TENTATIVE MAP
3 LOT SUBDIVISION

CONSISTING OF ONE (1) SHEET

BEING A PORTION OF THE AUZERIAS SURVEY OF RANCHO RINCONADA DE LOS GATOS. AND LYING WITHIN THE CITY OF MONTE SERENO, COUNTY OF SANTA CLARA, CALIFORNIA

OSUNA Engineering Inc.
A CALIFORNIA CORPORATION
CONSULTING CIVIL ENGINEERS & LAND SURVEYORS
117 BERNAL RD., #70-336, SAN JOSE, CALIFORNIA

FEBRUARY 10, 2020

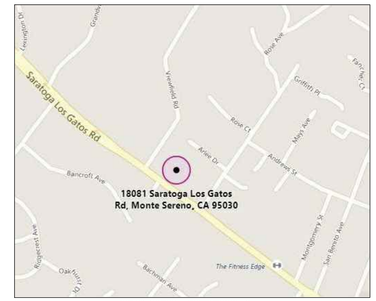
NOTES:

SUBDIVISION NAME:	3 LOT SUBDIVISION
OWNERS & SUBDIVIDER:	ANNETTE SEABORN 410 N SANTA CRUZ AVE, LOS GATOS, CA 95030 (408) 859-5881 aseaborn@cbnorcal.com
CIVIL ENGINEER:	OSUNA ENGINEERING INC 117 BERNAL RD. 70-336 SAN JOSE, CA 95119 (408) 772-4381
ASSESSOR'S PARCEL NO:	410-20-036
EXISTING ZONING:	R1-8
PROPOSED ZONING:	R1-8
EXISTING USE:	SINGLE FAMILY RESIDENTIAL
PROPOSED USE:	SINGLE FAMILY RESIDENTIAL

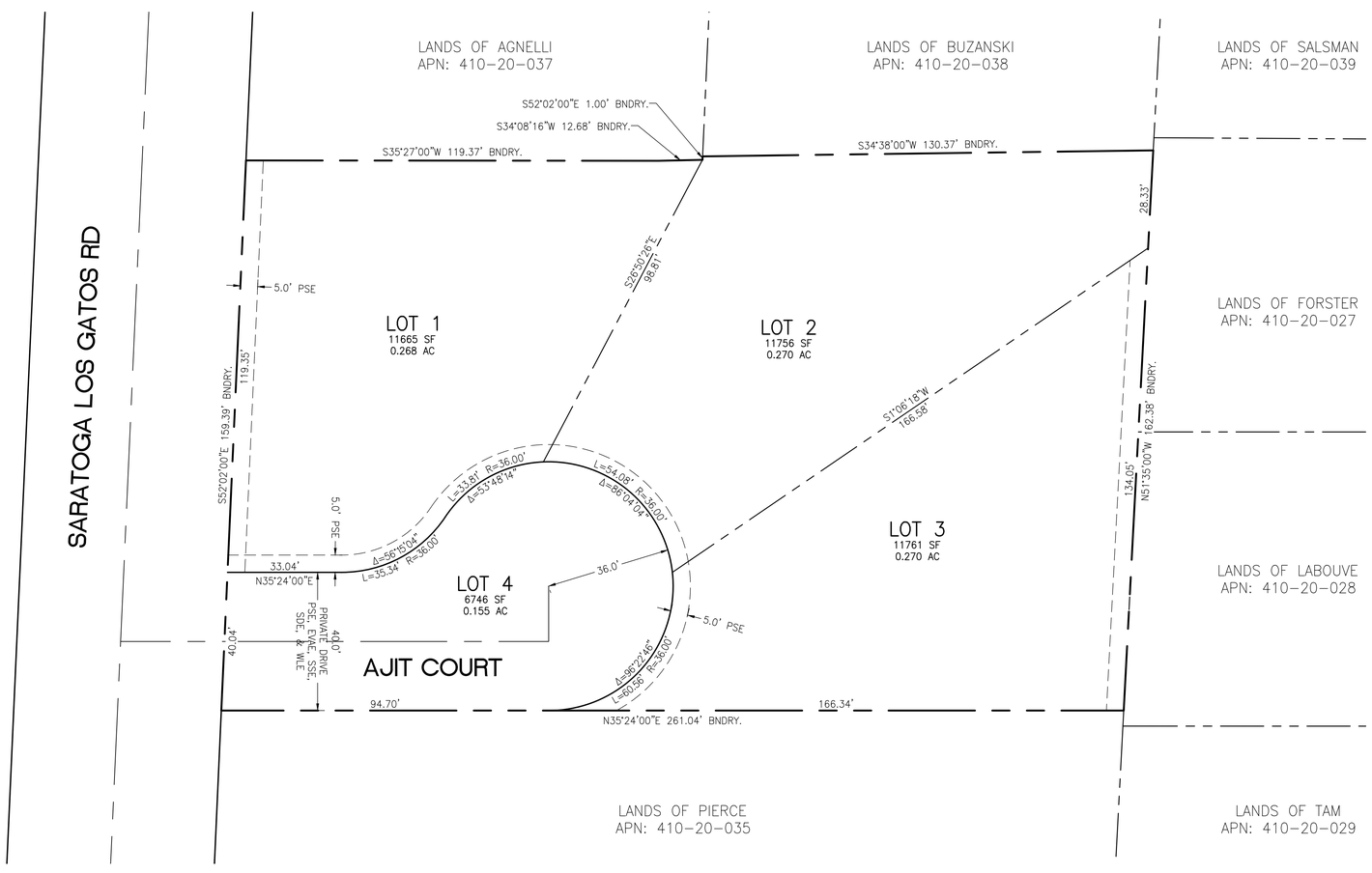
NOTES (CONTINUED):

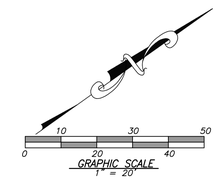
NO. PROPOSED PARCELS:	3 LOTS AND 1 PRIVATE ROAD
TOTAL AREA:	41,927± SF; 0.9625± ACRES
PUBLIC AREAS:	NONE
SEWAGE DISPOSAL:	PRIVATE
WATER:	SAN JOSE WATER COMPANY
STORM:	PRIVATE
FLOOD ZONE:	ZONE X (0.2% ANNUAL CHANCE FLOOD ZONE)

LAND COVERAGE SUMMARY TABLE		
LAND COVERAGE SUMMARY TABLE	%	ACREAGE
OPEN SPACE	51	0.495
COVERAGE BY HOUSING, ACCESORY STRUCTURES	24	0.233
PARKING (COVERED AND UNCOVERED)	5	0.050
STREETS (PRIVATE)	13	0.123
SIDEWALKS, DRIVEWAYS, AND PATHS	7	0.062
RECREATIONAL FACILITIES	0	0
	100	0.963



VICINITY MAP
NTS





SOILS REPORT

A SOILS AND/OR GEOTECHNICAL REPORT ON THIS PROPERTY HAS BEEN PREPARED BY CAPEX ENGINEERING INC. TITLED "REVISED GEOTECHNICAL INVESTIGATION, AND FOUNDATION RECOMMENDATION REPORT" AT 18081 LOS GATOS SARATOGA RD, MONTE SERENO, CALIFORNIA" DATED FEBRUARY 21, 2017, A COPY OF WHICH HAS BEEN FILED WITH THE CITY OF MONTE SERENO.

SHEET INDEX

BY	CITY	DATE	REVISIONS

PROFESSIONAL LAND SURVEYOR
PORFIRIO OSCAR OSUNA
No. 8921
Exp. 9-30-18
STATE OF CALIFORNIA

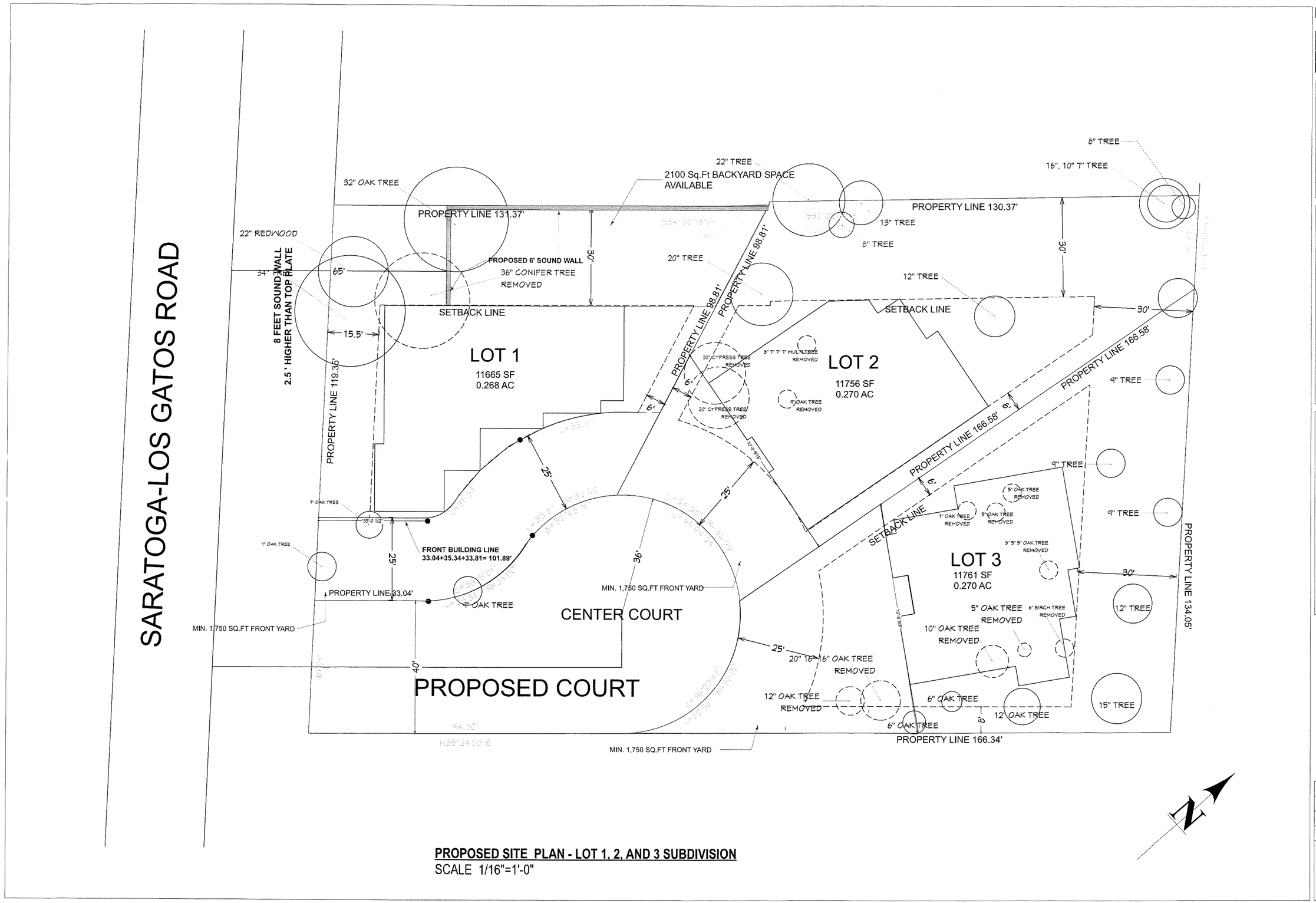
PORFIRIO OSCAR OSUNA
PLS 8921 EXP. 9-30-18

OSUNA Engineering Inc.
CONSULTING CIVIL ENGINEERS & LAND SURVEYORS
117 BERNAL RD. STE. 70-336
SAN JOSE, CA 95119
TEL. (408) 772-4381
info@osunaengineering.com

TENTATIVE MAP
LOTTING PLAN
3 LOT SUBDIVISION
18081 SARATOGA LOS GATOS RD
CITY OF MONTE SERENO, CALIFORNIA

Project No.: 1605 | Designed: O.O. | Checked: O.O. | Date: 2/10/20

SHEET
T1
OF 10 SHEETS



PROPOSED SITE PLAN - LOT 1, 2, AND 3 SUBDIVISION

SCALE 1/16"=1'-0"

PROFESSIONAL ENGINEERS, Inc.

