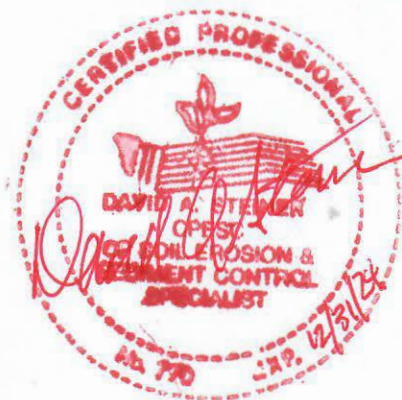


Exhibit D

Soil Loss Analysis, Revised
Proposed New Vineyard Development
Meka Vineyards
4473 Atlas Peak Road
Napa, CA 94588
032-540-034
February 29, 2024



The following analysis evaluates a vineyard planting proposal, to determine the project's potential to increase sediment delivery from the site. The project proposes development of approximately 23.8 acres of vineyard on the referenced, approximately 91-acre parcel. This analysis, prepared by David Steiner, CPESC, CPSWQ, at the request of and in consultation with Mike Muelrath of Applied Civil Engineering, has adapted the Universal Soil Loss Equation (USLE) protocol developed by the Napa RCD, with guidance from the NRCS (SCS) Field Office Technical Guide, to requirements of the Napa County Engineering Division. Specifications of the Erosion Control Plan are also designed to assure adherence to the USDA soil loss tolerance "T." The transects modeled were drawn on the accompanying maps, provided by Applied Civil Engineering. The accompanying Excel spreadsheet¹ incorporates USLE principles and formulas, as follows:

- The "R" value is derived from the median value of the predicted range of 2-year/6-hour storms for this site, according to NOAA Atlas 14. A printout of the NOAA Atlas 14 table accompanies this analysis.
- The "K" (soil erosivity) and "T" (soil loss tolerance) values were taken from the Napa County Web Soil Survey.
- The "LS" value is calculated per algorithms based on USDA empirical data, using plotted slope lengths and gradients, over six representative transects through the proposed vineyard areas.
- Pre-project "C": Cover values were assigned based on site inspections on June 14 and July 5, 2022, and examination of aerial photographic imagery (Google Earth and OnX).
 - Block A, North Transect:
 - Segment 1: 0 Canopy; 90% Cover: 50%G, 50%W
 $C = .006 \times .5 + .022 \times .5 = .014$
 - Segment 2: 0 Canopy; 90% Cover: 50%G, 50%W
 $C = .006 \times .5 + .022 \times .5 = .014$
 - Segment 3: 0 Canopy; 70% Cover: 60G, 40W
 $C = .028 \times .6 = .067 \times .4 = .0436$
 - Segment 4: 0 Canopy; 85% Cover: 60G, 40W
 $C = .010 \times .6 = .032 \times .4 = .0188$

¹ This Excel format segments modeled transects according to the most complex variable or USLE factor describing conditions along the transect. For example, a transect with five different types or levels of canopy or vegetative cover—but with uniform slope throughout—would nonetheless be assigned five separate slope entries (even though they were all the same), as the transect's segmentation (for all factors) would be based on cover, its most complex variable.

- Segment 5: 0 Canopy; 85% Cover: 70G, 30W
 $C = .010 \times .7 = .032 \times .3 = .0166$
- o Block A, Mid Transect
 - Segment 1: 0 Canopy; 85% Cover: 80%G, 20%W
 $C = .010 \times .8 = .043 \times .2 = .0144$
 - Segment 2: 0 Canopy; 90% Cover: 70% G, 30%W
 $C = .006 \times .7 + .022 \times .3 = .0108$
 - Segment 3: 0 Canopy; 70% Cover: 60%G, 40%W
 $C = .028 \times .6 = .067 \times .4 = .0436$
- o Block A, South Transect
 - Segment 1: 0 Canopy; 80% Cover: 50%G, 50%W
 $C = .013 \times .5 = .043 \times .5 = .028$
 - Segment 2: 0 Canopy; 85% Cover: 50% G, 50%W
 $C = .010 \times .5 + .032 \times .5 = .021$
- o Block B Transect
 - Segment 1: 0 Canopy; 70% Cover: 20%G, 80%W
 $C = .028 \times .2 + .067 \times .8 = .0592$
 - Segment 2: 0 Canopy; 90% Cover: 50% G, 50%W
 $C = .006 \times .5 + .022 \times .5 = .014$
 - Segment 3: 0 Canopy; 85% Cover: 50%G, 50%W
 $C = .010 \times .5 = .031 \times .5 = .0205$
 - Segment 4: 0 Canopy; 85% Cover: 50%G, 50%W
 $C = .010 \times .5 = .031 \times .5 = .0205$
- o Block C, East Transect
 - Segment 1: 25% Low brush; 80% Cover: 60%G, 40%W
 $C = .013 \times .6 = .041 \times .4 = .0354$
 - Segment 2: 25% Trees; 60% Cover: 50% G, 50%W
 $C = .041 \times .5 + .089 \times .5 = .065$
- o Block C, West Transect
 - Segment 1: 25% Low brush; 80% Cover: 60%G, 40%W
 $C = .013 \times .6 = .041 \times .4 = .0242$
 - Segment 2: 25% Low brush; 70% Cover: 50% G, 50%W
 $C = .026 \times .5 + .062 \times .5 = .044$
- Post-project “C” values are assigned based on the specifications of the current proposal, i.e., 80% cover with non-till management ($C = .022$) except for the predominantly flat Block B, which will be non-tilled with 75% cover ($C = .035$).
- Pre- and post-project “P” values are assigned the default maximum (1.00), indicating proposed row direction up- and down-hill, that is, no “practice” reduction in soil loss.

Conclusion: With the assumption that the specified cover levels will be maintained, calculations predict that the net soil loss in each of the vineyard blocks will exceed neither pre-project levels nor the USDA soil loss tolerance. (Please see accompanying Excel printouts.)

Meka
Pre-Project USLE
June 15, 2023
2/6 storm, inches 1.97

Transect Identification		Meka Block A North, Pre-project				
Acres		3.1	acres			
Total Slope Length		470	feet			
Number of Segments		5	segments			
		1	2	3	4	5
R		72.08	72.08	72.08	72.08	72.08
Factor (F)		0.09	0.16	0.21	0.25	0.28
Slope Length		470	470	470	470	470
Slope %		19.1	11.7	7.4	5.3	2.1
LS		7.09	3.65	1.93	1.24	0.33
K		0.10	0.28	0.28	0.28	0.28
C		0.014	0.014	0.044	0.019	0.017
P		1.00	1.00	1.00	1.00	1.00
T		1.00	3.00	3.00	3.00	3.00
(F) (LS) (K) (C)		0.0008935	0.0023	0.0049	0.0016	0.0004
A = (R) (F) (LS) (K) (C) (P)		0.06	0.16	0.36	0.12	0.03

