2.59	C	2.59	C
8. Broad Street/Aero Vista Lane	AM	NB	>200	F	>200	F
		SB	>200	F	>200	F
	PM	NB	>200	F	>200	F
		SB	>200	F	>200	F
9. Broad Street/Aero Drive	AM	NB	2.70	C	2.70	C
		SB	2.71	C	2.71	C
		EB	1.98	B	1.98	B
		WB	1.97	B	1.97	B
	PM	NB	2.68	C	2.68	C
		SB	2.70	C	2.71	C
		EB	2.01	B	2.01	B
		WB	1.97	B	1.97	B

1. HCM 2010 pedestrian score and LOS.
2. HCM 2010 reports pedestrian LOS at two-way stop controlled intersections in delay (seconds).

Table 14: Existing and Existing Plus Project Intersection Bicycle Levels of Service						
			Existing		Existing + Project	
Intersection		Direction	LOS Score[1]	LOS[1]	LOS Score[1]	LOS[1]
1. Tank Farm Road/South Higuera Street	AM	NB	3.41	C	3.41	C
		SB	3.04	C	3.05	C
		EB	3.12	C	3.12	C
		WB	3.55	D	3.58	D
	PM	NB	3.60	D	3.61	D
		SB	3.47	C	3.47	C
		EB	3.10	C	3.10	C
		WB	4.44	D	4.48	D
2. Tank Farm Road/Long Street	AM	-	N/A			
	PM	-				
3. Tank Farm Road/Santa Fe Road	AM	-	N/A			
	PM	-				
4. Tank Farm Road/MindBody Traffic Signal	AM	NB	2.51	C	2.57	C
		SB	-	-	2.31	B
		EB	2.89	C	2.98	C
		WB	4.13	D	3.84	D
	PM	NB	2.87	C	2.92	C
		SB	-	-	2.36	B
		EB	3.10	C	3.16	C
		WB	4.50	D	4.36	D
5. Broad Street/Capitolio Way	AM	-	N/A			
	PM	-				
6. Broad Street/Industrial Way	AM	NB	3.12	C	3.17	C
		SB	3.14	C	3.17	C
		EB	2.71	C	2.73	C
		WB	2.89	C	2.90	C
	PM	NB	3.28	C	3.31	C
		SB	3.21	C	3.28	C
		EB	2.86	C	2.93	C
		WB	3.25	C	3.26	C
7. Broad Street/Tank Farm Road	AM	NB	3.58	D	3.59	D
		SB	3.69	D	3.88	D
		EB	3.27	C	3.34	C
		WB	3.89	D	3.88	D
	PM	NB	3.73	D	3.75	D
		SB	3.80	D	4.03	D
		EB	3.57	D	3.62	D
		WB	3.85	D	3.85	D
8. Broad Street/Aero Vista Lane	AM	-	N/A			
	PM	-				
9. Broad Street/Aero Drive	AM	NB	3.43	C	3.43	C
		SB	2.85	C	2.86	C
		EB	2.70	C	2.70	C
		WB	2.71	C	2.71	C
	PM	NB	2.89	C	2.90	C
		SB	3.28	C	3.29	C
		EB	2.90	C	2.90	C
		WB	2.76	C	2.77	C

1. HCM 2010 bicycle score and LOS.
2. The 2010 HCM does not establish LOS standards for bicycles at stop-controlled intersections.

2. Segment Operations

Tables 15 and 16 show the Existing Plus Project segment operations during the AM and PM peak hours. Note that Existing Plus Project conditions include both the 650 and 660 Tank Farm project trips. The following deficiencies are reported:

- **Auto:** The westbound segment of Tank Farm Road from Santa Fe Road to Broad Street (#1b) operates at LOS F during the PM peak hour because its volume to capacity ratio is greater than one, resulting in an automatic LOS F. The addition of project traffic does not change the auto LOS score. No other new deficiencies were noted with the addition of project traffic.
- **Pedestrian:** The northbound segment of Broad Street from Orcutt Road to Industrial Way operates at LOS D during the PM peak hour both with and without the project due to the high vehicular volumes and percentage of vehicles turning at the downstream intersection. The addition of project traffic increases the LOS score by less than two percent and increases vehicular volumes by less than five percent. This is an insignificant change that would not substantively worsen pedestrian conditions.
- **Bicycle:** No new bicycle deficiencies are reported.
- **Transit:** Multiple study segments operate below the desired transit service level due to relatively infrequent service or the lack of bus stops on a specific segment. The addition of project traffic would not overburden or otherwise impact the transit network.

Table 15: Existing Plus Project AM Segment MMLOS[1]