REVISIONS	BY

PROJECT

NEW RESIDENTIAL HOMES
18081 SARATOGA- LOS GATOS ROAD
MONTE SERENO, CA 95030

SHEET TITLE

LOT 1, 2 AND 3
SITE PLANS & SETBACKS

DATE	06.01.2018
SCALE	AS NOTED
BY	P.E.
JOB NO.	
SHEET:	A-2

GRADING & DRAINAGE NOTES:

NOTE: THIS DRAWING IS APPROVED SUBJECT TO:

1. ALL GRADING IS SUBJECT TO OBSERVATION BY THE CITY. PERMITTEE OR REPRESENTATIVE SHALL NOTIFY THE CITY OF SUNNYVALE DEPARTMENT OF PUBLIC WORKS PROJECT INSPECTOR AT LEAST 48 HOURS BEFORE START OF ANY GRADING.
2. APPROVAL OF THIS PLAN APPLIES ONLY TO (A) THE EXCAVATION, PLACEMENT, AND COMPACTION OF NATURAL EARTH MATERIALS, (B) THE INSTALLATION OF ON-SITE (I.E. PRIVATE PROPERTY) STORM WATER CONVEYANCE AND TREATMENT FACILITIES THAT ARE OUTSIDE OF THE 5-FOOT BUILDING ENVELOPE, AND (C) THE INSTALLATION OF RETAINING STRUCTURES. THIS APPROVAL DOES NOT CONFER ANY RIGHTS OF ENTRY TO EITHER PUBLIC PROPERTY OR THE PRIVATE PROPERTY OF OTHERS. APPROVAL OF THIS PLAN ALSO DOES NOT CONSTITUTE APPROVAL OF ANY IMPROVEMENTS WITH THE EXCEPTION OF THOSE LISTED ABOVE. PROPOSED IMPROVEMENTS, WITH THE EXCEPTION OF THOSE LISTED ABOVE, ARE SUBJECT TO REVIEW AND APPROVAL BY THE RESPONSIBLE AUTHORITIES AND ALL OTHER REQUIRED PERMITS SHALL BE OBTAINED.
3. UNLESS OTHERWISE NOTED ON THE PLAN, ANY DEPICTION OF A RETAINING STRUCTURE ON THIS PLAN SHALL NOT CONSTITUTE APPROVAL FOR CONSTRUCTION OF THE RETAINING STRUCTURE UNLESS A SEPARATE STRUCTURAL REVIEW, BY THE DEPARTMENT OF PUBLIC WORKS IS COMPLETED AND APPROVED.
4. IT SHALL BE THE RESPONSIBILITY OF THE PERMITTEE OR AGENT TO IDENTIFY, LOCATE AND PROTECT ALL UNDERGROUND FACILITIES.
5. THE PERMITTEE OR AGENT SHALL MAINTAIN THE STREETS, SIDEWALKS AND ALL OTHER PUBLIC RIGHTS-OF-WAY IN A CLEAN, SAFE AND USABLE CONDITION. ALL SPILLS OF SOIL, ROCK OR CONSTRUCTION DEBRIS SHALL BE REMOVED FROM THE PUBLICLY OWNED PROPERTY DURING CONSTRUCTION AND UPON COMPLETION OF THE PROJECT. ALL ADJACENT PROPERTY, PRIVATE OR PUBLIC SHALL BE MAINTAINED IN A CLEAN, SAFE AND USABLE CONDITION.
6. ALL GRADING SHALL BE PERFORMED IN SUCH A MANNER AS TO COMPLY WITH THE STANDARDS ESTABLISHED BY THE AIR QUALITY MANAGEMENT DISTRICT FOR AIRBORNE PARTICULATES.
7. IN THE EVENT THAT HUMAN REMAINS AND/OR CULTURAL MATERIALS ARE FOUND, ALL PROJECT-RELATED CONSTRUCTION SHOULD CEASE WITHIN A 100-FOOT RADIUS. THE CONTRACTOR SHALL, PURSUANT TO SECTION 7050.5 OF THE HEALTH AND SAFETY CODE, AND SECTION 5097.94 OF THE PUBLIC RESOURCES CODE OF THE STATE OF CALIFORNIA, NOTIFY THE MARIN COUNTY CORONER IMMEDIATELY.
8. THIS PLAN DOES NOT APPROVE THE REMOVAL OF TREES. APPROPRIATE TREE REMOVAL PERMITS AND METHODS OF TREE PRESERVATION SHOULD BE OBTAINED FROM THE CITY'S PLANNING DEPARTMENT AND THE CITY ARBORIST.
9. FOR NON-RESIDENTIAL PROJECTS, ANY NON-HAZARDOUS EXPORT RESULTING FROM PROJECT RELATED EXCAVATION OR LAND CLEARING SHALL BE 100% REUSED AND RECYCLED PER CALIFORNIA GREEN BUILDING STANDARDS CODE SECTION 5.408.
10. ALL GRADING WORK SHALL CONFORM TO THE RECOMMENDATIONS OF THE PROJECT GEOTECHNICAL REPORT AND/OR THE PROJECT SOIL ENGINEER. ALL GRADING WORK SHALL BE OBSERVED AND APPROVED BY THE SOIL ENGINEER.
11. THE SOIL ENGINEER SHALL BE NOTIFIED AT LEAST 48 HOURS BEFORE BEGINNING ANY GRADING. UNOBSERVED AND/OR UNAPPROVED GRADING WORK SHALL BE REMOVED AND REPLACED UNDER OBSERVATION.
12. PERIMETER BUILDING GRADES SHALL SLOPE AWAY FROM BUILDINGS AT LEAST 5% MINIMUM
13. ALL DOWNSPOUTS SHALL HAVE SPLASH BOXES AS SHOWN ON THE GRADING AND DRAINAGE PLAN. DIRECTION OF THE FLOW SHALL BE AWAY FROM THE BUILDING.

BENCH MARK

CITY OF MONTE SERENO BENCHMARK ID MS13:
DESCRIPTION: SET BRASS DISK IN MONUMENT WELL STAMPED "MS#13". LOCATED 130'± NORTH OF SARATOGA LOS GATOS RD ON ROSE AVENUE.
ELEV.: 451.01' (NGVD29)

EARTH WORK QUANTITIES

CUT: 4,690 CY
FILL: 100 CY
EXPORT: 4,590 CY
IMPORT: 0 CY

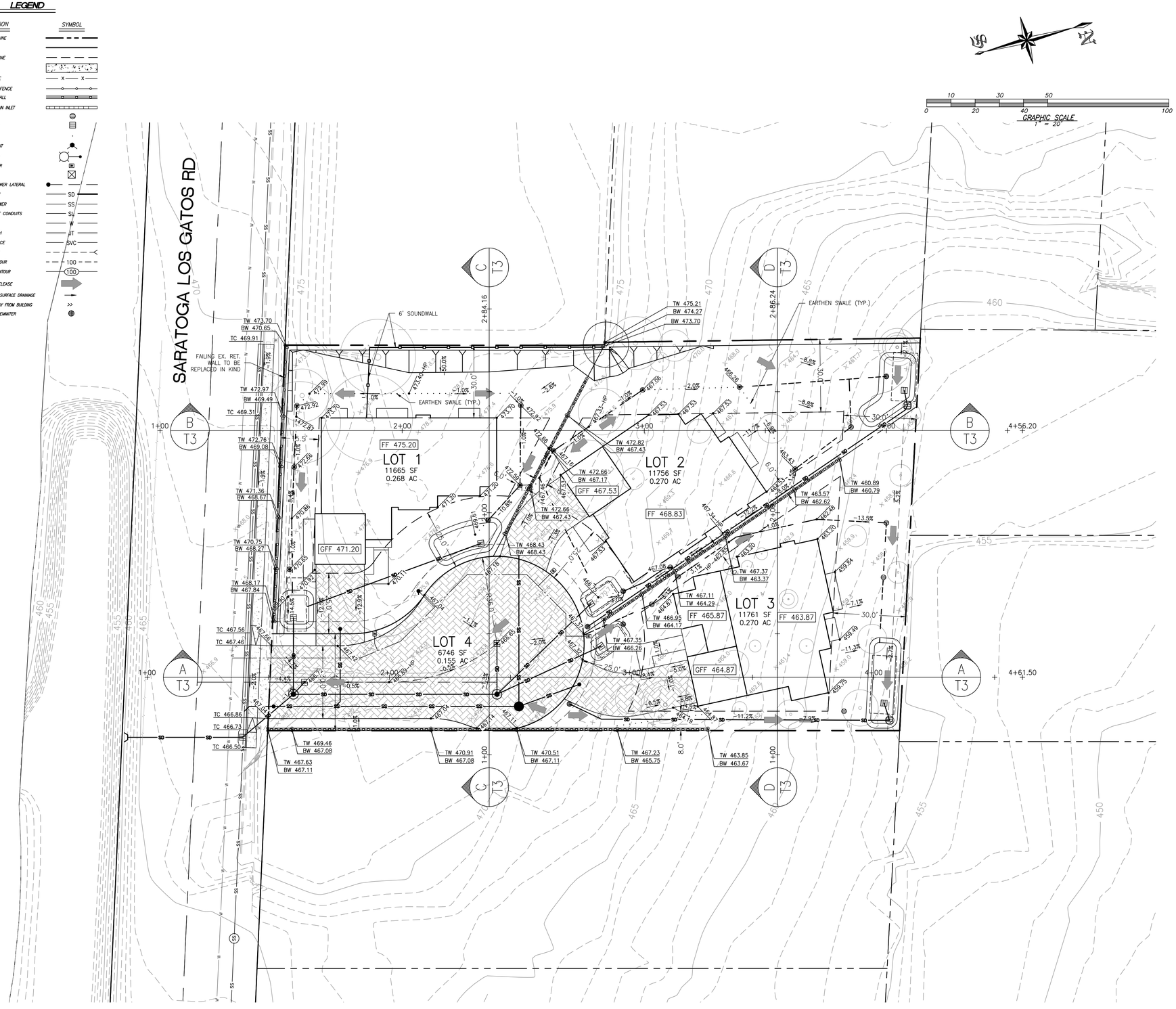
NOTE: EARTHWORK QUANTITIES SHOWN ARE APPROXIMATE. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO INDEPENDENTLY ESTIMATE QUANTITIES FOR HIS/HER OWN USE.