tons/acre/year
2.79
2.28 tons/year

Transect Identification		Meka Block A Mid, Pre-project				
Acres		2.1	acres			
Total Slope Length		552	feet			
Number of Segments		3	segments			
		1	2	3	4	5
R		72.08	72.08	72.08	72.08	72.08
Factor (F)		0.19	0.35	0.46	0.00	0.00
Slope Length		552	552	552		
Slope %		26.6	22.9	12.5		
LS		11.85	9.76	4.33	0.00	0.00
K		0.28	0.28	0.28		
C		0.014	0.011	0.044		
P		1.00	1.00	1.00		
T		3.00	3.00	3.00		
(F) (LS) (K) (C)		0.0090759	0.0103	0.0243	0.0000	0.0000
A = (R) (F) (LS) (K) (C) (P)		0.65	0.74	1.75	0.00	0.00

tons/acre/year
3.00
3.15
6.62 tons/year

Meka
Post-Project USLE
June 15, 2023
2/6 storm, inches 1.97

Transect Identification		Meka Block A North, Post-project				
Acres		3.1	acres			
Total Slope Length		470	feet			
Number of Segments		5	segments			
		1	2	3	4	5
R		72.08	72.08	72.08	72.08	72.08
Factor (F)		0.09	0.16	0.21	0.25	0.28
Slope Length		470	470	470	470	470
Slope %		19.1	11.7	7.4	5.3	2.1
LS		7.09	3.65	1.93	1.24	0.33
K		0.10	0.28	0.28	0.28	0.28
C		0.022	0.022	0.022	0.022	0.022
P		0.67	1.00	1.00	1.00	1.00
T		1.00	3.00	3.00	3.00	3.00
(F) (LS) (K) (C)		0.00140409	0.0036	0.0025	0.0019	0.0006
A = (R) (F) (LS) (K) (C) (P)		0.07	0.26	0.18	0.14	0.04

tons/acre/year
2.79
0.69
2.13 tons/year

Transect Identification		Meka Block A Mid, Post-project				
Acres		2.1	acres			
Total Slope Length		552	feet			
Number of Segments		3	segments			
		1	2	3	4	5
R		72.08	72.08	72.08	72.08	72.08
Factor (F)		0.19	0.35	0.46	0.00	0.00
Slope Length		552	552	552		
Slope %		26.6	22.9	12.5		
LS		11.85	9.76	4.33	0.00	0.00
K		0.28	0.28	0.28		
C		0.022	0.022	0.022		
P		1.00	1.00	1.00		
T		3.00	3.00	3.00		
(F) (LS) (K) (C)		0.01386593	0.0211	0.0123	0.0000	0.0000
A = (R) (F) (LS) (K) (C) (P)		1.00	1.52	0.88	0.00	0.00

tons/acre/year
3.00
3.40
7.14 tons/year

Transect Identification		Meka Block C East, Pre-project			
Acres		3.9	acres		
Total Slope Length		406	feet		
Number of Segments		2	segments		
	1	2	3	4	5
R	72.08	72.08	72.08	72.08	72.08
Factor (F)	0.35	0.65	0.00	0.00	0.00
Slope Length	406	406			
Slope %	10.3	17.7			
LS	2.84	5.95	0.00	0.00	0.00
K	0.28	0.28			
C	0.035	0.065			
P	1.00	1.00			
T	3.00	3.00			3.00
(F) (LS) (K) (C)	0.0098657	0.0704	0.0000	0.0000	0.0000
A = (R) (F) (LS) (K) (C) (P)	0.71	5.08	0.00	0.00	0.00

tons/acre/year

22.57 tons/year

Transect Identification		Meka Block C East, Post-project			
Acres		3.9	acres		
Total Slope Length		406	feet		
Number of Segments		2	segments		
	1	2	3	4	5
R	72.08	72.08	72.08	72.08	72.08
Factor (F)	0.35	0.65	0.00	0.00	0.00
Slope Length	406	406			
Slope %	10.3	17.7			
LS	2.84	5.95	0.00	0.00	0.00
K	0.28	0.28			
C	0.022	0.022			
P	1.00	1.00			
T	3.00	3.00			3.00
(F) (LS) (K) (C)	0.00613122	0.0238	0.0000	0.0000	0.0000
A = (R) (F) (LS) (K) (C) (P)	0.44	1.72	0.00	0.00	0.00

tons/acre/year

8.42 tons/year

Transect Identification		Meka Block C West, Pre-project			
Acres		4	acres		
Total Slope Length		322	feet		
Number of Segments		2	segments		
	1	2	3	4	5
R	72.08	72.08	72.08	72.08	72.08
Factor (F)	0.35	0.65	0.00	0.00	0.00
Slope Length	322	322			
Slope %	19.9	17.4			
LS	6.20	5.18	0.00	0.00	0.00
K	0.28	0.28			
C	0.024	0.044			
P	1.00	1.00			
T	3.00	3.00			3.00
(F) (LS) (K) (C)	0.0147014	0.0415	0.0000	0.0000	0.0000
A = (R) (F) (LS) (K) (C) (P)	1.06	2.99	0.00	0.00	0.00

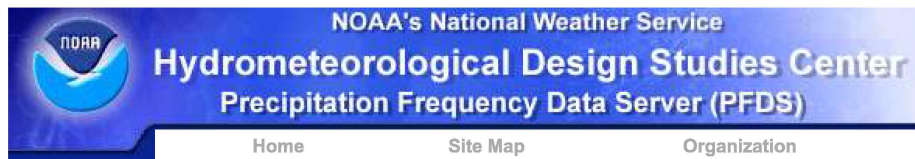
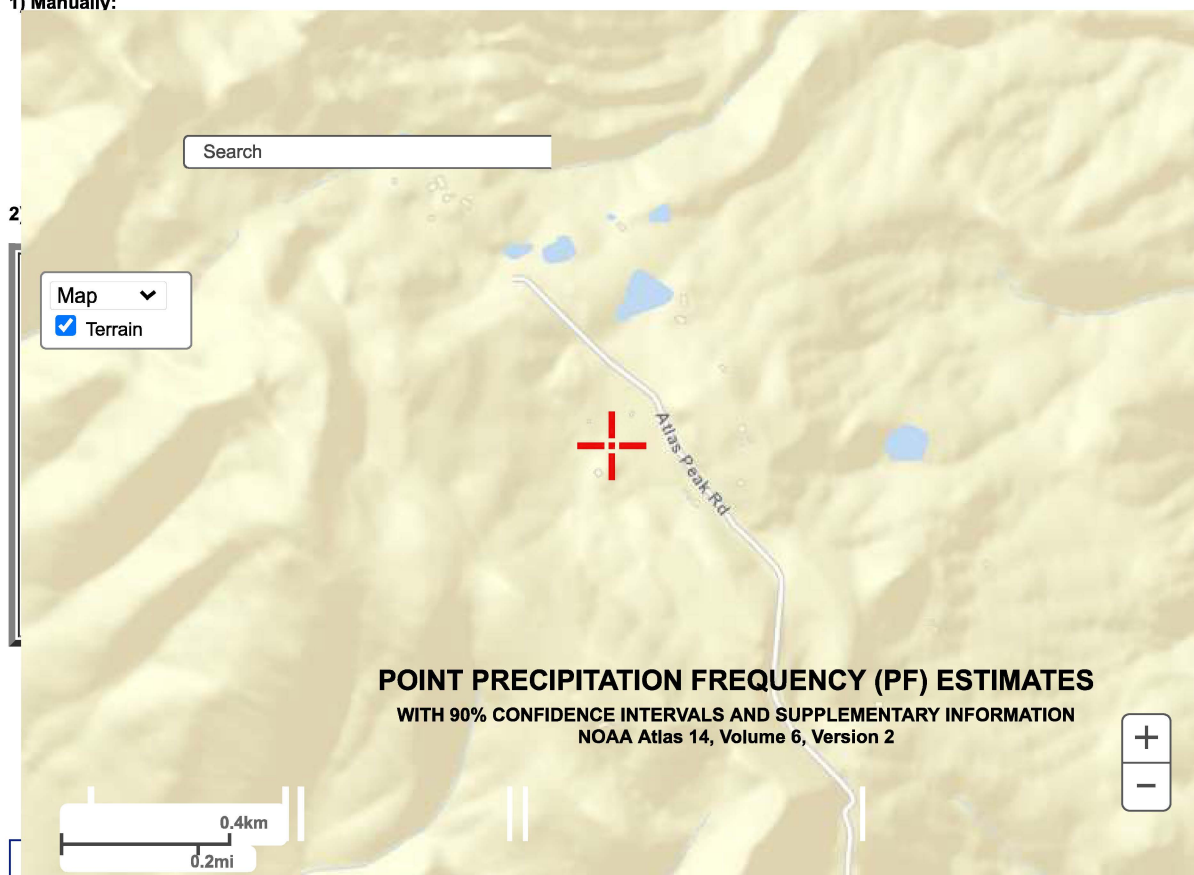
tons/acre/year