Segment	Direction	Auto		Pedestrian[2]		Bicycle		Transit[3]	
		Score	LOS[1]	Score	LOS	Score	LOS	Score	LOS
1a. Tank Farm Road - Old	EB	2.34	B	N/A	N/A	2.79	C	N/A	N/A
Windmill Lane to Santa Fe Road	WB	2.34	B	N/A	N/A	2.71	B	N/A	N/A
1b. Tank Farm Road - Santa Fe	EB	2.75	B	2.84	C	2.07	B	N/A	N/A
Road to Broad Street	WB	2.75	B	N/A	N/A	2.10	B	N/A	N/A
2a. Tank Farm Road - Broad	EB	2.47	B	2.85	C	2.19	B	N/A	N/A
Street to UPRR	WB	2.47	B	3.14	C	2.38	B	3.33	C
2b. Tank Farm Road - UPRR to	EB	3.13	C	1.14	A	0.32	A	N/A	N/A
Orcutt Road	WB	3.13	C	N/A	N/A	0.47	A	4.17	D
3a. Broad Street - Orcutt Road	NB	2.14	B	3.20	C	2.24	B	**4.66**	**E**
to Industrial Way	SB	2.14	B	N/A	N/A	2.10	B	N/A	N/A
3b. Broad Street - Industrial Way	NB	2.14	B	2.88	C	2.12	B	**5.55**	**F**
to Tank Farm Road	SB	**2.14**	**F**	N/A	N/A	2.06	B	N/A	N/A
4a. Broad Street - Tank Farm	NB	**2.52**	**F**	N/A	N/A	2.08	B	N/A	N/A
Road to Aero Vista Lane	SB	2.52	B	3.23	C	0.98	A	**4.70**	**E**
4b. Broad Street - Aero Vista	NB	2.14	B	2.89	C	1.25	A	N/A	N/A
Lane to Aero Drive	SB	2.14	B	2.19	B	0.93	A	N/A	N/A
4c. Broad Street - Aero Drive to	NB	**2.93**	**F**	N/A	N/A	2.10	B	N/A	N/A
South City Limits	SB	2.93	C	N/A	N/A	1.22	A	**5.71**	**F**

1. HCM 2010 LOS score and LOS.
2. LOS is not established for segments without a sidewalk.
3. LOS is not established for segments without a directional transit route.

Table 16: Existing Plus Project PM Segment MMLOS[1]									
		Auto		Pedestrian		Bicycle		Transit	
Segment	Direction	Score	LOS[1]	Score	LOS	Score	LOS	Score	LOS
1a. Tank Farm Road - Old	EB	2.34	B	N/A	N/A	2.81	C	N/A	N/A
Windmill Lane to Santa Fe Road	WB	2.34	B	N/A	N/A	2.92	C	N/A	N/A
1b. Tank Farm Road - Santa Fe	EB	2.75	B	3.14	C	2.22	B	N/A	N/A
Road to Broad Street	WB	2.75	B	N/A	N/A	2.24	B	N/A	N/A
2a. Tank Farm Road - Broad	EB	2.47	B	3.30	C	2.59	B	N/A	N/A
Street to UPRR	WB	2.47	B	3.14	C	2.38	B	3.33	C
2b. Tank Farm Road - UPRR to	EB	3.13	C	1.73	A	0.66	A	N/A	N/A
Orcutt Road	WB	3.13	C	N/A	N/A	0.35	A	4.14	D
3a. Broad Street - Orcutt Road	NB	**2.14**	**F**	**3.67**	**D**	2.40	B	**4.72**	**E**
to Industrial Way	SB	2.14	B	N/A	N/A	2.13	B	N/A	N/A
3b. Broad Street - Industrial Way	NB	2.14	B	2.82	C	2.13	B	**5.54**	**F**
to Tank Farm Road	SB	**2.14**	**F**	N/A	N/A	2.10	B	N/A	N/A
4a. Broad Street - Tank Farm	NB	**2.52**	**F**	N/A	N/A	2.07	B	N/A	N/A
Road to Aero Vista Lane	SB	2.52	B	3.39	C	1.05	A	**4.72**	**E**
4b. Broad Street - Aero Vista	NB	2.14	B	2.33	B	0.83	A	N/A	N/A
Lane to Aero Drive	SB	**2.14**	**F**	2.68	B	1.18	A	N/A	N/A
4c. Broad Street - Aero Drive to	NB	2.93	C	N/A	N/A	1.77	A	N/A	N/A
South City Limits	SB	2.93	C	N/A	N/A	1.53	A	**5.71**	**F**

1. HCM 2010 LOS score and LOS.
2. LOS is not established for segments without a sidewalk.
3. LOS is not established for segments without a directional transit route.

SITE ACCESS AND ON-SITE CIRCULATION

This section discusses issues related to site access and on-site circulation. On-site circulation deficiencies would occur if project designs fail to meet appropriate standards, fail to provide adequate truck access, or would result in hazardous conditions.

The site plan is shown on **Figure 2.**

The Westmont and NWC Tank Farm/Broad sites share access to Broad Street (via Industrial Way and Tank Farm Road (via Mindbody traffic signal). New limited access driveways are proposed on Broad Street (right-in/right-out/left-in only) and Tank Farm Road (right-in/right-out only).

Recommendations

- Widen Tank Farm Road along the project frontages to provide two westbound lanes, bike lanes, and sidewalks consistent with the parkway arterial designation in the Airport Area Specific Plan.
- Install single lane roundabout at the internal site intersection of the Mindbody road extension adjacent to SESLOC on the north property line to encourage smooth traffic flow between the sites.
- Eliminate the SESLOC right-in/right-out driveway on Broad Street.

Cumulative Conditions

Cumulative Conditions represent build-out of the land uses in the region.

