APPENDIX L

Project Site Plans - Lot 1 and Lot 2

&

Architectural Style Memorandum

PALM VILLAS - SARATOGA (LOT 1)

GENERAL NOTES

1. CODES AND REGULATIONS — ALL WORK AND MATERIALS SHALL BE IN ACCORDANCE WITH THE FOLLOWING CODES, AS WELL AS ALL APPLICABLE STATE CODES & LOCAL CITY ORDINANCES,
   2019 CALIFORNIA BUILDING CODE (C.B.C.)
   2019 CALIFORNIA RESIDENTIAL CODE (C.R.C.)
   2019 CALIFORNIA ELECTRICAL CODE (C.E.C.)
   2019 CALIFORNIA PLUMBING CODE (C.P.C.)
   2019 CALIFORNIA MECHANICAL CODE (C.M.C.)
   2019 CALIFORNIA FIRE CODE (C.F.C.)
   2019 CALIFORNIA ENERGY CODE (C.E.C.)
   2019 CALIFORNIA GREEN CODE (C.G.C.)
   NOTHING ON THE DRAWINGS IS TO BE CONSTRUED TO PERMIT WORK NOT CONFORMING TO THESE CODES & REGULATIONS.

2. CALGREEN STANDARDS — ALL ADHESIVES, SEALANTS, CAULKS, PAINTS, COATINGS, AND AEROSOL PAINT CONTAINERS MUST REMAIN ON THE SITE FOR FIELD VERIFICATION BY THE BUILDING INSPECTOR. PER CGBSC SEC. 4.504.2.4

   PRIOR TO FINAL INSPECTION, A LETTER SIGNED BY THE GENERAL CONTRACTOR OR THE OWNER/BUILDER (FOR ANY OWNER/BUILDER) PROJECTS MUST BE PROVIDED TO THE CITY OF SAN JOSE BUILDING OFFICIAL CERTIFYING THAT ALL ADHESIVES, SEALANTS, CAULKS, PAINTS, COATINGS, AEROSOL PAINTS, AEROSOL COATINGS, CARPET SYSTEMS (INCLUDING CARPETING, CUSHION AND ADHESIVE), RESILIENT FLOORING SYSTEMS, AND COMPOSITE WOOD PRODUCTS INSTALLED ON THIS PROJECT ARE WITHIN THE EMISSION LIMITS SPECIFIED IN CGBSC SECTION 4.504.

SITE / BUILDING DESCRIPTION

THE SITE IS BISECTED BY SARATOGA CREEK DRIVE, A PRIVATE ROAD BETWEEN TWO DISTINCTIVE LOTS. THE BUILDINGS AND ACTIVITIES FOR LOT ONE AND LOT TWO HAVE BEEN DESIGNED TO FUNCTION AS ONE COMPLEX WHILE COMPLEMENTING THE ORIGINAL INTENT AND VISION FOR THIS P-A ZONING DISTRICT. THE CREATORS OF THIS SUBDIVISION ENVISIONED AN ENCLAVE OF SEVERAL DISTINCTIVE BUILDINGS WITH GENEROUS SETBACKS BETWEEN THEM AND EASY PEDESTRIAN AND VEHICULAR CIRCULATION. THE 2 PROPOSED BUILDINGS WILL BE THE FIRST TWO BUILDINGS CONSTRUCTED THAT FACE SARATOGA CREEK DRIVE AND HAVE BEEN DESIGNED WITH GENEROUS PARKING ON EACH OF THE TWO SITES.

LOT ONE

PROPOSED 2-STORY BUILDINGS WILL BE CONSTRUCTED IN NATURAL MATERIALS SUCH AS HORIZONTAL WOOD SIDING, CEDAR SHINGLES AND STONE WAINSCOT REFLECTING AN ARTS & CRAFTS / CRAFTSMAN ARCHITECTURAL STYLE. THE RUSTIC ARCHITECTURE AND COLOR PALATE WILL INTEGRATE WITH THE WOODED BACKDROP ALONG SARATOGA CREEK. THE HARDSCAPE WILL USE PRECAST CONCRETE PAVERS IN NATURAL EARTH COLORS AND THE LANDSCAPED AREAS THAT SURROUND THE BUILDING WILL BE DROUGHT TOLERANT NATIVE SPECIES OF TREES, SHRUBS AND GROUNDCOVER.
ON-SITE PARKING FOR LOT ONE IS PROVIDED WITH AN UNDERGROUND PARKING LOT AND SURFACE PARKING. THE SITE INCLUDES TWO ACCESSIBLE VAN PARKING STALLS AND A CIRCLE DRIVE FOR DROP-OFF AND DRIVE THRU USES.

TABULATIONS

1. SITE AREA - LOT 1

GROSS AREA :	= 31,757 SQ. FT. (0.729 AC.)
ROAD DEDICATION:	= 4,544 SQ. FT. (0.104 AC.)
SCVWD EASEMENT:	= 2,005 SQ. FT. (0.047 AC.)
NET AREA :	= 25,208 SQ. FT. (0.624 AC.)

2. FLOOR AREA - LOT 1

FIRST FLOOR	= 7,440 SQ. FT.
SECOND FLOOR	= 7,626 SQ. FT.
TOTAL FLOOR AREA	= 15,066 SQ. FT.
BASEMENT AREA:	= 8,408 SQ .FT.

* BASEMENT DOES NOT COUNT AS A STORY OR FLOOR AREA

TOTAL FLOOR AREA (WITH BASEMENT LEVEL)	= 23,474 SQ. FT.

3. BUILDING COVERAGE - LOT 1

ALLOWABLE BUILDING FOOTPRINT / NET LOT AREA : =7,562.4 SQ. FT. (30.00 %)

PROPOSED BUILDING FOOTPRINT / NET LOT AREA : =7,440.0 SQ. FT. (29.51 %)

4. ELEVATION HEIGHTS

BUILDING HEIGHT:

LOWEST ELEVATION PT. @ BUILDING CORNERS: 297.70'

HIGHEST ELEVATION PT. @ BUILDING CORNERS: 300.07'

AVERAGE ELEVATION PT. : 298.88'

ALLOWABLE TOP MOST ELEVATION PT. OF THE STRUCTURE: 328.88'

PROPOSED TOP MOST ELEVATION PT. OF THE STRUCTURE: 328.86'

PROJECT CONTACTS

ARCHITECT
METRO DESIGN GROUP
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3333 S. BASCOM AVE.
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SOIL ENGINEER
GEOFORENSICS, INC.
CONTACT: DAN DYCKMAN
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BIOLOGICAL RESOURCE ASSESSMENT
ENVIRONMENTAL COLLABORATIVE
1268 64TH STREET
EMERYVILLE, CA 94608
(519) 654-4444 PHONE

CONSULTING ARBORIST & HORTICULTURIST
DEBORAH ELLIS, MS
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decah@pacbell.net

CONSULTING ARBORIST
URBAN TREE MANAGEMENT, INC.
CONTACT: MICHAEL P. YOUNG, WCISA #623
PO BOX 971,
LOS GATOS, CALIFORNIA 95031
(650) 321-0202 PHONE

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4 NORTH SECOND STREET,
STE 400 SAN JOSE, CA 95113
(408) 971-6100 PHONE
(408) 971-6102 FAX

CIVIL ENGINEER
SANDIS, CIVIL ENGINEERS, SURVEYIORS & PLANNERS
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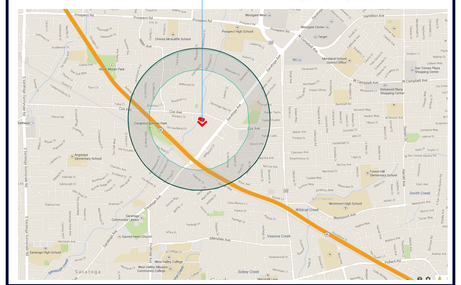
PROJECT INFORMATION

PROPERTY OWNERS	GOLDEN AGE PROPERTIES SARATOGA LLC CONTACT: MICHAEL SNEPER (408) 559-8301
APPLICANT NAME CONTACT PHONE	GOLDEN AGE PROPERTIES SARATOGA LLC CONTACT: MICHAEL SNEPER (408) 559-8301
MAILING ADDRESS	3333 S. BASCOM AVE CAMPBELL, CA 95008
PROJECT ADDRESS	PARCEL 1 SARATOGA CREEK DRIVE
SITE AREA	0.729 AC GROSS(31,757 SF) 0.578 AC NET (25,208 SF)
A.P.N.	389-06-020
ZONING	(P-A) PROFESSIONAL AND ADMINISTRATIVE
LOCATED WITHIN WUI FIRE AREA	NO
BUILDING SETBACKS	FRONT: 25.00' (N) SIDE: 19.05' (S) SIDE: 21.56' REAR: 25.00'
CONSTRUCTION TYPE	V-A
OCCUPANCY	R-2.1, S-2
STORIES	2
FIRE SPRINKLERS	REQUIRED
EXISTING USE	VACANT LOT

VICINITY MAP

PROJECT SITE



PARKING TABULATION

REQUIRED PARKING SPACES ON LOT 1 AND LOT 2

1 SPACE REQUIRED FOR 3 GUESTS
1 SPACE REQUIRED FOR 2 EMPLOYEES

LOT 1: 48 GUESTS & 12 EMPLOYEES
LOT 2: 30 GUESTS & 9 EMPLOYEES
TOTAL: 78 GUESTS & 21 EMPLOYEES

78 (GUESTS) / 3 =26.0 PARKING SPACES
21 (EMPLOYEES) / 2 =10.5 PARKING SPACES

TOTAL REQUIRED SPACES: 37
ADA SPACES 2/LOT REQUIRED

TOTAL PROVIDED SPACES: 48
ADA SPACES: 4 SPACES

PARKING SPACES ON LOT 1

12 EMPLOYEES / 2 = 6.0 PARKING SPACES
48 GUESTS / 3 = 16.0 PARKING SPACES
TOTAL REQUIRED = 22 PARKING SPACES

2 DESIGNATED VAN ACCESSIBLE PARKING SPACES
20 STANDARD 9.5' X 18' PARKING SPACES

TOTAL PROVIDED = 22 PARKING SPACES

PARKING SPACES ON LOT 2

10 EMPLOYEES / 2 = 5.0 PARKING SPACES
30 GUESTS / 3 = 10.0 PARKING SPACES
TOTAL REQUIRED = 15 PARKING SPACES

2 DESIGNATED VAN ACCESSIBLE PARKING SPACES
20 STANDARD 9.5' X 18' PARKING SPACES
4 COMPACT 8' X 16' PARKING SPACES

TOTAL PROVIDED = 26 PARKING SPACES

BICYCLE PARKING

SHORT-TERM BICYCLE PARKING PER CBSC-2019 SEC. 5.104.4.1.1.
REQUIRED PARKING SPACES
ON LOT 1 AND LOT 2: 37 PARKING SPACES
2 SHORT-TERM BICYCLE PARKING REQUIRED

LONG-TERM BICYCLE PARKING PER CBSC-2019 SEC. 5.104.4.1.2.
TOTAL NUMBER OF GUESTS & EMPLOYEES REQUIRE 37 VEHICLE PARKING SPACES
37 x 5%=1.85 **2 LONG-TERM BICYCLE PARKING REQUIRED**

BUSINESS DESCRIPTION

RESIDENTIAL CARE FACILITY FOR THE ELDERLY (RCFE) PROVIDING 24 HOUR CARE FOR UP TO 48 GUESTS

LICENSED BY THE CALIFORNIA DEPT. OF SOCIAL SERVICES FOR ALZHEIMERS AND DEMENTIA PATIENTS

SHIFTS	NUMBER OF EMPLOYEES
6:00 AM TO 2:00 PM SHIFT	= 12 EMPLOYEES
2:00 PM TO 10:00 PM SHIFT	= 9 EMPLOYEES
10:00 PM TO 6:00 AM SHIFT	= 3 EMPLOYEES

SHEET INDEX

A-0	SHEET INDEX, PROJECT INFORMATION, VICINITY MAP, PROJECT CONTACTS, GENERAL NOTES BUSINESS & SITE DESCRIPTIONS
C-0	TOPOGRAPHIC SURVEY
C-3.0	PRELIMINARY GRADING AND DRAINAGE PLAN
C-4.0	PRELIMINARY UTILITY PLAN
C-6.0	PRELIMINARY STORMWATER MANAGEMENT PLAN
C-7.0	GENERAL DETAILS
C-8.0	EROSION CONTROL PLAN
C-8.1	EROSION CONTROL DETAILS
A-1.0	NEIGHBORHOOD SITE PLAN
A-1.1	GENERAL SITE DEVELOPMENT PLAN
A-1.2	SITE PLAN
A-1.3	LIGHTING PLAN
A-2.0	PROPOSED GARAGE / BASEMENT PLAN
A-2.1	PROPOSED FLOOR PLANS
A-3.0	EXTERIOR ELEVATIONS
A-3.1	EXTERIOR ELEVATIONS
A-4.0	ROOF PLAN
A-5.0	SECTIONS
A-5.1	SETBACK CALCULATION AND SECTIONS
L-1.0	LANDSCAPE PLAN
TP-1.0	TREE PRESERVATION
TP-1.1	TREE PRESERVATION
TP-1.2	TREE PRESERVATION
TP-1.3	TREE PRESERVATION
TP-1.4	TREE PRESERVATION

METRO DESIGN GROUP
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PROJECT NAME

PALM VILLAS SARATOGA

LOT #1
389-06-020
SARATOGA CREEK DRIVE
SARATOGA, CA 95070

REVISIONS

COVER SHEET

GENERAL NOTES
PROJECT CONTACTS
PROJECT INFORMATION
VICINITY MAP
SHEET INDEX
BUSINESS DESCRIPTION
SITE / BUILDING DESCRIPTION

DATE : 8-14-20
SCALE : NO SCALE
DRAWN BY : DZ
CHECKED BY : TS
ARCHITECT : TOM SLOAN
PROJECT NO : 15600

SHEET NUMBER

A-0

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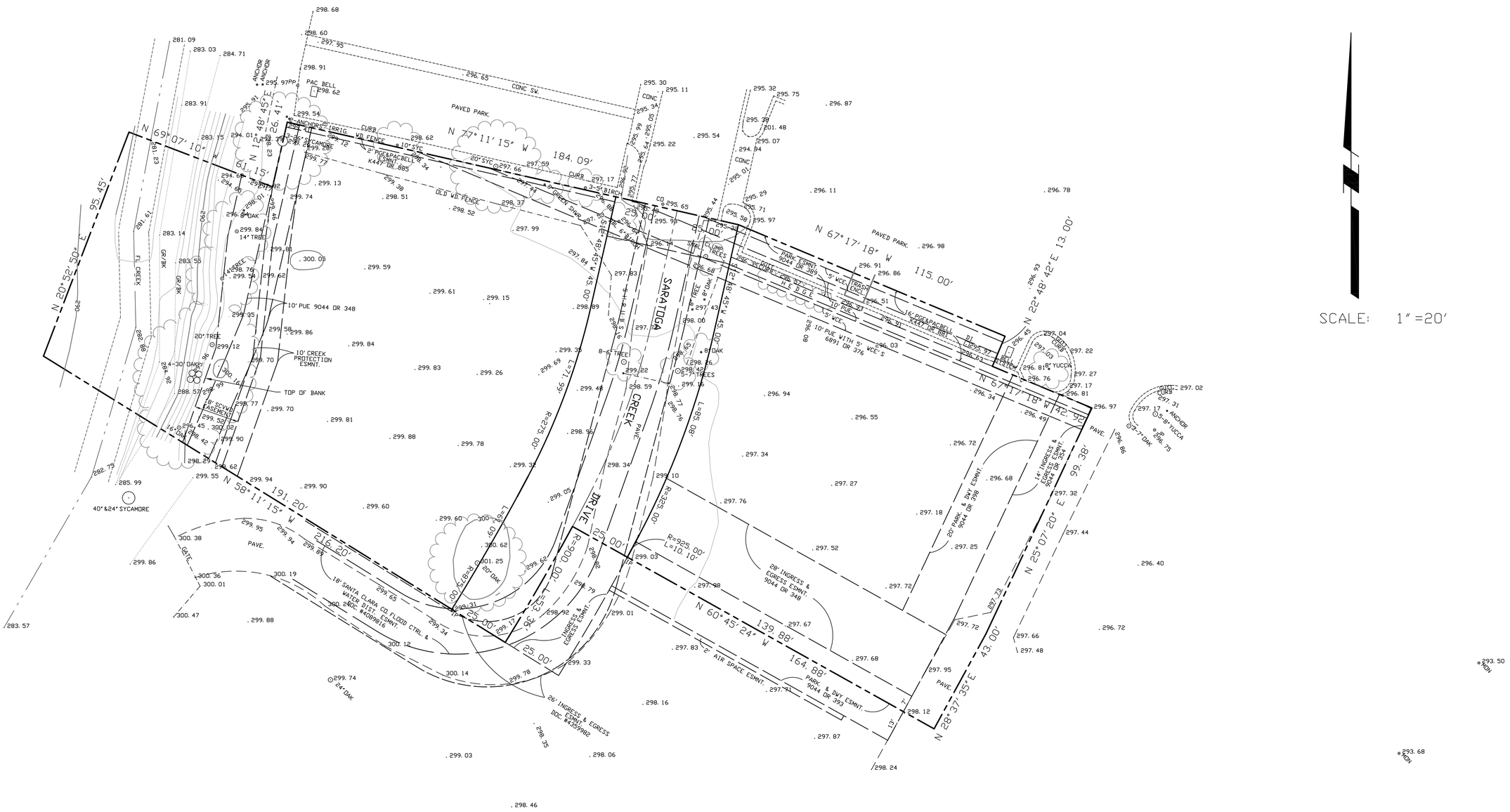


NO.	BY	DATE	REVISION	BY	DATE

DATE: June, 2018
SCALE: HOR. 1"=20' VERT.
DESIGNED:
DRAWN: JK
PROJ. ENGR:

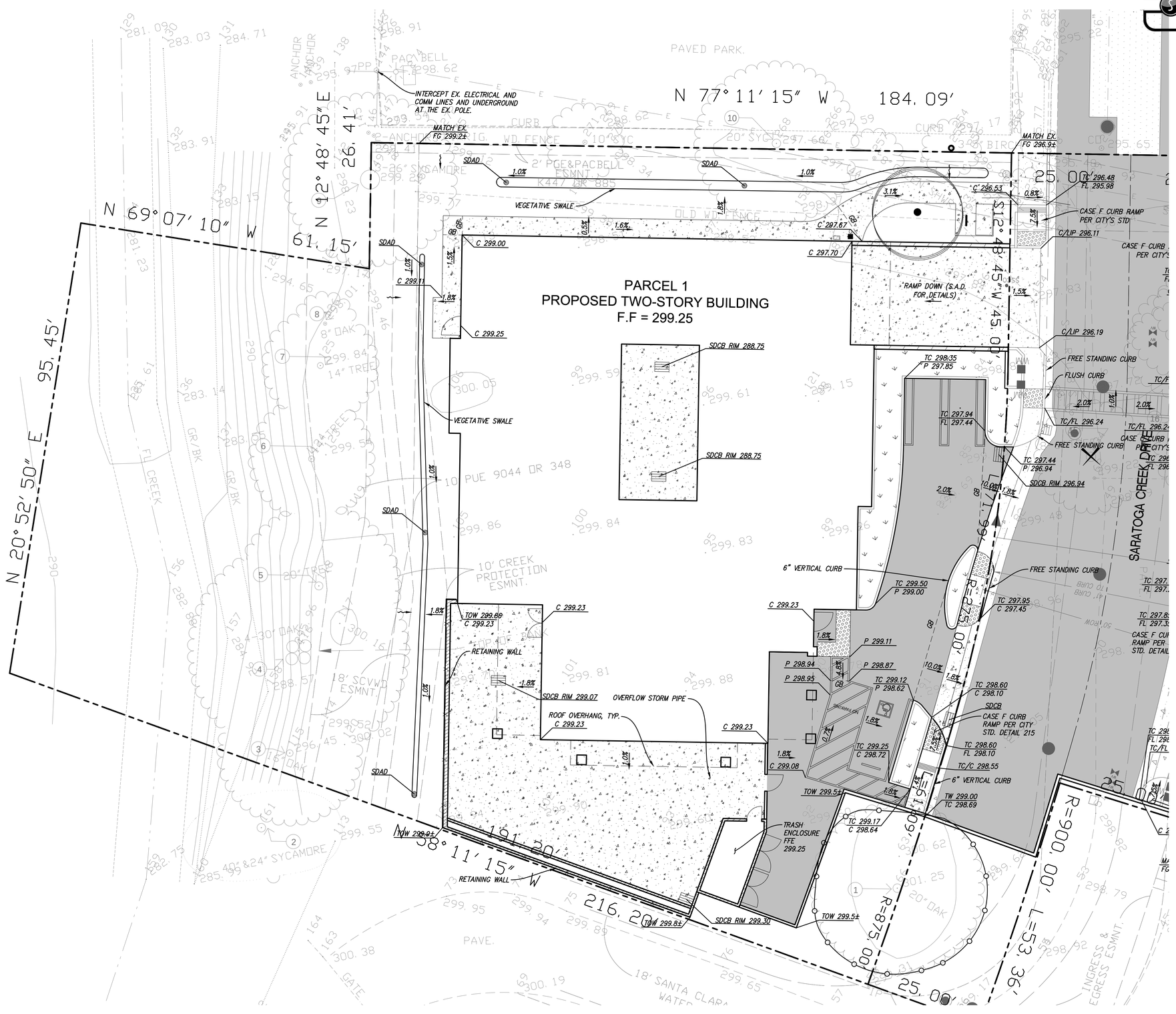
BY: HARRY BABICKA, L. S. 4953
DATE: APRIL 26, 2017

WESTFALL ENGINEERS, INC.
14583 BIG BASIN WAY, SARATOGA, CA 95070 (408)867-0244

TOPOGRAPHIC SURVEY
APN 389-06-020 & APN 389-06-021
SARATOGA CREEK DR., SARATOGA

JOB NO. 2015-103

SHEET **C-0**



GRADING PLAN LEGEND

- CONCRETE PAVING
- LANDSCAPE AREA
- CONCRETE PAVER AREA
- ASPHALT CONCRETE PAVEMENT
- RETAINING WALL
- LIMIT OF WORK LINE
- GRADE BREAK
- TREE PROTECTION
- REMOVE TREE

GRADING NOTES

1. PROVIDE POSITIVE SURFACE DRAINAGE AWAY FROM ALL STRUCTURES BY SLOPING ALL HARDSCAPE SURFACES AT 2% AND LANDSCAPE SURFACES AT 5% AWAY FROM STRUCTURES UNLESS OTHERWISE NOTED ON PLANS.
2. AREAS LACKING TOPOGRAPHIC INFORMATION (ELEVATIONS) HAVE BEEN INTERPOLATED USING STANDARD ENGINEERING METHODS. CONTRACTOR SHALL FIELD VERIFY ALL ELEVATIONS AT CONFORMS PRIOR TO COMMENCEMENT OF CONSTRUCTION AND REPORT BACK ANY DISCREPANCIES TO THE CIVIL ENGINEER.

ADA NOTES

1. ALL HARDSCAPE ALONG THE ADA PATH OF TRAVEL SHALL BE IN CONFORMANCE WITH TITLE 24 OF THE CALIFORNIA ADMINISTRATIVE CODE.
2. SLOPED WALKS ALONG THE DESIGNATED ADA PATH OF TRAVEL SHALL NOT EXCEED A SLOPE OF 1:20 (5%) WITHOUT HANDRAILS. THE MAXIMUM SLOPE WITH HANDRAILS OR FOR CURB RAMPS IS 1:12 (8.33%). LEVEL LANDINGS ARE REQUIRED AT THE TOP AND BOTTOM OF ALL SLOPED WALKWAYS AND RAMPS.
3. WALKWAYS ON ANY PATH OF TRAVEL SHALL HAVE A MINIMUM WIDTH OF 48". WALKWAYS AND ADA PARKING STALLS OR LOADING ZONES SHALL HAVE A 2% MAXIMUM CROSS SLOPE.
4. A LEVEL LANDING (2% MAX SLOPE) SHALL BE PROVIDED AT ALL ACCESSIBLE ENTRANCES TO BUILDINGS, THE LANDINGS SHALL HAVE A MINIMUM WIDTH OF 60" AND A MINIMUM DEPTH OF 60" WHEN THE DOOR OPENS INTO THE BUILDING, AND 42" PLUS THE WIDTH OF THE DOOR WHEN THE DOOR OPEN ONTO THE LANDING.
5. RAMPS GREATER THAN 1:20 SLOPE AND EXCEEDING 30" IN VERTICAL ELEVATION CHANGE SHALL HAVE INTERMEDIATE LEVEL LANDINGS.

PRELIMINARY GRADING QUANTITIES

CUT 4,300 CY
FILL 0 CY
BALANCE 4,300 CY EXPORT

THE EARTHWORK QUANTITIES SHOWN ARE PROVIDED FOR THE PURPOSE OF GRADING PERMIT APPROVAL ONLY. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO CARRY OUT THE CUT/FILL, IMPORT/EXPORT AS NECESSARY TO MEET THE DESIGN GRADES AS SHOWN ON THE PLANS REGARDLESS OF THE ESTIMATED EARTHWORK QUANTITIES AS INDICATED. SIGNIFICANT REVISIONS TO THE QUANTITIES NEED REVIEW BY THE CITY OF SARATOGA. FILL SHORTAGE IS ANTICIPATED TO COME FROM ON-SITE SPOILS ACQUIRED FROM UTILITY TRENCHES AND FOOTING SPOILS.

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PROJECT NAME

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LOT #1
389-06-020
SARATOGA CREEK DRIVE
SARATOGA, CA 95070

REVISIONS

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SILICON VALLEY TRI-VALLEY CENTRAL VALLEY
SACRAMENTO EAST BAY/SF

PRELIMINARY GRADING AND DRAINAGE PLAN

DATE :	8-14-20
SCALE :	1" = 10'
DRAWN BY :	
CHECKED BY :	ND
ENGINEER :	SY
PROJECT NO :	217040

SHEET NUMBER

C-3.0

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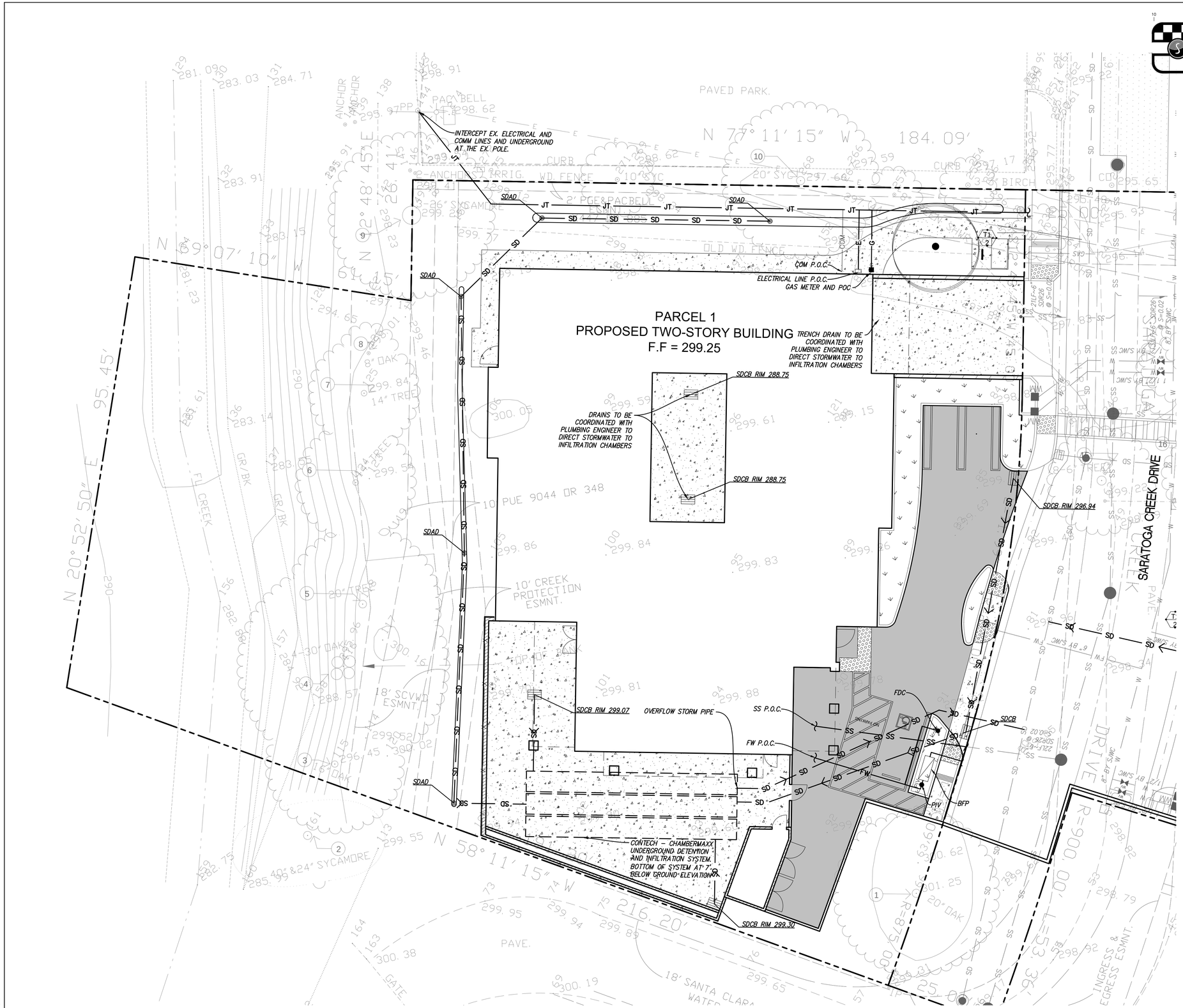

UTILITY PLAN LEGEND

PROPERTY LINE

BIO–TREATMENT AREA (XX / XXXX)

STORM DRAIN NOTES

1. ALL AREA DRAINS AND CATCH BASINS GRATES WITHIN PEDESTRIAN ACCESSIBLE AREAS SHALL MEET ADA REQUIREMENTS.
2. ALL TRENCHES SHALL BE BACK FILLED PER THE SPECIFICATIONS WITH APPROPRIATE TESTS BY THE GEOTECHNICAL ENGINEER TO VERIFY COMPACTION VALUES.
3. FOR GRAVITY FLOW SYSTEMS CONTRACTOR SHALL VERIFY (POTHOLE IF NECESSARY) SIZE, MATERIAL, LOCATION AND DEPTH OF ALL SYSTEMS THAT ARE TO BE CONNECTED TO OR CROSSED PRIOR TO THE TRENCHING OR INSTALLATION OF ANY GRAVITY FLOW SYSTEM.
4. DRAINS SHOWN ON CIVIL PLANS ARE NOT INTENDED TO BE THE FINAL NUMBER AND LOCATION OF ALL DRAINS. PLACEMENT AND NUMBER OF LANDSCAPING DRAINS ARE HIGHLY DEPENDENT ON GROUND COVER TYPE AND PLANT MATERIAL. CONTRACTOR SHALL ADD ADDITIONAL AREA DRAINS AS NEEDED AND AS DIRECTED BY THE LANDSCAPE ARCHITECT.
5. INSTALL SEPARATE SUB–DRAIN SYSTEM BEHIND RETAINING WALLS PER GEOTECHNICAL REPORT AND CONNECT TO STORM DRAIN SYSTEM AS SHOWN ON PLANS.
6. ALL DOWN SPOUTS SHALL DISCHARGE DIRECTLY ON TO ADJACENT PERVIOUS SURFACES OR SPLASH BLOCKS UNLESS OTHERWISE NOTED ON PLANS. SEE ARCHITECTURE PLANS FOR EXACT LOCATION OF THE DOWN SPOUTS.

SANITARY SEWER NOTES

1. ALL SEWER WORK SHALL BE IN CONFORMANCE WITH THE COUNTY ENVIRONMENTAL HEALTH DEPARTMENT STANDARDS.
2. ALL LATERALS SHALL HAVE A TWO WAY CLEANOUT AT FACE OF BUILDING AND AS SHOWN ON PLANS.
3. IF (E) SEWER LATERAL IS TO BE USED, CONTRACTOR SHALL VIDEO INSPECT, PERFORM PRESSURE TEST ON (E) SEWER LATERAL, AND SHALL PERFORM ANY NEEDED REPAIRS.

WATER SYSTEM NOTES

1. MAINTAIN WATER MAIN LINES 10' AWAY FROM SANITARY SEWER MAIN LINES. LATERALS SHALL BE SEPARATED PER PLAN DIMENSIONS.
2. WHERE WATER LINES HAVE TO CROSS SANITARY SEWER LINES, DO SO AT A 90 DEGREE ANGLE AND WATER LINES SHALL BE MINIMUM OF 12" ABOVE TOP OF SANITARY SEWER LINES.
3. ALL WATER SERVICE CONNECTIONS SHALL BE INSTALLED IN ACCORDANCE WITH THE APPLICABLE WATER DISTRICT STANDARDS.
4. ALL WATER LINES SHALL BE INSTALLED WITH 36" MINIMUM COVER.
5. THRUST RESTRAINTS SHALL BE DESIGNED AND INSTALLED AT ALL TEES, CROSSES, BENDS (HORIZONTAL AND VERTICAL), AT SIZE CHANGES AND AT FIRE HYDRANTS.

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PROJECT NAME

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SILICON VALLEY TRI-VALLEY CENTRAL VALLEY
SACRAMENTO EAST BAY/ SF

PRELIMINARY UTILITY PLAN

DATE :	8-14-20
SCALE :	1" = 10'
DRAWN BY :	
CHECKED BY :	ND
ENGINEER :	SY
PROJECT NO :	217040

SHEET NUMBER

C-4.0

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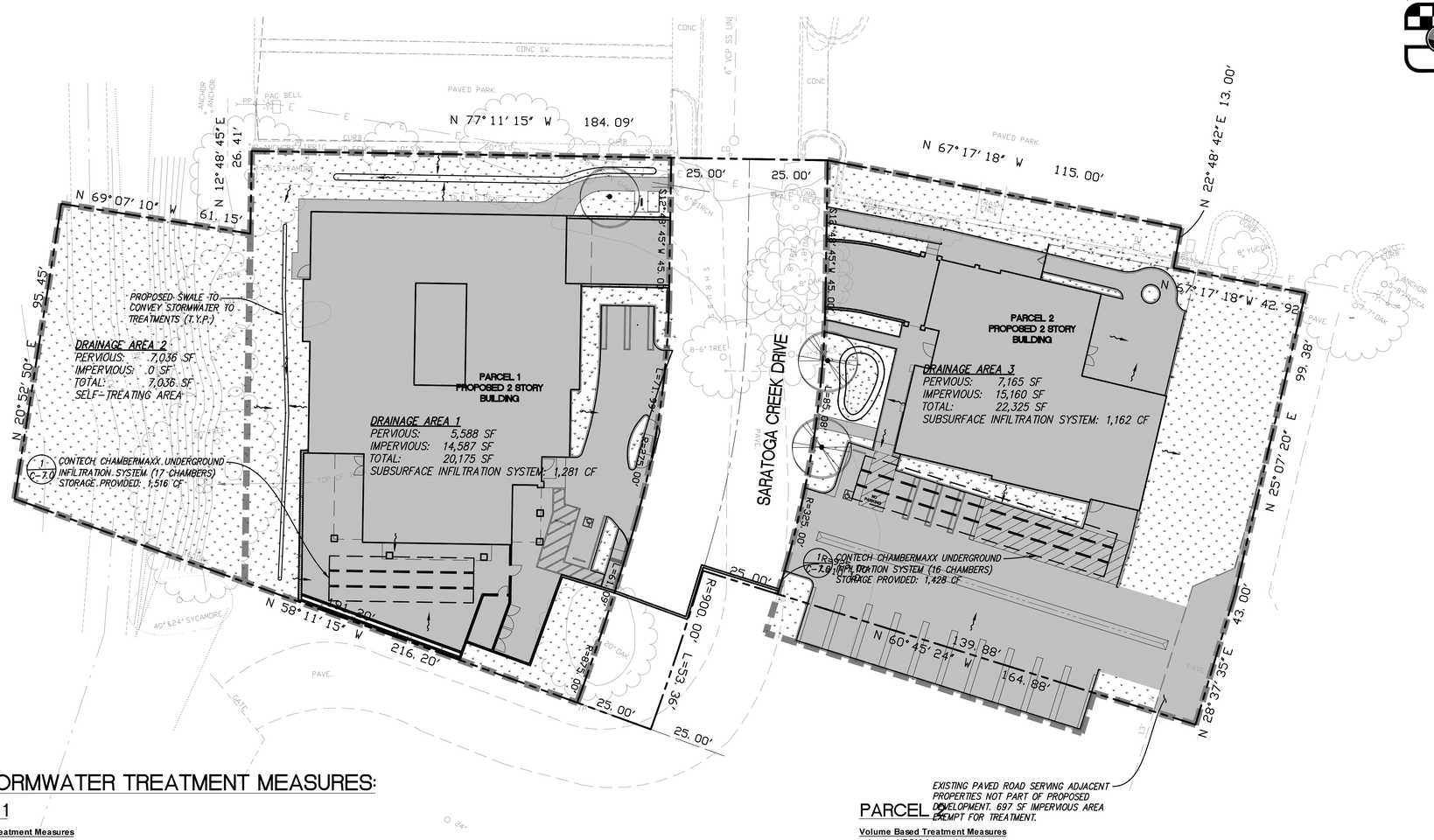

SANDIS SILICON VALLEY — SCALE: 1"=20'

STORMWATER MANAGEMENT PLAN LEGEND

PROPOSED PERVIOUS AREA

PROPOSED IMPERVIOUS AREA

DRAINAGE AREA BOUNDARY

FLOW LINE

FLOW DIRECTION

HYDROMODIFICATION NOTE:

THE PROJECT IS EXEMPT FROM HYDROMODIFICATION REQUIREMENTS PER THE SANTA CLARA COUNTY C.3 TECHNICAL GUIDANCE DOCUMENT. THE PROJECT IS EXEMPT FROM HYDROMODIFICATION DUE TO IMPERVIOUS AREA ADDED OR REPLACED BEING LESS THAN 1 ACRE.

SITE TREATMENT AREA NOTE:

THIS PROJECT IS REPLACING MORE THAN 50% OF THE EXISTING IMPERVIOUS AREA AND THEREFORE MUST TREAT THE ENTIRE SITE.

STORMWATER MANAGEMENT NOTES:

1. THIS PLAN PRESENTS METHODS AND CALCULATIONS FOR COMPLYING WITH THE REQUIREMENTS OF PROVISION C.3 OF THE MUNICIPAL REGIONAL STORMWATER PERMIT IN ACCORDANCE WITH THE SANTA CLARA COUNTY PROGRAM AND THE CITY OF SARATOGA REQUIREMENTS.

2. THE FOLLOWING TREATMENT MEASURES ARE PROPOSED TO REGULATE THE QUALITY OF STORM WATER LEAVING THE SITE

   2.1. SELF-TREATING AREA – RUNOFF IN THIS AREA ORIGINATES IN AND FLOWS THROUGH PLANTING PRIOR TO EXITING THE PROJECT SITE, NO TREATMENT IS REQUIRED

   2.2. SUBSURFACE INFILTRATION SYSTEM – RUNOFF IN THIS AREA IS DIRECTED TO A SUBSURFACE INFILTRATION SYSTEM FOR STORAGE AND INFILTRATION PRIOR TO EXISTING THE SITE.

C.3 STORMWATER TREATMENT MEASURES:

PARCEL 1

Volume Based Treatment Measures
using the URQM Approach

Step 1. Drainage Area for BMP: 0.46 acres

Step 2. a. Impervious Area: 0.35 acres
b. Impervious ratio: (i) 74.9%

Step 3. Watershed runoff Coefficient Cw = 0.543
($Cw = 0.858i^3 - 0.78i^2 + 0.774i + 0.04$)

Step 4. Mean Annual Precipitation 20 inches

Step 5. Closest Rain Gage Palo Alto

Gage	MAP_{gage}	$(P_6)_{gage}$ (in)
San Jose Airport	13.9	0.512
Palo Alto	13.7	0.522
Morgan Hill	19.5	0.76

MAP_{gage} 13.7
$(P_6)_{gage}$ 0.522

Step 6. Mean Storm Event Precipitation Depth $(P_6)_{site}$
$(P_6)_{site} = (P_6)_{gage} \times (MAP_{site})/(MAP_{gage})$ 0.762 inches

Step 7. "a" regression constant

a=	48 hour	1.963
a=	24 hour	1.582
a=	12 hour	1.312

48 hour
a= 1.963

Step 8. Maximized Storage Area
$P_o = (a \times Cw) \times P_6$ 0.812 inches

Step 9. Volume of Runoff to be Treated
Design Volume = Po X A X 1ft/12in 0.031 acre-ft
1,366 cuft

Step 10. Infiltration within 72 hrs Check
Estimated Infiltration Rate 0.5 in/hr
Volume Provided V 1516 cuft
System Footprint 778.901 sqft
V / (System Footprint X infiltration rate) 47 hrs

PARCEL 2

Volume Based Treatment Measures
using the URQM Approach

Step 1. Drainage Area for BMP: 0.51 acres

Step 2. a. Impervious Area: 0.35 acres
b. Impervious ratio: (i) 67.9%

Step 3. Watershed runoff Coefficient Cw = 0.475
($Cw = 0.858i^3 - 0.78i^2 + 0.774i + 0.04$)

Step 4. Mean Annual Precipitation 20 inches

Step 5. Closest Rain Gage Palo Alto

Gage	MAP_{gage}	$(P_6)_{gage}$ (in)
San Jose Airport	13.9	0.512
Palo Alto	13.7	0.522
Morgan Hill	19.5	0.76

MAP_{gage} 13.7
$(P_6)_{gage}$ 0.522

Step 6. Mean Storm Event Precipitation Depth $(P_6)_{site}$
$(P_6)_{site} = (P_6)_{gage} \times (MAP_{site})/(MAP_{gage})$ 0.762 inches

Step 7. "a" regression constant

a=	48 hour	1.963
a=	24 hour	1.582
a=	12 hour	1.312

48 hour
a= 1.963

Step 8. Maximized Storage Area
$P_o = (a \times Cw) \times P_6$ 0.710 inches

Step 9. Volume of Runoff to be Treated
Design Volume = Po X A X 1ft/12in 0.030 acre-ft
1,321 cuft

Step 10. Infiltration within 72 hrs Check
Estimated Infiltration Rate 0.5 in/hr
Volume Provided V 1428 cuft
System Footprint 701.398 sqft
V / (System Footprint X infiltration rate) 49 hrs

Drainage Area	TOTAL AREA sq. ft.	TOTAL AREA Ac.	IMPERVIOUS AREA sq. ft.	IMPERVIOUS AREA Ac.	PERVIOUS AREA sq. ft.	PERVIOUS AREA Ac.	Percent Impervious	Net Impervious	Runoff Coefficient, c	Q (cfs) Required	Treatment Area	C.3 LID Method	Treatment Provided (sf)
Self-Treating Area (2:1 Calculation)	7,036.0	0.16	0.0	0.00	7,036	0.16	0.0%	0.0	0.300	0.010	0	STA	7,036

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PROJECT NAME

PALM VILLAS SARATOGA

LOT #1
389-06-020
SARATOGA CREEK DRIVE
SARATOGA, CA 95070

REVISIONS

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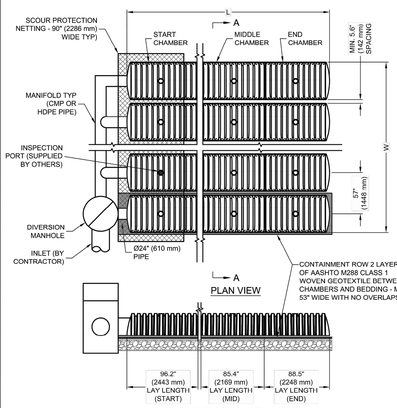
SILICON VALLEY TRI VALLEY CENTRAL VALLEY SACRAMENTO EAST BAY/SF

PRELIMINARY STORMWATER MANAGEMENT PLAN

DATE : 8-14-20
SCALE : 1" = 20'
DRAWN BY :
CHECKED BY : ND
ENGINEER : SY
PROJECT NO : 217040

SHEET NUMBER

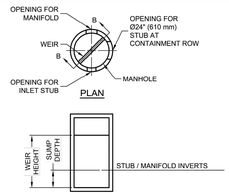
C-6.0



TYPICAL LAYOUT

CHAMBERMAXX DESIGN DETAILS			
FEATURE	**START CHAMBER**	**MIDDLE CHAMBER**	**END CHAMBER**
OVERALL CHAMBER HEIGHT - IN (mm)	30.3 (770)	30.3 (770)	30.3 (770)
OVERALL CHAMBER WIDTH - IN (mm)	51.4 (1306)	51.4 (1306)	51.4 (1306)
ACTUAL LENGTH - IN (mm)	98.4 (2500)	91.0 (2311)	92.0 (2337)
INSTALLED LAY LENGTHS - IN (mm)	96.2 (2443)	85.4 (2169)	88.5 (2248)
CHAMBER STORAGE VOLUME - CF (m^3)	50.2 (1.421)	47.2 (1.336)	46.2 (1.307)
CHAMBER STORAGE PER LINEAR FOOT - CF/LF (m^3/m)	6.3 (0.582)	6.6 (0.616)	6.3 (0.582)
*INSTALLED CHAMBER VOLUME - CF (m^3)	78.1 (2.211)	75.1 (2.127)	74.1 (2.098)
*INSTALLED CHAMBER VOLUME PER LINEAR FOOT - CF/LF (m^3/m)	9.7 (0.905)	10.6 (0.981)	10.0 (0.934)
CHAMBER WEIGHT - LB (kg)	83 (37.65)	73 (33.11)	76 (34.47)
*6" (152 mm) OF STONE ABOVE AND BELOW CHAMBER, 5.6" (142 mm) CHAMBER SPACING AND 40% POROSITY			

* SITE SPECIFIC DATA REQUIREMENTS	
FOR DETAILED DESIGN ASSISTANCE REFERENCE CHAMBERMAXX DYODS (DESIGN YOUR OWN DETENTION SYSTEM) SOFTWARE AND CHAMBERMAXX STAGE STORAGE CALCULATOR @ WWW.CONTECHSTORMWATER.COM	
TOTAL REQUIRED STORAGE VOLUME (CF OR m^3)	
DEPTH TO INVERT BELOW ASPHALT (FT OR m)	
LIMITING WIDTH (FT OR m)	
LIMITING LENGTH (FT OR m)	
POROUS STONE ABOVE CHAMBER (IN OR mm)	
POROUS STONE BELOW CHAMBER (IN OR mm)	
STONE POROSITY (0 TO 40%)	
MANIFOLD SYSTEM DIAMETER (IN OR mm)	
* PER ENGINEER OF RECORD	



DIVERSION MANHOLE DETAIL

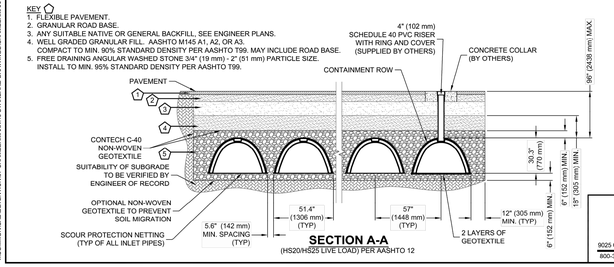
GENERAL NOTES

1. ALL ELEVATIONS, DIMENSIONS AND LOCATIONS OF RISERS AND INLETS SHALL BE VERIFIED BY THE ENGINEER OF RECORD.
2. PRIOR TO INSTALLATION OF THE CHAMBERMAXX SYSTEM A PRE-CONSTRUCTION MEETING SHALL BE CONDUCTED. THOSE REQUIRED TO ATTEND ARE THE SUPPLIER OF THE SYSTEM, THE GENERAL CONTRACTOR, SUB-CONTRACTORS AND THE ENGINEER.
3. CHAMBERMAXX CHAMBERS ARE MANUFACTURED FROM POLYPROPYLENE PLASTIC.
4. CHAMBERMAXX SYSTEM TO MEET AASHTO HS20/HS25 LIVE LOADING, PER AASHTO LRFD SECTION 12.
5. ACCESS COVERS TO MEET AASHTO HS20/HS25 LIVE LOADING.
6. MINIMUM COVER IS 18-INCHES (457 mm) AND MAXIMUM COVER IS 96-INCHES (2438 mm) TO BOTTOM OF FLEXIBLE PAVEMENT OR TO TOP OF RIGID PAVEMENT. FOR COVER HEIGHTS GREATER THAN 96-INCHES (2438 mm) CONTACT YOUR LOCAL REPRESENTATIVE.
7. ALL PARTS PROVIDED BY CONTECH UNLESS OTHERWISE NOTED.
8. FOR INFORMATION ON PRE-TREATMENT SYSTEMS, REFERENCE CONTECH PRE-TREATMENT SYSTEM STANDARD DETAILS OR CONTACT YOUR LOCAL REPRESENTATIVE.
9. CHAMBERMAXX BY CONTECH ENGINEERED SOLUTIONS, LLC

INSTALLATION NOTES

1. CHAMBERMAXX INSTALLATION GUIDE TO BE REVIEWED BY CONTRACTOR PRIOR TO INSTALLATION.
2. PRIOR TO PLACING BEDDING, THE FOUNDATION MUST BE CONSTRUCTED TO A UNIFORM AND STABLE GRADE. IN THE EVENT THAT UNSUITABLE FOUNDATION MATERIALS ARE ENCOUNTERED DURING EXCAVATION, A GEOGRID SHALL BE UTILIZED OR UNSUITABLE MATERIAL SHALL BE REMOVED AND BROUGHT BACK TO GRADE WITH FILL MATERIAL AS APPROVED BY THE ENGINEER OF RECORD. ONCE THE FOUNDATION PREPARATION IS COMPLETE, THE BEDDING MATERIAL CAN BE PLACED.
3. THE SCOUR PROTECTION NETTING TO EXTEND 1'-0" (305 mm) BEYOND OUTSIDE EDGE OF INLET CHAMBERS.
4. COVER ANY OPEN VOID SPACES GREATER THAN ¾" (19 mm) ON CHAMBERS WITH A NON-WOVEN GEOTEXTILE TO PREVENT INFILTRATION OF BACKFILL MATERIAL.
5. STONE EMBEDMENT MATERIAL SHALL BE INSTALLED TO 95% STANDARD PROCTOR DENSITY AND PLACED IN 6-INCH (152 mm) TO 8-INCH (203 mm) LIFTS SUCH THAT THERE IS NO MORE THAN A TWO LIFT DIFFERENTIAL BETWEEN ANY OF THE CHAMBERS AT ANY TIME. GRANULAR BACKFILL MATERIAL SHALL BE COMPACTED TO 90% SPD. BACKFILLING SHALL BE ADVANCED ALONG THE LENGTH OF THE CHAMBER ROWS AT THE SAME RATE TO AVOID DIFFERENTIAL LOADING AND DISPLACEMENT OF THE CHAMBERS. THE MINIMUM CHAMBER SPACING MUST BE MAINTAINED.
6. REFER TO CHAMBERMAXX INSTALLATION GUIDE FOR TEMPORARY CONSTRUCTION LOADING GUIDELINES.
7. IT IS ALWAYS THE CONTRACTOR'S RESPONSIBILITY TO FOLLOW OSHA GUIDELINES FOR SAFE PRACTICES.
8. GENERAL INSTALLATION METHODS AND MATERIALS TO BE IN ACCORDANCE WITH ASTM D2321.