16.20 tons/year

Transect Identification		Meka Block C West, Post-project			
Acres		4	acres		
Total Slope Length		322	feet		
Number of Segments		2	segments		
	1	2	3	4	5
R	72.08	72.08	72.08	72.08	72.08
Factor (F)	0.35	0.65	0.00	0.00	0.00
Slope Length	322	322			
Slope %	19.9	17.4			
LS	6.20	5.18	0.00	0.00	0.00
K	0.28	0.28			
C	0.022	0.022			
P	1.00	1.00			
T	3.00	3.00			3.00
(F) (LS) (K) (C)	0.01336487	0.0207	0.0000	0.0000	0.0000
A = (R) (F) (LS) (K) (C) (P)	0.96	1.50	0.00	0.00	0.00

tons/acre/year

9.83 tons/year

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aa.gov):

a) Select location

Move crosshair or double click

b) Click on station icon☐ Show stations on map**Location information:****Name:** Napa, California, USA***Latitude:** 38.4430°**Longitude:** -122.2500°**Elevation:** 2086.77 ft **

* Source: ESRI Maps

** Source: USGS

POINT PRECIPITATION FREQUENCY (PF) ESTIMATESWITH 90% CONFIDENCE INTERVALS AND SUPPLEMENTARY INFORMATION
NOAA Atlas 14, Volume 6, Version 2 [Print page](#)**PDS-based precipitation frequency estimates with 90% confidence intervals (in inches)¹**

Duration	Average recurrence interval (years)									
	1	2	5	10	25	50	100	200	500	1000
5-min	0.146 (0.130-0.166)	0.182 (0.162-0.207)	0.229 (0.203-0.261)	0.268 (0.235-0.308)	0.321 (0.271-0.383)	0.362 (0.299-0.444)	0.405 (0.325-0.510)	0.450 (0.350-0.585)	0.513 (0.381-0.699)	0.564 (0.402-0.799)

10-min	0.210 (0.187-0.238)	0.261 (0.232-0.296)	0.328 (0.291-0.374)	0.384 (0.337-0.442)	0.460 (0.389-0.550)	0.519 (0.428-0.636)	0.581 (0.466-0.731)	0.645 (0.501-0.839)	0.736 (0.545-1.00)	0.809 (0.577-1.15)
15-min	0.253 (0.226-0.288)	0.316 (0.281-0.358)	0.397 (0.352-0.452)	0.464 (0.408-0.534)	0.556 (0.470-0.665)	0.628 (0.518-0.769)	0.702 (0.563-0.884)	0.780 (0.606-1.01)	0.890 (0.660-1.21)	0.978 (0.697-1.39)
30-min	0.364 (0.324-0.413)	0.453 (0.403-0.515)	0.570 (0.505-0.650)	0.667 (0.585-0.767)	0.799 (0.675-0.955)	0.902 (0.744-1.10)	1.01 (0.809-1.27)	1.12 (0.871-1.46)	1.28 (0.947-1.74)	1.40 (1.00-1.99)
60-min	0.532 (0.474-0.604)	0.663 (0.589-0.753)	0.834 (0.739-0.950)	0.975 (0.856-1.12)	1.17 (0.987-1.40)	1.32 (1.09-1.61)	1.47 (1.18-1.86)	1.64 (1.27-2.13)	1.87 (1.39-2.55)	2.05 (1.47-2.91)
2-hr	0.808 (0.719-0.916)	1.01 (0.895-1.14)	1.27 (1.12-1.44)	1.48 (1.30-1.70)	1.77 (1.49-2.11)	1.99 (1.64-2.44)	2.22 (1.78-2.79)	2.45 (1.91-3.19)	2.78 (2.06-3.78)	3.03 (2.16-4.29)
3-hr	1.03 (0.921-1.17)	1.29 (1.15-1.46)	1.62 (1.44-1.85)	1.89 (1.66-2.17)	2.26 (1.91-2.70)	2.54 (2.09-3.11)	2.82 (2.26-3.55)	3.12 (2.42-4.05)	3.52 (2.61-4.79)	3.83 (2.73-5.43)
6-hr	1.58 (1.41-1.79)	1.97 (1.76-2.24)	2.49 (2.20-2.83)	2.90 (2.54-3.33)	3.45 (2.91-4.12)	3.87 (3.19-4.74)	4.29 (3.44-5.40)	4.72 (3.67-6.14)	5.31 (3.94-7.23)	5.76 (4.11-8.16)
12-hr	2.27 (2.02-2.58)	2.87 (2.55-3.26)	3.63 (3.22-4.14)	4.24 (3.72-4.88)	5.05 (4.26-6.03)	5.66 (4.67-6.92)	6.26 (5.02-7.88)	6.88 (5.34-8.94)	7.70 (5.71-10.5)	8.32 (5.94-11.8)
24-hr	3.28 (2.95-3.72)	4.19 (3.77-4.76)	5.35 (4.80-6.09)	6.27 (5.59-7.18)	7.48 (6.49-8.81)	8.39 (7.15-10.0)	9.29 (7.76-11.4)	10.2 (8.32-12.8)	11.4 (8.98-14.8)	12.3 (9.43-16.4)
2-day	4.36 (3.92-4.95)	5.59 (5.02-6.34)	7.14 (6.41-8.13)	8.38 (7.47-9.60)	10.0 (8.69-11.8)	11.3 (9.59-13.5)	12.5 (10.4-15.3)	13.7 (11.2-17.2)	15.4 (12.1-19.9)	16.7 (12.8-22.2)
3-day	5.20 (4.67-5.89)	6.66 (5.98-7.56)	8.51 (7.64-9.69)	10.00 (8.91-11.5)	12.0 (10.4-14.1)	13.5 (11.5-16.1)	15.0 (12.5-18.3)	16.5 (13.4-20.6)	18.5 (14.6-24.0)	20.1 (15.3-26.7)
4-day	5.77 (5.19-6.54)	7.40 (6.65-8.40)	9.47 (8.49-10.8)	11.1 (9.90-12.7)	13.3 (11.5-15.7)	14.9 (12.7-17.9)	16.6 (13.9-20.3)	18.3 (14.9-22.8)	20.5 (16.1-26.5)	22.2 (17.0-29.6)
7-day	7.14 (6.43-8.10)	9.19 (8.26-10.4)	11.7 (10.5-13.4)	13.8 (12.3-15.8)	16.4 (14.2-19.3)	18.3 (15.6-22.0)	20.3 (16.9-24.8)	22.2 (18.1-27.8)	24.8 (19.5-32.1)	26.8 (20.5-35.7)
10-day	7.91 (7.12-8.97)	10.2 (9.16-11.6)	13.0 (11.7-14.8)	15.2 (13.6-17.4)	18.1 (15.7-21.3)	20.2 (17.2-24.1)	22.2 (18.6-27.1)	24.3 (19.8-30.4)	26.9 (21.2-34.9)	29.0 (22.2-38.6)
20-day	10.3 (9.30-11.7)	13.3 (12.0-15.1)	17.0 (15.2-19.3)	19.8 (17.6-22.6)	23.2 (20.2-27.4)	25.8 (21.9-30.8)	28.2 (23.5-34.4)	30.5 (24.9-38.2)	33.6 (26.5-43.5)	35.8 (27.4-47.8)
30-day	12.7 (11.4-14.4)	16.3 (14.7-18.5)	20.7 (18.5-23.5)	23.9 (21.3-27.4)	28.0 (24.3-32.9)	30.8 (26.3-36.9)	33.6 (28.0-41.0)	36.2 (29.5-45.3)	39.6 (31.2-51.2)	42.0 (32.2-56.1)
45-day	15.3 (13.7-17.3)	19.5 (17.5-22.2)	24.5 (22.0-27.9)	28.2 (25.2-32.4)	32.8 (28.4-38.6)	35.9 (30.6-43.0)	38.9 (32.5-47.5)	41.7 (34.0-52.2)	45.3 (35.7-58.6)	47.8 (36.6-63.8)
60-day	18.4 (16.5-20.8)	23.3 (20.9-26.4)	29.0 (26.0-33.0)	33.2 (29.5-38.0)	38.2 (33.1-45.0)	41.7 (35.5-49.9)	44.9 (37.5-54.9)	48.0 (39.1-60.0)	51.7 (40.8-67.0)	54.5 (41.7-72.6)