ABBREVATIONS

AC = ASPHALT CONCRETE
AD = AREA DRAIN
BC = BEGIN CURVE
BS = BOTTOM OF STAIR
BU = BUBBLE UP
BVC = BEGIN VERTICAL CURVE
BRW = BOTTOM OF RETAINING WALL
CB = CATCH BASIN
CL = CENTERLINE
CO = CLEANOUT
DS = DOWNSPOUT WITH SPLASH BOX
EC = END CURVE
ELEV. = ELEVATION
EVC = END VERTICAL CURVE
EX. = EXISTING
F/C = FACE OF CURB
FF = FINISHED FLOOR ELEVATION
FH = FIRE HYDRANT
FL = FLOW LINE
GB = GRADE BREAK
GFF = GARAGE FINISH FLOOR
HP = HIGH POINT
HC = HANDICAP UNIT
INV = INVERT
LP = LOW POINT
PAD = PAD ELEVATION
PCC = PORTLAND CEMENT CONCRETE
PL = PROPERTY LINE
PV = PAVEMENT GRADE
PVC = POLYVINYL CHLORIDE PIPE
PVI = POINT OF VERTICAL INTERSECTION
RCP = REINFORCED CONCRETE PIPE
ROW = RIGHT OF WAY
S=.004> SLOPE
SD = STORM DRAIN
SDMH = STORM DRAIN MANHOLE
SG = SUBGRADE ELEVATION
SS = SANITARY SEWER
SSMH = SANITARY SEWER MANHOLE
STA = STATION
TC = TOP OF CURB
TF = TOP OF FENCE
TRW = TOP OF RETAINING WALL
TS = TOP OF STAIR
TW = TOP OF WALL
VCP = VITRIFIED CLAY PIPE
WM = WATER METER
WV = WATER VALVE

LEGEND

DESCRIPTION	SYMBOL
BOUNDARY LINE	
LOT LINE	
EASEMENT LINE	
SIDEWALK	
WOOD FENCE	X X
CHAIN LINK FENCE	
RETAINING WALL	
DRIVEWAY DRAIN INLET	
AREA DRAIN	
DROP INLET	
MONUMENT	
FIRE HYDRANT	
ELECTROLIER	
WATER METER	
AC UNIT	
SANITARY SEWER LATERAL	
STORM DRAIN	SD
SANITARY SEWER	SS
STREET LIGHT CONDUITS	SL
WATER	W
JOINT TRENCH	JT
HOUSE SERVICE	SVC
SLOPE ARROW	
EXISTING CONTOUR	100
PROPOSED CONTOUR	100
OVERLAND RELEASE	
DIRECTION OF SURFACE DRAINAGE	
5% SLOPE AWAY FROM BUILDING	>>
BUBBLE-UP EMMITER	



CONTRACTOR AGREES THAT HE SHALL ASSUME SOLE AND COMPLETE RESPONSIBILITY FOR JOB SITE CONDITIONS DURING THE COURSE OF CONSTRUCTION OF THIS PROJECT, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY. THAT THIS REQUIREMENT SHALL APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS. CONTRACTOR SHALL DEFEND, INDEMNIFY AND HOLD THE OWNER AND THE ENGINEER HARMLESS FROM ANY AND ALL LIABILITY, REAL OR ALLEGED, IN CONNECTION WITH THE PERFORMANCE OF WORK ON THIS PROJECT, EXCEPTING FOR LIABILITY ARISING FROM THE SOLE NEGLIGENCE OF THE OWNER OR THE ENGINEER.

REVISIONS	DATE	CITY	BY

REGISTERED PROFESSIONAL ENGINEER
PORFIRIO OSCAR OSUNA
No. 70829
Exp. 6-30-19
CIVIL
STATE OF CALIFORNIA

P. Oscar Osuna
PORFIRIO OSCAR OSUNA
RCE 70829 EXP. 6-30-19

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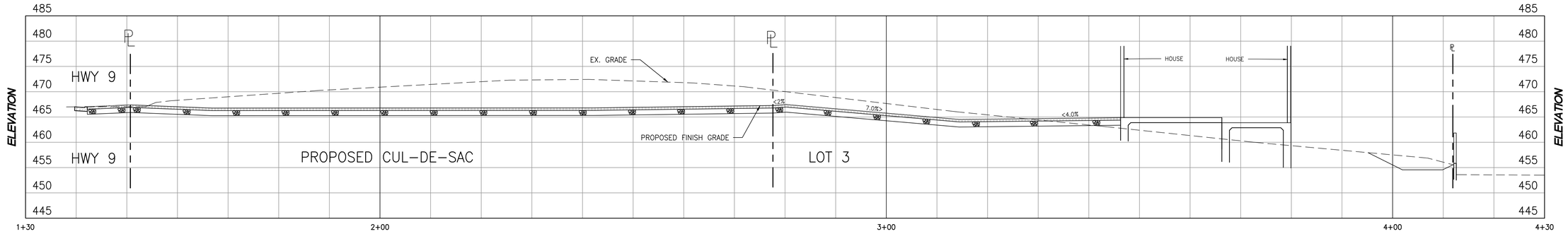
info@osunaengineering.com

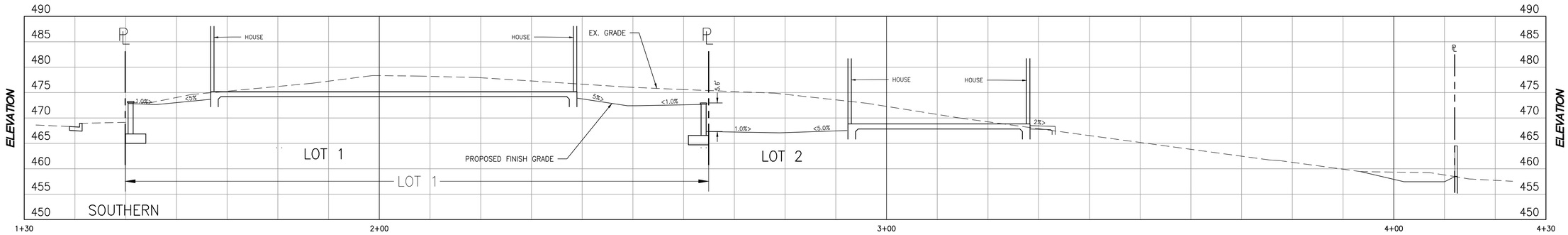
TENTATIVE MAP
PRELIMINARY GRADING & DRAINAGE PLAN
3 LOT SUBDIVISION
18081 SARATOGA LOS GATOS RD
CITY OF MONTE SERENO, CALIFORNIA

Project No.: 1605	Designed: J.O.	Checked: O.O.	Date: 2/10/20

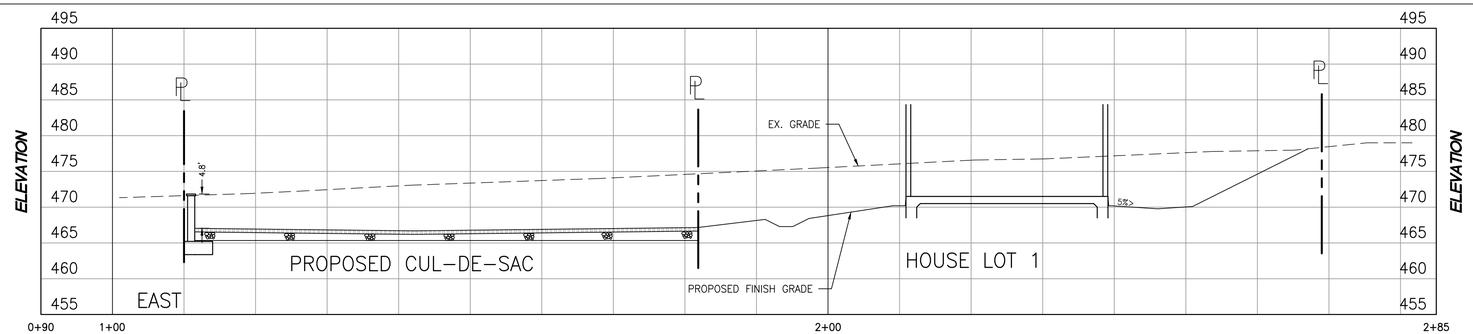
SHEET
T2
OF 10 SHEETS



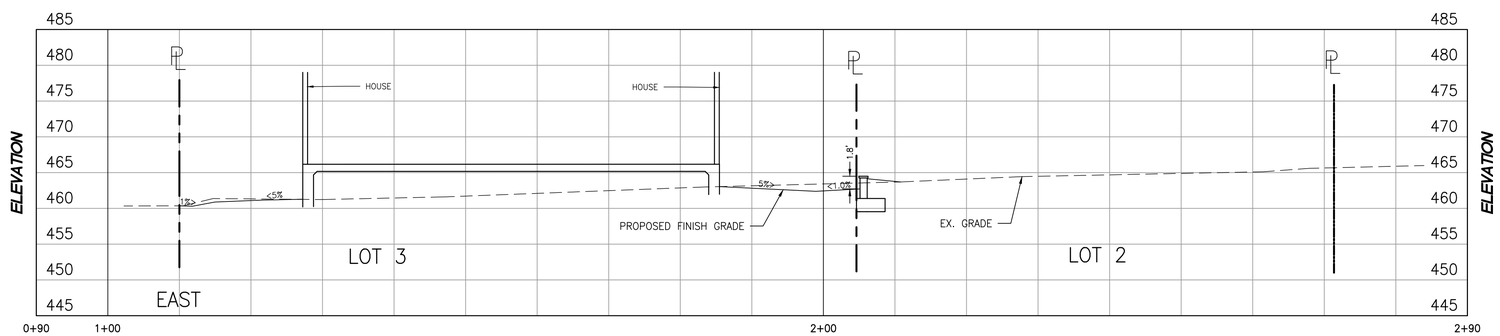
A SECTION A



B SECTION B



C SECTION C



D SECTION D

REVISIONS	DATE	CITY	BY

REGISTERED PROFESSIONAL ENGINEER
PORFIRIO OSCAR OSUNA
No. 70829
Exp. 6-30-19
CIVIL
STATE OF CALIFORNIA

PORFIRIO OSCAR OSUNA
RCE 70829 EXP. 6-30-19

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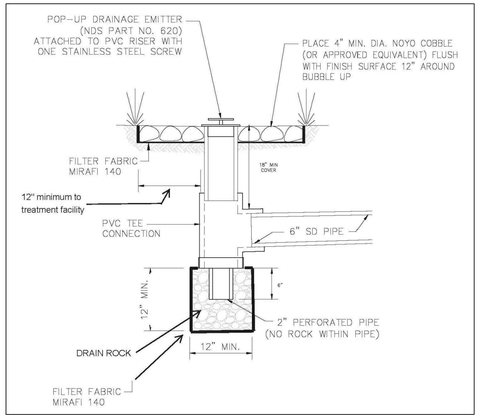
TENTATIVE MAP
SECTIONS AND DETAILS
3 LOT SUBDIVISION
18081 SARATOGA LOS GATOS RD
CITY OF MONTE SERENO, CALIFORNIA

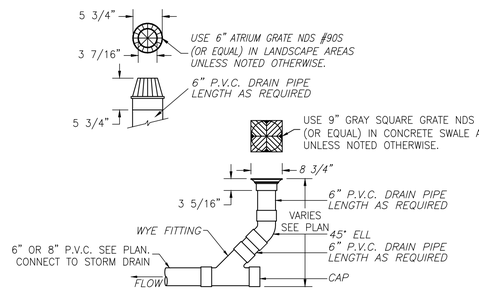
Project No.: 1605 | Designed: J.O. | Checked: O.O. | Date: 2/10/20

SHEET
T3
OF 10 SHEETS



N.T.S.

