

STAFF REPORT
PLANNING COMMISSION

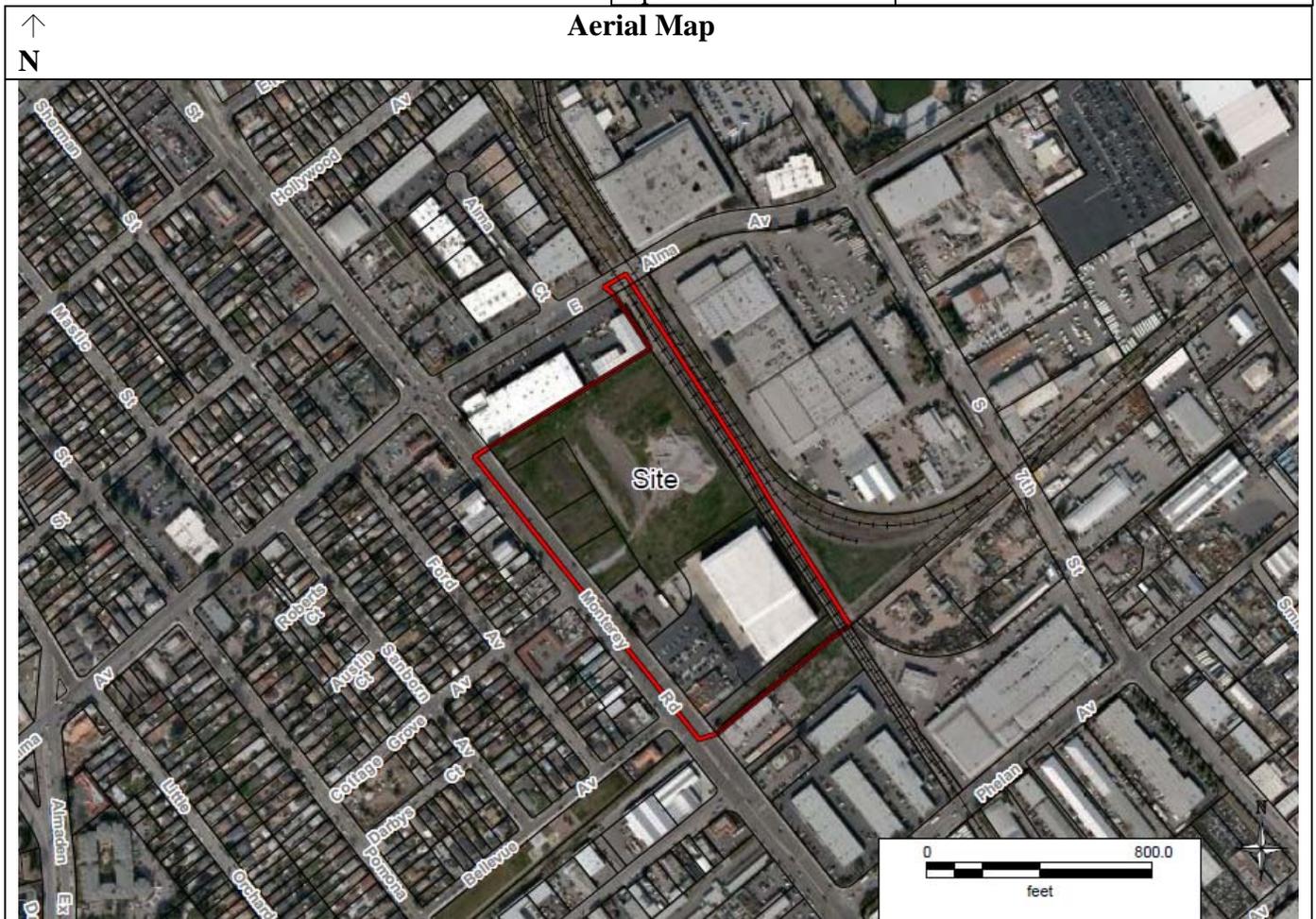
File No.: PDC10-026

Submitted: 11/17/10

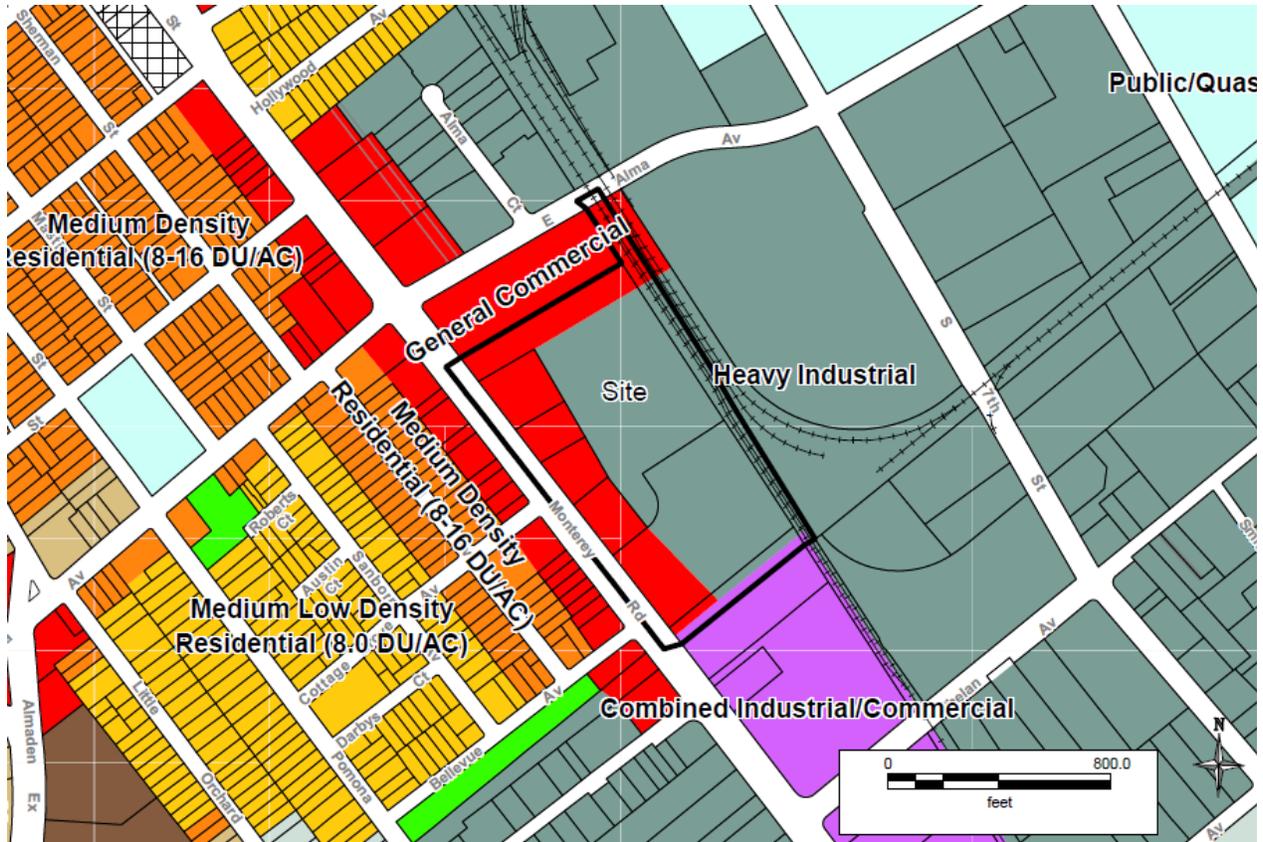
PROJECT DESCRIPTION: Planned Development Zoning from the LI-Light Industrial and HI-Heavy Industrial Zoning Districts to CG(PD) Planned Development Zoning District to allow for the demolition of the three existing structures and construction of up to 257,296 square foot of commercial buildings on 19.75 gross acre site

LOCATION: East side of Monterey Road, approximately 500 feet southerly of East Alma Avenue

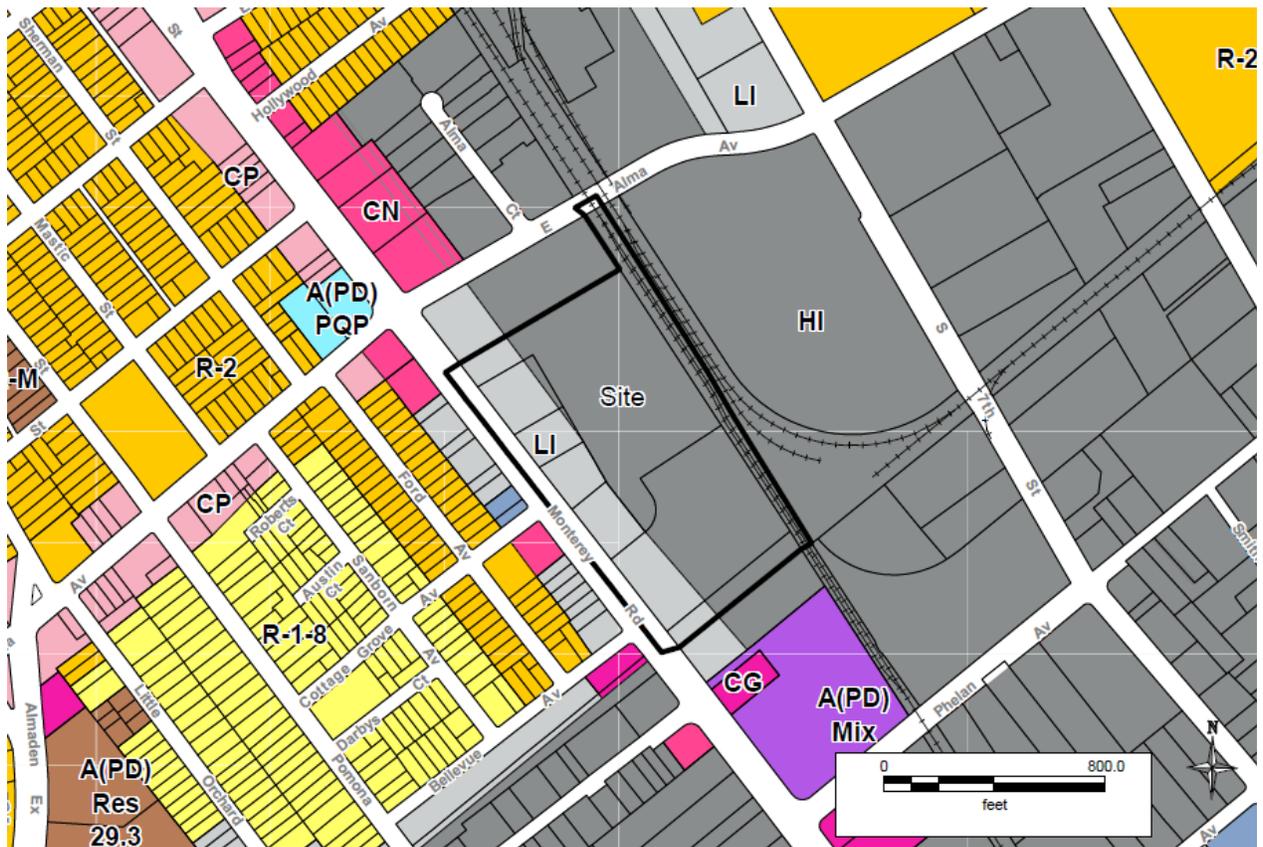
Existing Zoning	LI-Light Industrial; HI-Heavy Industrial
Proposed Zoning	CG(PD) Planned Development
General Plan	General Commercial; Heavy Industrial; Combined Industrial/Commercial (see pending File No. GP10-07-01)
Council District	7
Annexation Date	07/19/56
SNI	N/A
Historic Resource	N/A
Redevelopment Area	Monterey Corridor
Specific Plan	N/A



GENERAL PLAN



CURRENT ZONING



RECOMMENDATION

Planning staff recommends that the Planning Commission recommend to the City Council approval of the proposed Planned Development Rezoning on the site for the following reasons:

1. The proposed Planned Development Zoning is consistent with the goals and policies of the San Jose 2020 General Plan and Draft Envision 2040 General Plan, specifically:
 - a. The proposed zoning will comply with the proposed Envision San Jose 2040 Land Use Transportation Diagram land use designation of Combined Industrial/Commercial, as retail/restaurant uses are in within this designation.
 - b. The project conforms to the Commercial Land Use Goals and Policies of the San Jose 2020 General Plan and the proposed Envision San Jose 2040 General Plan, in that it would provide neighborhood-serving commercial uses at a location easily accessible to the surrounding residential neighborhood.
2. The project conforms to the Commercial Design Guidelines.
3. The proposed commercial development with drive-through use conforms to City Council Policy 6-10: Drive-Through Uses.
4. The proposed project is compatible with the surrounding land uses.
5. The proposed project conforms to the requirements of CEQA.

