



ADDENDUM

January 10, 2023

To: Mr. Jim Bean
Pritchard Hill Properties LLC (PHP)
Sent via email (jjim@brandnapavalley.com)

Cc: Mr. Mike Muelrath
Applied Civil Engineering, Inc (ACE)
Sent via email (mike@appliedcivil.com)

Job No. 643-NPA05

From: Anthony Hicke, CHG and Edward Linden, GIT
Richard C. Slade & Associates LLC (RCS)

Re: Addendum to Tier 1 Water Availability Analysis (WAA)
Revised Precipitation Dataset
Pritchard Hill Properties LLC

Ref: "Results of Napa County Tier 1 Water Availability Analysis
Pritchard Hill Properties LLC
90, 92, and 95 Long Ranch Road
Vicinity Pritchard Hill, Napa County, CA"
Dated July 13, 2020
Prepared by RCS

This Addendum was prepared in response to a Napa County Planning, Building, & Environmental Services Department (PBES) request to revise the WAA prepared by RCS in July, 2020 for the Pritchard Hill Properties LLC vineyard development project with respect to recent changes in WAA preparation requirements. Specifically, these recent changes are with respect to the precipitation dataset used for groundwater recharge calculations. Furthermore, and independent of the County's request regarding the precipitation dataset used for groundwater recharge calculations, the property owner has reduced the extent of vineyard development area by 4.6 acres. The original project and the prior WAA considered 19.2 acres of proposed new vineyards, but the revised project proposes only 14.6 acres of new vines. This reduction in proposed vineyard area results in lower groundwater demands for the property than those presented in the RCS WAA (2020). No other aspects of the project differ from the descriptions in the prior WAA (RCS, 2020). The revised vineyard development plans prepared by ACE are attached to this Addendum. With (and without) the newly reduced project groundwater demands, the proposed future water use of the project remains lower than the estimated recharge at the property when calculated according to the recent Napa County PBES request. For reference, the subject property boundaries, and the locations of onsite wells and offsite wells are shown on Figure 1, "Property Map".



ADDENDUM

On November 9, 2022, Ms. Pam Arifian of Napa County PBES sent an email to Mr. Mike Muelrath of ACE, with a carbon-copy sent to Mr. Jim Bean of PHP, which stated:

“Since the original WAA was prepared, County practice has shifted from the 30 year PRISM data with average/dry years to the 10 most recent years of PRISM data in order to better reflect recent trends in precipitation. Please revise the WAA to match the proposed project and using the 10 most recent years PRISM data.”

In response to this recent PBES request, RCS has recalculated groundwater recharge for the Pritchard Hill Properties LLC vineyard development project, but instead basing the new calculation on the County-provided precipitation dataset covering the 10 most recent years of PRISM data (Napa County, 2022a), rather than the 30-year PRISM precipitation dataset that had been used in the original RCS WAA (2020).

Groundwater Recharge Calculations

Original WAA (2020)

The originally submitted WAA (RCS, 2020) presented an onsite groundwater recharge estimate of 23.8 acre-feet per year (AFY). That recharge estimate was calculated based on estimates of rainfall, deep percolation rates, property area, and a 50-acre onsite “dry area” on which it was assumed no deep percolation occurred, in compliance with Napa County’s then-current Tier 1 WAA requirements (Napa County, 2015).

As described in the original WAA (RCS, 2020), omitting the 50-acre “dry area” on the property for calculation purposes results in a current “available recharge area” of 58.9 acres (this is 50 acres less than the assessed property area of 108.9 acres). The deep percolation rate of rainfall used in the 2020 WAA was originally estimated to be 14%, and the average annual onsite precipitation used in our prior document was 34.7 inches (derived from then-current 30-year [1981-2010] PRISM precipitation normals 800-meter dataset). Using those values, an estimated average groundwater recharge volume of 23.8 AFY was calculated for the property in the RCS WAA (2020).

Subject 2022 Revised Calculation

By request of PBES, and based on the recently updated PBES methodology, a new estimate of groundwater recharge is calculated herein using a County-provided GIS dataset representing average water year (WY) precipitation from WY 2011-12 to WY 2020-21 (Napa County, 2022a). The description of this dataset states: *“The 10-year average for precipitation in Napa County was determined with monthly precipitation data from PRISM Climate Group. Annual totals were calculated on a water year basis (October through September). Precipitation values are in inches/year.”* This County-provided dataset was apparently derived from a monthly timestep PRISM precipitation dataset, but neither a specific reference to the original dataset, nor a description of the methodology for the derivation were distributed with the County files. The gridded polygon cells in the County-provided dataset are slightly variable in dimension, measuring roughly 210 meters wide (longitudinally [i.e., in a roughly west to east direction]) by 268 meters tall (latitudinally [i.e., in a roughly north to south direction]).

Using the County-provided 10-year average data set, RCS calculates the area-weighted mean (average) precipitation for the entire subject property to now be approximately 28.14 inches



ADDENDUM

(2.35 ft), which is 19% lower than the 34.7-inch total presented in the 2020 WAA. To calculate an updated groundwater recharge value for the subject property, the previously used 30-year average precipitation estimate of 34.7 inches is replaced with the 10-year average precipitation estimate of 28.14 inches, but all of the other values used in the original groundwater recharge calculation remain unchanged (i.e., 14% rainfall deep percolation rate, 58.9 acres of “available recharge area”). This updated calculation results in a revised groundwater recharge estimate of 19.3 AFY, which is 4.5 AFY lower than the 23.8 AFY groundwater recharge estimate presented in the 2020 WAA (RCS).

RCS understands that a “prolonged drought analysis” is no longer required for WAA preparation due to the required use of the 10-year annual rainfall average (Napa County, 2022b).

Groundwater Demand Estimates

An estimated future (after project completion) total onsite groundwater demand of 24.7 AFY was calculated in the RCS WAA (2020) and that calculation used a unit irrigation demand (usage) of 0.51 AFY/acre for the proposed new vineyard areas (see Table 1, below). As described in the prior WAA (RCS, 2020), the existing residential, winery, and landscape/lawn irrigation demands will be unchanged as part of the proposed project; the only changes to onsite groundwater demands will result from the proposed expansion of vineyard areas.

Water demands for the existing onsite developments have historically been met via groundwater pumped primarily by an offsite well (the “Canyon Well” on attached Figure 1) for which a water easement reportedly exists; onsite water demands are also supplemented by an onsite well (the “Fitts Well”; see Figure 1). A new onsite water-supply well (the “New Well” on Figure 1) was constructed in September 2018 to meet the irrigation demands that will be required for the proposed new vineyard development project. The “New Well” could also be used to supplement existing onsite water demands, if necessary. A third onsite well exists on the subject property, (the “Easement Well”; see Figure 1); this well is owned by others (not Pritchard Hill Properties LLC) and is currently unused. It is reported that there is an existing easement for the “Easement Well” to allow it to supply water to a neighboring offsite property, and it can be used by that neighboring property for water supply in the future.

Water demands for the proposed new vineyards are proposed to be met using groundwater pumped from two onsite wells: the Fitts Well and the New Well. Water demands for existing onsite uses will not increase as part of the proposed project and will continue to be supplied by groundwater pumped from the offsite Canyon Well, supplemented by the Fitts Well and the New Well when necessary.

For the purposes of this WAA Addendum, the Fitts Well and the New Well are considered the “project wells” because they will be used to meet the new water demands of the proposed vineyard development project. All changes to onsite groundwater demands will thus be met solely by combined pumping from the Fitts Well and the New Well. As noted above, all other existing onsite water demands will continue to be supplied by groundwater pumped from the offsite Canyon Well, and will be supplemented by the Fitts Well and the New Well when necessary.



ADDENDUM

All water use estimates presented in the 2020 WAA were prepared by the project owner and Applied Civil Engineering, Inc. (ACE), the project civil engineer; those water use estimates are still applicable to the project.

The revised proposed vineyard development project discussed herein is identical to the project described in the 2020 WAA, except for a 24% reduction to the area of the proposed new vineyard development (from 19.2 originally proposed acres to 14.6 currently proposed acres), which corresponds to a reduction in the required volumes and pumping rates required from the Fitts Well and the New Well that were previously proposed to meet the irrigation demands of the proposed vineyard development area.

Under the revised project, the total onsite vineyard area will be 26.1 acres, which would include 11.5 acres of existing vineyards and 14.6 acres of proposed vineyards. Application of the groundwater use rate of 0.51 AFY/acre to the revised total onsite vineyard area of 26.1 acres yields a total anticipated vineyard irrigation groundwater demand of 13.2 AFY. Adding this vineyard demand total to the existing and proposed non-vineyard demands of 9.1 AFY presented in the 2020 WAA results in a future total onsite water demand of 22.4 AFY. The irrigation demands of the new vineyard areas will be met exclusively by the Fitts Well and the New Well, consistent with the 2020 WAA. Table 1 summarizes and compares the revised project estimates of onsite groundwater demands and the estimates of groundwater demands presented in the 2020 WAA.

In the 2020 WAA, approximately 2 to 4 AFY were estimated as being currently pumped from the Fitts Well to help meet existing onsite water demands. The 9.8 AFY demand increase (see Table 1) presented therein for irrigation of the new vineyard areas was proposed to be met solely by a combined increase in pumping from the Fitts Well and the New Well, without any other changes to the existing onsite water supplies or uses. The combined production required from the Fitts Well and the New Well to meet the increased demand was estimated to be 11.8 to 13.8 AFY, which in turn was calculated to require a combined pumping rate of 38 to 43 gpm from these wells. Note that these pumping rates were estimated based on the assumption that a portion of the 2 to 4 AFY existing demand from the Fitts Well was distributed over a 365-day period to better reflect year-round domestic and winery demands, rather than the 20-week, 12-hr/day pumping period that was assumed for the 9.8 AFY portion of combined production from the Fitts Well and the New Well.