E BUBBLE-UP EMITTER DETAIL

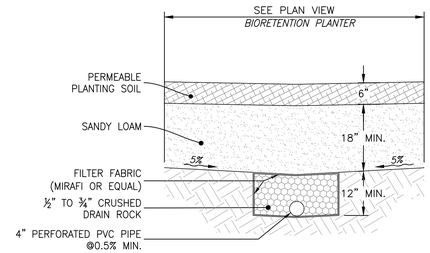


LANDSCAPE DRAIN DETAIL

N.T.S.

N.T.S.

F AREA DRAIN DETAIL



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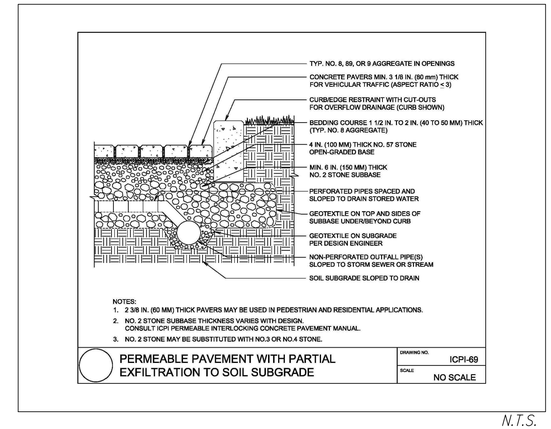
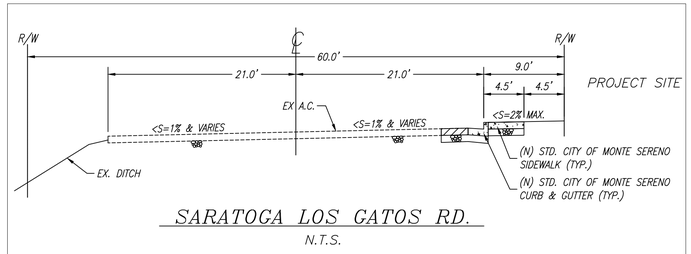
G TYPICAL BIORETENTION DETAIL



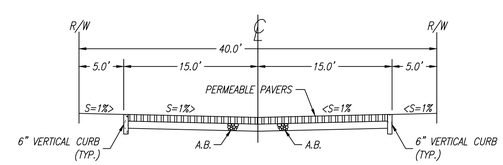
N.T.S.

H PERMEABLE PAVERS



SARATOGA LOS GATOS RD.

N.T.S.



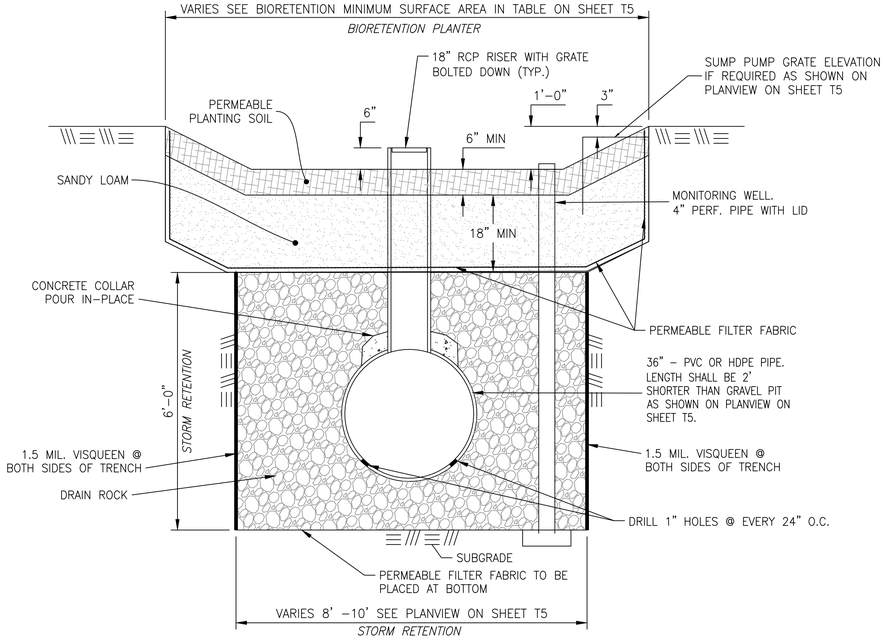
AJIT COURT

N.T.S.

J STREET SECTIONS

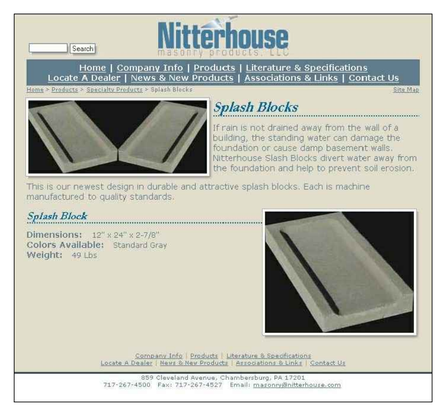
N.T.S.

K EARTHEN SWALE DETAIL



N.T.S.

I TYPICAL STORM DETENTION/INFILTRATION TRENCH WITH BIORETENTION ON TOP DETAIL

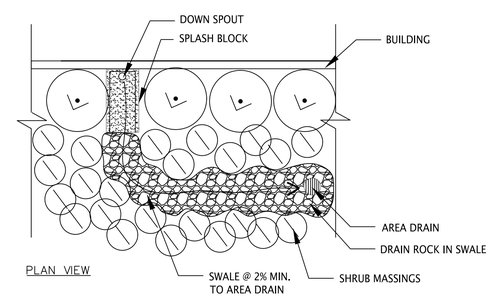


SPLASH BLOCK IMAGE

NOTES:

1. SPLASH BLOCKS SHALL BE LOCATED UNDER ALL BLDG. DOWNSPOUTS.

2. SWALE SHALL RUN FROM SPLASH BLOCK AWAY FROM BUILDIHNG TO AREA DRAIN. MIN. SWALE SLOPE 2%. AREA DRAINS PER CIVIL.



PLAN VIEW

N.T.S.

L SPLASH BLOCK DETAIL

						REVISIONS
						DATE
						CITY
						BY
◁	◁	◁	◁	◁	◁	

REGISTERED PROFESSIONAL ENGINEER PORFIRIO OSCAR OSUNA No. 70829 Exp. 6-30-19 CIVIL STATE OF CALIFORNIA

P. Oscar Osuna
PORFIRIO OSCAR OSUNA
RCE 70829 EXP. 6-30-19

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TENTATIVE MAP
SECTIONS AND DETAILS
3 LOT SUBDIVISION
18081 SARATOGA LOS GATOS RD
CITY OF MONTE SERENO, CALIFORNIA

Project No.: 1605	Designed: J.O.	Checked: O.O.	Date: 2/10/20

SHEET
T4
OF 10 SHEETS

POLLUTANTS AND POLLUTANT SOURCE AREAS:

SEDIMENT: roads, parking lots and roofs
The main component of total suspended solids (TSS), and is detrimental to aquatic life. They also transport pollutants such as trace metal, nutrients, and hydrocarbons that attach to each particle.

ORGANIC COMPOUNDS: automotive fluids, pesticides and fertilizers
Organic compounds often attach to soil particles

NUTRIENTS: organic litter, fertilizers, food waste, sewage and sediment.
Nutrients include nitrogen, phosphorus and other organic compounds. Excess nutrients impact creek health and impair use of water in water supply sources by promoting excessive growth of algae or vegetation.

METALS: motor vehicles, roofing and construction materials and chemicals.
Trace metals such as copper, lead, cadmium, chromium, nickel and zinc can be toxic to aquatic organisms and, in accumulated quantities, can contaminate drinking water supplies.

BACTERIA & VIRUSES: animal excrement (areas where pets are often walked), sanitary overflow, and trash handling areas (dumpsters).
Bacteria & viruses may pose public health and safety concerns if they are present in drinking water sources.

OIL & GREASE: motor vehicles, food service establishments and fueling stations.
Oil & grease act as carriers for heavy metals and contain hydrocarbon compBounds, which even at low concentrations may be toxic to aquatic organisms.

STORMWATER TREATMENT SUMMARY

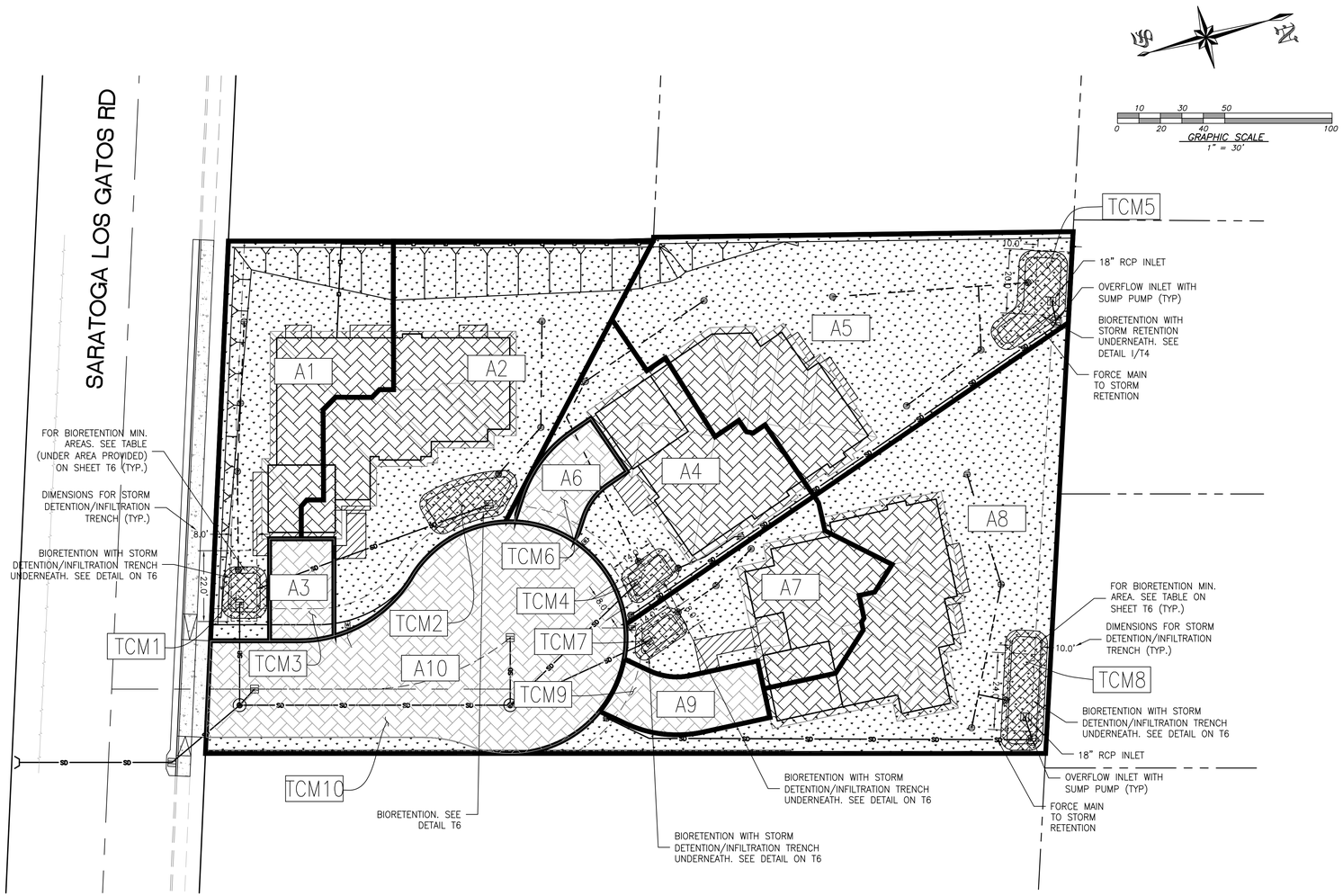
The infill site will be designed to Minimize the Directly Connected Impervious Area (DCIA). The downspouts will not be directly connected to the storm sewer system and will be directed into the landscape areas.