¹ Precipitation frequency (PF) estimates in this table are based on frequency analysis of partial duration series (PDS).

Numbers in parenthesis are PF estimates at lower and upper bounds of the 90% confidence interval. The probability that precipitation frequency estimates (for a given duration and average recurrence interval) will be greater than the upper bound (or less than the lower bound) is 5%. Estimates at upper bounds are not checked against probable maximum precipitation (PMP) estimates and may be higher than currently valid PMP values.

Please refer to NOAA Atlas 14 document for more information.

Estimates from the table in CSV format: [Precipitation frequency estimates](#)

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US Department of Commerce
National Oceanic and Atmospheric Administration
National Weather Service
Office of Water Prediction (OWP)
1325 East West Highway
Silver Spring, MD 20910
Page Author: [HDSC webmaster](#)
Page last modified: April 21, 2017

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Map unit symbol	Unit — Napa County, California (CA055)	Map unit name	Rating	Acres in AOI	Percent of AOI
100	Aiken loam, 2 to 15 percent slopes	Aiken loam, 2 to 15 percent slopes	.28	60.3	22.6%
101	Aiken loam, 15 to 30 percent slopes	Aiken loam, 15 to 30 percent slopes	.28	16.9	9.1%
102	Aiken loam, 30 to 50 percent slopes	Aiken loam, 30 to 50 percent slopes	.28	67.9	36.7%
140	Forward silt loam, 12 to 57 percent slopes, MLRA 15	Forward silt loam, 12 to 57 percent slopes, MLRA 15	.43	13.6	7.3%
152	Hambright rock-Outcrop complex, 30 to 75 percent slopes	Hambright rock-Outcrop complex, 30 to 75 percent slopes	.10	0.0	0.0%
154	Henneke gravelly loam, 30 to 75 percent slopes	Henneke gravelly loam, 30 to 75 percent slopes	.10	24.1	13.0%
183	Water	Water		2.3	1.2%
Totals for Area of Interest				185.2	100.0%

Description — K Factor, Whole Soil

Erosion factor K indicates the susceptibility of a soil to sheet and rill erosion by water. Factor K is one of six factors used in the Universal Soil Loss Equation (USLE) and the Revised Universal Soil Loss Equation (RUSLE) to predict the average annual rate of soil loss by sheet and rill erosion in tons per acre per year. The estimates are based primarily on percentage of silt, sand, and organic matter and on soil structure and saturated hydraulic conductivity (Ksat). Values of K range from 0.02 to 0.69. Other factors being equal, the higher the value, the more susceptible the soil is to sheet and rill erosion by water.

"Erosion factor Kw (whole soil)" indicates the erodibility of the whole soil. The estimates are modified by the presence of rock fragments.

Factor K does not apply to organic horizons and is not reported for those layers.

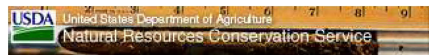
Rating Options — K Factor, Whole Soil

Aggregation Method: Dominant Condition

Component Percent Cutoff: None Specified

Tie-break Rule: Higher

Layer Options (Horizon Aggregation Method): All Layers (Weighted Average)



[Area of Interest \(AOI\)](#) | [Soil Map](#) | [Soil Data Explorer](#) | [Download Soils Data](#) | [Shopping Cart \(Free\)](#)

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Properties and Qualities Ratings

[Open All](#) [Close All](#)

Soil Chemical Properties

Soil Erosion Factors

K Factor, Rock Free

K Factor, Whole Soil

T Factor

[View Description](#) [View Rating](#)

View Options

Map ☒

Table ☒

Description of Rating ☒

Rating Options ☒

☐ Detailed Description

Advanced Options

Aggregation Method [Dominant Condition](#) ▼

Component Percent Cutoff

Tie-break Rule ☒ Lower ☐ Higher

Interpret Nulls as Zero ☐ Yes ☒ No

[View Description](#) [View Rating](#)