BACKGROUND & DESCRIPTION

On November 17, 2010, Michael Mulcahy, on behalf of Sun Gardens Tenants in Common, filed a request for a Planned Development Zoning from the LI-Light Industrial and HI-Heavy Industrial Zoning Districts to the CG(PD) Planned Development Zoning District to allow for the demolition of the three existing structures and construction of up to 257,296 square foot of commercial buildings on a 19.75 gross acre site. The developer is proposing a Planned Development Zoning to secure a combination of uses and setbacks that would not otherwise be allowed in a conventional commercial zoning district. The proposed base zoning district of "CG" is proposed with this Planned Development Zoning as an alternative, in the event that the applicant later decides to propose a project with a Site Development Permit rather than a Planned Development Permit. In the event that this occurs, the development would need to comply with the development regulations of the CG-Commercial General Zoning District.

The project proposes a phased development of the site. Phase 1 would include 122,130 square feet of new retail on the northern portion of the project site, demolition of the one-story house on-site, and retention of the two other existing industrial/commercial buildings on-site. In Phase 2, the remaining buildings would be demolished or converted to commercial uses for a total of 257,296 square feet of development on the entire site. This rezoning also allows the property owner the option of retaining the three existing buildings for industrial or commercial uses. Alternatively, the existing buildings could be demolished and new commercial buildings constructed in their place. The proposed project will also allow up to two drive-through uses. The applicant has expressed interest in providing a few 24-hour uses and these may be considered with a Planned Development Permit subject to conformance with City Council Policy 6-27: Evaluation of 24 Hour Uses.

Access to the site would be from four driveways along Monterey Road and one driveway to Alma Avenue. The main driveway will be signalized and centrally located along the Monterey Road frontage aligned with Cottage Grove Avenue. There is a railroad spur easement along the east edge of the site. The project applicant has acquired a portion of this easement which now provides access to Alma Avenue. Parking will be provided in surface parking lots throughout the site and along the Alma access

drive aisle. Along the southerly boundary of the site is an abandoned railroad right-of-way, where the applicant proposes landscaping and a public trail easement (future Three Creeks Trails).

Existing Site Condition and History

The Sun Garden Cannery, founded in the late 1930's, operated on 10-acres in the northern portion of the project site until it was closed in 1996. On February 8, 2002, the buildings were heavily damaged by fire and subsequently approved for demolition. The only building that remains from the Sun Garden Cannery complex is a 4,655 square foot single-family house that was moved to the project site in the 1960's and converted to an office. Two additional buildings, a 10,866 square foot restaurant and a 100,820 square foot warehouse, occupy the remainder of the site. All three buildings are located on the southern portion of the property. The northern portion is currently vacant. The entire site is surrounded by a mixture of industrial and commercial uses.

ANALYSIS

The City Council is expected to consider the adoption of the new Envision San Jose 2040 General Plan in October, 2011. The related preferred land use plan has already been developed by the Task Force and endorsed by the City Council. The new plan is now pending approval upon completion of the Environmental Impact Report. For this reason, during this transitional period, this proposal is being evaluated in the context of the new draft plan as well as relevant policies of the current General Plan.

The proposed rezoning was analyzed to address the following: 1) conformance with the Draft Envision San Jose 2040 General Plan, 2) conformance with the current applicable goals and policies of the San José 2020 General Plan, 3) the Commercial Design Guidelines, 4) City Council Policy 6-10, Criteria for the Review of Drive-Through Uses, 5) interface with the Three Creeks Trail, 6) sustainability, and 7) the California Environmental Quality Act (CEQA).

General Plan Conformance

The current San Jose 2020 General Plan Land Use/Transportation Diagram designation is General Commercial along the Monterey Road frontage with the balance, and majority, of the site designated as Heavy Industrial. The portion of land encompassed by the trail, along the south side of the property has an existing land use designation of Combined Industrial/Commercial. Under these designations the amount of commercial uses as proposed by the applicant would not be allowed. There is a pending General Plan Amendment (File GP10-07-01) to change the land use designations to Combined Industrial/Commercial. The subject Planned Development Zoning can only be considered upon approval of the above referenced General Plan Amendment. If approved, this would facilitate a rezoning to CG(PD)Planned Development to allow for construction of a new neighborhood retail center, but with the possible retention of some of the existing industrial buildings and uses.

Under the Draft Envision San Jose 2040 General Plan, the site will be given a designation of Combined Industrial/Commercial and is consistent with the applicant's requested designation. The proposed Combined Industrial/Commercial designation would allow a significant amount of flexibility for the development of a varied mixture of compatible commercial and industrial uses. Properties with this designation will be intended for commercial, office, or industrial developments or a compatible mix of these uses. This designation would occur in areas where the existing development pattern exhibits a mix of commercial and industrial land uses or in areas on the boundary between commercial and industrial uses. Development intensity can vary significantly in this proposed designation based on the nature of specific uses likely to occur in a particular area. In order to maintain an industrial character, small,

suburban strip centers are discouraged in this designation, although larger big-box type developments may be allowed because they mix elements of retail commercial and warehouse forms and uses.

The subject property is located near the northern edge of a larger industrial area and serves as a transition from industrial to commercial and then to housing approximately 250 feet to the west. In keeping with the proposed General Plan designation, the property could be developed with a larger big-box type development, because they contain a mix of retail commercial and warehouse forms and uses. Based on the proposed mix of uses, and project design, the project conforms to the Combined Industrial/Commercial designation.

Commercial Design Guidelines

Site Design, Setbacks and Building Presence

The conceptual design includes a single-story scale, pedestrian-accessible shopping center which conforms to the Commercial Design Guidelines. The proposed development regulations are similar to the CG Commercial General Zoning District, but with slightly reduced front setbacks to be more urban and pedestrian-oriented. This site provides a transition from more suburban areas to the south and the more urban development planned along this corridor to the north. Pedestrian traffic is forecasted to increase due to transit and development of the trail in this area (see discussion on page 6 under Three Creek Trails). While the Guidelines recommend a building setback of 25 feet to the street and a 5 foot internal setback to a property line with a non-residential interface, the project provides a setback of 17 feet to any street and an internal setback of 6 feet on all sides adjacent to non-residential uses.

The proposed Zoning includes a minimum building frontage requirement of 38% to facilitate a strong building presence along Monterey Road while balancing the need to provide adequate visibility to anchor tenant spaces near the back of the site. To encourage a more urban appearance, in keeping with the smaller front setbacks, staff is recommending that at least half of the buildings along street edge maintain a two story design, or appearance thereof. This technique was successfully implemented as part of the recent redevelopment of the shopping center at the southeast corner of Story Road and King Avenue. The two-story appearance helped to achieve a much more urban appearance and better sense of place.

The proposed rezoning also includes a requirement for an offer of cross-access to be provided in case the adjacent commercial property to the north (Southern Lumber) ever redevelops to a different form of commercial development. This will allow traffic to flow more easily between the two sites and would therefore reduce vehicle trips on the adjacent public streets.

Parking

The Guidelines do not provide specific recommendations for parking, but refer to compliance with the Zoning Ordinance. Table 20-190 of the Zoning Ordinance requires a ratio of one vehicle parking space per 225 square feet of net floor area and one bicycling parking space per 3,000 square feet for neighborhood shopping centers that are larger than 100,000 square feet. The 257,296 square feet of commercial retail space will require 972 vehicle parking spaces and 73 bicycle parking spaces if the entire square footage is built out. The conceptual site plan shows 1073 vehicle parking spaces, which exceeds the parking requirement by 101 parking spaces.

Vehicular access to the Site

As shown on the conceptual site plan, the applicant is proposing five (5) driveway entrances along the Monterey Road frontage, while Staff is recommending four (4) driveways. One of these is a new

signalized intersection which intended to be the site's preferred primary point of ingress and egress. Staff's recommendation is based on the need to balance appropriate site access with pedestrian and bicycle safety along Monterey Road. Every sidewalk or path that crosses a driveway represents a point of potential vehicle conflict with a pedestrian or bicycle. With the addition of a new trail at along the south side of the side, pedestrian and bike traffic is expected to increase. Reducing the number of driveways per block reduces the number of conflict points. Greater separation of driveways promotes pedestrian safety by reducing overlap of the operational areas of driveways. The number of driveways compared to street frontage length proposed is substantially more that was provided with other recently approved shopping centers such as The Plant, Hacienda Gardens and @First (At First).

City Council Policy 6-10: Drive-Through Uses

This project conforms to all applicable recommendations of City Council Policy 6-10: Drive-Through Uses. The proposed project will facilitate up to two (2) drive-through uses (e.g. fast food restaurant, drug store). The drive-through uses will be placed more than 250 feet from residential uses in accordance with the policy. Of the two drive-through uses only one will be allowed to have the drive-through lane adjacent to the public street, the other will be limited to a drive through located at the rear of the building and away from the public street. This also helps eliminates a design constraint that would otherwise limit the ability to articulate the building elevations that face the public streets. Also, by limiting the number of drive-through uses adjacent to the public street, building presence and landscaping can be maximized. Each of the proposed drive-through uses provides adequate vehicle stacking lanes that do not interfere with other internal driveways.

Interface with Three Creeks Trail

The development of the Three Creeks Trail is important to the community and therefore the developer has worked diligently with the City's Parks Department. The developer is offering an easement over a portion of land at the southern edge of the property, no less than 10 feet in width, which can be used for future trail development. Staff has also worked with the applicant to craft the development standard in such a way that either the commercial development or the trail could go forward first, and therefore development of one would not hamper development of the other. The applicant is currently proposing a stormwater control bioretention swale adjacent to the trail. Staff will evaluate at the Planned Development Permit stage whether some of the 101 surplus parking spaces should be eliminated to provide more space between the trail and bioretention swale to enhance the function and appearance of the trail. The elimination of some parking spaces could facilitate a meandering trail.

Sustainability

This project is subject to the City of San Jose Green Building Ordinance for New Construction Private Development. A future Planned Development Permit for this project will be conditioned to conform to applicable regulations in effect at the time of building permit issuance. At this time, specific information is not known about green building measures to be included in the project. Currently, a project of this size is required to receive LEED Silver certification.

California Environmental Quality Act (CEQA)

An Environmental Impact Report (EIR) was prepared for the project, which ended its public circulation period on April 15, 2011. The EIR concludes that the proposed General Plan Amendments and Planned Development Rezoning will not have a significant effect on the environment with mitigation as proposed except for Greenhouse Gas Emissions which will be a significant unavoidable impact. The entire EIR is available for review on the Planning web site at: <http://www.sanjoseca.gov/planning/eir/EIR.asp>

The primary issues addressed in the EIR include the potential impacts of the physical development of the site on; hydrology and water quality, vegetation and wildlife, hazardous materials, cultural resources, air quality, Greenhouse Gas Emissions, and noise. The EIR includes mitigation measures that would reduce most of the potentially significant project impacts to a less-than-significant level.

PUBLIC OUTREACH/INTEREST

On January 26, 2011, a community meeting was held at the Alma Community Center to present both the General Plan Amendment and Planned Development Rezoning, at which 17 community members were in attendance. Those in attendance were generally supportive of the project as it would eliminate blight, create jobs, and provided needed services in their neighborhood.

In addition to the community meeting, the property owners and occupants within a 1,000-foot radius were sent public hearing notices for the Planning Commission and City Council hearings. This staff report has been posted on the City's web site. Signage in three languages has been posted at the site to inform the public about the proposed change. Staff has been available to discuss the proposal with interested members of the public.

CONCLUSION

The proposed Planned Development Rezoning will allow reuse of existing buildings on site to be occupied while also providing opportunity for the site to be redeveloped consistent with the Draft Envision San Jose 2040 General Plan. The proposed development of this site will facilitate a project that conforms to all City design policies. Both the existing buildings proposed to be saved in the interim phase and the new buildings are compatible with the surrounding neighborhood. This project will provide an appropriately urban character that creates a good transition from more suburban areas to the south to the more urban development planned to the north.

Project Manager: Jodie Clark, AICP

Approved by:  **Date:** 5/16/11

Owner/Applicant: Michael Mulcahy Sun Gardens Tenants in Common 1122 Willow Street San Jose, CA 95125	Attachments: Draft Development Standards Public Works Memo - to be sent under separate cover General Development Plan Set
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PDC10-026
SUN GARDEN RETAIL CENTER PROJECT
GENERAL DEVELOPMENT PLAN NOTES

The following notes are to be incorporated on the final General Development Plan upon recommendation by the Planning Commission and City Council Approval.