The 7.4 AFY increase in irrigation demand under the revised project is 2.4 AFY lower than the corresponding value presented in the 2020 WAA (see Table 1). As with the 2020 WAA, the increase in irrigation demand resulting from the revised vineyard development project is proposed to be met solely by a combined increase in pumping from the Fitts Well and the New well, without any other changes to the existing onsite water supplies or uses. In addition, the same approximately 2 to 4 AFY are assumed to be currently pumped from the Fitts Well to help meet existing onsite water demands. As a result of the smaller increase in irrigation demand of 7.4 AFY, the required combined production from the Fitts Well and the New Well under the revised project is 9.4 to 11.4 AFY. To present a more conservative (higher) estimate of the combined required pumping rate from these two wells, the existing 2 to 4 AFY production from the Fitts Well was also assumed to only occur during the 20-week, 12-hr/day irrigation season. Based on these assumptions, a combined pumping rate of 30 to 37 gpm will be required from the Fitts Well and



ADDENDUM

the New Well for the revised project, which is less than the 38 to 43 gpm estimated in the RCS 2020 WAA.

As stated above, the Fitts Well and the New Well are considered the “project wells” because they will be used to meet the irrigation demands of the proposed vineyard development project. All changes to onsite groundwater demands will thus be met solely by combined pumping from the Fitts Well and the New Well. All other existing onsite water demands will continue to be supplied by groundwater pumped from the offsite Canyon Well, and will be supplemented by the Fitts Well and the New Well when necessary.

Table 1 - Summary of Groundwater Demand and Supply Estimates

Groundwater Demand / Supply	RCS WAA (2020) Estimate	Revised Project Estimate	Item ID & Calculation
Residential Demand (Existing and Future)	1.9 AFY (no change)		A
Winery Demand (Existing and Future)	0.4 AFY (no change)		B
Landscape and Lawn Irrigation Demand (Existing and Future)	6.8 AFY (no change)		C
Total Onsite Non-Vineyard Irrigation Demand (Existing and Future)	9.1 AFY (no change)		D = A + B + C
Vineyard Irrigation Demand (Existing Area)	5.8 AFY for 11.5 ac of existing vineyards (no change)		E
Total Onsite Demand (Existing)	14.9 AFY		F = D + E
Vineyard Irrigation Demand (Proposed Area; 0.51 AFY/ac)	9.8 AFY for 19.2 ac new vineyards	7.4 AFY for 14.6 ac new vineyards	G
Total Vineyard Irrigation Demand (Existing Area + Proposed Area)	15.6 AFY for 30.7 ac vineyards	13.2 AFY for 26.1 ac vineyards	H = E + G
Total Onsite Demand (Future)	24.7 AFY (increase of 9.8 AFY)	21.3 AFY (increase of 7.4 AFY)	Total = D + H
Groundwater Supply from Offsite Source (Canyon Well; not used for new vineyard areas)	10.9 to 12.9 AFY (no change)		--
Groundwater Supply from Onsite Sources (Fitts Well & New Well)	11.8 to 13.8 AFY (irrigation of new vineyard areas & 2 to 4 AFY for other onsite uses)	9.4 to 11.4 AFY	--

ac = acres

Conclusions

The data and calculations presented herein demonstrate that when considering the new County-mandated calculations using the 10-year rainfall average, the groundwater required to be pumped from the onsite project wells annually (9.4 to 11.4 AFY) is less than the 19.3 AFY of onsite groundwater recharge estimated from the County-provided precipitation dataset. Furthermore, the proposed onsite vineyard demands will be easily met by the two onsite wells, and at pumping rates (30 to 37 gpm combined from both project wells) that are lower than those proposed in the 2020 WAA (38 to 43 gpm combined from both project wells).

No other project details or RCS WAA calculations are changed as part of this Addendum document, other than as discussed herein. For all other project details, please refer to the referenced RCS 2020 WAA.



ADDENDUM

Closure/Disclaimer

This Addendum regarding RCS's WAA for a proposed vineyard development project for Pritchard Hill Properties LLC at 90, 92, and 95 Long Ranch Road, Vicinity Pritchard Hill, Napa County, CA has been prepared for Mr. Jim Bean of Pritchard Hill Properties LLC and applies only to the evaluation of the subject property for the requirements discussed herein. This report has been prepared in accordance with the care and skill generally exercised by reputable professionals, under similar circumstances, and in this or similar localities. No other warranty, either express or implied, is made to the calculations, conclusions, or professional advice presented herein.

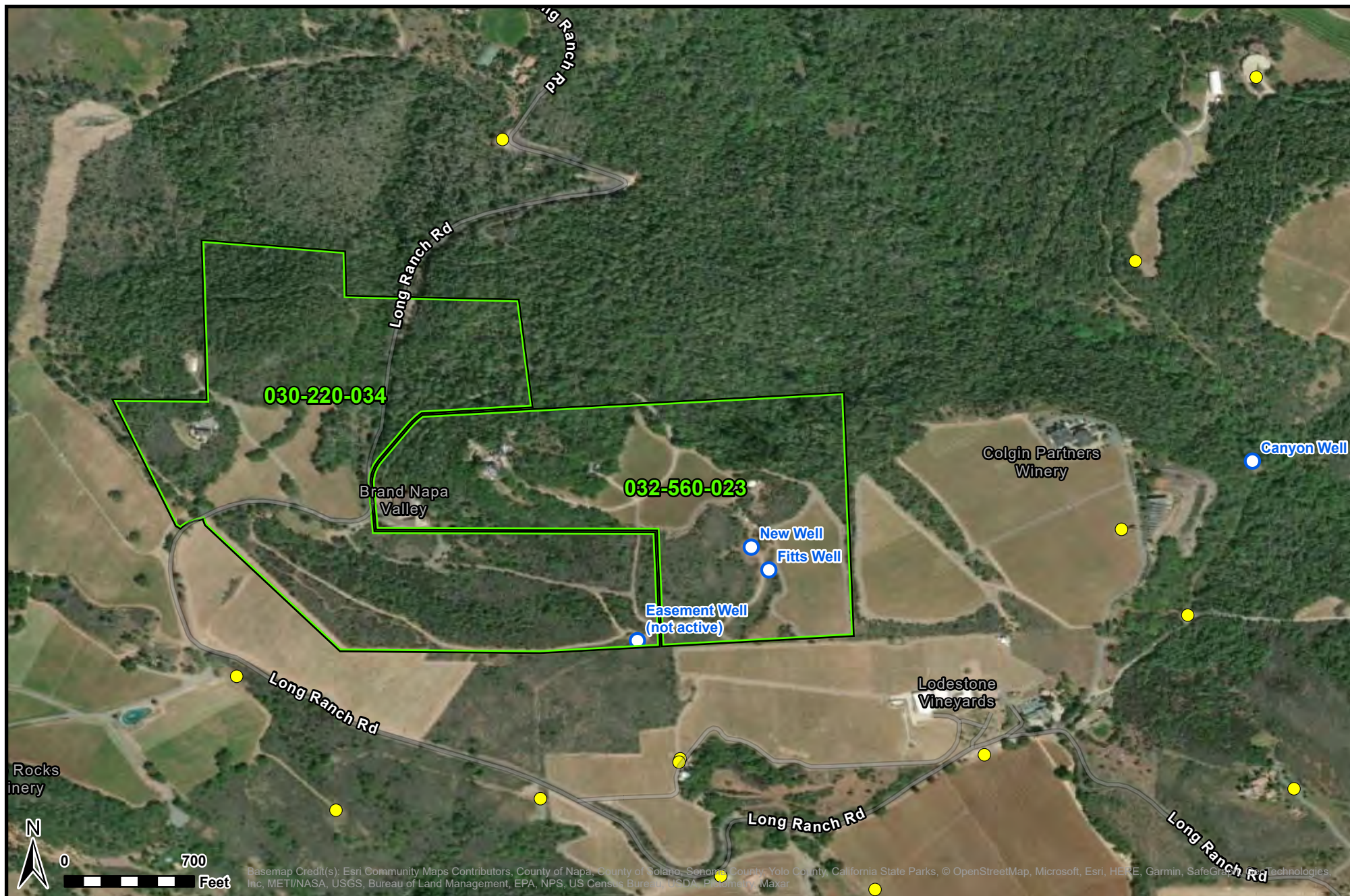
References

Napa County, 2015. Water Availability Analysis (WAA) – Guidance Document. Napa County Board of Supervisors, Adopted May 12, 2015.

Napa County, 2022a. MeanPrecip_WY_2012_2021_PRISM. Feature Service polygon layer. Credits: <https://prism.oregonstate.edu/recent/> (data modified by LSCE and Napa Co. PBES). Geographic coordinate system: NAD 1983. Last updated: 10/20/2022. Accessed 12/14/2022 at:
<https://napacounty.maps.arcgis.com/home/item.html?id=985a11dfb2ab45518254354036c93aa2>

-----, 2022b. "WAA & Napa County Practices" Stakeholder Outreach Meeting. Virtual meeting held on November 28, 2022.

Richard C. Slade & Associates LLC (RCS), 2020. Results of Napa County Tier 1 Water Availability Analysis Pritchard Hill Properties LLC 90, 92, and 95 Long Ranch Road Vicinity Pritchard Hill, Napa County, CA. Dated 7/13/2020.