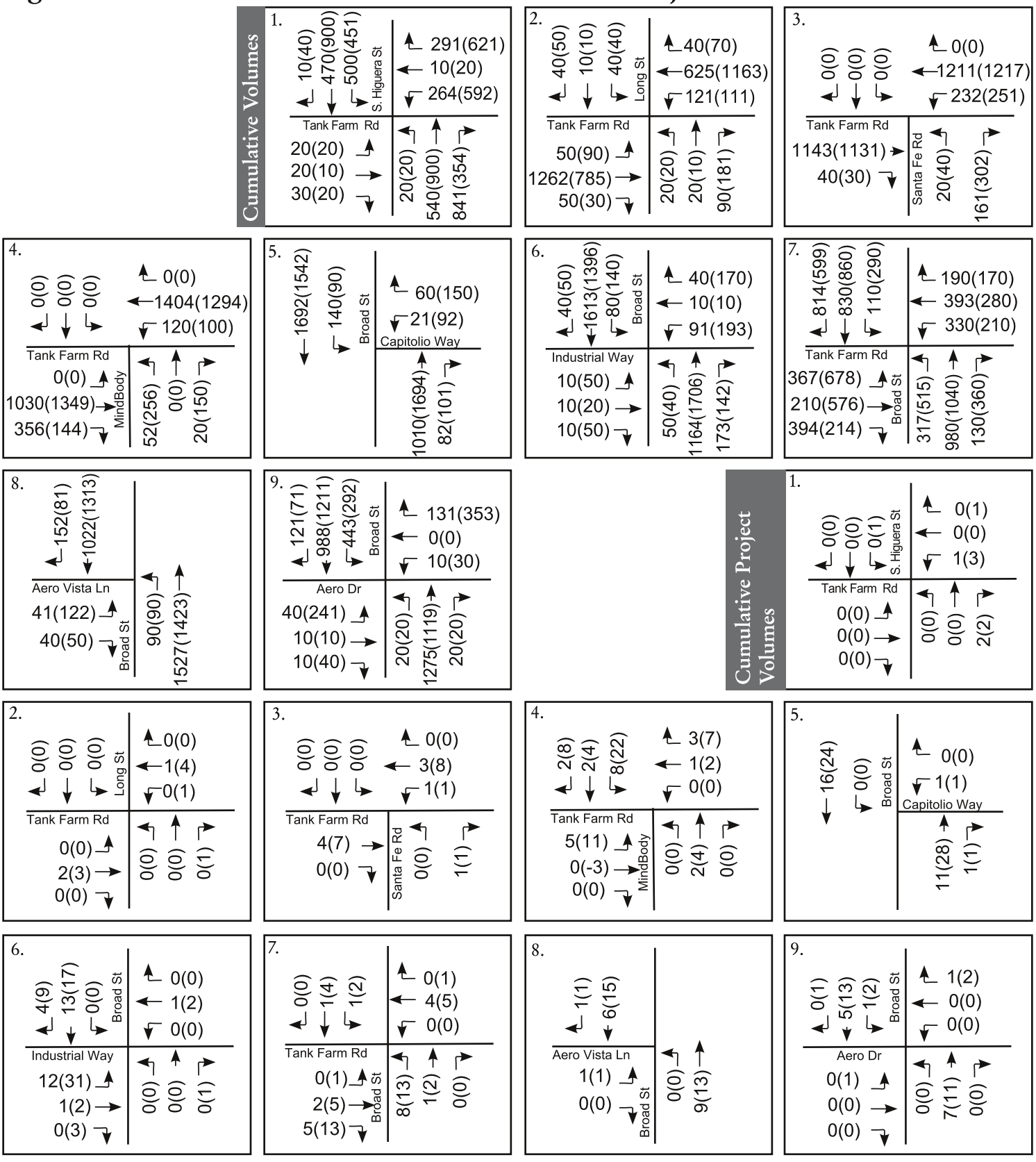
CUMULATIVE VOLUME FORECASTS

Cumulative, Cumulative Project, and Cumulative Plus Project traffic volume forecasts, shown on **Figures 6 and 7**, were developed using the City's Travel Demand Model, which includes planned network and land use changes expected upon buildout of the City's General Plan. The following key network changes will shift travel patterns in the study area:

- Prado Road would extend as a four-lane regional route arterial from S Higuera Street to Broad Street with a new intersection between Capitolio Way and Industrial Way.
- A full interchange would be constructed at Prado Road and US 101.
- Victoria Avenue would be extended from Woodbridge Street to High Street.
- Orcutt Road would be widened as a four-lane arterial from the railroad tracks to Johnson Avenue.
- Tank Farm Road would be widened to four lanes west of 250 Tank Farm Road and east of Santa Fe Road.
- The intersection of Tank Farm Road/Long Street would be signalized.
- Transit conditions were assumed to remain the same as those in Existing conditions.

Figures 6 and 7 show the Cumulative, Cumulative Project, and Cumulative Plus Project traffic volumes.