Wind Erodibility Group

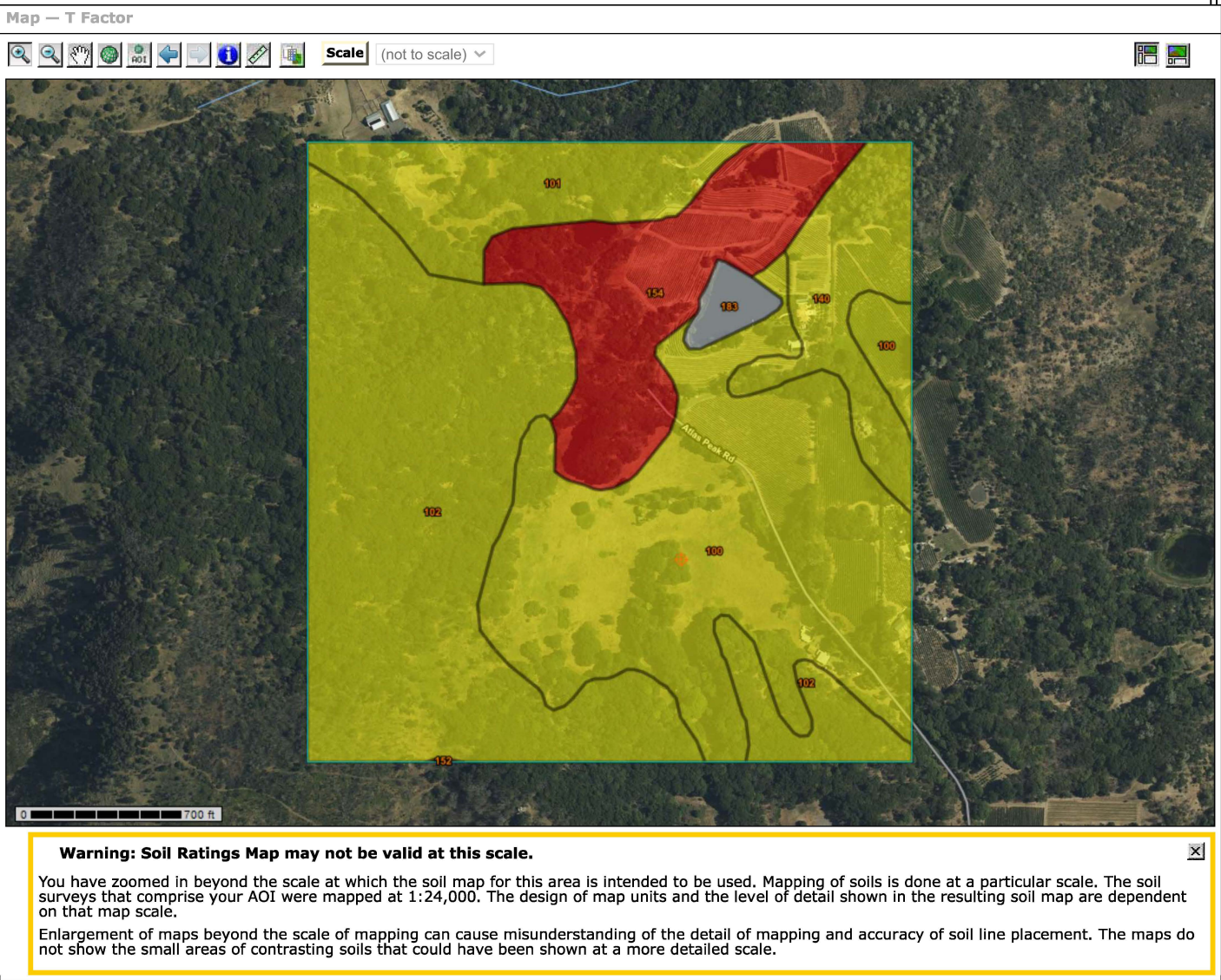
Wind Erodibility Index

Soil Health Properties

Soil Physical Properties

Soil Qualities and Features

Water Features



Tables — T Factor — Summary By Map Unit
Summary by Map Unit — Napa County, California (CA055)
Summary by Map Unit — Napa County, California (CA055)

Summary By Map Unit — Napa County, California (CA055)				
Map unit symbol	Map unit name	Rating (tons per acre per year)	Acres in AOI	Percent of AOI
100	Aiken loam, 2 to 15 percent slopes	3	60.3	52.8%
101	Aiken loam, 15 to 30 percent slopes	3	16.9	9.1%
102	Aiken loam, 30 to 50 percent slopes	3	67.9	36.7%
140	Forward silt loam, 12 to 57 percent slopes, MLRA 15	3	13.6	7.3%
152	Hambright rock-Outcrop complex, 30 to 75 percent slopes	1	0.0	0.0%
154	Henneke gravelly loam, 30 to 75 percent slopes	1	24.1	13.0%
183	Water		2.3	1.2%
Totals for Area of Interest			185.2	100.0%