LEGEND

- Water-Supply Well (Pritchard Hill Properties LLC)
- Water-Supply Well (Offsite)
- Subject Parcel Boundary (Showing APN; Napa County, 12/7/22)

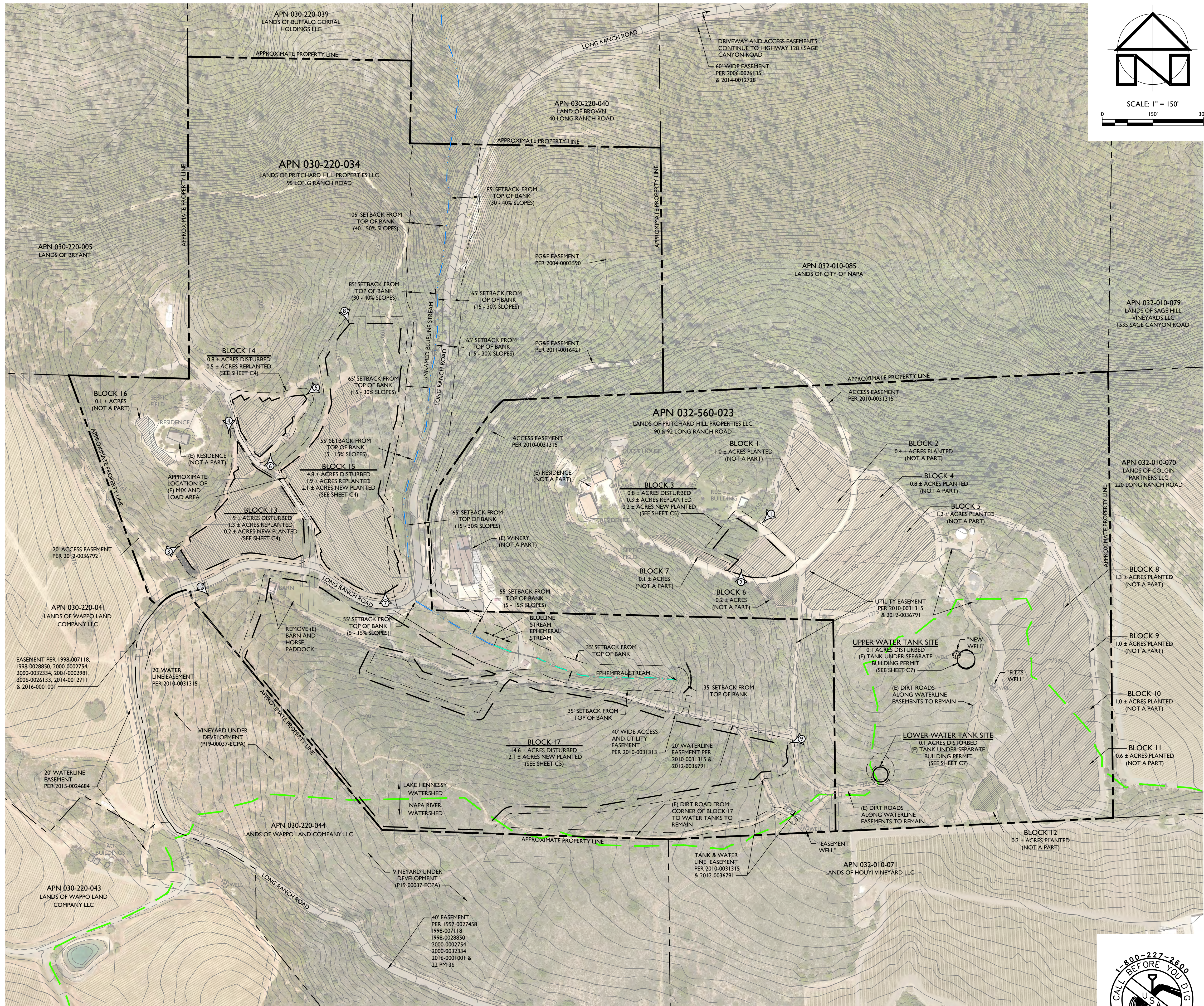


Figure 1
Property Map

Attachment
Revised Vineyard Development Plans

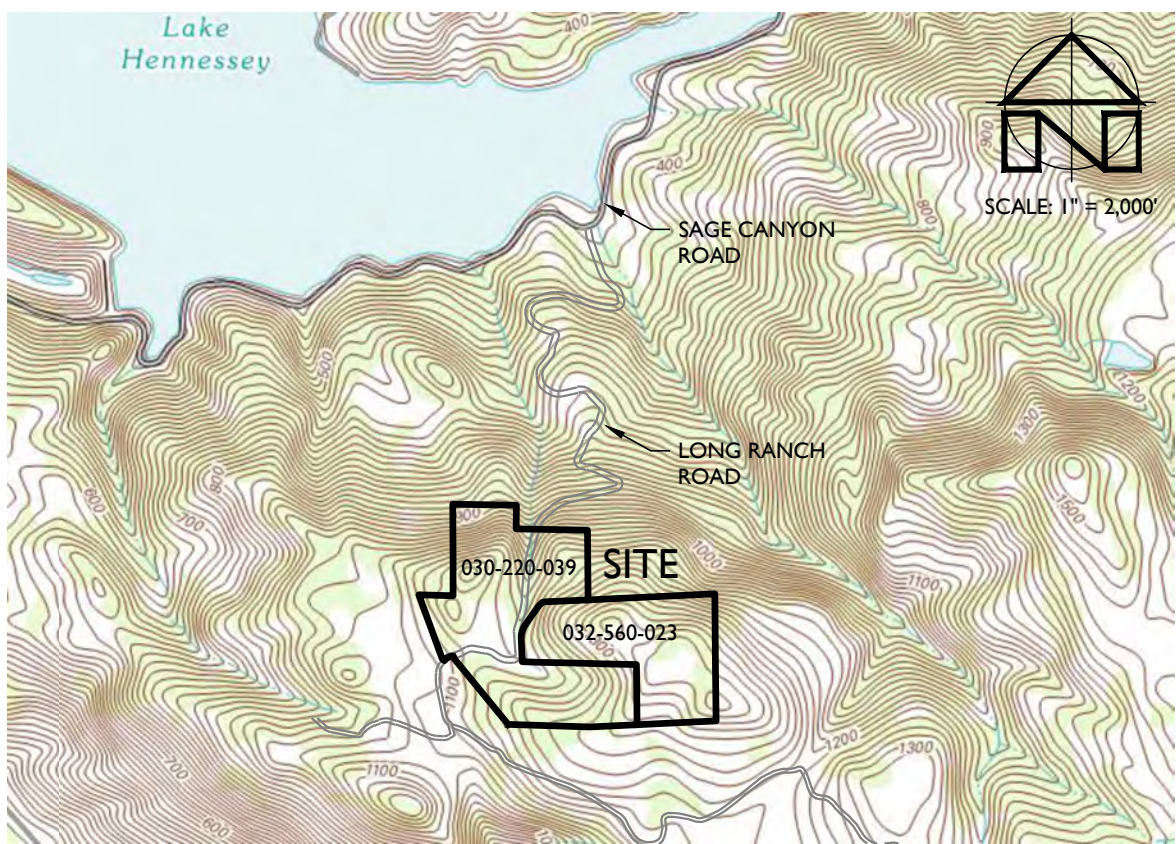
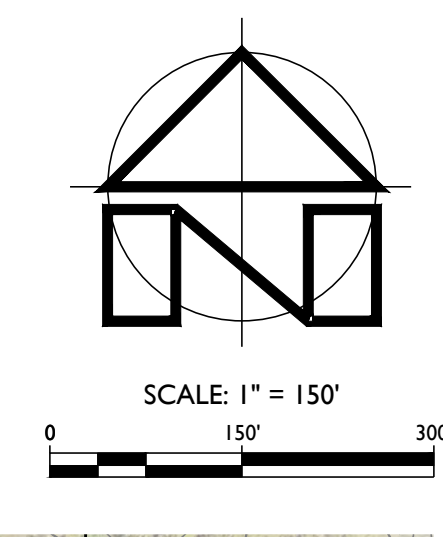
PRITCHARD HILL PROPERTIES LLC

VINEYARD DEVELOPMENT EROSION CONTROL PLAN



OVERALL SITE PLAN

SCALE: 1" = 150'



LOCATION MAP

SCALE: 1" = 2,000'

PROJECT INFORMATION:

PROPERTY OWNER & APPLICANT:
PRITCHARD HILL PROPERTIES LLC
420 PALM STREET
PALO ALTO, CA 94301

SITE ADDRESS:
90, 92 & 95 LONG RANCH ROAD
ST. HELENA, CA 94574

ASSESSOR'S PARCEL NUMBERS:
032-560-023 & 030-220-034

PARCEL SIZES:
42.3 ± & 66.6 ± ACRES

PROJECT SIZES:
23.0 ± ACRES TOTAL DISTURBED
18.6 ± ACRES TOTAL PLANTED
4.0 ± ACRES REPLANTED
14.6 ± ACRES NEW PLANTED

ZONING:
AGRICULTURAL WATERSHED (AW)

WATER SOURCE:
EXISTING WELLS

SHEET INDEX:

C1	OVERALL SITE PLAN
C2	NOTES, ABBREVIATIONS AND LEGEND
C3	VINEYARD SLOPE DETERMINATION SECTIONS
C4	EROSION CONTROL PLAN - VINEYARD BLOCKS 13, 14 AND 15
C5	EROSION CONTROL PLAN - VINEYARD BLOCKS 3 AND 17
C6	FENCING AND WATER LINE EXHIBIT
C7	WATER TANK EROSION CONTROL PLANS
C8	DETAILS

PROJECT DESCRIPTION:

THE PURPOSE OF THIS PROJECT IS TO REPLANT AND EXPAND 4 VINEYARD BLOCKS AND CREATE 1 NEW VINEYARD BLOCK ON THE SUBJECT PARCELS.