Figure 6: Cumulative Volumes and Cumulative Project Volumes



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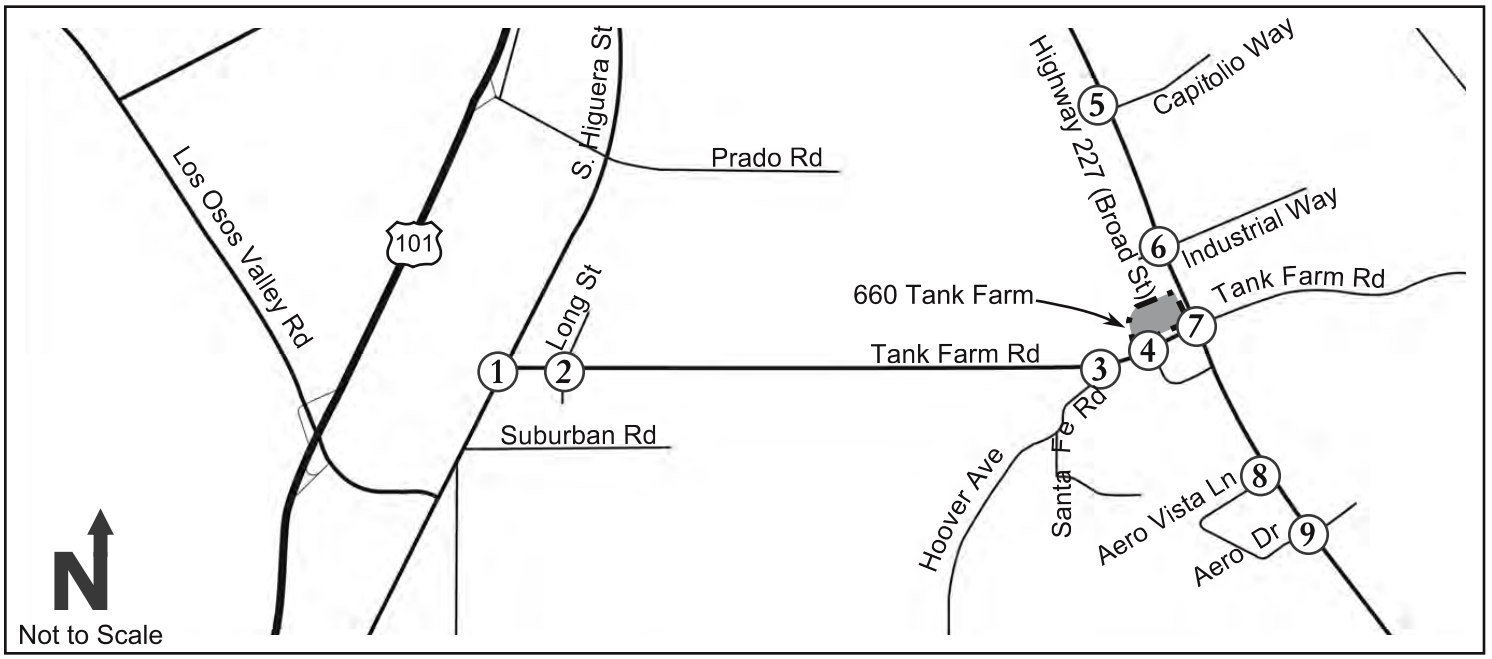
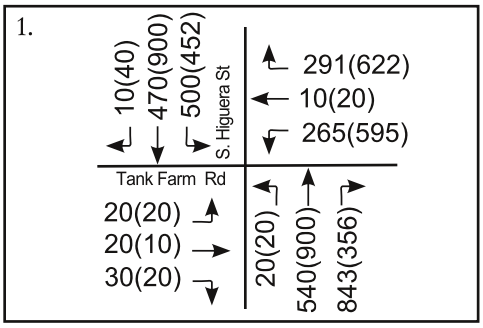
Legend:

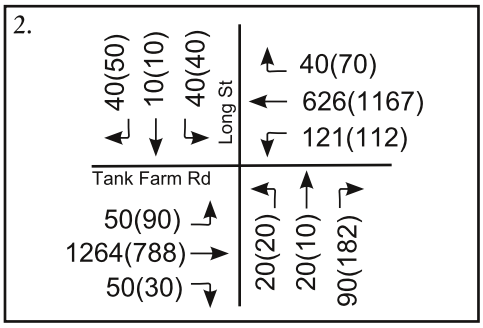
xx(yy) - AM(PM) Peak Hour Traffic Volumes

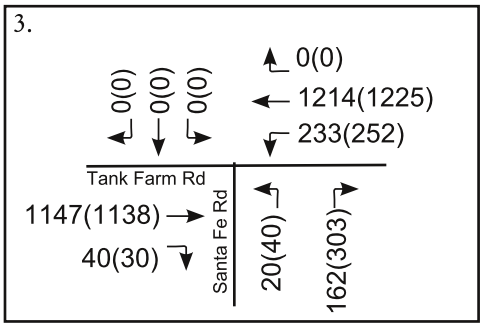
Figure 7: Cumulative Plus Project Volumes