KEY
1. FLEXIBLE PAVEMENT.
2. GRANULAR ROAD BASE.
3. ANY SUITABLE NATIVE OR GENERAL BACKFILL, SEE ENGINEER PLANS.
4. WELL GRADED GRANULAR FILL. AASHTO M145 A1, A2, OR A3. COMPACT TO MIN. 90% STANDARD DENSITY PER AASHTO T99. MAY INCLUDE ROAD BASE.
5. FREE DRAINING ANGULAR WASHED STONE 3/4" (19 mm) - 2" (51 mm) PARTICLE SIZE. INSTALL TO MIN. 95% STANDARD DENSITY PER AASHTO T99.



CONTECH ENGINEERED SOLUTIONS LLC
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CHAMBERMAXX STORMWATER RETENTION
STANDARD DETAIL
CONTAINMENT ROW OPTION

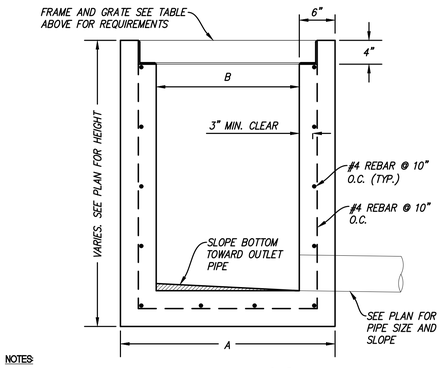
CHAMBERMaxx®
PATENT PENDING

SUBSURFACE INFILTRATION SYSTEM DETAILS (1)

N.T.S.

FRAME AND GRATE REQUIREMENTS		
CATCH BASIN LOCATION	LOADING REQUIREMENTS	MIN. GRATE SPACING REQUIREMENTS
VEHICLE ACCESS ROAD	H20 RATED	4" CROSS BARS O.C. W/ 1 $\frac{3}{16}$" BEARING BARS O.C.
PEDESTRIAN PATH	LIGHT DUTY/NON-TRAFFIC	1/4" MAX. OPENINGS
LANDSCAPE	LIGHT DUTY/NON-TRAFFIC	4" CROSS BARS O.C. W/ 1 $\frac{3}{16}$" BEARING BARS O.C.

CATCH BASIN SIZE	A	B	MAX PIPE SIZE
12"	2'-0"	1'-0"	6"
24"	3'-0"	2'-0"	18"
36"	4'-0"	3'-0"	30"

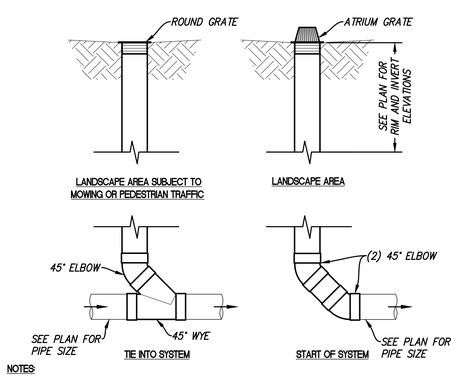


NOTES:
1. T&G JOINT AS REQUIRED FOR STRUCTURES OVER 4'-0" DEEP.
2. FRAME SHALL BE ANCHORED TO CONCRETE PER MANUFACTURER'S SPECIFICATIONS.

(2) CONCRETE SQUARE CATCH BASIN

1"=1'

PIPE SIZE	NDS NUMBER*			
	45° WYE	45° ELBOW	ATRIUM GRATE	ROUND GRATE
3"	3P08	3P03	74	14
4"	4P08	4P03	78	11
6"	6P08	6P03	90	40
8"	8P08	8P03		10
*OR APPROVED EQUIVALENT				



NOTES:
1. STORM DRAIN AREA DRAIN SHALL MATCH PIPE DIAMETER.

(3) LANDSCAPE AREA DRAIN

1"=1'

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PROJECT NAME

PALM VILLAS SARATOGA

LOT #1
389-06-020
SARATOGA CREEK DRIVE
SARATOGA, CA 95070

REVISIONS

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SILICON VALLEY TRI-VALLEY CENTRAL VALLEY
SACRAMENTO EAST BAY/ SF

GENERAL DETAILS

DATE : 8-14-20
SCALE : N.T.S.
DRAWN BY :
CHECKED BY : ND
ENGINEER : SY
PROJECT NO : 217040

SHEET NUMBER

C-7.0

\\COMMON-CAD\CONTENT\CONXT CHAMBERMAXX\40 STANDARD DRAWINGS\CHAMBERMAXX\CCP-03-STANDARD DETAIL_2.DWG 10/21/2018 8:28 AM
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SANDIS SILICON VALLEY

SCALE: 1"=20'

LEGEND

- FIBER ROLLS (TO BE INSTALLED AROUND PERIMETER OF DISTURBED AREAS) (SE-5 / C8.1)
- INLET PROTECTION (SE-10 / C8.1)
- SK — SPILL KIT (LOCATION TO BE DETERMINED BY CONTRACTOR)
- STABILIZED CONSTRUCTION ENTRANCE (EX. AC PAVING) (TC-1 / C8.1)
- PORTABLE RESTROOM (TBD)
- CONSTRUCTION TRAILER — CONSTRUCTION TRAILER (TBD)

EROSION CONTROL NOTES:

A. TEMPORARY CONSTRUCTION ENTRANCE/EXIT LOCATION SHOWN IS APPROXIMATE. CONTRACTOR TO PROVIDE LOCATION WHERE APPROPRIATE.

B. THIS PLAN REPRESENTS POSSIBLE WATER POLLUTION CONTROL MEASURES INCLUDING EROSION CONTROL AND SEDIMENT CONTROL.

C. EXISTING SURFACES SHALL BE UNDISTURBED TO THE EXTENT PRACTICAL.

D. GROUND WATER SHALL NOT BE DISCHARGED WITH STORM WATER. GROUND WATER DEWATERING OPERATIONS SHALL BE COORDINATED AS NEEDED WITH OWNER.

E. CONTRACTOR SHALL PROVIDE EFFECTIVE SOIL COVER FOR AREAS OF CONSTRUCTION ACTIVITY THAT HAVE BEEN DISTURBED AND ARE NOT SCHEDULED TO BE ACTIVE FOR AT LEAST 14 DAYS.

F. ALL EROSION CONTROL AND SEDIMENT CONTROLS TO BE OBTAINED INSTALLED AND MAINTAINED AS REQUIRED IN PROJECT SWPPP.

G. CONTRACTOR TO INSTALL RUN-ON AND RUN-OFF CONTROL MEASURES ACCORDING TO PLANS OR AS NECESSARY TO ENSURE SEDIMENT IS NOT TRANSPORTED FROM SITE.

H. CONTRACTOR TO PROVIDE BACK-UP EROSION PREVENTION MEASURES (SOIL STABILIZATION) WITH SEDIMENT CONTROL MEASURES SUCH AS STRAW WATTLES, SILT FENCE, GRAVEL INLET FILTERS, AND/OR SEDIMENT TRAPS OR BASINS. ENSURE CONTROL MEASURES ARE ADEQUATE, IN PLACE, AND IN OPERABLE CONDITIONS. SEDIMENT CONTROLS, INCLUDING INLET PROTECTION, ARE NECESSARY BUT SHOULD BE A SECONDARY DEFENSE BEHIND GOOD EROSION CONTROL MEASURES.

I. STOCKPILE LOCATION(S) TO BE DETERMINED BY THE CONTRACTOR. COORDINATE WITH SITE QSP.

J. ALL CONCRETE TRUCKS TO USE CHUTE WASH BUCKETS FOR CONCRETE RINSE, ALL CONCRETE PUMPS TO CAPTURE CONCRETE RINSE IN SECONDARY CONTAINMENT AND PROPERLY DISPOSE.

K. STREET SWEEPING SHALL BE CHECKED DAILY TO ENSURE DEPOSITED SEDIMENT AND DEBRIS DOES NOT ENTER THE STORM DRAIN SYSTEM. USE REGENERATIVE VACUUM STREET CLEANER TO MITIGATE AIR AND WATER POLLUTION.

L. RUNOFF THAT HAS CONTACTED AMENDED SOIL AREAS SHALL NOT BE ALLOWED TO LEAVE THE SITE OR ENTER THE STORM DRAIN SYSTEM.

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PROJECT NAME

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SILICON VALLEY TRI VALLEY CENTRAL VALLEY
SACRAMENTO EAST BAY/SF

EROSION CONTROL PLAN

DATE :	8-14-20
SCALE :	1" = 20'
DRAWN BY :	
CHECKED BY :	ND
ENGINEER :	SY
PROJECT NO :	217040

SHEET NUMBER

C-8.0

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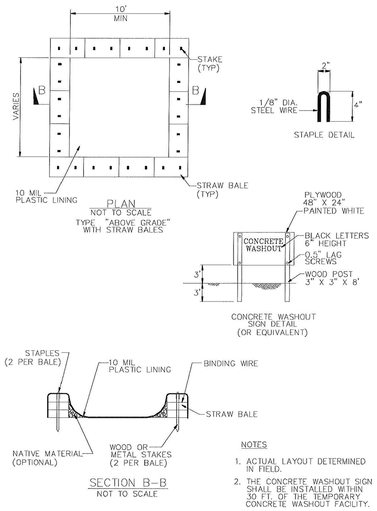
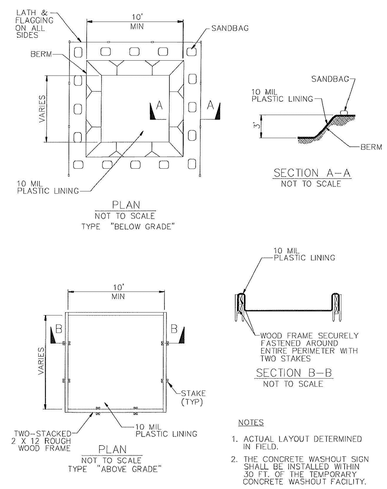
Concrete Waste Management WM-8



NOTES

1. ACTUAL LAYOUT DETERMINED IN FIELD.
2. THE CONCRETE WASHOUT SIGN SHALL BE INSTALLED WITHIN 30 FT. OF THE TEMPORARY CONCRETE WASHOUT FACILITY.

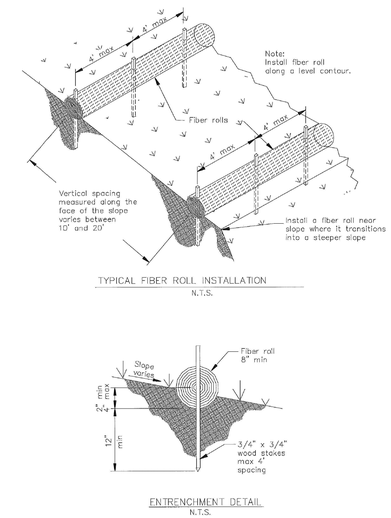
Concrete Waste Management WM-8



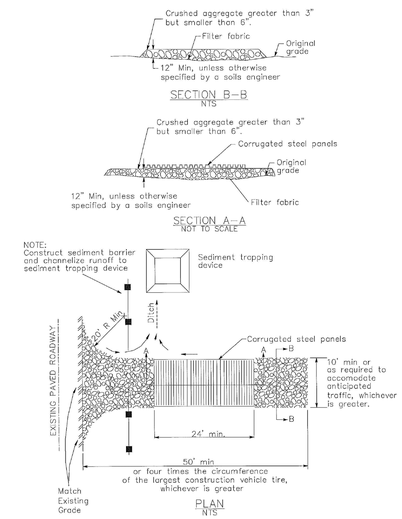
NOTES

1. ACTUAL LAYOUT DETERMINED IN FIELD.
2. THE CONCRETE WASHOUT SIGN SHALL BE INSTALLED WITHIN 30 FT. OF THE TEMPORARY CONCRETE WASHOUT FACILITY.

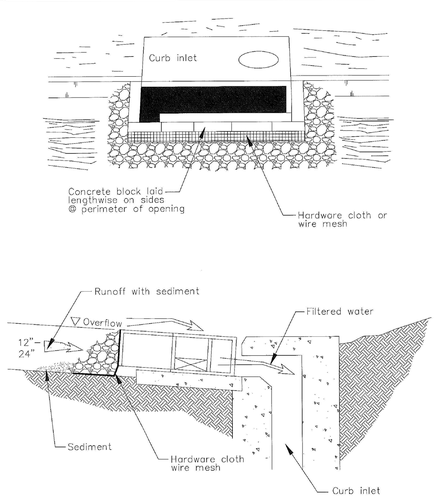
Fiber Rolls SE-5



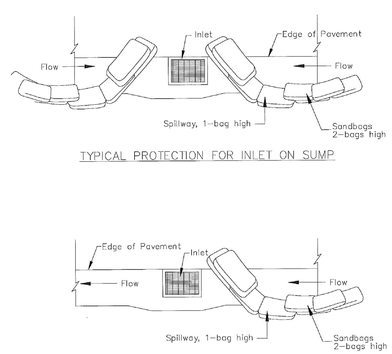
Stabilized Construction Entrance/Exit TC-1



Storm Drain Inlet Protection SE-10



Storm Drain Inlet Protection SE-10

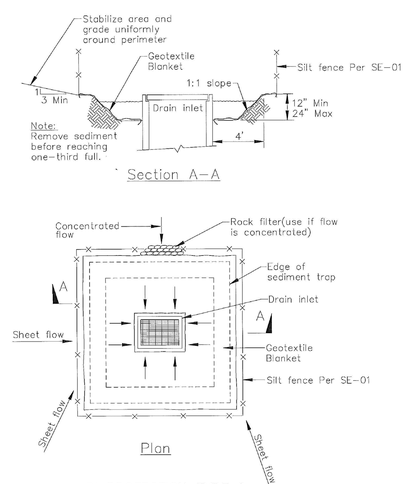


NOTES:

1. Intended for short-term use.
2. Use to inhibit non-storm water flow.
3. Allow for proper maintenance and cleanup.
4. Bags must be removed after adjacent operation is completed
5. Not applicable in areas with high silts and clays without filter fabric.

DI PROTECTION TYPE 3
NOT TO SCALE

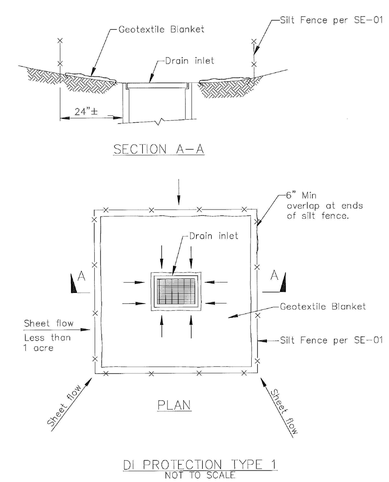
Storm Drain Inlet Protection SE-10



Notes

1. For use in cleared and grubbed and in graded areas.
2. Shape basin so that longest inflow area faces longest length of trap.
3. For concentrated flows, shape basin in 2:1 ratio with length oriented towards direction of flow.

Storm Drain Inlet Protection SE-10



NOTES:

1. For use in areas where grading has been completed and final soil stabilization and seeding are pending.
2. Not applicable in paved areas.
3. Not applicable with concentrated flows.

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PROJECT NAME

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SILICON VALLEY TRI-VALLEY CENTRAL VALLEY
SACRAMENTO EAST BAY/SF

EROSION CONTROL DETAILS

DATE : 8-14-20
SCALE : N.T.S.
DRAWN BY :
CHECKED BY : ND
ENGINEER : SY
PROJECT NO : 217040

SHEET NUMBER

C-8.1

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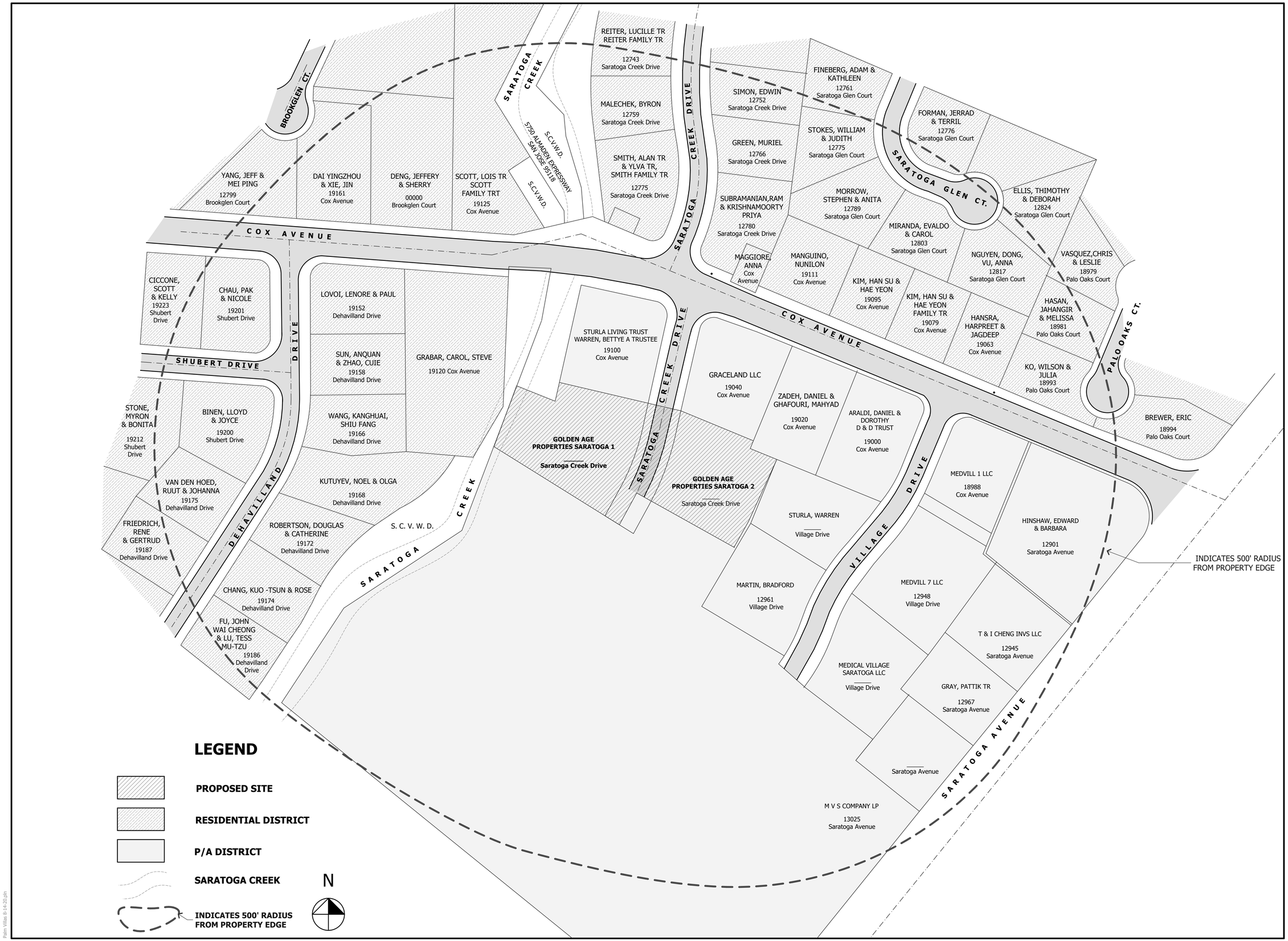

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PROJECT NAME

PALM VILLAS SARATOGA

LOT #1
389-06-020
SARATOGA CREEK DRIVE
SARATOGA, CA 95070

REVISIONS

NEIGHBORHOOD SITE PLAN

DATE : 8-14-20
SCALE : 1" = 60'-0"
DRAWN BY : DZ
CHECKED BY : TS
ARCHITECT : TOM SLOAN
PROJECT NO : 15600

SHEET NUMBER

A-1.0

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PROJECT NAME

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LOT #1
389-06-020
SARATOGA CREEK DRIVE
SARATOGA, CA 95070

REVISIONS

GENERAL SITE DEVELOPMENT PLAN

DATE :	8-14-20
SCALE :	1" = 30'-0"
DRAWN BY :	DZ
CHECKED BY :	TS
ARCHITECT :	TOM SLOAN
PROJECT NO :	15600

SHEET NUMBER

A-1.1

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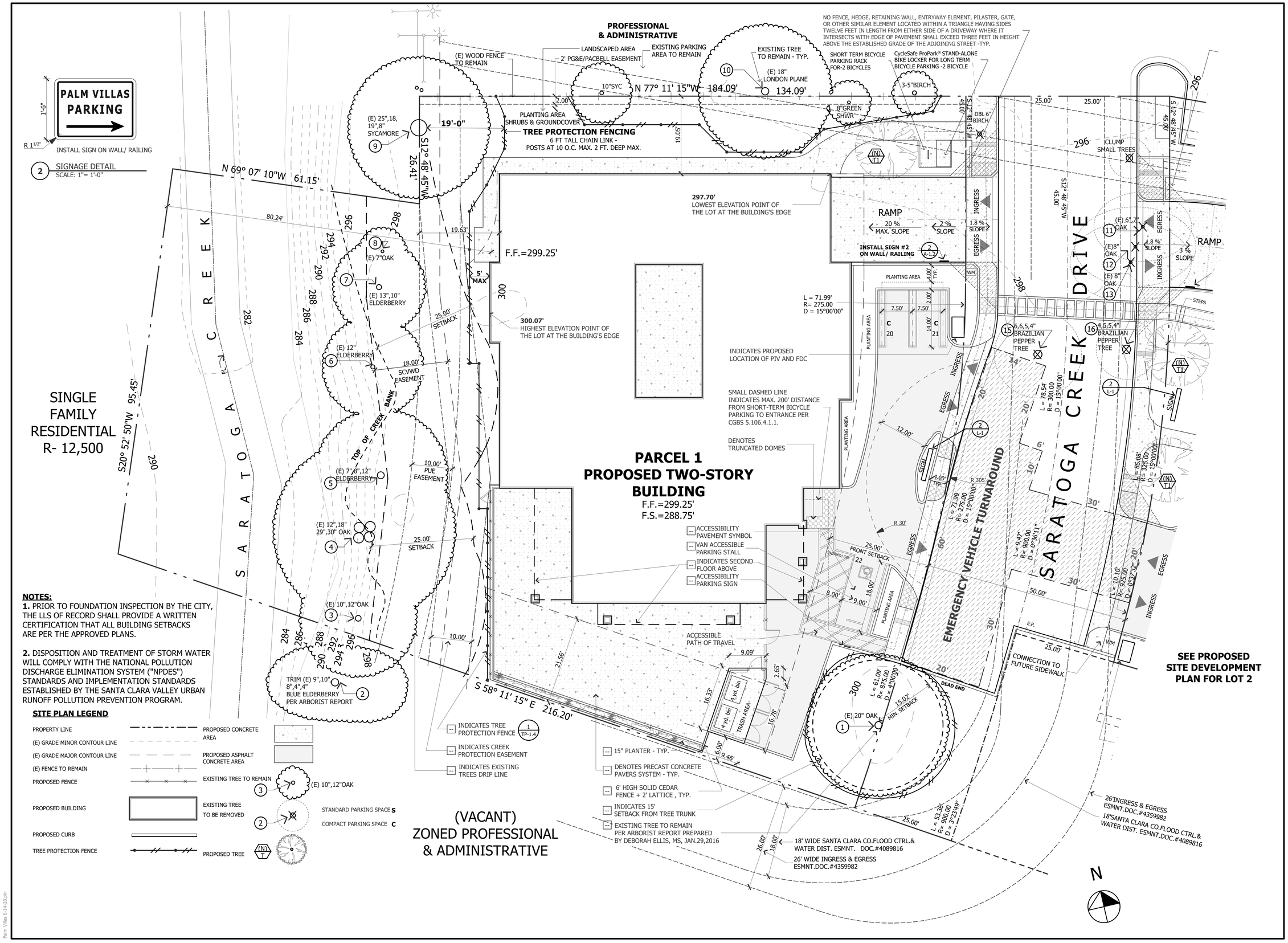
Palm Villas 8-14-20.dwg



NOTES:

1. PRIOR TO FOUNDATION INSPECTION BY THE CITY, THE LLS OF RECORD SHALL PROVIDE A WRITTEN CERTIFICATION THAT ALL BUILDING SETBACKS ARE PER THE APPROVED PLANS.

2. DISPOSITION AND TREATMENT OF STORM WATER WILL COMPLY WITH THE NATIONAL POLLUTION DISCHARGE ELIMINATION SYSTEM ("NPDES") STANDARDS AND IMPLEMENTATION STANDARDS ESTABLISHED BY THE SANTA CLARA VALLEY URBAN RUNOFF POLLUTION PREVENTION PROGRAM.

SITE PLAN LEGEND

PROPERTY LINE
(E) GRADE MINOR CONTOUR LINE
(E) GRADE MAJOR CONTOUR LINE
(E) FENCE TO REMAIN
PROPOSED FENCE
PROPOSED BUILDING
PROPOSED CURB
TREE PROTECTION FENCE
PROPOSED CONCRETE AREA
PROPOSED ASPHALT CONCRETE AREA
EXISTING TREE TO REMAIN
EXISTING TREE TO BE REMOVED
PROPOSED TREE
STANDARD PARKING SPACE S
COMPACT PARKING SPACE C

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PROJECT NAME

PALM VILLAS SARATOGA

LOT #1
389-06-020
SARATOGA CREEK DRIVE
SARATOGA, CA 95070

REVISIONS

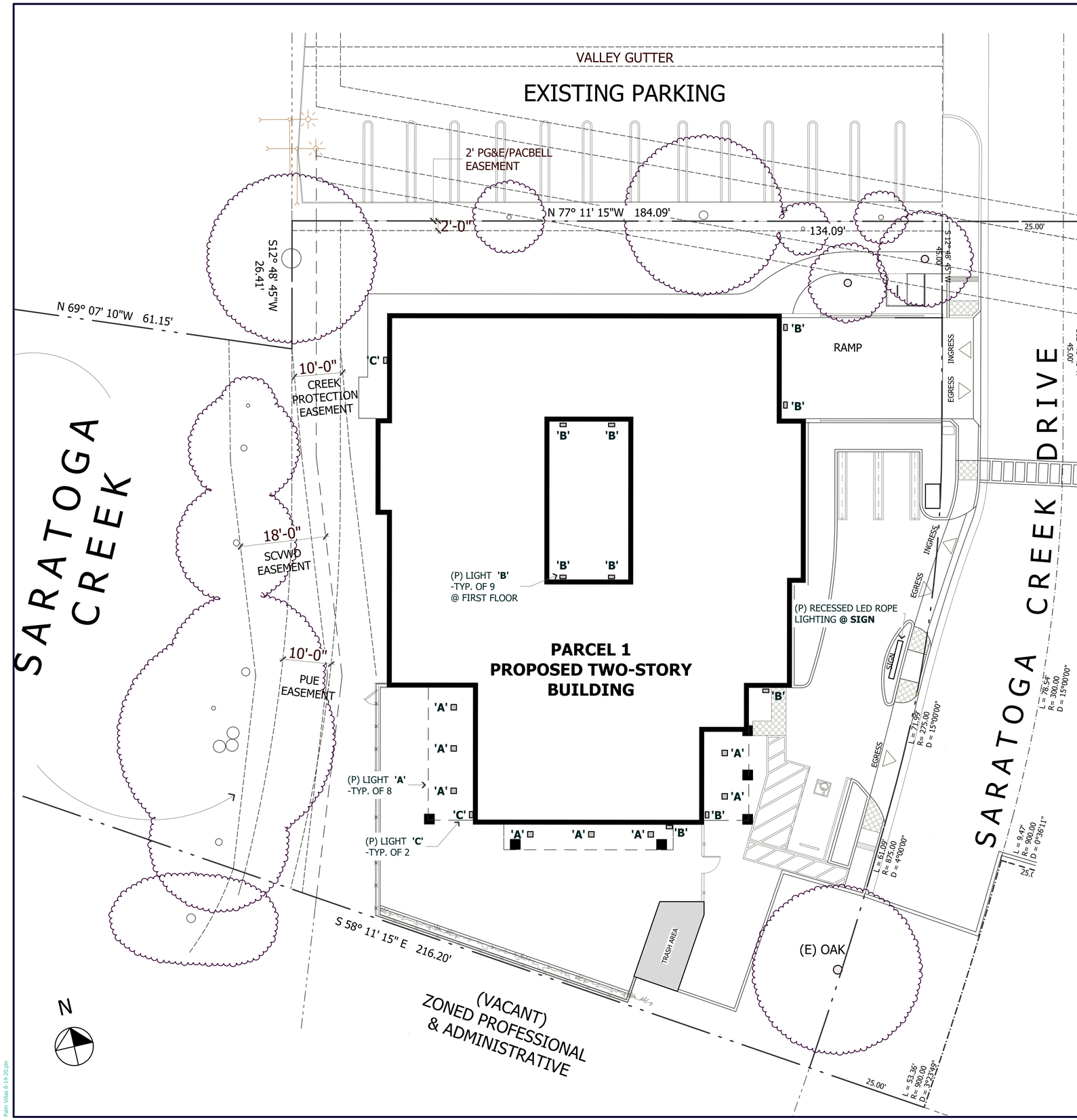
PROPOSED SITE DEVELOPMENT PLAN

DATE :	8-14-20
SCALE :	1" = 10'-0"
DRAWN BY :	DZ
CHECKED BY :	TS
ARCHITECT :	TOM SLOAN
PROJECT NO :	15600

SHEET NUMBER

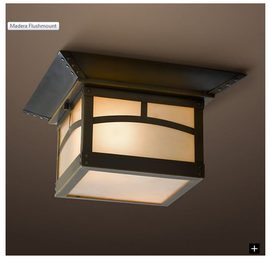
A-1.2

8/18/2020 6:42 PM
Palm Villas 8-14-20.dwn



PROPOSED CEILING FLUSHMOUNT LIGHT 'A'

MADERA FLUSHMOUNT
$229



Madera displays strong, simple lines, serene balance and a frank and forthright use of materials.

HIDE DETAILS -

- Classic Mission design
- Made of steel
- Crafted with visible joinery
- Iridescent art glass diffuses the light
- Rust resistant
- Uses two **LED bulbs**
- Damp UL listed: suitable for use indoors, such as bathrooms where it is subject to moisture, and in sheltered outdoor areas
- Hardwire

DIMENSIONS
13½" sq., 7½"H

PROPOSED WALL MOUNTED LIGHT 'B'

MADERA POCKET SCONCE
$169

Madera displays strong, simple lines, serene balance and a frank and forthright use of materials.

HIDE DETAILS -

- Made of steel
- Crafted with visible joinery
- Iridescent art glass diffuses the light
- Pyramid roof
- Uses one **LED bulb**
- Wet UL listed: suitable for use indoors or outdoors, including areas that receive direct contact with rain, snow or excessive moisture
- Hardwire
- Hangs vertically, shade pointing down

DIMENSIONS
9"W x 6"D x 10"H

PROPOSED WALL MOUNTED LIGHT 'C'

HINKLEY LIGHTING 1660BZ-LED BRONZE 16.75" HEIGHT ADA COMPLIANT DARK SKY LED OUTDOOR WALL SCONCE - LUNA COLLECTION

LUNA
1660BZ
MEDIUM WALL MOUNT LANTERN
Luna is a modern collection of solid aluminum fixtures offered in a unique combination of contemporary styles, including sleek wall lanterns. Luna also offers chic pocket wall sconces and compact ceiling mounts that are ideal for indoors or out.

DETAILS	
FINISH:	Bronze
MATERIAL:	Extruded Aluminum
GLASS:	Etched Glass Lens

DIMENSIONS	
WIDTH:	6"
HEIGHT:	16"
WEIGHT:	5 lbs.
BACK PLATE:	6"W X 16"H
EXTENSION:	3.5"
TOP TO OUTLET:	10"

LIGHT SOURCE	
LIGHT SOURCE:	Socket
WATTAGE:	2-20w GU10 *Included
VOLTAGE:	120v

PRODUCT DETAILS:

- Suitable for use in wet (interior direct splash and outdoor direct rain or sprinkler) locations as defined by NEC and CEC. Meets United States UL Underwriters Laboratories & CSA Canadian Standards Association Product Safety Standards
- Fixture is Dark Sky compliant and engineered to minimize light glare upward into the night sky.
- Fixture is ADA compliant and adheres to the standards and guidelines listed by the Americans with Disabilities Act.
- 2 year finish warranty
- Bold lines and a clean, minimalist style complement contemporary architecture
- Warm rich light bronze tone

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PROJECT NAME

PALM VILLAS SARATOGA

LOT #1
389-06-020
SARATOGA CREEK DRIVE
SARATOGA, CA 95070

REVISIONS

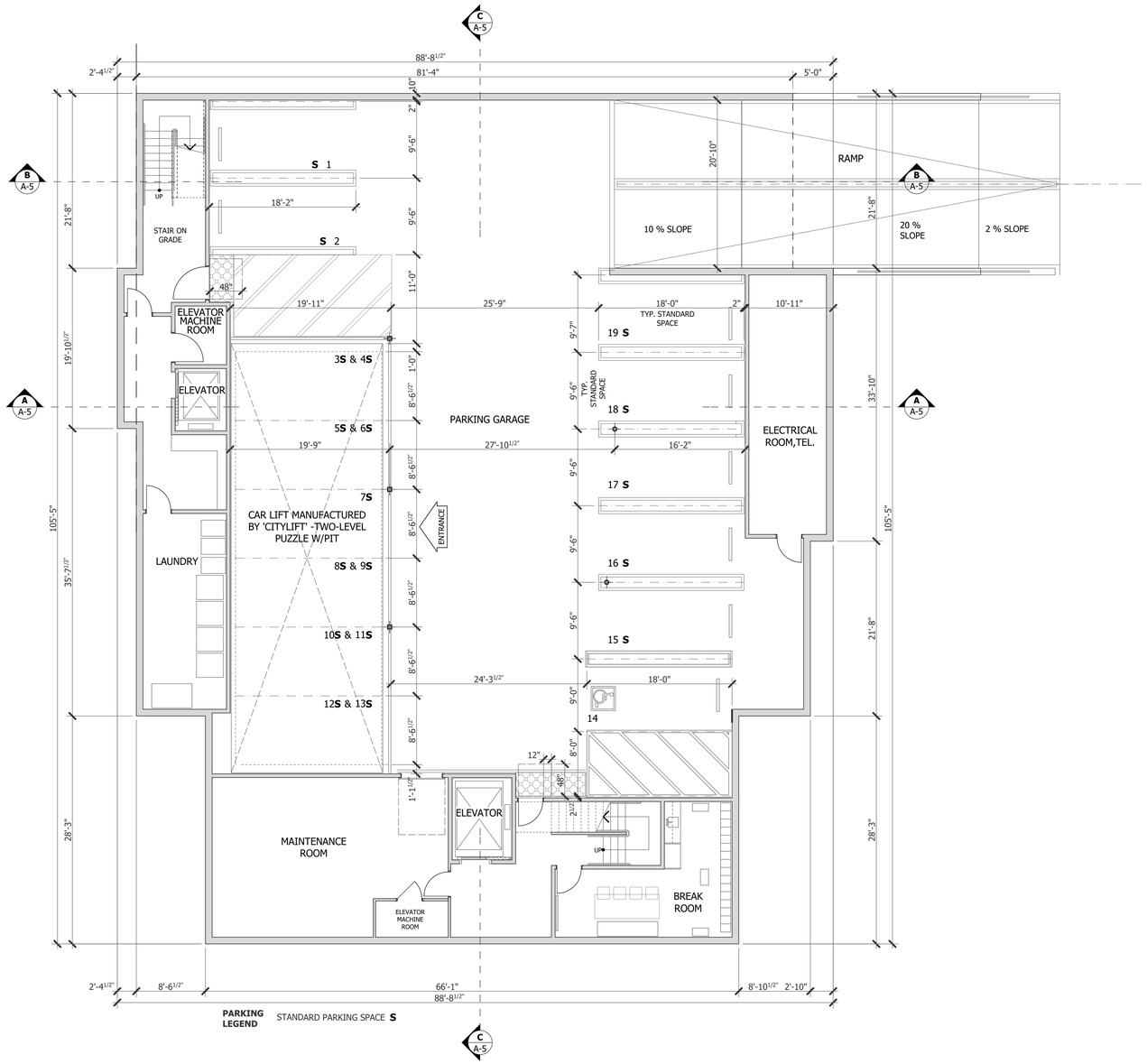
PROPOSED LIGHTING PLAN

DATE : 8-14-20
SCALE : 1" = 10'-0"
DRAWN BY : DZ
CHECKED BY : TS
ARCHITECT : TOM SLOAN
PROJECT NO : 15600

SHEET NUMBER

A-1.3

8/18/2020 6:42 PM
Palm Villas 8-14-20.pln



PARKING GARAGE

BASEMENT AREA: 8,408 SQ. FT.

N

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PROJECT NAME

PALM VILLAS SARATOGA

LOT #1
389-06-020
SARATOGA CREEK DRIVE
SARATOGA, CA 95070

REVISIONS

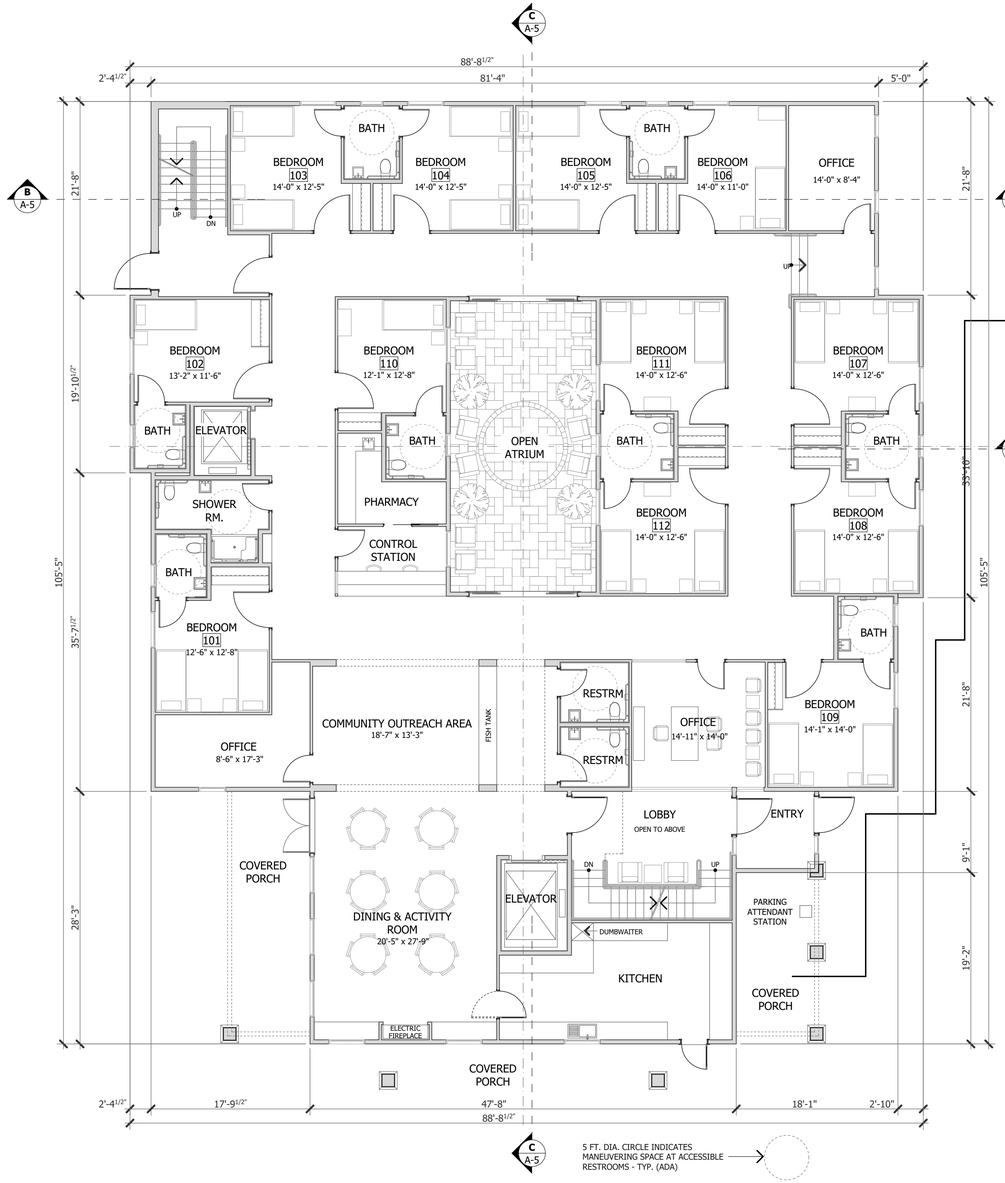
PROPOSED LOT 1 PARKING GARAGE

DATE : 8-14-20
SCALE : 1/8" = 1'-0"
DRAWN BY : TS / DZ
CHECKED BY : TS
ARCHITECT : TOM SLOAN
PROJECT NO : 15600

SHEET NUMBER

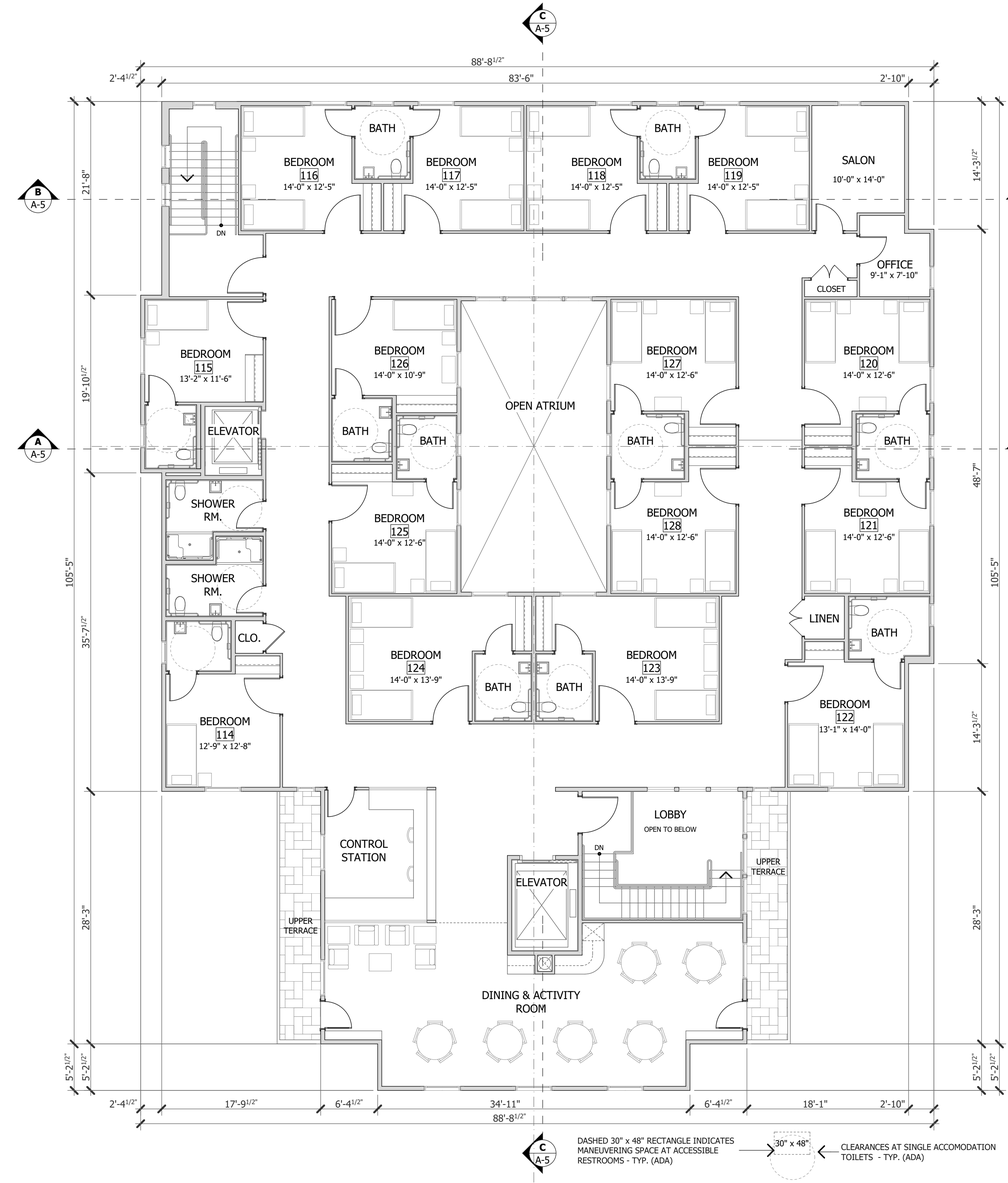
A-2.0

8/18/2020 6:42 PM
Palm Villas 8-14-20.pln



FIRST FLOOR PLAN

FLOOR AREA: 7,440 SQ. FT.



SECOND FLOOR PLAN

FLOOR AREA: 7,626 SQ. FT.