FLOOD HAZARD NOTE:

ACCORDING TO THE FEDERAL EMERGENCY MANAGEMENT AGENCY (FEMA) FLOOD INSURANCE RATE MAP (FIRM) MAP NUMBER 06055C0405E, EFFECTIVE SEPTEMBER 26, 2008, THE PROJECT SITE IS NOT LOCATED IN A SPECIAL FLOOD HAZARD AREA.

LEGEND:

---	APPROXIMATE PROPERTY LINE
---	BLUELINE STREAM
---	EPHEMERAL STREAM
---	EXISTING VINEYARD BLOCK
---	VINEYARD AVENUE / LIMIT OF GRADING
---	LIMIT OF VINEYARD BLOCK
---	PHOTO LOCATION AND DIRECTION

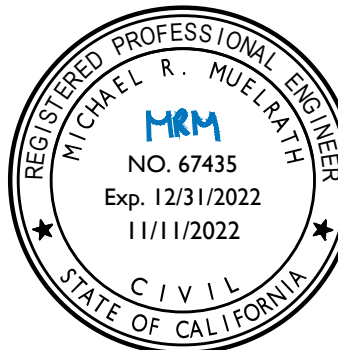
SITE PHOTOGRAPH NOTES:

① REPRESENTS APPROXIMATE LOCATION AND DIRECTION OF ISOMETRIC VIEW OBTAINED FROM GOOGLE EARTH IMAGERY DATED SEPTEMBER 1, 2018. SEE PHOTOGRAPHIC DOCUMENTATION OF EXISTING SITE CONDITIONS FOR THE PRITCHARD HILL PROPERTIES LLC VINEYARD DEVELOPMENT EROSION CONTROL PLAN FOR PHOTOGRAPHS.

PRITCHARD HILL PROPERTIES LLC

VINEYARD DEVELOPMENT EROSION CONTROL PLAN
OVERALL SITE PLAN

PREPARED UNDER THE
DIRECTION OF:



DRAWN BY:
PowerCAD LLC

CHECKED BY:
MRM

DATE:
NOVEMBER 11, 2022

REVISIONS: BY:
7/7/2020 YMS
PERMIT SUBMITTAL

4/7/2021 YMS
PLAN CHECK
COMMENTS

11/11/2022 YMS
PROJECT REVISION

JOB NUMBER:
15-132

FILE:
15-132ECP-OSP.DWG

ORIGINAL SIZE:
24" X 36"

SHEET NUMBER:

C1

OF

8

GENERAL NOTES:

1. THESE DRAWINGS WERE DEVELOPED EXCLUSIVELY FOR THIS PROJECT AND ARE NOT TO BE REPRODUCED OR USED FOR ANY OTHER PROJECT WITHOUT THE WRITTEN PERMISSION OF APPLIED CIVIL ENGINEERING INCORPORATED.
2. ALL MATERIALS AND WORKMANSHIP FOR THE WORK DESCRIBED ON THESE PLANS SHALL CONFORM TO THE LATEST EDITIONS OF THE FOLLOWING STANDARDS AS ADOPTED AND AMENDED BY NAPA COUNTY:

CALIFORNIA BUILDING CODE (2019)

CALIFORNIA ELECTRIC CODE (2019)

CALIFORNIA PLUMBING CODE (2019)

CALIFORNIA MECHANICAL CODE (2019)

CALIFORNIA FIRE CODE (2019)

CALIFORNIA DEPARTMENT OF TRANSPORTATION (2018)

NAPA COUNTY CODE (CURRENT)

- CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR BEING FAMILIAR WITH ALL STANDARDS, CODES AND REGULATIONS APPLICABLE TO THIS PROJECT.
3. CONTRACTOR SHALL BE APPROPRIATELY LICENSED WITH THE STATE OF CALIFORNIA TO PERFORM THE WORK SHOWN ON THESE PLANS.
4. CONTRACTOR SHALL SUPPLY ALL MATERIALS, EQUIPMENT AND LABOR NECESSARY TO CONSTRUCT THE IMPROVEMENTS ILLUSTRATED ON THESE PLANS.
5. CONTRACTOR SHALL PROVIDE SUBMITTALS FOR ALL MATERIALS AND PRODUCTS TO BE USED FOR THE SITE IMPROVEMENTS TO APPLIED CIVIL ENGINEERING INCORPORATED FOR REVIEW AND APPROVAL.
6. THE IMPROVEMENTS SHOWN ON THESE PLANS REQUIRE INSPECTION BY THE NAPA COUNTY PLANNING, BUILDING AND ENVIRONMENTAL SERVICES DEPARTMENT. CONTRACTOR IS RESPONSIBLE FOR SCHEDULING ALL INSPECTIONS.
7. CONTRACTOR SHALL SCHEDULE A PRECONSTRUCTION MEETING WITH APPLIED CIVIL ENGINEERING INCORPORATED AND NAPA COUNTY AT LEAST ONE WEEK PRIOR TO THE COMMENCEMENT OF CONSTRUCTION TO REVIEW THE PROJECT PLANS AND SPECIFICATIONS AND NAPA COUNTY REQUIREMENTS.
8. CONTRACTOR IS RESPONSIBLE FOR SECURING ALL CONSTRUCTION RELATED PERMITS FROM THE GOVERNING AGENCIES AND MAINTAINING A COPY OF THE PERMITS AND THE APPROVED PLANS ON THE JOB SITE AT ALL TIMES.
9. THE PROPERTY OWNER AND CONTRACTOR ARE RESPONSIBLE FOR OBTAINING ALL APPROPRIATE PERMITS FOR WORK WITHIN ANY RIPARIAN AREA PRIOR TO COMMENCING WORK IN THAT AREA.
10. CONTRACTOR IS SOLELY RESPONSIBLE FOR JOB SITE CONDITIONS AND THE SAFETY OF PROPERTY AND PEOPLE ON THE JOB SITE AT ALL TIMES. CONTRACTOR SHALL MAINTAIN THE JOB SITE IN A SAFE CONDITION, IN ACCORDANCE WITH FEDERAL, STATE AND LOCAL REQUIREMENTS, AT ALL TIMES, INCLUDING OUTSIDE OF NORMAL WORKING HOURS. CONTRACTOR SHALL DEFEND, INDEMNIFY AND HOLD THE OWNER AND ENGINEER HARMLESS FROM ALL LIABILITY, REAL OR ALLEGED, IN CONNECTION WITH THE PERFORMANCE OF WORK ON THE PROJECT, EXCEPT LIABILITY ARISING FROM THE SOLE NEGLIGENCE OF THE OWNNER OR THE ENGINEER.
11. CONTRACTOR SHALL PROVIDE AND MAINTAIN BARRICADES TO PROVIDE FOR THE SAFETY OF THE GENERAL PUBLIC TO THE SATISFACTION OF NAPA COUNTY AND THE OWNER.
12. THESE PLANS ARE INTENDED TO PROVIDE HORIZONTAL AND VERTICAL CONTROL FOR THE PROPOSED SITE IMPROVEMENTS SHOWN HEREON.
13. ALL DIMENSIONS SHOWN ON THESE PLANS SHOW MEASUREMENTS IN A HORIZONTAL PLANE UNLESS OTHERWISE SPECIFIED.
14. ALL WRITTEN DIMENSIONS SUPERCEDE ANY SCALED DIMENSIONS. IF AN APPARENT DISCREPANCY IS IDENTIFIED CONTACT APPLIED CIVIL ENGINEERING INCORPORATED IMMEDIATELY FOR A WRITTEN CLARIFICATION.
15. IF ANY CONTRACTOR, SUBCONTRACTOR, OR SURVEYOR IDENTIFIES ANY OMISSIONS, DEFICIENCIES, CONFLICTS OR ERRORS IN THESE PLANS AND SPECIFICATIONS OR IF THERE IS ANY DOUBT AS TO THEIR MEANING OR INTENT, THEY SHALL CONTACT APPLIED CIVIL ENGINEERING INCORPORATED FOR A WRITTEN ADDENDUM OR CLARIFICATION. CONTRACTOR IS NOT ELIGIBLE FOR ADDITIONAL COMPENSATION IF THEY FAIL TO DO SO BEFORE PROVIDING A PROPOSAL.
16. CONTRACTOR IS TO PROTECT ALL EXISTING SITE IMPROVEMENTS, UTILITIES, BUILDINGS AND NATURAL FEATURES FROM DAMAGE THROUGHOUT THE DURATION OF CONSTRUCTION. ANY DAMAGE CAUSED BY CONTRACTOR SHALL BE REPAIRED AT CONTRACTOR'S EXPENSE.

SURVEY NOTES:

1. 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.
2. AERIAL PHOTOGRAPHS WERE OBTAINED FROM THE NAPA COUNTY GEOGRAPHIC INFORMATION SYSTEM (GIS) DATABASE, TAKEN APRIL TO JUNE 2018 AND MAY NOT REPRESENT CURRENT CONDITIONS.
3. CONTOUR INTERVAL: FIVE (5) FEET, HIGHLIGHTED EVERY TWENTY FIVE (25) FEET
4. BENCHMARK: NAVD 88
5. THE PROPERTY LINES SHOWN ON THESE PLANS DO NOT REPRESENT A BOUNDARY SURVEY. THEY ARE APPROXIMATE AND ARE PROVIDED FOR INFORMATIONAL PURPOSES ONLY.
6. CONTRACTOR SHALL PRESERVE ALL EXISTING MONUMENTS THROUGHOUT THE DURATION OF CONSTRUCTION OR HAVE THEM REPLACED AT THEIR OWN EXPENSE.
7. ALL CONSTRUCTION STAKING SHALL BE PERFORMED BY A LICENSED LAND SURVEYOR.