Description — T Factor

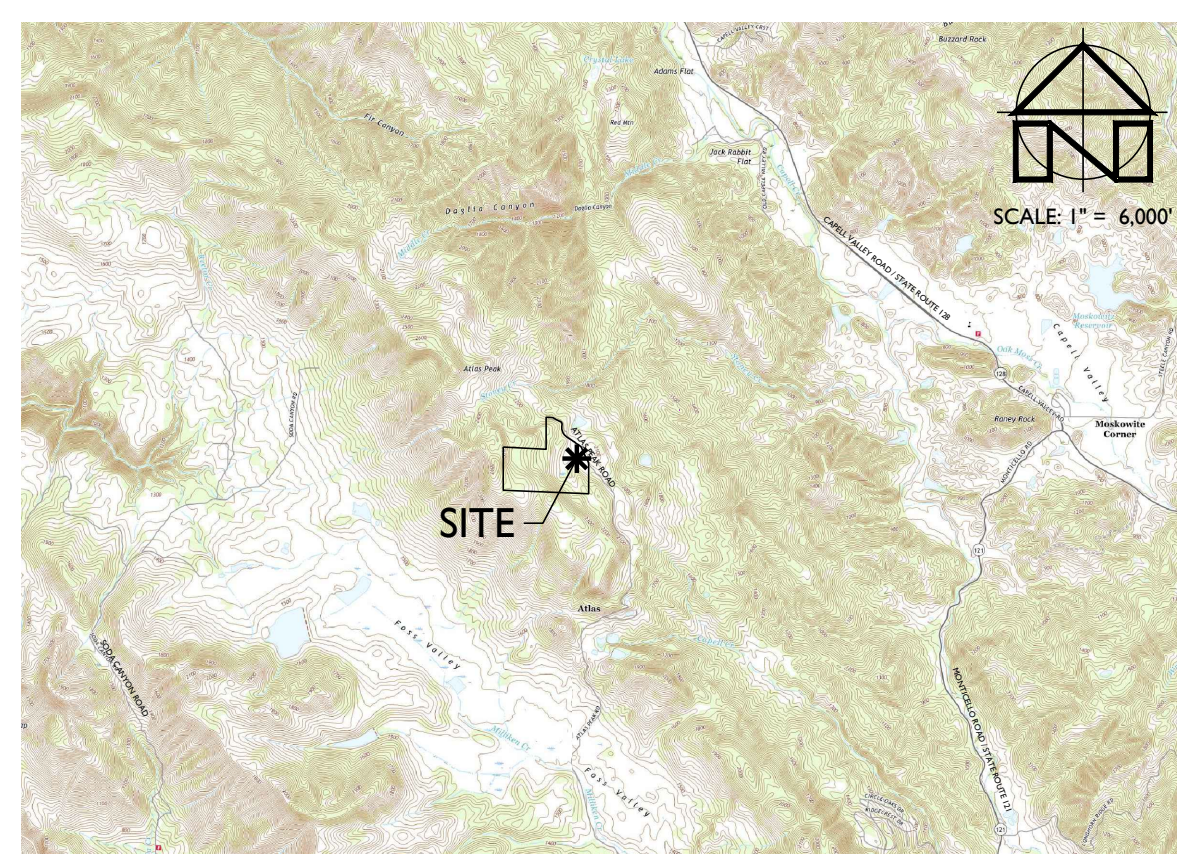
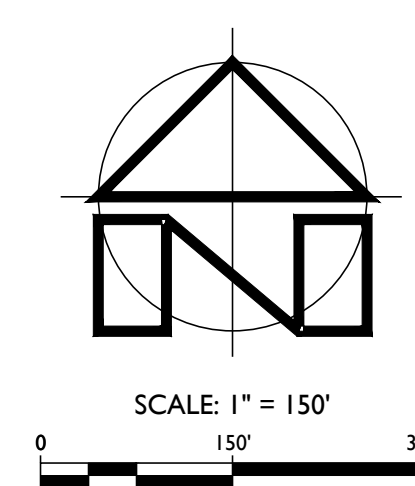
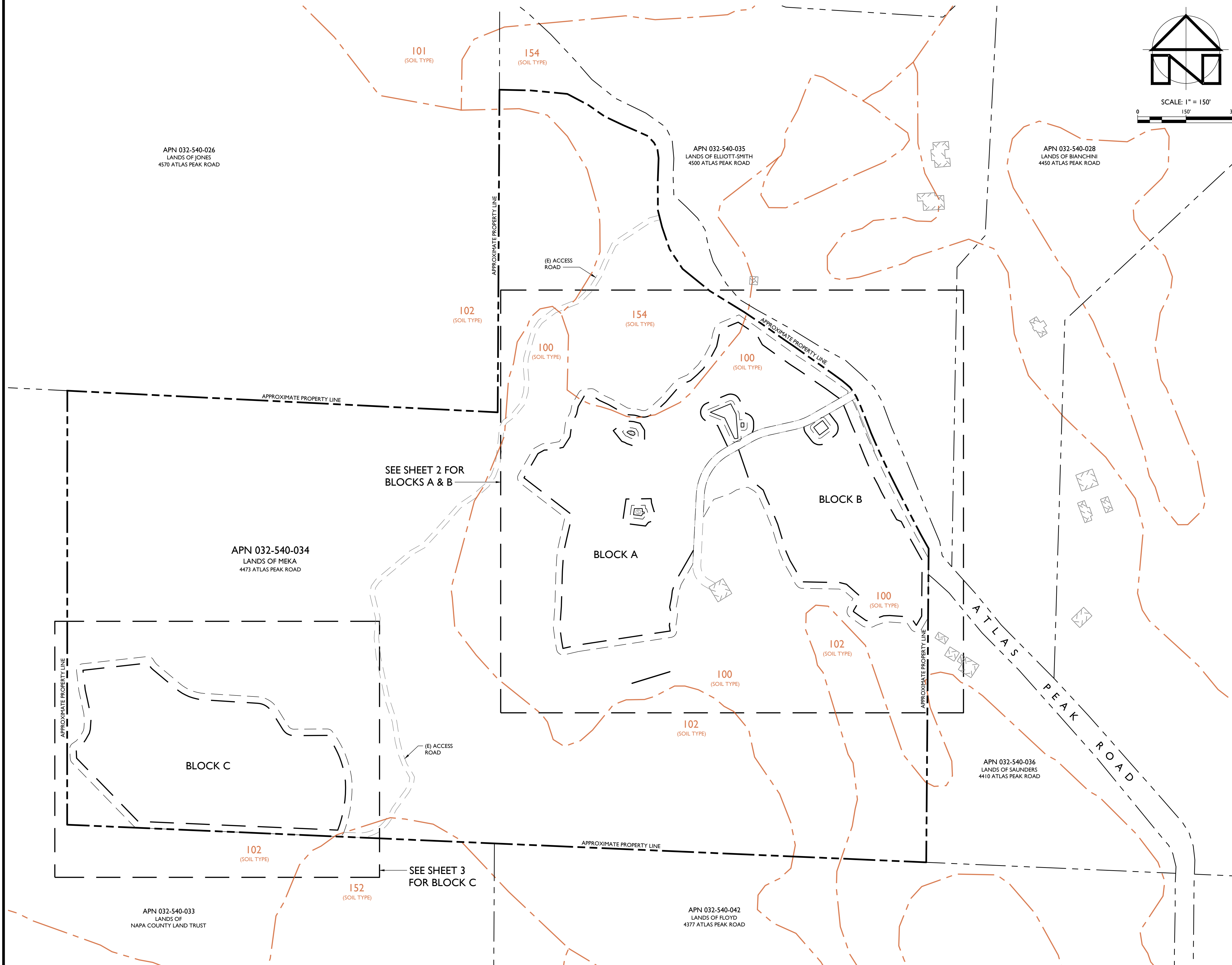
The T factor is an estimate of the maximum average annual rate of soil erosion by wind and/or water that can occur without affecting crop productivity over a sustained period. The rate is in tons per acre per year.

Rating Options — T Factor

Units of Measure: tons per acre per year
Aggregation Method: Dominant Condition
Component Percent Cutoff: None Specified
Tie-break Rule: Lower
Interpret Nulls as Zero: No

MEKA VINEYARD

UNIVERSAL SOIL LOSS EQUATION EXHIBIT



LOCATION MAP

PROJECT INFORMATION:

PROPERTY OWNER & APPLICANT:
MUKTHESWARA RAO MEKA
4473 ATLAS PEAK ROAD
NAPA, CA 94558

SITE ADDRESS:
4473 ATLAS PEAK ROAD
NAPA, CA 94558

ASSESSOR'S PARCEL NUMBER:
032-540-034

PARCEL SIZE:
96.6 ± ACRES

PROJECT SIZE:
26 ± ACRES DISTURBED AREA
19.8 ± ACRES PLANTED

ZONING:
AGRICULTURAL WATERSHED (AW)

SHEET INDEX:

- 1 SITE KEY MAP
- 2 VINEYARD BLOCKS A & B
- 3 VINEYARD BLOCK C

FLOOD HAZARD NOTE:

ACCORDING TO THE FEDERAL EMERGENCY MANAGEMENT AGENCY (FEMA) FLOOD INSURANCE RATE MAP (FIRM) MAP NUMBER 06055C0410E, EFFECTIVE SEPTEMBER 26, 2008, THE PROJECT SITE IS NOT LOCATED IN A SPECIAL FLOOD HAZARD AREA.

NOTES:

- FADED BACKGROUND REPRESENTS EXISTING TOPOGRAPHIC FEATURES. TOPOGRAPHIC INFORMATION WAS TAKEN FROM THE NAPA COUNTY GEOGRAPHIC INFORMATION SYSTEM DATABASE. APPLIED CIVIL ENGINEERING INCORPORATED ASSUMES NO LIABILITY REGARDING THE ACCURACY OR COMPLETENESS OF THE TOPOGRAPHIC INFORMATION.
- CONTOUR INTERVAL: FIVE (5) FEET, HIGHLIGHTED EVERY TWENTY FIVE (25) FEET.
- VERTICAL DATUM: NAVD 88
- THE PROPERTY LINES SHOWN ON THESE PLANS DO NOT REPRESENT A BOUNDARY SURVEY. THEY ARE APPROXIMATE AND ARE PROVIDED FOR INFORMATIONAL PURPOSES ONLY.