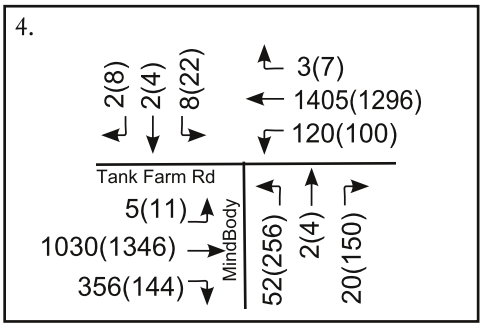
Attachment 10

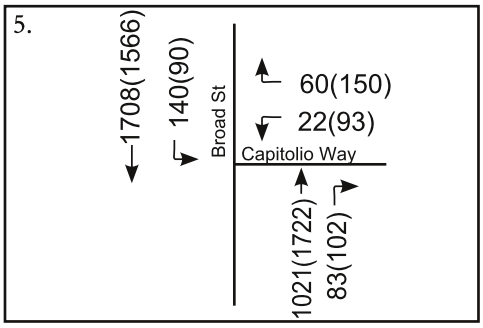


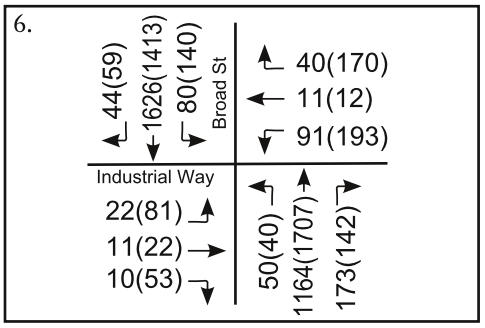


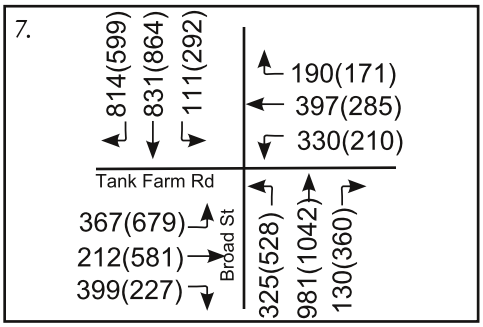


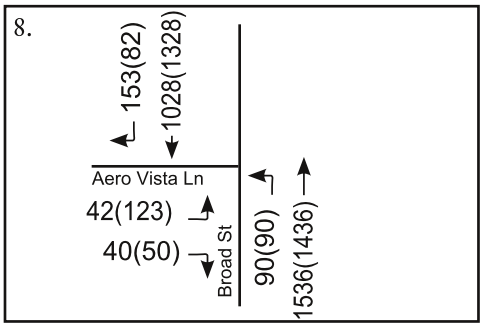


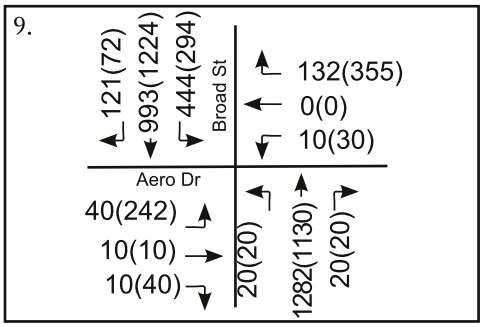












Legend:

xx(yy) - AM(PM) Peak Hour Traffic Volumes

(X) - Study Intersection

- Project Site

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CUMULATIVE TRANSPORTATION CONDITIONS

This section describes 1) intersection operations and 2) segment operations under Cumulative Plus Project conditions.

1. Intersection Operations

Figures 6 and 7 show the Cumulative Plus Project peak hour traffic volumes. Table 17 shows the LOS for the study intersections and Table 18 summarizes the vehicular queuing under and Cumulative Plus Project conditions, with detailed calculation sheets included in Appendix B.

Table 17: Cumulative Plus Project Intersection Auto Levels of Service

Intersection	Peak Hour	V/C[1]	Delay[2] (sec/veh)	LOS
1. Tank Farm Road/South Higuera Street	AM	1.35	**94.9**	**F**
	PM	0.71	**79.2**	**E**
2. Tank Farm Road/Long Street	AM	0.83	17.0	B
	PM	0.76	12.1	B
3. Tank Farm Road/Santa Fe Road	AM	>1.00	**- (>200)**	**- (F)**
	PM	>1.00	**- (>200)**	**- (F)**
4. Tank Farm Road/MindBody Traffic Signal	AM	0.85	18.7	B
	PM	0.99	42.5	D
5. Broad Street/Capitolio Way	AM	0.26	1.3 (26.6)	- (D)
	PM	1.70	**14.6 (>200)**	**- (F)**
6. Broad Street/Industrial Way	AM	1.06	36.8	D
	PM	1.38	**113.9**	**F**
7. Broad Street/Tank Farm Road	AM	1.37	**105.2**	**F**
	PM	1.91	**142.6**	**F**
8. Broad Street/Aero Vista Lane	AM	0.31	1.2 (27.8)	- (D)
	PM	1.13	**8.4 (142.6)**	**- (F)**
9. Broad Street/Aero Drive	AM	0.95	32.2	C
	PM	0.94	38.4	D

1. Volume to capacity ratio reported for worst movement.
2. HCM 6th average control delay in seconds per vehicle. For side-street-stop controlled intersections the worst
Note: Unacceptable operations shown in **bold** text.

The following intersections operate below the LOS D threshold for vehicles under Cumulative Plus Project conditions:

- Broad Street/South Higuera Street (#1) operates at LOS F during the AM peak hour and at LOS E during the PM peak hour.
- Tank Farm Road/Santa Fe Road (#3) operates at LOS F on the northbound approach.
- Broad Street/Capitolio Way (#5) operates at LOS F during the PM peak hour. The westbound approach has a large delay due to the side street stop controlled intersection and the high volume of traffic along Broad Street.
- Broad Street/Industrial Way (#6) operates at LOS F during the PM peak hour due to the presence of long pedestrian crossing times across the north and south approaches. Without pedestrian actuation, the intersection operates acceptably at LOS D.
- Broad Street/Tank Farm Road (#7) operates at LOS F during the AM and PM peak hours due to high volumes from all approaches of the intersection.

- Broad Street/Aero Vista Lane (#8) operates at LOS F during the PM peak hour. The eastbound approach has high delays due to the side street stop control, and the high volumes and speeds along Broad Street.

Table 18: Summary Cumulative Plus Project Queues				
Intersection	**Movement**	**Storage Length (ft)**	**Peak Hour**	**95th Percentile Queues (ft)[1]**
1. Tank Farm Road/South Higuera Street	WBL	670	AM	153
			PM	#440
	WBR	250	AM	71
			PM	**#342**
	NBR	140	AM	**#298**
			PM	63
	SBL	165	AM	**#681**
			PM	**#706**
3. Tank Farm Road/Santa Fe Road	NBR	25	AM	**48**
			PM	**174**
4. Tank Farm Road/MindBody Traffic Signal	WBL	210	AM	#176
			PM	#196
	NBL	330	AM	75
			PM	#303
5. Broad Street/Capitolio Way	WBL	-	AM	22
			PM	202
6. Broad Street/Industrial Way	EBT/L	350	AM	41
			PM	111
	NBL	150	AM	#67
			PM	#98
	SBL	150	AM	#115
			PM	**#311**
7. Broad Street/Tank Farm Road	EBL	300	AM	#245
			PM	**#553**
	EBR	90	AM	**#347**
			PM	57
	WBL	150	AM	**#554**
			PM	**#409**
	NBL	290	AM	#256
			PM	**#346**
	SBL	250	AM	#237
			PM	**#529**
	SBR	300	AM	**#824**
			PM	**#450**
8. Broad Street/Aero Vista Lane	EBL	75	AM	26
			PM	**176**
9. Broad Street / Aero Drive	EBT/L	310	AM	73
			PM	**#361**

1. Queue length that would not be exceeded 95 percent of the time.
# indicates that 95th percentile volume exceeds capacity, queue may be longer.
Bold indicates queue length longer than storage length.
Detailed queues provided in Appendix B.