GRADING NOTES:

1. ALL EARTHWORK IS TO CONFORM TO THE REQUIREMENTS OF THE CALIFORNIA BUILDING CODE, NAPA COUNTY CONSERVATION REGULATIONS AND THE NAPA COUNTY PLANNING, BUILDING AND ENVIRONMENTAL SERVICES DEPARTMENT - ENGINEERING DIVISION STANDARDS.
2. ALL CUT AND FILL SLOPES SHALL BE NO STEEPER THAN 2:1 UNLESS OTHERWISE APPROVED BY A GEOTECHNICAL ENGINEER.
3. ALL DEBRIS GENERATED DURING DEMOLITION, SITE STRIPPING AND GRADING ACTIVITIES IS TO BE DISPOSED OF PROPERLY OFFSITE BY THE CONTRACTOR.
4. CONTRACTOR IS RESPONSIBLE FOR IMPORTING AND / OR EXPORTING MATERIALS AS NECESSARY TO ACHIEVE THE FINISH GRADES ILLUSTRATED ON THESE PLANS.
5. CONTRACTOR SHALL CONDUCT ALL GRADING OPERATIONS IN A MANNER THAT PREVENTS WIND BLOWN DIRT AND DUST AND RELATED DAMAGE TO NEIGHBORING PROPERTIES.
6. CONTRACTOR SHALL CONFORM TO EXISTING IMPROVEMENTS WITH A SMOOTH TRANSITION TO AVOID ABRUPT CHANGES IN GRADE, LOW SPOTS OR OTHER HAZARDOUS CONDITIONS.
7. PROPERTY OWNER SHALL BE RESPONSIBLE FOR MAINTAINING ALL FINISH GRADED SLOPES AFTER THE COMPLETION OF CONSTRUCTION AND REPAIRING ANY EROSION DAMAGE.

EXISTING UTILITY NOTES:

1. THE EXISTING UTILITY LOCATIONS SHOWN ON THESE PLANS ARE APPROXIMATE AND FOR INFORMATIONAL PURPOSES ONLY. THEY ARE BASED ON INFORMATION PROVIDED BY THE PROPERTY OWNER, THE SURVEYOR AND THE RESPECTIVE UTILITY COMPANIES. APPLIED CIVIL ENGINEERING INCORPORATED ASSUMES NO LIABILITY REGARDING THE ACCURACY OR THE COMPLETENESS OF THEIR LOCATIONS.
2. CONTRACTOR IS RESPONSIBLE FOR VERIFYING EXISTING UTILITY LOCATIONS PRIOR TO ORDERING MATERIALS OR BEGINNING CONSTRUCTION. IF A DISCREPANCY BETWEEN THE PLANNED AND ACTUAL HORIZONTAL OR VERTICAL LOCATION OF ANY EXISTING UTILITY EXISTS, CONTRACT APPLIED CIVIL ENGINEERING INCORPORATED FOR AN ALTERNATE DESIGN.
3. CONTRACTOR SHALL NOTIFY ALL PUBLIC AND PRIVATE UTILITY COMPANIES TWO WORKING DAYS PRIOR TO THE START OF CONSTRUCTION TO MARK THE LOCATION OF EXISTING UTILITY LINES. CALL UNDERGROUND SERVICE ALERT (USA) AT (800) 227-2600.
4. EXISTING UTILITIES ARE TO REMAIN IN SERVICE AT ALL TIMES. CONTRACTOR SHALL PROTECT ALL EXISTING UTILITIES PER THE REQUIREMENTS OF THE UTILITY OWNER.
5. CONTRACTOR SHALL COORDINATE ANY REQUIRED UTILITY RELOCATIONS WITH THE UTILITY OWNER.

EROSION CONTROL COVER CROP MANAGEMENT NOTES:

1. ESTABLISHING AN EFFECTIVE VEGETATIVE COVER CROP WILL BE THE PRIMARY MEANS OF PREVENTING EROSION FROM THE PROPOSED VINEYARD DEVELOPMENT AREA. AFTER THE INITIAL LAND PREPARATION ACTIVITIES ARE COMPLETE A TEMPORARY COVER CROP WILL BE PLANTED AND STRAW MULCH WILL BE APPLIED THROUGHOUT THE CLEARED AREA TO STABILIZE THE PROJECT AREAS THROUGH THE WINTER. MINIMUM COVERAGE REQUIRED TO MAINTAIN EROSION RATES AT ACCEPTABLE LEVELS ARE LISTED IN THE VINEYARD BLOCK COVER CROP SPECIFICATION TABLE, THIS SHEET.
2. THE TEMPORARY COVER CROP WILL BE TILLED IN THE SPRING DURING THE INITIAL VINEYARD ESTABLISHMENT PERIOD (UP TO THE FIRST THREE YEARS). THE TILLED AREAS AND ANY OTHER DISTURBED AREAS OR AREAS WITH LESS THAN ADEQUATE COVER WILL ALSO BE MULCHED EACH YEAR IN THE FALL TO PROTECT THE BARE SOIL WHILE THE COVER CROP IS GETTING ESTABLISHED.
3. AFTER THE VINEYARD ESTABLISHMENT PERIOD ALL VINEYARD BLOCKS WILL BE CONVERTED TO A NO-TILL REGIME. THE NO-TILL COVER CROP WILL BE MOWED IN THE SPRING AND WILL BE RESEEDED AND MULCHED IN THE FALL AS NECESSARY TO ACHIEVE THE SPECIFIED COVER IN THE VINEYARD BLOCK COVER CROP SPECIFICATION TABLE, THIS SHEET.
4. ALL VINEYARD AVENUES WILL BE PROTECTED WITH A PERMANENT NO-TILL COVER CROP WITH DENSITIES MAINTAINED AT THE INDICATED COVER SPECIFICATION FOR THE BLOCK OR MORE THROUGHOUT THE RAINY SEASON. VINEYARD AVENUES SHALL NOT BE TILLED. ALTERNATIVELY, VINEYARD AVENUES MAY BE LINED WITH CRUSHED ROCK TO PROTECT FROM EROSION AND PROVIDE ALL WEATHER ACCESS.
5. THE COVER CROP SHOULD BE IRRIGATED PRIOR TO THE RAINY SEASON TO ESTABLISH A DENSE COVER PRIOR TO THE ONSET OF HEAVY RAINS. THIS IS ESPECIALLY IMPORTANT IN EROSION PRONE AREAS SUCH AS VINEYARD AVENUES AND MORE STEEPLY SLOPING AREAS. IN ORDER TO EFFECTIVELY ESTABLISH COVER, AT LEAST TWO INCHES OF WATER SHOULD BE APPLIED TO GERMINATE THE SEEDS. WATER SHOULD BE APPLIED BY SPRINKLER OR MICROSPRAYERS AT A RATE THAT DOES NOT CAUSE RUNOFF OR EROSION. ADDITIONAL WATER SHOULD BE APPLIED, AS NECESSARY, TO ACHIEVE THE DESIGN COVER PERCENTAGE AND TO MAINTAIN THE COVER CROP UNTIL SUFFICIENT RAINFALL OCCURS. IF ADEQUATE WATER IS NOT AVAILABLE TO IRRIGATE THE ENTIRE PROJECT AREA THEN 20 FOOT WIDE STRIPS, ORIENTATED ALONG THE CONTOUR, SHOULD BE IRRIGATED. LOCATIONS TO BE DETERMINED BY THE ENGINEER IN THE FIELD.

VINEYARD BLOCK COVER CROP SPECIFICATION TABLE

BLOCK ID	REQUIRED COVER %
3	80%
13	80%
14	80%
15	80%
17	80%

EROSION CONTROL NOTES:

1. ALL EROSION CONTROL WORK WILL BE PERFORMED BY THE VINEYARD MANAGER IN ACCORDANCE WITH THIS APPROVED VINEYARD EROSION CONTROL PLAN.
2. GRADING MUST BE COMPLETED BY SEPTEMBER 1ST AND ALL DISTURBED AREAS MUST BE WINTERIZED BY SEPTEMBER 15TH OF EACH YEAR THAT THE PROJECT IS UNDER CONSTRUCTION.
3. A REQUEST TO ALLOW GRADING TO EXTEND BEYOND SEPTEMBER 1ST MAY BE GRANTED BY THE NAPA COUNTY PLANNING, BUILDING AND ENVIRONMENTAL SERVICES DEPARTMENT - CONSERVATION DIVISION IF A MAJORITY OF THE GRADING HAS BEEN COMPLETED AND THERE COULD BE A DETRIMENTAL EFFECT ON THE ENVIRONMENT IF THE REMAINING GRADING REMAINS INCOMPLETE. A REQUEST TO ALLOW GRADING TO EXTEND BEYOND SEPTEMBER 1ST MUST BE SUBMITTED IN WRITING TO NAPA COUNTY NO LATER THAN AUGUST 15TH. GRADING BEYOND THE WINTERIZATION DEADLINE WILL NOT BE ALLOWED PRIOR TO APPROVAL BY NAPA COUNTY.
4. ALL PERMANENT DRAINAGE FACILITIES AND SEDIMENT RETENTION STRUCTURES MUST BE INSTALLED BY SEPTEMBER 1ST.
5. ALL TEMPORARY EROSION AND SEDIMENT CONTROL DEVICES (WATER BARS, SILT FENCE & STRAW WATTLES) MUST BE INSTALLED BY SEPTEMBER 15TH.
6. ALL EROSION CONTROL MEASURES MUST BE INSPECTED AND MAINTAINED BY THE CONTRACTOR THROUGHOUT THE RAINY SEASON (SEPTEMBER 15TH THROUGH APRIL 1ST). INSPECTIONS MUST BE PERFORMED AT LEAST ONCE PER WEEK DURING EXTENDED DRY PERIODS, IMMEDIATELY BEFORE ANTICIPATED RAIN EVENTS, ONCE EVERY 24 HOURS DURING EXTENDED RAIN EVENTS AND IMMEDIATELY FOLLOWING EACH RAIN EVENT.
7. ALL DISTURBED AREAS ARE TO BE STABILIZED BY PLANTING OF AN EROSION CONTROL COVER CROP. PRIOR TO APPLYING THE EROSION CONTROL SEED BLEND, THE SEED BED SHOULD BE PREPARED BY UNIFORMLY SCARIFYING THE GROUND SURFACE TO A DEPTH OF TWO TO FOUR INCHES AND CONDITIONING TO BREAK UP LARGE PEDS.
8. THE COVER CROP SEED BLEND SHOULD BE BROADCAST OR DRILLED AFTER THE SEED BED HAS BEEN PREPARED.
9. A TEMPORARY TILLED COVER CROP WILL BE ESTABLISHED IN THE VINEYARD BLOCK AREAS FOR THE FIRST THREE YEARS AFTER PLANTING WHILE THE VINEYARD IS GETTING ESTABLISHED. THE TEMPORARY COVER CROP SEED MIX FOR THE VINEYARD ESTABLISHMENT SHOULD BE THE "SOIL BUILDER" AVAILABLE FROM NAPA VALLEY AG SUPPLY APPLIED AT A MINIMUM RATE OF 75 POUNDS PER ACRE:

COMMON VETCH	10%
CALIFORNIA RED OATS	20%
FIELD PEAS	30%
BELL BEANS	40%

10. THE PERMANENT COVER CROP SEED MIX FOR ALL NO-TILL VINEYARD BLOCKS AND VINEYARD AVENUES SHOULD BE THE "VINTNER'S BLEND" AVAILABLE FROM NAPA VALLEY AG SUPPLY APPLIED AT A MINIMUM RATE OF 75 POUNDS PER ACRE:
- CREEPING RED FESCUE

40%

CHEWING FESCUE

25%

DWARF PERENNIAL RYE

25%

ROSE CLOVER

8%

NEW ZEALAND WHITE CLOVER

2%
11. ALTERNATE SEED MIX MAY BE USED BY THE VINEYARD MANAGER PROVIDED THAT ATTENTION IS GIVEN TO CHOOSING A COVER CROP THAT IS SUITABLE FOR THE SITE SOIL AND TOPOGRAPHIC CONDITIONS. ANY ALTERNATE SEED MIX MUST BE APPROVED BY THE ENGINEER AND THE NAPA COUNTY RESOURCE CONSERVATION DISTRICT PRIOR TO USE.
12. ALL SEEDED AREAS ARE TO BE FERTILIZED TO PROMOTE SUCCESSFUL ESTABLISHMENT OF THE COVER CROP. THE RECOMMENDED FERTILIZER IS AMMONIUM PHOSPHATE (16-20-0) APPLIED AT A RATE OF 250 POUNDS PER ACRE.
13. ADDITIONAL SOIL AMENDMENTS WILL BE ADDED BASED ON FUTURE SOILS TESTING REPORTS BY OTHERS. TYPICAL AMENDMENTS INCLUDE: COMPOSTED ORGANIC MATTER, LIME AND /OR GYPSUM. THE AMENDMENTS SHOULD BE INCORPORATED DURING THE LAND PREPARATION PROCESS TO INCREASE SOIL NUTRIENT CONTENT AND AVAILABILITY, AND TO IMPROVE SOIL STRUCTURE AND WATER HOLDING CAPACITY.
14. AFTER THE SEED AND FERTILIZER HAVE BEEN PLACED THE SEEDED AREA SHOULD BE RAKED, DRAGGED OR HARROWED TO ENSURE THAT SEEDS ARE PROPERLY BEDDED.
15. ALL DISTURBED AREAS ARE TO BE MULCHED WITH STRAW AT A RATE OF 3,000 POUNDS PER ACRE TO PROTECT THE BARE SOILS WHILE THE COVER CROP IS GETTING ESTABLISHED.
16. STRAW SHOULD BE SPREAD BY HAND IN A MANNER THAT PROMOTES FORMATION OF AN INTERWOVEN MATRIX. CRIMPING STRAW INTO THE SOIL IS HIGHLY RECOMMENDED ESPECIALLY ON WINDY SITES AND IS MANDATORY ON SITES WHERE STRAW IS MECHANICALLY CHOPPED AND BLOWN INTO PLACE.
17. ALL SOIL CUT AND FILL SLOPES THAT ARE STEEPER THAN 4:1 (HORIZONTAL TO VERTICAL) MUST BE COVERED WITH NORTH AMERICAN GREEN C125BN EROSION CONTROL BLANKET AFTER THE EROSION CONTROL SEED AND FERTILIZER HAVE BEEN PLACED.
18. CONTRACTOR MUST MAINTAIN AN ADEQUATE SUPPLY OF EROSION CONTROL MATERIALS ONSITE TO FACILITATE MAINTENANCE AND REPAIR THROUGHOUT THE RAINY SEASON. TYPICAL MATERIALS THAT SHOULD BE KEPT ONSITE INCLUDE SILT FENCE AND STRAW WATTLE SEDIMENT BARRIERS, GRAVEL BAGS, EROSION CONTROL BLANKETS, STRAW AND EROSION CONTROL SEED MIX.

ENVIRONMENTAL COMMITMENTS:

IN ORDER TO MINIMIZE THE IMPACTS TO THE IMMEDIATE AND SURROUNDING ENVIRONMENT, THE PROJECT PROPOSES THE FOLLOWING MEASURES:

ARCHEOLOGY:

1. ALL WORK IS TO CEASE IF ARCHEOLOGICAL, CULTURAL, OR HISTORICAL RESOURCES ARE DISCOVERED DURING CONSTRUCTION. IF SUCH RESOURCES ARE DISCOVERED, THE NAPA COUNTY CONSERVATION, DEVELOPMENT AND PLANNING DEPARTMENT SHALL BE CONTACTED AT (707) 253-4417 AND AN APPROPRIATE COURSE OF ACTION WILL BE DEVELOPED.

AIR QUALITY:

1. WOODY VEGETATION CLEARED FROM THE DEVELOPMENT AREA WILL BE CHIPPED OR USED OR DISPOSED OF IN ANOTHER APPROVED MANNER TO AVOID BURNING IN LARGE PILES.
2. ALL EXPOSED SOIL STOCKPILES SHALL BE COVERED.
3. DISTURBED AREAS WILL BE SEEDED AND MULCHED AS SOON AS POSSIBLE.
4. ALL TRUCKS HAULING SOIL, SAND AND OTHER LOOSE MATERIALS SHALL BE COVERED OR ALL TRUCKS SHALL MAINTAIN AT LEAST TWO FEET OF FREEBOARD (I.E. THE MINIMUM REQUIRED SPACE BETWEEN THE TOP OF THE LOAD AND THE TOP OF THE TRAILER) IN ACCORDANCE WITH SECTION 23114 OF THE CALIFORNIA VEHICLE CODE DURING TRANSIT TO AND FROM THE SITE.
5. THE DRIVEWAY AND SITE ACCESS SHALL BE SWEEPED DAILY (PREFERABLY WITH WATER SWEEPERS), IF VISIBLE SOIL MATERIAL IS CARRIED ONTO THE DRIVEWAY AND STREET.
6. TRAFFIC ON UNPAVED AREAS AND ROADS SHALL BE LIMITED TO 15 MILES PER HOUR (MPH).
7. GRADING AND EARTHMOVING ACTIVITIES SHALL BE SUSPENDED WHEN WINDS EXCEED 25 MPH.
8. EXTENDED PERIODS OF CONSTRUCTION EQUIPMENT ENGINE IDLING WILL BE AVOIDED TO THE MAXIMUM EXTENT FEASIBLE.
9. CONSTRUCTION EQUIPMENT WILL BE MAINTAINED IN ACCORDANCE WITH MANUFACTURERS' SPECIFICATIONS.

NOISE:

1. ROCK BLASTING, IF REQUIRED WILL BE PERFORMED IN ISOLATED AREAS AND WILL BE SCHEDULED TO OCCUR BETWEEN THE HOURS OF 10:00 A.M. AND 2:00 P.M.

BIOLOGY:

1. THE OWNER/APPLICANT SHALL INCLUDE AS PART OF THIS EROSION CONTROL PLAN THE FOLLOWING MEASURES TO MINIMIZE IMPACTS ASSOCIATED WITH THE LOSS AND DISTURBANCE OF PASSERINE BIRD AND RAPTOR SPECIES CONSISTENT WITH AND PURSUANT TO CALIFORNIA DEPARTMENT OF FISH AND WILDLIFE (DFW) CODE SECTIONS 3503 AND 3503.5:

A. FOR EARTH-DISTURBING ACTIVITIES OCCURRING BETWEEN FEBRUARY 1 AND AUGUST 31, (WHICH COINCIDES WITH THE GRADING SEASON OF APRIL 1 THROUGH OCTOBER 15 – NCC SECTION 18.108.070.L AND BIRD BREEDING AND NESTING SEASONS), A QUALIFIED WILDLIFE BIOLOGIST SHALL CONDUCT PRECONSTRUCTION SURVEYS FOR RAPTOR AND PASSERINE BIRD COURTSHIP ACTIVITIES AND/OR THEIR NESTS WITHIN A 300-FEET RADIUS OF EARTHMOVING ACTIVITIES. THE PRECONSTRUCTION SURVEY SHALL BE CONDUCTED NO MORE THAN 14 DAYS PRIOR TO VEGETATION REMOVAL AND GROUND DISTURBING ACTIVITIES ARE TO COMMENCE (SURVEYS SHOULD BE CONDUCTED A MINIMUM OF 3 SEPARATE DAYS DURING THE 14 DAYS PRIOR TO DISTURBANCE). A COPY OF THE SURVEY WILL BE PROVIDED TO THE COUNTY CONSERVATION DIVISION AND THE DFW PRIOR TO COMMENCEMENT OF WORK.