N

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PROJECT NAME

PALM VILLAS SARATOGA

LOT #1
389-06-020
SARATOGA CREEK DRIVE
SARATOGA, CA 95070

REVISIONS

PROPOSED LOT 1 FLOOR PLANS

DATE : 8-14-20
SCALE : 1/8" = 1'-0"
DRAWN BY : TS / DZ
CHECKED BY : TS
ARCHITECT : TOM SLOAN
PROJECT NO : 15600

SHEET NUMBER

A-2.1

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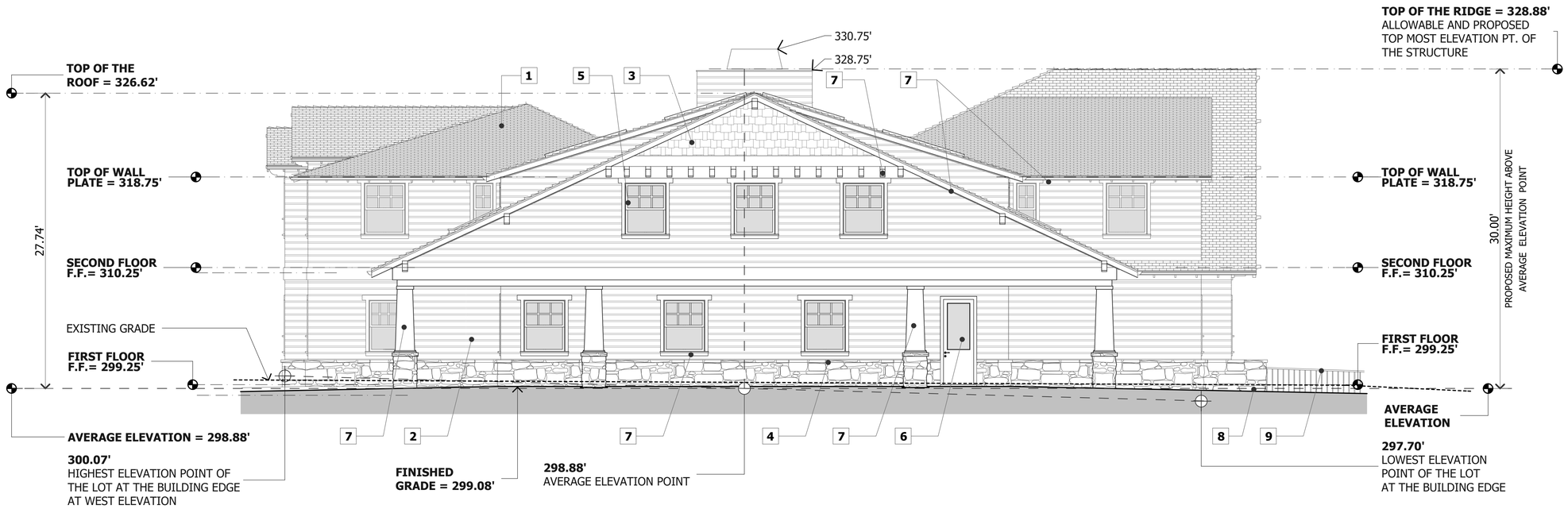
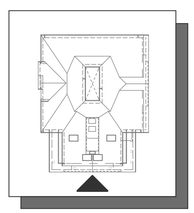
Palm Villas 8-14-20.pln

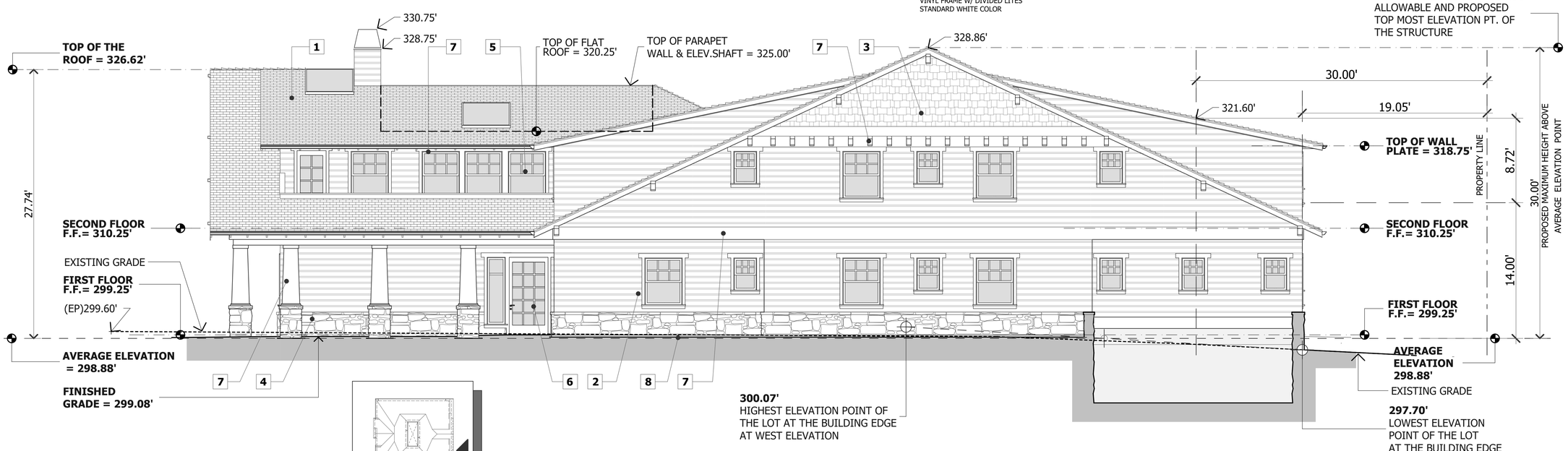


SOUTH ELEVATION

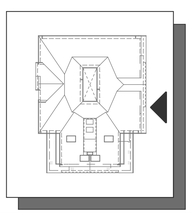


EXTERIOR FINISHES

1	ROOF:	CLASS 'A' COMPOSITION SHINGLE BY **'GAF'** - 'TIMBERLINE' NATURAL SHADOW - CHARCOAL COLOR	6	DOORS:	ALUMINUM CLAD WOOD FRAMED W/ DIVIDED LITES WHITE COLOR
2	EXTERIOR WALLS:	**'BORAL TRUEXTERIOR'** CRAFTSMAN COLLECTION 1 x 8 HORIZONTAL SIDING, CHANNEL BEVEL W/ GREY PAINT -**'KELLY MOORE'** -KM4788-1 EVENING DOVE	7	WINDOW AND DOOR TRIM, POSTS, TRELLIS, PICKETS, RAFTER TAILS, RAILINGS, GUTTERS & DOWNSPOUTS	**'BORAL TRUEXTERIOR TRIM'** WHITE PAINT -**'SHERWIN-WILLIAMS'** -WESTHIGHLAND SW 7566
3	EXTERIOR WALLS:	CEDAR SHINGLES, W/ GREY PAINT -**'KELLY MOORE'** -KM4788-1 EVENING DOVE	8	DRIVEWAY, WALKWAYS AND PATIOS	CONCRETE / ASPHALT CONCRETE PER SITE PLAN
4	EXTERIOR WALLS WAINSCOT:	**'NORSTONE'** - CHARCOAL XL PANEL	9	GUARDRAIL	IRON - POWDER COATED BLACK COLOR
5	WINDOWS:	**'MILGARD'** VINYL FRAME W/ DIVIDED LITES STANDARD WHITE COLOR			



EAST ELEVATION



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PROJECT NAME

PALM VILLAS SARATOGA

LOT #1
389-06-020
SARATOGA CREEK DRIVE
SARATOGA, CA 95070

REVISIONS

PROPOSED ELEVATIONS LOT 1

DATE :	8-14-20
SCALE :	3/16" = 1'-0"
DRAWN BY :	DZ
CHECKED BY :	TS
ARCHITECT :	TOM SLOAN
PROJECT NO :	15600

SHEET NUMBER

A-3.0

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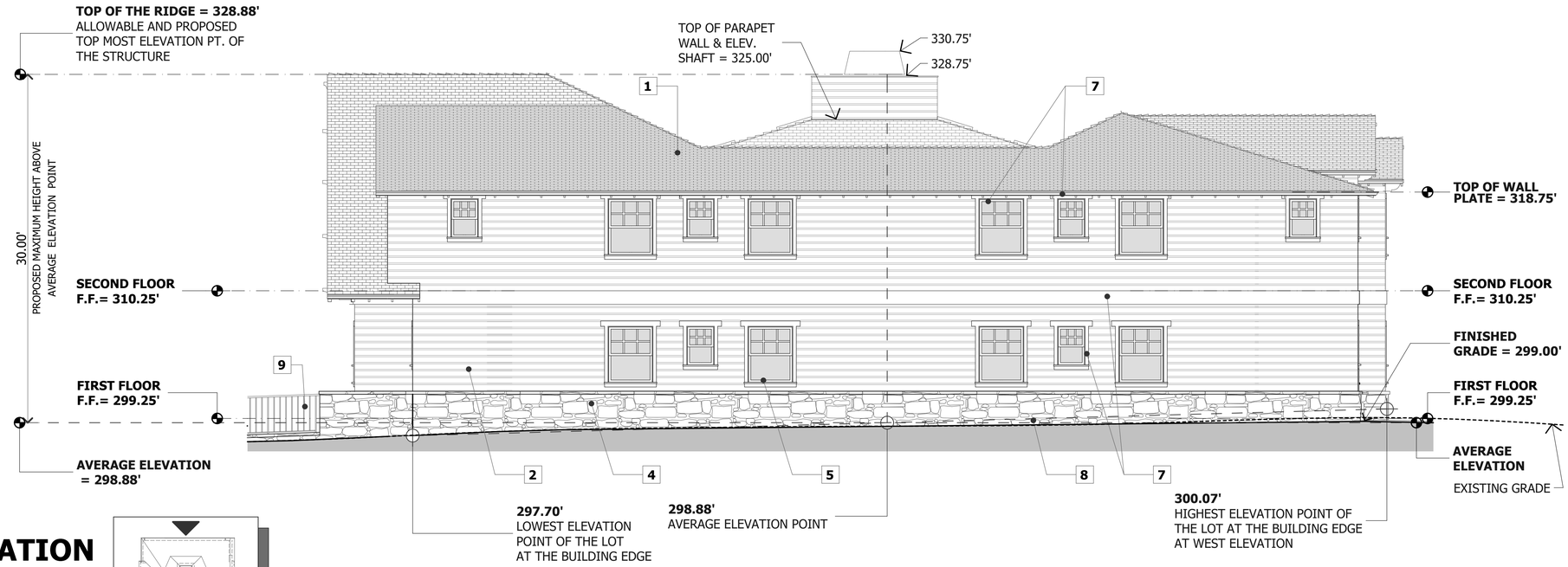
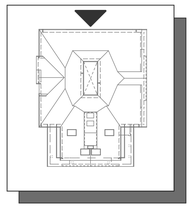
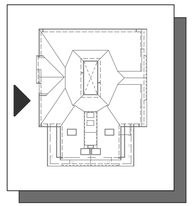
Palm Villas 8-14-20.dwn



NORTH ELEVATION

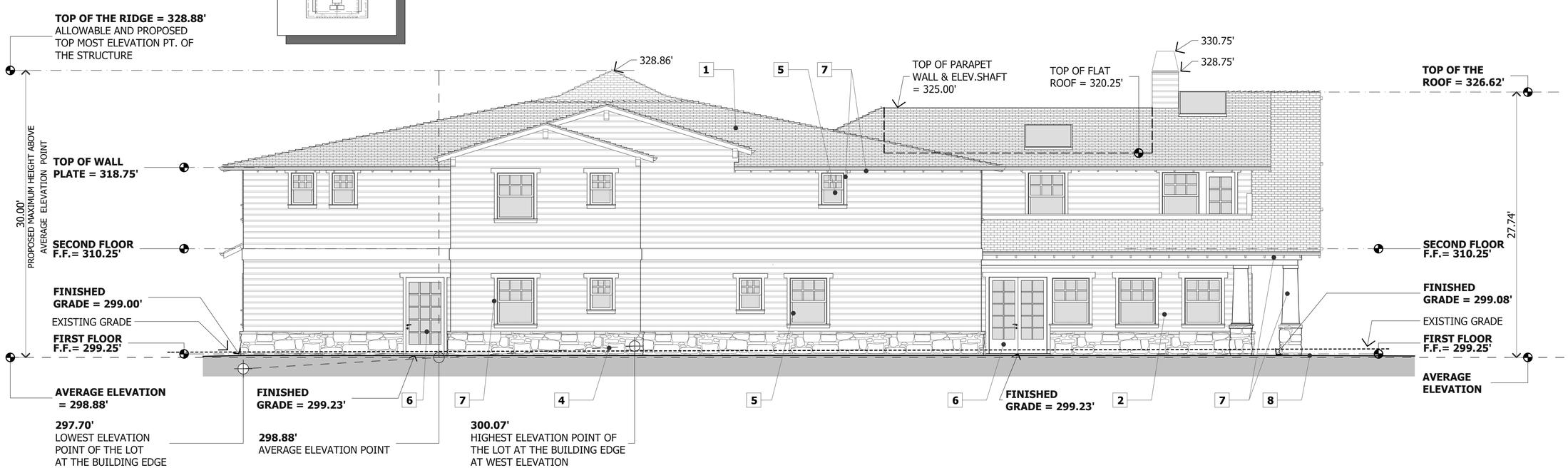




WEST ELEVATION

EXTERIOR FINISHES

1	ROOF:	CLASS 'A' COMPOSITION SHINGLE BY '**GAF**' - 'TIMBERLINE' NATURAL SHADOW - CHARCOAL COLOR	6	DOORS:	ALUMINUM CLAD WOOD FRAMED W/ DIVIDED LITES WHITE COLOR
2	EXTERIOR WALLS:	'**BORAL TRUEXTERIOR**' CRAFTSMAN COLLECTION 1 x 8 HORIZONTAL SIDING, CHANNEL BEVEL W/ GREY PAINT -'**KELLY MOORE**' -KM4788-1 EVENING DOVE	7	WINDOW AND DOOR TRIM, POSTS, TRELLIS, PICKETS, RAFTER TAILS, RAILINGS, GUTTERS & DOWNSPOUTS	'**BORAL TRUEXTERIOR TRIM**' WHITE PAINT -'**SHERWIN-WILLIAMS**' -WESTHIGHLAND SW 7566
3	EXTERIOR WALLS:	CEDAR SHINGLES, W/ GREY PAINT -'**KELLY MOORE**' -KM4788-1 EVENING DOVE	8	DRIVEWAY, WALKWAYS AND PATIOS	CONCRETE / ASPHALT CONCRETE PER SITE PLAN
4	EXTERIOR WALLS WAINSCOT:	'**NORSTONE**' - CHARCOAL XL PANEL	9	GUARDRAIL	IRON - POWDER COATED BLACK COLOR
5	WINDOWS:	'**MILGARD**' VINYL FRAME W/ DIVIDED LITES STANDARD WHITE COLOR			



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PROJECT NAME

PALM VILLAS SARATOGA

LOT #1
389-06-020
SARATOGA CREEK DRIVE
SARATOGA, CA 95070

REVISIONS

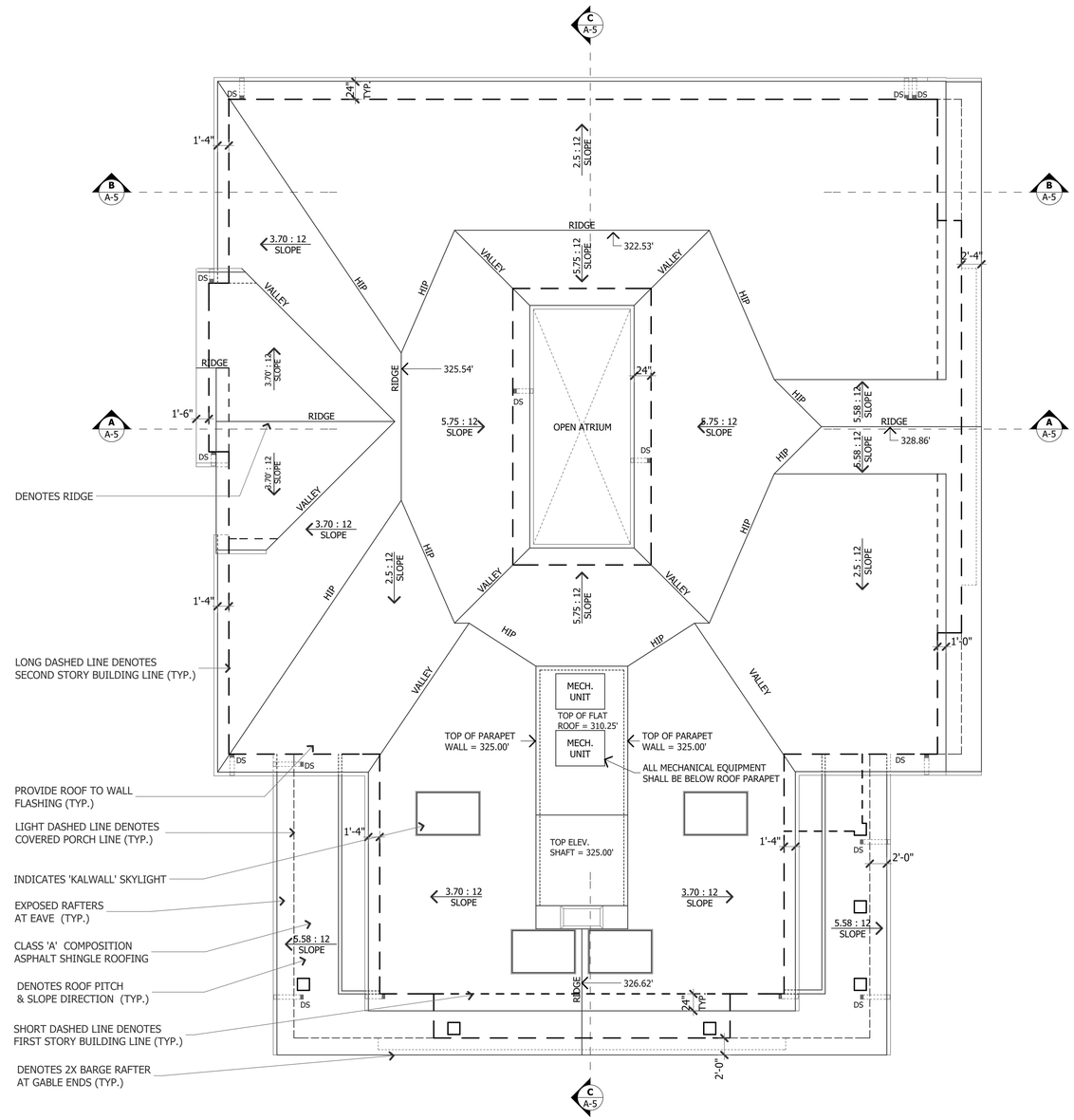
PROPOSED ELEVATIONS LOT 1

DATE :	8-14-20
SCALE :	3/16" = 1'-0"
DRAWN BY :	DZ
CHECKED BY :	TS
ARCHITECT :	TOM SLOAN
PROJECT NO :	15600

SHEET NUMBER

A-3.1

8/18/2020 6:42 PM
Palm Villas 8-14-20.pln



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PROJECT NAME

PALM VILLAS SARATOGA

LOT #1
389-06-020
SARATOGA CREEK DRIVE
SARATOGA, CA 95070

REVISIONS

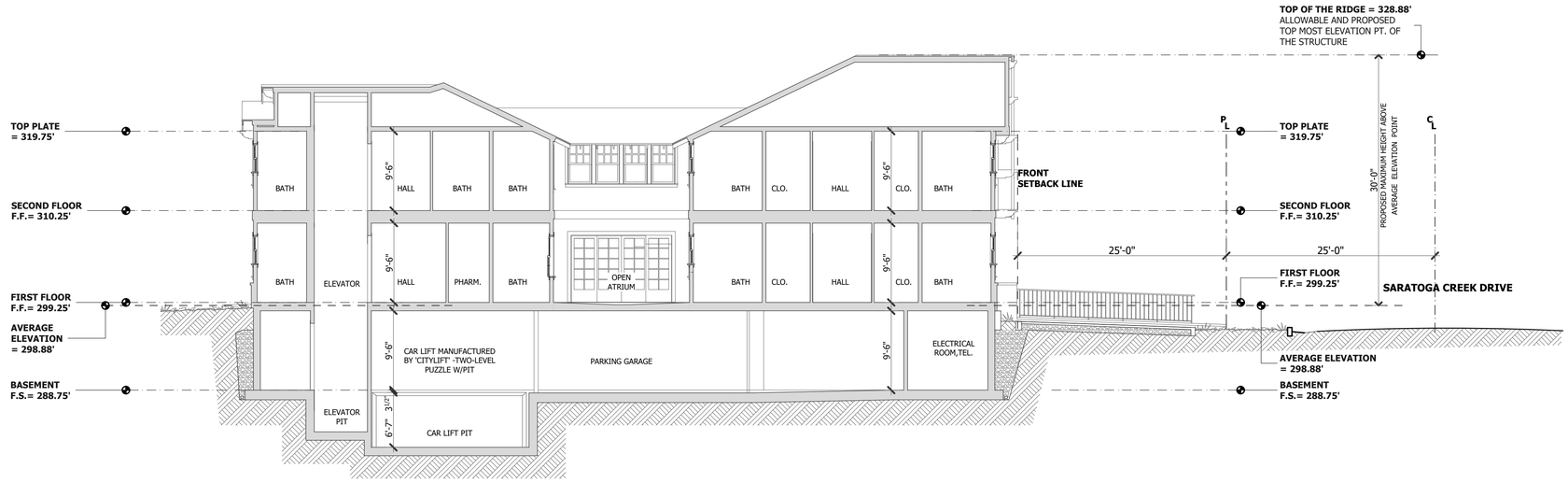
PROPOSED ROOF PLAN LOT 1

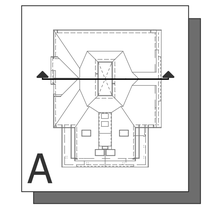
DATE :	8-14-20
SCALE :	1/8" = 1'-0"
DRAWN BY :	DZ
CHECKED BY :	TS
ARCHITECT :	TOM SLOAN
PROJECT NO :	15600

SHEET NUMBER

A-4.0

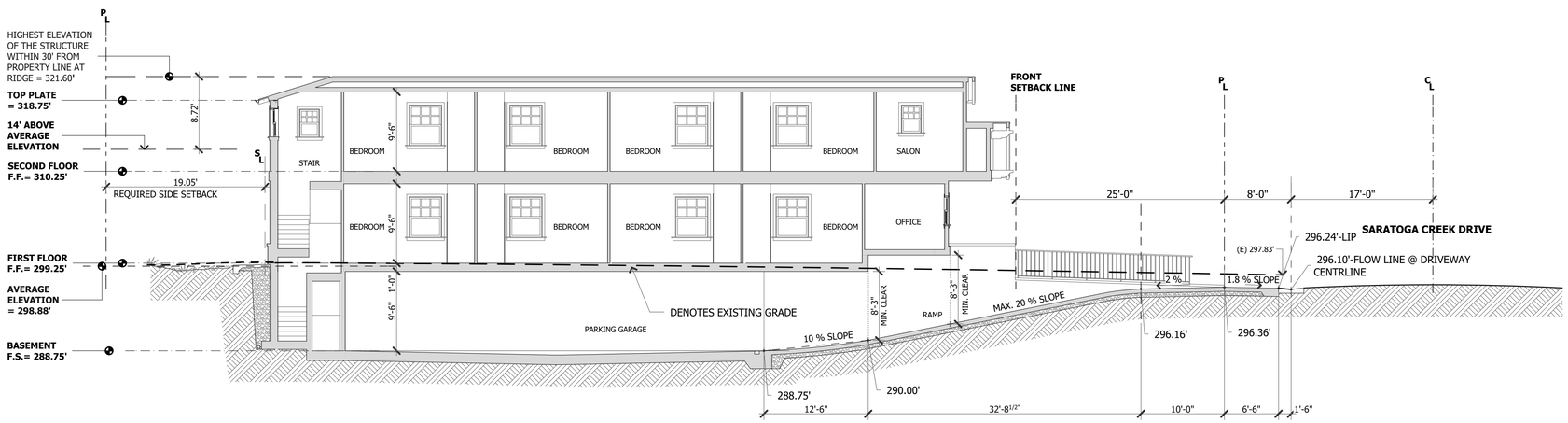
8/18/2020 6:42 PM
Palm Villas 8-14-20.pln

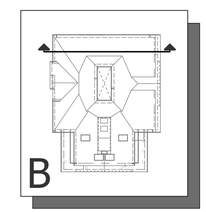




SECTION 'A'

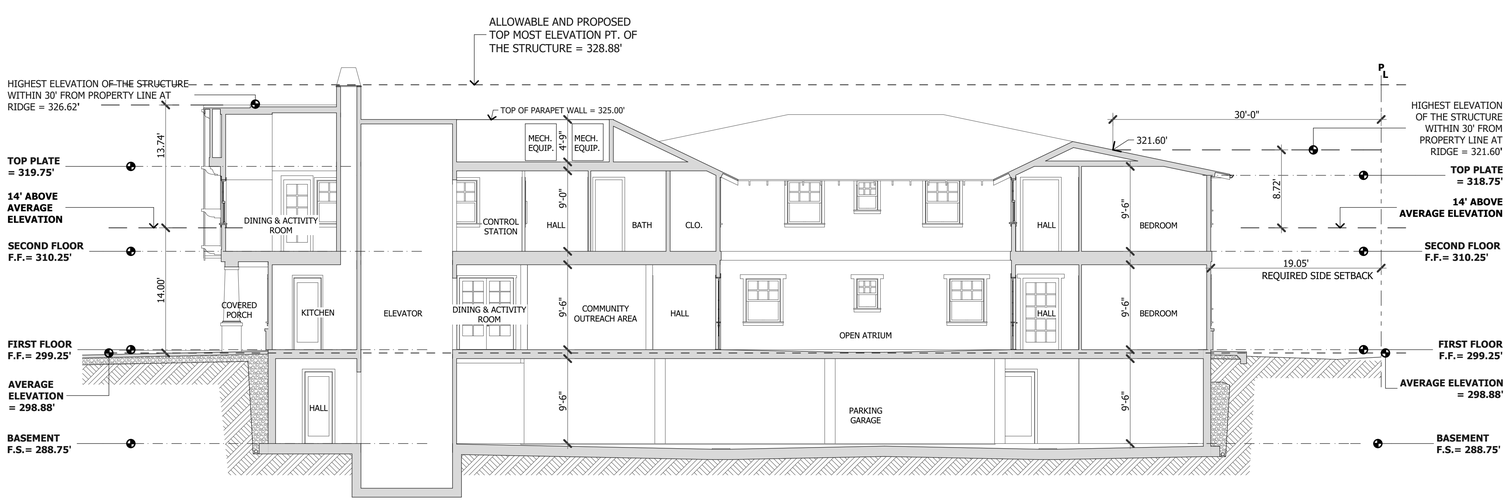
SCALE: 1/8" = 1'-0"

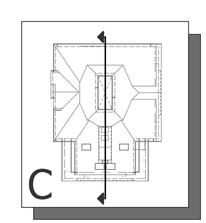




SECTION 'B'

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





SECTION 'C'

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

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PROJECT NAME

PALM VILLAS SARATOGA

LOT #1
389-06-020
SARATOGA CREEK DRIVE
SARATOGA, CA 95070

REVISIONS

CROSS SECTIONS LOT 1

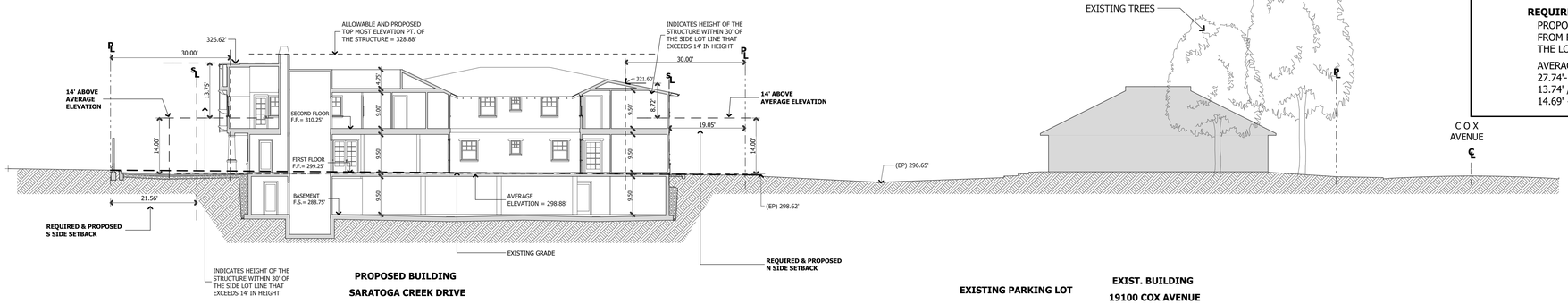
SECTION 'A'
SECTION 'B'
SECTION 'C'

DATE : 8-14-20
SCALE : AS NOTED
DRAWN BY : DZ
CHECKED BY : TS
ARCHITECT : TOM SLOAN
PROJECT NO : 15600

SHEET NUMBER

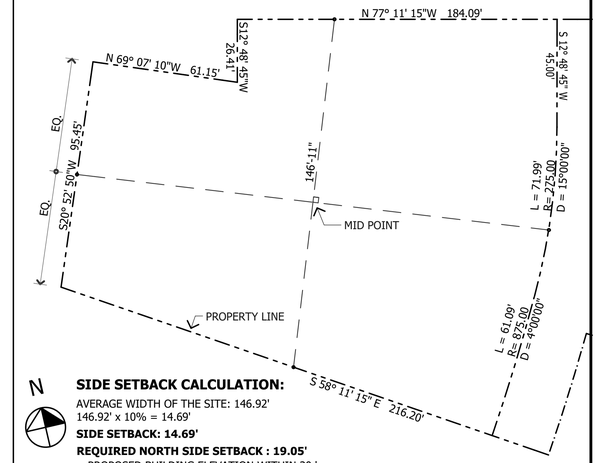
A-5.0

8/18/2020 6:42 PM
Palm Villas 8-14-20.dgn



SITE SECTION '1'

SCALE: 1/16" = 1'-0"



N

SIDE SETBACK CALCULATION:

AVERAGE WIDTH OF THE SITE: 146.92'
146.92' x 10% = 14.69'

SIDE SETBACK: 14.69'

REQUIRED NORTH SIDE SETBACK : 19.05'

PROPOSED BUILDING ELEVATION WITHIN 30 '
FROM PROPERTY LINE AT NORTH SIDE OF
THE LOT: 321.60' (SEE SITE SECTION '1' - SHEET A-5.1)

AVERAGE ELEVATION: 298.88'
22.72'-14.00' = 8.72'
8.72' / 2 = 4.36'
14.69' + 4.36' = 19.05'

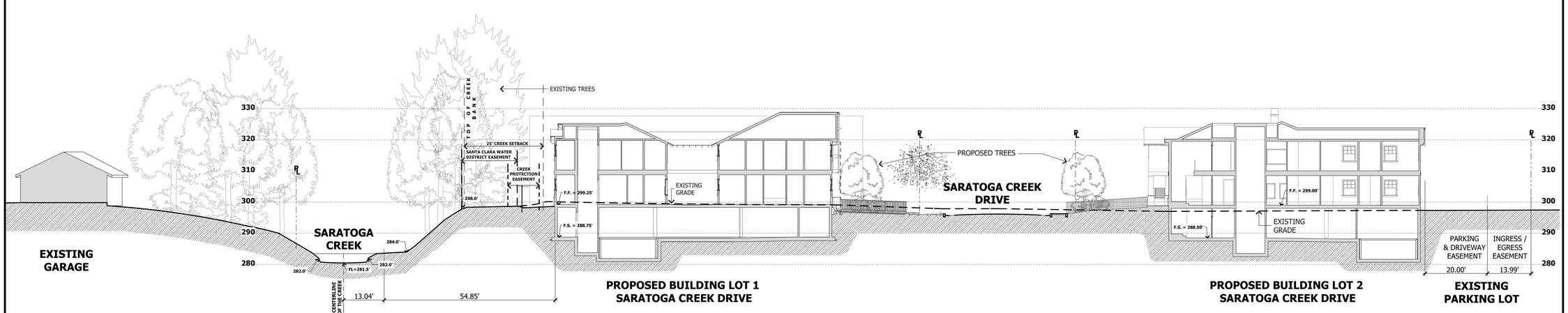
REQUIRED SOUTH SIDE SETBACK: 21.56'

PROPOSED BUILDING ELEVATION WITHIN 30 '
FROM PROPERTY LINE AT SOUTH SIDE OF
THE LOT: 326.62' (SEE SITE SECTION '1' - SHEET A-5.1)

AVERAGE ELEVATION: 298.88'
27.74'-14.00' = 13.74'
13.74' / 2 = 6.87'
14.69' + 6.87' = 21.56'

SETBACK CALCULATION

SCALE: 1" = 30'-0"



SITE SECTION '2'

SCALE: 1/16" = 1'-0"

METRO DESIGN GROUP

ARCHITECTURE- PLANNING- INTERIORS

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PROJECT NAME

PALM VILLAS SARATOGA

LOT #1
389-06-020
SARATOGA CREEK DRIVE
SARATOGA, CA 95070

REVISIONS

SECTION 2
LOT 1

SETBACK CALCULATION

DATE : 8-14-20

SCALE : AS NOTED

DRAWN BY : DZ

CHECKED BY : TS

ARCHITECT : TOM SLOAN

PROJECT NO : 15600

SHEET NUMBER

A-5.1

8/18/2020 6:42 PM
Palm Villas 8-14-20.dwn

LEGEND

- PROPERTY LINE
- (E) GRADE CONTOUR LINE
- PROPOSED GRADE CONTOUR LINE (516)
- FENCE
- (E) WOOD FENCE TO REMAIN
- PROPOSED BUILDING
- PROPOSED CONCRETE AREA
- PROPOSED ASPHALT
- EXISTING TREE TO REMAIN (1) (E) 8" OAK
- PROPOSED SHRUBS
- PROPOSED GROUNDCOVER
- PROPOSED IRRIGATED AREA
- DROUGHT RESISTANT NATIVE GRASSES AND GROUND COVERS NON-IRRIGATED AREAS
- PROPOSED TREE (T2 1)
- EXISTING TREE TO BE REMOVED (2)

PLANT LEGEND

KEY	BOTANICAL NAME	COMMON NAME	SIZE	QTY	IRRIGATION
	DROUGHT TOLERANT SHRUBS / GRASSES				471 SQ. FT. OF IRRIGATED AREA
S1	LAVANDULA ANGUSTIFOLIA	LAVENDER	1 GAL	8	
S2	SALVIA CLEVELANDII	SAGE	1 GAL	15	
S3	AGAPANTHUS	LILY-OF-THE-NILE	1 GAL	18	
	GROUND COVER				
G1	VINCA MINOR	DWARF PERIWINKLE	FLATS	12" O.C.	
G2	MULCH	-	-	-	
	TREES				
T1	LAGERSTROEMIA INDICA	CRAPE MYRTLE	36" BOX	1	
	NATIVE DROUGHT TOLERANT GRASSES AND GROUND COVERS				NON-IRRIGATED AREAS
N1	ACHILLEA MILLEFOLIUM	COMMON YARROW	1 GAL	IN FIELD	
N2	ARTEMISIA CALIFORNICA - ' MONTARA'	CALIFORNIA SAGEBRUSH	1 GAL	IN FIELD	
N3	CEANOTHUS - 'YANKEE POINT'	WILD LILAC	1 GAL	IN FIELD	
N4	DYAMONDIA MARGARETAE	DYAMONDIA SILVER CARPET	FLATS	12" O.C.	
N5	MISCELLANEOUS SUCCULENTS		FLATS	12" O.C.	

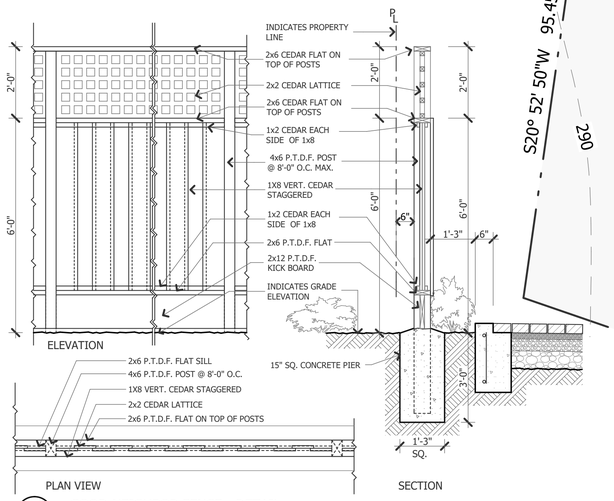
EXISTING TREE LEGEND

PER ARBORIST REPORT DATED JANUARY 29, 2016 PREPARED BY DEBORAH ELLIS, MS

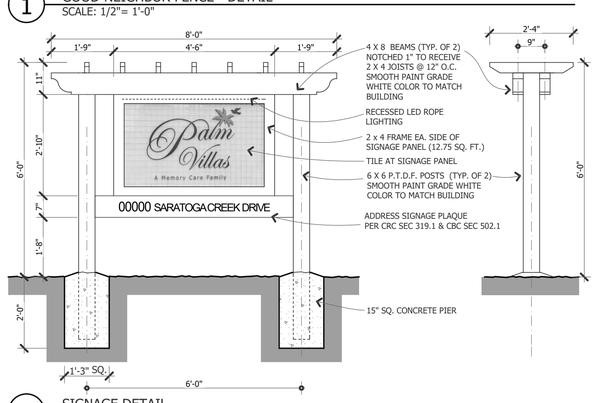
TREE NO.	TREE NAME	TREE SIZE	STATUS
1	COAST LIVE OAK	20"	(E) TO REMAIN
2	BLUE ELDERBERRY	9,10,8,4,4,	TRIM (E) PER ARBORIST REPORT
3	OAK	10",12"	(E) TO REMAIN
4	OAK	12",18", 29",30"	(E) TO REMAIN
5	ELDERBERRY	7",8",12"	(E) TO REMAIN
6	ELDERBERRY	12"	(E) TO REMAIN
7	ELDERBERRY	13",10"	(E) TO REMAIN
8	OAK	7"	(E) TO REMAIN
9	SYCAMORE	25",18,19",8"	(E) TO REMAIN
10	LONDON PLANE	18"	(E) TO REMAIN
15	BRAZILIAN PEPPER	6",6",5",4"	(E) TO BE REMOVED $ 4,250, IN RIGHT OF WAY

SEE TREE PRESERVATION DETAIL 1/C-2, SHEET C-1 FOR LOCATION AND ARBORIST REPORT FOR MORE INFORMATION.

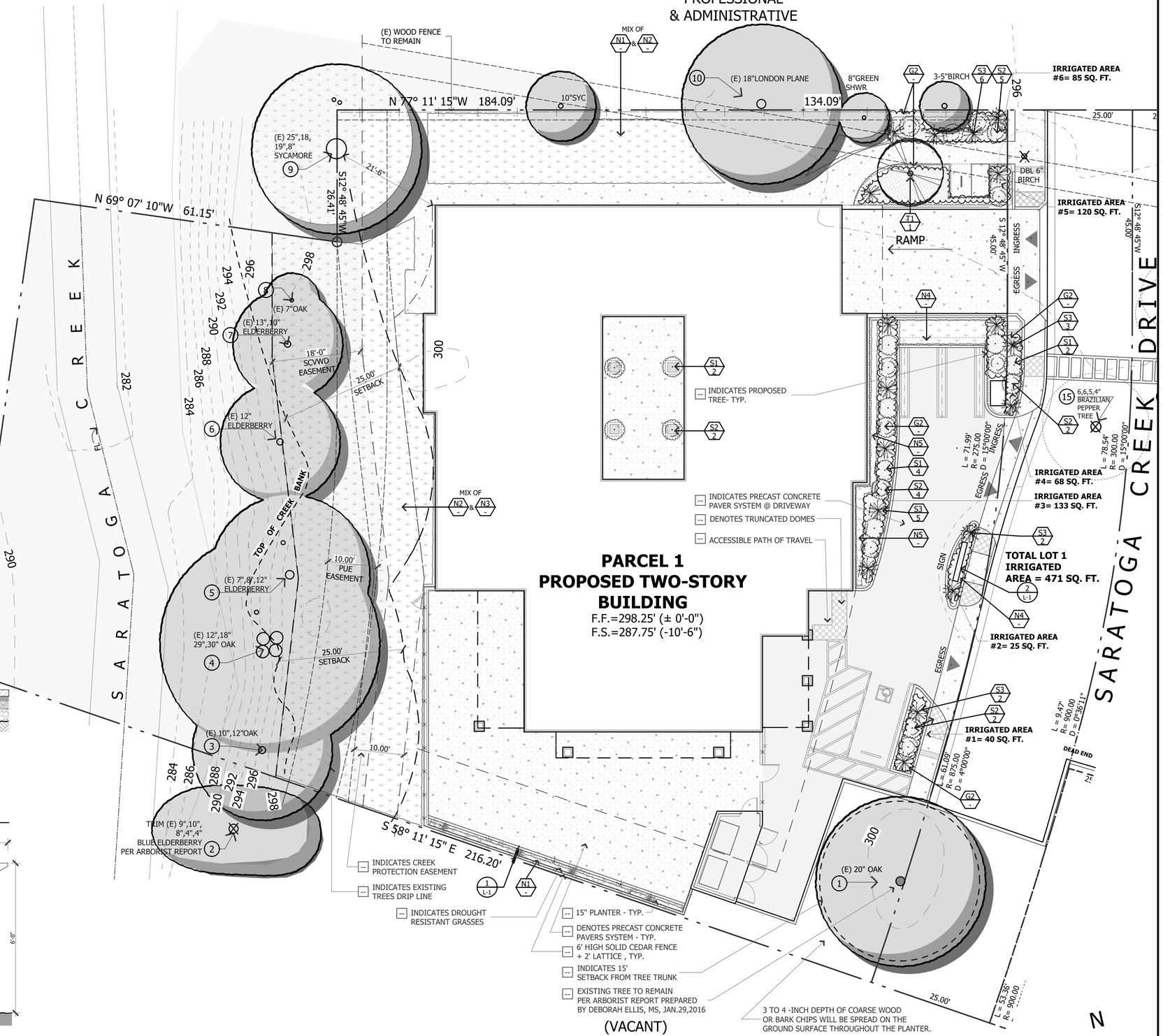
(LOT 1 & LOT 2)
TOTAL VALUE OF THE TREES TO BE REMOVED: $28,850.
TOTAL VALUE OF PROPOSED TREES: $ 5,400.
PER ARBORIST REPORT: 3 (TREES - 48" BOX SIZE) x ($ 900 x 2) = $ 5, 400
PARK -IN- LIEU FEE: $23,450.



1 GOOD NEIGHBOR FENCE - DETAIL
SCALE: 1/2"= 1'-0"



2 SIGNAGE DETAIL
SCALE: 1/2"= 1'-0"



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PROJECT NAME

PALM VILLAS SARATOGA

LOT #1
389-06-020
SARATOGA CREEK DRIVE
SARATOGA, CA 95070

REVISIONS

LANDSCAPE PLAN LOT 1

LEGEND
DETAIL

DATE :	8-14-20
SCALE :	1" = 10'-0"
DRAWN BY :	DZ
CHECKED BY :	TS
ARCHITECT :	TOM SLOAN
PROJECT NO :	15600

SHEET NUMBER

L-1.0

8/18/2020 6:42 PM
Palm Villas 8-14-20.pln

ARBORIST REPORT

Tree Inventory, Tree Descriptions and Recommendations Relative to Proposed Construction

Palm Villas, Saratoga (Lots 1 & 2)

Saratoga Creek Drive at Cox Avenue,
Saratoga, California

Prepared for:

Michael Sneper
3333 S. Bascom Avenue
Campbell, CA 95008
Address2

Prepared by:
Deborah Ellis, MS.
Consulting Arborist & Horticulturist
Registered Consulting Arborist #305, American Society of Consulting Arborists
Board Certified Master Arborist WE-0457B, International Society of Arboriculture
Certified Professional Horticulturist #30022, American Society for Horticultural Science

JANUARY 29, 2016

Report History: This is my second report for this project. My first report was dated July 27, 2015.

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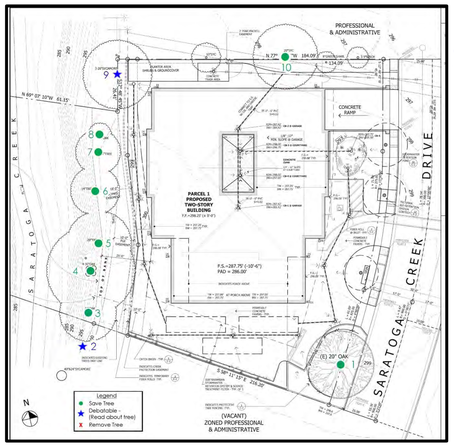
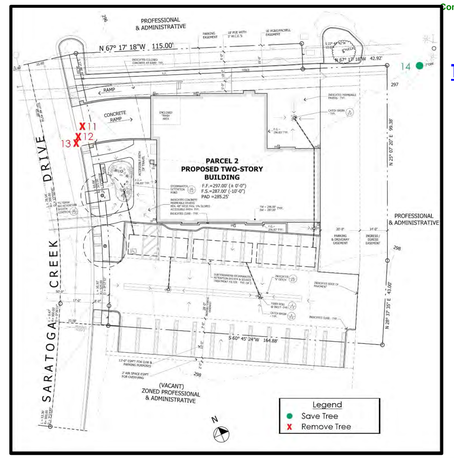
Cover photo: **coast live oak #1**, the most prominent tree on the project site. All photos in this report were taken by D. Ellis on January 26, 2016.

TREE MAP #1 AERIAL

TREE MAP #2 – LOT 1



TREE MAP #3 – LOT 2



SUMMARY

THE PROJECT

A two-story senior assisted living building and associated improvements will be constructed on the project site, which is presently two adjacent vacant lots.

THE TREES & THE PROJECT

There are 14 *protected trees*[1] with driplines that may be within 5 feet of proposed construction. Most of these trees are on neighboring properties adjacent to the project site. Only 4 of the trees (**#1, 11, 12 and 13**) are located on the project site. Three trees (**coast live oaks #11, 12 and 13**) will need to be removed because they are located within the proposed extension of Saratoga Creek Drive. These are small trees that have trunk diameters of 7 to 8 inches. **Coast live oak #3** has a large decayed area on one of its two trunks that overhang the site. The trunk overhanging the site should be removed. It should be possible to save all of the other trees although I have recommended a few design modifications to reduce damage for **coast live oak #1** and **California sycamore #9**.

Elderberry #3: is not shown on any of the construction plans I received, but is it located between a 40 and 24-inch sycamore on adjacent property to the south, and coast live oak #3 on the Topographic Survey, near the southwest corner of Lot 1. This is a sprawling multi-trunk tree that has split apart and fallen over, with most of its trunks dead. A portion of the tree is still alive (an 8 to 10-inch trunk) and the tree may overhang (or be lying on) the project site. I recommend that the trunks of the tree, be they living or dead, be cut to short stumps about 6 inches tall. The shrub/tree will probably regrow from these stumps and provide value for wildlife and erosion control above the creek.

All 14 of the trees are described briefly the *Summary Tree Table* (Table 1) on page 5 and in greater detail in the *Complete Tree Table* (Table 3) beginning on page 13. The total estimated value of the 14 trees described in this report is $100,080. The value of trees will be removed is $4050. The value of trees to remain is $96,030. The amount requested for the tree protection bond is half the amount of the trees that I estimate will be saved, or $48,015.

[1] Protected Tree: a protected tree in Saratoga has a trunk diameter of 6 inches or greater for native tree species or 10 inches in diameter for non-native species. Trunk diameter is measured at 4.5 feet above the ground. For construction project tree evaluation and arborist reports, any protected tree with its dripline within 5 feet of proposed construction must be addressed.

TABLE 1 SUMMARY TREE TABLE

Tree #	Common Name	Trunk Diam. (DBH)	Preservation Suitability	Estimated. Value	Expected Construction Impact	Action	Reason
1	coast live oak	20 (2.5)	Good	$7,200	Moderate	Save	
2	blue elderberry	9,10,8,4,4	Poor/Unacceptable	480	Uncertain	Debatable	Construction, Overall Condition, Actual location
3	coast live oak	10,12	Fair/Good	3,850	Low	Save but remove trunk overhanging site	Risk
4	coast live oak	12,18,29,30	Good	42,200	Low/Moderate	Save	
5	elderberry	7,8,12	Fair/Poor	1,760	Low/Moderate	Save	
6	elderberry	12	Fair/Poor	900	Low	Save	
7	elderberry	13,10	Fair/Poor	1840	Low	Save	
8	coast live oak	7	Good	1,400	Low	Save	
9	Calif. sycamore	25,18,19,8	Good	24,800	Moderate/ Severe	Debatable	Construction
*10	London plane	18	Fair	5,900	Moderate	Save	
11	coast live oak	6,7	Fair/Good	1,350	Severe	Remove	Construction
12	coast live oak	8	Fair/Good	1,350	Severe	Remove	Construction
13	coast live oak	8	Fair/Good	1,350	Severe	Remove	Construction
14	coast live oak	10,8,7,6	Fair/Good	5,700	Low/Moderate	Save	
Total Estimated Value				**$100,080**			

*Species not native to the immediate area. All other species are native to the immediate area and are probably of *natural growth*, meaning that they were not planted.

RECOMMENDATIONS

1. **Existing trees to be saved or removed should be numbered on all site-based plans to match the tree tag numbers that are used in this arborist report.**

2. **Tree Removals: Three trees, #11, 12 and 13 coast live oak** will need to be removed because they are within the proposed entrance roadway into the site. I also recommend removal of one trunk of the multi-trunk **coast live oak #3** that is overhanging the site, because it has significant decay and is likely to fail over the site.

3. **Design changes are recommended around coast live oak #3** and **California sycamore #9** to reduce construction damage. Please read about this in the *Notes* column of the Complete Tree Table.

4. **Elderberry #3**: this tree is not shown on any of the construction plans I received, but is it located between a 40 and 24-inch sycamore and coast live oak #3 on the Topographic survey, near the southwest corner of Lot 1. This is a sprawling multi-trunk tree that has split apart and fallen over, with most of its trunks dead. A portion of the tree is still alive (an 8 to 10-inch trunk) and the tree may overhang (or be lying on) the project site. I recommend that the trunks of the tree, be they living or dead, be cut to short stumps about 6 inches tall. The shrub/tree will probably regrow from these stumps and provide value for wildlife and erosion control above the creek.

5. **Story posts should be erected facing the north and west perimeter of Lot 1**, in order to verify if any and how much construction clearance will be required for adjacent trees.

6. **For those trees that will be retained on the site or with canopies overhanging the site, follow the City of Saratoga Tree Protection Requirements**, which are included on pages 25 through 27. A separate copy of the *Requirements* will be provided by City Arborist Kate Bear and must be incorporated into the project final plans. These Requirements shall replace any tree protection notes, specifications or other directions (including detail drawings) that are currently included in the plans, for example on sheets C-2 for each lot. Kate Bear will also require that a copy of this Arborist Report be included in the project final plans. You may request that I provide a condensed version of this report for the plans. Additional tree protection information is also available from me if necessary.

7. **Neighboring trees**: whose canopies overhang the project site and have driplines within 5 feet of any soil disturbance or other improvements must receive tree protection in the same manner as existing trees to remain on the project site; for example tree protection fencing and signage. The general contractor shall fence off the dripline of these trees as much as possible in order to

avoid damaging branches and compacting the soil beneath the canopy. If pruning is necessary in order to avoid branch breakage, the general contractor shall hire a qualified tree service[2] to perform the minimum necessary construction clearance pruning.

8. **Tree Protection Bond:** I recommend that half the value of the trees estimated to remain be requested for the bond.
   - The total value of all trees on site or overhanging the site is $100,080.
   - The total value of the trees to be removed is $4,050.
   - The total value of the trees that will remain is $96,030. Half of this value (to be requested for the tree protection bond) is $48,015.

9. **I should review all site-based plans for this project:** I have reviewed the plan sheets listed on page 10. Additional improvements on plans that were not reviewed or have been revised may cause additional trees to be impacted and/or removed. Plans reviewed by the arborist should be full-size, to-scale and with accurately located tree trunks and canopy driplines relative to proposed improvements. Scale should be 1:20 or 1:10.

10. **As a part of the design process, try to keep improvements (and any additional over-excavation or work area beyond the improvement) as far from tree trunks and canopies as possible.** *5xDBH*[3] or the dripline of the tree, whichever is greater, should be used as the minimum distance for any soil disturbance to the edge of the trunk. 3xDBH should be considered the absolute minimum distance from any disturbance to the tree trunk on one side of the trunk only, for root protection, with a minimum distance of 5 feet. Farther is better, of course. For disturbances on multiple sides of the trunk, then 5xDBH or greater should be used, and farther is also better here. Tree canopies must also be taken into consideration when designing around trees. Don't forget the minimum necessary working margin around improvements as you locate those improvements. Disturbance usually comes much closer to trees than the lines shown on the plans!

11. **Construction or landscaping work done underneath the dripline of existing trees should preferably be done by hand**, taking care to preserve existing roots in undamaged condition as much as possible and cutting roots cleanly by hand when first encountered, when those roots must be removed. A qualified consulting arborist (the project arborist) should be hired to monitor tree protection and supervise all work underneath the dripline of trees. This also applies to trees on neighboring properties whose canopies overhang the work site.

[2] Terms highlighted at their first occurrence in this report are explained in the Glossary beginning on page 37.
[3] See pages 24 and 25 for an explanation of the 3 and 5xDBH root protection distances for trees.

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PROJECT NAME

PALM VILLAS SARATOGA

LOT #1
389-06-020
SARATOGA CREEK DRIVE
SARATOGA, CA 95070

REVISIONS

TREE PRESERVATION

DATE : 8-14-20
SCALE : N/A
DRAWN BY : N/A
CHECKED BY : TS
ARCHITECT : TOM SLOAN
PROJECT NO : 15600

SHEET NUMBER

TP-1.0

8/18/2020 6:42 PM Palm Villas 8-14-20.dwg

12. **Landscaping:**

a. **New landscaping and irrigation can be as much or more damaging to existing trees than any other type of construction.** The same tree root protection distances recommended for general construction should also be observed for new landscaping. Within the root protection zone it is usually best to limit landscape changes to a 3 to 4-inch depth of coarse organic mulch such as wood or bark chips or tree trimming chippings spread over the soil surface. The environment around existing trees should be changed very carefully or not at all – please consult with me regarding changes in the landscape around existing trees and/or have me review the landscape and irrigation plans for this project.

b. **This site contains oaks and other tree species that are native to the immediate area** (coast live oak). These tree species fares best with no irrigation during the normal dry months of the year. The best treatment of the ground beneath these trees is nothing but their own natural leaf and twig litter mulch. Exceptions to irrigation restriction include during the winter in extended drought periods, as temporary compensation for root loss due to construction, and for newly planted trees during their 2 to 3 year establishment period after installation. Native oak species especially are often killed due to inappropriate landscaping that is installed around them; mostly commonly landscaping that requires frequent irrigation such as lawns or other high water-use plants. Large drought tolerant trees such as native oaks can become dangerous when exposed to frequent irrigation, especially close to their trunks. California native oaks that are treated in this manner may contract root rot diseases and fall over at the roots; often causing great damage and personal injury I there are targets in their vicinity such as homes, cars and people. It is important to landscape correctly around our native oaks; e.g. summer dry. I have attached a publication entitled *Living among the Oaks,* to assist in best managing the oaks on the property, as well as the directions to follow in items `b' and `c' below.

c. **Around the native oaks: there shall be no planting or irrigation (including drip irrigation) within a minimum radius of 10 feet from the trunks of the oaks or the inner half of the dripline of the tree, whichever is greater. Farther is better. Within this 10-foot (or greater) radius around the trunk** a 3 to 4-inch depth of coarse organic mulch such as wood or bark chips or tree trimming chippings shall be spread over the soil surface. Shredded redwood bark is not allowed. Keep the mulch off the root collar of the trees. Beyond this 10-foot (or greater) protective, mulched area only drought-tolerant, summer-dry plant species, preferably plant species that are native to the immediate area and grow commonly in association with the native oaks, may be planted. Only summer-dry tolerant plants are allowed within the outer half of the dripline of the tree or 20 feet from the trunk, whichever is greater. Such plants may be planted from no larger than 1-gallon cans in holes that are hand-dug manually with a shovel (no power equipment such as augers allowed). These plants must be spaced sparsely (e.g. planted no closer than 4 feet apart) and watered with drip irrigation. The planting zone around these plants shall be mulched in the same

manner previously described. The drip irrigation for these plants should preferably be abandoned after a 2 to 3 year establishment period.