** In any cases where the graphic plans and text may differ, the text takes precedence*

DEVELOPMENT LIMITATIONS

Up to 257,296 square feet, including any existing buildings that are not demolished

ALLOWED USES

1. New buildings and existing buildings within 25 feet of Monterey Road:

Permitted, Conditional and Special uses in the CG-Commercial General Zoning District of Title 20 of the San Jose Municipal Code, as amended. Conditional and Special uses as identified in the CG-Commercial General Zoning District shall be subject to approval by the Planning Director with a Planned Development Permit or Amendment.

2. Existing buildings (other than those described above):

Permitted, Conditional and Special uses in the LI-Light Industrial Zoning District of Title 20 of the San Jose Municipal Code, as amended. Conditional and Special uses as identified in the LI-Light Industrial Zoning District shall be subject to approval by the Planning Director with a Planned Development Permit or Amendment. Such uses and buildings will be subject to site, landscape and sidewalks upgrades to ensure compatibility with the planned commercial development.

Use Limitations:

1. This project may contain no more than two (2) drive-through uses.

DEVELOPMENT STANDARDS

Perimeter Setbacks:

Along Monterey Road and Alma Avenue - 17 feet for parking and/or structures, which includes a 2 foot public sidewalk easement.

Exception to front setback: The Director of Planning may allow patios to encroach into the front setback with approval of a Development Permit.

All Other Property Lines Along Exterior of Project Site - 6 feet for parking and/or structures.

Exception to side setback: If the parcel on the corner of Monterey Road and Alma Avenue (APN 477-07-012) is redeveloped with a parking lot that is integrated with that of the subject shopping center, the side setback may be reduced to 0 feet provided that there are at least two points of cross vehicular connection.

Maximum Building Height - 50 feet.

PARKING REQUIREMENTS

All land uses shall provide on-site parking, including automobile, bicycle, motorcycle and clean air vehicle parking, in accordance with Chapter 20.90 (Parking and Loading) of the City of San Jose Municipal Code, as amended.

PROJECT DESIGN REQUIREMENTS

1. This project shall conform to the City's Commercial Design Guidelines.
2. No more than one of the drive-through uses allowed for this project may include a drive-through lane adjacent and parallel to Monterey Road and between the building and street.
3. Provide as much and well distributed building presence as feasible along Monterey Road by providing a minimum linear frontage of 35% for building footprints within 25 feet of the front property line, and providing greater building heights equivalent to two stories for at least half of the above buildings along the Monterey Road frontage.
4. Provide screening or internalization of loading courts to minimize visibility from Monterey Road.
5. Create pedestrian and bicycle connections from Monterey Road and Alma Avenue to the retail stores on-site to encourage pedestrian and bicycle traffic.

SIGNAGE

All signs shall conform to the City of San Jose sign regulations (Title 23), as amended, and shall be approved under a separate Planned Development Adjustment Permit to the satisfaction of the Director of Planning.

DEVELOPMENT PHASING

1. Separate Planned Development Permits are allowed for the phased build-out of the project.
2. Phasing of the development is permitted to allow the continued use of the existing warehouse per allowed uses of this PD Zoning and continued use of the existing restaurant building, both at the southwesterly portion of the project site, or their demolition when new construction is planned by the submittal of a PD Permit application.

THREE CREEKS TRAIL SYSTEM

Property owner will cooperate with the City Parks trail plan objective to utilize a portion of the southerly section of the site as a public trail to the satisfaction of the Director of Planning. Such future trail development shall not preclude the applicant's ability to landscape the same area with bio-swales to serve the project.

As a part of the Planned Development Permit that would require landscaping and bio-swale development in the general area that the public trail is planned, the property owner shall:

1. Grade the area to accommodate a minimum 10 foot continuous right of way suitable for future trail development.
2. Prior to trail development, the area may be landscaped by the property owner understanding that it is subject to future replacement by a paved trail.

3. Provide the City of San Jose the right to construct and operate a paved trail for use by the public on a 24/7 basis, provided adequate easement documentation, including owner indemnification provision, is completed.
4. Future trail improvements could include a paved section within the designated right of way, gateway element (such as decorative pavement and/or vertical stone column(s)), signage and striping. The City of San Jose would deliver each of these elements as part of the work it would fund at some future date.
5. Provide two pedestrian connections from the project's parking lot into the trail corridor, as shown on the conceptual site plan.
6. Following trail construction by the City of San Jose, the City will be responsible for trail pavement, preventive and long-term maintenance, and all other trail improvements.
7. Permit the City of San Jose to construct the trail under separate agreement in the event that property owner's work at the trail area is deferred for any reason.

ACCESS TO THE PROPERTY

Access shall not be allowed in between railroad gates along Alma Avenue as they currently exist. The proposed driveway on Alma Avenue requires relocation of existing gates and is subject to further City and Public Utilities Commission review at the PD Permit stage.

Full access including left turns at Alma Avenue is subject to the City and Public Utilities Commission approval. At the PD Permit stage, the developer shall demonstrate that a safe and sufficient left turn pocket can be accommodated from Alma Avenue to the site.

A maximum of four driveways including the signalized entrance along Monterey Road can be allowed. At the PD stage, one driveway between the proposed signalized entrance and the southerly property line, as shown on the conceptual site plan, shall be eliminated.

PUBLIC INFRASTRUCTURE AND OFF-SITE IMPROVEMENTS

Prior to the issuance of Building permits, tract or parcel map the applicant will be required to have satisfied all of the following Public Works conditions: ADD FINAL PUBLIC WORKS MEMORANDUM COMMENTS HERE.

MITIGATION MEASURES: ADD EIR MITIGATION HERE

May 16, 2011

Planning Commission
City of San Jose
c/o Jodie Clark, Project Manager
City of San Jose Planning Division
200 East Santa Clara St., Rm. T-300
San Jose, CA 95113

RE: GP10-07-01 and PDC10-026
Proposed Sun Garden Retail Center on Monterey Road

Dear Commissioners:

I wanted to take this opportunity to introduce myself and my partners, and offer a summary of our planned redevelopment project. We look forward to the Planning Commission hearing on May 25, 2011 that involves certification of the EIR and the Commission's recommendation to the City Council on a General Plan Amendment and PD Zoning.

Sun Garden TIC controls approximately 20 acres of under-developed land along Monterey Road immediately adjacent to the southeast corner of Alma Street (at Monterey Road), one mile south of Downtown San Jose. This site was formerly home to my family's Sun Garden Packing Company which ceased operations after the canning season in late 1997. During its heyday, Sun Garden was the largest independent canner of tomato products in the US. Today, the site maintains 110,000 square feet in two occupied buildings and the balance is vacant land after demolition of the packing facility in summer 2002.

Sun Garden TIC, under the direction of my firm, SDS NexGen Partners LP, assembled a team of professionals in early 2010 to assess development opportunities and perform due diligence work associated with new land use entitlements for the site.

In reviewing the San Jose City Council's current **Policy and Framework for Preservation of Employment Lands**, this site presents a unique opportunity for the City. Future redevelopment was judged to be best guided by this Policy and Framework which encourages use of the Combined Industrial/Commercial (CIC) General Plan designation. Beginning in May 2010, we met with City staff in the Planning and Economic Development Departments and submitted a Preliminary Review application to ensure City coordination before submitting the General Plan Amendment and PD Zoning applications.

Since our first application submittals on June 21, 2010, we have worked closely with all involved City Departments to ensure adequate environmental study, as well as site planning through the PD zoning process, to address any concerns of the City and community.

It is our expectation that use of the Combined Industrial/Commercial (CIC) designation for the site allows full implementation of the referenced Preservation Framework to strengthen the City's economic strategy by:

- Bringing revenue to the City
- Providing jobs to residents
- Facilitating retail development that serves the immediate neighborhoods
- Assuring "no net loss" employment
- Avoiding conversion to residential use

Prior use of the CIC designation in the Monterey corridor has already produced significant results with The Plant – a shopping center at the former General Electric facility. This is a massive power center of 650,000 square feet at Monterey Road and Curtner Avenue. It should be noted that the CIC designation has been applied to properties immediately adjacent to the north and south of our subject property, essentially surrounding, yet currently bypassing our acreage.

This planned development also offers other significant public benefits. This includes a new signalized intersection at the mid-point of the site at Cottage Grove Avenue; land held in reserve to accommodate that portion of the future Three Creeks Trail to be installed at the southern end of the site, and added delivery and customer access via Alma Avenue as we purchased surplus railroad right-of-way in November 2010 to expand the site at the east.

In conclusion, this General Plan Amendment, and subsequent PD Zoning, is expected to further fuel redevelopment of the Monterey corridor, provide job growth, add needed shops and services for the immediate area, increase local tax revenue, and further brighten the landscape of this important San Jose boulevard and corridor.

Thank you in advance for your time and consideration and we look forward to our hearing on May 25th.

Sincerely,



Michael Mulcahy
Managing Partner, SDS NexGen Partners
Development Lead for Sun Garden TIC

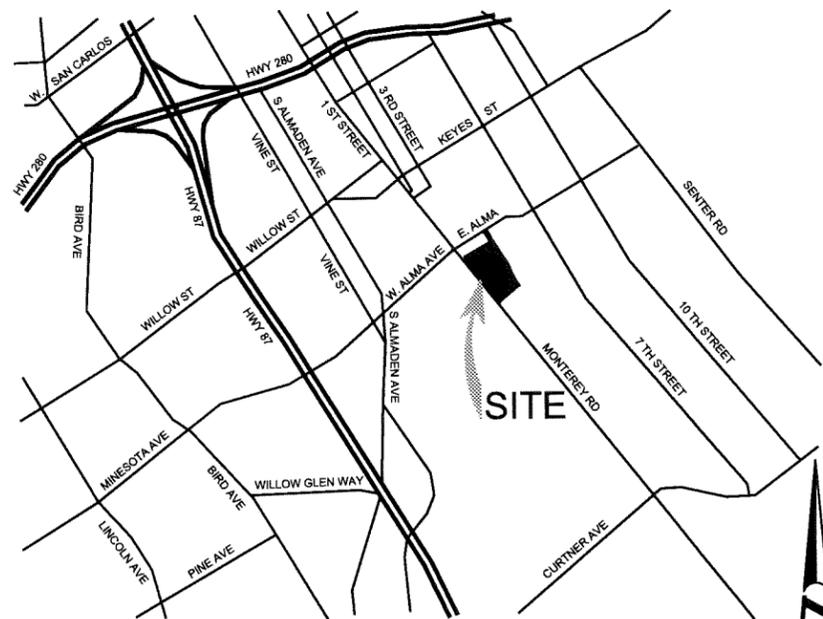
cc: Honorable Madison Nguyen, Vice Mayor, San Jose City Council, District 7

SUN GARDEN RETAIL CENTER

1420 - 1600 MONTEREY ROAD
SAN JOSE, CALIFORNIA

MAY 16, 2011

VICINITY MAP



CONTACTS

CLIENT

SUN GARDEN TIC
1122 WILLOW STREET, SUITE 201
SAN JOSE CA 95125

Phone: 408.298.4264
Fax: 408.904.7075
Contact: MICHAEL MULCAHY

ARCHITECT

KENNETH RODRIGUES & PARTNERS, INC.
445 N. WHISMAN ROAD, SUITE 200
MOUNTAIN VIEW, CA 94043

Phone: 650.965.0700
Fax: 650.960.0707
Contact: KENNETH RODRIGUES

OWNERS REPRESENTATIVE

CORD AND ASSOCIATES
42 S. FIRST STREET, SUITE D
SAN JOSE, CA 95113

Phone: 408.283.7292
Fax: 408.971.7699
Contact: HENRY CORD

INGRAM AND ASSOCIATES
521 CHARCOT SUITE # 209 - L
SAN JOSE, CA 95131

Phone: 650.917.8618
Fax: 650.961.9195
Contact: ALEX INGRAM JR.

CIVIL ENGINEER

KIER & WRIGHT
3350 SCOTT BLVD., BLDG. 22
SANTA CLARA, CA 95054

Phone: 408.727.6665
Fax: 408.727.5641
Contact: BARRY SCHMITT

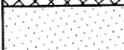
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KENNETH RODRIGUES & PARTNERS INC
445 NORTH WHISMAN RD., SUITE 200
MOUNTAIN VIEW CA 94043.650.965.0700

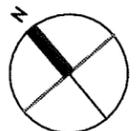
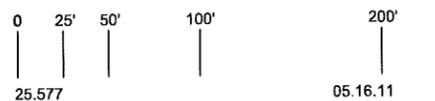
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SYMBOL	AREA	AREA (AC)	% OF TOTAL AREA	PRIMARY LAND USES	
				RETAIL (SF)	F.A.R.
	COMMERCIAL / MIXED USE	19.355 AC	98 %	257,296 SF	0.30
	LANDSCAPING & TRAIL	.39 AC	2 %	-	-
TOTAL		19.745 AC	100 %	257,296 SF	



Sun Garden Retail Center
 SAN JOSE, CALIFORNIA
 KENNETH RODRIGUES & PARTNERS, INC.