The following queue deficiencies are noted:

- Tank Farm Road/S Higuera Street (#1): Queues exceed storage length during at least one peak hour on the westbound right, northbound right, and southbound left turning movements.
- Tank Farm Road/Santa Fe Road (#3): The northbound right turn queue length exceeds storage length during the AM and PM peak hours.
- Broad Street/Industrial Way (#6): The southbound left turn queue exceeds storage length during the PM peak hour.
- Broad Street/Tank Farm Road (#7): During at least one peak hour, queues exceed storage on the eastbound left, eastbound right, northbound left, and southbound right movements.
- Broad Street/Aero Vista Lane (#8): The eastbound left movement exceeds storage during the PM peak hour.

Recommendations

The recommendations below would address Cumulative LOS and queueing deficiencies.

- Tank Farm Road/S Higuera Street (#1): Installing a second southbound left turn lane would improve operations and address this impact.
- Tank Farm Road/Santa Fe Road (#3) operates at LOS F on the northbound approach. Installing a multi-lane roundabout would provide acceptable operations.
- Broad Street/Capitolio Way (#5) operates at LOS F during the PM peak hour. The planned future intersection of Prado Road/Broad Street would be signalized, making signalization of the nearby Broad Street/Capitolio Way intersection undesirable. Capitolio Way is connected to both Orcutt Road and Industrial Way by Sacramento Drive, thereby providing an alternative access point for drivers seeking signalized access to Broad Street. No changes are recommended.
- Broad Street/Industrial Way (#6) operates at LOS F during the PM peak hour due to the presence of long pedestrian crossing times across the north and south approaches and the split phasing. Converting the east and west approaches from split phasing to permissive phasing and restriping both approaches to provide dedicated left turn lanes and shared through/right turn lanes would result in LOS C operations.
- Broad Street/Tank Farm Road (#7) operates at LOS F during the AM and PM peak hours due to high volumes from all approaches of the intersection. Adding a second southbound left turn lane, adding a dedicated northbound right turn lane, and converting the westbound right turn lane to a shared through/right lane would improve conditions. However, while some queue lengths would be decreased, others would be increased. The City's Circulation Element EIR recommends establishing time-of-day timing plans at this intersection.
- Broad Street/Aero Vista Lane (#8) operates at LOS F during the PM peak hour. The eastbound approach has high delays due to the side street stop control and the high volumes and speeds along Broad Street. The signalized intersection of Broad Street/Aero Drive provides a viable alternative route for drivers in this area. No improvements are recommended.

Tables 19 and 20 show the bicycle and pedestrian levels of service at the study intersections.

Table 19: Cumulative Plus Project Intersection Pedestrian Levels of Service

Intersection		Direction	Cumulative + Project LOS Score[1]	Cumulative + Project LOS[1]
1. Tank Farm Road/South Higuera Street	AM	NB	3.03	C
		SB	2.88	C
		EB	1.99	B
		WB	2.89	C
	PM	NB	3.24	C
		SB	3.29	C
		EB	2.00	B
		WB	3.00	C
2. Tank Farm Road/Long Street	AM	NB	2.06	B
		SB	2.02	B
		EB	2.74	C
		WB	2.77	C
	PM	NB	2.07	B
		SB	2.03	B
		EB	2.74	C
		WB	2.78	C
3. Tank Farm Road/Santa Fe Road	AM	EB	**118.40**	**F**
		WB	**>200**	**F**
	PM	EB	**121.30**	**F**
		WB	**>200**	**F**
4. Tank Farm Road/MindBody Traffic Signal	AM	NB	2.17	B
		SB	1.97	B
		EB	2.95	C
		WB	2.95	C
	PM	NB	2.21	B
		SB	1.98	B
		EB	3.01	C
		WB	3.02	C
5. Broad Street/Capitolio Way	AM	NB	**>200**	**F**
		SB	**>200**	**F**
	PM	NB	**>200**	**F**
		SB	**>200**	**F**
6. Broad Street/Industrial Way	AM	NB	3.01	C
		SB	2.99	C
		EB	2.01	B
		WB	2.10	B
	PM	NB	3.08	C
		SB	3.08	C
		EB	2.05	B
		WB	2.19	B
7. Broad Street/Tank Farm Road	AM	NB	3.00	C
		SB	3.05	C
		EB	2.99	C
		WB	2.61	C
	PM	NB	3.02	C
		SB	3.09	C
		EB	3.04	C
		WB	2.71	C
8. Broad Street/Aero Vista Lane	AM	NB	**>200**	**F**
		SB	**>200**	**F**
	PM	NB	**>200**	**F**
		SB	**>200**	**F**
9. Broad Street/Aero Drive	AM	NB	2.82	C
		SB	2.97	C
		EB	2.03	B
		WB	2.18	B
	PM	NB	2.85	C
		SB	3.03	C
		EB	2.10	B
		WB	2.21	B

1. HCM 2010 pedestrian score and LOS.
2. HCM 2010 reports pedestrian LOS at two-way stop controlled intersections in delay (seconds).