The site will use Bioretention to treat impervious areas. A range of treatment measures may be utilized for this infill site, including but not limited to infiltration, concrete pervious pavers, and bioretentions.
This will maximize the opportunity for the runoff to be cleaned before it enters the collection system.
These measures will be maintained by the home owner.

CONTRACTOR AGREES THAT HE SHALL ASSUME SOLE AND COMPLETE RESPONSIBILITY FOR JOB SITE CONDITIONS DURING THE COURSE OF CONSTRUCTION OF THIS PROJECT, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY. THAT THIS REQUIREMENT SHALL APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS. THE CONTRACTOR SHALL DEFEND, INDEMNIFY, AND HOLD THE OWNER AND THE ENGINEER HARMLESS FROM ANY AND ALL LIABILITY, REAL OR ALLEGED, IN CONNECTION WITH THE PERFORMANCE OF WORK ON THIS PROJECT, EXCEPTING FOR LIABILITY ARISING FROM THE SOLE NEGLIGENCE OF THE OWNER OR THE ENGINEER.

STORMWATER LEGEND

- BIORETENTION
- LANDSCAPE
- HARDSCAPE
- ROOF TOP
- PERMEABLE PAVERS



PERVIOUS AND IMPERVIOUS SURFACE COMPARISON TABLE			
a. Project Phase Number: (N/A, 1, 2, etc.)	N/A	b. Total Site (acres):	0.96
c. Total Site Existing Impervious Surfaces (square feet):	6,507	d. Total Area of Site Disturbed (acres):	0.96

e Impervious Surfaces	Existing Condition of Site Area Disturbed (+/- sq.ft.)	Proposed Condition of Site Area Disturbed (+/- sq.ft.) Replaced (1)	New (2)
Roof Area(s)	2,886	2,886	8,507
Parking/Driveways	2,967	0	0
Sidewalks, Patios, etc.	654	587	0
Streets (Public) Roadway Projects	0	0	0
Streets (Private)	0	0	0
Total Impervious Surfaces:	**e.1 6,507**	**e.2 3,473**	**e.3 8,507**
f. Pervious Surfaces			
Landscape Areas	35,420	0	21,676
Pervious Pavers	0	0	8,271
Other Pervious Surfaces (green roof, etc.)	0	0	0
Total Pervious Surfaces:	**f.1 35,420**	**f.2 0**	**f.3 29,947**

g. Total Proposed Replaced + New Impervios Surfaces (e.2 + e.3):	**11,980**
h. Total Proposed Pervious Surfaces = Total Proposed Replaced + New Pervious Surfaces:	**29,947**

i Percent of Replacement of Impervious Area in Redevelopment Projects (e.2/c x 100)	**53%**
j Percent of Impervious Area of proposed Projects (g,2/c x 100)	**29%**

Stormwater Treatment AreasTable

AREA ID	TCM ID	Description	Total Area (SF)	Areas: Pervious Area (P) Perm. Paver Area (SF)	Landscape Area (SF)	Impervious Area (I) Rooftop Area (SF)	Parking/Pvt. Drive Area (SF)	Hardscape Area (SF)	(P) Pervious (SF)	(I) Impervious (SF)	Type of Treatment Control Measure that will be used
A1	1	House, Garage, Hardscape, and landscape	4,449	0	2,836	1,488	0	125	2,836	1,613	Bioretention
A2	2	House, Garage, Hardscape, and landscape	6,827		4,445	2,248	0	134	4,445	2,382	Bioretention
A3	3	Driveway Permeable Pavers	628	628	0	0	0	0	628	0	Permeable Pavers
A4	4	House, Garage, Hardscape, and landscape	3,555		1,395	2,071	0	89	1,395	2,160	Bioretention
A5	5	House, Garage, Hardscape, and landscape	7,526		5,728	1748	0	50	5,728	1,798	Bioretention
A6	6	Driveway Permeable Pavers	674	674	0	0	0	0	674	0	Permeable Pavers
A7	7	House, Garage, Hardscape, and landscape	2,743		1,086	1,521	0	136	1,086	1,657	Bioretention
A8	8	House, Garage, Hardscape, and landscape	8,150		5,780	2,317	0	53	5,780	2,370	Bioretention
A9	9	Driveway Permeable Pavers	868	868	0	0	0	0	868	0	Permeable Pavers
A10	10	Private Drive Permeable Pavers and Landscape	6,507	6101	406	0	0	0	6,507	0	Permeable Pavers
		Totals:	41,927	8,271	21,676	11,393	0	587	29,947	11,980	

REVISIONS	BY	CITY	DATE

REGISTERED PROFESSIONAL ENGINEER PORFIRIO OSCAR OSUNA No. 70829 Exp. 6-30-19 CIVIL STATE OF CALIFORNIA

P. Oscar Osuna
PORFIRIO OSCAR OSUNA
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TENTATIVE MAP
STORM WATER CONTROL PLAN
3 LOT SUBDIVISION
18081 SARATOGA LOS GATOS RD
CITY OF MONTE SERENO, CALIFORNIA

Project No.: 1605 | Designed: O.O. | Checked: O.O. | Date: 4/23/19

SHEET
T5
OF 10 SHEETS

SIZING FOR VOLUME BASED TREATMENT

DMA # A3
A= 628 s.f.
Impervious Area = 0 s.f. **% Imperviousness (i)= 0.00%**
Pervious Pavement Area = 628 s.f.
MAPsite = 32 Correction Factor= **2.3022**
MAPgage = 13.9
P6(gage): 0.512 in

P6(site)= P6(gage) x Correction Factor
P6(site): 1.17871 in

Cw= 0.858i^3 – 0.78i^2 + 0.774i + 0.04
Cw: 0.0400000
Regression Factor (a) a = 1.963 (48 hour draw down)

Po = a x Cw x P6(site)
Po: 0.09255 in.

Design Volume = Po x A x 1ft/12in
Design Volume = 4.84355 ft^3

SELF RETAINING (PERVIOUS PAVEMENT)

Porosity of Rock*	Min. Storage Depth Required (in)	Pervious ≥ 1/2 Impervious**
0.40	0.23	Yes

Minimum Storage Depth = Design Volume (c.f.) / Pervious Pavement Area (s.f.) / rock porosity x 12 in/1 ft

* Porosity of Class II Permeable = 0.4 based on SCVUURP training.

SIZING FOR VOLUME BASED TREATMENT

DMA # A10
A= 6507 s.f.
Impervious Area = 0 s.f. **% Imperviousness (i)= 0.00%**
Pervious Pavement Area = 6507 s.f.
MAPsite = 32 Correction Factor= **2.3022**
MAPgage = 13.9
P6(gage): 0.512 in

P6(site)= P6(gage) x Correction Factor
P6(site): 1.17871 in

Cw= 0.858i^3 – 0.78i^2 + 0.774i + 0.04
Cw: 0.0400000
Regression Factor (a) a = 1.963 (48 hour draw down)

Po = a x Cw x P6(site)
Po: 0.09255 in.

Design Volume = Po x A x 1ft/12in
Design Volume = 50.1863 ft^3

SELF RETAINING (PERVIOUS PAVEMENT)

Porosity of Rock*	Min. Storage Depth Required (in)	Pervious ≥ 1/2 Impervious**
0.40	0.23	Yes

Minimum Storage Depth = Design Volume (c.f.) / Pervious Pavement Area (s.f.) / rock porosity x 12 in/1 ft

* Porosity of Class II Permeable = 0.4 based on SCVUURP training.
** If value = "No" increase size of pervious pavement.

SIZING FOR VOLUME BASED TREATMENT

DMA # A6
A= 674 s.f.
Impervious Area = 0 s.f. **% Imperviousness (i)= 0.00%**
Pervious Pavement Area = 674 s.f.
MAPsite = 32 Correction Factor= **2.3022**
MAPgage = 13.9
P6(gage): 0.512 in

P6(site)= P6(gage) x Correction Factor
P6(site): 1.17871 in

Cw= 0.858i^3 – 0.78i^2 + 0.774i + 0.04
Cw: 0.0400000
Regression Factor (a) a = 1.963 (48 hour draw down)

Po = a x Cw x P6(site)
Po: 0.09255 in.

Design Volume = Po x A x 1ft/12in
Design Volume = 5.19833 ft^3

SELF RETAINING (PERVIOUS PAVEMENT)

Porosity of Rock*	Min. Storage Depth Required (in)	Pervious ≥ 1/2 Impervious**
0.40	0.23	Yes

Minimum Storage Depth = Design Volume (c.f.) / Pervious Pavement Area (s.f.) / rock porosity x 12 in/1 ft

* Porosity of Class II Permeable = 0.4 based on SCVUURP training.
** If value = "No" increase size of pervious pavement.

SIZING FOR VOLUME BASED TREATMENT

DMA # A9
A= 868 s.f.
Impervious Area = 0 s.f. **% Imperviousness (i)= 0.00%**
Pervious Pavement Area = 868 s.f.
MAPsite = 32 Correction Factor= **2.3022**
MAPgage = 13.9
P6(gage): 0.512 in

P6(site)= P6(gage) x Correction Factor
P6(site): 1.17871 in

Cw= 0.858i^3 – 0.78i^2 + 0.774i + 0.04
Cw: 0.0400000
Regression Factor (a) a = 1.963 (48 hour draw down)

Po = a x Cw x P6(site)
Po: 0.09255 in.

Design Volume = Po x A x 1ft/12in
Design Volume = 6.69459 ft^3

SELF RETAINING (PERVIOUS PAVEMENT)

Porosity of Rock*	Min. Storage Depth Required (in)	Pervious ≥ 1/2 Impervious**
0.40	0.23	Yes

Minimum Storage Depth = Design Volume (c.f.) / Pervious Pavement Area (s.f.) / rock porosity x 12 in/1 ft

* Porosity of Class II Permeable = 0.4 based on SCVUURP training.
** If value = "No" increase size of pervious pavement.