LAND USE PLAN
 "EXHIBIT C"

25.577 05.16.11

A1

(TO BE DEVELOPED BY THE PLANNING DEPARTMENT)

Sun Garden Retail Center

SAN JOSE, CALIFORNIA
KENNETH RODRIGUES & PARTNERS, INC.

DEVELOPMENT STANDARDS

A2

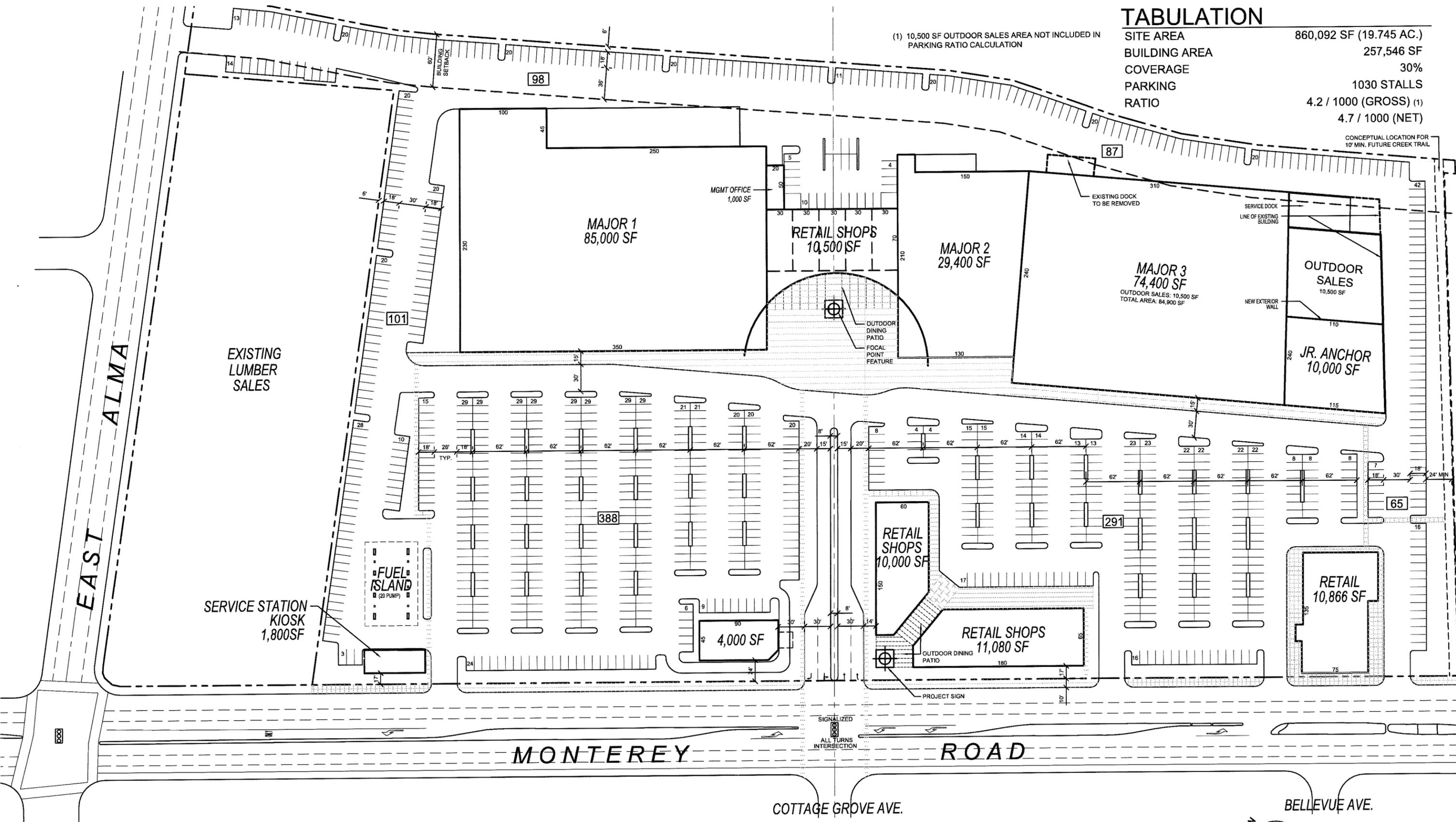
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TABULATION

SITE AREA	860,092 SF (19.745 AC.)
BUILDING AREA	257,546 SF
COVERAGE	30%
PARKING RATIO	1030 STALLS
	4.2 / 1000 (GROSS) (1)
	4.7 / 1000 (NET)

(1) 10,500 SF OUTDOOR SALES AREA NOT INCLUDED IN PARKING RATIO CALCULATION

CONCEPTUAL LOCATION FOR 10' MIN. FUTURE CREEK TRAIL

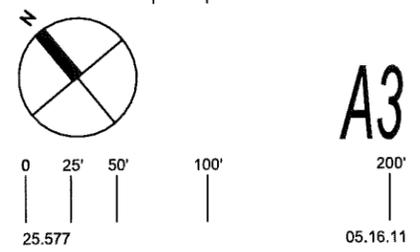


Sun Garden Retail Center

SAN JOSE, CALIFORNIA
KENNETH RODRIGUES & PARTNERS, INC.

CONCEPTUAL SITE PLAN

PHASE 1

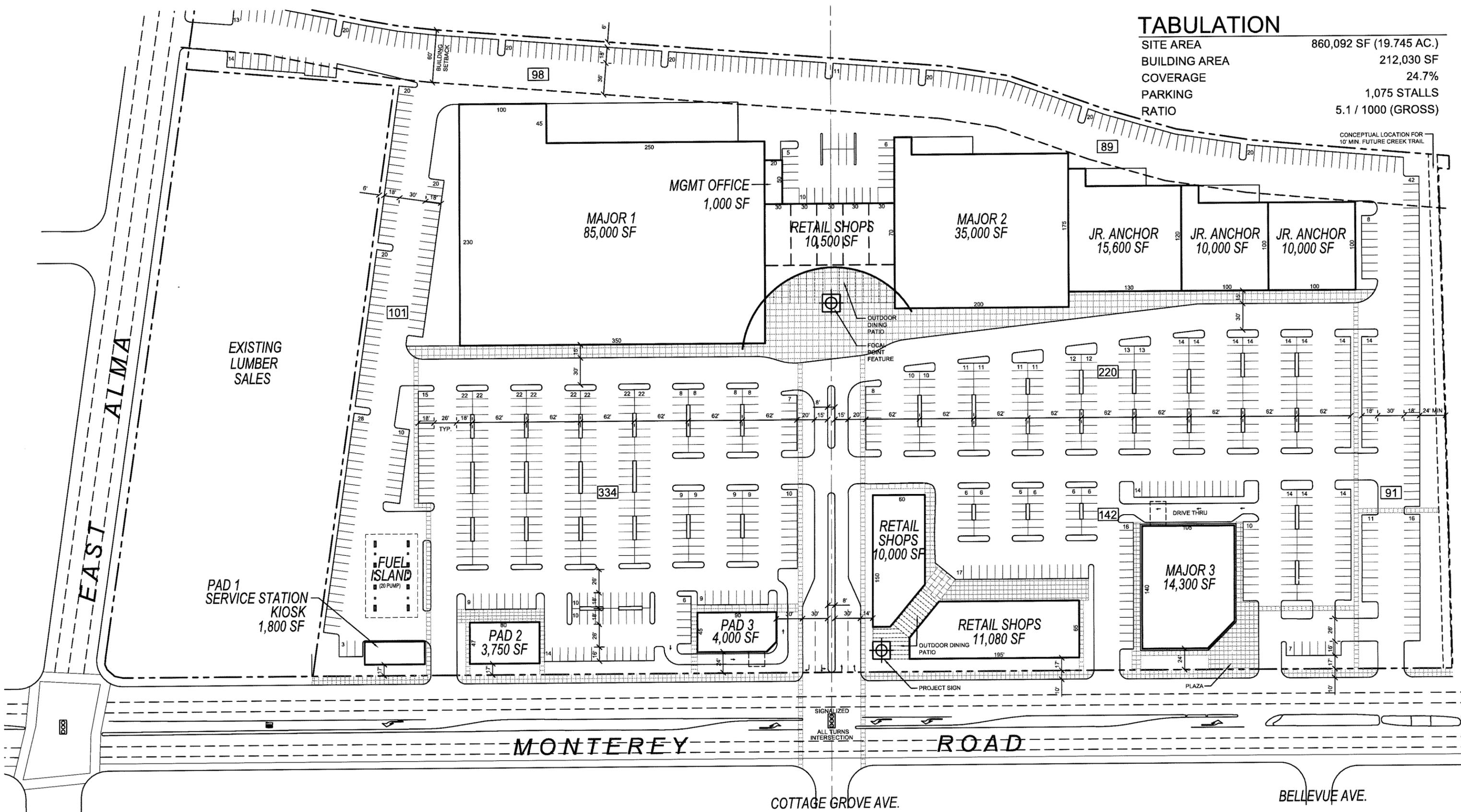


A3

05.16.11

TABULATION

SITE AREA	860,092 SF (19.745 AC.)
BUILDING AREA	212,030 SF
COVERAGE	24.7%
PARKING RATIO	1,075 STALLS
	5.1 / 1000 (GROSS)

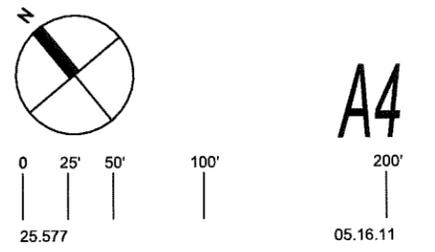


Sun Garden Retail Center

SAN JOSE, CALIFORNIA
KENNETH RODRIGUES & PARTNERS, INC.

CONCEPTUAL SITE PLAN

PHASE 2



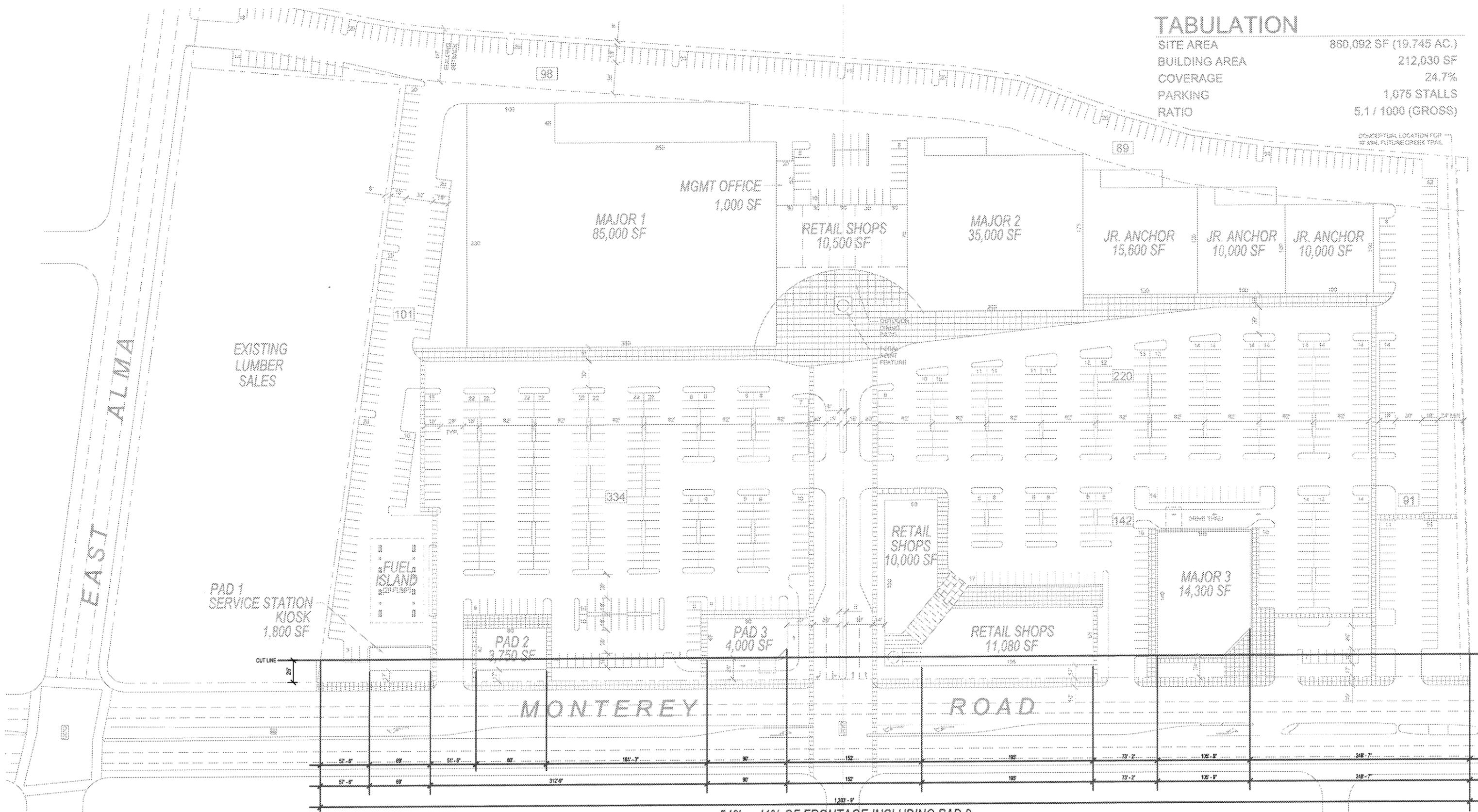
A4

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TABULATION

SITE AREA	860,092 SF (19,745 AC.)
BUILDING AREA	212,030 SF
COVERAGE	24.7%
PARKING	1,075 STALLS
RATIO	5.1 / 1000 (GROSS)

CONCEPTUAL LOCATION FOR 10' MIN. FUTURE CREEK TRAIL



540' or 41% OF FRONTAGE INCLUDING PAD 2
OR
460' or 35% OF FRONTAGE NOT INCLUDING PAD 2

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KENNETH RODRIGUES & PARTNERS, INC.