13. **Trees to remain after adjacent trees are removed** should be re-evaluated by me or the project arborist after the surrounding trees have been taken out.

14. **General Tree Maintenance:**
a. **The root collars and lower trunks of some of the trees (e.g. California sycamore #9) were obscured from view by vegetation, excess soil or other covering.** Such portions of the tree should be uncovered and the tree re-evaluated by the arborist.
b. **Do no unnecessary pruning, fertilization or other tree work.** Pre-construction pruning should be limited to the absolute minimum required for construction clearance. A qualified tree service should be hired to provide such pruning.

INTRODUCTION

PURPOSE & USE OF REPORT

This survey and report was required by the City of Saratoga as a part of the building permit process for this project. The purpose of the report is to identify and describe the existing protected trees that are within or near proposed construction. The audience for this report is the property owner, developer, project architects and contractors, and City of Saratoga authorities (including the City Arborist, Kate Bear) concerned with tree preservation and tree removal. The goal of this report is to preserve existing protected trees that are in acceptable condition, are good species for the area and will fit in well with the proposed new use of the site.

BACKGROUND INFORMATION

My first Arborist Report for this project is dated July 27, 2015, based upon my July 23, 2015 tree and site evaluation. At that time no construction plans were available except for a Proposed Site Layout for Lot 1 with no existing trees included. In that first report I recommended that the existing trees on and adjacent to the site be accurately surveyed and included in the project plans, which has been done. This second Arborist Report is based upon those plans which I have recently reviewed, which are listed on page 10.

I have made a few changes to the trees that are included in this second Arborist Report, based upon the topographic map that I reviewed as well as a re-evaluation of some of the trees on the site. Upon closer inspection I decided that the two Brazilian pepper tree clumps on either side of the entrance to the site (labeled as **trees #11 and 12** in my July 2015 report) do not qualify as "protected" trees, and so are not included in this report. These trees are replaced with trees #11 and 12, coast live oaks, which are part of a clump of trees and shrubs on Lot 2. I have also added a **coast live oaks #13 and #14**.

PLANS REVIEWED

Table 2

PLAN	DATE	SHEET	REVIEWED	SHOULD REVIEW	NOTES
Existing Site Topographic Map *including existing tree trunk locations*	9/15				
Proposed Site Layout	1/21/16	A-1.2	X		Does not include all existing tree locations.
Demolition					
Construction Staging				X	
Grading/Drainage	1/21/16	C-1	X		
Erosion Control					
Underground Utility				X	
Site & Building Sections				X	
Building Exterior Elevations				X	
Roof				X	
Shadow Study					
Construction Details *that would affect trees (for example building foundations, pavement installation including sub-grade preparation, underground utility installation)*				X	
Landscape Planting	1/21/16	L-1	X		
Irrigation Plan				X	
Landscape & Irrigation Details				X	

METHODOLOGY

I performed a brief evaluation of the subject trees on July 23, 2015 and again on January 26, 2016. On January 26, 2016 I briefly rechecked **trees #1-10** and performed a complete basic evaluation of **trees #11-14**. Tree characteristics such as form, weight distribution, foliage color and density, wounds and indicators of decay were noted. Surrounding site conditions were also observed. Evaluation procedures were taken from:

- American National Standard A-300 (Part 5) – 2012 for *Tree Care Operations – Tree, Shrub & Other Woody Plant Management – Standard Practices (Management of Trees, & Shrubs During Site Planning, Site Development and Construction)*.
- International Society of Arboriculture, *Best Management Practices:*
  - *Managing Trees during Construction*. 2008
  - *Tree Inventories*. 2013

The above references serve as industry professional standards for tree evaluation and written findings and recommendations for trees on construction sites prior, during and after site development.

Each of the trees was tagged in the field with metal number tags that correspond with the tree numbers referenced in this report. I measured the trunk diameter of each tree with a diameter tape at 4.5 feet above the ground (DBH), which is also the required trunk diameter measurement height of the City of Saratoga. DBH is used calculate tree protection distances and other tree-related factors. Trunk diameter was rounded to the nearest inch. I estimated the tree's height and canopy spread. Tree *Condition* (structure and vigor) was evaluated and I also recorded additional notes for trees when significant. Tree species and condition considered in combination with the current or (if applicable) proposed use of the site yields the *Tree Preservation Suitability* rating. The more significant trees (or groups of trees) were photographed with a digital camera. Some of these photos are included in this report, but all photos are available from me by email if requested.

OBSERVATIONS

SITE CONDITIONS

The project site is currently a vacant lot bordered by existing professional buildings to the north and east, Saratoga Creek and neighboring residential properties to the west and a vacant lot to the south. Site topography is mainly level. Sun exposure for the trees varies from full to partly shaded, depending upon proximity to other trees. Most of the subject trees are growing off the site on adjacent properties, but their canopies overhang the project site. Tree condition ranges from Poor to Good with most trees in Fair to Good condition. All tree species except **London plane #10** are native to the immediate area and are probably of *natural growth*, meaning that they were not planted.

No irrigation is supplied to **trees #1-9** and **11-14** which is fine because these are native tree species that are adapted to the climate of the area. Those trees bordering however, do receive some additional water (other than rainfall) from the creek itself. **London plane #10** does receive irrigation from the office complex landscape. Tree maintenance is of a low or non-existent level for trees #1-9 and 11-14 which is fine for these native, natural growth trees. Maintenance for London plane #10 consists of lower branch removal for parking lot clearance, and directional pruning for overhead electric wire clearance.

APPENDIX

TABLE 3 COMPLETE TREE TABLE

This Table is continued through page 19. Data fields in the Table are explained on pages 20 to 24.
** Tree species not native to the immediate area. All other tree species are native to the immediate area and are probably of natural growth, meaning that they were not planted.*

Tree #	*Species* & Common Name	Trunk Diam. (DBH)	Size	CONDITION		Preservation Suitability	Est. Value	Expected Construction Impact	Action	Reason	Notes	TREE ROOT PROTECTION DISTANCES		
				Vigor	Structure							3xDBH	5xDBH	DTPZ
1	*Quercus agrifolia*, coast live oak	20 (2.5)	30x30	90	60	Good	$7,200	Moderate	Debatable	Construction	Construction: proposed curb and pavement is 7.5 feet from the trunk and farther. Since there is disturbance on multiple sides of the trunk I would like to see no soil disturbance closer than 8 feet. This means that the nearest pavement should be moved at least another foot father from the trunk. This may reduce the width of a parking space that is planned near this tree – so turn this in to a motorcycle or bicycle parking if it is not large enough for a car. Proposed landscaping are acceptable species and far enough from the trunk, as long as there will be no soil disturbance for planting or	5	8	15

Tree #	*Species* & Common Name	Trunk Diam. (DBH)	Size	CONDITION		Preservation Suitability	Est. Value	Expected Construction Impact	Action	Reason	Notes	TREE ROOT PROTECTION DISTANCES		
				Vigor	Structure							3xDBH	5xDBH	DTPZ
											irrigation (e.g. trenching) closer than 10 feet from the trunk of the tree. Condition: the only problem with this near-perfect tree is included bark between the two-codominant scaffold branches at 4 feet.			
2	*Sambucus nigra caerulea*, blue elderberry	9,10,8,4,4	18x33	50	20	Poor	480	Uncertain	Debatable	Actual Location, Construction, Overall Condition	Construction: not included on any plans, but it is between the 40 + 24-inch sycamore near the southwest corner of Lot 1. Most of the tree is dead. I recommend cutting all trunks to a short stump of 6 inches or so and allowing the live portion of this shrub/tree to regrow. This will also remove any impediment from the tree to project construction. Saratoga Tree Removal Criteria* met: 1, 7. Condition: most of the trunks of this tree are dead and fell over onto the project site (or at least the level area above	6	10	23

* See page 34 for an explanation of the Saratoga Tree Removal Criteria.

Tree #	*Species* & Common Name	Trunk Diam. (DBH)	Size	CONDITION		Preservation Suitability	Est. Value	Expected Construction Impact	Action	Reason	Notes	TREE ROOT PROTECTION DISTANCES		
				Vigor	Structure							3xDBH	5xDBH	DTPZ
											the creek bank), but one trunk is still alive and continues to grow. The trunks emerge from the soil at about 6 feet from the edge of the creek bank. Much poison oak is growing amongst the fallen canopy.			
3	coast live oak	10,12	40x30	90	40	Fair/Good	3,850	Low	Save, but remove decayed trunk overhanging site	Risk	Construction: nearest construction is 22 feet to proposed pavement. trunk. Condition: there is significant decay high on the trunk overhanging the project site from an old pruning wound stub. Birds have made holes and nests in this area of the tree. The trunk is positioned precariously on the steep creek side of the creek bank. The terrain is too steep for me to observe the creek side of the tree. The canopy of the tree overhangs the project site by perhaps 30 feet, but the tree has been pruned so that branches are high and will probably not interfere with future construction. I still	5	7	8

Tree #	*Species* & Common Name	Trunk Diam. (DBH)	Size	CONDITION		Preservation Suitability	Est. Value	Expected Construction Impact	Action	Reason	Notes	TREE ROOT PROTECTION DISTANCES		
				Vigor	Structure							3xDBH	5xDBH	DTPZ
											recommend using story posts to better assess any potential impacts to the canopy and any necessary construction clearance pruning.			
4	coast live oak	12,18,29,30	60x50	90	70	Good	42,200	Low	Save		Construction: nearest construction is 19.5 feet to proposed pavement. Will have to check any interference with canopy via story posts. Condition: this tree is also precariously perched on the steep creek bank. Its canopy also overhangs the project site, but fairly high.	15	25	30
5	elderberry	7,8,12	22x20	50	40	Fair/Poor	1,760	Low/ Moderate	Save		Condition: this tree overhangs the level area beyond creek area by 6 ft.	5	8	20
6	elderberry	12	28x22	70	50	Fair/Poor	900	Low	Save		Construction: same as previous. Condition: the trunk of this tree is located several feet down the steep creek bank and I wasn't able to observe the creek side.	5	5	12
7	elderberry	13,10	18x12	70	40	Fair/Poor	1840	Low	Save		Construction: same as previous.	5	8	22

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PROJECT NAME

PALM VILLAS SARATOGA

LOT #1
389-06-020
SARATOGA CREEK DRIVE
SARATOGA, CA 95070

REVISIONS

TREE PRESERVATION

DATE : 8-14-20
SCALE : N/A
DRAWN BY : N/A
CHECKED BY : TS
ARCHITECT : TOM SLOAN
PROJECT NO : 15600

SHEET NUMBER

TP-1.1

8/18/2020 6:42 PM
Palm Villas 8-14-20.pln

Tree #	Species & Common Name	Trunk Diam. (DBH)	Size	CONDITION Vigor	CONDITION Structure	Preservation Suitability	Est. Value	Expected Construction Impact	Action	Reason	Notes	TREE ROOT PROTECTION DISTANCES 3xDBH	5xDBH	OTPZ
8	coast live oak	7	20x18	85	70	Good	1,400	Low	Save			5	4	5
9	*Platanus racemosa, Calif.* sycamore	25,18,19,8	85x60	75	60	Good	24,800	Moderate/ Severe	Debatable	Construction	Construction: proposed new pavement 5 feet from trunk; drainage pipe centerline 6.5 feet. There must be no soil disturbance closer than 12 feet on one side of the trunk of this tree; preferably farther. Please adjust plans accordingly. Story posts should also be erected to understand pruning requirements – there are some large long branches high in the tree that may be in the path of the building. Condition: the root collar and lower trunks are obstructed by stored materials, a partial fence and debris. The trunks should be cleared of these materials and I should re-evaluate this area.	12	20	60
*10	*Platanus x hispanica*, London plane	18	35x30	100	70	Fair	5,900	Moderate	Save		Construction: proposed pavement and the end of a drainage pipe are 7 feet from the trunk. This is acceptable. No landscaping	5	8	14

Tree #	Species & Common Name	Trunk Diam. (DBH)	Size	CONDITION Vigor	CONDITION Structure	Preservation Suitability	Est. Value	Expected Construction Impact	Action	Reason	Notes	TREE ROOT PROTECTION DISTANCES 3xDBH	5xDBH	OTPZ
											is shown between tree trunk and property line – this is good but please install organic mulch in this area. Condition: this tree is located on the adjacent professional office property to the north, but the canopy overhangs the project site by perhaps 10 feet (it is hard to say how far the canopy overhangs due to two fences about 10 feet apart – so I am unsure where the actual property line is probably located). The lower trunk and root collar of the tree are growing through a notch that was cut in the fence nearest to the office complex. This tree is also growing beneath overhead electric wires and has been directionally pruned to its present height.			
11	coast live oak	6,7	25x18	90	60	Fair/Good	1,350	Severe	Remove	Construction	Construction: within proposed roadway on Lot 2. Saratoga Tree Removal Criteria met: 7, 9.	5	5	5

Tree #	Species & Common Name	Trunk Diam. (DBH)	Size	CONDITION Vigor	CONDITION Structure	Preservation Suitability	Est. Value	Expected Construction Impact	Action	Reason	Notes	TREE ROOT PROTECTION DISTANCES 3xDBH	5xDBH	OTPZ
12	coast live oak	8	30x20	90	60	Fair/Good	1,350	Severe	Remove	Construction	Construction: same as previous. Saratoga Tree Removal Criteria met: 7, 9.	5	5	5
13	coast live oak	8	30x20	90	60	Fair/Good	1,350	Severe	Remove	Construction	Construction: same as previous. Saratoga Tree Removal Criteria met: 7, 9.	5	5	5
14	coast live oak	10,8,7,6	30x30	90	50	Fair	5,700	Low/ Moderate	Save		Construction: tree canopy overhangs corner of Lot 2 slightly and may require some clearance pruning. Condition: this tree is probably a volunteer of natural growth. There are also a few other small stems in this crowded clump of trees that are from volunteer holly oaks, *Quercus ilex*. The main tree however, is a stump sprout.	5	9	10

EXPLANATION OF TREE TABLE DATA COLUMNS:

1) **Tree Number** (the field tag number of the existing tree). Each existing tree in the field is tagged with a 1.25 inch round aluminum number tag that corresponds to its tree number referenced in the arborist report, Tree Map, Tree Protection Specifications and any other project plans where existing trees must be shown and referenced.

2) **Tree Name and Type:**
Species: The *Genus* and *species* of each tree. This is the unique scientific name of the plant, for example *Quercus agrifolia* where *Quercus* is the Genus and *agrifolia* is the species. The scientific names of plants can be changed from time to time, but those used in this report are from the most current edition of the *Sunset Western Garden Book* (2012) Sunset Publishing Corporation. The scientific name is presented at its first occurrence in the Tree Table, along with the regional common name. After that only the common name is used.

3) **Trunk DBH**. Tree trunk diameter in inches "at breast height" (measured at 4.5 feet above ground level). This is the forestry and arboricultural standard measurement height that is also used in many tree-related calculations. It is also the trunk diameter measurement height required by the City of Saratoga. For multi-trunk trees, trunk diameter is measured for the largest trunk and estimated for all smaller trunks. A number in parentheses (3) after the trunk diameter(s) indicates that it was not possible to measure the trunk at 4.5 feet (due to tree architecture) and so the diameter was measured at this alternate height (in feet), which reflects a more realistic trunk diameter for the tree.

4) **Size**: tree size is listed as height x width in feet, estimated and approximate and intended for comparison purposes.

5) **Condition Ratings**: Trees are rated for their *condition* on a scale of *zero to 100* with zero being a dead tree and 100 being a perfect tree (which is rare – like a supermodel in human terms). A 60 is "average" (not great but not terrible either). There are two components to tree condition – ***vigor*** and ***structure***, and each component is rated separately. Averaging the two components is not useful because a very low rating for either one could be a valid reason to remove a tree from a site -- even if the other component has a high rating. Numerically speaking for each separate component:

100 is equivalent to *Excellent* (an `A' academic grade), **80** is *Good* (B), **60** is *Fair* (C), **40** is *Poor* (D), **20** is *Unacceptable* (F) and **0** is *Dead*.

6) Relative to the scope of work for this report, tree *Condition* has been rated but not explained in detail and recommendations for the management of tree condition have not been included. The tree owner may contact Deborah Ellis for additional information on tree condition and specific recommendations for the general care of individual trees relative to their condition.

7) The *Condition* of the tree is considered relative to the tree species and present or future intended use of the site to provide an opinion on the tree's Preservation Suitability Rating (i.e. "Is this tree worth keeping on this site, in this location, as explained in Table 4 on the next page. This is based upon

the scenario that the tree is given enough above and below-ground space to survive and live a long life on the site. Ratings such as "Fair/Good" and "Fair/Poor" are intermediate in nature. The Preservation Suitability rating is not always the same as the Condition Rating because (for example) some trees with poor condition or structure can be significantly improved with just a small amount of work – and it would be worthwhile to keep the tree if this were done.

Table 4 Preservation Suitability Rating Explanation

Excellent	Such trees are rare but they have unusually good health and structure and provide multiple functional and aesthetic benefits to the environment and the users of the site. These are great trees with a minimum rating of "Good" for both vigor and structure. Equivalent to academic grade `A'.
Good	These trees may have some minor to moderate structural or condition flaws that can be improved with treatment. They are not perfect but they are in relatively good condition and provide at least one significant functional or aesthetic benefit to the environment and the users of the site. These are better than average trees equivalent to academic grade `B'.
Fair	These trees have moderate or greater health and/or structural defects that it may or may not be possible to improve with treatment. These are "average" trees – not great but not so terrible that they absolutely should be removed. The majority of trees on most sites tend to fall into this category. These trees will require more intensive management and monitoring, and may also have shorter life spans than trees in the "Good" category. Retention of trees with moderate suitability for preservation depends upon the degree of proposed site changes. Equivalent to academic grade `C'.
Poor	These trees have significant structural defects or poor health that cannot be reasonably improved with treatment. These trees can be expected to decline regardless of management. The tree species themselves may have characteristics that are undesirable in landscape settings or may be unsuitable for high use areas. I do not recommend retention of trees with low suitability for preservation in areas where people or property will be present. Equivalent to academic grade `D'.
None	These trees are dead and/or are not suitable for retention in their location due to risk or other issues. In certain settings however, (such as wilderness areas, dead trees are beneficial as food and shelter for certain animals and plants including decomposers. Equivalent to academic grade `F'.

8) **Value**: Tree monetary appraisal is based upon: (1) Cost of Installation plus (2) its increase in value over a container-size tree if a larger size tree being appraised. This value is then adjusted according to: (a) *Species* (according to regional published species ratings), (b) *Condition* of the tree, and (c) *Location* of the tree (an average of the sub-categories of *Site*, *Contribution* and *Placement*). The methodology and calculations for the Trunk Formula Method are taken from two industry standard texts – The Guide for Plant Appraisal, 9th edition, 2000, edited by the Council of Tree & Landscape Appraisers and published by the International Society of Arboriculture, and the Species Classification and Group Assignment, 2004, published by the

Western Chapter of the International Society of Arboriculture. The cross-sectional trunk diameter price presented in this text has been adjusted slightly downward to match the current actual average wholesale cost of a 24-inch box nursery tree in this area. Note that the values produced for this report are meant for reference only and may not reflect the true value of the tree that could be calculated by a thorough and more detailed analysis of each individual tree.

a) **Caveats regarding tree values**: The values in this report have not been subjected to a "reasonableness test" which compares the value of trees and landscaping to the total value of the property. The values in the report were calculated quickly and are intended to be approximate and for reference only. Research on tree and landscape values has shown that landscaping can contribute up to 20% of the total property value. In some cases however, tree appraisals have produced tree values that exceed the value of the entire property. Performing a reasonableness test screens for this error. For certain trees in this report I have decreased or increased tree values when I felt that the calculated values were too high or too low.

b) **The Trunk Formula Method** is used for trees that are too large for practical replacement with a similar size nursery container-grown tree. This method applies to trees with trunk diameters that are larger than 8-inches, measured at 12 inches above the ground. For the purpose of this report, all trees with trunk diameters of 8 inches or greater measured at DBH (4.5 feet above the ground) are appraised by this method.

c) **The Replacement Cost Method** is used for smaller trees with trunk diameters up to 4-inches in diameter measured at 12 inches above the ground. This is generally equivalent to a 48-inch box-size tree. The replacement cost for such a tree shall be the average wholesale cost of the tree multiplied by two to include transportation to the site, planting and other costs. This price is then adjusted (usually downward) based upon the Condition ratings percentages for the appraised tree. For the purpose of this report, all trees with trunk diameters of 7 inches or less measured at DBH (4.5 feet above the ground) are appraised by this method. The following cost basis is used (based upon the average of wholesale tree prices from Boething Treeland Nursery, Portola Valley and Valley Crest Tree Nursery, Sunol, 2/2/2015):

Trunk DBH	Replacement tree size	Replacement Tree Wholesale Cost x 2 (for installation, etc.)
<1" to 1"	15 gallon	$47.50 x 2 = $95
2-3"	24" box	$162.50 x 2 = $325
4-5"	36" box	$412.50 x 2 = $825
6-7"	48" box	$900 x 2 = $1800

d) **Tree values for tree protection bonds**: Prior to commencing work, the tree-regulating authority may require that the contractor furnish a bond equal to some portion of the total appraised value of the trees on the site based upon the values presented in the Arborist Report. Bond money will be returned to the contractor upon the completion of the project with deductions or additional fines imposed based upon tree protection compliance and the final condition of the trees. Tree values are often used to establish a benchmark amount to fine the contractor if non-

compliance with the Tree Protection Specifications or other negligence causes a subject tree to be removed or unnecessarily damaged. The full value amount should be charged to the contractor if a tree is damaged to the degree that it must be removed. A portion of the value of the tree plus any necessary remediation costs, as determined by the tree owner, should be charged to the contractor if the tree is damaged but does not have to be removed.

9) **Action (Disposition):**
a) ***Save:*** it should be no problem save this tree utilizing standard tree protection measures.
b) ***Remove:*** this recommendation is based upon tree condition, preservation suitability, expected impact of construction, poor species for the site or any combination of these factors.
c) ***Debatable:*** there is a problem with potentially retaining this tree. Find out why in the *Reason* and Notes columns of the Complete Tree Table. Examples are:
- The tree is shown to be saved (and may be a desirable tree to save) but proposed construction is too close or is uncertain and may cause too much damage to retain the tree. Design changes may be recommended to reduce damage to the tree so that it can be saved.
- Further evaluation of the tree is necessary (e.g. the tree requires further, more detailed evaluation that is beyond the scope of this tree survey and report. Examples are advanced internal decay detection and quantification with resistance drilling or tomography, a "pull test" to assess tree stability from the roots, or tissue samples sent to a plant pathology laboratory for disease diagnosis.
- Condition: the tree is in "so-so" or lesser condition and an argument could be made to either save or remove the tree as it stands now. In some cases the owner will make the decision to save or remove the tree based upon the information provided in this report as well as the owner's own preferences.
- Species: the tree may be a poor species for the area or the intended use of the developed site.
- Uncertain construction impact
- Other (as explained for the individual tree)

10) **Reason** (for tree removal or to explain why a tree is listed as "Debatable" or "Uncertain"). Multiple reasons may be provided, with the most significant reason listed first. Reasons can include but are not limited to:
- ***Construction*** (excessive construction impact is unavoidable and it is not worthwhile to try and save the tree)
- ***Condition*** (e.g. poor tree condition – either *vigor*, *structure* or both)
- ***Landscaping*** (the tree is being removed because it does not fit in with or conflicts with proposed new landscaping)
- ***Owner's Decision*** (for some reason the owner has decided to remove this tree)
- ***Species*** (the tree is a poor species for the use of the site)
- ***Risk*** (the tree presents moderate to excessive risk to people or property that cannot be sufficiently mitigated)

11) **Notes:** This may include any other information that would be helpful to the client and their architects and contractors within the scope of work for this report, such as a more detailed explanation of tree condition or expected construction impact.

12) **Tree Protection Distances** *(Also see pages 24 and 25 for a more detailed explanation).*
a) Root Protection:
i) **3 and 5xDBH**: Both the 3 and 5xDBH distances are listed for each tree. For multi-trunk trees 100% of the DBH of the largest trunk is added to 50% of the DBH for all other trunks in order to compute the operational DBH to use for these the Tree Protection Distance calculations. For practical purposes, the minimum root protection distance listed is 5 feet. If disturbance cannot be kept at least 3 feet from the trunk of a tree, the tree should normally be removed.
ii) **OTPZ (Optimum Tree Protection Zone)**: This is calculated as per the text, *Trees & Development*, Matheny et al., International Society of Arboriculture, 1998. This method takes into account tree age and the particular tree species tolerance of root disturbance. Because it may not be possible to maintain the OPTZ distance recommended for trees on many projects due to crowded site conditions, the Arborist may omit this requirement and list only the 3 and 5xDBH distances.
b) Canopy Protection: Additional space beyond root zone protection distances may be necessary for canopy protection.
c) I have increased a few of the calculated tree protection distances for individual trees based upon my professional judgment relative to site constraints. For example, the minimum root protection distance listed is 5 feet.

TREE PROTECTION DISTANCES

3 TO 5 X DBH

No one can estimate and predict with absolute certainty how far a soil disturbance such as an excavation must be from the edge of the trunk of an individual tree to affect tree stability or health at a low, moderate or severe degree -- there are simply too many variable involved that we cannot see or anticipate. 3xDBH however, is a reasonable "rule of thumb" minimum distance (in feet) any excavation should be from the edge of the trunk *on one side of the trunk*. This is supported by several separate research studies including (Smiley, Fraedrich, & Hendrickson 2002, Bartlett Tree Research Laboratories. *DBH* is trunk "diameter at breast height" (4.5 feet above the ground). This distance is often used during the design and planning phases of a construction project in order to estimate root damage to a tree due to the proposed construction. It tends to correlate reasonably well with the *zone of rapid taper*, which is the area in which the large *buttress roots* (main support roots close to the trunk) rapidly decrease in diameter with increasing distance from the trunk. For example, using the 3X DBH guideline an excavation should be no closer than 4.5 feet from the trunk of an 18-inch DBH tree. Such distances are guidelines only, and should be increased for trees with heavy canopies, significant leans, decay, structural problems, etc. It is also important to understand that in actual field conditions we often find that much less root damage occurs than was anticipated by the guidelines. 3xDBH may be more of

an aid in preserving tree stability and not necessarily long-term tree health. 5X DBH or greater is the "preferred" minimum distance which should be strived for, and this distance or greater should probably be used when there are multiple trenches on more than one side of the trunk. The roots beyond the zone of rapid taper form an extensive network of long, rope-like roots one to two inches in diameter. These woody perennial roots are referred to as *transport roots* because they function primarily to transport water and minerals. Maintaining a 5xDBH tree protection zone or greater around a tree will preserve more of these transport roots, which will have less of an impact on tree health than if the excavation were closer to the trunk.

OTPZ (OPTIMUM TREE PROTECTION ZONE)

OTPZ is the distance in feet from the trunk of the tree, all around the tree, that construction or other disturbance should not encroach within. If this zone is respected, then chances of the tree surviving construction disturbance are very good. This method takes into account tree age, DBH and the particular species tolerance to root disturbance. Although there are no scientifically based methods to determine the minimum distance for construction (for example, root severance) from trees to assure their survival and stability, there are some guidelines that are often used in the arboricultural industry. The most current guideline comes from the text, Trees & Development, Matheny et al., International Society of Arboriculture, 1998. The tree protection zone calculation method in this text was used to obtain the OTPZ's provided in this report. Due to the crowded, constrained nature of many building sites it is often not be possible to maintain the OPTZ distance recommended for many of the trees -- therefore I have also listed alternate distances of 3 and 5X DBH (*see paragraph above).*

Note that by default, the minimum root protection distance listed for any tree is 5 feet.

CITY OF SARATOGA TREE PROTECTION REQUIREMENTS

2014

1) **Any time the canopy of a tree protected by City Code extends into an area of proposed construction or is within 5 feet of the proposed work area** an *Arborist Report* and a *Tree Preservation Plan* area required.
2) **Protected trees are:**
a) All trees – when the trunk diameter at 4.5 feet above the ground (DBH) is **10 inches or more** (includes all species, dead trees and fallen trees).
b) Native species – when the trunk diameter (DBH) is **6 inches or more**. Native species include but are not limited to: coast live oak, valley oak, blue oak, redwood, Douglas fir, bigleaf maple and California buckeye.

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PROJECT NAME

PALM VILLAS SARATOGA

LOT #1
389-06-020
SARATOGA CREEK DRIVE
SARATOGA, CA 95070

REVISIONS

TREE PRESERVATION

DATE : 8-14-20
SCALE : N/A
DRAWN BY : N/A
CHECKED BY : TS
ARCHITECT : TOM SLOAN
PROJECT NO : 15600

SHEET NUMBER

TP-1.2

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Palm Villas 8-14-20.pln

c) For additional protected trees see City Code 15-50-.050.

3) **Saratoga City Code:** http://library.municode.com/index.aspx?clientId=16616. Tree Regulations are Article 15-50.
4) **This Arborist Report is to be copied onto plan sheet(s)** and become part of the final project plan set. This sheet(s) shall be titled, *Tree Preservation Plan*.
5) **The owner, general contractor, architects and property owner are all responsible** for knowing the information included in the Arborist Report and adhering to the tree protection conditions provided.
6) **The Designated Project Arborist** for this development is Name, Company, City, Phone Number and Email Address.
7) **The Project Arborist shall visit the site to inspect tree protection** no less than once a week during demolition and grading and no less than once per month during all other times, until the project has been completed. The Project Arborist shall submit a Tree Protection Inspection Report to City Arborist Kate Bear as soon as possible after each inspection. The report shall state whether or not tree protection is adequate or needs improvement, and any mitigation measures that are recommended for the protected trees.
8) **The Project Arborist shall supervise any work that must occur within the tree protection zone,** and a follow-up report shall be provided to the Saratoga City Arborist.
9) **Any time that work must be supervised by the Project Arborist, a follow-up report shall be provided** to the Saratoga City Arborist documenting how the work was carried out and any necessary mitigation requirements.
10) **Tree Protection Fencing Requirements:**
   a) Six-foot high chain link fencing mounted on eight-foot tall, 2-inch diameter galvanized posts, driven 24 inches into the ground and spaced no more than 10 feet apart.
   b) Posted with signs reading, "TREE PROTECTION FENCE – DO NOT MORE OR REMOVE WITHOUT APPROVAL FROM CITY ARBORIST". Print these signs at a minimum size of 8.5 x 11 inches, laminate them and attach them to the fencing by punching 4 holes in each corner, and then attaching the sign to the fence with plastic wire ties in each of the holes. Place the signs 6 inches below the top of the fencing. Place signs every 25 feet or in each cardinal direction, whichever is less, facing the work zone.
   c) The City requires that tree protection fencing be installed before any equipment comes on site. The fencing must be inspected and approved by the City Arborist before issuance of demolition and/or building permits.
   d) Tree protection fencing is required to remain in place throughout construction.

TREE PROTECTION ZONE
The tree protection zone is the distance from the trunk to a point that is five feet beyond the canopy of a tree protected by City Code. Tree protection fencing shall be located as close to this location as possible while allowing room for construction to occur.

11) **Other Tree Protection Measures:**
   a) The arborist report, once copied onto a plan sheet(s) and included in the final set of plans, serves as a Tree Preservation Plan (City Code 15-50.140).
   b) Any additional conditions needed to adequately protect trees during construction.
   c) Any branch or root pruning must be supervised by an ISA-certified arborist or the Project Arborist.
   d) Dealing with Roots: where a grade cut will take place underneath or within 5 feet of the dripline of a protected tree, a trench 18 inches wide and to the depth of the total excavation must be hand-dug. Roots will be cleanly cut within this trench by the project arborist, who will then make an assessment of the total root damage and report this to City Arborist Kate Bear. The project arborist must be on site when the trench is dug. The arborist shall file a report with Kate Bear documenting how the work was carried out and any necessary mitigation requirements. After the trench is dug and roots are hand cut, heavy equipment can then excavate for the remainder of the excavation as the equipment does not contact the intact ends of the cut roots. Cutting the roots twice, to create a gap of about 6 inches between the intact and cut portions of the roots will facilitate protecting the cut root ends.
   e) A final inspection by the City Arborist is required at the end of the project. This is to be done before tree protection fencing is taken down. Replacement trees should be planted at this time as well.
   f) The tree protection fencing and signage described above as well as Saratoga's other tree protection requirements, are explained in the attached document, *Tree Protection Requirements for Projects in Saratoga*.
12) **A Tree Protection Security Deposit on trees to be retained** during construction and potentially impacted by work is required. The deposit is between 25% and 100% of the total appraised value of the trees potentially impacted. The owner/applicant will be required to obtain, and file with the Community Development Director, this Tree Protection Security Deposit prior to obtaining Building Division Permits.
   a) If there will be more than one structure on the property, the deposit must be equal to 100% of the value of the trees potentially impacted (City Code 15-50.080(d)). If only one structure will be built, the deposit will be .
   b) The Tree Protection Security Deposit is to remain in place for the duration of construction of the project to ensure the protection of the trees.
   c) Once the project has been completed, inspected and approved ty the City Arborist (a building inspector cannot release the Tree Security Deposit), the bond will be released.
   d) Any tree on site protected by City Code will require replacement according to its appraised value if it is damaged beyond repair as a result of construction.
13) **Replacement tree requirements**
   a) Height of maturity if tall trees are being removed
   b) native species if natives are being removed
   c) whether new trees should be planted in the front yard or anywhere on the property.

   d) The City requires that new trees equal to the total appraised value of trees approved for removal be planted on site, or that some or all of the value to be placed in a fund for tree planting elsewhere in the City.
   e) Replacement values have been assigned to specific sizes of trees as follows:
   15 gal - $150, 24-inch box - $500, 36-inch box - $1500, 48-inch box - $5000, 60-inch box - $7000, 72-inch box - $15,000

TREE PHOTOS

West perimeter of the site and northwest corner, Lot 1. From left to right: fallen and mostly dead **elderberry #2, coast live oak #3** and **4, elderberries #5, 6 and 7, coast live oak #8,** and **California sycamore #9**.

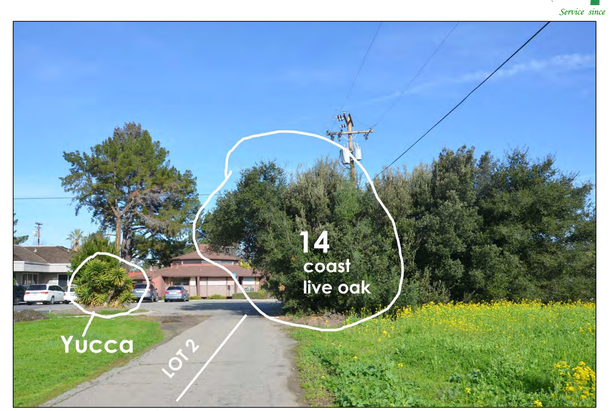
Elderberry #2, which probably does at least sprawl over a portion of the project site at the southwest corner.

Close-up of fallen trunks of **elderberry #2**. I have placed a yellow dot near the base of each trunk.

Coast live oak #3 and the problem with the decay in one of its two trunks, the trunk leaning over the project site. The left photo shows the decayed area circled. The right photo shows a close-up of the decay. There is a lot of internal decay here, because there is a bird nest inside. The weight of the canopy is above this decayed portion.

North perimeter of the site, Lot 1. Left to right: the edge of large **coast live oak #4, California sycamore #9 and London plane #10**.

The west perimeter of Lot #2, viewed form the west. **Coast live oaks #11, 12 and 13**. All three of these trees will be removed because they will be within the extension of Saratoga Creek Drive.



The northeast corner of Lot 2. **Coast live oak #14** overhangs the site slightly

TREE REMOVAL CRITERIA, CITY OF SARATOGA

Criteria. Each application for a tree removal pruning or encroachment permit shall be reviewed and determined on the basis of the following criteria:

1. The condition of the tree with respect to disease, imminent danger of falling, proximity to existing or proposed structures and interference with utility services, and whether the tree is a Dead tree or a Fallen tree.
2. The necessity to remove the tree because of physical damage or threatened damage to improvements or impervious surfaces on the property.
3. The topography of the land and the effect of the tree removal upon erosion, soil retention and the diversion or increased flow of surface waters, particularly on steep slopes.
4. The number, species, size and location of existing trees in the area and the effect the removal would have upon shade, privacy impact, scenic beauty, property values, erosion control, and the general welfare of residents in the area.
5. The age and number of healthy trees the property is able to support according to good forestry practices.
6. Whether or not there are any alternatives that would allow for retaining or not encroaching on the protected tree.
7. Whether the approval of the request would be contrary to or in conflict with the general purpose and intent of this Article.
8. Any other information relevant to the public health, safety, or general welfare and the purposes of this ordinance as set forth in Section 15-50.010
9. The necessity to remove the tree for economic or other enjoyment of the property when there is no other feasible alternative to the removal.
10. The necessity to remove the tree for installation and efficient operation of solar panels, subject to the requirements that the tree(s) to be removed, shall not be removed until solar panels have been installed and replacement trees planted in conformance with the City Arborist's recommendation.

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PROJECT NAME

PALM VILLAS SARATOGA

LOT #1
389-06-020
SARATOGA CREEK DRIVE
SARATOGA, CA 95070

REVISIONS

TREE PRESERVATION

DATE : 8-14-20
SCALE : N/A
DRAWN BY : N/A
CHECKED BY : TS
ARCHITECT : TOM SLOAN
PROJECT NO : 15600

SHEET NUMBER

TP-1.3

8/18/2020 6:42 PM
Palm Villas 8-14-20.pln

ASSUMPTIONS & LIMITATIONS

1. A *Basic Evaluation* **of the subject trees described in this report was performed on July 23, 2015 for the purpose of this report.** Trees were briefly rechecked on January 26, 2016 for this current report and coast live oaks #11-14 were added. A basic evaluation is a visual evaluation of the tree from the ground, without climbing into the tree or performing detailed tests such as extensive digging, boring or removing samples. This is an initial screening of the tree after which the evaluator may recommend that additional, more detailed examination(s) be performed if deemed necessary.
2. **Trees on neighboring properties other than those specifically mentioned in this report were not evaluated in detail.** They were only viewed cursorily from the project site. I did not enter the neighboring property to inspect these trees up close.
3. **Some trees had their root collars and or lower trunks covered** with soil, vegetation or debris and were obstructed from view when I conducted my tree evaluation. If these trees may remain, the obstructions should be removed and I should re-examine these previously covered areas.
4. **Any information and descriptions provided to me for the purpose of my investigation in this case and the preparation of this report are assumed to be correct**. Any titles and ownerships to any property are assumed to be good and marketable. I assume no responsibility for legal matters in character nor do I render any opinion as to the quality of any title.
5. **The information contained in this report covers only those items that were examined** and reflects the condition of those items at the time of inspection.
6. **Loss or removal of any part of this report** invalidates the entire report.
7. **Possession of this report, or any copy thereof, does not imply right of publication** for use for any purpose by any person other than to whom this report is addressed without my written consent beforehand.
8. **This report and the ratings or values represented herein represent my opinion**. My fee is in no way contingent upon the reporting of a specified value or upon any finding or recommendation reported.
9. **This report has been prepared in conformity with generally acceptable appraisal/diagnostic/reporting methods and procedures** and is consistent with practices recommended by the International Society of Arboriculture and the American Society of Consulting Arborists.
10. **My evaluation of the trees that are the subject of this report is limited to visual examination of accessible items without dissection, excavation, probing or coring**. There is no warranty or guarantee, expressed or implied, that problems or deficiencies of the plants or property in question may not arise in the future.
11. **I take no responsibility for any defects in any tree's structure**. No tree described in this report has been climbed and examined from above the ground, and as such, structural defects that could only have been discovered have not been reported, unless otherwise stated. Structural defects may also be hidden within a tree, in any portion of a tree. Likewise, root collar excavations and evaluations have not been performed unless otherwise stated.

12. **The measures noted within this report are designed to assist in the protection and preservation of the trees mentioned herein**, should some or all of those trees remain, and to help in their short and long term health and longevity. This is not however; a guarantee that any of these trees may not suddenly or eventually decline, fail, or die, for whatever reason. Because a significant portion of a tree's roots are usually far beyond its dripline, even trees that are well protected during construction often decline, fail or die. Because there may be hidden defects within the root system, trunk or branches of trees, it is possible that trees with no obvious defects can be subject to failure without warning. The current state of arboricultural science does not guarantee the accurate detection and prediction of tree defects and the risks associated with trees. There will always be some level of risk associated with trees, particularly large trees. It is impossible to guarantee the safety of any tree. Trees are unpredictable.

****

I certify that the information contained in this report is correct to the best of my knowledge, and that this report was prepared in good faith. Thank you for the opportunity to provide service again. Please call me if you have questions or if I can be of further assistance.

Sincerely,

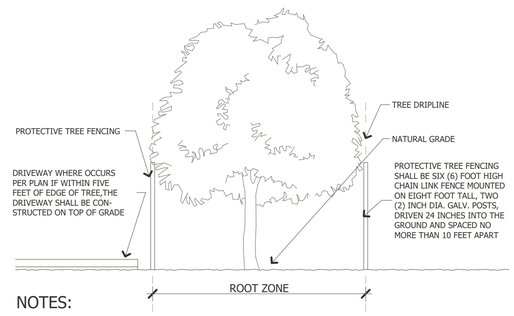
Deborah Ellis, MS.
Consulting Arborist & Horticulturist
Certified Professional Horticulturist #30022
ASCA Registered Consulting Arborist #305
I.S.A. Board Certified Master Arborist WE-457B
I.S.A. Tree Risk Assessment Qualified

Enclosures:
- *Saratoga Tree Protection Sign* template (to be placed on tree protection fencing)
- *Keeping Native Calif. Oaks Healthy*. Hagen. June 1990. California Department of Forestry & Fire Protection. Tree Notes #7.

GLOSSARY

1. **Directional pruning** for overhead utility line clearance means that only the branches directly interfering with the wires are removed. Branches cut back to the trunk or to lateral branches at least 1/3 the diameter of the parent branch. This is in contrast to *topping* where the entire top of the tree is cut back to some predetermined height below the power lines, or heading cuts where individual branches are cut back to some predetermined height with no regard to the future tree structural problems that this will cause.
2. **Dripline**: the area under the total branch spread of the tree, all around the tree. Although tree roots may extend out 2 to 3 times the radius of the dripline, a great concentration of active roots is often in the soil directly beneath this area. The dripline is often used as an arbitrary "tree protection zone".
3. **Included bark** is bark sandwiched between adjacent branches, a branch and the trunk, or two or more trunks, often appearing as a seam. In contrast, a normal attachment will have a ridge of bark protruding upwards and a continuous wood connection between adjacent members. An included bark branch or trunk attachment is weaker than a normal attachment. As branches or trunks with included bark grow, they expand in diameter, squeezing the bark along the seam. This may kill some portion of the included bark. When this occurs, a wound response is initiated. As a consequence, cracks can be generated, leading to breakage. Such defects can often be completely removed when a tree is young (e.g. the offending members equal or less than 2 inches in diameter). Older, larger cuts (such as 6 inches in diameter or more) could cause decay to spread into the remaining member, which is undesirable. In these cases it may be best to thin one member (usually the smaller member) by 25% to slow its growth and ultimate size.
4. **Project Arborist. The arborist who is appointed to be in charge of arborist services for the project.** That arborist shall also be a *qualified consulting arborist* (either an International Society of Arboriculture (ISA) Board-Certified Master Arborist or an American Society of Consulting Arborists (ASCA) Registered Consulting Arborist) that has sufficient knowledge and experience to perform the specific work required. For most construction projects that work will include inspection and documentation of tree protection fencing and other tree protection procedures, and being available to assist with tree-related issues that come up during the project.
5. **Qualified Consulting Arborist:** must be either an International Society of Arboriculture (ISA) Board-Certified Master Arborist or an American Society of Consulting Arborists (ASCA) Registered Consulting Arborist that has sufficient knowledge and experience to perform the specific work required.
6. **Qualified Tree Service**: A tree service is a company that performs tree pruning and tree removals as their main business. A *Qualified Tree Service* is a tree service with a supervising arborist who has the minimum certification level of ISA (International Society of Arboriculture) Certified Arborist and acts in a supervisory position on the job site during execution of the tree work. The tree service shall have a State of California Contractor's license for Tree Service (C61-D49) and provide proof of Workman's Compensation and General Liability Insurance. The person(s) performing the tree work must adhere to the most current of the following arboricultural industry tree care standards:
   - *Best Management Practices, Tree Pruning*. 2008. International Society of Arboriculture, PO Box 3129, Champaign, IL 61826-3129. 217-355-9411
   - *ANSI A300 Pruning Standards*. 2008 Edition. Ibid. (Covers tree care methodology).
   - *ANSI Z133.1 Safety Requirements for Arboricultural Operations*. 2006 Edition. Ibid. (Covers safety).

7. **Root collar & root collar excavation and examination**: The *root collar* (junction between trunk and roots) is critical to whole-tree health and stability. A root collar excavation carefully uncovers this area (with hand digging tools, water or pressurized air). The area is then examined to assess its health and structural stability. Buttress roots may be traced outward from the trunk several feet. Decay assessment of the large roots close to the trunk (buttress roots) involves additional testing such as drilling to extract interior wood with a regular drill, or the use of a resistance-recording drill to check for changes in wood density within the root; as would be caused by decay or cavities. It is important to note that root decay often begins on the underside of roots, which is not detectable in a root collar excavation unless the entire circumference of the root is excavated and visible. Drill tests may detect such hidden decay. Note that it is not possible to uncover and evaluate the entire portion of the root system that is responsible for whole-tree stability. Decayed roots that are inaccessible (e.g. underneath the trunk) can be degraded to the extent that the whole tree may fail even though uncovered and examined roots in accessible locations appear to be sound.
8. **Root rot disease** is caused by wet, poorly aerated soil conditions. Degradation of roots (root rot) and sometimes the lower trunk (crown rot) ensues on weakened, susceptible plant species not adapted to such a soil environment. Opportunistic plant root pathogens (such as watermold fungi) are often the secondary cause of the problem. Root rot is a particular problem among drought tolerant plants that are not adapted to frequent irrigation during our normally rain-free months, such as many of our California native plants. The problem is often worsened in fine-textured heavy clay soils that retain water more than do the coarser, fast-draining soils such as occur in the natural environment of many of our native plants.
9. **Scaffold branch**: a primary structural branch arising from the trunk of a tree. Usually the largest and often the lowest branches of the tree.
10. **Stub**: a short length of branch remaining following the removal of a branch through pruning, versus the more correct method of cutting a branch back to just beyond the branch collar and branch bark ridge. Leaving stubs in trees is generally a poor practice. A stub can also be created naturally, through a branch failure that leaves a portion of the branch still attached to the trunk or parent branch.
11. **Stump sprout trees** are the result of a tree trunk being cut down to a short stump close to the ground. If the tree survives, it sends out many small shoots (suckers) from around the cut stump. Some of these suckers may survive and grow to become significant trunks. These trunks are spaced very close together and usually have included bark between them, which reduces the strength of their union. Such trunks are prone to failure. Stump sprout trees can be very structurally unsound, particularly as they become large and old. There is often a great deal of decay associated with the mother stump, which can also reduce mechanical stability.
12. **Summer Dry**: Our native oak species are adapted to our "summer dry' climate. When the soil in their root system is kept moist during our normally dry months, these oaks are predisposed to attack by fungal root rot pathogens that are usually present in our soils. Therefore it is important to keep irrigation as far from the tree trunk (preferably beyond the mature dripline) as possible. The best landscape treatment underneath native oaks is non-compacted soil covered with a 3 to 4-inch depth of oak wood, leaf and twig litter (the tree's natural litter). Keep this mulch 6 to 12 inches away from the root collar (junction of trunk and roots). An exception to the no summer water rule would be newly planted oaks (for the first 2 to 3 years after planting, until they are "established") and also during droughts that occur during the normal rainy season.



NOTES:

1. TREE PROTECTIVE FENCING SHALL BE INSPECTED AND APPROVED BY CITY ARBORIST PRIOR TO OBTAINING BUILDING DIVISION PERMITS.
2. NO EXCAVATION SHALL OCCUR UNDER THE TREE CANOPIES FOR INSTALLATION OF UTILITIES OR DRIVEWAY.
3. NO FILL SOIL SHALL BE PLACED ANY CLOSER THAN FIVE FEET OUTSIDE THE EDGE OF THE CANOPY OF ANY TREE ON PROPERTY.
4. UNLESS OTHERWISE APPROVED, ALL CONSTRUCTION ACTIVITIES SHALL BE CONDUCTED OUTSIDE THE DESGINATED FENCED AREA (EVEN AFTER FENCING IS REMOVED). THESE ACTIVITIES INCLUDE, BUT ARE NOT NECESSARILY LIMITED TO, THE FOLLOWING: DEMOLITION, GRADING, TRENCHING, EQUIPMENT CLENAING, STOCKPILING AND DUMPING MATERIALS (INCLUDING SOIL FILL), AND EQUIPMENT/VEHICLE OPERATION AND PARKING.
5. THE DISPOSAL OF HARMFUL PRODUCTS, INCLUDING BUT NOT LIMITED TO CHEMICALS, PAINT RINSE WATER, FUEL, CEMENT WATER RINSE, HERBICIDES, OR OTHER MATERIALS, IS PROHIBITED BENEATH TREE CANOPIES OR ANYWHERE ON SITE THAT ALLOWS DRAINAGE BENEATH TREE CANOPIES.
6. THE FOLLOWING SIGNS WILL BE REQUIRED ON THE TREE PROTECTION FENCES: "TREE PROTECTION FENCE - DO NOT MOVE OR REMOVE WITHOUT PRIOR APPROVAL OF CITY ARBORIST, KATE BEAR (408) 868-1276".

1 MANAGEMENT OF ACTIVITIES IN THE ROOT ZONE

N.T.S.

NOTE: PLEASE SEE CITY OF SARATOGA TREE PROTECTION REQUIREMENTS NOTED ON PAGES 25 TO 28 IN THE ARBORIST REPORT.

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PROJECT NAME

PALM VILLAS SARATOGA

LOT #1
389-06-020
SARATOGA CREEK DRIVE
SARATOGA, CA 95070

REVISIONS

TREE PRESERVATION

DATE : 8-14-20
SCALE : N/A
DRAWN BY : N/A
CHECKED BY : TS
ARCHITECT : TOM SLOAN
PROJECT NO : 15600

SHEET NUMBER

TP-1.4

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Palm Villas 8-14-20.dwn

PALM VILLAS - SARATOGA (LOT 2)

GENERAL NOTES

1. CODES AND REGULATIONS — ALL WORK AND MATERIALS SHALL BE IN ACCORDANCE WITH THE FOLLOWING CODES, AS WELL AS ALL APPLICABLE STATE CODES & LOCAL CITY ORDINANCES,
   2019 CALIFORNIA BUILDING CODE (C.B.C.)
   2019 CALIFORNIA RESIDENTIAL CODE (C.R.C.)
   2019 CALIFORNIA ELECTRICAL CODE (C.E.C.)
   2019 CALIFORNIA PLUMBING CODE (C.P.C.)
   2019 CALIFORNIA MECHANICAL CODE (C.M.C.)
   2019 CALIFORNIA FIRE CODE (C.F.C.)
   2019 CALIFORNIA ENERGY CODE (C.E.C.)
   2019 CALIFORNIA GREEN CODE (C.G.C.)
   NOTHING ON THE DRAWINGS IS TO BE CONSTRUED TO PERMIT WORK NOT CONFORMING TO THESE CODES & REGULATIONS.