Flow-Based Treatment Measures based on the CASQA Stormwater BMP Handbook Flow Approach

Mean Annual Precipitation at Project Site:		32	in/yr [1]
Mean Annual Precipitation Reference Gauge:	San Jose Airport	13.9	in/yr [2]
Reference Gage Design Rainfall Intensity:	San Jose Airport	0.17	in/hr [3]
Rain Correction Factor:		2.30	
Soil Type[1]:		Silt Loam B	

Area ID	Description	Drainage Area				Unit Basin Storage			
		Total Ac	Total ft	Pervious sf	Impervious sf	Impervious %	$UBS_{1\% \ slope}$[4] in/hr	Adj. UBS in/hr	Design Volume cf
A1	Landscape / Roofs / Hardscape	0.10	4,449	1,613	2,836	63.7%	0.4	0.92	341
A2	Landscape / Roofs / Hardscape	0.16	6,827	2,382	4,445	65.1%	0.41	0.94	537
A4	Landscape / Roofs / Hardscape	0.08	3,555	2,160	1,395	39.2%	0.28	0.64	191
A5	Landscape / Roofs / Hardscape	0.17	7,526	1,798	5,728	76.1%	0.45	1.04	650
A7	Landscape / Roofs / Hardscape	0.06	2,743	1,657	1,086	39.6%	0.28	0.64	147
A8	Landscape / Roofs / Hardscape	0.19	8,150	2,370	5,780	70.9%	0.43	0.99	672
	Totals:	0.76	33,250	11,980	21,270				

* Calculations are based on C.3 Stormwater Handbook, June 2016, by EOA Inc., for SCVURPPP
[1] Refer to Figure B-1 in Appendix B, of the C.3 Stormwater Handbook
[2] Refer to Table B-2b in Appendix B, of the C.3 Stormwater Handbook
[3] Refer to Table B-2c in Appendix B, of the C.3 Stormwater Handbook
[4] Refer to Figure B-2 in Appendix B of the C.3 Stormwater Handbook

TCM ID	Bioretention or Flow-Through Planter Sizing - Flow and Volume Combination							
	Equiv. Imp Area sf	Design Rain Intensity in/hr	Duration hrs	Sizing Factor	Provided Surf. Area sf	Vol. Treated Runoff cf	Vol. Ponding Area cf	Depth of Ponding ft
1	2,997	0.39	2.35	0.078	234	229	112	0.5
2	4,683	0.39	2.41	0.078	365	367	170	0.5
2	1,611	0.39	1.65	0.100	161	111	80	0.5
2	5,908	0.39	2.65	0.070	414	456	194	0.5
2	1,252	0.39	1.65	0.100	125	86	61	0.5
2	6,017	0.39	2.53	0.070	421	444	228	0.5

PERVIOUS PAVEMENT – OPERATIONS & MAINTENANCE PLAN

Pervious pavement is a permeable pavement surface with an underlying stone reservoir that temporarily stores surface runoff before infiltrating into the subsoil or being collected in underlying drain pipes and being discharged off-site. There are many types of pervious pavement including plastic rings planted with grass, stone or concrete blocks with pore spaces backfilled with gravel or sand, porous asphalt, and porous concrete, Pervious pavement accepts only precipitation, not storm water runoff. All facility components, vegetation, and source controls shall be inspected for proper operations and structural stability, at a minimum, quarterly for the first 2 years from the date of installation, 2 times per year thereafter, and within 48 hours after each major storm event. The facility owner must keep a log, recording all inspection dates, observations, and maintenance activities. The following items shall be inspected and maintained as stated:

Surface: In most pervious pavement design, the pavement itself acts as pretreatment to the stone reservoir below. The surface shall be kept clean and free of leaves, debris, and sediment. The surface shall not be overlaid with an impermeable paving surface

- *Regular sweeping shall be implemented for porous asphalt or concrete systems.*

Overflows or Emergency Spillways are used in the event that the facility's infiltration capacity is exceeded. Overflow devices shall be inspected for obstructions or debris, which shall be removed upon discovery Overflow or emergency spillways shall be capable of transporting high flows of storm water to an approved storm water receiving system.

- *Sources of erosion damage shall be identified and controlled when native soil is exposed near the overflow structure.*

Vegetation (where applicable) shall be healthy and dense enough to provide filtering while protecting underlying soils from erosion. Vegetation, such as trees and shrubs, should not be located in or around the pervious pavement because roots from trees can penetrate the pavement, and leaves from deciduous trees and shrubs can increase the risk of clogging the surface.

- *Vegetation and large shrubs/trees that limit access or interfere with porous pavement operation shall be pruned.*
- *Fallen leaves and debris from deciduous plant foliage shall be raked and removed.*
- *Poisonous, nuisance, dead or odor producing vegetation shall be removed immediately.*
- *Grass shall be mowed to less than four inches and grass clippings shall be bagged and removed.*
- *Irrigation shall be provided as needed.*

Source Control measures prevent pollutants from mixing with storm water. Typical non-structural control measures include raking and removing leaves, street sweeping, vacuum sweeping, limited and controlled application of pesticides and fertilizers, and other good housekeeping practices.

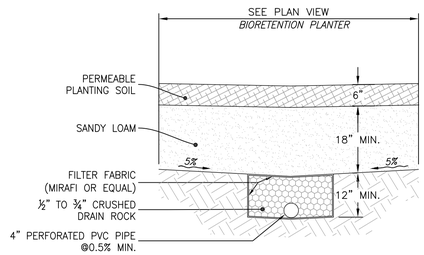
Spill Prevention measures shall be exercised when handling substances that can contaminate storm water. A spill prevention plan shall be implemented at all non-residential sites and in areas where there is likelihood of spills from hazardous materials, However, virtually all sites, including residential and commercial, present potential danger from spills. All homes contain a wide variety of toxic materials including gasoline for lawn mowers, antifreeze for cars, solvents, pesticides, and cleaning aids that can adversely affect storm water if spilled. It is important to exercise caution when handling substances that can contaminate storm water. Releases of pollutants shall be corrected as soon as identified.

Training and/or written guidance information for operating and maintaining pervious pavement shall be provided to all property owners and tenants. A copy of the O&M Plan shall be provided to all property owners

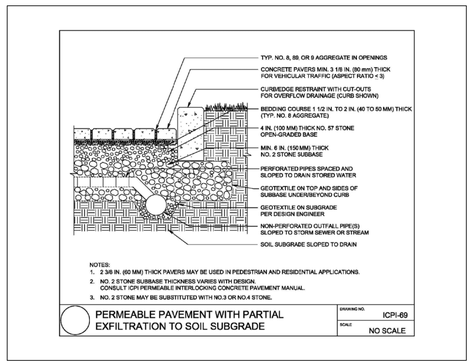
Access to the pervious pavement shal1 be safe and efficient. Egress and ingress routes shay be maintained to design standards. Roadways shall be maintained to accommodate size and weight of vehicles, if applicable. Obstacles preventing maintenance personnel and/or equipment access to the porous pavement shall be removed. Gravel or ground cover shall be added if erosion occurs, e.g., due to vehicular or pedestrian traffic.

Debris and Litter shall be removed to prevent clogging.

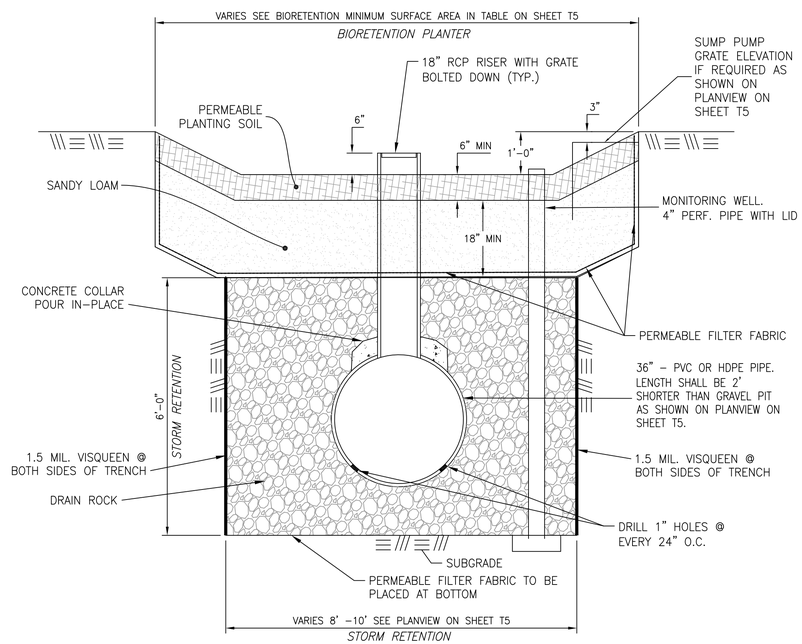
Storm water Management Manual
Eugene 2008



TYPICAL BIORETENTION DETAIL



TYPICAL PERMEABLE PAVERS DETAIL



TYPICAL STORM DETENTION/INFILTRATION TRENCH WITH BIORETENTION ON TOP DETAIL

					REVISIONS
					DATE
					CITY
					BY

REGISTERED PROFESSIONAL ENGINEER PORFIRIO OSCAR OSUNA No. 70829 Exp. 6-30-19 CIVIL STATE OF CALIFORNIA

PORFIRIO OSCAR OSUNA
RCE 70829 EXP. 6-30-19

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TENTATIVE MAP
STORM WATER CONTROL PLAN
3 LOT SUBDIVISION
18081 SARATOGA LOS GATOS RD
CITY OF MONTE SERENO, CALIFORNIA

Project No.: 1605 | Designed: O.O. | Checked: O.O. | Date: 4/23/19

SHEET
T6
OF 10 SHEETS

CONTRACTOR AGREES THAT HE SHALL ASSUME SOLE AND COMPLETE RESPONSIBILITY FOR JOB SITE CONDITIONS DURING THE COURSE OF CONSTRUCTION OF THIS PROJECT, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY; THAT THIS REQUIREMENT SHALL APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS; THAT THE CONTRACTOR SHALL DEFEND, INDEMNIFY AND HOLD THE OWNER AND THE ENGINEER HARMLESS FROM ANY AND ALL LIABILITY, REAL OR ALLEGED, IN CONNECTION WITH THE PERFORMANCE OF WORK ON THIS PROJECT, EXCEPTING FOR LIABILITY ARISING FROM THE SOLE NEGLIGENCE OF THE OWNER OR THE ENGINEER.

REVISIONS	DATE	CITY	BY

REGISTERED PROFESSIONAL ENGINEER
PORFIRIO OSCAR OSUNA
No. 70829
Exp. 6-30-19
CIVIL
STATE OF CALIFORNIA

PORFIRIO OSCAR OSUNA
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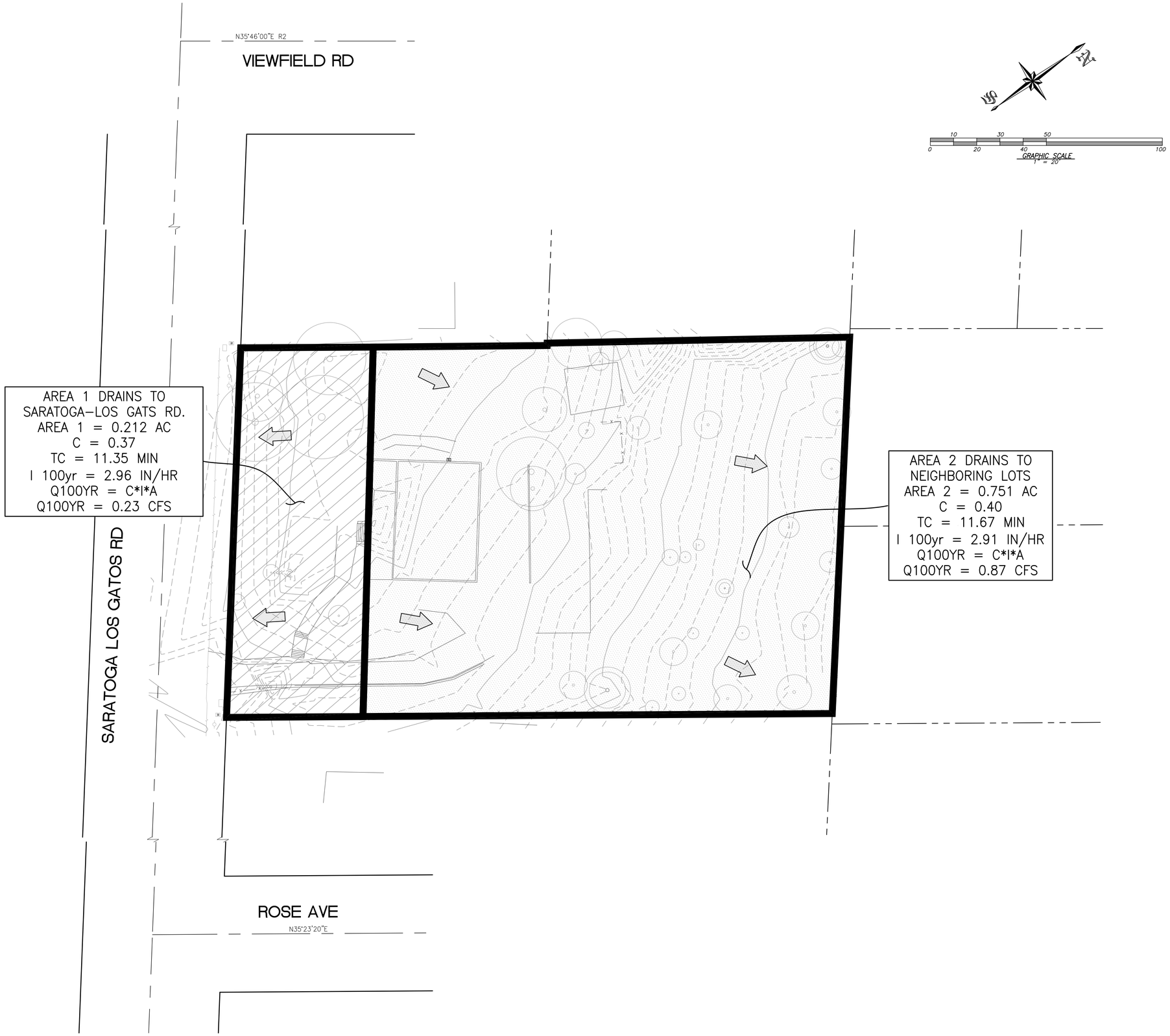
TENTATIVE MAP
CIRCULATION PLAN
3 LOT SUBDIVISION
18081 SARATOGA LOS GATOS RD