CONCEPTUAL SITE PLAN

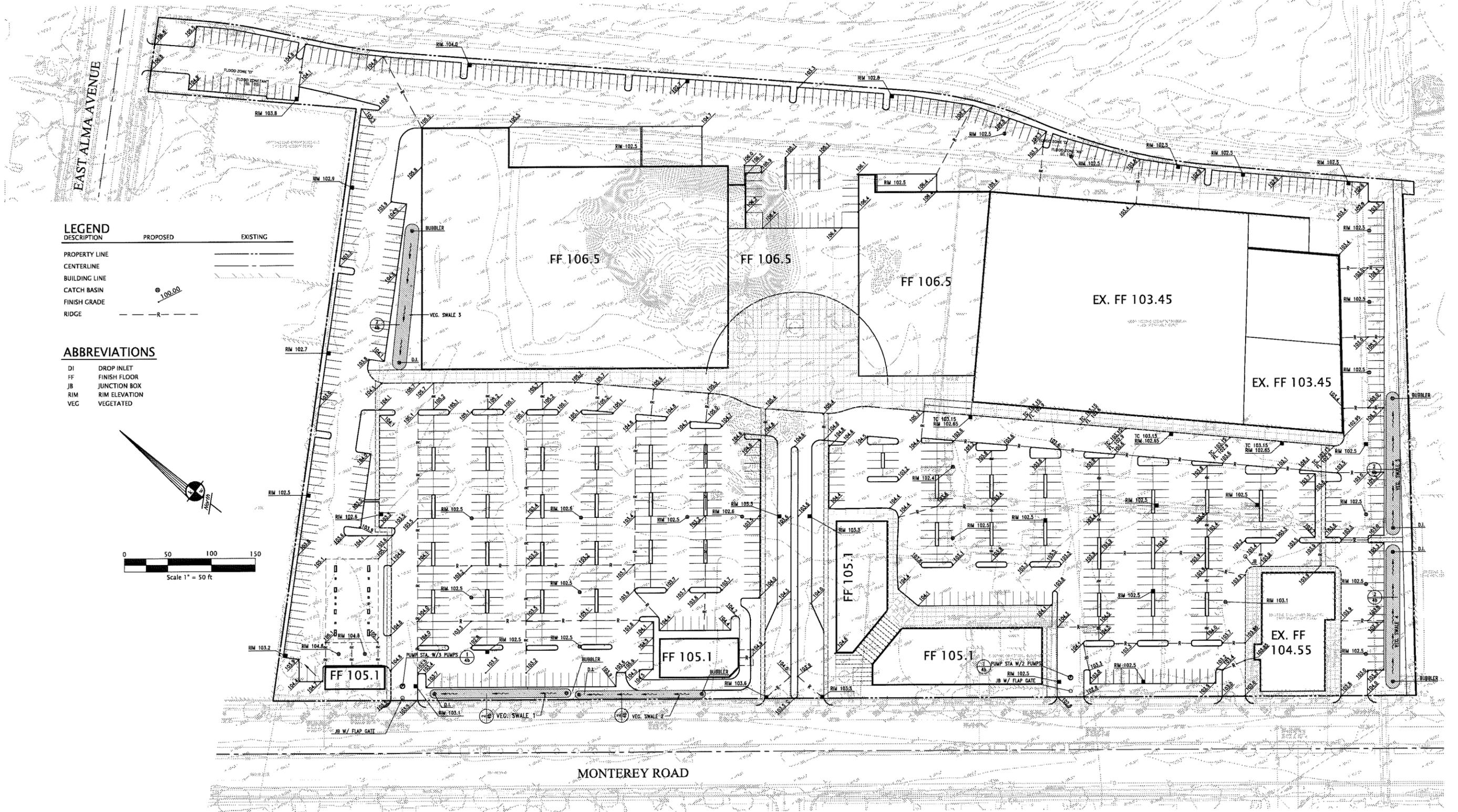
PHASE 2

0 25' 50' 100' 200'

25.577

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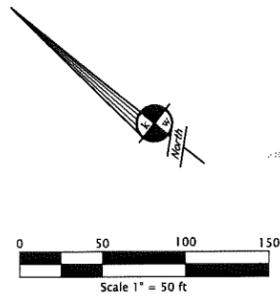


LEGEND

DESCRIPTION	PROPOSED	EXISTING
PROPERTY LINE	—	—
CENTERLINE	—	—
BUILDING LINE	—	—
CATCH BASIN	⊙	⊙
FINISH GRADE	—	—
RIDGE	—	—

ABBREVIATIONS

DI	DROP INLET
FF	FINISH FLOOR
JB	JUNCTION BOX
RIM	RIM ELEVATION
VEG	VEGETATED



KENNETH RODRIGUES & PARTNERS INC
 445 North Whisman Road, Suite 200
 Mountain View, CA 94035-5070

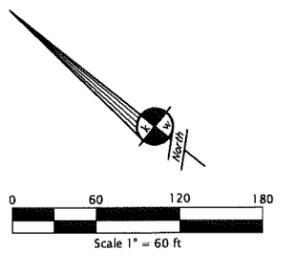
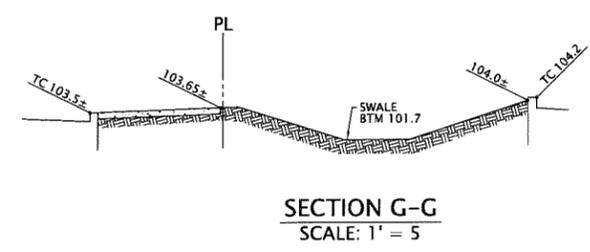
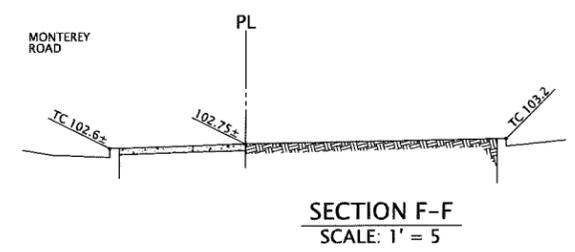
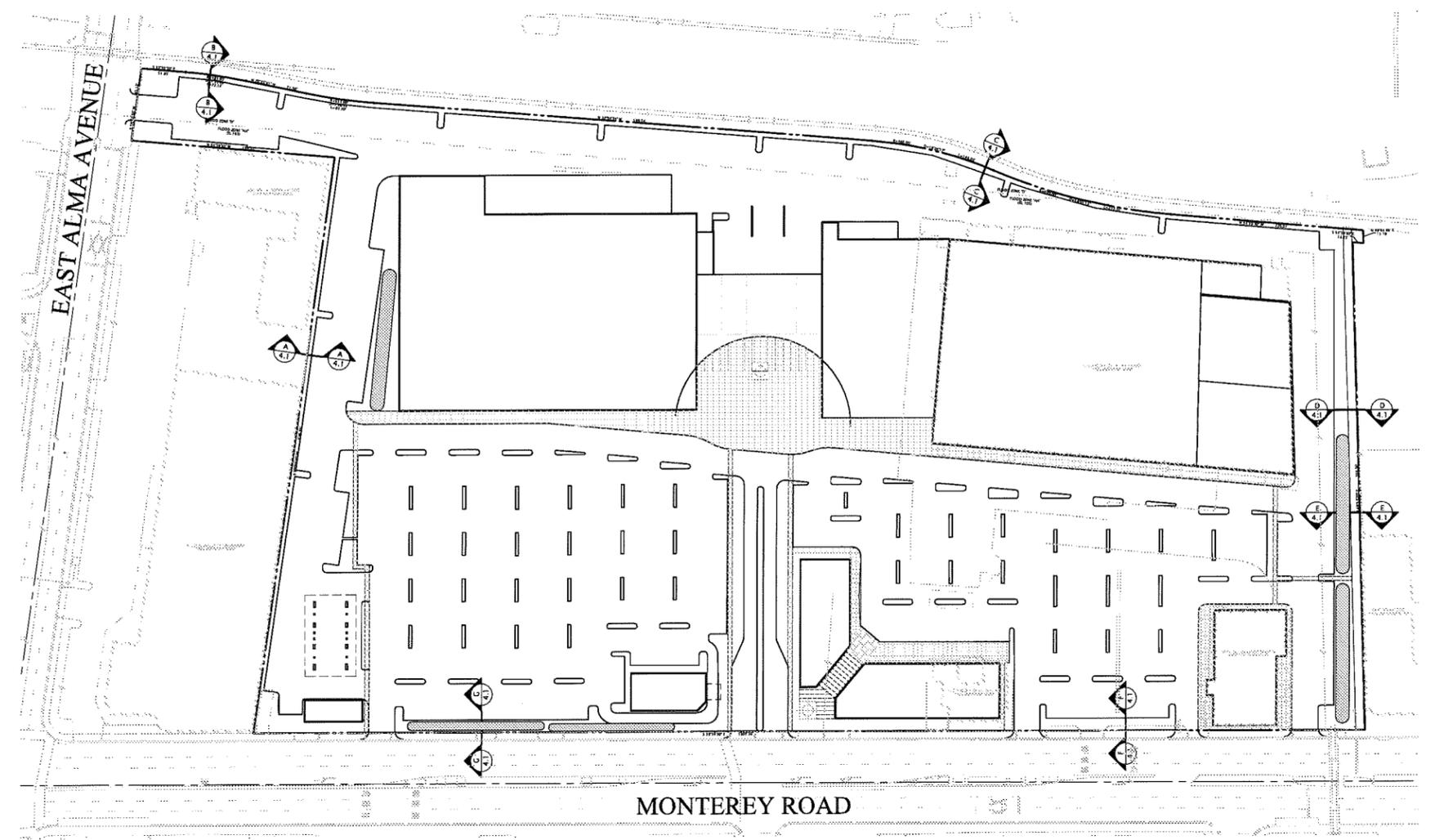
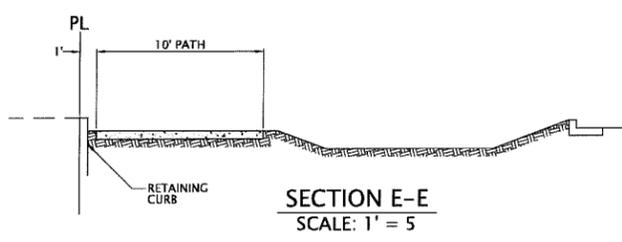
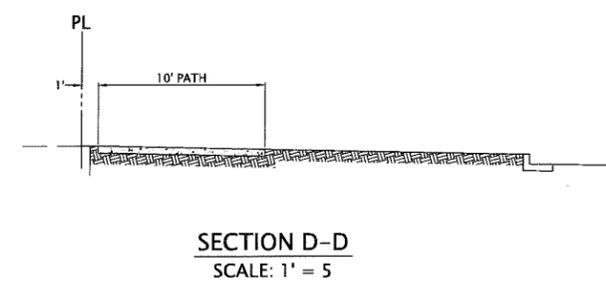
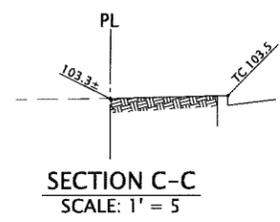
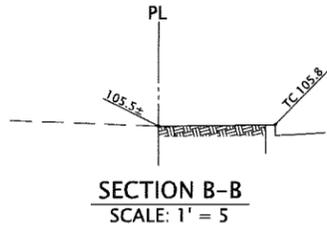
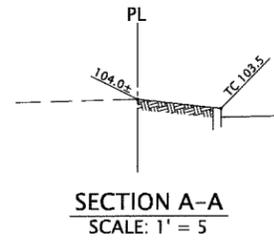
Sun Garden Retail Center

SAN JOSE, CALIFORNIA
 KENNETH RODRIGUES & PARTNERS, INC.