2. CALGREEN STANDARDS — ALL ADHESIVES, SEALANTS, CAULKS, PAINTS, COATINGS, AND AEROSOL PAINT CONTAINERS MUST REMAIN ON THE SITE FOR FIELD VERIFICATION BY THE BUILDING INSPECTOR. PER CGBSC SEC. 4.504.2.4

   PRIOR TO FINAL INSPECTION, A LETTER SIGNED BY THE GENERAL CONTRACTOR OR THE OWNER/BUILDER (FOR ANY OWNER/BUILDER) PROJECTS MUST BE PROVIDED TO THE CITY OF SAN JOSE BUILDING OFFICIAL CERTIFYING THAT ALL ADHESIVES, SEALANTS, CAULKS, PAINTS, COATINGS, AEROSOL PAINTS, AEROSOL COATINGS, CARPET SYSTEMS (INCLUDING CARPETING, CUSHION AND ADHESIVE), RESILIENT FLOORING SYSTEMS, AND COMPOSITE WOOD PRODUCTS INSTALLED ON THIS PROJECT ARE WITHIN THE EMISSION LIMITS SPECIFIED IN CGBSC SECTION 4.504.

SITE / BUILDING DESCRIPTION

THE SITE IS BISECTED BY SARATOGA CREEK DRIVE, A PRIVATE ROAD BETWEEN TWO DISTINCTIVE LOTS. THE BUILDINGS AND ACTIVITIES FOR LOT ONE AND LOT TWO HAVE BEEN DESIGNED TO FUNCTION AS ONE COMPLEX WHILE COMPLEMENTING THE ORIGINAL INTENT AND VISION FOR THIS P-A ZONING DISTRICT. THE CREATORS OF THIS SUBDIVISION ENVISIONED AN ENCLAVE OF SEVERAL DISTINCTIVE BUILDINGS WITH GENEROUS SETBACKS BETWEEN THEM AND EASY PEDESTRIAN AND VEHICULAR CIRCULATION. THE 2 PROPOSED BUILDINGS WILL BE THE FIRST TWO BUILDINGS CONSTRUCTED THAT FACE SARATOGA CREEK DRIVE AND HAVE BEEN DESIGNED WITH GENEROUS PARKING ON EACH OF THE TWO SITES.

LOT TWO
PROPOSED 2-STORY BUILDINGS WILL BE CONSTRUCTED IN NATURAL MATERIALS SUCH AS HORIZONTAL WOOD SIDING, CEDAR SHINGLES AND STONE WAINSCOT REFLECTING AN ARTS & CRAFTS / CRAFTSMAN ARCHITECTURAL STYLE. THE RUSTIC ARCHITECTURE AND COLOR PALATE WILL INTEGRATE WITH THE WOODED BACKDROP ALONG SARATOGA CREEK. THE HARDSCAPE WILL USE PRECAST CONCRETE PAVERS IN NATURAL EARTH COLORS AND THE LANDSCAPED AREAS THAT SURROUND THE BUILDING WILL BE DROUGHT TOLERANT NATIVE SPECIES OF TREES, SHRUBS AND GROUNDCOVER.
ON-SITE PARKING FOR LOT TWO IS PROVIDED WITH AN UNDERGROUND PARKING LOT AND SURFACE PARKING. THE SITE INCLUDES TWO ACCESSIBLE VAN PARKING STALLS AN OFF-STREET LOADING AREA THAT WILL BE SHARED WITH THE BUILDING LOCATED ON LOT ONE.

TABULATIONS

1. SITE AREA - LOT 2

GROSS AREA :	= 24,357 SQ. FT. (0.559 AC.)
ROAD DEDICATION:	= 3,413 SQ. FT. (0.078 AC.)
INGRESS / EGRESS EASEMENT :	= 5,536 SQ. FT. (0.127 AC.)
NET AREA :	= 15,408 SQ. FT. (0.432 AC.)

2. FLOOR AREA - LOT 2

FIRST FLOOR	= 4,492 SQ. FT.
SECOND FLOOR	= 4,649 SQ. FT.
TOTAL FLOOR AREA	= 9,141 SQ. FT.
BASEMENT AREA:	= 5,254 SQ .FT.

∗ BASEMENT DOES NOT COUNT AS A STORY AND FLOOR AREA

TOTAL FLOOR AREA (WITH BASEMENT LEVEL)	= 14,395 SQ. FT.

3. BUILDING COVERAGE - LOT 2

ALLOWABLE BUILDING FOOTPRINT / LOT AREA : = 4,622 SQ. FT.(30.00 %)

PROPOSED BUILDING FOOTPRINT / LOT AREA : = 4,492 SQ. FT.(29.15 %)

4. ELEVATION HEIGHTS

BUILDING HEIGHT:

LOWEST ELEVATION PT. @ BUILDING CORNERS: 296.08'

HIGHEST ELEVATION PT. @ BUILDING CORNERS: 297.34'

AVERAGE ELEVATION PT. : 296.71'

ALLOWABLE TOP MOST ELEVATION PT. OF THE STRUCTURE: 326.71'

PROPOSED TOP MOST ELEVATION PT. OF THE STRUCTURE: 326.71'

PROJECT CONTACTS

ARCHITECT
METRO DESIGN GROUP
CONTACT :TOM SLOAN A.I.A.
1475 S. BASCOM AVE. # 208
CAMPBELL, CALIFORNIA 95008
(408) 871-1071 PHONE

APPLICANT
GOLDEN AGE PROPERTIES SARATOGA LLC
CONTACT : MICHAEL SNEPER
3333 S. BASCOM AVE.
CAMPBELL, CALIFORNIA 95008
(408) 559-8301 PHONE

TOPOGRAPHIC & BOUNDARY SURVEY
WESTFALL ENGINEERS, INC.
14583 BIG BASIN WAY #3
SARATOGA, CA 95070
(408) 867-0244 PHONE

SOIL ENGINEER
GEOFORENSICS, INC.
CONTACT: DAN DYCKMAN
561 PILGRIM DR., SUITE D
FOSTER CITY, CALIFORNIA 94404
(650) 349-3369 PHONE

BIOLOGICAL RESOURCE ASSESSMENT
ENVIRONMENTAL COLLABORATIVE
1268 64TH STREET
EMERYVILLE, CA 94608
(519) 654-4444 PHONE

CONSULTING ARBORIST & HORTICULTURIST
DEBORAH ELLIS, MS
PO BOX 3714
SARATOGA, CA 95070
(408) 725-1357 PHONE
decah@pacbell.net

CONSULTING ARBORIST
URBAN TREE MANAGEMENT, INC.
CONTACT: MICHAEL P. YOUNG, WCISA #623
PO BOX 971,
LOS GATOS, CALIFORNIA 95031
(650) 321-0202 PHONE

PARKING & TRAFFIC CONSULTANTS
HEXAGON TRANSPORTATION CONSULTANTS, INC.
4 NORTH SECOND STREET,
STE 400 SAN JOSE, CA 95113
(408) 971-6100 PHONE
(408) 971-6102 FAX

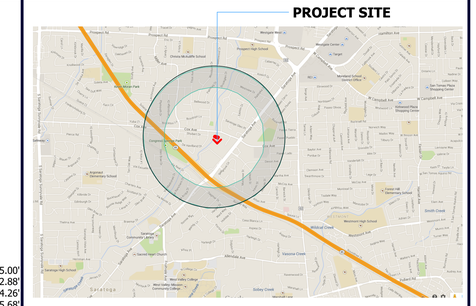
CIVIL ENGINEER
SANDIS, CIVIL ENGINEERS, SURVEYIORS & PLANNERS
1700 WINCHESTER AVENUE SUITE 200
CAMPBELL, CA 95008
(408) 636-0900 PHONE
(408) 636-0999 FAX
www.sandis.net

PROJECT INFORMATION

PROPERTY OWNERS	GOLDEN AGE PROPERTIES SARATOGA LLC CONTACT: MICHAEL SNEPER (408) 559-8301
APPLICANT NAME CONTACT PHONE	GOLDEN AGE PROPERTIES SARATOGA LLC CONTACT: MICHAEL SNEPER (408) 559-8301
MAILING ADDRESS	3333 S. BASCOM AVE CAMPBELL, CA 95008
PROJECT ADDRESS	PARCEL 2 SARATOGA CREEK DRIVE
SITE AREA	0.559 AC GROSS(24,357 SF) 0.354 AC NET (15,408 SF)
A.P.N.	389-06-021
ZONING	(P-A) PROFESSIONAL AND ADMINISTRATIVE
LOCATED WITHIN WUI FIRE AREA:	NO
BUILDING SETBACKS	REQUIRED SETBACKS: FRONT: 25.00' (N) SIDE: 22.32' (S) SIDE: 14.74' REAR: 33.00' PROPOSED SETBACKS: FRONT: 25.00' (N) SIDE: 22.88' (S) SIDE: 54.26' REAR: 35.68'
CONSTRUCTION TYPE	V-A
OCCUPANCY	R-2.1, S-2
STORIES	2
FIRE SPRINKLERS	REQUIRED
EXISTING USE	VACANT

VICINITY MAP

PROJECT SITE



PARKING TABULATION

REQUIRED PARKING SPACES ON LOT 1 AND LOT 2

1 SPACE REQUIRED FOR 3 GUESTS
1 SPACE REQUIRED FOR 2 EMPLOYEES

LOT 1: 48 GUESTS & 12 EMPLOYEES
LOT 2: 30 GUESTS & 9 EMPLOYEES
TOTAL: 78 GUESTS & 21 EMPLOYEES

78 (GUESTS) / 3 =26.0 PARKING SPACES
21 (EMPLOYEES) / 2 =10.5 PARKING SPACES

TOTAL REQUIRED SPACES: 37
ADA SPACES 2/LOT REQUIRED

TOTAL PROVIDED SPACES: 48
ADA SPACES: 4 SPACES

PARKING SPACES ON LOT 1

12 EMPLOYEES / 2 = 6.0 PARKING SPACES
48 GUESTS / 3 = 16.0 PARKING SPACES
TOTAL REQUIRED = 22 PARKING SPACES

2 DESIGNATED VAN ACCESSIBLE PARKING SPACES
20 STANDARD 9.5' X 18' PARKING SPACES

TOTAL PROVIDED = 22 PARKING SPACES

PARKING SPACES ON LOT 2

10 EMPLOYEES / 2 = 5.0 PARKING SPACES
30 GUESTS / 3 = 10.0 PARKING SPACES
TOTAL REQUIRED = 15 PARKING SPACES

2 DESIGNATED VAN ACCESSIBLE PARKING SPACES
20 STANDARD 9.5' X 18' PARKING SPACES
4 COMPACT 8' X 16' PARKING SPACES

TOTAL PROVIDED = 26 PARKING SPACES

BICYCLE PARKING

SHORT-TERM BICYCLE PARKING PER CBSC-2019 SEC. 5.104.4.1.1.
REQUIRED PARKING SPACES
ON LOT 1 AND LOT 2: 37 PARKING SPACES
37 x 5%=1.85 **2 SHORT-TERM BICYCLE PARKING REQUIRED**

LONG-TERM BICYCLE PARKING PER CBSC-2019 SEC. 5.104.4.1.2.
TOTAL NUMBER OF GUESTS (78) REQUIRE 26 VEHICLE PARKING SPACES
26 x 5%=1.3 **2 LONG-TERM BICYCLE PARKING REQUIRED**

BUSINESS DESCRIPTION

RESIDENTIAL CARE FACILITY FOR THE ELDERLY (RCFE) PROVIDING 24 HOUR CARE FOR UP TO 30 GUESTS.

LICENSED BY THE CALIFORNIA DEPT. OF SOCIAL SERVICES FOR ALZHEIMERS AND DEMENTIA PATIENTS

SHIFTS	NUMBER OF EMPLOYEES
6:00 AM TO 2:00 PM SHIFT	= 9 EMPLOYEES
2:00 PM TO 10:00 PM SHIFT	= 5 EMPLOYEES
10:00 PM TO 6:00 AM SHIFT	= 2 EMPLOYEES

PALM VILLAS COMMUNITY PARKING ATTENDANT = 1 DEDICATED EMPLOYEE

SHEET INDEX

A-0	SHEET INDEX, PROJECT INFORMATION, VICINITY MAP, PROJECT CONTACTS, GENERAL NOTES BUSINESS & SITE DESCRIPTIONS
C-0	TOPOGRAPHIC SURVEY
C-3.1	PRELIMINARY GRADING AND DRAINAGE PLAN
C-4.1	PRELIMINARY UTILITY PLAN
C-6.0	PRELIMINARY STORMWATER MANAGEMENT PLAN
C-7.0	GENERAL DETAILS
C-8.0	EROSION CONTROL PLAN
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A-1.0	NEIGHBORHOOD SITE PLAN
A-1.1	GENERAL SITE DEVELOPMENT PLAN
A-1.2	SITE PLAN
A-1.3	LIGHTING PLAN
A-2.0	PROPOSED FLOOR PLANS
A-3.0	EXTERIOR ELEVATIONS
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A-4.0	ROOF PLAN
A-5.0	SETBACK CALCULATION AND SECTIONS
L-1.0	LANDSCAPE PLAN
TP-1.0	TREE PRESERVATION
TP-1.1	TREE PRESERVATION
TP-1.2	TREE PRESERVATION
TP-1.3	TREE PRESERVATION
TP-1.4	TREE PRESERVATION

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PROJECT NAME

PALM VILLAS SARATOGA

LOT #2
389-06-021
SARATOGA CREEK DRIVE
SARATOGA, CA 95070

REVISIONS

COVER SHEET

GENERAL NOTES
PROJECT CONTACTS
PROJECT INFORMATION
VICINITY MAP
SHEET INDEX
BUSINESS DESCRIPTION
SITE / BUILDING DESCRIPTION

DATE : 8-14-20
SCALE : NO SCALE
DRAWN BY : DZ
CHECKED BY : TS
ARCHITECT : TOM SLOAN
PROJECT NO : 15601

SHEET NUMBER

A-0

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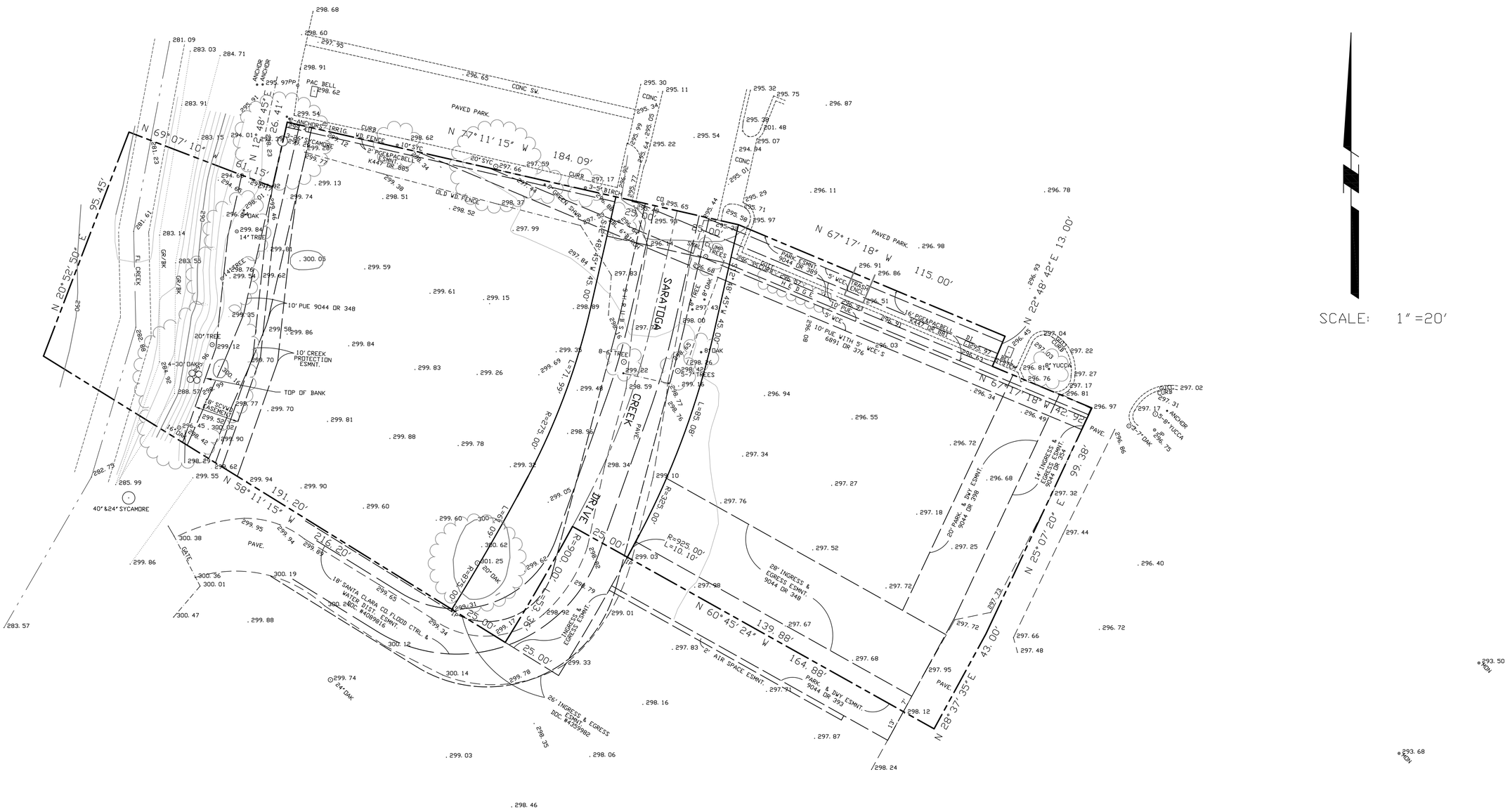

NO.	BY	DATE	REVISION	BY	DATE

DATE: June, 2018
SCALE: HOR. 1"=20' VERT.
DESIGNED:
DRAWN: JK
PROJ. ENGR:

BY: HARRY BABICKA, L. S. 4953
DATE: APRIL 26, 2017

WESTFALL ENGINEERS, INC.
14583 BIG BASIN WAY, SARATOGA, CA 95070 (408)867-0244

TOPOGRAPHIC SURVEY
APN 389-06-020 & APN 389-06-021
SARATOGA CREEK DR., SARATOGA

JOB NO. 2015-103

SHEET **C-0**

SANDIS SILICON VALLEY

SCALE: 1"=10'

GRADING PLAN LEGEND

- CONCRETE PAVING
- LANDSCAPE AREA
- CONCRETE PAVER AREA
- ASPHALT CONCRETE PAVEMENT
- RETAINING WALL
- LIMIT OF WORK LINE
- GRADE BREAK
- TREE PROTECTION
- REMOVE TREE

GRADING NOTES

1. PROVIDE POSITIVE SURFACE DRAINAGE AWAY FROM ALL STRUCTURES BY SLOPING ALL HARDSCAPE SURFACES AT 2% AND LANDSCAPE SURFACES AT 5% AWAY FROM STRUCTURES UNLESS OTHERWISE NOTED ON PLANS.
2. AREAS LACKING TOPOGRAPHIC INFORMATION (ELEVATIONS) HAVE BEEN INTERPOLATED USING STANDARD ENGINEERING METHODS. CONTRACTOR SHALL FIELD VERIFY ALL ELEVATIONS AT CONFORMS PRIOR TO COMMENCEMENT OF CONSTRUCTION AND REPORT BACK ANY DISCREPANCIES TO THE CIVIL ENGINEER.

ADA NOTES

1. ALL HARDSCAPE ALONG THE ADA PATH OF TRAVEL SHALL BE IN CONFORMANCE WITH TITLE 24 OF THE CALIFORNIA ADMINISTRATIVE CODE.
2. SLOPED WALKS ALONG THE DESIGNATED ADA PATH OF TRAVEL SHALL NOT EXCEED A SLOPE OF 1:20 (5%) WITHOUT HANDRAILS. THE MAXIMUM SLOPE WITH HANDRAILS OR FOR CURB RAMPS IS 1:12 (8.33%). LEVEL LANDINGS ARE REQUIRED AT THE TOP AND BOTTOM OF ALL SLOPED WALKWAYS AND RAMPS.
3. WALKWAYS ON ANY PATH OF TRAVEL SHALL HAVE A MINIMUM WIDTH OF 48". WALKWAYS AND ADA PARKING STALLS OR LOADING ZONES SHALL HAVE A 2% MAXIMUM CROSS SLOPE.
4. A LEVEL LANDING (2% MAX SLOPE) SHALL BE PROVIDED AT ALL ACCESSIBLE ENTRANCES TO BUILDINGS, THE LANDINGS SHALL HAVE A MINIMUM WIDTH OF 60" AND A MINIMUM DEPTH OF 60" WHEN THE DOOR OPENS INTO THE BUILDING, AND 42" PLUS THE WIDTH OF THE DOOR WHEN THE DOOR OPEN ONTO THE LANDING.
5. RAMPS GREATER THAN 1:20 SLOPE AND EXCEEDING 30" IN VERTICAL ELEVATION CHANGE SHALL HAVE INTERMEDIATE LEVEL LANDINGS.

PRELIMINARY GRADING QUANTITIES

CUT 1,940 CY
FILL 100 CY
BALANCE 1,840 CY EXPORT

THE EARTHWORK QUANTITIES SHOWN ARE PROVIDED FOR THE PURPOSE OF GRADING PERMIT APPROVAL ONLY. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO CARRY OUT THE CUT/FILL, IMPORT/EXPORT AS NECESSARY TO MEET THE DESIGN GRADES AS SHOWN ON THE PLANS REGARDLESS OF THE ESTIMATED EARTHWORK QUANTITIES AS INDICATED. SIGNIFICANT REVISIONS TO THE QUANTITIES NEED REVIEW BY THE CITY OF SARATOGA. FILL SHORTAGE IS ANTICIPATED TO COME FROM ON-SITE SPOILS ACQUIRED FROM UTILITY TRENCHES AND FOOTING SPOILS.

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PROJECT NAME

PALM VILLAS SARATOGA

LOT #2
389-06-021
SARATOGA CREEK DRIVE
SARATOGA, CA 95070

REVISIONS

SANDIS

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SILICON VALLEY TRI-VALLEY CENTRAL VALLEY
SACRAMENTO EAST BAY SF

PRELIMINARY GRADING AND DRAINAGE PLAN

DATE : 8-14-20
SCALE : 1" = 10'
DRAWN BY :
CHECKED BY : ND
ENGINEER : SY
PROJECT NO : 217040

SHEET NUMBER

C-3.1

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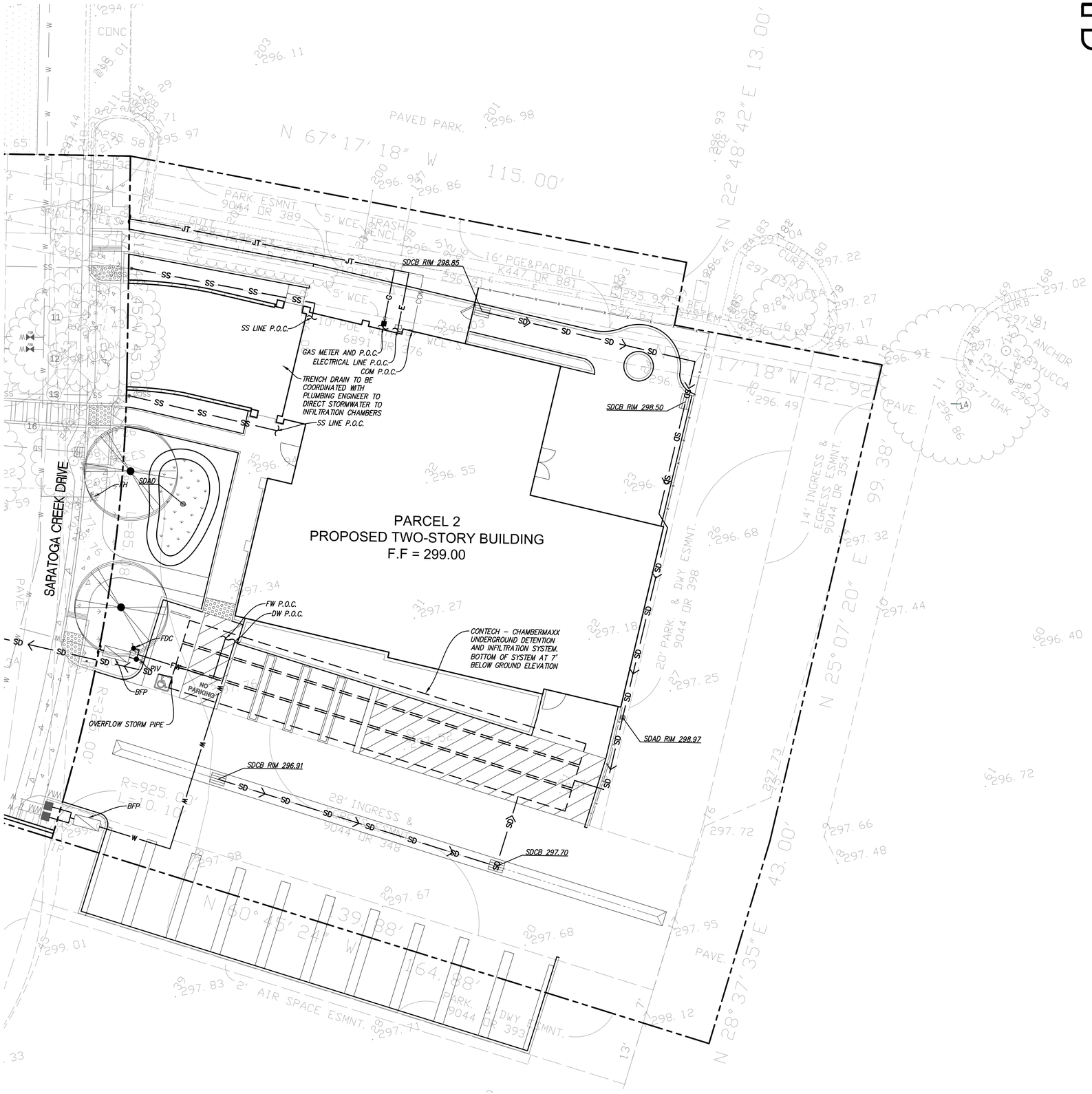

SANDIS
SILICON VALLEY

SCALE: 1"=10'

UTILITY PLAN LEGEND

— — — — PROPERTY LINE

STORM DRAIN NOTES

1. ALL AREA DRAINS AND CATCH BASINS GRATES WITHIN PEDESTRIAN ACCESSIBLE AREAS SHALL MEET ADA REQUIREMENTS.
2. ALL TRENCHES SHALL BE BACK FILLED PER THE SPECIFICATIONS WITH APPROPRIATE TESTS BY THE GEOTECHNICAL ENGINEER TO VERIFY COMPACTION VALUES.
3. FOR GRAVITY FLOW SYSTEMS CONTRACTOR SHALL VERIFY (POTHOLE IF NECESSARY) SIZE, MATERIAL, LOCATION AND DEPTH OF ALL SYSTEMS THAT ARE TO BE CONNECTED TO OR CROSSED PRIOR TO THE TRENCHING OR INSTALLATION OF ANY GRAVITY FLOW SYSTEM.
4. DRAINS SHOWN ON CIVIL PLANS ARE NOT INTENDED TO BE THE FINAL NUMBER AND LOCATION OF ALL DRAINS. PLACEMENT AND NUMBER OF LANDSCAPING DRAINS ARE HIGHLY DEPENDENT ON GROUND COVER TYPE AND PLANT MATERIAL. CONTRACTOR SHALL ADD ADDITIONAL AREA DRAINS AS NEEDED AND AS DIRECTED BY THE LANDSCAPE ARCHITECT.
5. INSTALL SEPARATE SUB-DRAIN SYSTEM BEHIND RETAINING WALLS PER GEOTECHNICAL REPORT AND CONNECT TO STORM DRAIN SYSTEM AS SHOWN ON PLANS.
6. ALL DOWN SPOUTS SHALL DISCHARGE DIRECTLY ON TO ADJACENT PERVIOUS SURFACES OR SPLASH BLOCKS UNLESS OTHERWISE NOTED ON PLANS. SEE ARCHITECTURE PLANS FOR EXACT LOCATION OF THE DOWN SPOUTS.

SANITARY SEWER NOTES

1. ALL SEWER WORK SHALL BE IN CONFORMANCE WITH THE COUNTY ENVIRONMENTAL HEALTH DEPARTMENT STANDARDS.
2. ALL LATERALS SHALL HAVE A TWO WAY CLEANOUT AT FACE OF BUILDING AND AS SHOWN ON PLANS.
3. IF (E) SEWER LATERAL IS TO BE USED, CONTRACTOR SHALL VIDEO INSPECT, PERFORM PRESSURE TEST ON (E) SEWER LATERAL, AND SHALL PERFORM ANY NEEDED REPAIRS.

WATER SYSTEM NOTES

1. MAINTAIN WATER MAIN LINES 10' AWAY FROM SANITARY SEWER MAIN LINES. LATERALS SHALL BE SEPARATED PER PLAN DIMENSIONS.
2. WHERE WATER LINES HAVE TO CROSS SANITARY SEWER LINES, DO SO AT A 90 DEGREE ANGLE AND WATER LINES SHALL BE MINIMUM OF 12" ABOVE TOP OF SANITARY SEWER LINES.
3. ALL WATER SERVICE CONNECTIONS SHALL BE INSTALLED IN ACCORDANCE WITH THE APPLICABLE WATER DISTRICT STANDARDS.
4. ALL WATER LINES SHALL BE INSTALLED WITH 36" MINIMUM COVER.
5. THRUST RESTRAINTS SHALL BE DESIGNED AND INSTALLED AT ALL TEES, CROSSES, BENDS (HORIZONTAL AND VERTICAL), AT SIZE CHANGES AND AT FIRE HYDRANTS.

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SILICON VALLEY TRI-VALLEY CENTRAL VALLEY
SACRAMENTO EAST BAY SF

PRELIMINARY
UTILITY PLAN

DATE : 8-14-20
SCALE : 1" = 10'
DRAWN BY :
CHECKED BY : ND
ENGINEER : SY
PROJECT NO : 217040

SHEET NUMBER

C-4.1

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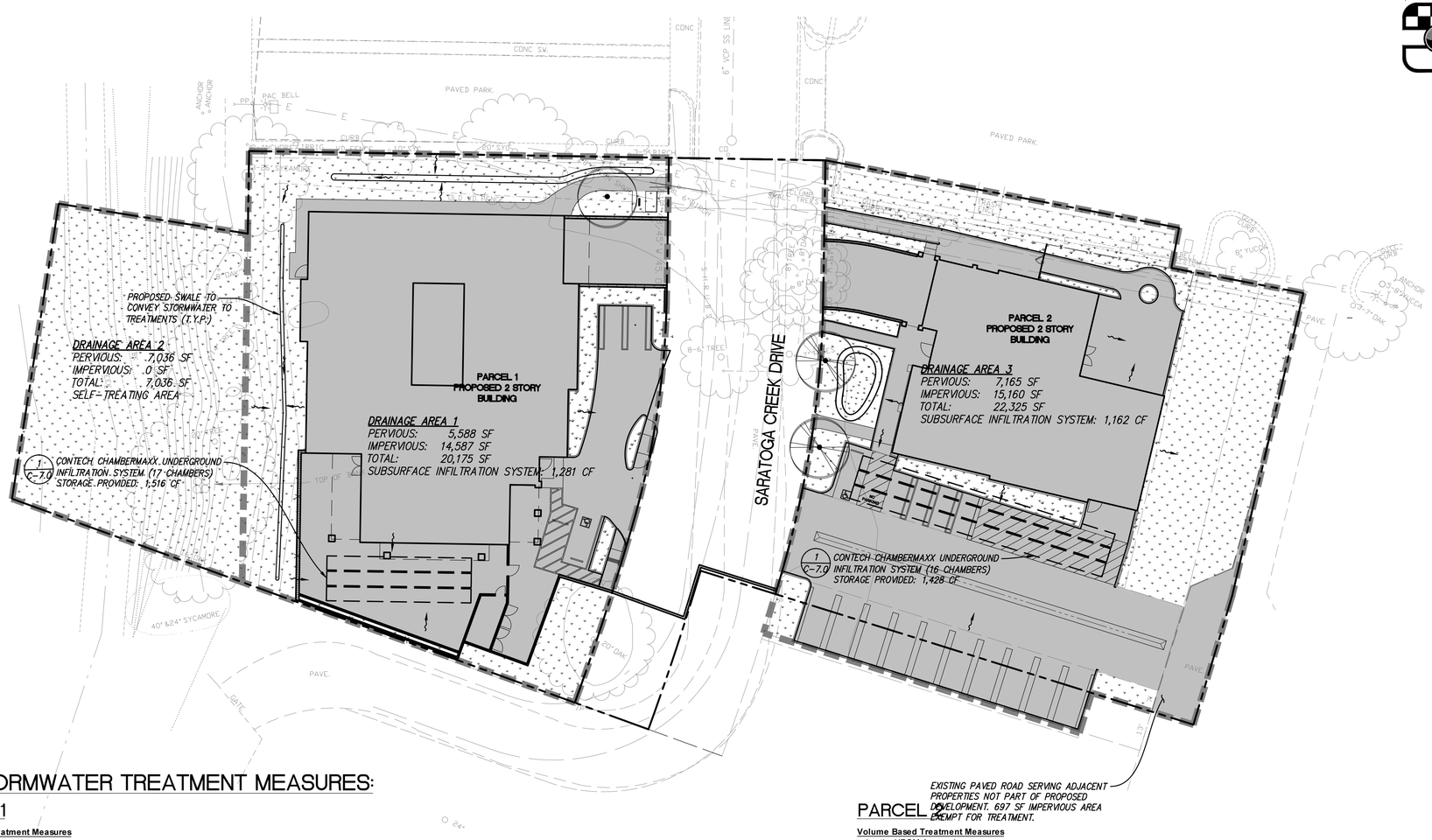

SANDIS SILICON VALLEY

SCALE: 1"=20'

STORMWATER MANAGEMENT PLAN LEGEND

PROPOSED PERVIOUS AREA

PROPOSED IMPERVIOUS AREA

DRAINAGE AREA BOUNDARY

FLOW LINE

FLOW DIRECTION

HYDROMODIFICATION NOTE:

THE PROJECT IS EXEMPT FROM HYDROMODIFICATION REQUIREMENTS PER THE SANTA CLARA COUNTY C.3 TECHNICAL GUIDANCE DOCUMENT. THE PROJECT IS EXEMPT FROM HYDROMODIFICATION DUE TO IMPERVIOUS AREA ADDED OR REPLACED BEING LESS THAN 1 ACRE.

SITE TREATMENT AREA NOTE:

THIS PROJECT IS REPLACING MORE THAN 50% OF THE EXISTING IMPERVIOUS AREA AND THEREFORE MUST TREAT THE ENTIRE SITE.

STORMWATER MANAGEMENT NOTES:

1. THIS PLAN PRESENTS METHODS AND CALCULATIONS FOR COMPLYING WITH THE REQUIREMENTS OF PROVISION C.3 OF THE MUNICIPAL REGIONAL STORMWATER PERMIT IN ACCORDANCE WITH THE SANTA CLARA COUNTY PROGRAM AND THE CITY OF SARATOGA REQUIREMENTS.

2. THE FOLLOWING TREATMENT MEASURES ARE PROPOSED TO REGULATE THE QUALITY OF STORM WATER LEAVING THE SITE

   2.1. SELF-TREATING AREA – RUNOFF IN THIS AREA ORIGINATES IN AND FLOWS THROUGH PLANTING PRIOR TO EXITING THE PROJECT SITE, NO TREATMENT IS REQUIRED

   2.2. SUBSURFACE INFILTRATION SYSTEM – RUNOFF IN THIS AREA IS DIRECTED TO A SUBSURFACE INFILTRATION SYSTEM FOR STORAGE AND INFILTRATION PRIOR TO EXISTING THE SITE.

C.3 STORMWATER TREATMENT MEASURES:

PARCEL 1

Volume Based Treatment Measures
using the URQM Approach

Step 1. Drainage Area for BMP: 0.46 acres

Step 2. a. Impervious Area: 0.35 acres
b. Impervious ratio: (i) 74.9%

Step 3. Watershed runoff Coefficient Cw = 0.543
($Cw = 0.858i^3 - 0.78i^2 + 0.774i + 0.04$)

Step 4. Mean Annual Precipitation 20 inches

Step 5. Closest Rain Gage Palo Alto

Gage	MAP_{gage}	$(P_6)_{gage}$ (in)
San Jose Airport	13.9	0.512
Palo Alto	13.7	0.522
Morgan Hill	19.5	0.76

MAP_{gage} 13.7
$(P_6)_{gage}$ 0.522

Step 6. Mean Storm Event Precipitation Depth $(P_6)_{site}$
$(P_6)_{site} = (P_6)_{gage} \times (MAP_{site})/(MAP_{gage})$ 0.762 inches

Step 7. "a" regression constant

a=	48 hour	1.963
a=	24 hour	1.582
a=	12 hour	1.312

48 hour
a= 1.963

Step 8. Maximized Storage Area
$P_o = (a \times Cw) \times P_6$ 0.812 inches

Step 9. Volume of Runoff to be Treated
Design Volume = Po X A X 1ft/12in 0.031 acre-ft
1,366 cuft

Step 10. Infiltration within 72 hrs Check
Estimated Infiltration Rate 0.5 in/hr
Volume Provided V 1516 cuft
System Footprint 778.901 sqft
V / (System Footprint X infiltration rate) 47 hrs

PARCEL 2

Volume Based Treatment Measures
using the URQM Approach

Step 1. Drainage Area for BMP: 0.51 acres

Step 2. a. Impervious Area: 0.35 acres
b. Impervious ratio: (i) 67.9%

Step 3. Watershed runoff Coefficient Cw = 0.475
($Cw = 0.858i^3 - 0.78i^2 + 0.774i + 0.04$)

Step 4. Mean Annual Precipitation 20 inches

Step 5. Closest Rain Gage Palo Alto

Gage	MAP_{gage}	$(P_6)_{gage}$ (in)
San Jose Airport	13.9	0.512
Palo Alto	13.7	0.522
Morgan Hill	19.5	0.76

MAP_{gage} 13.7
$(P_6)_{gage}$ 0.522

Step 6. Mean Storm Event Precipitation Depth $(P_6)_{site}$
$(P_6)_{site} = (P_6)_{gage} \times (MAP_{site})/(MAP_{gage})$ 0.762 inches

Step 7. "a" regression constant

a=	48 hour	1.963
a=	24 hour	1.582
a=	12 hour	1.312

48 hour
a= 1.963

Step 8. Maximized Storage Area
$P_o = (a \times Cw) \times P_6$ 0.710 inches

Step 9. Volume of Runoff to be Treated
Design Volume = Po X A X 1ft/12in 0.030 acre-ft
1,321 cuft

Step 10. Infiltration within 72 hrs Check
Estimated Infiltration Rate 0.5 in/hr
Volume Provided V 1428 cuft
System Footprint 701.398 sqft
V / (System Footprint X infiltration rate) 49 hrs

Drainage Area	TOTAL AREA sq. ft.	TOTAL AREA Ac.	IMPERVIOUS AREA sq. ft.	IMPERVIOUS AREA Ac.	PERVIOUS AREA sq. ft.	PERVIOUS AREA Ac.	Percent Impervious	Net Impervious	Runoff Coefficient, c	Q (cfs) Required	Treatment Area	C.3 LID Method	Treatment Provided (sf)
Self-Treating Area (2:1 Calculation)	7,036.0	0.16	0.0	0.00	7,036	0.16	0.0%	0.0	0.300	0.010	0	STA	7,036

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SILICON VALLEY TRI VALLEY CENTRAL VALLEY SACRAMENTO EAST BAY/SF

PRELIMINARY STORMWATER MANAGEMENT PLAN

DATE : 8-14-20
SCALE : 1" = 20'
DRAWN BY :
CHECKED BY : ND
ENGINEER : SY
PROJECT NO : 217040

SHEET NUMBER

C-6.0

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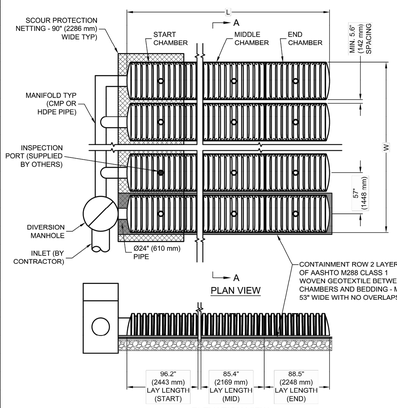
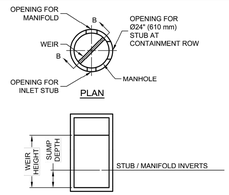


TYPICAL LAYOUT

CHAMBERMAXX DESIGN DETAILS			
FEATURE	**START CHAMBER**	**MIDDLE CHAMBER**	**END CHAMBER**
OVERALL CHAMBER HEIGHT - IN (mm)	30.3 (770)	30.3 (770)	30.3 (770)
OVERALL CHAMBER WIDTH - IN (mm)	51.4 (1306)	51.4 (1306)	51.4 (1306)
ACTUAL LENGTH - IN (mm)	98.4 (2500)	91.0 (2311)	92.0 (2337)
INSTALLED LAY LENGTHS - IN (mm)	96.2 (2443)	85.4 (2169)	88.5 (2248)
CHAMBER STORAGE VOLUME - CF (m^3)	50.2 (1.421)	47.2 (1.336)	46.2 (1.307)
CHAMBER STORAGE PER LINEAR FOOT - CF/LF (m^3/m)	6.3 (0.582)	6.6 (0.616)	6.3 (0.582)
*INSTALLED CHAMBER VOLUME - CF (m^3)	78.1 (2.211)	75.1 (2.127)	74.1 (2.098)
*INSTALLED CHAMBER VOLUME PER LINEAR FOOT - CF/LF (m^3/m)	9.7 (0.905)	10.6 (0.981)	10.0 (0.934)
CHAMBER WEIGHT - LB (kg)	83 (37.65)	73 (33.11)	76 (34.47)
*6" (152 mm) OF STONE ABOVE AND BELOW CHAMBER, 5.6" (142 mm) CHAMBER SPACING AND 40% POROSITY			

* SITE SPECIFIC DATA REQUIREMENTS	
FOR DETAILED DESIGN ASSISTANCE REFERENCE CHAMBERMAXX DYODS (DESIGN YOUR OWN DETENTION SYSTEM) SOFTWARE AND CHAMBERMAXX STAGE STORAGE CALCULATOR @ WWW.CONTECHSTORMWATER.COM	
TOTAL REQUIRED STORAGE VOLUME (CF OR m^3)	
DEPTH TO INVERT BELOW ASPHALT (FT OR m)	
LIMITING WIDTH (FT OR m)	
LIMITING LENGTH (FT OR m)	
POROUS STONE ABOVE CHAMBER (IN OR mm)	
POROUS STONE BELOW CHAMBER (IN OR mm)	
STONE POROSITY (0 TO 40%)	
MANIFOLD SYSTEM DIAMETER (IN OR mm)	
* PER ENGINEER OF RECORD	



DIVERSION MANHOLE DETAIL

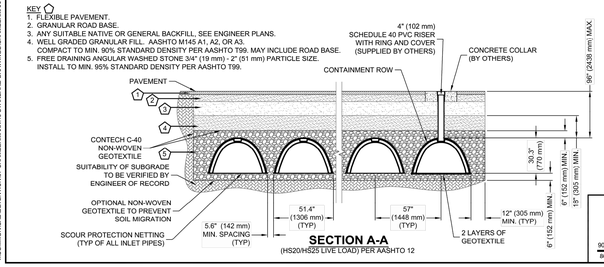
GENERAL NOTES

1. ALL ELEVATIONS, DIMENSIONS AND LOCATIONS OF RISERS AND INLETS SHALL BE VERIFIED BY THE ENGINEER OF RECORD.
2. PRIOR TO INSTALLATION OF THE CHAMBERMAXX SYSTEM A PRE-CONSTRUCTION MEETING SHALL BE CONDUCTED. THOSE REQUIRED TO ATTEND ARE THE SUPPLIER OF THE SYSTEM, THE GENERAL CONTRACTOR, SUB-CONTRACTORS AND THE ENGINEER.
3. CHAMBERMAXX CHAMBERS ARE MANUFACTURED FROM POLYPROPYLENE PLASTIC.
4. CHAMBERMAXX SYSTEM TO MEET AASHTO HS20/HS25 LIVE LOADING, PER AASHTO LRFD SECTION 12.
5. ACCESS COVERS TO MEET AASHTO HS20/HS25 LIVE LOADING.
6. MINIMUM COVER IS 18-INCHES (457 mm) AND MAXIMUM COVER IS 96-INCHES (2438 mm) TO BOTTOM OF FLEXIBLE PAVEMENT OR TO TOP OF RIGID PAVEMENT. FOR COVER HEIGHTS GREATER THAN 96-INCHES (2438 mm) CONTACT YOUR LOCAL REPRESENTATIVE.
7. ALL PARTS PROVIDED BY CONTECH UNLESS OTHERWISE NOTED.
8. FOR INFORMATION ON PRE-TREATMENT SYSTEMS, REFERENCE CONTECH PRE-TREATMENT SYSTEM STANDARD DETAILS OR CONTACT YOUR LOCAL REPRESENTATIVE.
9. CHAMBERMAXX BY CONTECH ENGINEERED SOLUTIONS, LLC

INSTALLATION NOTES

1. CHAMBERMAXX INSTALLATION GUIDE TO BE REVIEWED BY CONTRACTOR PRIOR TO INSTALLATION.
2. PRIOR TO PLACING BEDDING, THE FOUNDATION MUST BE CONSTRUCTED TO A UNIFORM AND STABLE GRADE. IN THE EVENT THAT UNSUITABLE FOUNDATION MATERIALS ARE ENCOUNTERED DURING EXCAVATION, A GEOGRID SHALL BE UTILIZED OR UNSUITABLE MATERIAL SHALL BE REMOVED AND BROUGHT BACK TO GRADE WITH FILL MATERIAL AS APPROVED BY THE ENGINEER OF RECORD. ONCE THE FOUNDATION PREPARATION IS COMPLETE, THE BEDDING MATERIAL CAN BE PLACED.
3. THE SCOUR PROTECTION NETTING TO EXTEND 1'-0" (305 mm) BEYOND OUTSIDE EDGE OF INLET CHAMBERS.
4. COVER ANY OPEN VOID SPACES GREATER THAN ¾" (19 mm) ON CHAMBERS WITH A NON-WOVEN GEOTEXTILE TO PREVENT INFILTRATION OF BACKFILL MATERIAL.
5. STONE EMBEDMENT MATERIAL SHALL BE INSTALLED TO 95% STANDARD PROCTOR DENSITY AND PLACED IN 6-INCH (152 mm) TO 8-INCH (203 mm) LIFTS SUCH THAT THERE IS NO MORE THAN A TWO LIFT DIFFERENTIAL BETWEEN ANY OF THE CHAMBERS AT ANY TIME. GRANULAR BACKFILL MATERIAL SHALL BE COMPACTED TO 90% SPD. BACKFILLING SHALL BE ADVANCED ALONG THE LENGTH OF THE CHAMBER ROWS AT THE SAME RATE TO AVOID DIFFERENTIAL LOADING AND DISPLACEMENT OF THE CHAMBERS. THE MINIMUM CHAMBER SPACING MUST BE MAINTAINED.
6. REFER TO CHAMBERMAXX INSTALLATION GUIDE FOR TEMPORARY CONSTRUCTION LOADING GUIDELINES.
7. IT IS ALWAYS THE CONTRACTOR'S RESPONSIBILITY TO FOLLOW OSHA GUIDELINES FOR SAFE PRACTICES.
8. GENERAL INSTALLATION METHODS AND MATERIALS TO BE IN ACCORDANCE WITH ASTM D2321.

KEY
1. FLEXIBLE PAVEMENT.
2. GRANULAR ROAD BASE.
3. ANY SUITABLE NATIVE OR GENERAL BACKFILL, SEE ENGINEER PLANS.
4. WELL GRADED GRANULAR FILL. AASHTO M145 A1, A2, OR A3. COMPACT TO MIN. 90% STANDARD DENSITY PER AASHTO T99. MAY INCLUDE ROAD BASE.
5. FREE DRAINING ANGULAR WASHED STONE 3/4" (19 mm) - 2" (51 mm) PARTICLE SIZE. INSTALL TO MIN. 95% STANDARD DENSITY PER AASHTO T99.



CHAMBERMaxx®
PATENT PENDING

CONTECH ENGINEERED SOLUTIONS LLC
www.ContechES.com
9025 Centre Pointe Dr., Suite 400, West Chester, OH 45069
800-338-1122 513-645-7000 513-645-7993 FAX

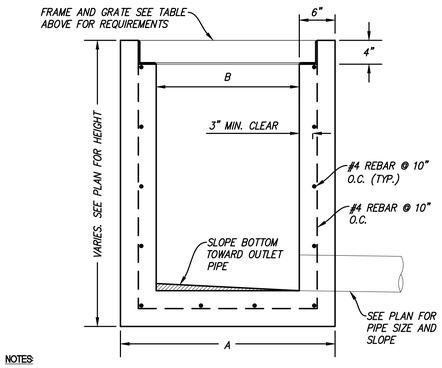
CHAMBERMAXX STORMWATER RETENTION
STANDARD DETAIL
CONTAINMENT ROW OPTION

SUBSURFACE INFILTRATION SYSTEM DETAILS (1)

N.T.S.

FRAME AND GRATE REQUIREMENTS		
CATCH BASIN LOCATION	LOADING REQUIREMENTS	MIN. GRATE SPACING REQUIREMENTS
VEHICLE ACCESS ROAD	H20 RATED	4" CROSS BARS O.C. W/ 1 3/16" BEARING BARS O.C.
PEDESTRIAN PATH	LIGHT DUTY/NON-TRAFFIC	1/4" MAX. OPENINGS
LANDSCAPE	LIGHT DUTY/NON-TRAFFIC	4" CROSS BARS O.C. W/ 1 3/16" BEARING BARS O.C.

CATCH BASIN SIZE	A	B	MAX PIPE SIZE
12"	2'-0"	1'-0"	6"
24"	3'-0"	2'-0"	18"
36"	4'-0"	3'-0"	30"

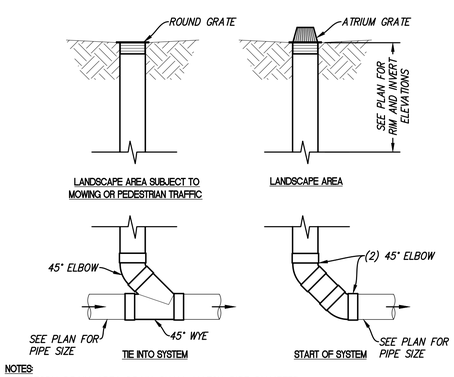


NOTES:
1. T&G JOINT AS REQUIRED FOR STRUCTURES OVER 4'-0" DEEP.
2. FRAME SHALL BE ANCHORED TO CONCRETE PER MANUFACTURER'S SPECIFICATIONS.