The following intersections operate below the LOS C threshold for pedestrians:

- Tank Farm Road/Santa Fe Road (#3) operates at LOS F during the AM and PM peak hours due to the presence of side street stop controlled intersections and high volumes and speeds along Tank Farm Road. Installation of the recommended roundabout at this intersection would provide acceptable pedestrian operations.
- Broad Street/Capitolio Way (#5) operates at LOS F during the AM and PM peak hours due to the presence of side street stop controlled intersections and high volumes and speeds along Broad Street. Pedestrians seeking to cross Broad Street would use one of the nearby signalized intersections with dedicated pedestrian phases.
- Broad Street/Aero Vista Lane (#8) operates at LOS F during the AM and PM peak hours due to the presence of side street stop controlled intersections and high volumes and speeds along Broad Street. Pedestrians seeking to cross Broad Street would use one of the nearby signalized intersections with dedicated pedestrian phases.

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Table 20: Cumulative Plus Project Intersection Bicycle Levels of Service				
			Cumulative + Project	
Intersection		Direction	LOS Score[1]	LOS[1]
1. Tank Farm Road/South Higuera Street	AM	NB	3.89	D
		SB	3.4	C
		EB	3.15	C
		WB	3.59	D
	PM	NB	3.85	D
		SB	3.84	D
		EB	3.12	C
		WB	**4.90**	**E**
2. Tank Farm Road/Long Street	AM	NB	2.72	C
		SB	2.61	C
		EB	3.35	C
		WB	2.83	C
	PM	NB	2.85	C
		SB	2.62	C
		EB	2.90	C
		WB	3.29	C
3. Tank Farm Road/Santa Fe Road	AM	-	N/A	
	PM	-		
4. Tank Farm Road/MindBody Traffic Signal	AM	NB	2.83	C
		SB	2.50	C
		EB	3.42	C
		WB	3.56	D
	PM	NB	3.47	C
		SB	2.54	C
		EB	3.54	D
		WB	3.46	C
5. Broad Street/Capitolio Way	AM	-	N/A	
	PM	-		
6. Broad Street/Industrial Way	AM	NB	3.35	C
		SB	3.68	D
		EB	2.75	C
		WB	2.94	C
	PM	NB	3.77	D
		SB	3.54	D
		EB	2.95	C
		WB	3.34	C
7. Broad Street/Tank Farm Road	AM	NB	3.93	D
		SB	4.42	D
		EB	3.53	D
		WB	4.46	D
	PM	NB	4.31	D
		SB	4.38	D
		EB	3.94	D
		WB	3.98	D
8. Broad Street/Aero Vista Lane	AM	-	N/A	
	PM	-		
9. Broad Street/Aero Drive	AM	NB	3.5	D
		SB	3.71	D
		EB	2.76	C
		WB	2.94	C
	PM	NB	3.36	C
		SB	3.74	D
		EB	3.18	C
		WB	3.38	C

1. HCM 2010 bicycle score and LOS.
2. The 2010 HCM does not establish LOS standards for bicycles at stop-controlled intersections.

The following intersection operates below the LOS D threshold for bicycles:

- Tank Farm Road/South Higuera Street (#1) operates at LOS E in the westbound direction during the PM peak hour. The addition of project traffic to this intersection would not noticeably change bicycle comfort, so this is an insignificant impact.

2. Segment Operations

Tables 21 and 22 show the segment operations during the AM and PM peak hours under Cumulative Plus Project conditions.

Table 21: Cumulative Plus Project AM Segment MMLOS[1]

Segment	Direction	Auto		Pedestrian[2]		Bicycle		Transit[3]	
		Score	LOS[1]	Score	LOS	Score	LOS	Score	LOS
1a. Tank Farm Road - Old Windmill Lane to Santa Fe Road	EB	2.34	B	N/A	N/A	2.98	C	N/A	N/A
	WB	2.34	B	N/A	N/A	2.88	C	N/A	N/A
1b. Tank Farm Road - Santa Fe Road to Broad Street	EB	2.75	B	3.22	C	2.25	B	N/A	N/A
	WB	2.75	B	3.13	C	2.38	B	N/A	N/A
2a. Tank Farm Road - Broad Street to UPRR	EB	2.47	B	2.99	C	2.35	B	N/A	N/A
	WB	2.47	B	**3.51**	**D**	2.60	B	3.38	C
2b. Tank Farm Road - UPRR to Orcutt Road	EB	3.13	C	0.95	A	0.13	A	N/A	N/A
	WB	3.13	C	N/A	N/A	0.34	A	4.14	D
3a. Broad Street - Orcutt Road to Industrial Way	NB	2.14	B	3.36	C	2.30	B	**4.69**	**E**
	SB	**2.14**	**F**	N/A	N/A	2.29	B	N/A	N/A
3b. Broad Street - Industrial Way to Tank Farm Road	NB	2.14	B	3.08	C	2.22	B	**5.58**	**F**
	SB	**2.14**	**F**	**3.57**	**D**	2.28	B	N/A	N/A
4a. Broad Street - Tank Farm Road to Aero Vista Lane	NB	**2.52**	**F**	N/A	N/A	2.23	B	N/A	N/A
	SB	2.52	B	**3.66**	**D**	1.15	A	**4.76**	**E**
4b. Broad Street - Aero Vista Lane to Aero Drive	NB	2.14	B	3.23	C	1.35	A	N/A	N/A
	SB	**2.14**	**F**	2.94	C	1.27	A	N/A	N/A
4c. Broad Street - Aero Drive to South City Limits	NB	**2.93**	**F**	N/A	N/A	2.13	B	N/A	N/A
	SB	2.93	C	N/A	N/A	1.49	A	**5.85**	**F**

1. HCM 2010 LOS score and LOS.
2. LOS is not established for segments without a sidewalk.
3. LOS is not established for segments without a directional transit route.