LEGEND:

- APPROXIMATE PROPERTY LINE (SUBJECT PARCEL)
- APPROXIMATE PROPERTY LINE (ADJACENT PARCEL)
- SOIL TYPE BOUNDARY
- PROPOSED LIMIT OF VINEYARD BLOCK
- PROPOSED VINEYARD CLEARING LIMITS / VINEYARD AVENUE

SOIL TYPE LEGEND:

- 100 AIKEN LOAM, 2 TO 15 PERCENT SLOPES
- 101 AIKEN LOAM, 15 TO 30 PERCENT SLOPES
- 102 AIKEN LOAM, 30 TO 50 PERCENT SLOPES
- 152 HAMBRIGHT ROCK-OUTCROP COMPLEX, 30 TO 75 PERCENT SLOPES
- 154 HENNEKE GRAVELLY LOAM, 30 TO 75 PERCENT SLOPES

SOIL TYPE BOUNDARIES SHOWN ON THIS MAP ARE BASED ON THE NAPA COUNTY GEOGRAPHIC INFORMATION SYSTEM DATA AND SHOULD BE CONSIDERED APPROXIMATE.

SITE KEY MAP

SCALE: 1" = 150'

PREPARED UNDER THE DIRECTION OF:



DRAWN BY:
PowerCAD LLC

CHECKED BY:
MRM

DATE:
FEBRUARY 15, 2024

REVISIONS: 2/15/2024 BY: NJH
PERMIT SUBMITTAL

JOB NUMBER:
21-115

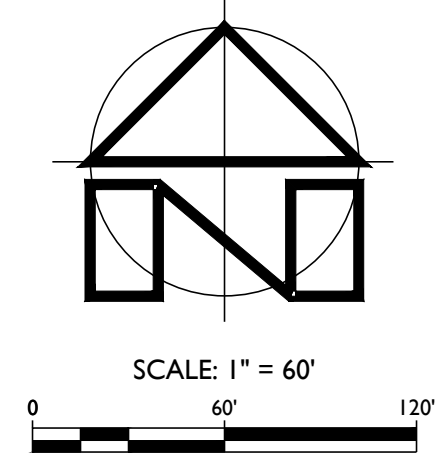
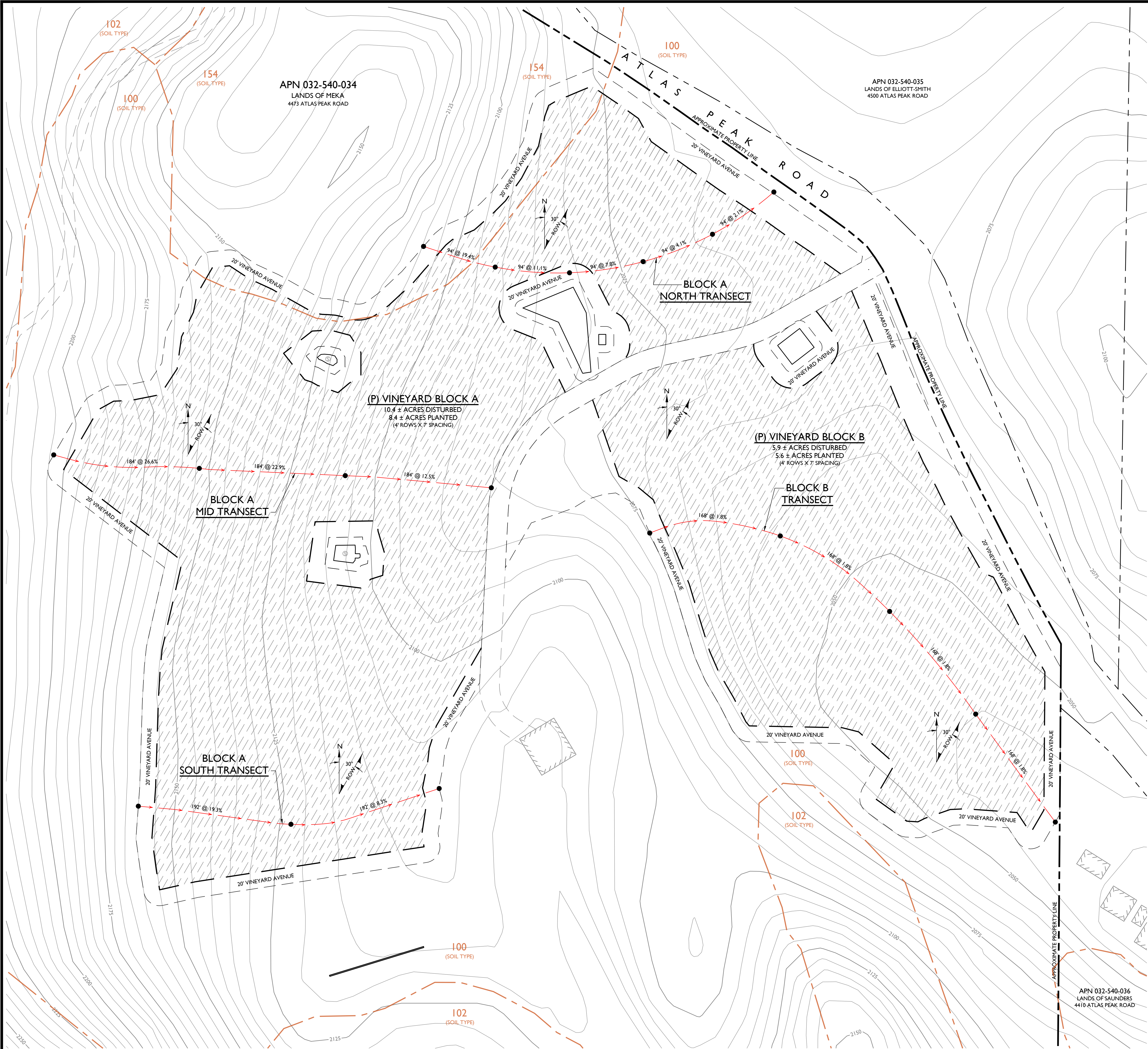
FILE:
21-115EXH-USLE.DWG

ORIGINAL SIZE:
24" X 36"

SHEET NUMBER:

1

OF



LEGEND:

- APPROXIMATE PROPERTY LINE (SUBJECT PARCEL)
- APPROXIMATE PROPERTY LINE (ADJACENT PARCEL)
- SOIL TYPE BOUNDARY
- PROPOSED LIMIT OF VINEYARD BLOCK
- PROPOSED VINEYARD CLEARING LIMITS / VINEYARD AVENUE
- PROPOSED VINE ROWS & ROW DIRECTION
- USLE TRANSECT

SOIL TYPE LEGEND:

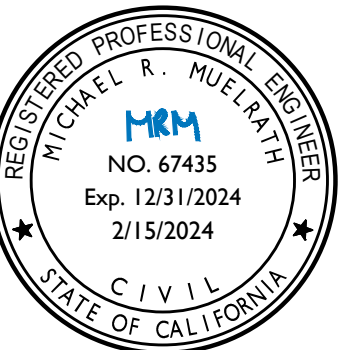
- 100 AIKEN LOAM, 2 TO 15 PERCENT SLOPES
- 101 AIKEN LOAM, 15 TO 30 PERCENT SLOPES
- 102 AIKEN LOAM, 30 TO 50 PERCENT SLOPES
- 152 HAMBRIGHT ROCK-OUTCROP COMPLEX, 30 TO 75 PERCENT SLOPES
- 154 HENNEKE GRAVELLY LOAM, 30 TO 75 PERCENT SLOPES

SOIL TYPE BOUNDARIES SHOWN ON THIS MAP ARE BASED ON THE NAPA COUNTY GEOGRAPHIC INFORMATION SYSTEM DATA AND SHOULD BE CONSIDERED APPROXIMATE.