(2) CONCRETE SQUARE CATCH BASIN

1"=1'

PIPE SIZE	NDS NUMBER*			
	45° WYE	45° ELBOW	ATRIUM GRATE	ROUND GRATE
3"	3P08	3P03	74	14
4"	4P08	4P03	78	11
6"	6P08	6P03	90	40
8"	8P08	8P03		10
*OR APPROVED EQUIVALENT				



NOTES:
1. STORM DRAIN AREA DRAIN SHALL MATCH PIPE DIAMETER.

(3) LANDSCAPE AREA DRAIN

1"=1'

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PROJECT NAME

PALM VILLAS SARATOGA

LOT #2
389-06-021
SARATOGA CREEK DRIVE
SARATOGA, CA 95070

REVISIONS

SANDIS
CIVIL ENGINEERS
SURVEYORS
PLANNERS
1700 S. Winchester Blvd,
Suite 200, Campbell, CA 95008
P. 408.636.0900
F. 408.636.0999
www.sandis.net
SILICON VALLEY TRI-VALLEY CENTRAL VALLEY
SACRAMENTO EAST BAY/ SF

GENERAL DETAILS

DATE : 8-14-20
SCALE : N.T.S.
DRAWN BY :
CHECKED BY : ND
ENGINEER : SY
PROJECT NO : 217040

SHEET NUMBER

C-7.0

\\COMMON\CAD\CETENTI\ONXT CHAMBERMAXX\NG STANDARD DRAWINGS\CHAMBERMAXX\CCP-03-STANDARD DETAIL_2.DWG 10/21/2018 8:28 AM
5/21/2018 1:44 PM
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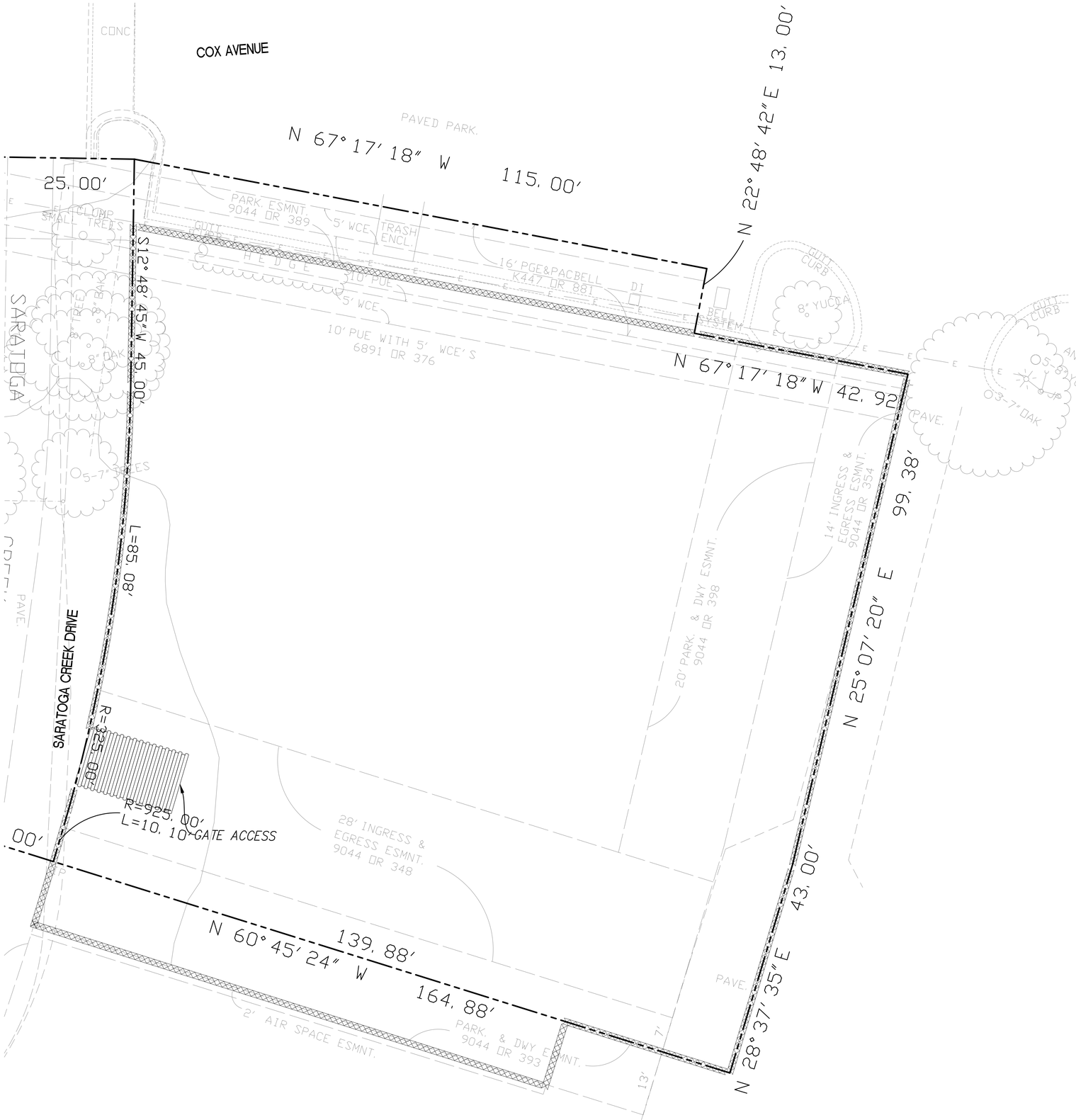

SANDIS
SILICON VALLEY
SCALE: 1"=20'

LEGEND

- FIBER ROLLS (TO BE INSTALLED AROUND PERIMETER OF DISTURBED AREAS) — SE-5 / C8.1
- INLET PROTECTION — SE-10 / C8.1
- SK — SPILL KIT (LOCATION TO BE DETERMINED BY CONTRACTOR)
- STABILIZED CONSTRUCTION ENTRANCE (EX. AC PAVING) — TC-1 / C8.1
- PORTABLE RESTROOM (TBD)
- CONSTRUCTION TRAILER — CONSTRUCTION TRAILER (TBD)

EROSION CONTROL NOTES:

A. TEMPORARY CONSTRUCTION ENTRANCE/EXIT LOCATION SHOWN IS APPROXIMATE. CONTRACTOR TO PROVIDE LOCATION WHERE APPROPRIATE.

B. THIS PLAN REPRESENTS POSSIBLE WATER POLLUTION CONTROL MEASURES INCLUDING EROSION CONTROL AND SEDIMENT CONTROL.

C. EXISTING SURFACES SHALL BE UNDISTURBED TO THE EXTENT PRACTICAL.

D. GROUND WATER SHALL NOT BE DISCHARGED WITH STORM WATER. GROUND WATER DEWATERING OPERATIONS SHALL BE COORDINATED AS NEEDED WITH OWNER.

E. CONTRACTOR SHALL PROVIDE EFFECTIVE SOIL COVER FOR AREAS OF CONSTRUCTION ACTIVITY THAT HAVE BEEN DISTURBED AND ARE NOT SCHEDULED TO BE ACTIVE FOR AT LEAST 14 DAYS.

F. ALL EROSION CONTROL AND SEDIMENT CONTROLS TO BE OBTAINED INSTALLED AND MAINTAINED AS REQUIRED IN PROJECT SWPPP.

G. CONTRACTOR TO INSTALL RUN-ON AND RUN-OFF CONTROL MEASURES ACCORDING TO PLANS OR AS NECESSARY TO ENSURE SEDIMENT IS NOT TRANSPORTED FROM SITE.

H. CONTRACTOR TO PROVIDE BACK-UP EROSION PREVENTION MEASURES (SOIL STABILIZATION) WITH SEDIMENT CONTROL MEASURES SUCH AS STRAW WATTLES, SILT FENCE, GRAVEL INLET FILTERS, AND/OR SEDIMENT TRAPS OR BASINS. ENSURE CONTROL MEASURES ARE ADEQUATE, IN PLACE, AND IN OPERABLE CONDITIONS. SEDIMENT CONTROLS, INCLUDING INLET PROTECTION, ARE NECESSARY BUT SHOULD BE A SECONDARY DEFENSE BEHIND GOOD EROSION CONTROL MEASURES.

I. STOCKPILE LOCATION(S) TO BE DETERMINED BY THE CONTRACTOR. COORDINATE WITH SITE QSP.

J. ALL CONCRETE TRUCKS TO USE CHUTE WASH BUCKETS FOR CONCRETE RINSE, ALL CONCRETE PUMPS TO CAPTURE CONCRETE RINSE IN SECONDARY CONTAINMENT AND PROPERLY DISPOSE.

K. STREET SWEEPING SHALL BE CHECKED DAILY TO ENSURE DEPOSITED SEDIMENT AND DEBRIS DOES NOT ENTER THE STORM DRAIN SYSTEM. USE REGENERATIVE VACUUM STREET CLEANER TO MITIGATE AIR AND WATER POLLUTION.

L. RUNOFF THAT HAS CONTACTED AMENDED SOIL AREAS SHALL NOT BE ALLOWED TO LEAVE THE SITE OR ENTER THE STORM DRAIN SYSTEM.

METRO DESIGN GROUP

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PROJECT NAME

PALM VILLAS SARATOGA

LOT #2
389-06-021
SARATOGA CREEK DRIVE
SARATOGA, CA 95070

REVISIONS

SANDIS

CIVIL ENGINEERS
SURVEYORS
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SILICON VALLEY TRI-VALLEY CENTRAL VALLEY
SACRAMENTO EAST BAY/ SF

EROSION CONTROL PLAN

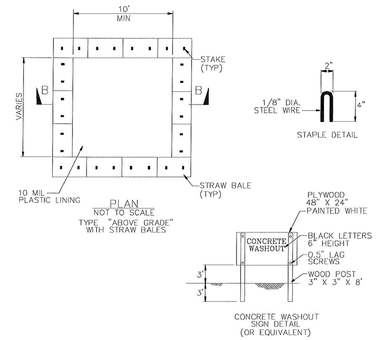
DATE :	8-14-20
SCALE :	1" = 20'
DRAWN BY :	
CHECKED BY :	ND
ENGINEER :	SY
PROJECT NO :	217040

SHEET NUMBER

C-8.0

5/21/2018 1:44 PM
Palm Villas 5-01-18.pln

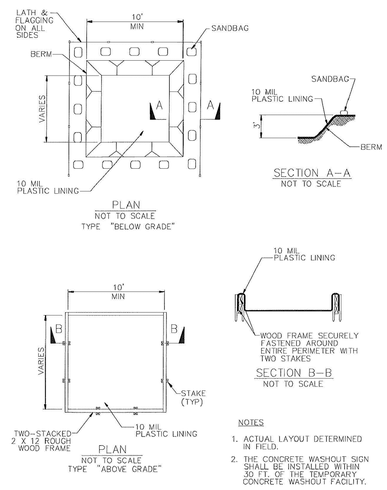
Concrete Waste Management WM-8



NOTES

1. ACTUAL LAYOUT DETERMINED IN FIELD.
2. THE CONCRETE WASHOUT SIGN SHALL BE INSTALLED WITHIN 30 FT. OF THE TEMPORARY CONCRETE WASHOUT FACILITY.

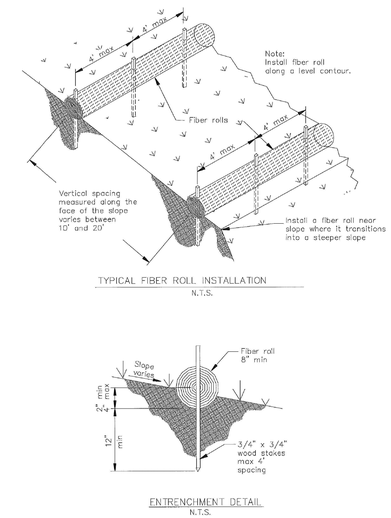
Concrete Waste Management WM-8



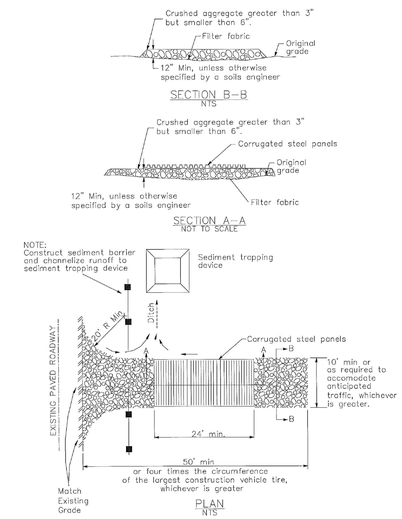
NOTES

1. ACTUAL LAYOUT DETERMINED IN FIELD.
2. THE CONCRETE WASHOUT SIGN SHALL BE INSTALLED WITHIN 30 FT. OF THE TEMPORARY CONCRETE WASHOUT FACILITY.

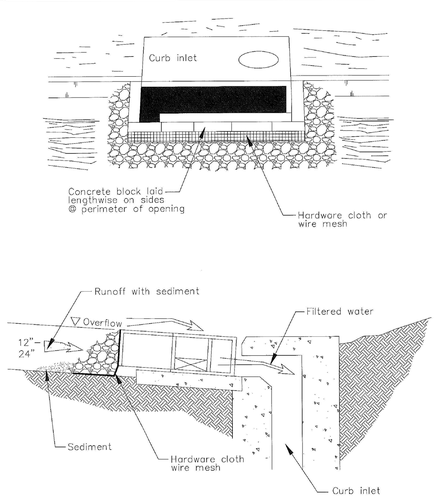
Fiber Rolls SE-5



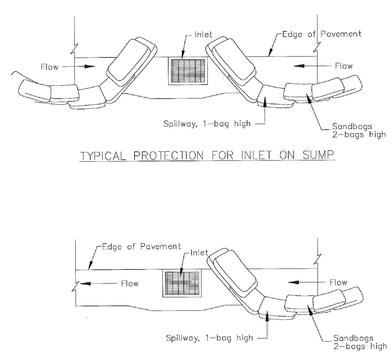
Stabilized Construction Entrance/Exit TC-1



Storm Drain Inlet Protection SE-10



Storm Drain Inlet Protection SE-10

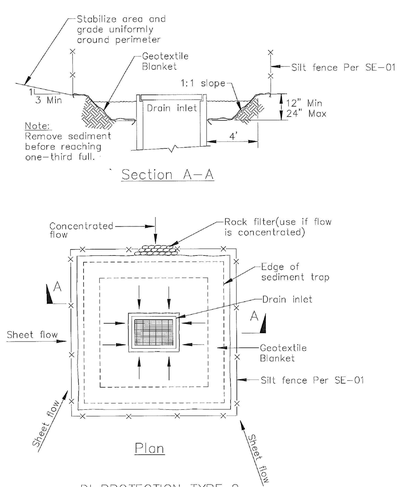


NOTES:

1. Intended for short-term use.
2. Use to inhibit non-storm water flow.
3. Allow for proper maintenance and cleanup.
4. Bags must be removed after adjacent operation is completed
5. Not applicable in areas with high silts and clays without filter fabric.

DI PROTECTION TYPE 3
NOT TO SCALE

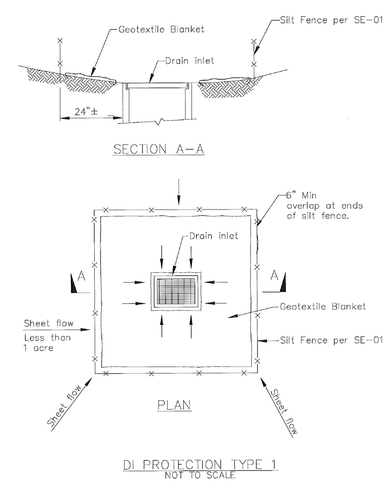
Storm Drain Inlet Protection SE-10



Notes

1. For use in cleared and grubbed and in graded areas.
2. Shape basin so that longest inflow area faces longest length of trap.
3. For concentrated flows, shape basin in 2:1 ratio with length oriented towards direction of flow.

Storm Drain Inlet Protection SE-10



NOTES:

1. For use in areas where grading has been completed and final soil stabilization and seeding are pending.
2. Not applicable in paved areas.
3. Not applicable with concentrated flows.

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PROJECT NAME

PALM VILLAS SARATOGA

LOT #2
389-06-021
SARATOGA CREEK DRIVE
SARATOGA, CA 95070

REVISIONS

SANDIS

CIVIL ENGINEERS
SURVEYORS
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SILICON VALLEY TRI-VALLEY CENTRAL VALLEY
SACRAMENTO EAST BAY/SF

EROSION CONTROL DETAILS

DATE : 8-14-20
SCALE : N.T.S.
DRAWN BY :
CHECKED BY : ND
ENGINEER : SY
PROJECT NO : 217040

SHEET NUMBER

C-8.1

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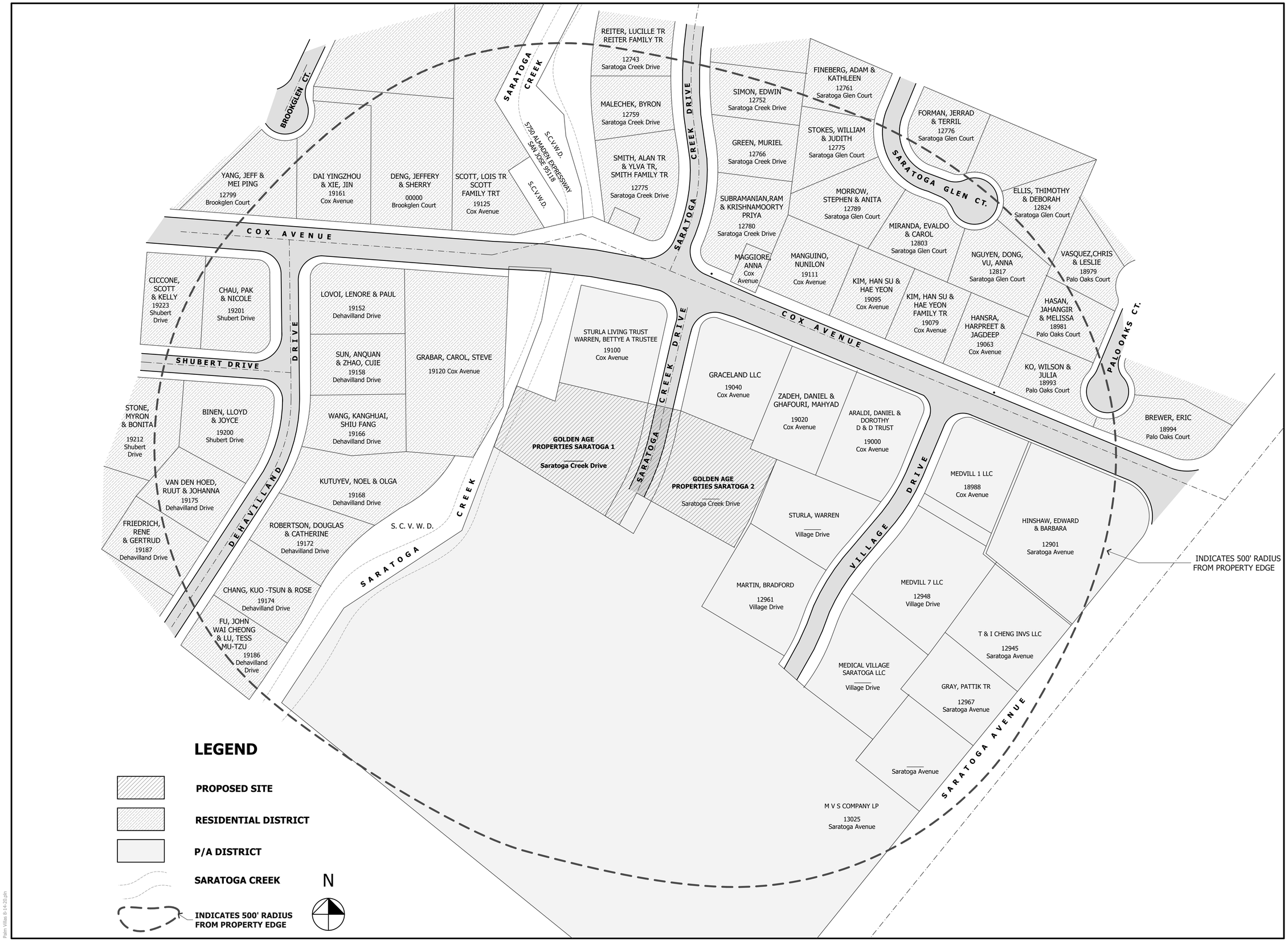
Palm Villas 5-01-18.pln



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PROJECT NAME

PALM VILLAS SARATOGA

LOT #2
389-06-021
SARATOGA CREEK DRIVE
SARATOGA, CA 95070

REVISIONS

NEIGHBORHOOD SITE PLAN

DATE :	8-14-20
SCALE :	1" = 60'-0"
DRAWN BY :	DZ
CHECKED BY :	TS
ARCHITECT :	TOM SLOAN
PROJECT NO :	15601

SHEET NUMBER

A-1.0

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PROJECT NAME

PALM VILLAS SARATOGA

LOT #2
389-06-021
SARATOGA CREEK DRIVE
SARATOGA, CA 95070

REVISIONS

GENERAL SITE DEVELOPMENT PLAN

DATE :	8-14-20
SCALE :	1" =30'-0"
DRAWN BY :	DZ
CHECKED BY :	TS
ARCHITECT :	TOM SLOAN
PROJECT NO :	15601

SHEET NUMBER

A-1.1

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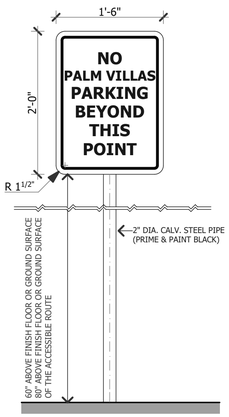
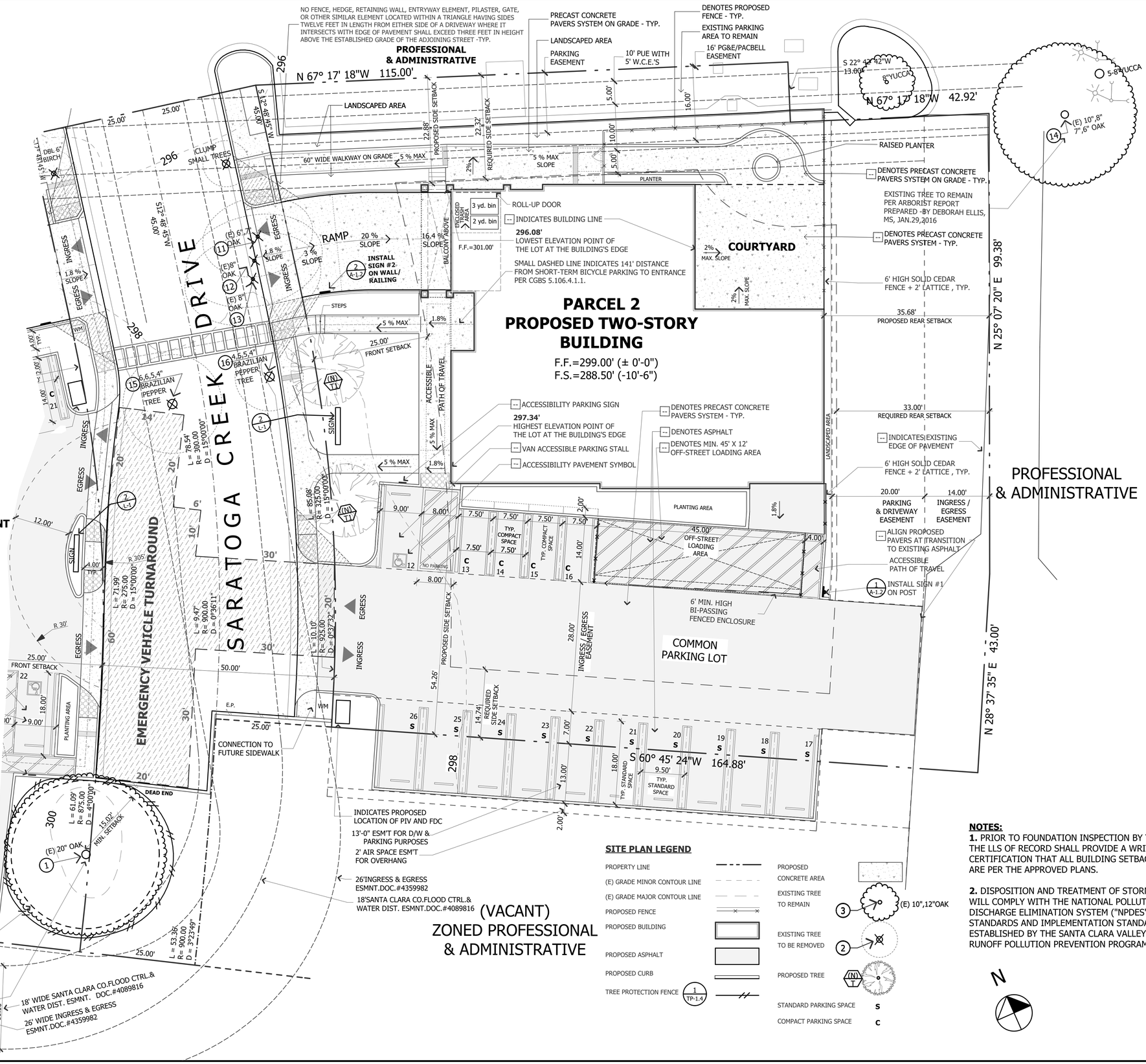


INSTALL SIGN ON POST

1 SIGNAGE DETAIL
SCALE: 1"= 1'-0"

INSTALL SIGN ON WALL/ RAILING

2 SIGNAGE DETAIL
SCALE: 1"= 1'-0"



NOTES:

1. PRIOR TO FOUNDATION INSPECTION BY THE CITY, THE LLS OF RECORD SHALL PROVIDE A WRITTEN CERTIFICATION THAT ALL BUILDING SETBACKS ARE PER THE APPROVED PLANS.

2. DISPOSITION AND TREATMENT OF STORM WATER WILL COMPLY WITH THE NATIONAL POLLUTION DISCHARGE ELIMINATION SYSTEM ("NPDES") STANDARDS AND IMPLEMENTATION STANDARDS ESTABLISHED BY THE SANTA CLARA VALLEY URBAN RUNOFF POLLUTION PREVENTION PROGRAM.

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PROJECT NAME

PALM VILLAS SARATOGA

LOT #2
389-06-021
SARATOGA CREEK DRIVE
SARATOGA, CA 95070

REVISIONS

PROPOSED SITE DEVELOPMENT PLAN

DATE :	8-14-20
SCALE :	1" = 10'-0"
DRAWN BY :	DZ
CHECKED BY :	TS
ARCHITECT :	TOM SLOAN
PROJECT NO :	15601

SHEET NUMBER

A-1.2

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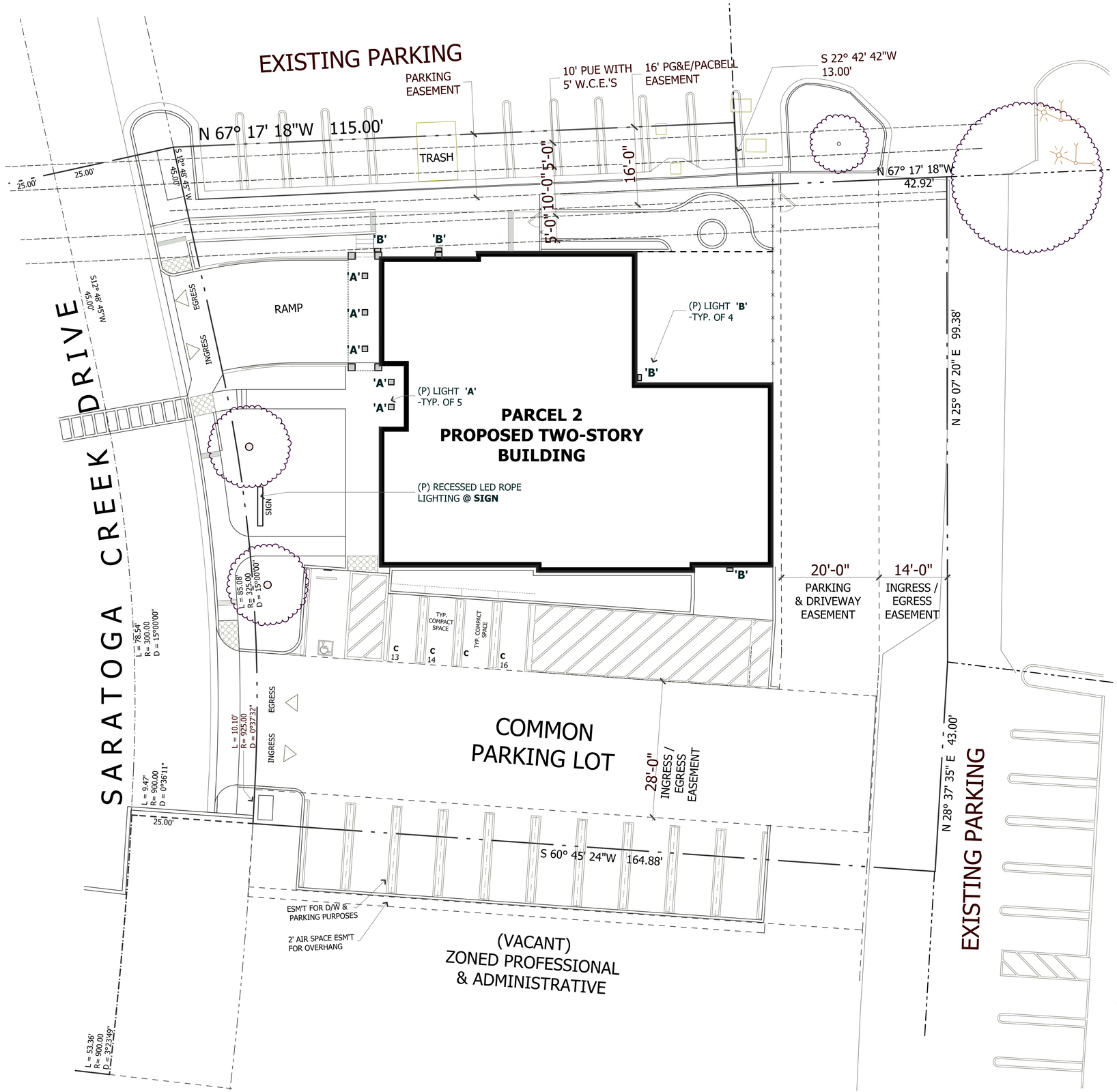
Palm Villas 8-14-20.pln



PROPOSED CEILING FLUSHMOUNT LIGHT 'A'

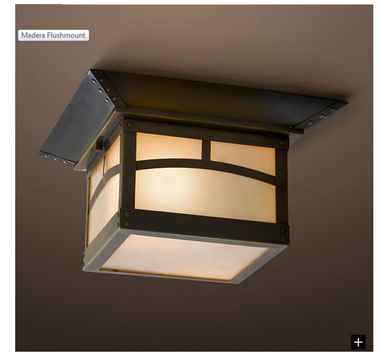
MADERA FLUSHMOUNT

Madera displays strong, simple lines, serene balance and a frank and forthright use of materials.

HIDE DETAILS -

- Classic Mission design
- Made of steel
- Crafted with visible joinery
- Iridescent art glass diffuses the light
- Rust resistant
- Uses two **LED bulbs**
- Damp UL listed: suitable for use indoors, such as bathrooms where it is subject to moisture, and in sheltered outdoor areas
- Hardwire

DIMENSIONS
13½" sq., 7½"H



PROPOSED WALL MOUNTED LIGHT 'B'

MADERA POCKET SCONCE

Madera displays strong, simple lines, serene balance and a frank and forthright use of materials.

HIDE DETAILS -

- Made of steel
- Crafted with visible joinery
- Iridescent art glass diffuses the light
- Pyramid roof
- Uses one **LED bulb**
- Wet UL listed: suitable for use indoors or outdoors, including areas that receive direct contact with rain, snow or excessive moisture
- Hardwire
- Hangs vertically, shade pointing down

DIMENSIONS
9"W x 6"D x 10"H

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PROJECT NAME

PALM VILLAS SARATOGA

LOT #2
389-06-021
SARATOGA CREEK DRIVE
SARATOGA, CA 95070

REVISIONS

PROPOSED LIGHTING PLAN

DATE : 8-14-20
SCALE : 1" = 10'-0"
DRAWN BY : DZ
CHECKED BY : TS
ARCHITECT : TOM SLOAN
PROJECT NO : 15601

SHEET NUMBER

A-1.3

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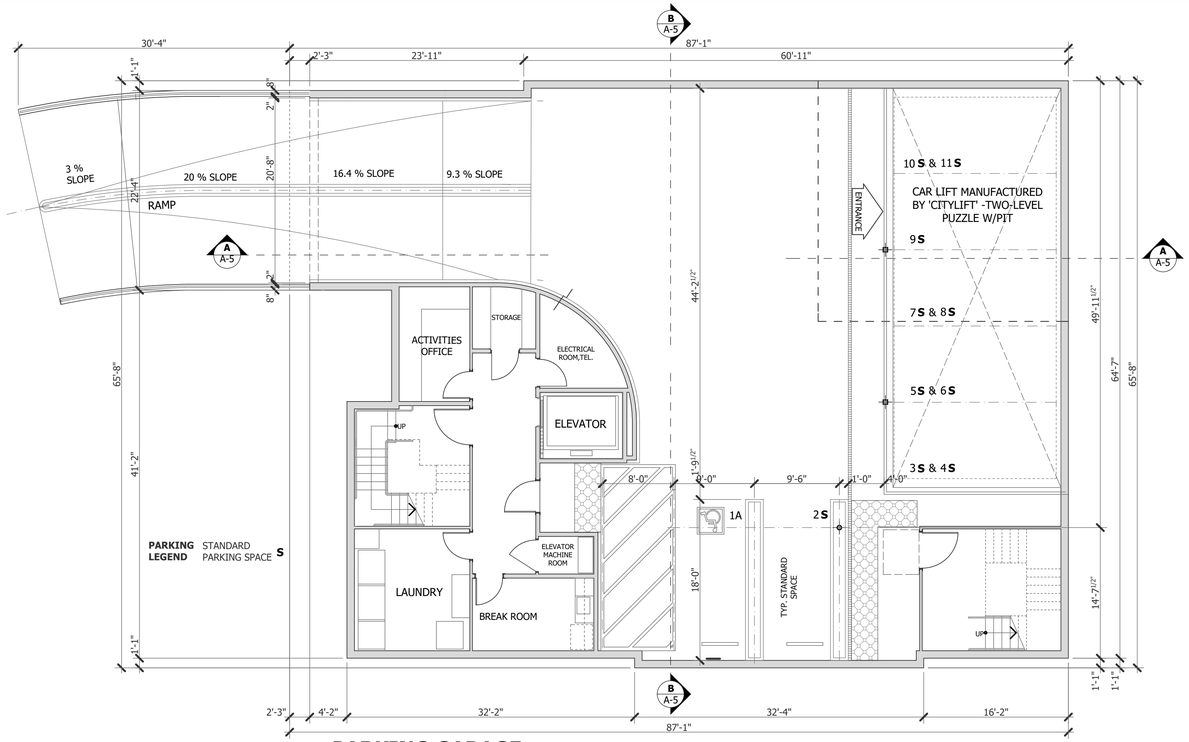
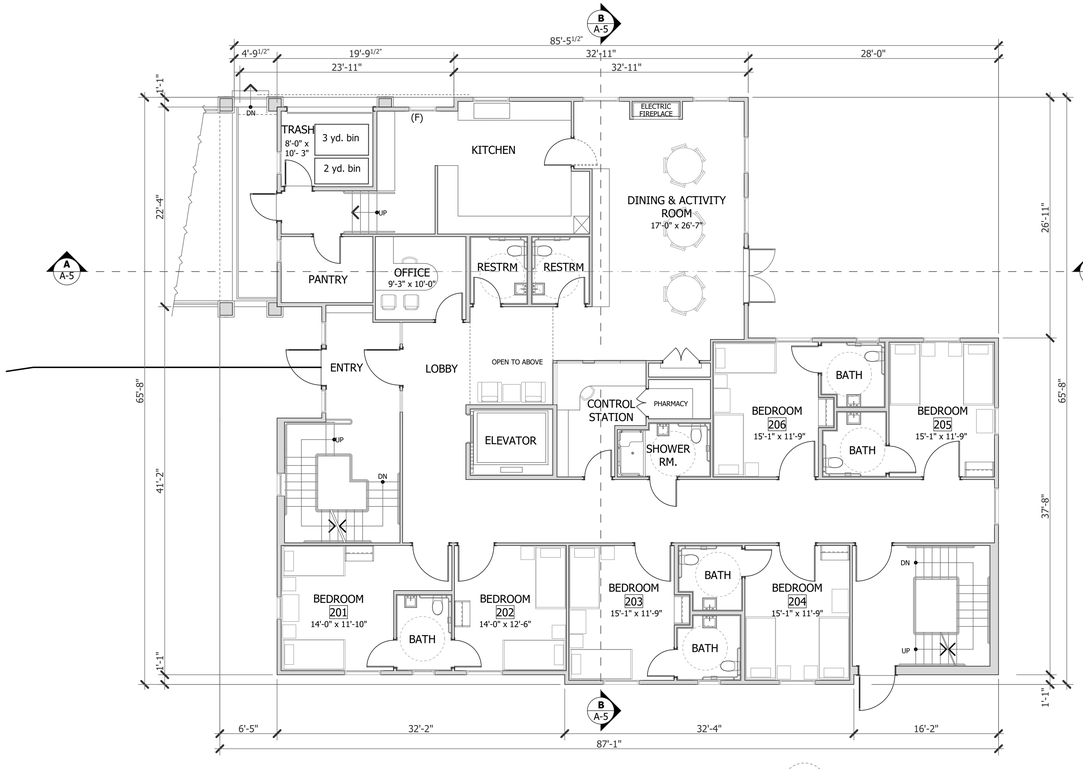


PARKING GARAGE

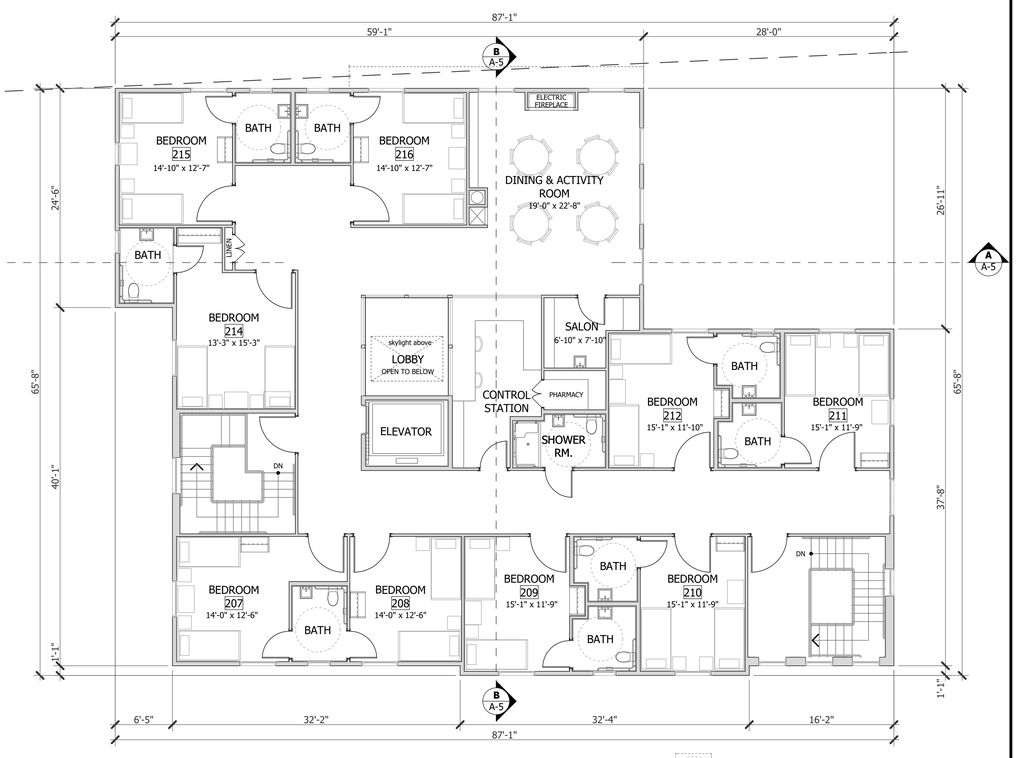
BASEMENT AREA: 5,254 SQ. FT.



FIRST FLOOR PLAN

FIRST FLOOR AREA: 4,492 SQ. FT.

5 FT. DIA. CIRCLE INDICATES MANEUVERING SPACE AT ACCESSIBLE RESTROOMS - TYP. (ADA)



SECOND FLOOR PLAN

SECOND FLOOR AREA: 4,649 SQ. FT.

DASHED 30" x 48" RECTANGLE INDICATES MANEUVERING SPACE AT ACCESSIBLE RESTROOMS - TYP. (ADA)

30" x 48"

CLEARANCES AT SINGLE ACCOMODATION TOILETS - TYP. (ADA)

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PROJECT NAME

PALM VILLAS SARATOGA

LOT #2
389-06-021
SARATOGA CREEK DRIVE
SARATOGA, CA 95070

REVISIONS

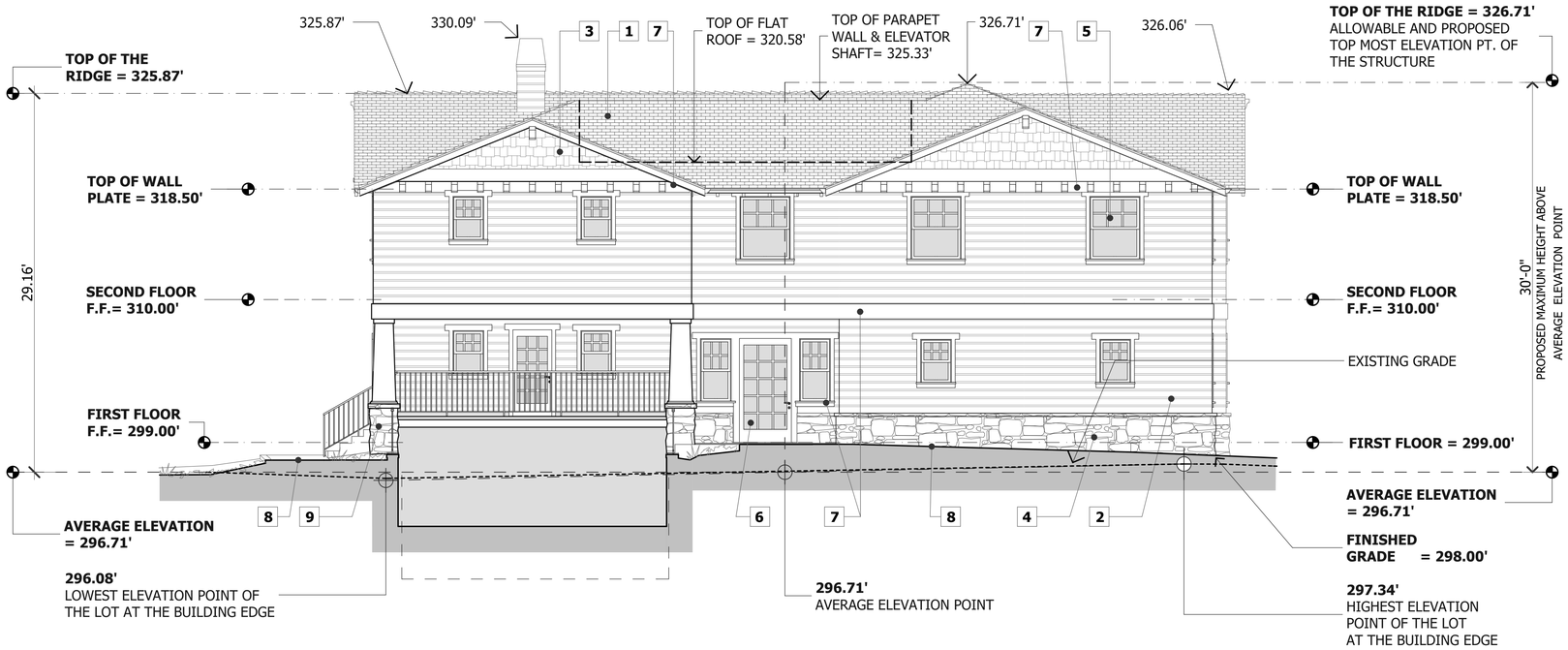
PROPOSED LOT 2 FLOOR PLANS

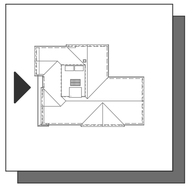
DATE : 8-14-20
SCALE : 1/8" = 1'-0"
DRAWN BY : TS / DZ
CHECKED BY : TS
ARCHITECT : TOM SLOAN
PROJECT NO : 15601

SHEET NUMBER

A-2.0

8/18/2020 6:44 PM
Palm Villas 8-14-20.pln

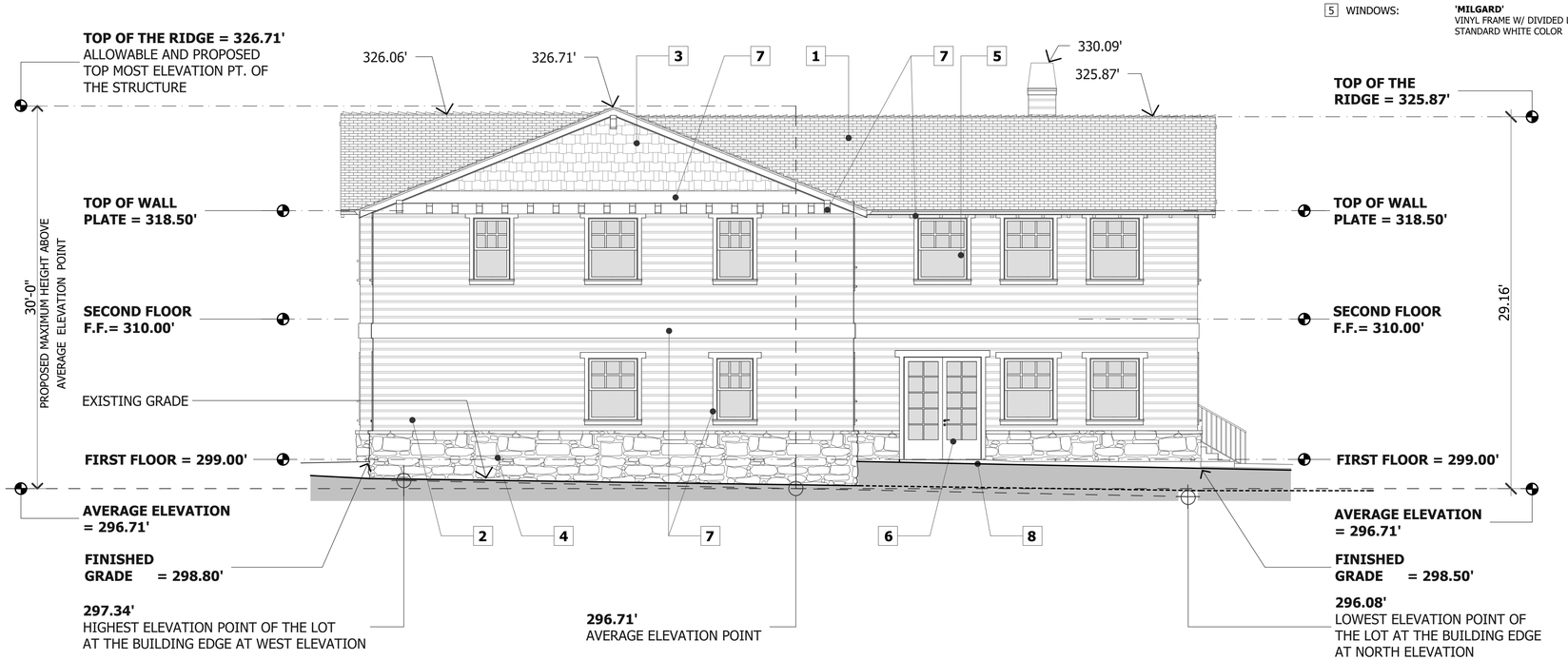


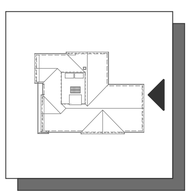


WEST ELEVATION

EXTERIOR FINISHES

1	ROOF:	CLASS 'A' COMPOSITION SHINGLE BY **'GAF'** - 'TIMBERLINE' NATURAL SHADOW - CHARCOAL COLOR	6	DOORS:	ALUMINUM CLAD WOOD FRAMED W/ DIVIDED LITES WHITE COLOR
2	EXTERIOR WALLS:	**'BORAL TRUEXTERIOR'** CRAFTSMAN COLLECTION 1 x 8 HORIZONTAL SIDING, CHANNEL BEVEL W/ GREY PAINT -**'KELLY MOORE'** -KM4788-1 EVENING DOVE	7	WINDOW AND DOOR TRIM, POSTS, TRELLIS, PICKETS, RAFTER TAILS, RAILINGS, GUTTERS & DOWNSPOUTS	**'BORAL TRUEXTERIOR TRIM'** WHITE PAINT -**'SHERWIN-WILLIAMS'** -WESTHIGHLAND SW 7566
3	EXTERIOR WALLS:	CEDAR SHINGLES, W/ GREY PAINT -**'KELLY MOORE'** -KM4788-1 EVENING DOVE	8	DRIVEWAY, WALKWAYS AND PATIOS	CONCRETE / ASPHALT CONCRETE PER SITE PLAN
4	EXTERIOR WALLS WAINSCOT:	**'NORSTONE'** - CHARCOAL XL PANEL	9	GUARDRAIL	IRON - POWDER COATED BLACK COLOR
5	WINDOWS:	**'MILGARD'** VINYL FRAME W/ DIVIDED LITES STANDARD WHITE COLOR			