Table 22: Cumulative Plus Project PM Segment MMLOS[1]									
		Auto		Pedestrian[2]		Bicycle		Transit[3]	
Segment	Direction	Score	LOS[1]	Score	LOS	Score	LOS	Score	LOS
1a. Tank Farm Road - Old Windmill	EB	2.34	B	N/A	N/A	2.89	C	N/A	N/A
Lane to Santa Fe Road	WB	2.34	B	N/A	N/A	3.00	C	N/A	N/A
1b. Tank Farm Road - Santa Fe	EB	2.75	B	**3.59**	**D**	2.37	B	N/A	N/A
Road to Broad Street	WB	2.75	B	3.08	C	2.37	B	N/A	N/A
2a. Tank Farm Road - Broad Street	EB	2.47	B	**3.88**	**D**	2.86	C	N/A	N/A
to UPRR	WB	2.47	B	3.23	C	2.44	B	3.34	C
2b. Tank Farm Road - UPRR to	EB	3.13	C	1.55	A	0.58	A	N/A	N/A
Orcutt Road	WB	3.13	C	N/A	N/A	0.06	A	4.10	D
3a. Broad Street - Orcutt Road to	NB	**2.14**	**F**	**4.26**	**E**	2.56	B	**4.81**	**E**
Industrial Way	SB	**2.14**	**F**	N/A	N/A	2.24	B	N/A	N/A
3b. Broad Street - Industrial Way to	NB	**2.14**	**F**	3.23	C	2.30	B	**5.60**	**F**
Tank Farm Road	SB	**2.14**	**F**	3.36	C	2.22	B	N/A	N/A
4a. Broad Street - Tank Farm Road	NB	**2.52**	**F**	N/A	N/A	2.31	B	N/A	N/A
to Aero Vista Lane	SB	2.52	B	**3.64**	**D**	1.14	A	**4.76**	**E**
4b. Broad Street - Aero Vista Lane to	NB	2.14	B	3.27	C	1.19	A	N/A	N/A
Aero Drive	SB	**2.14**	**F**	3.13	C	1.34	A	N/A	N/A
4c. Broad Street - Aero Drive to	NB	**2.93**	**F**	N/A	N/A	2.07	B	N/A	N/A
South City Limits	SB	2.93	C	N/A	N/A	1.62	A	**5.78**	**F**

1. HCM 2010 LOS score and LOS.
2. LOS is not established for segments without a sidewalk.
3. LOS is not established for segments without a directional transit route.

In addition to the methods above, generalized LOS thresholds were also applied to calculate Auto LOS on the segment of Tank Farm Road between Santa Fe Road and Old Windmill Lane to be consistent with the methods applied in the 2014 Circulation Element Update. Peak hour volumes between 2,406 and 3,224 vehicles correspond to LOS E operations.

Under Cumulative conditions the PM peak hour volume along the study segment is 2,418 vehicles which corresponds to LOS E. The 650 Tank Farm project adds 15 vehicles, for a total of 2,433 vehicles under Cumulative Plus Project conditions, also LOS E.

The 660 Tank Farm project's proportional share is 0.62 percent (15/2,433=.0062).

The following deficiencies are reported:

Auto:

The following segments have a V/C ratio that is greater than one, resulting in an automatic LOS F, even thought the LOS scores are acceptable. The addition of project traffic does not change the auto LOS, and the nearby intersections would constrain flow before the segments did, so the project would have an insignificant effect on these segments.

- #3a: Southbound Broad Street from Orcutt Road to Industrial Way – AM and PM
- #3a: Northbound Broad Street from Orcutt Road to Industrial Way – PM
- #3b: Southbound Broad Street from Industrial Way to Tank Farm Road – AM and PM
- #3b: Northbound Broad Street from Industrial Way to Tank Farm Road – PM
- #4a: Northbound Broad Street from Aero Vista Lane to Tank Farm Road – AM and PM
- #4b: Southbound Broad Street from Aero Vista Lane to Aero Drive – AM and PM

- #4c: Northbound Broad Street from South City Limits to Aero Drive – AM and PM

Pedestrian:

- Multiple segments do not have a pedestrian LOS reported due to the absence of pedestrian facilities, or the presence of discontinuous pedestrian facilities.
- The eastbound segment of Tank Farm Road from Santa Fe Road to Broad Street (#1b) operates unacceptably at LOS D during the PM peak hour due to high vehicular volumes and speeds.
- The segment of Tank Farm Road from UPRR to Orcutt Road (#2a) operates unacceptably at LOS D westbound during the AM peak hour and eastbound during the PM peak hour due to high vehicular volumes and speeds.
- The segment of northbound Broad Street from Orcutt Road to Industrial Way (#3a) operates unacceptably at LOS E with the project during the PM peak hour due to the high vehicular volumes and speeds.
- The segment of southbound Broad Street from Industrial Way to Tank Farm Road (#3b) operates unacceptably at LOS D during the PM peak hour due to the high vehicular volumes and speeds along Broad Street.
- The segment of southbound Broad Street from Tank Farm Road to Aero Vista Lane (#4a) operates unacceptably at LOS D during both peak hours due to high vehicular volumes and speeds.

Bicycle: No bicycle deficiencies are reported.

Transit: Several segments operate below the transit LOS threshold due to infrequent service to the study segments. Given the relatively low boardings on stops in the area, the addition of project traffic would not overburden or otherwise impact the transit network.

Recommendations

We recommend that the project make a fair share contribution of 0.62 percent of the cost of widening Tank Farm Road to four lanes between Santa Fe Road and Old Windmill Lane.

No mitigations are recommended for the segments with deficient pedestrian LOS scores. On each of these segments, the addition of project traffic increases the pedestrian LOS score by less than two percent and increases vehicular volumes by less than three percent. These are insignificant changes that would not substantively worsen pedestrian conditions.

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