CITY OF MONTE SERENO, CALIFORNIA

Project No.: 1605 | Designed: J.O. | Checked: O.O. | Date: 2/10/20

SHEET
T7
OF 10 SHEETS



CONTRACTOR AGREES THAT HE SHALL ASSUME SOLE AND COMPLETE RESPONSIBILITY FOR JOB SITE CONDITIONS DURING THE COURSE OF CONSTRUCTION OF THIS PROJECT, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY. THAT THIS REQUIREMENT SHALL APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS. CONTRACTOR SHALL DEFEND, INDEMNIFY AND HOLD THE OWNER AND THE ENGINEER HARMLESS FROM ANY AND ALL LIABILITY, REAL OR ALLEGED, IN CONNECTION WITH THE PERFORMANCE OF WORK ON THIS PROJECT, EXCEPTING FOR LIABILITY ARISING FROM THE SOLE NEGLIGENCE OF THE OWNER OR THE ENGINEER.

BY	CITY	DATE	REVISIONS

REGISTERED PROFESSIONAL ENGINEER
PORFIRIO OSCAR OSUNA
No. 70829
Exp. 6-30-19
CIVIL
STATE OF CALIFORNIA

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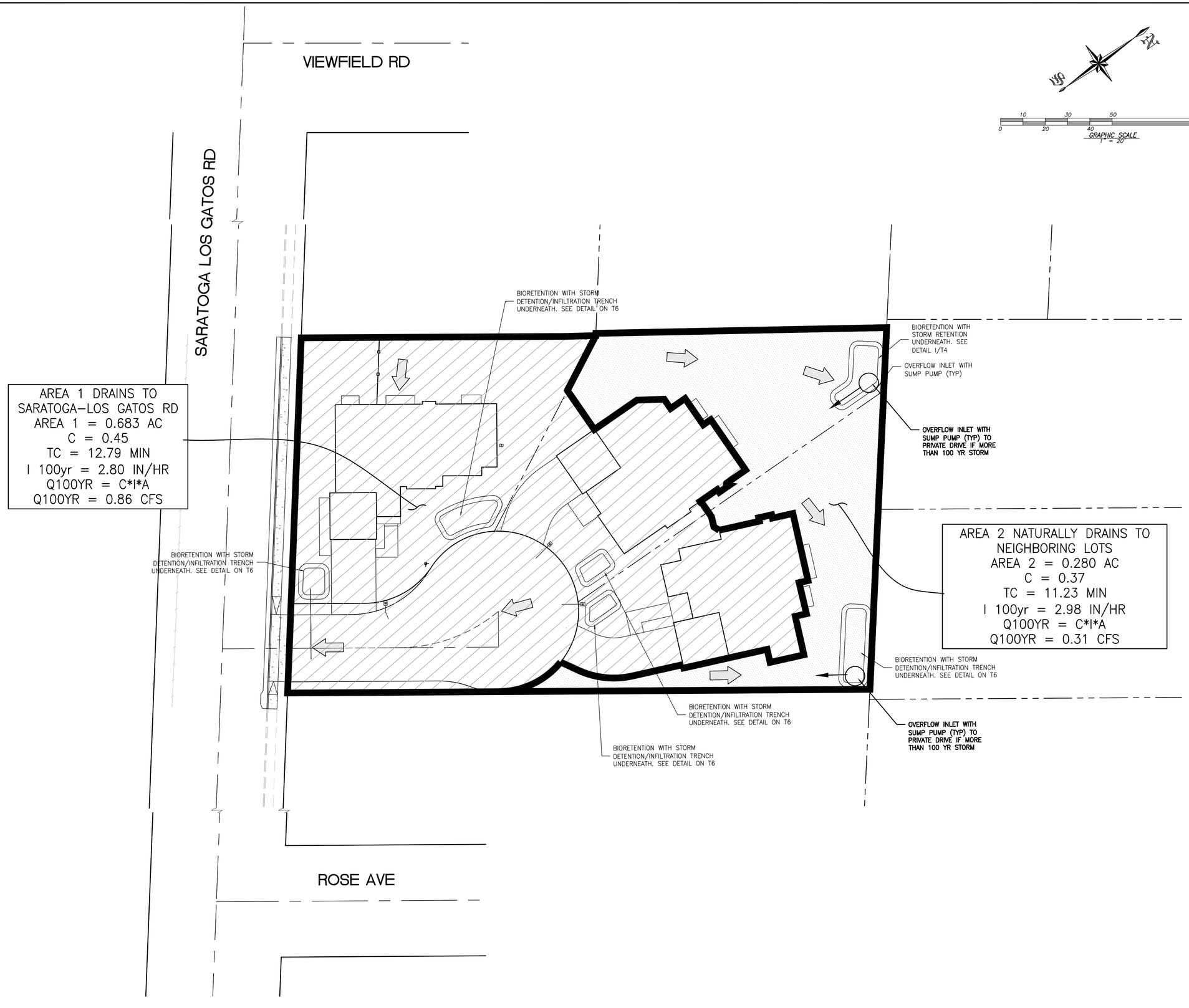
TENTATIVE MAP
WATERSHED MAP - EX. CONDITIONS
3 LOT SUBDIVISION
18081 SARATOGA LOS GATOS RD
CITY OF MONTE SERENO, CALIFORNIA

Project No.: 1605	Designed: O.O.	Checked: O.O.	Date: 4/23/19

SHEET
T8
OF 10 SHEETS



CONTRACTOR AGREES THAT HE SHALL ASSUME SOLE AND COMPLETE RESPONSIBILITY FOR JOB SITE CONDITIONS DURING THE COURSE OF CONSTRUCTION OF THIS PROJECT, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY THAT MAY BE AFFECTED BY THE CONTRACTOR'S WORK. THE CONTRACTOR SHALL DEFEND, INDEMNIFY AND HOLD THE OWNER AND THE ENGINEER HARMLESS FROM ANY AND ALL LIABILITY, REAL OR ALLEGED, IN CONNECTION WITH THE PERFORMANCE OF WORK ON THIS PROJECT, EXCEPTING FOR LIABILITY ARISING FROM THE SOLE NEGLIGENCE OF THE OWNER OR THE ENGINEER.

BY	CITY	DATE	REVISIONS

REGISTERED PROFESSIONAL ENGINEER
PORFIRIO OSCAR OSUNA
No. 70829
Exp. 6-30-19
CIVIL
STATE OF CALIFORNIA

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TENTATIVE MAP
WATERSHED MAP-PROPOSED CONDITIONS
3 LOT SUBDIVISION
18081 SARATOGA LOS GATOS RD
CITY OF MONTE SERENO, CALIFORNIA

Project No.: 1605 | Designed: O.O. | Checked: O.O. | Date: 4/23/19

SHEET
T9
OF 10 SHEETS

18081 Saratoga Los Gatos Road

Tree Disposition Plan

February 21, 2018

LEGEND

DESCRIPTION	SYMBOL
BOUNDARY LINE	
LOT LINE	
EASEMENT LINE	
SIDEWALK	
WOOD FENCE	X X
CHAIN LINK FENCE	
RETAINING WALL	
DRIVEWAY DRAIN INLET	
AREA DRAIN	
DROP INLET	
MONUMENT	
FIRE HYDRANT	
ELECTROLIER	
WATER METER	
AC UNIT	
SANITARY SEWER LATERAL	
STORM DRAIN	SD
SANITARY SEWER	SS
STREET LIGHT CONDUITS	SL
WATER	W
JOINT TRENCH	JT
HOUSE SERVICE	SVC
SLOPE ARROW	
EXISTING CONTOUR	100
PROPOSED CONTOUR	100
OVERLAND RELEASE	
DIRECTION OF SURFACE DRAINAGE	
5% SLOPE AWAY FROM BUILDING	>>

Base Plan Produced By:

SHEET C1 OF 3 SHEETS	CONCEPTUAL GRADING AND DRAINAGE PLAN PROPOSED NEW RESIDENCE 18081 SARATOGA LOS GATOS RD CITY OF MONTE SERENO, CALIFORNIA Project No.: 1404 Designed: J.Q/D.Q. Checked: D.Q. Date: 2/13/18	GreenBluEarth Inc. CONSULTING CIVIL ENGINEERS & LAND SURVEYORS 117 BERNAL RD. STE. 70-336 SAN JOSE, CA 95119 TEL. (408) 772-4381 GsunaiEngineering@gmail.com