PRELIMINARY GRADING PLAN 4

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SAN JOSE, CALIFORNIA
KENNETH RODRIGUES & PARTNERS, INC.

CROSS SECTIONS

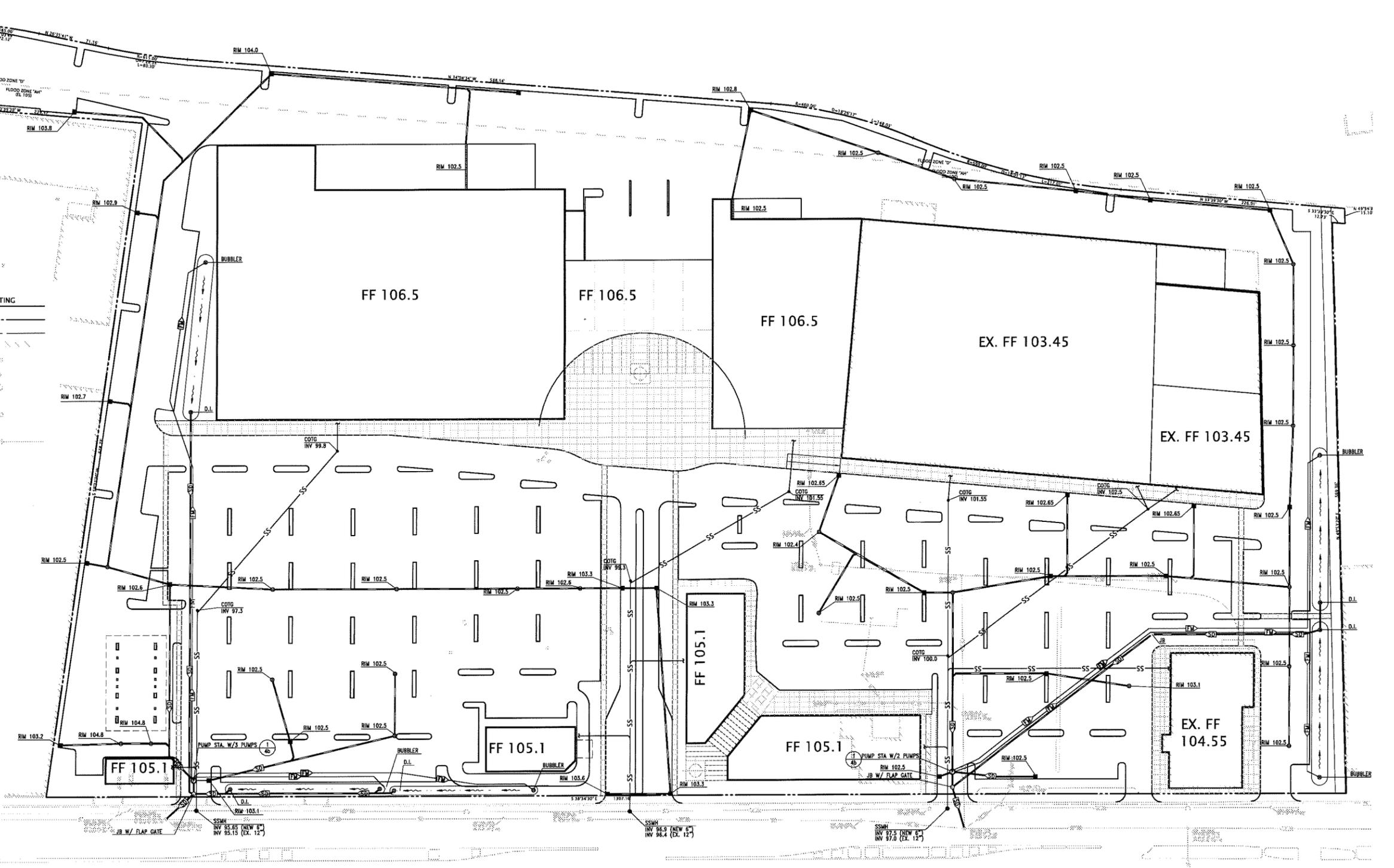
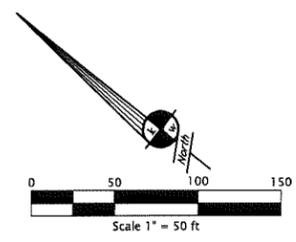
EAST ALMA AVENUE

LEGEND

DESCRIPTION	PROPOSED	EXISTING
PROPERTY LINE	---	---
CENTERLINE	---	---
BUILDING LINE	---	---
CATCH BASIN	○	○
COTG	●	●
SANITARY SEWER MANHOLE	●	●
RIDGE	---	---
STORM DRAIN	---	---
FORCE MAIN	---	---
SANITARY SEWER	---	---

ABBREVIATIONS

COTG	CLEAN OUT TO GRADE
DI	DROP INLET
FF	FINISH FLOOR
JB	JUNCTION BOX
RIM	RIM ELEVATION
SS	SANITARY SEWER
SSMH	SANITARY SEWER MANHOLE
VEG	VEGETATED



MONTEREY ROAD



KENNETH RODRIGUES & PARTNERS INC
 445 North Waterman Road, Suite 200
 Mountain View, CA 94035-5000
 408.993.0700

Sun Garden Retail Center

SAN JOSE, CALIFORNIA
 KENNETH RODRIGUES & PARTNERS, INC.

CONCEPTUAL UTILITY PLAN

4.2

A10067-1

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EAST ALMA AVENUE

LEGEND

DESCRIPTION	PROPOSED	EXISTING
PROPERTY LINE	—	—
CENTERLINE	—	—
BUILDING LINE	—	—
CATCH BASIN	⊙	⊙
RIDGE	— R —	— R —
BOUNDARY OF TREATMENT AREA	▤▤▤▤▤▤▤▤▤▤	▤▤▤▤▤▤▤▤▤▤
STORM DRAIN	— SD —	— SD —
FORCE MAIN	— FM —	— FM —

ABBREVIATIONS

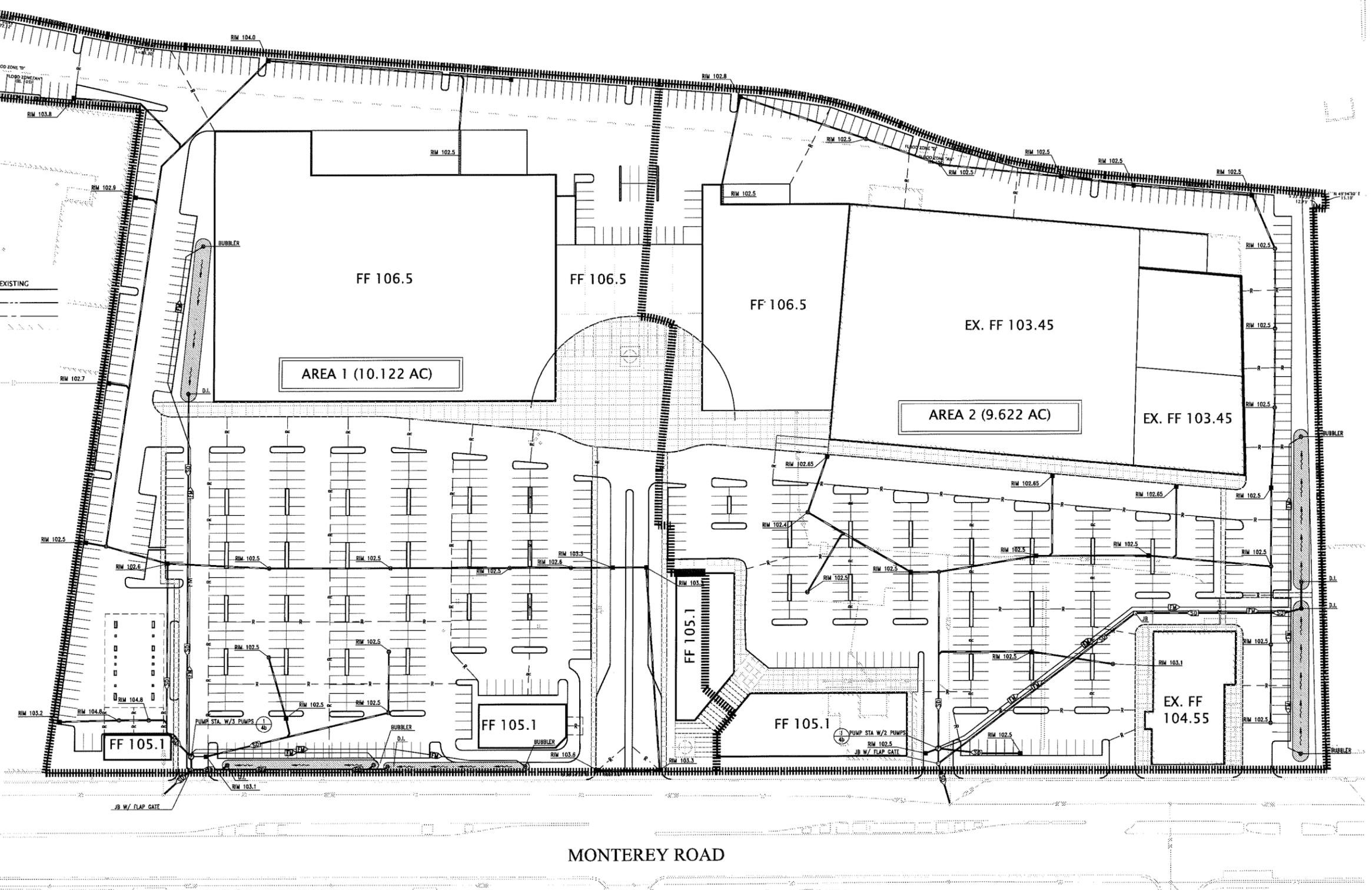
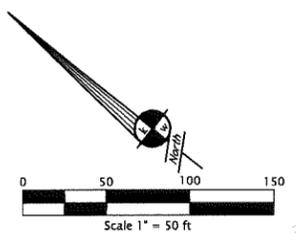
DI	DROP INLET
FF	FINISH FLOOR
FM	FORCE MAIN
JB	JUNCTION BOX
RIM	RIM ELEVATION
SD	STORM DRAIN
VEG	VEGETATED

STORMWATER TREATMENT

AREA 1 SHALL BE TREATED BY VEGETATED SWALE 1, 2, & 3.
 AREA 2 SHALL BE TREATED BY VEGETATED SWALE 4 & 5

NOTES

- STORMWATER TREATMENT SHALL COMPLY WITH C.3 REGULATIONS AND WILL BE ACCOMPLISHED BY VEGETATED SWALES.
- THE SITE PLAN USED FOR THIS PLAN IS SCHEMATIC AND IS SUBJECT TO CHANGE.



KENNETH RODRIGUES & PARTNERS INC
 445 North Whisman Road, Suite 200
 Mountain View, CA 408.993.0700

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SAN JOSE, CALIFORNIA
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STORMWATER MANAGEMENT PLAN

4a

A10067-1

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TREATMENT METHODOLOGY

THE PROJECT HAS BEEN DIVIDED INTO TWO AREAS: AREA 1 AND AREA 2. BOTH AREAS WILL BE TREATED BY VEGETATED SWALES.

AREA 1 (10,122 AC.) WILL BE TREATED BY 3 SWALES: VEGETATED SWALE 1 WILL TREAT 111,500 SF, VEGETATED SWALE 2 WILL TREAT 68,900 SF, AND VEGETATED SWALE 3 WILL TREAT 260,515 SF FOR A TOTAL OF 440,915 SF (10,122 AC.)

AREA 2 (9,622 AC.) WILL BE TREATED BY 2 SWALES: VEGETATED SWALE 4 WILL TREAT 209,570 SF AND VEGETATED SWALE 5 WILL TREAT 209,570 SF FOR A TOTAL OF 419,140 SF (9,622 AC.)

BOTH AREAS WILL USE PUMPS TO DELIVER THE C.3 FLOWRATE TO THE VEGETATED SWALES. THE PUMP STATION FOR AREA 1 WILL HAVE 3 PUMPS THAT WILL DELIVER THE C.3 FLOWRATES TO VEGETATED SWALES 1, 2, AND 3. THE PUMP STATION FOR AREA 2 WILL HAVE 2 PUMPS THAT WILL DELIVER THE C.3 FLOWRATES TO VEGETATED SWALES 4 AND 5. THE TREATED STORMWATER WILL THEN BE CONVEYED TO A JUNCTION BOX THAT WILL DISCHARGE TO THE PUBLIC SYSTEM.