VINEYARD BLOCKS A & B
SCALE: 1" = 60'

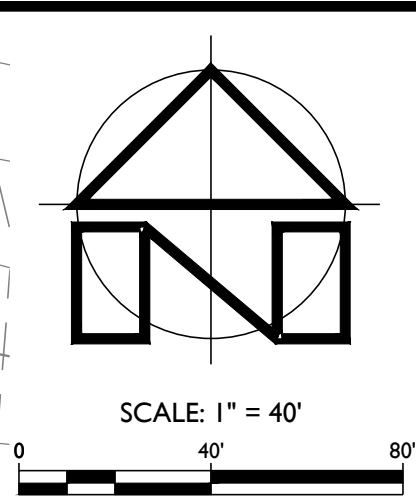
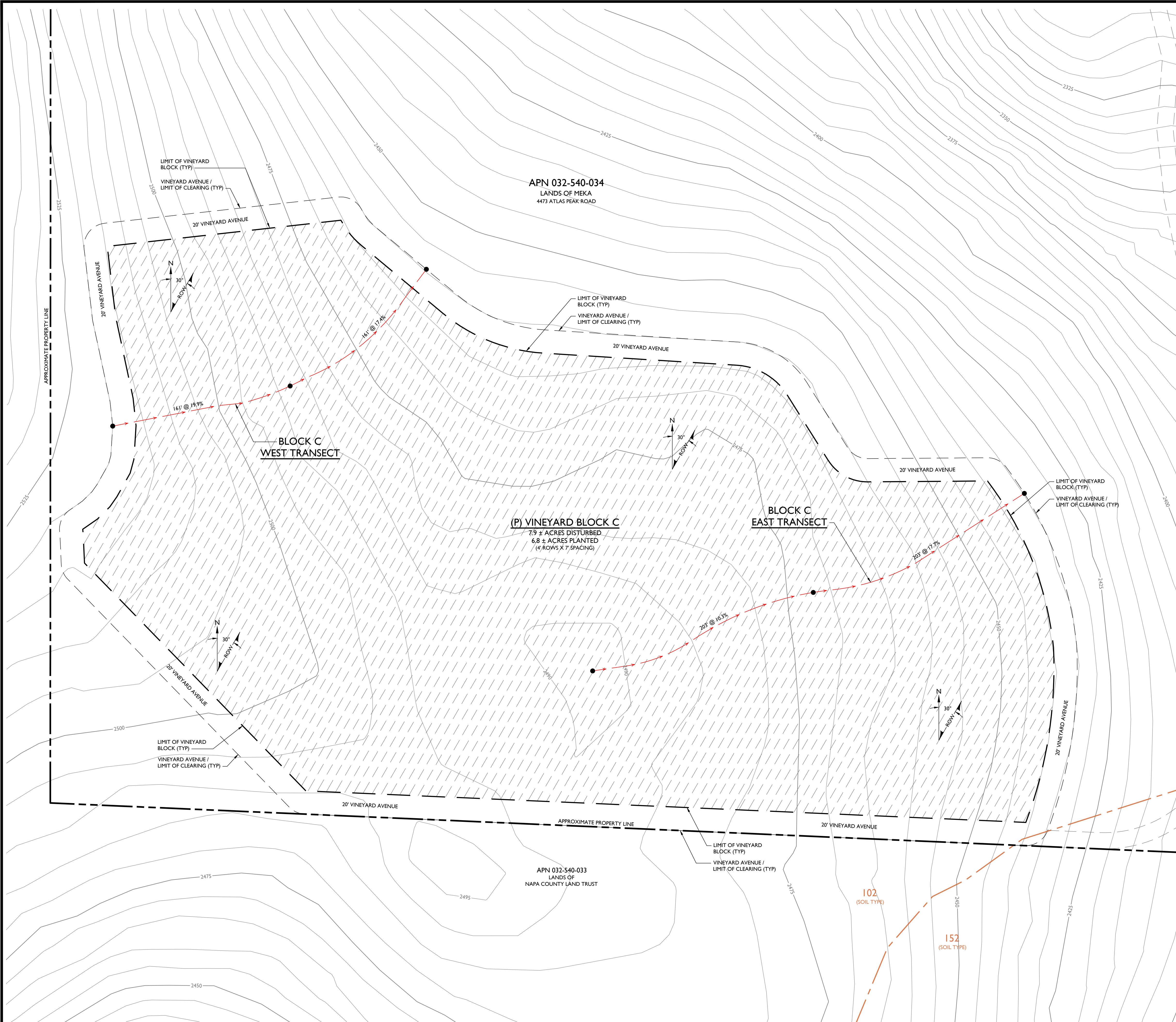
MEKA VINEYARD
UNIVERSAL SOIL LOSS EQUATION EXHIBIT
VINEYARD BLOCKS A & B

PREPARED UNDER THE
DIRECTION OF:



DRAWN BY:
PowerCAD LLC
CHECKED BY:
MRM
DATE:
FEBRUARY 15, 2024
REVISIONS: BY:
2/15/2024 NJH
PERMIT SUBMITTAL

JOB NUMBER:
21-115
FILE:
21-115EXH-USLE.DWG
ORIGINAL SIZE:
24" X 36"
SHEET NUMBER:



LEGEND:

- APPROXIMATE PROPERTY LINE (SUBJECT PARCEL)
- APPROXIMATE PROPERTY LINE (ADJACENT PARCEL)
- SOIL TYPE BOUNDARY
- PROPOSED LIMIT OF VINEYARD BLOCK
- PROPOSED VINEYARD CLEARING LIMITS / VINEYARD AVENUE
- PROPOSED VINE ROWS & ROW DIRECTION
- USLE TRANSECT

SOIL TYPE LEGEND:

- 100 AIKEN LOAM, 2 TO 15 PERCENT SLOPES
- 101 AIKEN LOAM, 15 TO 30 PERCENT SLOPES
- 102 AIKEN LOAM, 30 TO 50 PERCENT SLOPES
- 152 HAMBRIGHT ROCK-OUTCROP COMPLEX, 30 TO 75 PERCENT SLOPES
- 154 HENNEKE GRAVELLY LOAM, 30 TO 75 PERCENT SLOPES

SOIL TYPE BOUNDARIES SHOWN ON THIS MAP ARE BASED ON THE NAPA COUNTY GEOGRAPHIC INFORMATION SYSTEM DATA AND SHOULD BE CONSIDERED APPROXIMATE.

MEKA VINEYARD
UNIVERSAL SOIL LOSS EQUATION EXHIBIT
VINEYARD BLOCK C

PREPARED UNDER THE
DIRECTION OF:



DRAWN BY:
PowerCAD LLC

CHECKED BY:
MRM

DATE:
FEBRUARY 15, 2024

REVISIONS: BY:
2/15/2024 NJH
PERMIT SUBMITTAL

JOB NUMBER:
21-115

FILE:
21-115EXH-USLE.DWG

ORIGINAL SIZE:
24" X 36"

SHEET NUMBER:

3

OF

3