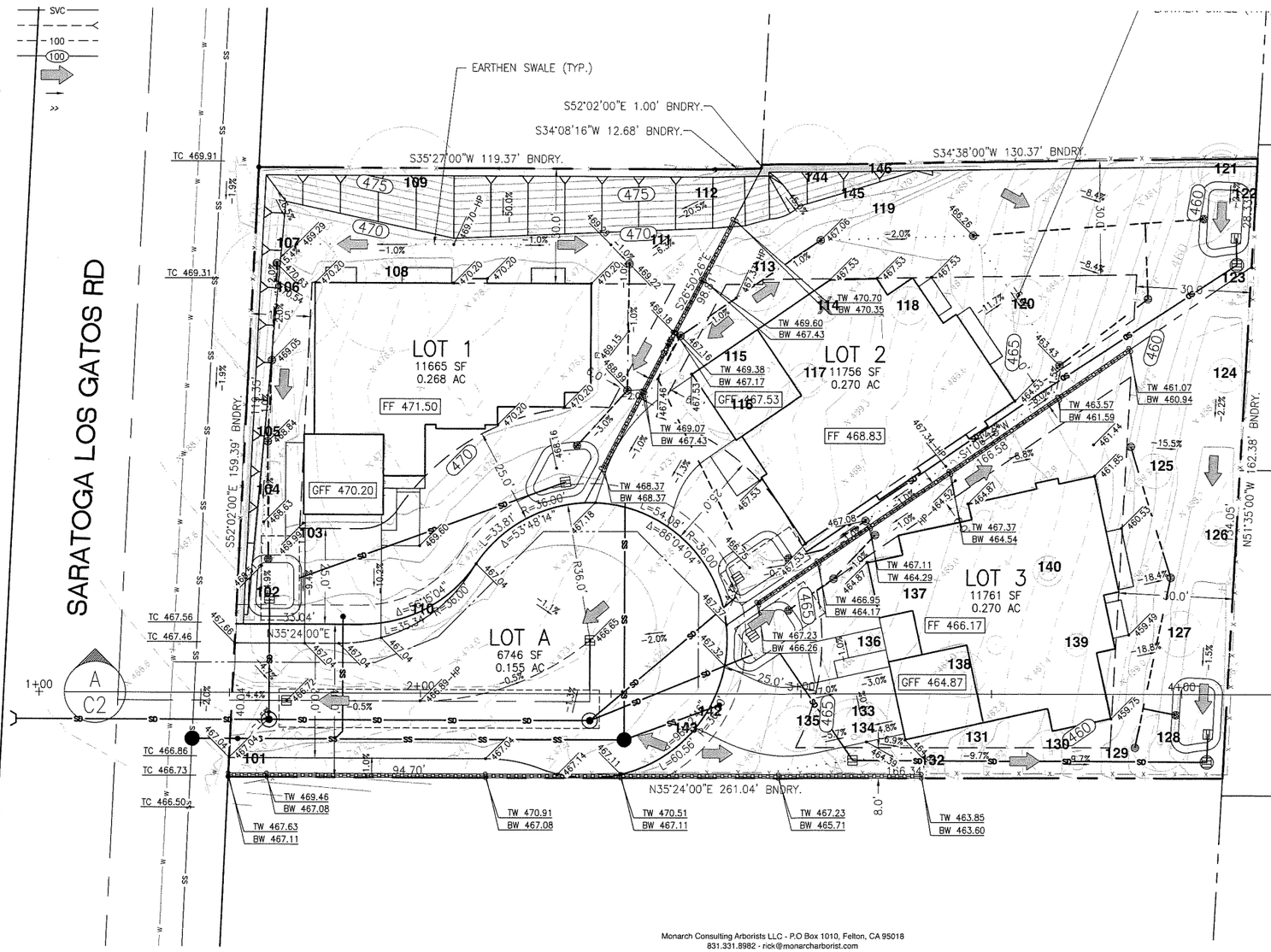

Table 1: Tree Inventory and Disposition

Tree Species	Number	Trunk Diameter (in.)	Condition	Suitability for Preservation	Expected Impact/ Disposition
black acacia (*Acacia melanoxylon*)	101	8 x 8	Poor	Poor	High/Remove
black acacia (*Acacia melanoxylon*)	102	9 x 7 stems 4	Poor	Poor	High/Remove
silver acacia (*Acacia dealbata*)	103	10, 8, 4	Good	Good	High/Remove
silver acacia (*Acacia dealbata*)	104	8	Poor	Poor	High/Remove
black acacia (*Acacia melanoxylon*)	105	8	Poor	Poor	High/Remove
Norfolk Island pine (*Araucaria heterophylla*)	106	32	Poor	Poor	High/Remove
coast redwood (*Sequoia sempervirens*)	107	23	Poor	Poor	High/Remove
deodar cedar (*Cedrus deodara*)	108	29	Fair	Fair	High/Remove
coast live oak (*Quercus agrifolia*)	109	33	Good	Good	High/Remove
ash (*Fraxinus velutina* 'Modesto')	110	11	Poor	Poor	High/Remove
coast live oak (*Quercus agrifolia*)	111	14	Good	Good	High/Remove
plum (*Prunus cerasifera*)	112	20	Poor	Poor	High/Remove
Peruvian pepper (*Schinus molle*)	113	11, 12	Poor	Poor	High/Remove
London plane (*Platanus x hispanica*)	114	9, 9, 9, 9, 9	Fair	Fair	High/Remove
Italian cypress (*Cupressus sempervirens*)	115	24	Fair	Poor	High/Remove
Italian cypress (*Cupressus sempervirens*)	116	15	Fair	Poor	High/Remove
coast live oak (*Quercus agrifolia*)	117	10	Good	Good	High/Remove
valley oak (*Quercus lobata*)	118	8	Good	Good	High/Remove
valley oak (*Quercus lobata*)	119	6	Fair	Fair	High/Remove
plum (*Prunus sp.*)	120	10	Poor	Poor	High/Remove
deodar cedar (*Cedrus deodara*)	121	12	Poor	Poor	High/Remove
coast live oak (*Quercus agrifolia*)	122	8	Poor	Poor	High/Remove
coast live oak (*Quercus agrifolia*)	123	15, 10, 7	Fair	Fair	High/Remove
deodar cedar (*Cedrus deodara*)	124	10	Poor	Poor	High/Remove
valley oak (*Quercus lobata*)	125	9	Good	Good	High/Remove
plum (*Prunus sp.*)	126	12 multi	Fair	Fair	High/Remove
plum (*Prunus sp.*)	127	12 multi	Fair	Fair	High/Remove
coast live oak (*Quercus agrifolia*)	128	12	Fair	Good	High/Remove
coast live oak (*Quercus agrifolia*)	129	6	Fair	Fair	High/Remove
coast live oak (*Quercus agrifolia*)	130	10	Good	Good	High/Remove
coast live oak (*Quercus agrifolia*)	131	6	Good	Good	High/Remove
coast live oak (*Quercus agrifolia*)	132	6	Good	Good	High/Remove
coast live oak (*Quercus agrifolia*)	133	8	Poor	Poor	High/Remove
silk oak (*Grevillea robusta*)	134	20, 14, 10	Poor	Poor	High/Remove
coast live oak (*Quercus agrifolia*)	135	10	Fair	Fair	High/Remove
silk tree (*Albizia julibrissin*)	136	6, 6, 6, 4	Poor	Poor	High/Remove
coast live oak (*Quercus agrifolia*)	137	10 multi	Poor	Poor	High/Remove
coast live oak (*Quercus agrifolia*)	138	6, 6 or 10	Fair	Fair	High/Remove
European birch (*Betula pendula*)	139	7	Poor	Poor	High/Remove
coast live oak (*Quercus agrifolia*)	140	5, 7, 8	Fair	Fair	High/Remove
coast live oak (*Quercus agrifolia*)	141	6, 6	Fair	Fair	High/Remove
valley oak (*Quercus lobata*)	142	7	Good	Good	High/Remove
coast live oak (*Quercus agrifolia*)	143	11	Fair	Fair	High/Remove
ash (Fraxinus velutina 'Modesto')	144	22	Poor	Poor	High/Remove
European olive (*Olea europaea*)	145	8	Poor	Poor	High/Remove
coast live oak (*Quercus agrifolia*)	146	14	Fair	Fair	High/Remove

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831.331.8982 - rick@monarcharborist.com

PLANT LEGEND

Qty	Size	Botanical Name	Common Name	WUCOLS
		SHRUBS, VINES & HERBACEOUS		
44	5 gal.	Diosma 'Golden Sunset'	Dwarf Breath of Heaven	Moderate
45	5 gal	Dodonaea viscosa 'Purpurea'	Purple Hop Bush	Low
27	5 gal.	Heteromeles arbutifolia	Toyon	Very Low
17	5 gal.	Loropetalum chinensis 'Rubra'	Loropetalum 'Rubra'	Low
15	5 gal.	Nandina domestica	Heavenly Bamboo	Low
16	5 gal.	Pittosporum tenuifolium	Pittosporum tenuifolium	Moderate
59	5 gal.	Prunus caroliniana	Carolina Laurel Cherry	Low
21	5 gal.	Rhaphiolepis umbellata 'Minor'	White Compact Yeddo Hawthorn	Low
31	5 gal.	Rosa 'Rosy Carpet'	Pink Carpet Roses	Moderate
		TREES		
3	24" Box	Acer palmatum	Japanese Maple	Moderate
1	24" Box	Acer rubrum 'October Glory'	Red Maple	Moderate
12	24" Box	Arbutus 'Marina'	Strawberry Tree	Low
4	24" Box	Lagerstroemia x fauriei hybrids	Muskogee (lt.lavender Crape Myrtle)	Low
7	24" Box	Quercus agrifolia 'Natural Form'	Coast Live Oak	Very Low
		GROUNDCOVERS		
43	1 gal.	Ceanothus griseus horizontalis	Carmel Creeper	Moderate
54	1 gal.	Cotoneaster 'Lowfast'	Cotoneaster	Moderate
16	1 gal	Verbena peruviana 'Homestead Purple'	Purple Verbena	Low
		PERENNIALS		
14	1 gal.	Salvia leucantha	Mexican Sage	Low
30	1 gal.	Salvia greggii 'Rosea'	Autumn Sage (Pink)	Low
		GRASSES		
39	1 gal.	Calamagrostis X acu. 'Karl Foerster'	Karl Foerster Feather Reed Grass	Low
104	1 gal.	Juncus patens	California Gray Rush	Low

TREE CANOPY GROWTH RATE

Size	Botanical Name	Common Name	Height & Width at Planting	Height & Width in 5 Years	Height & Width in 10 Years	Height & Width at Maturity
	TREES					
24" Box	Acer palmatum 'Dissectum Viridis'	Green Laceleaf Japanese Maple	4-5' x 18-24"	11.5' x 8'	18.5' x 12'	15- 20' x < 15'
24" Box	Acer rubrum 'October Glory'	Red Maple	8-10' x 2-3'	15.5-17.5' x 9.5'	23-25' x 17'	40-60' x 40'
24" Box	Arbutus 'Marina'	Strawberry Tree	7-8' x 16 x 24"	13' x 7'	18' x 12'	12'-25' x 20-25'
24" Box	Lagerstroemia x fauriei hybrids	Tuscarora (red) (Crape Myrtle)	6-7' x 1-2'	12' x 7'	17' x 12'	22' x 15'
24" Box	Quercus agrifolia 'Natural Form'	Coast Live Oak	7-8' x 1.5-2.5'	19' x 10.5'	30' x 17.5'	20-70' x 20-70'

Tree numbers corresponds to Tree Inventory and disposition plan by Monarch Consulting Arborists

SCALE 1"=10'

0 10 20

*** NOTES (E) = Existing**

A minimum three inch (3") layer of mulch shall be applied on all exposed soil surfaces of planting areas.

Arbutus 'Marina' Strawberry Tree

Lagerstroemia Tuscarora Crape Myrtle

Dodonaea viscosa 'Purpurea' Purple Hopseed Bush

Loropetalum chinense 'Rubrum' Loropetalum "Rubrum'

Heteromeles arbutifolia Toyon

Rhaphiolepis umbrellata White Yeddo Hawthorn

Calamagrostis x acutiflora 'Karl Foerster' Reed Grass

REVISIONS	BY

Karen Aitken & Associates
Landscape Architecture & Design

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SEABORN RESIDENCE
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LANDSCAPE PLAN

LICENSED LANDSCAPE ARCHITECT
KAREN JONES AITKEN
No. 2239
Exp. 8-31-21
STATE OF CALIFORNIA

DATE	01-09-2020
SCALE	1"=10'-0"
DRAWN	AD & IN
JOB	SEABORN

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