VEGETATED SWALE MAINTENANCE PLAN

1. OBJECTIVES: THE MAINTENANCE OBJECTIVES FOR VEGETATED SWALE SYSTEMS INCLUDE KEEPING UP THE HYDRAULIC AND REMOVAL EFFICIENCY OF THE CHANNEL AND MAINTAINING A DENSE, HEALTHY GRASS (OR PLANT) COVER.

2. INSPECTION SCHEDULE

2.1 VISUAL INSPECTIONS SHALL BE CONDUCTED MONTHLY, PARTICULARLY AFTER HEAVY RUNOFF, TO ENSURE NORMAL FUNCTIONING OF SWALE (I.E. NO POOLING, OR BLOCKAGE)

2.2 DETAILED INSPECTIONS SHALL BE CONDUCTED AT LEAST TWICE ANNUALLY WITH INSPECTIONS OCCURRING (1) AT THE END OF THE WET SEASON TO SCHEDULE SUMMER MAINTENANCE, (2) BEFORE MAJOR FALL RUNOFF IN PREPARATION FOR WINTER, AND (3) AFTER PERIODS OF HEAVY RUNOFF. THE OBJECTIVE OF DETAILED INSPECTIONS IS TO IDENTIFY EROSION, DAMAGE TO VEGETATION, GRASS OR PLANT HEIGHT, DEBRIS, LITTER, AREAS OF SEDIMENT ACCUMULATION, AND POOLS/STANDING WATER. IF ANY ISSUES EXIST, ACTIVITIES AS OUTLINED IN SECTION 3, MAINTENANCE ACTIVITIES WILL BE CONDUCTED.

3. MAINTENANCE ACTIVITIES

3.1 ROUTINE OR PREVENTATIVE MAINTENANCE REFERS TO PROCEDURES THAT ARE PERFORMED ON A REGULAR BASIS TO KEEP THE SWALE AESTHETIC AND IN PROPER WORKING ORDER. MAINTENANCE ACTIVITIES INCLUDE DEBRIS REMOVAL, SLIT AND SEDIMENT REMOVAL, AND CLEARING OF VEGETATION AROUND FLOW CONTROL DEVICES TO PREVENT CLOGGING. ROUTINE MAINTENANCE ALSO INCLUDES THE MAINTENANCE OF A HEALTHY VEGETATIVE COVER. DEAD TURF OR OTHER UNHEALTHY VEGETATIVE AREAS WILL NEED TO BE REPLACED AFTER BEING DISCOVERED.

3.1.1 EROSION: AREAS OF EROSION AND SLOPE FAILURE SHALL BE REPAIRED AND REPLANTED AS SOON AS POSSIBLE. ERODED AREAS NEAR THE INLET OR OUTLET MAY ALSO NEED TO BE LINED WITH RIPRAP, WHICH WILL BE DETERMINED ON A CASE BY CASE BASIS.

3.1.2 DAMAGE TO VEGETATION: IF THE CHANNEL DEVELOPS RUTS OR HOLES, IT SHALL BE REPAIRED UTILIZING A SUITABLE SOIL THAT IS PROPERLY TAMPED AND SEEDED. THE GRASS OR PLANT COVER SHOULD BE THICK; IF IT IS NOT, IT SHALL BE REPLANTED WITH IN-KIND PLANTS, AS NECESSARY. IF POSSIBLE, FLOW WILL BE REDIRECTED UNTIL NEW PLANTINGS ARE FIRMLY ESTABLISHED TO AVOID DETERIORATION. IF INVASIVE SPECIES AND/OR WEEDS DEVELOP, PROMPTLY REMOVE TO AVOID DISRUPTION TO ORIGINAL VEGETATION.

3.1.3 GRASS OR PLANT HEIGHT: MOW OR PRUNE AS REQUIRED BY PLANT VARIETY TO MAINTAIN AT LEAST A 4-6" GRASS HEIGHT, DENSE PLANT GROWTH AND/OR TO SUPPRESS WEEDS AND WOODY VEGETATION. LITTER MUST BE REMOVED PRIOR TO MOWING. MAINTAIN AS INDICATED BY SPECIES TO PROMOTE GROWTH AND POLLUTANT UPTAKE. REMOVE CUTTINGS AND DISPOSE /COMPOST.

3.1.4 DEBRIS / LITTER: REMOVE ALL LITTER OR DEBRIS WITHIN SWALE AND PRIOR TO MOWING AND AS INSPECTIONS WARRANT. KEEP SWALE FREE OF DEBRIS.

3.1.5 AREAS OF SEDIMENT ACCUMULATION: REMOVE SEDIMENT BY HAND WITH A FLAT-BOTTOMED SHOVEL WHENEVER SEDIMENT COVERS VEGETATION OR BEGINS TO REDUCE SWALE CAPACITY. MAINTAIN CLEAN CURB CUTS TO AVOID SOIL AND VEGETATION BUILDUP. SEDIMENT ACCUMULATING NEAR CULVERTS AND IN CHANNELS SHOULD BE REMOVED WHEN IT BUILDS UP TO 75 MM (3 IN.) AT ANY SPOT, OR COVERS VEGETATION. IF COBBLES OR OTHER SIMILAR FLOW SPREADERS ARE USED, ENSURE THAT COBBLES DO NOT BECOME EMBEDDED IN SEDIMENT. REMOVE ANY DEBRIS IN UNDER DRAINS THAT COULD CAUSE CLOGGING. (AT LEAST TWO TIMES PER YEAR)

3.1.6 POOLS AND STANDING WATER: OBSERVE SOIL AT THE BOTTOM OF THE SWALE FOR UNIFORM PERCOLATION THROUGHOUT. IF PORTIONS OF THE SWALE DO NOT DRAIN WITHIN 5 DAYS AFTER THE END OF A STORM, THE SOIL SHALL BE TILLED AND REPLANTED WITH PLANTS SIMILAR TO THOSE ORIGINALLY PLANTED IN THE SWALE. REMOVE ANY DEBRIS OR ACCUMULATION OF SEDIMENT.

3.1.7 IRRIGATION: WATER PLANTS IN SWALES DURING DRY CONDITIONS. CONFIRM THAT IRRIGATION IS ADEQUATE AND NOT EXCESSIVE.

3.1.8 PESTICIDES AND FERTILIZERS: APPLICATION OF PESTICIDES AND FERTILIZERS SHALL BE MINIMAL. BIOLOGICAL, PHYSICAL, AND CULTURAL CONTROLS SHALL BE USED PRIOR TO PESTICIDE AND FERTILIZER USE.

3.2 NON-ROUTINE OR CORRECTIVE MAINTENANCE REFERS TO ANY REHABILITATIVE ACTIVITY THAT IS NOT PERFORMED ON A REGULAR BASIS. THIS INCLUDES FLOW CONTROL STRUCTURE REPLACEMENT OR THE MAJOR REPLACEMENT AND CLEANING OF AQUATIC VEGETATION. NON-ROUTINE MAINTENANCE WILL BE COMPLETED AS NEEDED.

4. VECTOR CONTROL

4.1 OBJECTIVE: TO PREVENT CONDITIONS WITHIN SWALES THAT ATTRACT AND/OR PROMOTE THE GROWTH OF DISEASE VECTORS, INCLUDING BUT NOT LIMITED TO MOSQUITOES, RODENTS, AND FLIES.

4.2 MAINTENANCE ACTIVITIES FOR VECTOR CONTROL

4.2.1 INSPECTIONS: REGULAR INSPECTIONS WILL DETERMINE IF SWALES HAVE POOLS OF STANDING WATER OR DEBRIS ACCUMULATION. INSPECTIONS WILL BE CONDUCTED PRIOR TO THE RAINY SEASON, AFTER MAJOR STORM EVENTS, AND AT LEAST ONCE DURING THE DRY SEASON TO ASCERTAIN THAT STANDING WATER DRAINS FROM THE SWALE WITHIN 5 DAYS.

4.2.2 HOLES IN GROUND: ABATE POTENTIAL VECTORS BY FILLING HOLES IN THE GROUND IN AND AROUND THE SWALE AND BY INSURING THAT THERE ARE NO AREAS WHERE WATER STANDS LONGER THAN 5 DAYS FOLLOWING A STORM.

4.2.3 OTHER MAINTENANCE ACTIVITIES: IF ANY OBSTRUCTIONS DEVELOP (E.G. DEBRIS ACCUMULATION, INVASIVE VEGETATION, CLOGGING OF OUTLETS AND/OR UNDER DRAINS) WITHIN THE SWALE, APPROPRIATE MAINTENANCE ACTIVITIES SHALL BE IMPLEMENTED TO CORRECT THE OBSTRUCTION. REFER TO SECTION 3 FOR DETAILS ON SPECIFIC MAINTENANCE ACTIVITIES.

WATER QUALITY PUMP SYSTEM MAINTENANCE PLAN

1. OBJECTIVE: TO MAINTAIN THE WATER QUALITY PUMP SYSTEM TO DIVERT LOW FLOW POLLUTANTS FROM THE STORM DRAIN SYSTEM AND DISCHARGE FLOWS TO THE GRASSY SWALES.

2. INSPECTION SCHEDULE

2.1 NEW INSTALLATION INSPECTION: THE CONDITION OF THE PUMP SYSTEM SHALL BE CHECKED AFTER EVERY RUNOFF EVENT FOR THE FIRST 30 DAYS OF THE RAINY SEASON POST-INSTALLATION. THE INSPECTION SHALL ASCERTAIN THAT THE PUMPS ARE FUNCTIONING PROPERLY. THE INSPECTION WILL INCLUDE MANUALLY TRIGGERING THE SYSTEM FLOAT SWITCHES TO ENSURE THAT THE PUMPS WILL OPERATE AS DESIGNED. THE AMOUNT OF SEDIMENT IN THE CENTER OF THE VAULT SHOULD ALSO BE CHECKED. THIS CAN BE DONE WITH A "DIP STICK" CALIBRATED TO TRACK THE DEPTH OF DEPOSITION. THE ON-GOING INSPECTION AND CLEANING SCHEDULE SHALL BE DETERMINED BASED UPON THE NEW INSTALLATION INSPECTION RESULTS.

3. INSPECTION AND MAINTENANCE: ON-GOING OPERATION (AFTER 30 DAYS OF THE FIRST RAINY SEASON)

3.1 RAINY SEASON (OCT 15-APRIL 15)

3.1.1 MONTHLY: THE PUMP SYSTEM MUST BE INSPECTED AND TESTED AT A MINIMUM ONCE PER MONTH OR MORE FREQUENTLY (AS DETERMINED BY INSPECTION). THE INSPECTION WILL INCLUDE MANUALLY TRIGGERING THE SYSTEM FLOAT SWITCHES TO ENSURE THAT THE PUMPS WILL OPERATE AS DESIGNED. ANY SIGNIFICANT FLOATABLES SHALL BE REMOVED AS NEEDED. THE PUMP VAULT SHALL BE CLEANED WHEN THE SEDIMENT DEPTH REACHES 0.5 FEET IN THE CENTER OF THE VAULT. EACH CLEANING WILL INCLUDE THE FOLLOWING:

- REMOVAL OF FLOATABLES AND DEBRIS FROM THE SEPARATION CHAMBER
- REMOVAL OF SEDIMENT FROM THE VAULT
- VISUAL INSPECTION TO ASCERTAIN THAT THERE ARE NO VECTOR CONTROL ISSUES (REFER TO SECTION 4 - VECTOR CONTROL)

3.1.2 END OF SEASON: THE VAULT SHALL BE CLEANED OUT AT THE END OF THE RAINY SEASON TO PREVENT ODOR GENERATION DUE TO DECOMPOSITION OF ORGANIC MATTER IN THE VAULT.

3.2 DRY SEASON (APRIL 16-OCT 14)

3.2.1 MONTHLY: THE PUMP SYSTEM SHALL BE CHECKED MONTHLY TO ASSESS IF THE PUMPS ARE OPERATING CORRECTLY. THE INSPECTION WILL INCLUDE MANUALLY TRIGGERING THE SYSTEM FLOAT SWITCHES TO ENSURE THAT THE PUMPS WILL OPERATE AS DESIGNED.

THE SUMP SHOULD ALSO BE INSPECTED TO DETERMINE IF THERE ARE VECTOR CONTROL ISSUES. REFER TO SECTION 4-VECTOR CONTROL FOR SPECIFIC DETAILS REGARDING VECTOR CONTROL.

3.3 ANNUAL MAINTENANCE: THE FOLLOWING ACTIVITIES SHALL BE COMPLETED AT LEAST ONCE PER YEAR, OR MORE FREQUENTLY AS INSPECTION WARRANT.