EAST ELEVATION

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PROJECT NAME

PALM VILLAS SARATOGA

LOT #2
389-06-021
SARATOGA CREEK DRIVE
SARATOGA, CA 95070

REVISIONS

PROPOSED ELEVATIONS LOT 2

DATE : 8-14-20
SCALE : 3/16" = 1'-0"
DRAWN BY : DZ
CHECKED BY : TS
ARCHITECT : TOM SLOAN
PROJECT NO : 15601

SHEET NUMBER

A-3.0

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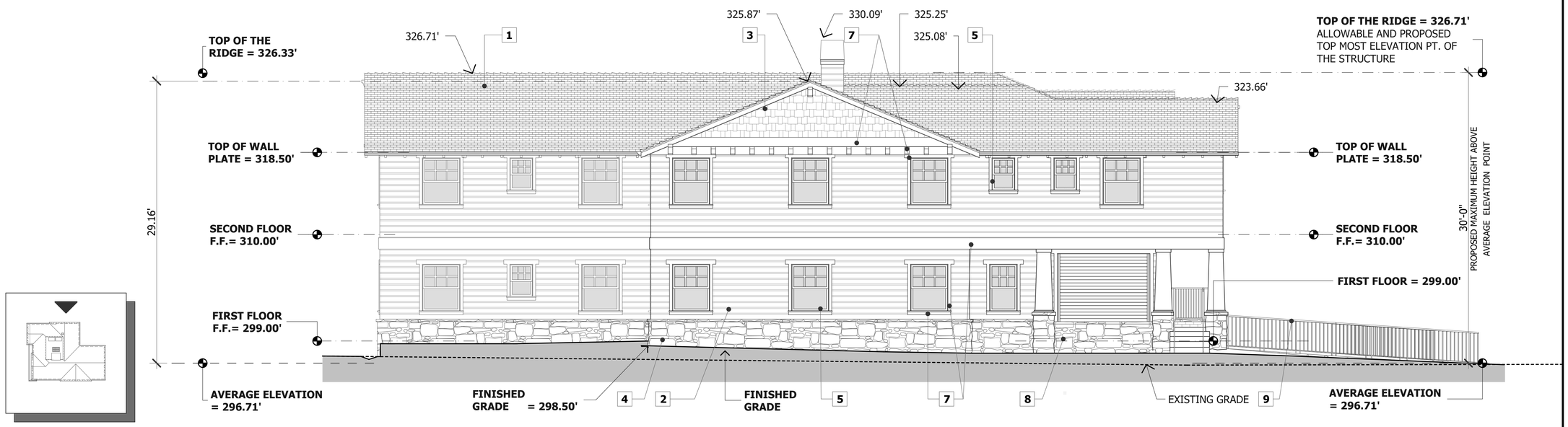
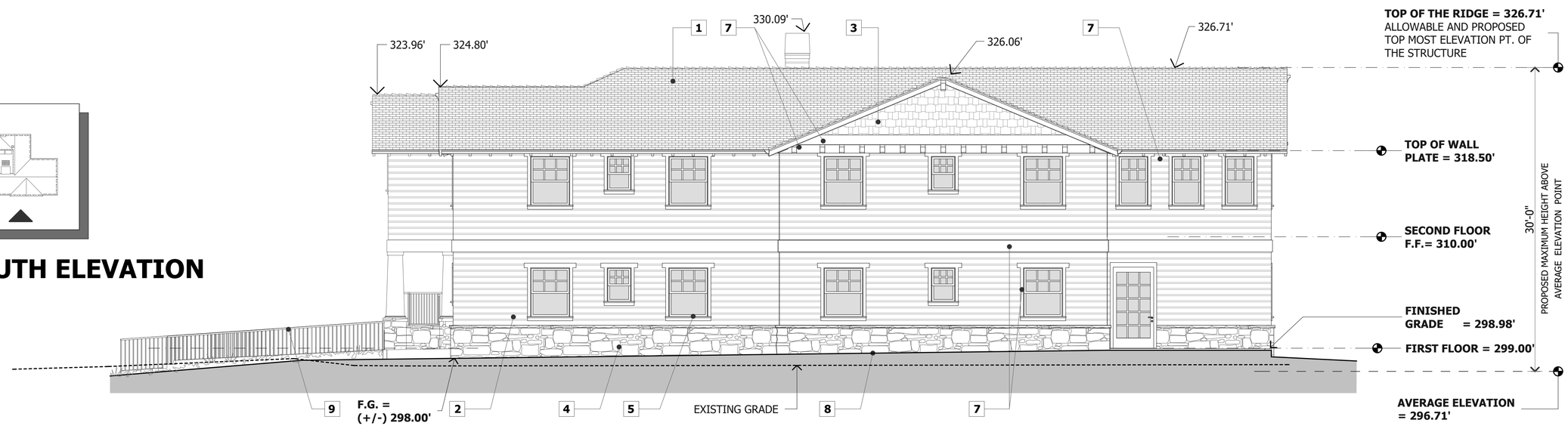
Palm Villas 8-14-20.pln



NORTH ELEVATION

EXTERIOR FINISHES

1	ROOF:	CLASS 'A' COMPOSITION SHINGLE BY **'GAF'** - 'TIMBERLINE' NATURAL SHADOW - CHARCOAL COLOR	6	DOORS:	ALUMINUM CLAD WOOD FRAMED W/ DIVIDED LITES WHITE COLOR
2	EXTERIOR WALLS:	**'BORAL TRUEXTERIOR'** CRAFTSMAN COLLECTION 1 x 8 HORIZONTAL SIDING, CHANNEL BEVEL W/ GREY PAINT -**'KELLY MOORE'** -KM4788-1 EVENING DOVE	7	WINDOW AND DOOR TRIM, POSTS, TRELLIS, PICKETS, RAFTER TAILS, RAILINGS, GUTTERS & DOWNSPOUTS	**'BORAL TRUEXTERIOR TRIM'** WHITE PAINT -**'SHERWIN-WILLIAMS'** -WESTHIGHLAND SW 7566
3	EXTERIOR WALLS:	CEDAR SHINGLES, W/ GREY PAINT -**'KELLY MOORE'** -KM4788-1 EVENING DOVE	8	DRIVEWAY, WALKWAYS AND PATIOS	CONCRETE / ASPHALT CONCRETE PER SITE PLAN
4	EXTERIOR WALLS WAINSCOT:	**'NORSTONE'** - CHARCOAL XL PANEL	9	GUARDRAIL	IRON - POWDER COATED BLACK COLOR
5	WINDOWS:	**'MILGARD'** VINYL FRAME W/ DIVIDED LITES STANDARD WHITE COLOR			



SOUTH ELEVATION

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PROJECT NAME

PALM VILLAS SARATOGA

LOT #2
389-06-021
SARATOGA CREEK DRIVE
SARATOGA, CA 95070

REVISIONS

PROPOSED ELEVATIONS LOT 2

DATE :	8-14-20
SCALE :	3/16" = 1'-0"
DRAWN BY :	DZ
CHECKED BY :	TS
ARCHITECT :	TOM SLOAN
PROJECT NO :	15601

SHEET NUMBER

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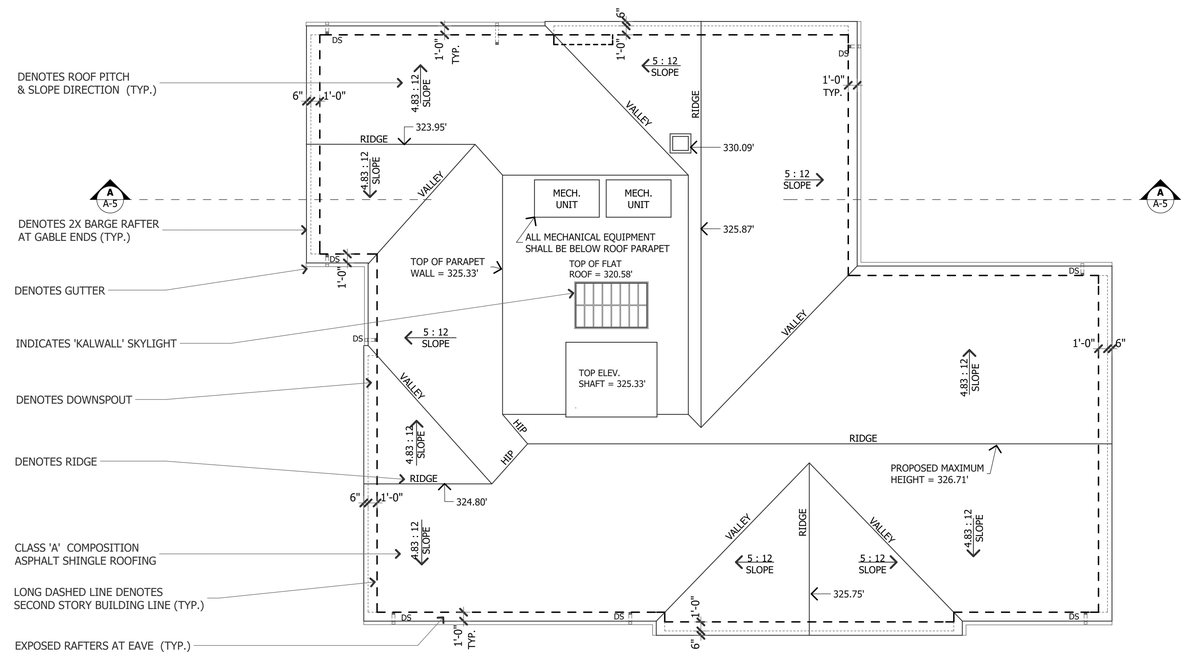

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PROJECT NAME

PALM VILLAS SARATOGA

LOT #2
389-06-021
SARATOGA CREEK DRIVE
SARATOGA, CA 95070

REVISIONS

PROPOSED ROOF PLAN LOT 2

DATE :	8-14-20
SCALE :	1/8" = 1'-0"
DRAWN BY :	DZ
CHECKED BY :	TS
ARCHITECT :	TOM SLOAN
PROJECT NO :	15601

SHEET NUMBER

A-4.0

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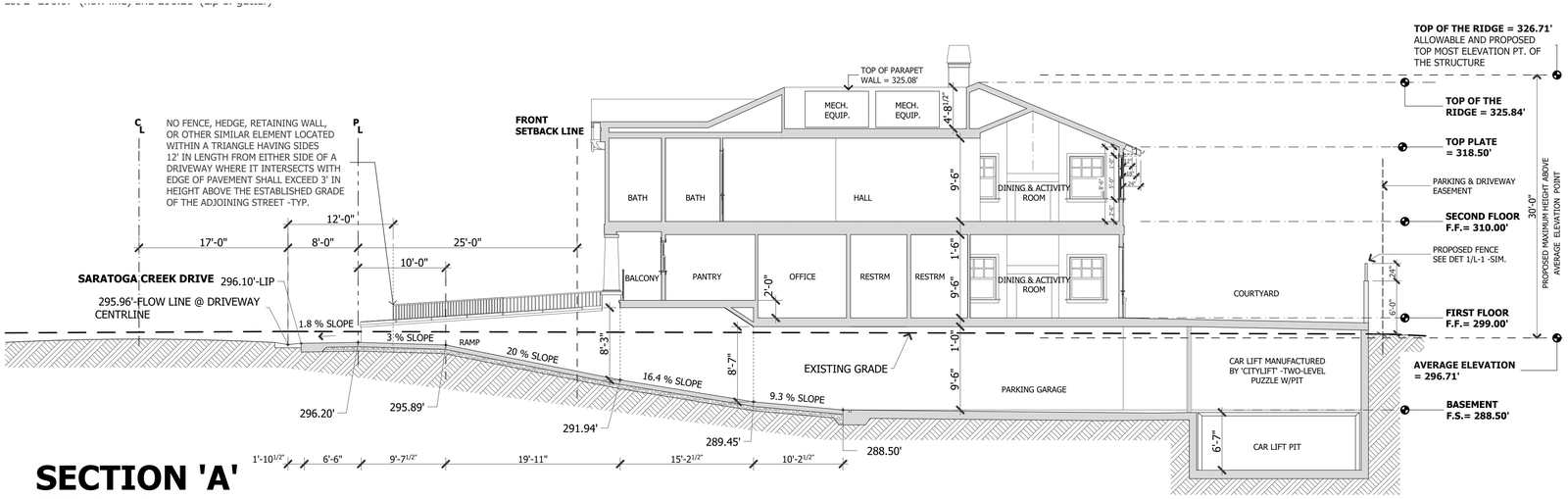
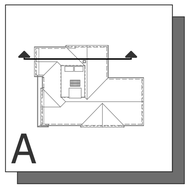
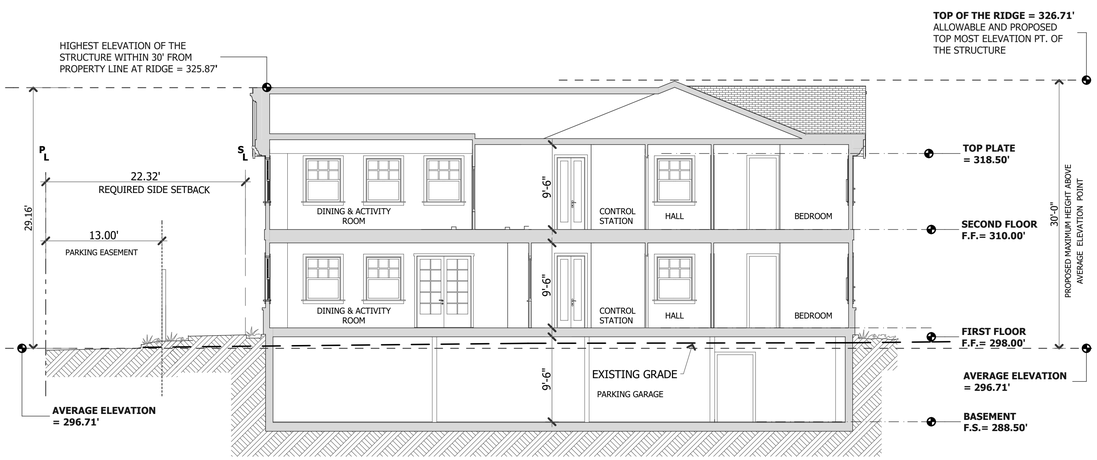


SECTION 'A'

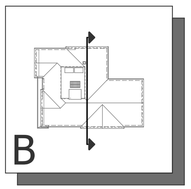
SCALE: 1/8" = 1'-0"

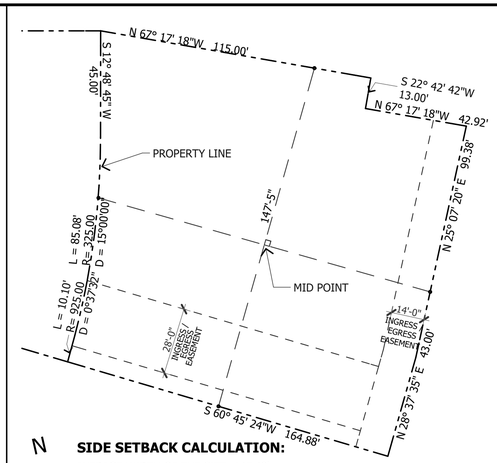




SECTION 'B'

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





N

SIDE SETBACK CALCULATION:

AVERAGE WIDTH OF THE SITE: 147.42'
147.42' x 10% = 14.74'

SIDE SETBACK: 14.74'

REQUIRED NORTH SIDE SETBACK : 22.32'

PROPOSED BUILDING ELEVATION WITHIN 30 '
FROM PROPERTY LINE AT NORTH SIDE OF
THE LOT: 325.87' (SEE SECTION 'B' - SHEET A-5.0)

AVERAGE ELEVATION: 296.71'
29.16'-14.00' = 15.16'
15.16' / 2 = 7.58'
14.74' + 7.58' = 22.32'

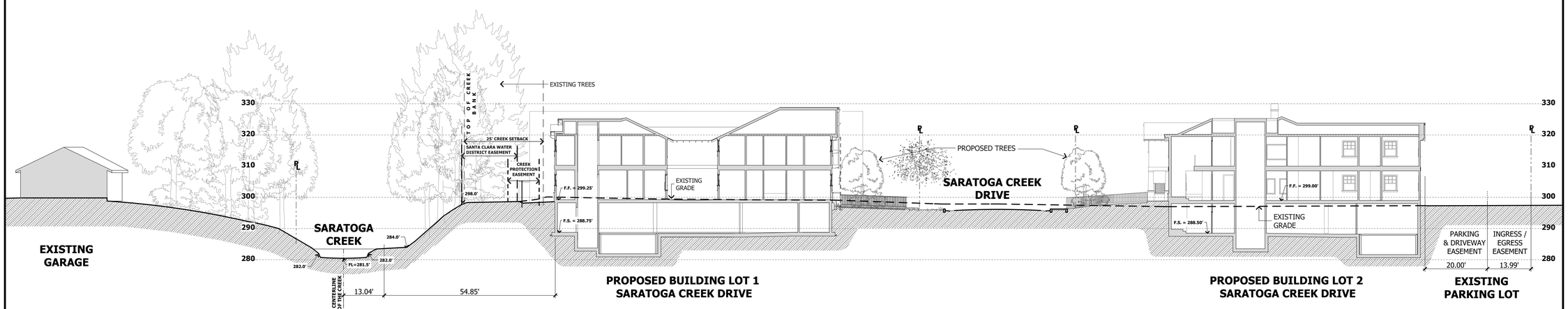
REQUIRED REAR SETBACK: 33.00'

PROPOSED BUILDING ELEVATION WITHIN 30 '
FROM PROPERTY LINE AT REAR SIDE OF
THE LOT: 326.71' (SEE SECTION 'B' - SHEET A-5.0)

AVERAGE ELEVATION: 296.71'
30.00'-14.00' = 16.00'
16.00' / 2 = 8.00'
25.00' + 8.00' = 33.00'

SETBACK CALCULATION

SCALE: 1" = 30'-0"



SITE SECTION '2'

SCALE: 1/16" = 1'-0"

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PROJECT NAME

PALM VILLAS SARATOGA

LOT #2
389-06-021
SARATOGA CREEK DRIVE
SARATOGA, CA 95070

REVISIONS

SECTIONS LOT 2

SECTION 'A'
SECTION 'B'

SETBACK CALCULATION

DATE :	8-14-20
SCALE :	AS NOTED
DRAWN BY :	DZ
CHECKED BY :	TS
ARCHITECT :	TOM SLOAN
PROJECT NO :	15601

SHEET NUMBER

A-5.0

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LEGEND

- PROPERTY LINE
- (E) GRADE CONTOUR LINE
- PROPOSED GRADE CONTOUR LINE (516)
- FENCE
- PROPOSED BUILDING
- PROPOSED CONCRETE AREA
- PROPOSED ASPHALT
- EXISTING TREE TO REMAIN (1) (E) 8" OAK
- PROPOSED SHRUBS
- PROPOSED GROUNDCOVER
- PROPOSED IRRIGATED AREA
- DROUGHT RESISTANT NATIVE GRASSES AND GROUND COVERS NON-IRRIGATED AREAS
- PROPOSED TREE (T2)
- EXISTING TREE TO BE REMOVED (2)
- PROPOSED SCREENING PLANT IN CONTAINERS (B)

PLANT LEGEND

KEY	BOTANICAL NAME	COMMON NAME	SIZE	QTY	IRRIGATION
	DROUGHT TOLERANT SHRUBS / GRASSES				483 SQ. FT. OF IRRIGATED AREA
S1	LAVANDULA ANGUSTIFOLIA	LAVENDER	1 GAL	4	
S2	SALVIA CLEVELANDII	SAGE	1 GAL	6	
S3	AGAPANTHUS	LILY-OF-THE-NILE	1 GAL	3	
	GROUND COVER				
G1	VINCA MINOR	DWARF PERIWINKLE	FLATS	12" O.C.	
G2	MULCH	-	-	-	
	SCREENING PLANT				
B	BAMBUSA MALINGENSIS	SEABREEZE BAMBOO	6 CONTAINERS		
	TREES				
T1	FRAXINUS ANGUSTIFOLIA 'RAYWOOD'	RAYWOOD ASH	36" BOX	2	
	NATIVE DROUGHT TOLERANT GRASSES AND GROUND COVERS				NON-IRRIGATED AREAS
N1	ACHILLEA MILLEFOLIUM	COMMON YARROW	1 GAL	IN FIELD	
N2	ARTEMISIA CALIFORNICA - ' MONTARA'	CALIFORNIA SAGEBRUSH	1 GAL	IN FIELD	
N3	CEANOTHUS - 'YANKEE POINT'	WILD LILAC	1 GAL	IN FIELD	
N4	DYAMONDIA MARGARETAE	DYAMONDIA SILVER CARPET	FLATS	12" O.C.	
N5	MISCELLANEOUS SUCCULENTS		FLATS	12" O.C.	

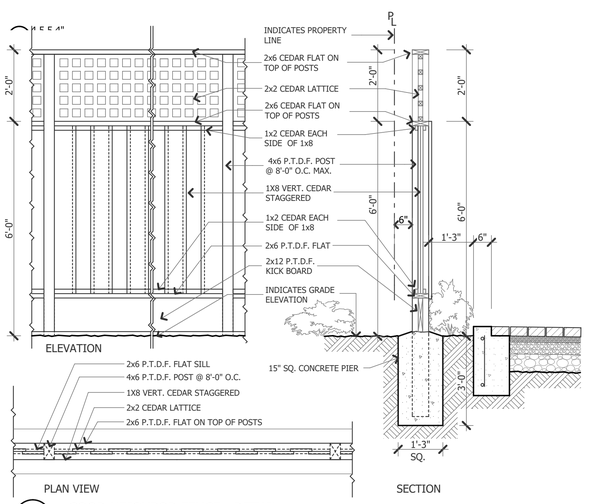
EXISTING TREE LEGEND

PER ARBORIST REPORT DATED JANUARY 29, 2016 PREPARED BY DEBORAH ELLIS, MS

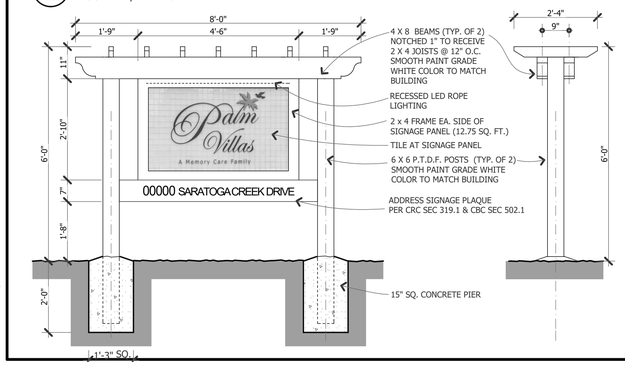
TREE NO.	TREE NAME	TREE SIZE	STATUS
11	COAST LIVE OAK	6", 7"	(E) TO BE REMOVED
12	COAST LIVE OAK	8"	(E) TO BE REMOVED
13	COAST LIVE OAK	8"	(E) TO BE REMOVED
14	COAST LIVE OAK	10", 8", 7",6"	(E) TO REMAIN
16	BRAZILIAN PEPPER	4",5",5",4"	(E) TO BE REMOVED $ 3,400, IN RIGHT OF WAY

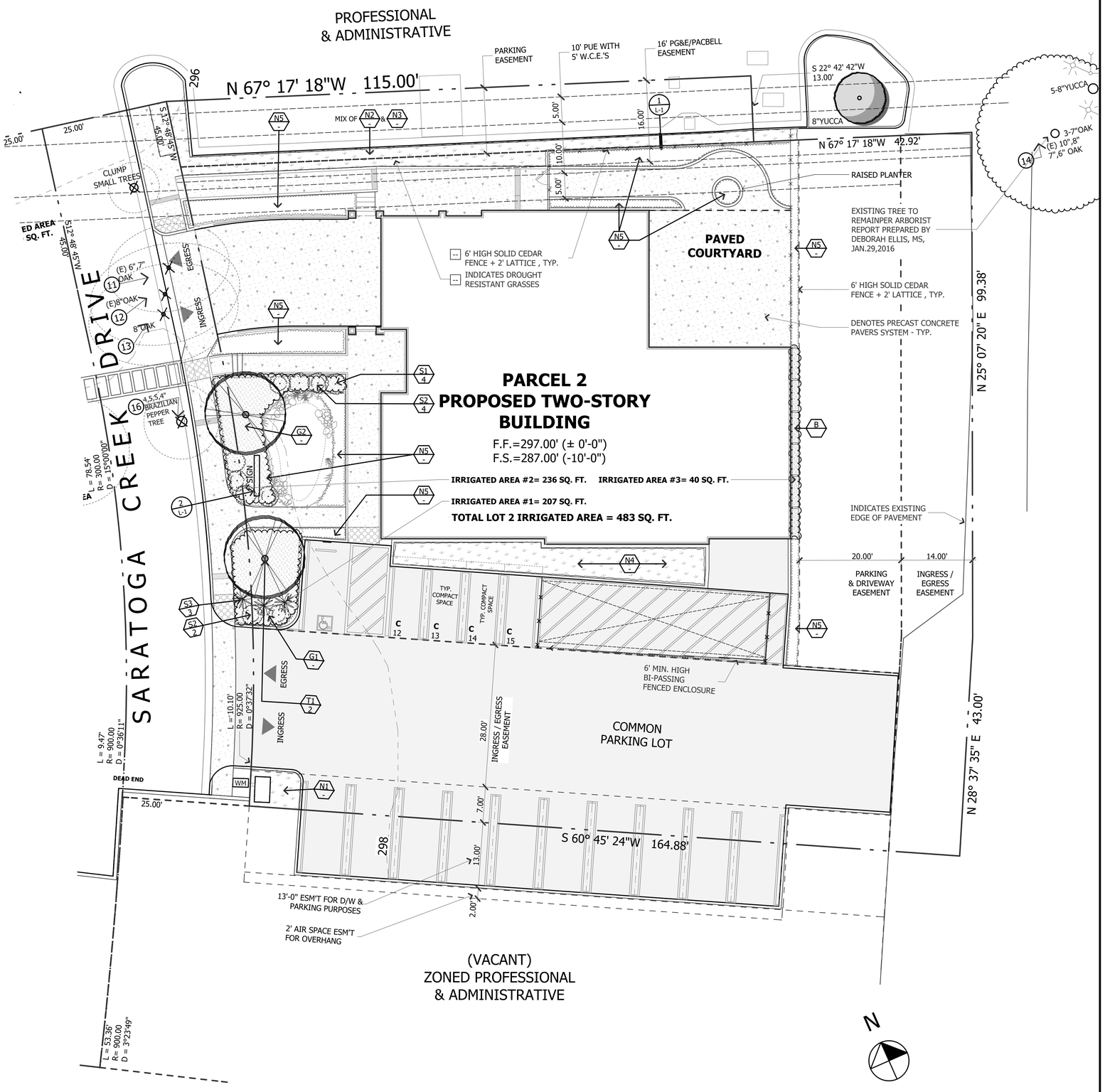
SEE TREE PRESERVATION DETAIL 1/C-2, SHEET C-1 FOR LOCATION AND ARBORIST REPORT FOR MORE INFORMATION.

(LOT 1 & LOT 2)
TOTAL VALUE OF THE TREES TO BE REMOVED: $28,850.
TOTAL VALUE OF PROPOSED TREES: $ 5,400.
PER ARBORIST REPORT: 3 (TREES - 48" BOX SIZE) x ($ 900 x 2) = $ 5, 400
PARK -IN- LIEU FEE: $23,450.



1 GOOD NEIGHBOR FENCE - DETAIL
SCALE: 1/2"= 1'-0"





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PROJECT NAME

PALM VILLAS SARATOGA

LOT #2
389-06-021
SARATOGA CREEK DRIVE
SARATOGA, CA 95070

REVISIONS

LANDSCAPE PLAN LOT 2

LEGEND DETAIL

DATE :	8-14-20
SCALE :	1" = 10'-0"
DRAWN BY :	DZ
CHECKED BY :	TS
ARCHITECT :	TOM SLOAN
PROJECT NO :	15601

SHEET NUMBER

L-1.0

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Palm Villas 8-14-20.pln

ARBORIST REPORT

Tree Inventory, Tree Descriptions and Recommendations Relative to Proposed Construction

Palm Villas, Saratoga (Lots 1 & 2)

Saratoga Creek Drive at Cox Avenue,
Saratoga, California

Prepared for:

Michael Sneper
3333 S. Bascom Avenue
Campbell, CA 95008
Address2

Prepared by:
Deborah Ellis, MS.
Consulting Arborist & Horticulturist
Registered Consulting Arborist #305, American Society of Consulting Arborists
Board Certified Master Arborist WE-0457B, International Society of Arboriculture
Certified Professional Horticulturist #30022, American Society for Horticultural Science

JANUARY 29, 2016

Report History: This is my second report for this project. My first report was dated July 27, 2015.

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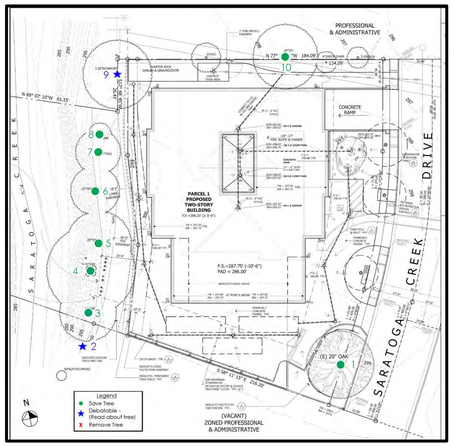
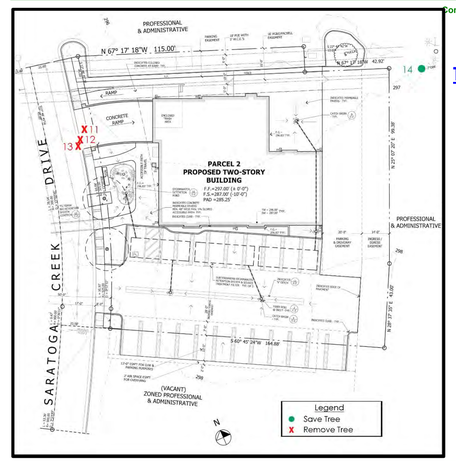
Cover photo: **coast live oak #1**, the most prominent tree on the project site. All photos in this report were taken by D. Ellis on January 26, 2016.

TREE MAP #1 AERIAL



TREE MAP #2 – LOT 1



TREE MAP #3 – LOT 2

SUMMARY

THE PROJECT

A two-story senior assisted living building and associated improvements will be constructed on the project site, which is presently two adjacent vacant lots.

THE TREES & THE PROJECT

There are 14 *protected trees*[1] with driplines that may be within 5 feet of proposed construction. Most of these trees are on neighboring properties adjacent to the project site. Only 4 of the trees (**#1, 11, 12 and 13**) are located on the project site. Three trees (**coast live oaks #11, 12 and 13**) will need to be removed because they are located within the proposed extension of Saratoga Creek Drive. These are small trees that have trunk diameters of 7 to 8 inches. **Coast live oak #3** has a large decayed area on one of its two trunks that overhang the site. The trunk overhanging the site should be removed. It should be possible to save all of the other trees although I have recommended a few design modifications to reduce damage for **coast live oak #1** and **California sycamore #9**.

Elderberry #3: is not shown on any of the construction plans I received, but is it located between a 40 and 24-inch sycamore on adjacent property to the south, and coast live oak #3 on the Topographic Survey, near the southwest corner of Lot 1. This is a sprawling multi-trunk tree that has split apart and fallen over, with most of its trunks dead. A portion of the tree is still alive (an 8 to 10-inch trunk) and the tree may overhang (or be lying on) the project site. I recommend that the trunks of the tree, be they living or dead, be cut to short stumps about 6 inches tall. The shrub/tree will probably regrow from these stumps and provide value for wildlife and erosion control above the creek.

All 14 of the trees are described briefly the *Summary Tree Table* (Table 1) on page 5 and in greater detail in the *Complete Tree Table* (Table 3) beginning on page 13. The total estimated value of the 14 trees described in this report is $100,080. The value of trees will be removed is $4050. The value of trees to remain is $96,030. The amount requested for the tree protection bond is half the amount of the trees that I estimate will be saved, or $48,015.

[1] Protected Tree: a protected tree in Saratoga has a trunk diameter of 6 inches or greater for native tree species or 10 inches in diameter for non-native species. Trunk diameter is measured at 4.5 feet above the ground. For construction project tree evaluation and arborist reports, any protected tree with its dripline within 5 feet of proposed construction must be addressed.

TABLE 1 SUMMARY TREE TABLE

Tree #	Common Name	Trunk Diam. (DBH)	Preservation Suitability	Estimated. Value	Expected Construction Impact	Action	Reason
1	coast live oak	20 (2.5)	Good	$7,200	Moderate	Save	
2	blue elderberry	9,10,8,4,4	Poor/Unacceptable	480	Uncertain	Debatable	Construction, Overall Condition, Actual location
3	coast live oak	10,12	Fair/Good	3,850	Low	Save but remove trunk overhanging site	Risk
4	coast live oak	12,18,29,30	Good	42,200	Low/Moderate	Save	
5	elderberry	7,8,12	Fair/Poor	1,760	Low/Moderate	Save	
6	elderberry	12	Fair/Poor	900	Low	Save	
7	elderberry	13,10	Fair/Poor	1840	Low	Save	
8	coast live oak	7	Good	1,400	Low	Save	
9	Calif. sycamore	25,18,19,8	Good	24,800	Moderate/ Severe	Debatable	Construction
*10	London plane	18	Fair	5,900	Moderate	Save	
11	coast live oak	6,7	Fair/Good	1,350	Severe	Remove	Construction
12	coast live oak	8	Fair/Good	1,350	Severe	Remove	Construction
13	coast live oak	8	Fair/Good	1,350	Severe	Remove	Construction
14	coast live oak	10,8,7,6	Fair/Good	5,700	Low/Moderate	Save	
Total Estimated Value				**$100,080**			

*Species not native to the immediate area. All other species are native to the immediate area and are probably of *natural growth*, meaning that they were not planted.

RECOMMENDATIONS

1. **Existing trees to be saved or removed should be numbered on all site-based plans to match the tree tag numbers that are used in this arborist report.**

2. **Tree Removals: Three trees, #11, 12 and 13 coast live oak** will need to be removed because they are within the proposed entrance roadway into the site. I also recommend removal of one trunk of the multi-trunk **coast live oak #3** that is overhanging the site, because it has significant decay and is likely to fail over the site.

3. **Design changes are recommended around coast live oak #3** and **California sycamore #9** to reduce construction damage. Please read about this in the *Notes* column of the Complete Tree Table.

4. **Elderberry #3**: this tree is not shown on any of the construction plans I received, but is it located between a 40 and 24-inch sycamore and coast live oak #3 on the Topographic survey, near the southwest corner of Lot 1. This is a sprawling multi-trunk tree that has split apart and fallen over, with most of its trunks dead. A portion of the tree is still alive (an 8 to 10-inch trunk) and the tree may overhang (or be lying on) the project site. I recommend that the trunks of the tree, be they living or dead, be cut to short stumps about 6 inches tall. The shrub/tree will probably regrow from these stumps and provide value for wildlife and erosion control above the creek.

5. **Story posts should be erected facing the north and west perimeter of Lot 1**, in order to verify if any and how much construction clearance will be required for adjacent trees.

6. **For those trees that will be retained on the site or with canopies overhanging the site, follow the City of Saratoga Tree Protection Requirements**, which are included on pages 25 through 27. A separate copy of the *Requirements* will be provided by City Arborist Kate Bear and must be incorporated into the project final plans. These Requirements shall replace any tree protection notes, specifications or other directions (including detail drawings) that are currently included in the plans, for example on sheets C-2 for each lot. Kate Bear will also require that a copy of this Arborist Report be included in the project final plans. You may request that I provide a condensed version of this report for the plans. Additional tree protection information is also available from me if necessary.

7. **Neighboring trees**: whose canopies overhang the project site and have driplines within 5 feet of any soil disturbance or other improvements must receive tree protection in the same manner as existing trees to remain on the project site; for example tree protection fencing and signage. The general contractor shall fence off the dripline of these trees as much as possible in order to

avoid damaging branches and compacting the soil beneath the canopy. If pruning is necessary in order to avoid branch breakage, the general contractor shall hire a qualified tree service[2] to perform the minimum necessary construction clearance pruning.

8. **Tree Protection Bond:** I recommend that half the value of the trees estimated to remain be requested for the bond.
   - The total value of all trees on site or overhanging the site is $100,080.
   - The total value of the trees to be removed is $4,050.
   - The total value of the trees that will remain is $96,030. Half of this value (to be requested for the tree protection bond) is $48,015.

9. **I should review all site-based plans for this project:** I have reviewed the plan sheets listed on page 10. Additional improvements on plans that were not reviewed or have been revised may cause additional trees to be impacted and/or removed. Plans reviewed by the arborist should be full-size, to-scale and with accurately located tree trunks and canopy driplines relative to proposed improvements. Scale should be 1:20 or 1:10.

10. **As a part of the design process, try to keep improvements (and any additional over-excavation or work area beyond the improvement) as far from tree trunks and canopies as possible.** *5xDBH*[3] or the dripline of the tree, whichever is greater, should be used as the minimum distance for any soil disturbance to the edge of the trunk. 3xDBH should be considered the absolute minimum distance from any disturbance to the tree trunk on one side of the trunk only, for root protection, with a minimum distance of 5 feet. Farther is better, of course. For disturbances on multiple sides of the trunk, then 5xDBH or greater should be used, and farther is also better here. Tree canopies must also be taken into consideration when designing around trees. Don't forget the minimum necessary working margin around improvements as you locate those improvements. Disturbance usually comes much closer to trees than the lines shown on the plans!

11. **Construction or landscaping work done underneath the dripline of existing trees should preferably be done by hand**, taking care to preserve existing roots in undamaged condition as much as possible and cutting roots cleanly by hand when first encountered, when those roots must be removed. A qualified consulting arborist (the project arborist) should be hired to monitor tree protection and supervise all work underneath the dripline of trees. This also applies to trees on neighboring properties whose canopies overhang the work site.

[2] Terms highlighted at their first occurrence in this report are explained in the Glossary beginning on page 37.
[3] See pages 24 and 25 for an explanation of the 3 and 5xDBH root protection distances for trees.

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PROJECT NAME

PALM VILLAS SARATOGA

LOT #2
389-06-021
SARATOGA CREEK DRIVE
SARATOGA, CA 95070

REVISIONS

TREE PRESERVATION

DATE : 8-14-20
SCALE : N/A
DRAWN BY : N/A
CHECKED BY : TS
ARCHITECT : TOM SLOAN
PROJECT NO : 15601

SHEET NUMBER

TP-1.0

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Palm Villas 8-14-20.dwg

12. **Landscaping:**

a. **New landscaping and irrigation can be as much or more damaging to existing trees than any other type of construction.** The same tree root protection distances recommended for general construction should also be observed for new landscaping. Within the root protection zone it is usually best to limit landscape changes to a 3 to 4-inch depth of coarse organic mulch such as wood or bark chips or tree trimming chippings spread over the soil surface. The environment around existing trees should be changed very carefully or not at all – please consult with me regarding changes in the landscape around existing trees and/or have me review the landscape and irrigation plans for this project.

b. **This site contains oaks and other tree species that are native to the immediate area** (coast live oak). These tree species fares best with no irrigation during the normal dry months of the year. The best treatment of the ground beneath these trees is nothing but their own natural leaf and twig litter mulch. Exceptions to irrigation restriction include during the winter in extended drought periods, as temporary compensation for root loss due to construction, and for newly planted trees during their 2 to 3 year establishment period after installation. Native oak species especially are often killed due to inappropriate landscaping that is installed around them; mostly commonly landscaping that requires frequent irrigation such as lawns or other high water-use plants. Large drought tolerant trees such as native oaks can become dangerous when exposed to frequent irrigation, especially close to their trunks. California native oaks that are treated in this manner may contract root rot diseases and fall over at the roots; often causing great damage and personal injury I there are targets in their vicinity such as homes, cars and people. It is important to landscape correctly around our native oaks; e.g. summer dry. I have attached a publication entitled *Living among the Oaks,* to assist in best managing the oaks on the property, as well as the directions to follow in items `b' and `c' below.

c. **Around the native oaks: there shall be no planting or irrigation (including drip irrigation) within a minimum radius of 10 feet from the trunks of the oaks or the inner half of the dripline of the tree, whichever is greater. Farther is better. Within this 10-foot (or greater) radius around the trunk** a 3 to 4-inch depth of coarse organic mulch such as wood or bark chips or tree trimming chippings shall be spread over the soil surface. Shredded redwood bark is not allowed. Keep the mulch off the root collar of the trees. Beyond this 10-foot (or greater) protective, mulched area only drought-tolerant, summer-dry plant species, preferably plant species that are native to the immediate area and grow commonly in association with the native oaks, may be planted. Only summer-dry tolerant plants are allowed within the outer half of the dripline of the tree or 20 feet from the trunk, whichever is greater. Such plants may be planted from no larger than 1-gallon cans in holes that are hand-dug manually with a shovel (no power equipment such as augers allowed). These plants must be spaced sparsely (e.g. planted no closer than 4 feet apart) and watered with drip irrigation. The planting zone around these plants shall be mulched in the same

manner previously described. The drip irrigation for these plants should preferably be abandoned after a 2 to 3 year establishment period.

13. **Trees to remain after adjacent trees are removed** should be re-evaluated by me or the project arborist after the surrounding trees have been taken out.

14. **General Tree Maintenance:**
a. **The root collars and lower trunks of some of the trees (e.g. California sycamore #9) were obscured from view by vegetation, excess soil or other covering.** Such portions of the tree should be uncovered and the tree re-evaluated by the arborist.
b. **Do no unnecessary pruning, fertilization or other tree work.** Pre-construction pruning should be limited to the absolute minimum required for construction clearance. A qualified tree service should be hired to provide such pruning.

INTRODUCTION

PURPOSE & USE OF REPORT

This survey and report was required by the City of Saratoga as a part of the building permit process for this project. The purpose of the report is to identify and describe the existing protected trees that are within or near proposed construction. The audience for this report is the property owner, developer, project architects and contractors, and City of Saratoga authorities (including the City Arborist, Kate Bear) concerned with tree preservation and tree removal. The goal of this report is to preserve existing protected trees that are in acceptable condition, are good species for the area and will fit in well with the proposed new use of the site.

BACKGROUND INFORMATION

My first Arborist Report for this project is dated July 27, 2015, based upon my July 23, 2015 tree and site evaluation. At that time no construction plans were available except for a Proposed Site Layout for Lot 1 with no existing trees included. In that first report I recommended that the existing trees on and adjacent to the site be accurately surveyed and included in the project plans, which has been done. This second Arborist Report is based upon those plans which I have recently reviewed, which are listed on page 10.

I have made a few changes to the trees that are included in this second Arborist Report, based upon the topographic map that I reviewed as well as a re-evaluation of some of the trees on the site. Upon closer inspection I decided that the two Brazilian pepper tree clumps on either side of the entrance to the site (labeled as **trees #11 and 12** in my July 2015 report) do not qualify as "protected" trees, and so are not included in this report. These trees are replaced with trees #11 and 12, coast live oaks, which are part of a clump of trees and shrubs on Lot 2. I have also added a **coast live oaks #13 and #14**.

PLANS REVIEWED

Table 2

PLAN	DATE	SHEET	REVIEWED	SHOULD REVIEW	NOTES
Existing Site Topographic Map *including existing tree trunk locations*	9/15				
Proposed Site Layout	1/21/16	A-1.2	X		Does not include all existing tree locations.
Demolition					
Construction Staging				X	
Grading/Drainage	1/21/16	C-1	X		
Erosion Control					
Underground Utility				X	
Site & Building Sections				X	
Building Exterior Elevations				X	
Roof				X	
Shadow Study					
Construction Details *that would affect trees (for example building foundations, pavement installation including sub-grade preparation, underground utility installation)*				X	
Landscape Planting	1/21/16	L-1	X		
Irrigation Plan				X	
Landscape & Irrigation Details				X	

METHODOLOGY

I performed a brief evaluation of the subject trees on July 23, 2015 and again on January 26, 2016. On January 26, 2016 I briefly rechecked **trees #1-10** and performed a complete basic evaluation of **trees #11-14**. Tree characteristics such as form, weight distribution, foliage color and density, wounds and indicators of decay were noted. Surrounding site conditions were also observed. Evaluation procedures were taken from:

- American National Standard A-300 (Part 5) – 2012 for *Tree Care Operations – Tree, Shrub & Other Woody Plant Management – Standard Practices (Management of Trees, & Shrubs During Site Planning, Site Development and Construction)*.
- International Society of Arboriculture, *Best Management Practices*:
  - *Managing Trees during Construction*. 2008
  - *Tree Inventories*. 2013

The above references serve as industry professional standards for tree evaluation and written findings and recommendations for trees on construction sites prior, during and after site development.

Each of the trees was tagged in the field with metal number tags that correspond with the tree numbers referenced in this report. I measured the trunk diameter of each tree with a diameter tape at 4.5 feet above the ground (DBH), which is also the required trunk diameter measurement height of the City of Saratoga. DBH is used calculate tree protection distances and other tree-related factors. Trunk diameter was rounded to the nearest inch. I estimated the tree's height and canopy spread. Tree *Condition* (structure and vigor) was evaluated and I also recorded additional notes for trees when significant. Tree species and condition considered in combination with the current or (if applicable) proposed use of the site yields the *Tree Preservation Suitability* rating. The more significant trees (or groups of trees) were photographed with a digital camera. Some of these photos are included in this report, but all photos are available from me by email if requested.

OBSERVATIONS

SITE CONDITIONS

The project site is currently a vacant lot bordered by existing professional buildings to the north and east, Saratoga Creek and neighboring residential properties to the west and a vacant lot to the south. Site topography is mainly level. Sun exposure for the trees varies from full to partly shaded, depending upon proximity to other trees. Most of the subject trees are growing off the site on adjacent properties, but their canopies overhang the project site. Tree condition ranges from Poor to Good with most trees in Fair to Good condition. All tree species except **London plane #10** are native to the immediate area and are probably of *natural growth*, meaning that they were not planted.

No irrigation is supplied to **trees #1-9** and **11-14** which is fine because these are native tree species that are adapted to the climate of the area. Those trees bordering however, do receive some additional water (other than rainfall) from the creek itself. **London plane #10** does receive irrigation from the office complex landscape. Tree maintenance is of a low or non-existent level for trees #1-9 and 11-14 which is fine for these native, natural growth trees. Maintenance for London plane #10 consists of lower branch removal for parking lot clearance, and directional pruning for overhead electric wire clearance.

APPENDIX

TABLE 3 COMPLETE TREE TABLE

This Table is continued through page 19. Data fields in the Table are explained on pages 20 to 24.
** Tree species not native to the immediate area. All other tree species are native to the immediate area and are probably of natural growth, meaning that they were not planted.*

Tree #	*Species* & Common Name	Trunk Diam. (DBH)	Size	CONDITION		Preservation Suitability	Est. Value	Expected Construction Impact	Action	Reason	Notes	TREE ROOT PROTECTION DISTANCES		
				Vigor	Structure							3xDBH	5xDBH	7xLOT
1	*Quercus agrifolia*, coast live oak	20 (2.5)	30x30	90	60	Good	$7,200	Moderate	Debatable	Construction	Construction: proposed curb and pavement is 7.5 feet from the trunk and farther. Since there is disturbance on multiple sides of the trunk I would like to see no soil disturbance closer than 8 feet. This means that the nearest pavement should be moved at least another foot father from the trunk. This may reduce the width of a parking space that is planned near this tree – so turn this in to a motorcycle or bicycle parking if it is not large enough for a car. Proposed landscaping are acceptable species and far enough from the trunk, as long as there will be no soil disturbance for planting or	5	8	15

Tree #	*Species* & Common Name	Trunk Diam. (DBH)	Size	CONDITION		Preservation Suitability	Est. Value	Expected Construction Impact	Action	Reason	Notes	TREE ROOT PROTECTION DISTANCES		
				Vigor	Structure							3xDBH	5xDBH	7xLOT
											irrigation (e.g. trenching) closer than 10 feet from the trunk of the tree. Condition: the only problem with this near-perfect tree is included bark between the two-codominant scaffold branches at 4 feet.			
2	*Sambucus nigra caerulea*, blue elderberry	9,10,8,4,4	18x33	50	20	Poor	480	Uncertain	Debatable	Actual Location, Construction, Overall Condition	Construction: not included on any plans, but it is between the 40 + 24-inch sycamore near the southwest corner of Lot 1. Most of the tree is dead. I recommend cutting all trunks to a short stump of 6 inches or so and allowing the live portion of this shrub/tree to regrow. This will also remove any impediment from the tree to project construction. Saratoga Tree Removal Criteria* met: 1, 7. Condition: most of the trunks of this tree are dead and fell over onto the project site (or at least the level area above	6	10	23

* See page 34 for an explanation of the Saratoga Tree Removal Criteria.

Tree #	*Species* & Common Name	Trunk Diam. (DBH)	Size	CONDITION		Preservation Suitability	Est. Value	Expected Construction Impact	Action	Reason	Notes	TREE ROOT PROTECTION DISTANCES		
				Vigor	Structure							3xDBH	5xDBH	7xLOT
											the creek bank), but one trunk is still alive and continues to grow. The trunks emerge from the soil at about 6 feet from the edge of the creek bank. Much poison oak is growing amongst the fallen canopy.			
3	coast live oak	10,12	40x30	90	40	Fair/Good	3,850	Low	Save, but remove decayed trunk overhanging site	Risk	Construction: nearest construction is 22 feet to proposed pavement. trunk. Condition: there is significant decay high on the trunk overhanging the project site from an old pruning wound stub. Birds have made holes and nests in this area of the tree. The trunk is positioned precariously on the steep creek side of the creek bank. The terrain is too steep for me to observe the creek side of the tree. The canopy of the tree overhangs the project site by perhaps 30 feet, but the tree has been pruned so that branches are high and will probably not interfere with future construction. I still	5	7	8

Tree #	*Species* & Common Name	Trunk Diam. (DBH)	Size	CONDITION		Preservation Suitability	Est. Value	Expected Construction Impact	Action	Reason	Notes	TREE ROOT PROTECTION DISTANCES		
				Vigor	Structure							3xDBH	5xDBH	7xLOT
											recommend using story posts to better assess any potential impacts to the canopy and any necessary construction clearance pruning.			
4	coast live oak	12,18,29,30	60x50	90	70	Good	42,200	Low	Save		Construction: nearest construction is 19.5 feet to proposed pavement. Will have to check any interference with canopy via story posts. Condition: this tree is also precariously perched on the steep creek bank. Its canopy also overhangs the project site, but fairly high.	15	25	30
5	elderberry	7,8,12	22x20	50	40	Fair/Poor	1,760	Low/ Moderate	Save		Condition: this tree overhangs the level area beyond creek area by 6 ft.	5	8	20
6	elderberry	12	28x22	70	50	Fair/Poor	900	Low	Save		Construction: same as previous. Condition: the trunk of this tree is located several feet down the steep creek bank and I wasn't able to observe the creek side.	5	5	12
7	elderberry	13,10	18x12	70	40	Fair/Poor	1840	Low	Save		Construction: same as previous.	5	8	22

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PROJECT NAME

PALM VILLAS SARATOGA

LOT #2
389-06-021
SARATOGA CREEK DRIVE
SARATOGA, CA 95070

REVISIONS

TREE PRESERVATION

DATE : 8-14-20
SCALE : N/A
DRAWN BY : N/A
CHECKED BY : TS
ARCHITECT : TOM SLOAN
PROJECT NO : 15601

SHEET NUMBER

TP-1.1

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Tree #	Species & Common Name	Trunk Diam. (DBH)	Size	CONDITION Vigor	CONDITION Structure	Preservation Suitability	Est. Value	Expected Construction Impact	Action	Reason	Notes	TREE ROOT PROTECTION DISTANCES 3xDBH	5xDBH	OTPZ
8	coast live oak	7	20x18	85	70	Good	1,400	Low	Save			5	4	5
9	*Platanus racemosa*, Calif. sycamore	25,18,19,8	85x60	75	60	Good	24,800	Moderate/ Severe	Debatable	Construction	Construction: proposed new pavement 5 feet from trunk; drainage pipe centerline 6.5 feet. There must be no soil disturbance closer than 12 feet on one side of the trunk of this tree; preferably farther. Please adjust plans accordingly. Story posts should also be erected to understand pruning requirements – there are some large long branches high in the tree that may be in the path of the building. Condition: the root collar and lower trunks are obstructed by stored materials, a partial fence and debris. The trunks should be cleared of these materials and I should re-evaluate this area.	12	20	60
*10	*Platanus x hispanica*, London plane	18	35x30	100	70	Fair	5,900	Moderate	Save		Construction: proposed pavement and the end of a drainage pipe are 7 feet from the trunk. This is acceptable. No landscaping	5	8	14

Tree #	Species & Common Name	Trunk Diam. (DBH)	Size	CONDITION Vigor	CONDITION Structure	Preservation Suitability	Est. Value	Expected Construction Impact	Action	Reason	Notes	TREE ROOT PROTECTION DISTANCES 3xDBH	5xDBH	OTPZ
											is shown between tree trunk and property line – this is good but please install organic mulch in this area. Condition: this tree is located on the adjacent professional office property to the north, but the canopy overhangs the project site by perhaps 10 feet (it is hard to say how far the canopy overhangs due to two fences about 10 feet apart – so I am unsure where the actual property line is probably located). The lower trunk and root collar of the tree are growing through a notch that was cut in the fence nearest to the office complex. This tree is also growing beneath overhead electric wires and has been directionally pruned to its present height.			
11	coast live oak	6,7	25x18	90	60	Fair/Good	1,350	Severe	Remove	Construction	Construction: within proposed roadway on Lot 2. Saratoga Tree Removal Criteria met: 7, 9.	5	5	5

Tree #	Species & Common Name	Trunk Diam. (DBH)	Size	CONDITION Vigor	CONDITION Structure	Preservation Suitability	Est. Value	Expected Construction Impact	Action	Reason	Notes	TREE ROOT PROTECTION DISTANCES 3xDBH	5xDBH	OTPZ
12	coast live oak	8	30x20	90	60	Fair/Good	1,350	Severe	Remove	Construction	Construction: same as previous. Saratoga Tree Removal Criteria met: 7, 9.	5	5	5
13	coast live oak	8	30x20	90	60	Fair/Good	1,350	Severe	Remove	Construction	Construction: same as previous. Saratoga Tree Removal Criteria met: 7, 9.	5	5	5
14	coast live oak	10,8,7,6	30x30	90	50	Fair	5,700	Low/ Moderate	Save		Construction: tree canopy overhangs corner of Lot 2 slightly and may require some clearance pruning. Condition: this tree is probably a volunteer of natural growth. There are also a few other small stems in this crowded clump of trees that are from volunteer holly oaks, *Quercus ilex*. The main tree however, is a stump sprout.	5	9	10

EXPLANATION OF TREE TABLE DATA COLUMNS:

1) **Tree Number** (the field tag number of the existing tree). Each existing tree in the field is tagged with a 1.25 inch round aluminum number tag that corresponds to its tree number referenced in the arborist report, Tree Map, Tree Protection Specifications and any other project plans where existing trees must be shown and referenced.

2) **Tree Name and Type:**
Species: The *Genus* and *species* of each tree. This is the unique scientific name of the plant, for example *Quercus agrifolia* where *Quercus* is the Genus and *agrifolia* is the species. The scientific names of plants can be changed from time to time, but those used in this report are from the most current edition of the *Sunset Western Garden Book* (2012) Sunset Publishing Corporation. The scientific name is presented at its first occurrence in the Tree Table, along with the regional common name. After that only the common name is used.

3) **Trunk DBH**. Tree trunk diameter in inches "at breast height" (measured at 4.5 feet above ground level). This is the forestry and arboricultural standard measurement height that is also used in many tree-related calculations. It is also the trunk diameter measurement height required by the City of Saratoga. For multi-trunk trees, trunk diameter is measured for the largest trunk and estimated for all smaller trunks. A number in parentheses (3) after the trunk diameter(s) indicates that it was not possible to measure the trunk at 4.5 feet (due to tree architecture) and so the diameter was measured at this alternate height (in feet), which reflects a more realistic trunk diameter for the tree.

4) **Size**: tree size is listed as height x width in feet, estimated and approximate and intended for comparison purposes.

5) **Condition Ratings**: Trees are rated for their *condition* on a scale of *zero to 100* with zero being a dead tree and 100 being a perfect tree (which is rare – like a supermodel in human terms). A 60 is "average" (not great but not terrible either). There are two components to tree condition – ***vigor*** and ***structure***, and each component is rated separately. Averaging the two components is not useful because a very low rating for either one could be a valid reason to remove a tree from a site -- even if the other component has a high rating. Numerically speaking for each separate component:

100 is equivalent to *Excellent* (an `A' academic grade), **80** is *Good* (B), **60** is *Fair* (C), **40** is *Poor* (D), **20** is *Unacceptable* (F) and **0** is *Dead*.

6) Relative to the scope of work for this report, tree *Condition* has been rated but not explained in detail and recommendations for the management of tree condition have not been included. The tree owner may contact Deborah Ellis for additional information on tree condition and specific recommendations for the general care of individual trees relative to their condition.

7) The *Condition* of the tree is considered relative to the tree species and present or future intended use of the site to provide an opinion on the tree's Preservation Suitability Rating (i.e. "Is this tree worth keeping on this site, in this location, as explained in Table 4 on the next page. This is based upon

the scenario that the tree is given enough above and below-ground space to survive and live a long life on the site. Ratings such as "Fair/Good" and "Fair/Poor" are intermediate in nature. The Preservation Suitability rating is not always the same as the Condition Rating because (for example) some trees with poor condition or structure can be significantly improved with just a small amount of work – and it would be worthwhile to keep the tree if this were done.

Table 4 Preservation Suitability Rating Explanation

Excellent	Such trees are rare but they have unusually good health and structure and provide multiple functional and aesthetic benefits to the environment and the users of the site. These are great trees with a minimum rating of "Good" for both vigor and structure. Equivalent to academic grade `A'.
Good	These trees may have some minor to moderate structural or condition flaws that can be improved with treatment. They are not perfect but they are in relatively good condition and provide at least one significant functional or aesthetic benefit to the environment and the users of the site. These are better than average trees equivalent to academic grade `B'.
Fair	These trees have moderate or greater health and/or structural defects that it may or may not be possible to improve with treatment. These are "average" trees – not great but not so terrible that they absolutely should be removed. The majority of trees on most sites tend to fall into this category. These trees will require more intensive management and monitoring, and may also have shorter life spans than trees in the "Good" category. Retention of trees with moderate suitability for preservation depends upon the degree of proposed site changes. Equivalent to academic grade `C'.
Poor	These trees have significant structural defects or poor health that cannot be reasonably improved with treatment. These trees can be expected to decline regardless of management. The tree species themselves may have characteristics that are undesirable in landscape settings or may be unsuitable for high use areas. I do not recommend retention of trees with low suitability for preservation in areas where people or property will be present. Equivalent to academic grade `D'.
None	These trees are dead and/or are not suitable for retention in their location due to risk or other issues. In certain settings however, (such as wilderness areas, dead trees are beneficial as food and shelter for certain animals and plants including decomposers. Equivalent to academic grade `F'.

8) **Value**: Tree monetary appraisal is based upon: (1) Cost of Installation plus (2) its increase in value over a container-size tree if a larger size tree being appraised. This value is then adjusted according to: (a) *Species* (according to regional published species ratings), (b) *Condition* of the tree, and (c) *Location* of the tree (an average of the sub-categories of *Site*, *Contribution* and *Placement*). The methodology and calculations for the Trunk Formula Method are taken from two industry standard texts – The Guide for Plant Appraisal, 9th edition, 2000, edited by the Council of Tree & Landscape Appraisers and published by the International Society of Arboriculture, and the Species Classification and Group Assignment, 2004, published by the

Western Chapter of the International Society of Arboriculture. The cross-sectional trunk diameter price presented in this text has been adjusted slightly downward to match the current actual average wholesale cost of a 24-inch box nursery tree in this area. Note that the values produced for this report are meant for reference only and may not reflect the true value of the tree that could be calculated by a thorough and more detailed analysis of each individual tree.

a) **Caveats regarding tree values**: The values in this report have not been subjected to a "reasonableness test" which compares the value of trees and landscaping to the total value of the property. The values in the report were calculated quickly and are intended to be approximate and for reference only. Research on tree and landscape values has shown that landscaping can contribute up to 20% of the total property value. In some cases however, tree appraisals have produced tree values that exceed the value of the entire property. Performing a reasonableness test screens for this error. For certain trees in this report I have decreased or increased tree values when I felt that the calculated values were too high or too low.

b) **The Trunk Formula Method** is used for trees that are too large for practical replacement with a similar size nursery container-grown tree. This method applies to trees with trunk diameters that are larger than 8-inches, measured at 12 inches above the ground. For the purpose of this report, all trees with trunk diameters of 8 inches or greater measured at DBH (4.5 feet above the ground) are appraised by this method.

c) **The Replacement Cost Method** is used for smaller trees with trunk diameters up to 4-inches in diameter measured at 12 inches above the ground. This is generally equivalent to a 48-inch box-size tree. The replacement cost for such a tree shall be the average wholesale cost of the tree multiplied by two to include transportation to the site, planting and other costs. This price is then adjusted (usually downward) based upon the Condition ratings percentages for the appraised tree. For the purpose of this report, all trees with trunk diameters of 7 inches or less measured at DBH (4.5 feet above the ground) are appraised by this method. The following cost basis is used (based upon the average of wholesale tree prices from Boething Treeland Nursery, Portola Valley and Valley Crest Tree Nursery, Sunol, 2/2/2015):

Trunk DBH	Replacement tree size	Replacement Tree Wholesale Cost x 2 (for installation, etc.)
<1" to 1"	15 gallon	$47.50 x 2 = $95
2-3"	24" box	$162.50 x 2 = $325
4-5"	36" box	$412.50 x 2 = $825
6-7"	48" box	$900 x 2 = $1800

d) **Tree values for tree protection bonds**: Prior to commencing work, the tree-regulating authority may require that the contractor furnish a bond equal to some portion of the total appraised value of the trees on the site based upon the values presented in the Arborist Report. Bond money will be returned to the contractor upon the completion of the project with deductions or additional fines imposed based upon tree protection compliance and the final condition of the trees. Tree values are often used to establish a benchmark amount to fine the contractor if non-

compliance with the Tree Protection Specifications or other negligence causes a subject tree to be removed or unnecessarily damaged. The full value amount should be charged to the contractor if a tree is damaged to the degree that it must be removed. A portion of the value of the tree plus any necessary remediation costs, as determined by the tree owner, should be charged to the contractor if the tree is damaged but does not have to be removed.

9) **Action (Disposition):**
a) ***Save:*** it should be no problem save this tree utilizing standard tree protection measures.
b) ***Remove:*** this recommendation is based upon tree condition, preservation suitability, expected impact of construction, poor species for the site or any combination of these factors.
c) ***Debatable:*** there is a problem with potentially retaining this tree. Find out why in the *Reason* and Notes columns of the Complete Tree Table. Examples are:
- The tree is shown to be saved (and may be a desirable tree to save) but proposed construction is too close or is uncertain and may cause too much damage to retain the tree. Design changes may be recommended to reduce damage to the tree so that it can be saved.
- Further evaluation of the tree is necessary (e.g. the tree requires further, more detailed evaluation that is beyond the scope of this tree survey and report. Examples are advanced internal decay detection and quantification with resistance drilling or tomography, a "pull test" to assess tree stability from the roots, or tissue samples sent to a plant pathology laboratory for disease diagnosis.
- Condition: the tree is in "so-so" or lesser condition and an argument could be made to either save or remove the tree as it stands now. In some cases the owner will make the decision to save or remove the tree based upon the information provided in this report as well as the owner's own preferences.
- Species: the tree may be a poor species for the area or the intended use of the developed site.
- Uncertain construction impact
- Other (as explained for the individual tree)

10) **Reason** (for tree removal or to explain why a tree is listed as "Debatable" or "Uncertain"). Multiple reasons may be provided, with the most significant reason listed first. Reasons can include but are not limited to:
- ***Construction*** (excessive construction impact is unavoidable and it is not worthwhile to try and save the tree)
- ***Condition*** (e.g. poor tree condition – either *vigor*, *structure* or both)
- ***Landscaping*** (the tree is being removed because it does not fit in with or conflicts with proposed new landscaping)
- ***Owner's Decision*** (for some reason the owner has decided to remove this tree)
- ***Species*** (the tree is a poor species for the use of the site)
- ***Risk*** (the tree presents moderate to excessive risk to people or property that cannot be sufficiently mitigated)

11) **Notes:** This may include any other information that would be helpful to the client and their architects and contractors within the scope of work for this report, such as a more detailed explanation of tree condition or expected construction impact.

12) **Tree Protection Distances** *(Also see pages 24 and 25 for a more detailed explanation).*
a) Root Protection:
i) **3 and 5xDBH**: Both the 3 and 5xDBH distances are listed for each tree. For multi-trunk trees 100% of the DBH of the largest trunk is added to 50% of the DBH for all other trunks in order to compute the operational DBH to use for these the Tree Protection Distance calculations. For practical purposes, the minimum root protection distance listed is 5 feet. If disturbance cannot be kept at least 3 feet from the trunk of a tree, the tree should normally be removed.
ii) **OTPZ (Optimum Tree Protection Zone)**: This is calculated as per the text, *Trees & Development*, Matheny et al., International Society of Arboriculture, 1998. This method takes into account tree age and the particular tree species tolerance of root disturbance. Because it may not be possible to maintain the OPTZ distance recommended for trees on many projects due to crowded site conditions, the Arborist may omit this requirement and list only the 3 and 5xDBH distances.
b) Canopy Protection: Additional space beyond root zone protection distances may be necessary for canopy protection.
c) I have increased a few of the calculated tree protection distances for individual trees based upon my professional judgment relative to site constraints. For example, the minimum root protection distance listed is 5 feet.

TREE PROTECTION DISTANCES

3 TO 5 X DBH

No one can estimate and predict with absolute certainty how far a soil disturbance such as an excavation must be from the edge of the trunk of an individual tree to affect tree stability or health at a low, moderate or severe degree -- there are simply too many variable involved that we cannot see or anticipate. 3xDBH however, is a reasonable "rule of thumb" minimum distance (in feet) any excavation should be from the edge of the trunk *on one side of the trunk*. This is supported by several separate research studies including (Smiley, Fraedrich, & Hendrickson 2002, Bartlett Tree Research Laboratories. *DBH* is trunk "diameter at breast height" (4.5 feet above the ground). This distance is often used during the design and planning phases of a construction project in order to estimate root damage to a tree due to the proposed construction. It tends to correlate reasonably well with the *zone of rapid taper*, which is the area in which the large *buttress roots* (main support roots close to the trunk) rapidly decrease in diameter with increasing distance from the trunk. For example, using the 3X DBH guideline an excavation should be no closer than 4.5 feet from the trunk of an 18-inch DBH tree. Such distances are guidelines only, and should be increased for trees with heavy canopies, significant leans, decay, structural problems, etc. It is also important to understand that in actual field conditions we often find that much less root damage occurs than was anticipated by the guidelines. 3xDBH may be more of

an aid in preserving tree stability and not necessarily long-term tree health. 5X DBH or greater is the "preferred" minimum distance which should be strived for, and this distance or greater should probably be used when there are multiple trenches on more than one side of the trunk. The roots beyond the zone of rapid taper form an extensive network of long, rope-like roots one to two inches in diameter. These woody perennial roots are referred to as *transport roots* because they function primarily to transport water and minerals. Maintaining a 5xDBH tree protection zone or greater around a tree will preserve more of these transport roots, which will have less of an impact on tree health than if the excavation were closer to the trunk.

OTPZ (OPTIMUM TREE PROTECTION ZONE)

OTPZ is the distance in feet from the trunk of the tree, all around the tree, that construction or other disturbance should not encroach within. If this zone is respected, then chances of the tree surviving construction disturbance are very good. This method takes into account tree age, DBH and the particular species tolerance to root disturbance. Although there are no scientifically based methods to determine the minimum distance for construction (for example, root severance) from trees to assure their survival and stability, there are some guidelines that are often used in the arboricultural industry. The most current guideline comes from the text, Trees & Development, Matheny et al., International Society of Arboriculture, 1998. The tree protection zone calculation method in this text was used to obtain the OTPZ's provided in this report. Due to the crowded, constrained nature of many building sites it is often not be possible to maintain the OPTZ distance recommended for many of the trees -- therefore I have also listed alternate distances of 3 and 5X DBH (*see paragraph above).*

Note that by default, the minimum root protection distance listed for any tree is 5 feet.

CITY OF SARATOGA TREE PROTECTION REQUIREMENTS

2014

1) **Any time the canopy of a tree protected by City Code extends into an area of proposed construction or is within 5 feet of the proposed work area** an *Arborist Report* and a *Tree Preservation Plan* area required.
2) **Protected trees are:**
a) All trees – when the trunk diameter at 4.5 feet above the ground (DBH) is **10 inches or more** (includes all species, dead trees and fallen trees).
b) Native species – when the trunk diameter (DBH) is **6 inches or more**. Native species include but are not limited to: coast live oak, valley oak, blue oak, redwood, Douglas fir, bigleaf maple and California buckeye.

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PROJECT NAME

PALM VILLAS SARATOGA

LOT #2
389-06-021
SARATOGA CREEK DRIVE
SARATOGA, CA 95070

REVISIONS

TREE PRESERVATION

DATE : 8-14-20
SCALE : N/A
DRAWN BY : N/A
CHECKED BY : TS
ARCHITECT : TOM SLOAN
PROJECT NO : 15601

SHEET NUMBER

TP-1.2

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c) For additional protected trees see City Code 15-50- 050.

3) **Saratoga City Code:** http://library.municode.com/index.aspx?clientId=16616. Tree Regulations are Article 15-50.
4) **This Arborist Report is to be copied onto plan sheet(s)** and become part of the final project plan set. This sheet(s) shall be titled, *Tree Preservation Plan*.
5) **The owner, general contractor, architects and property owner are all responsible** for knowing the information included in the Arborist Report and adhering to the tree protection conditions provided.
6) **The Designated Project Arborist** for this development is Name, Company, City, Phone Number and Email Address.
7) **The Project Arborist shall visit the site to inspect tree protection** no less than once a week during demolition and grading and no less than once per month during all other times, until the project has been completed. The Project Arborist shall submit a Tree Protection Inspection Report to City Arborist Kate Bear as soon as possible after each inspection. The report shall state whether or not tree protection is adequate or needs improvement, and any mitigation measures that are recommended for the protected trees.
8) **The Project Arborist shall supervise any work that must occur within the tree protection zone,** and a follow-up report shall be provided to the Saratoga City Arborist.
9) **Any time that work must be supervised by the Project Arborist, a follow-up report shall be provided** to the Saratoga City Arborist documenting how the work was carried out and any necessary mitigation requirements.
10) **Tree Protection Fencing Requirements:**
   a) Six-foot high chain link fencing mounted on eight-foot tall, 2-inch diameter galvanized posts, driven 24 inches into the ground and spaced no more than 10 feet apart.
   b) Posted with signs reading, "TREE PROTECTION FENCE – DO NOT MORE OR REMOVE WITHOUT APPROVAL FROM CITY ARBORIST". Print these signs at a minimum size of 8.5 x 11 inches, laminate them and attach them to the fencing by punching 4 holes in each corner, and then attaching the sign to the fence with plastic wire ties in each of the holes. Place the signs 6 inches below the top of the fencing. Place signs every 25 feet or in each cardinal direction, whichever is less, facing the work zone.
   c) The City requires that tree protection fencing be installed before any equipment comes on site. The fencing must be inspected and approved by the City Arborist before issuance of demolition and/or building permits.
   d) Tree protection fencing is required to remain in place throughout construction.

TREE PROTECTION ZONE
The tree protection zone is the distance from the trunk to a point that is five feet beyond the canopy of a tree protected by City Code. Tree protection fencing shall be located as close to this location as possible while allowing room for construction to occur.

11) Other Tree Protection Measures:
   a) The arborist report, once copied onto a plan sheet(s) and included in the final set of plans, serves as a Tree Preservation Plan (City Code 15-50.140).
   b) Any additional conditions needed to adequately protect trees during construction.
   c) Any branch or root pruning must be supervised by an ISA-certified arborist or the Project Arborist.
   d) Dealing with Roots: where a grade cut will take place underneath or within 5 feet of the dripline of a protected tree, a trench 18 inches wide and to the depth of the total excavation must be hand-dug. Roots will be cleanly cut within this trench by the project arborist, who will then make an assessment of the total root damage and report this to City Arborist Kate Bear. The project arborist must be on site when the trench is dug. The arborist shall file a report with Kate Bear documenting how the work was carried out and any necessary mitigation requirements. After the trench is dug and roots are hand cut, heavy equipment can then excavate for the remainder of the excavation as the equipment does not contact the intact ends of the cut roots. Cutting the roots twice, to create a gap of about 6 inches between the intact and cut portions of the roots will facilitate protecting the cut root ends.
   e) A final inspection by the City Arborist is required at the end of the project. This is to be done before tree protection fencing is taken down. Replacement trees should be planted at this time as well.
   f) The tree protection fencing and signage described above as well as Saratoga's other tree protection requirements, are explained in the attached document, *Tree Protection Requirements for Projects in Saratoga*.

12) **A Tree Protection Security Deposit on trees to be retained** during construction and potentially impacted by work is required. The deposit is between 25% and 100% of the total appraised value of the trees potentially impacted. The owner/applicant will be required to obtain, and file with the Community Development Director, this Tree Protection Security Deposit prior to obtaining Building Division Permits.
   a) If there will be more than one structure on the property, the deposit must be equal to 100% of the value of the trees potentially impacted (City Code 15-50.080(d)). If only one structure will be built, the deposit will be .
   b) The Tree Protection Security Deposit is to remain in place for the duration of construction of the project to ensure the protection of the trees.
   c) Once the project has been completed, inspected and approved ty the City Arborist (a building inspector cannot release the Tree Security Deposit), the bond will be released.
   d) Any tree on site protected by City Code will require replacement according to its appraised value if it is damaged beyond repair as a result of construction.

13) Replacement tree requirements
   a) Height of maturity if tall trees are being removed
   b) native species if natives are being removed
   c) whether new trees should be planted in the front yard or anywhere on the property

   d) The City requires that new trees equal to the total appraised value of trees approved for removal be planted on site, or that some or all of the value to be placed in a fund for tree planting elsewhere in the City.
   e) Replacement values have been assigned to specific sizes of trees as follows:
   15 gal - $150, 24-inch box - $500, 36-inch box - $1500, 48-inch box - $5000, 60-inch box - $7000, 72-inch box - $15,000

TREE PHOTOS

West perimeter of the site and northwest corner, Lot 1. From left to right: fallen and mostly dead **elderberry #2, coast live oak #3** and **4, elderberries #5, 6 and 7, coast live oak #8,** and **California sycamore #9**.

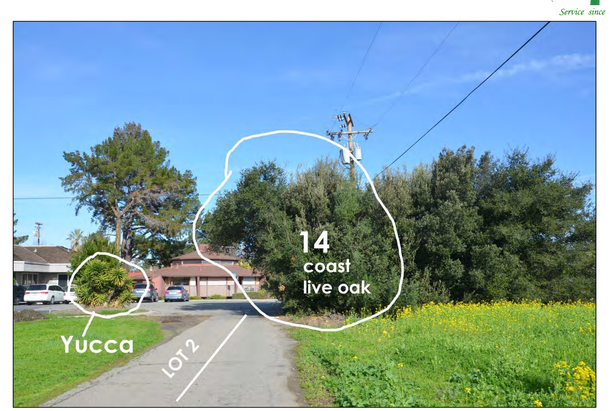
Elderberry #2, which probably does at least sprawl over a portion of the project site at the southwest corner.

Close-up of fallen trunks of **elderberry #2**. I have placed a yellow dot near the base of each trunk.

Coast live oak #3 and the problem with the decay in one of its two trunks, the trunk leaning over the project site. The left photo shows the decayed area circled. The right photo shows a close-up of the decay. There is a lot of internal decay here, because there is a bird nest inside. The weight of the canopy is above this decayed portion.

North perimeter of the site, Lot 1. Left to right: the edge of large **coast live oak #4, California sycamore #9 and London plane #10**.

The west perimeter of Lot #2, viewed form the west. **Coast live oaks #11, 12 and 13**. All three of these trees will be removed because they will be within the extension of Saratoga Creek Drive.



The northeast corner of Lot 2. **Coast live oak #14** overhangs the site slightly

TREE REMOVAL CRITERIA, CITY OF SARATOGA

Criteria. Each application for a tree removal pruning or encroachment permit shall be reviewed and determined on the basis of the following criteria:

1. The condition of the tree with respect to disease, imminent danger of falling, proximity to existing or proposed structures and interference with utility services, and whether the tree is a Dead tree or a Fallen tree.
2. The necessity to remove the tree because of physical damage or threatened damage to improvements or impervious surfaces on the property.
3. The topography of the land and the effect of the tree removal upon erosion, soil retention and the diversion or increased flow of surface waters, particularly on steep slopes.
4. The number, species, size and location of existing trees in the area and the effect the removal would have upon shade, privacy impact, scenic beauty, property values, erosion control, and the general welfare of residents in the area.
5. The age and number of healthy trees the property is able to support according to good forestry practices.
6. Whether or not there are any alternatives that would allow for retaining or not encroaching on the protected tree.
7. Whether the approval of the request would be contrary to or in conflict with the general purpose and intent of this Article.
8. Any other information relevant to the public health, safety, or general welfare and the purposes of this ordinance as set forth in Section 15-50.010
9. The necessity to remove the tree for economic or other enjoyment of the property when there is no other feasible alternative to the removal.
10. The necessity to remove the tree for installation and efficient operation of solar panels, subject to the requirements that the tree(s) to be removed, shall not be removed until solar panels have been installed and replacement trees planted in conformance with the City Arborist's recommendation.

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PALM VILLAS SARATOGA

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SARATOGA, CA 95070

REVISIONS

TREE PRESERVATION

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ARCHITECT :	TOM SLOAN
PROJECT NO :	15601

SHEET NUMBER

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ASSUMPTIONS & LIMITATIONS

1. A *Basic Evaluation* **of the subject trees described in this report was performed on July 23, 2015 for the purpose of this report.** Trees were briefly rechecked on January 26, 2016 for this current report and coast live oaks #11-14 were added. A basic evaluation is a visual evaluation of the tree from the ground, without climbing into the tree or performing detailed tests such as extensive digging, boring or removing samples. This is an initial screening of the tree after which the evaluator may recommend that additional, more detailed examination(s) be performed if deemed necessary.
2. **Trees on neighboring properties other than those specifically mentioned in this report were not evaluated in detail.** They were only viewed cursorily from the project site. I did not enter the neighboring property to inspect these trees up close.
3. **Some trees had their root collars and or lower trunks covered** with soil, vegetation or debris and were obstructed from view when I conducted my tree evaluation. If these trees may remain, the obstructions should be removed and I should re-examine these previously covered areas.
4. **Any information and descriptions provided to me for the purpose of my investigation in this case and the preparation of this report are assumed to be correct**. Any titles and ownerships to any property are assumed to be good and marketable. I assume no responsibility for legal matters in character nor do I render any opinion as to the quality of any title.
5. **The information contained in this report covers only those items that were examined** and reflects the condition of those items at the time of inspection.
6. **Loss or removal of any part of this report** invalidates the entire report.
7. **Possession of this report, or any copy thereof, does not imply right of publication** for use for any purpose by any person other than to whom this report is addressed without my written consent beforehand.
8. **This report and the ratings or values represented herein represent my opinion**. My fee is in no way contingent upon the reporting of a specified value or upon any finding or recommendation reported.
9. **This report has been prepared in conformity with generally acceptable appraisal/diagnostic/reporting methods and procedures** and is consistent with practices recommended by the International Society of Arboriculture and the American Society of Consulting Arborists.
10. **My evaluation of the trees that are the subject of this report is limited to visual examination of accessible items without dissection, excavation, probing or coring**. There is no warranty or guarantee, expressed or implied, that problems or deficiencies of the plants or property in question may not arise in the future.
11. **I take no responsibility for any defects in any tree's structure**. No tree described in this report has been climbed and examined from above the ground, and as such, structural defects that could only have been discovered have not been reported, unless otherwise stated. Structural defects may also be hidden within a tree, in any portion of a tree. Likewise, root collar excavations and evaluations have not been performed unless otherwise stated.

12. **The measures noted within this report are designed to assist in the protection and preservation of the trees mentioned herein**, should some or all of those trees remain, and to help in their short and long term health and longevity. This is not however; a guarantee that any of these trees may not suddenly or eventually decline, fail, or die, for whatever reason. Because a significant portion of a tree's roots are usually far beyond its dripline, even trees that are well protected during construction often decline, fail or die. Because there may be hidden defects within the root system, trunk or branches of trees, it is possible that trees with no obvious defects can be subject to failure without warning. The current state of arboricultural science does not guarantee the accurate detection and prediction of tree defects and the risks associated with trees. There will always be some level of risk associated with trees, particularly large trees. It is impossible to guarantee the safety of any tree. Trees are unpredictable.

****

I certify that the information contained in this report is correct to the best of my knowledge, and that this report was prepared in good faith. Thank you for the opportunity to provide service again. Please call me if you have questions or if I can be of further assistance.

Sincerely,

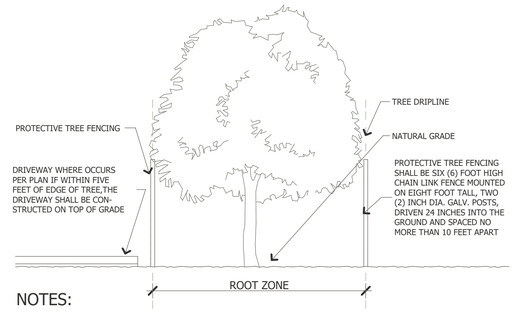
Deborah Ellis, MS.
Consulting Arborist & Horticulturist
Certified Professional Horticulturist #30022
ASCA Registered Consulting Arborist #305
I.S.A. Board Certified Master Arborist WE-457B
I.S.A. Tree Risk Assessment Qualified

Enclosures:
- *Saratoga Tree Protection Sign* template (to be placed on tree protection fencing)
- *Keeping Native Calif. Oaks Healthy*. Hagen. June 1990. California Department of Forestry & Fire Protection. Tree Notes #7.

GLOSSARY

1. **Directional pruning** for overhead utility line clearance means that only the branches directly interfering with the wires are removed. Branches cut back to the trunk or to lateral branches at least 1/3 the diameter of the parent branch. This is in contrast to *topping* where the entire top of the tree is cut back to some predetermined height below the power lines, or heading cuts where individual branches are cut back to some predetermined height with no regard to the future tree structural problems that this will cause.
2. **Dripline**: the area under the total branch spread of the tree, all around the tree. Although tree roots may extend out 2 to 3 times the radius of the dripline, a great concentration of active roots is often in the soil directly beneath this area. The dripline is often used as an arbitrary "tree protection zone".
3. **Included bark** is bark sandwiched between adjacent branches, a branch and the trunk, or two or more trunks, often appearing as a seam. In contrast, a normal attachment will have a ridge of bark protruding upwards and a continuous wood connection between adjacent members. An included bark branch or trunk attachment is weaker than a normal attachment. As branches or trunks with included bark grow, they expand in diameter, squeezing the bark along the seam. This may kill some portion of the included bark. When this occurs, a wound response is initiated. As a consequence, cracks can be generated, leading to breakage. Such defects can often be completely removed when a tree is young (e.g. the offending members equal or less than 2 inches in diameter). Older, larger cuts (such as 6 inches in diameter or more) could cause decay to spread into the remaining member, which is undesirable. In these cases it may be best to thin one member (usually the smaller member) by 25% to slow its growth and ultimate size.
4. **Project Arborist. The arborist who is appointed to be in charge of arborist services for the project.** That arborist shall also be a *qualified consulting arborist* (either an International Society of Arboriculture (ISA) Board-Certified Master Arborist or an American Society of Consulting Arborists (ASCA) Registered Consulting Arborist) that has sufficient knowledge and experience to perform the specific work required. For most construction projects that work will include inspection and documentation of tree protection fencing and other tree protection procedures, and being available to assist with tree-related issues that come up during the project.
5. **Qualified Consulting Arborist:** must be either an International Society of Arboriculture (ISA) Board-Certified Master Arborist or an American Society of Consulting Arborists (ASCA) Registered Consulting Arborist that has sufficient knowledge and experience to perform the specific work required.
6. **Qualified Tree Service**: A tree service is a company that performs tree pruning and tree removals as their main business. A *Qualified Tree Service* is a tree service with a supervising arborist who has the minimum certification level of ISA (International Society of Arboriculture) Certified Arborist and acts in a supervisory position on the job site during execution of the tree work. The tree service shall have a State of California Contractor's license for Tree Service (C61-D49) and provide proof of Workman's Compensation and General Liability Insurance. The person(s) performing the tree work must adhere to the most current of the following arboricultural industry tree care standards:
   - *Best Management Practices, Tree Pruning*. 2008. International Society of Arboriculture, PO Box 3129, Champaign, IL 61826-3129. 217-355-9411
   - *ANSI A300 Pruning Standards*. 2008 Edition. Ibid. (Covers tree care methodology).
   - *ANSI Z133.1 Safety Requirements for Arboricultural Operations*. 2006 Edition. Ibid. (Covers safety).

7. **Root collar & root collar excavation and examination**: The *root collar* (junction between trunk and roots) is critical to whole-tree health and stability. A root collar excavation carefully uncovers this area (with hand digging tools, water or pressurized air). The area is then examined to assess its health and structural stability. Buttress roots may be traced outward from the trunk several feet. Decay assessment of the large roots close to the trunk (buttress roots) involves additional testing such as drilling to extract interior wood with a regular drill, or the use of a resistance-recording drill to check for changes in wood density within the root; as would be caused by decay or cavities. It is important to note that root decay often begins on the underside of roots, which is not detectable in a root collar excavation unless the entire circumference of the root is excavated and visible. Drill tests may detect such hidden decay. Note that it is not possible to uncover and evaluate the entire portion of the root system that is responsible for whole-tree stability. Decayed roots that are inaccessible (e.g. underneath the trunk) can be degraded to the extent that the whole tree may fail even though uncovered and examined roots in accessible locations appear to be sound.
8. **Root rot disease** is caused by wet, poorly aerated soil conditions. Degradation of roots (root rot) and sometimes the lower trunk (crown rot) ensues on weakened, susceptible plant species not adapted to such a soil environment. Opportunistic plant root pathogens (such as watermold fungi) are often the secondary cause of the problem. Root rot is a particular problem among drought tolerant plants that are not adapted to frequent irrigation during our normally rain-free months, such as many of our California native plants. The problem is often worsened in fine-textured heavy clay soils that retain water more than do the coarser, fast-draining soils such as occur in the natural environment of many of our native plants.
9. **Scaffold branch**: a primary structural branch arising from the trunk of a tree. Usually the largest and often the lowest branches of the tree.
10. **Stub**: a short length of branch remaining following the removal of a branch through pruning, versus the more correct method of cutting a branch back to just beyond the branch collar and branch bark ridge. Leaving stubs in trees is generally a poor practice. A stub can also be created naturally, through a branch failure that leaves a portion of the branch still attached to the trunk or parent branch.
11. **Stump sprout trees** are the result of a tree trunk being cut down to a short stump close to the ground. If the tree survives, it sends out many small shoots (suckers) from around the cut stump. Some of these suckers may survive and grow to become significant trunks. These trunks are spaced very close together and usually have included bark between them, which reduces the strength of their union. Such trunks are prone to failure. Stump sprout trees can be very structurally unsound, particularly as they become large and old. There is often a great deal of decay associated with the mother stump, which can also reduce mechanical stability.
12. **Summer Dry**: Our native oak species are adapted to our "summer dry' climate. When the soil in their root system is kept moist during our normally dry months, these oaks are predisposed to attack by fungal root rot pathogens that are usually present in our soils. Therefore it is important to keep irrigation as far from the tree trunk (preferably beyond the mature dripline) as possible. The best landscape treatment underneath native oaks is non-compacted soil covered with a 3 to 4-inch depth of oak wood, leaf and twig litter (the tree's natural litter). Keep this mulch 6 to 12 inches away from the root collar (junction of trunk and roots). An exception to the no summer water rule would be newly planted oaks (for the first 2 to 3 years after planting, until they are "established") and also during droughts that occur during the normal rainy season.



NOTES:

1. TREE PROTECTIVE FENCING SHALL BE INSPECTED AND APPROVED BY CITY ARBORIST PRIOR TO OBTAINING BUILDING DIVISION PERMITS.
2. NO EXCAVATION SHALL OCCUR UNDER THE TREE CANOPIES FOR INSTALLATION OF UTILITIES OR DRIVEWAY.
3. NO FILL SOIL SHALL BE PLACED ANY CLOSER THAN FIVE FEET OUTSIDE THE EDGE OF THE CANOPY OF ANY TREE ON PROPERTY.
4. UNLESS OTHERWISE APPROVED, ALL CONSTRUCTION ACTIVITIES SHALL BE CONDUCTED OUTSIDE THE DESGINATED FENCED AREA (EVEN AFTER FENCING IS REMOVED). THESE ACTIVITIES INCLUDE, BUT ARE NOT NECESSARILY LIMITED TO, THE FOLLOWING: DEMOLITION, GRADING, TRENCHING, EQUIPMENT CLENAING, STOCKPILING AND DUMPING MATERIALS (INCLUDING SOIL FILL), AND EQUIPMENT/VEHICLE OPERATION AND PARKING.
5. THE DISPOSAL OF HARMFUL PRODUCTS, INCLUDING BUT NOT LIMITED TO CHEMICALS, PAINT RINSE WATER, FUEL, CEMENT WATER RINSE, HERBICIDES, OR OTHER MATERIALS, IS PROHIBITED BENEATH TREE CANOPIES OR ANYWHERE ON SITE THAT ALLOWS DRAINAGE BENEATH TREE CANOPIES.
6. THE FOLLOWING SIGNS WILL BE REQUIRED ON THE TREE PROTECTION FENCES: "TREE PROTECTION FENCE - DO NOT MOVE OR REMOVE WITHOUT PRIOR APPROVAL OF CITY ARBORIST, KATE BEAR (408) 868-1276".

1 MANAGEMENT OF ACTIVITIES IN THE ROOT ZONE

N.T.S.

NOTE: PLEASE SEE CITY OF SARATOGA TREE PROTECTION REQUIREMENTS NOTED ON PAGES 25 TO 28 IN THE ARBORIST REPORT.

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TREE PRESERVATION

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ARCHITECT : TOM SLOAN
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PALM VILLAS SARATOGA
A Project Description relating to the surrounding context

BUILDING DESIGN
The architectural style of the facility is reminiscent of the back to nature ethos of the Arts and Crafts movement that continues to flourish in California. Historically speaking, Arts and Crafts architects and designers believed that a return to a simpler, less pretentious style would lead to a healthier, more comfortable lifestyle. These Craftsman styled buildings use high quality building materials chosen for their sustainability and durability. Both buildings are characterized with simple and unassuming rooflines and integrated wraparound porches. The buildings are grounded to their sites with an earth gray ledgestone wainscot and embrace the same palate of materials and design elements such as tapered columns, horizontal banding and gabled roofs with exposed beams and corbels.

CONTEXTUAL COMPATIBILITY
The surrounding buildings represent an eclectic ensemble of architectural styles. Perhaps the single unifying architectural feature within this enclave of existing buildings is the predominance of conventional hip and gable roofs, similar to what is proposed. The subdivision was designed to provide an abundance of separation between the proposed buildings and the existing buildings along Cox Ave. This is accomplished with continuous ingress / egress and parking easements prescribed on most lots. This provides generous distances between the proposed buildings and other surrounding buildings.

12961 Village Drive

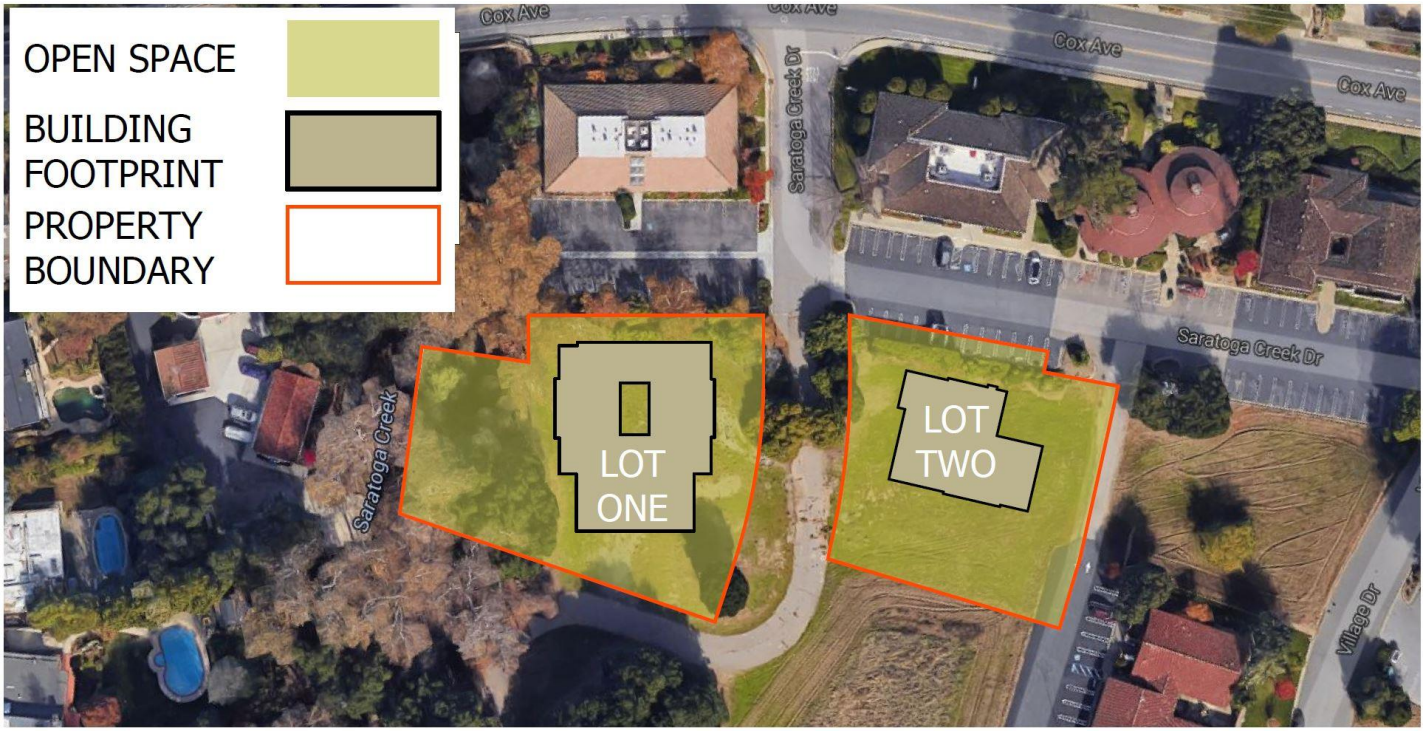
19100 Cox Avenue

19040 Cox Avenue

19020 Cox Avenue

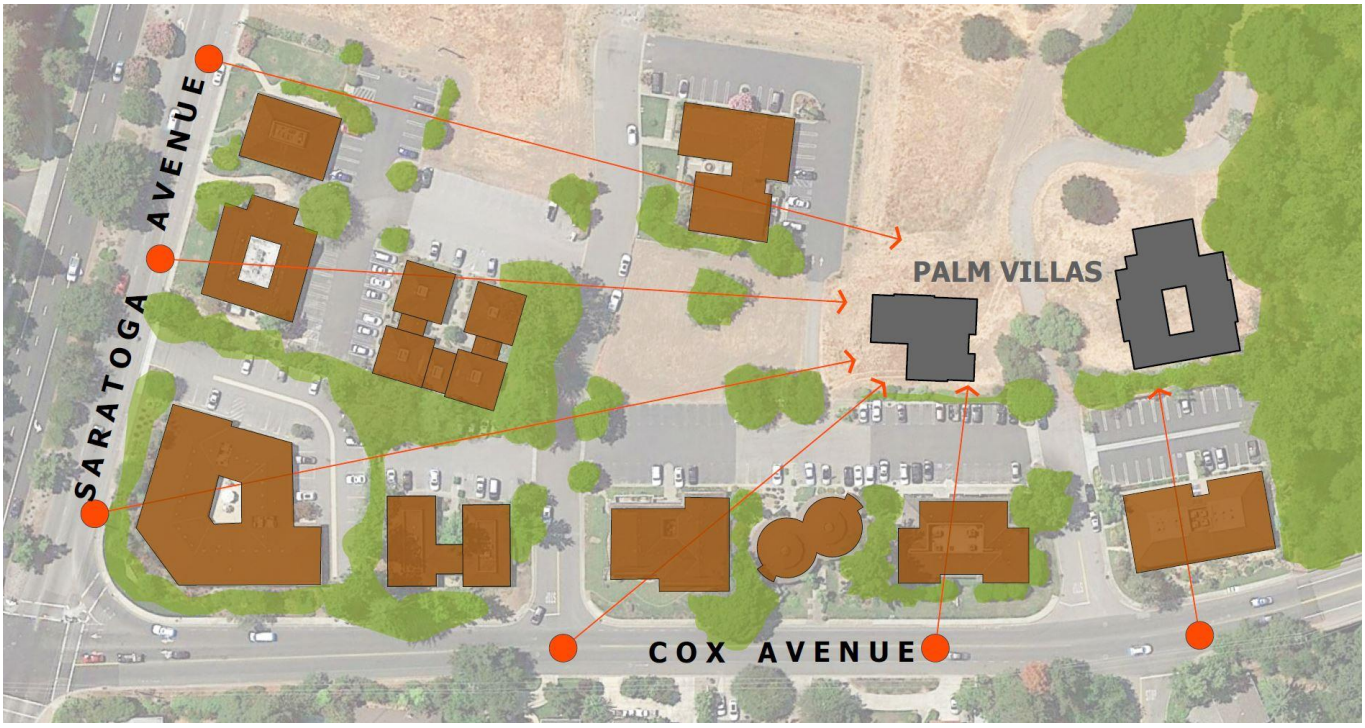
19000 Cox Avenue

The new Palm Villas buildings constitute a current trend of higher density while preserving the majority of the site as open space. Both sites are designed to preserve over 70 percent of open space which is a greater amount than other sites in the immediate area. This concept is incorporated directly upon each site and mergers together with the other surrounding sites



OPEN SPACE DIAGRAM

Both buildings are two stories above grade and within the allowable height limit, building setbacks and limitations of building coverage. As viewed from both Saratoga Avenue and Cox Avenue, both sites are located behind existing buildings and mature trees that will mitigate visual impacts. The construction of these new buildings will not adversely alter the existing character of the area, as viewed from the surrounding streets, sidewalks and neighborhoods.



VIEW FROM STREETS AND SURROUNDING NEIGHBORHOOD

The neutral and muted colors and materials for both buildings have been chosen to be unassuming, complementary and compatible within the existing context of the surround buildings.

- The prefinished color of HardiePlank V-groove siding, that embodies most of both building facades, will have a Light Reflectivity Value of 17, far exceeding the desired color necessary to recede seamlessly into the surrounding landscape. The product is exceptionally durable and engineered for resistance to adverse climate conditions, and is fire-resistant yet is has the appearance of true wood. The colors and materials of the surrounding buildings are a variety of materials and colors with no established continuity. Although wood siding is prevalent among the neighboring buildings, it is of older, low-quality plywood siding panels.

- Amongst the surrounding buildings, there is no predominant roofing material. A dark roof color, charcoal gray, was chosen because also bends seamlessly into background. Although each building has a different roofing material, the use of a GAF Timberline Composition Shingle has a lifetime warrantee and its textured surface creates deep shadow lines. The product is also UL Class A listed fire resistance.

- The stone wainscot that runs along around the entire base of the building, is manufactured by Cultured Stone and called Black Mountain Ledgestone. The subtle earth toned variations of color and horizontal proportions provide an integrated material for the buildings architecture and the surrounding landscape.

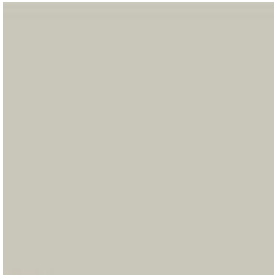
- The windows will be manufactured by Milgard using the Tuscany Series. The color of the window's sash and frame is a warm gray tone called Fog.

- The Trim that frames the doors, windows and architectural detailing is manufactured by Boral TruExterior and will be painted in an off-white color from Sherwin Williams called SW 7013 (Ivory White) The trim provides a high level of detail and craftsmanship to the project that is apparent in high quality craftsman design.

HARDIEPLANK SIDING

TRIM

STONE WAISCOT


WINDOW & DOORS

ROOF

COLOR AND MATERIAL PALATE

Most of the buildings in the immediate area were constructed nearly 40 years ago with different economic conditions, circumstances and development requirements. It is very likely that the adjacent vacant lots bordering the proposed Palm Villas buildings will someday be developed as two stories as well. Should this be the case, the current pattern of development will provide an even ampler distance between buildings for further added privacy.

The Building on Lot One mitigates building mass on the northerly facing façade by dropping the height of the second story wall plate. Additionally, the building is setback over 19 feet from the property line where the minimum allowable setback is 15 feet.

Lot One is virtually ensconced within a frame of mature trees that will be fully retained and provide a scenic backdrop for the easterly facade. Additionally, an alternating pattern of trees planted along the project's northerly border will further contribute to the screening of any visual impact from the new building thus further diminishing any visual impact to the adjacent area. The distance between the proposed building on Lot One and the adjacent building to the north (19100 Cox Ave.) is approx. 96 feet.

The Building on Lot Two mitigates building mass on the northerly and easterly facades facing the existing buildings by stepping a portion of the building away from the common property lines by approximately 27 feet. This technique reduces the overall building length, thus reducing the perception of the buildings size and scale.

Lot Two has a parking lot consistent with the pattern of development that exists on the surrounding sites. A continuous parking lot along the northerly boundary of Lot Two delineates a continuous buffer zone between the adjacent buildings that front along Cox Avenue. This pattern of development is consistent with the proposed parking located on the southern portion of the lot, as well as future development of a parking lot abutting the easterly side of the property. The distance between the proposed building on Lot Two and the adjacent building to the north (19140 Cox Ave.) is approx. 89 feet; the building located to the east (12961 Village Dr.) is approximately 97 feet away.

SITE DEVELOPMENT - NATURAL AND MAN-MADE BUFFER ZONES