3.3.1 PUMP DOWN THE VAULT: REMOVE ALL LIQUID AND SOLIDS FROM THE UNIT. RELEASE WASH WATER TO VEGETATED AREA OR THE SANITARY SEWER SYSTEM.

3.3.2 POWER WASH THE PUMPS AND VAULT: THE PUMPS AND VAULT WALLS SHALL BE POWER WASHED DURING THE ANNUAL INSPECTION AND MAINTENANCE.

3.3.3 INSPECT FOR PRESENCE OF MOSQUITOES OR OTHER VECTORS: DETERMINE IF MOSQUITOES OR OTHER VECTORS ARE PRESENT IN THE UNIT.

3.3.4 INSPECT THE INTEGRITY OF THE PUMP SYSTEM: INSPECT FOR DAMAGE TO THE FOLLOWING COMPONENTS:

- DIVERSION WEIR
- PUMPS AND PIPING
- FLEX HOSES AND CONNECTIONS
- CHECK VALVES AND GLOBE VALVES
- VAULT COVER, INCLUDING LIFTING MECHANISM (IF APPLICABLE)
- POWER CABLES AND CABLE SPLICES (IF APPLICABLE)
- FLOAT SWITCHES, WIRING AND SUPPORTS
- CONTROL BOX AND CONTROL PANEL

THE PUMP SYSTEM COMPONENTS SHOULD NOT SHOW ANY SIGNS OF DAMAGE OR ANY LOOSENING OF BOLT USED TO FASTEN THE VARIOUS COMPONENTS. IF ANY PROBLEMS ARE DISCOVERED, REPAIR SHALL BE COMPLETED AS SOON AS POSSIBLE.

NOTE: THE PUMP VAULT IS A CONFINED SPACE. ONLY PROPERLY TRAINED PEOPLE EQUIPPED WITH REQUIRED SAFETY GEAR SHOULD BE ALLOWED TO ENTER THE UNIT TO PERFORM THE DETAILED INSPECTION.

4. VECTOR CONTROL

4.1 OBJECTIVE: TO PREVENT CONDITIONS WITHIN PUMP VAULT THAT ATTRACT AND/OR PROMOTE THE PROLIFERATION OF DISEASE VECTORS, INCLUDING BUT NOT LIMITED TO MOSQUITOES AND RODENTS.

4.2 MAINTENANCE ACTIVITIES FOR VECTOR CONTROL

4.2.1 INSPECTIONS: REGULAR INSPECTIONS WILL DETERMINE IF THERE IS MOSQUITO BREEDING IN THE VAULT. INSPECTIONS SHALL BE CONDUCTED MONTHLY IF THERE IS EVIDENCE OF MOSQUITOES OR MOSQUITO BREEDING. THE MOSQUITO ABATEMENT DISTRICT SHALL BE CONTACTED FOR ASSISTANCE. THE PUMP VENDOR MAY ALSO BE CONTACTED TO HELP CORRECT THE PROBLEM.

4.2.2 VECTOR-RESTRICTING COVERS: VECTOR-RESTRICTING COVERS SHOULD BE INSPECTED TO ENSURE INTEGRITY. ACCESS HOLES SHOULD BE SEALED TO PREVENT MOSQUITO ENTRY.

SUN GARDEN RETAIL CENTER
VEGETATED SWALE CALCULATIONS
(Existing Warehouse and Restaurant to Remain)
Area 1: Swale 1
(Stormwater Treatment $i = 0.20$ in/hr)

For $C = 0.80$ $i = 0.20$ in/hr, and Area = 111,500 sf
The Stormwater treatment $Q = 0.41$ cfs. or 184 gpm 2,560 Ac.

Channel design:
Bottom slope, $s = 0.0100$ ft./ft. 0.250 recommended
Manning's $n = 0.2500$ 3.1 max
Side slope, Right side 3.00 horiz. to 1 vert. 3.1 max
Side slope, Left side 3.00 horiz. to 1 vert. 3.1 max
Depth of flow, $d = 0.33$ ft. (treatment depth) 0.33 ft. max
Bottom width, $w = 4.00$ ft. 10' max.
Top width @ Q Treatment depth 6.0 ft.
Top width @ design depth 10.0 ft. Design depth = 1.00 ft.
Freeboard (Q_{90} WS to top of swale) = 0.67 ft.

Therefore:
Area $A = 1.65$ sq. ft.
Wetted perimeter $P_w = 6.09$ ft.
Hydraulic radius $r = 0.27$

By Manning's Equation:
 $Q = 0.41$ cfs 0.41 cfs required Swale Length: 150 ft.
 $V = 0.25$ fps Residence time in swale: 10.0 minutes

Construct 1 swale(s) 10.0 ft. wide x 156 ft. long

SUN GARDEN RETAIL CENTER
VEGETATED SWALE CALCULATIONS
(Existing Warehouse and Restaurant to Remain)
Area 1: Swale 2
(Stormwater Treatment $i = 0.20$ in/hr)

For $C = 0.80$ $i = 0.20$ in/hr, and Area = 68,900 sf
The Stormwater treatment $Q = 0.25$ cfs. or 114 gpm 1,582 Ac.

Channel design:
Bottom slope, $s = 0.0100$ ft./ft. 0.250 recommended
Manning's $n = 0.2500$ 3.1 max
Side slope, Right side 3.00 horiz. to 1 vert. 3.1 max
Side slope, Left side 3.00 horiz. to 1 vert. 3.1 max
Depth of flow, $d = 0.31$ ft. (treatment depth) 0.33 ft. max
Bottom width, $w = 2.50$ ft. 10' max.
Top width @ Q Treatment depth 4.4 ft.
Top width @ design depth 8.5 ft. Design depth = 1.00 ft.
Freeboard (Q_{90} WS to top of swale) = 0.69 ft.

Therefore:
Area $A = 1.09$ sq. ft.
Wetted perimeter $P_w = 4.49$ ft.
Hydraulic radius $r = 0.24$

By Manning's Equation:
 $Q = 0.25$ cfs 0.25 cfs required Swale Length: 140 ft.
 $V = 0.23$ fps Residence time in swale: 10.1 minutes

Construct 1 swale(s) 8.5 ft. wide x 146 ft. long

SUN GARDEN RETAIL CENTER
VEGETATED SWALE CALCULATIONS
(Existing Warehouse and Restaurant to Remain)
Area 1: Swale 3
(Stormwater Treatment $i = 0.20$ in/hr)

For $C = 0.80$ $i = 0.20$ in/hr, and Area = 260,515 sf
The Stormwater treatment $Q = 0.96$ cfs. or 429 gpm 5,981 Ac.

Channel design:
Bottom slope, $s = 0.0100$ ft./ft. 0.250 recommended
Manning's $n = 0.2500$ 3.1 max
Side slope, Right side 3.00 horiz. to 1 vert. 3.1 max
Side slope, Left side 3.00 horiz. to 1 vert. 3.1 max
Depth of flow, $d = 0.33$ ft. (treatment depth) 0.33 ft. max
Bottom width, $w = 10.00$ ft. 10' max.
Top width @ Q Treatment depth 12.0 ft.
Top width @ design depth 16.0 ft. Design depth = 1.00 ft.
Freeboard (Q_{90} WS to top of swale) = 0.67 ft.

Therefore:
Area $A = 3.61$ sq. ft.
Wetted perimeter $P_w = 12.08$ ft.
Hydraulic radius $r = 0.30$

By Manning's Equation:
 $Q = 0.96$ cfs 0.96 cfs required Swale Length: 150 ft.
 $V = 0.27$ fps Residence time in swale: 9.4 minutes

Construct 1 swale(s) 16.0 ft. wide x 156 ft. long

SUN GARDEN RETAIL CENTER
VEGETATED SWALE CALCULATIONS
(Existing Warehouse and Restaurant to Remain)
Area 2: Swale 4 & 5
(Stormwater Treatment $i = 0.20$ in/hr)

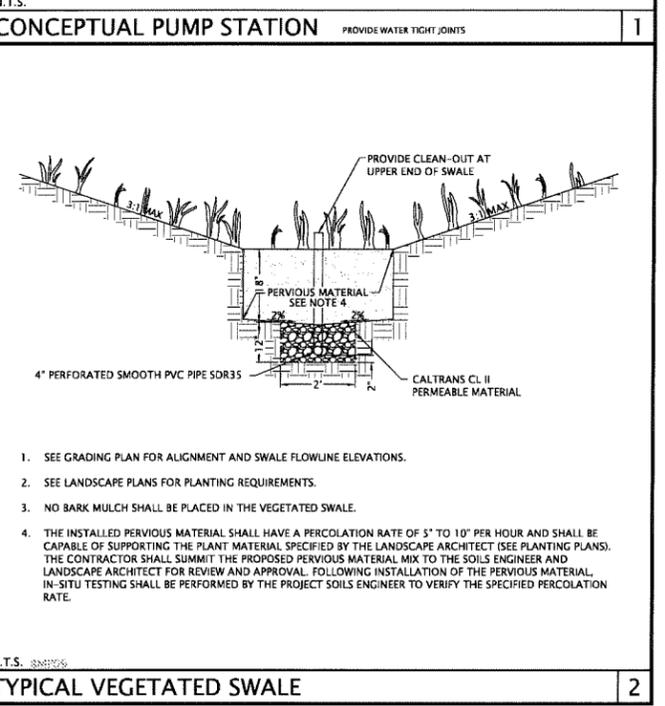
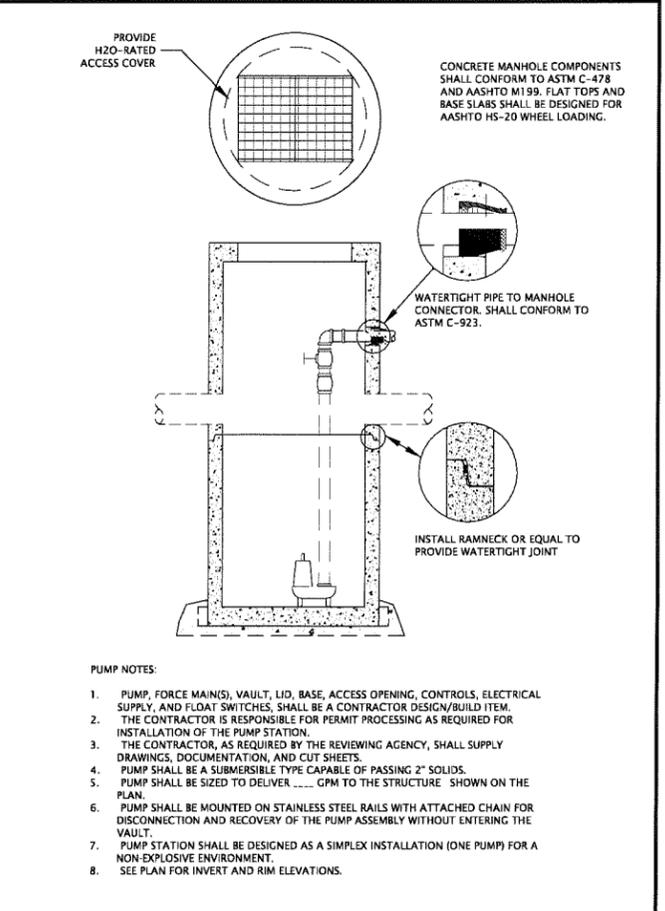
For $C = 0.80$ $i = 0.20$ in/hr, and Area = 209,570 sf
The Stormwater treatment $Q = 0.77$ cfs. or 345 gpm 4,811 Ac.

Channel design:
Bottom slope, $s = 0.0100$ ft./ft. 0.250 recommended
Manning's $n = 0.2500$ 3.1 max
Side slope, Right side 3.00 horiz. to 1 vert. 3.1 max
Side slope, Left side 3.00 horiz. to 1 vert. 3.1 max
Depth of flow, $d = 0.29$ ft. (treatment depth) 0.33 ft. max
Bottom width, $w = 10.00$ ft. 10' max.
Top width @ Q Treatment depth 11.7 ft.
Top width @ design depth 16.0 ft. Design depth = 1.00 ft.
Freeboard (Q_{90} WS to top of swale) = 0.71 ft.

Therefore:
Area $A = 3.14$ sq. ft.
Wetted perimeter $P_w = 11.83$ ft.
Hydraulic radius $r = 0.27$

By Manning's Equation:
 $Q = 0.77$ cfs 0.77 cfs required Swale Length: 147 ft.
 $V = 0.25$ fps Residence time in swale: 10.0 minutes

Construct 2 swale(s) 16.0 ft. wide x 153 ft. long



Sun Garden Retail Center

SAN JOSE, CALIFORNIA
KENNETH RODRIGUES & PARTNERS, INC.

STORMWATER CALCULATIONS AND DETAILS 4b