B. IN THE EVENT THAT NESTING RAPTORS AND/OR BIRDS ARE FOUND DURING PRECONSTRUCTION SURVEYS, THE PROPERTY OWNER SHALL CONSULT WITH DFW AND OBTAIN APPROVAL FOR SPECIFIC NEST-PROTECTION BUFFERS AS APPROPRIATE BASED ON SPECIES FOUND PRIOR TO COMMENCEMENT OF GROUND-BREAKING ACTIVITIES. GENERALLY A MINIMUM 150-FOOT NO-DISTURBANCE BUFFER WILL BE CREATED AROUND ALL ACTIVE PASSERINE BIRD NESTS AND A MINIMUM 300-FOOT BUFFER SHALL BE CREATED AROUND ALL ACTIVE RAPTOR NESTS DURING THE BREEDING AND NESTING SEASON OR UNTIL IT IS DETERMINED BY A QUALIFIED BIOLOGIST THAT ALL YOUNG HAVE FLEDGED. ALL NEST PROTECTION MEASURES SHALL APPLY TO OFF-SITE ACTIVE NESTS THAT ARE LOCATED WITHIN 300 FEET OF PROJECT ACTIVITIES. THESE BUFFER ZONES MAY BE MODIFIED IN COORDINATION WITH DFW BASED ON EXISTING CONDITIONS AT THE PROJECT SITE. BUFFER ZONES SHALL BE FENCED WITH TEMPORARY CONSTRUCTION FENCING AND REMAIN IN PLACE UNTIL THE END OF THE BREADING SEASON OR UNTIL YOUNG HAVE FLEDGED.

C. IF A 15 DAY OR GREATER LAPSE OF PROJECT-RELATED WORK OCCURS DURING THE BREEDING SEASON, ANOTHER BIRD AND RAPTOR PRE-CONSTRUCTION SURVEY AND CONSULTATION WITH DFW WILL BE REQUIRED BEFORE PROJECT WORK CAN BE REINITIATED
2. THE OWNER/APPLICANT SHALL INCLUDE AS PART OF THIS EROSION CONTROL PLAN THE FOLLOWING MEASURES TO REDUCE IMPACTS TO SPECIAL-STATUS BAT SPECIES:

A. A QUALIFIED BIOLOGIST SHALL CONDUCT A HABITAT ASSESSMENT FOR POTENTIAL SUITABLE SPECIAL-STATUS BAT HABITAT/TREES WITHIN 14 DAYS OF PROJECT INITIATION.

B. IF THE HABITAT ASSESSMENT REVEALS SUITABLE SPECIAL-STATUS BAT HABITAT AND/OR HABITAT TREES, THE QUALIFIED BIOLOGIST SHALL SUBMIT AN AVOIDANCE PLAN TO THE COUNTY AND CALIFORNIA DEPARTMENT OF FISH AND WILDLIFE (DFW) FOR APPROVAL. THE AVOIDANCE PLAN SHALL IDENTIFY AND EVALUATE THE TYPE OF HABITAT PRESENT AT THE PROJECT SITE AND DETAIL HABITAT AND/OR HABITAT TREE REMOVAL. BAT HABITAT/TREE REMOVAL SHALL OCCUR IN TWO PHASES CONDUCTED OVER TWO DAYS UNDER THE SUPERVISION OF A QUALIFIED BIOLOGIST: DAY ONE IN THE AFTERNOON LIMBS AND BRANCHES OF HABITAT TREES WITHOUT CAVITIES, CREVICES AND DEEP BARK FISSURES WOULD BE REMOVED BY CHAINSAW (LIMBS WITH CAVITIES, CREVICES AND DEEP BARK FISSURES WOULD BE AVOIDED); DAY TWO THE ENTIRE TREE CAN BE REMOVED. IN THE EVENT THE BAT AVOIDANCE MEASURES REQUIRED BY DFW RESULT IN A REDUCTION OR MODIFICATION OF VINEYARD BLOCK BOUNDARIES, THE EROSION CONTROL PLAN SHALL BE REVISED BY THE APPLICANT/ENGINEER AND SUBMITTED TO THE COUNTY.

ABBREVIATIONS:

AB	AGGREGATE BASE	OD	OUTSIDE DIAMETER
AC	ASPHALT CONCRETE	OG	ORIGINAL GRADE
AD	AREA DRAIN	(P)	PROPOSED
AP	ANGLE POINT	PC	POINT OF CURVATURE
BTM	BOTTOM	PCC	PORTLAND CEMENT CONCRETE
CONF	CONFORM	PL	PROPERTY LINE
CP	CONTROL POINT	PT	POINT OF TANGENCY
DCV	DOUBLE CHECK VALVE	PVC	POLYVINYL CHLORIDE
DI	DROP INLET	PW	PROCESS WASTE
DS	DOWN SPOUT	PWCO	PROCESS WASTE CLEANOUT
(E)	EXISTING	RSV	RECIRCULATING SPLITTER VALVE
EC	END CURVE	SAD	SEE ARCHITECTURAL DRAWINGS
ELEV	ELEVATION	SD	STORM DRAIN
EP	EDGE OF PAVEMENT	SDCO	STORM DRAIN CLEANOUT
EOC	EDGE OF CONCRETE	SDMH	STORM DRAIN MANHOLE
(F)	FUTURE	SED	SEE ELECTRICAL DRAWINGS
FDC	FIRE DEPARTMENT CONNECTION	SF	SQUARE FEET
FF	FINISH FLOOR	SHLDR	SHOULDER
FG	FINISH GRADE	SLD	SEE LANDSCAPE DRAWINGS
FH	FIRE HYDRANT	SMD	SEE MECHANICAL DRAWINGS
FL	FLOW LINE	SPD	SEE PLUMBING DRAWINGS
FS	FINISH SURFACE	SSD	SEE STRUCTURAL DRAWINGS
FSR	FIRE SPRINKLER RISER	SS	SANITARY SEWER
GB	GRADE BREAK	SSCO	SANITARY SEWER CLEANOUT
GM	GAS METER	SSMH	SANITARY SEWER MANHOLE
HP	HIGH POINT	TC	TOP FACE OF CURB
INV	INVERT	TW	TOP OF WALL
IPS	IRON PIPE SIZE	TYP	TYPICAL
IRR	IRRIGATION	WM	WATER METER
LF	LINEAR FEET	WV	WATER VALVE
LP	LOW POINT	XFMR	TRANSFORMER
OC	ON CENTER		

APPLIED CIVIL ENGINEERING INCORPORATED

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PRITCHARD HILL PROPERTIES LLC

VINEYARD DEVELOPEMENT EROSION CONTROL PLAN

NOTES, ABBREVIATIONS AND LEGEND

PREPARED UNDER THE DIRECTION OF:



DRAWN BY:
Power/CAD LLC

CHECKED BY:
MRM

DATE:
NOVEMBER 11, 2022

REVISIONS: BY:
7/7/2020 YMS
PERMIT SUBMITTAL

4/7/2021 YMS
PLAN CHECK COMMENTS

1/11/2022 YMS
PROJECT REVISION

JOB NUMBER:
15-132

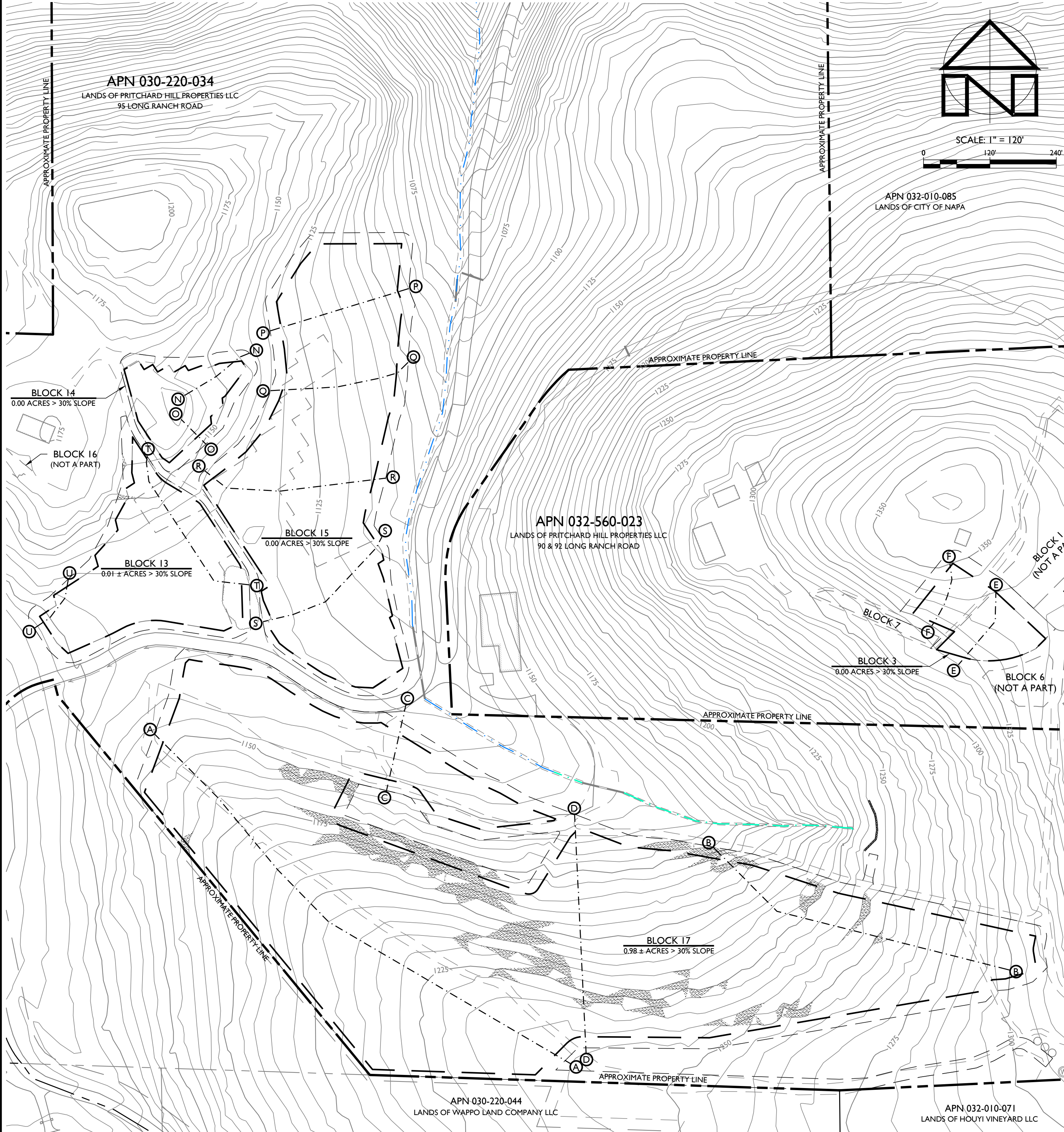
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ORIGINAL SIZE:
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SHEET NUMBER:

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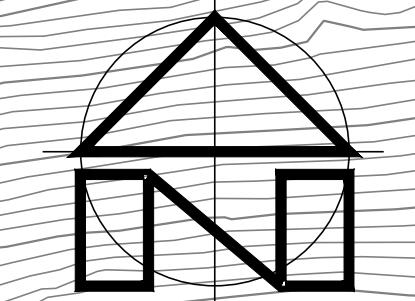


VINEYARD BLOCKS 3, 13, 14, 15 AND 17

SCALE: 1" = 120'

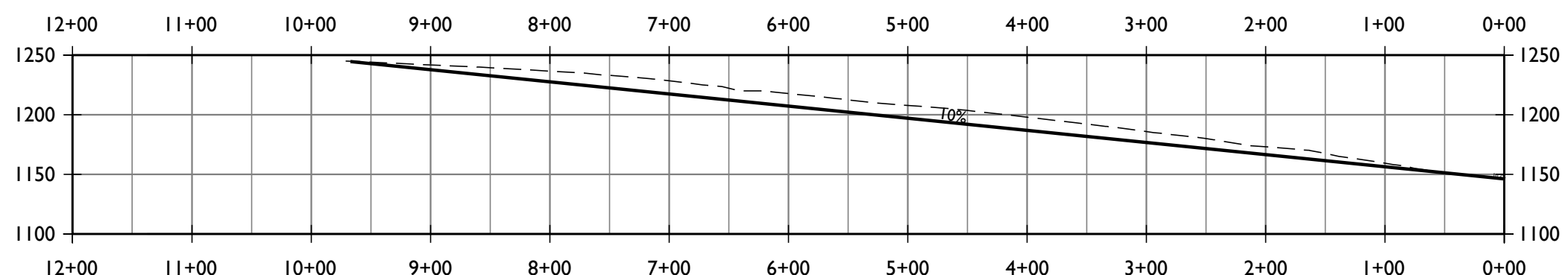
LEGEND:

- APPROXIMATE PROPERTY LINE
- VINEYARD CLEARING LIMITS / VINEYARD AVENUE
- LIMIT OF VINEYARD BLOCK
- SLOPE SECTION. SEE TABLE, THIS SHEET.
- > 30% SLOPES
(0.99 ± ACRES TOTAL)

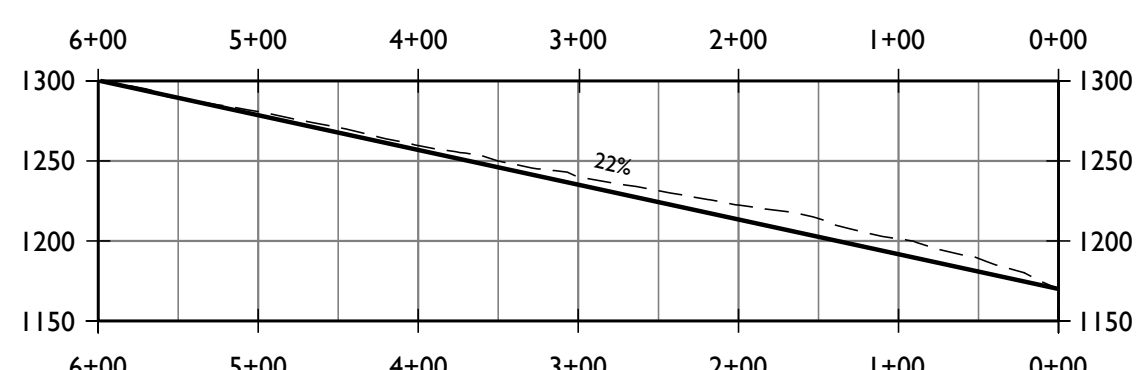


VINEYARD SLOPE SECTIONS

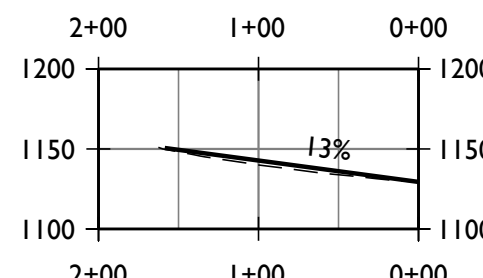
BLOCK 17	
A - A	10%
B - B	22%
C - C	13%
D - D	22%
BLOCK 3	
E - E	13%
F - F	21%
BLOCK 14	
N - N	16%
O - O	26%
BLOCK 15	
P - P	17%
Q - Q	13%
R - R	9%
S - S	7%
BLOCK 13	
T - T	8%
U - U	14%
AVERAGE	16%



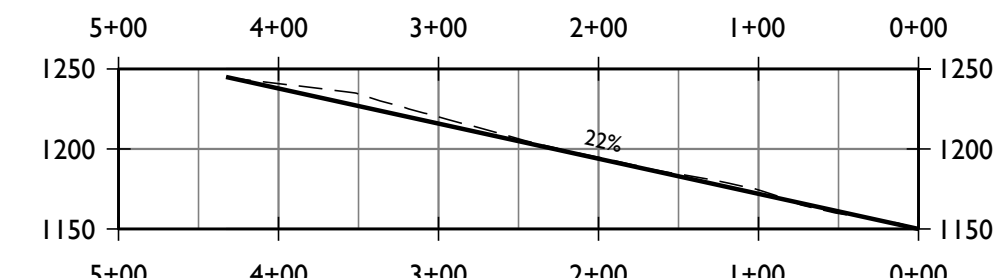
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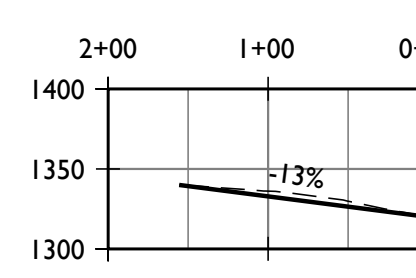
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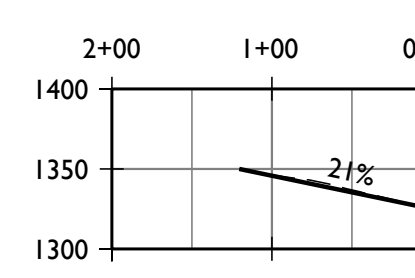
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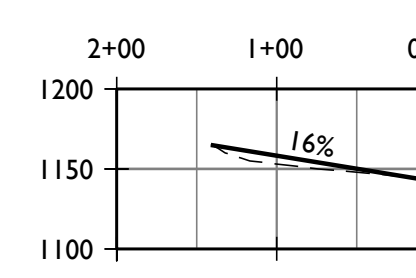
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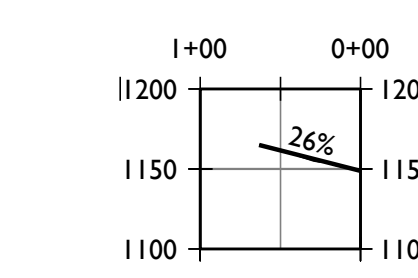
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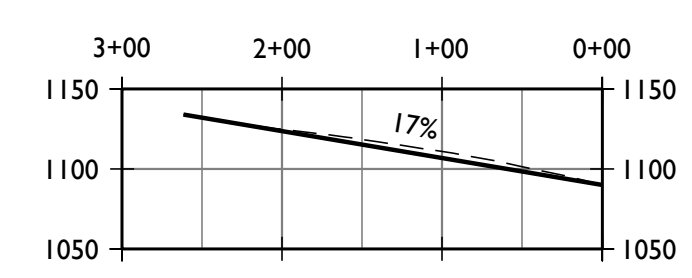
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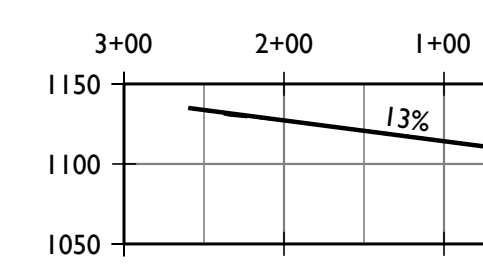
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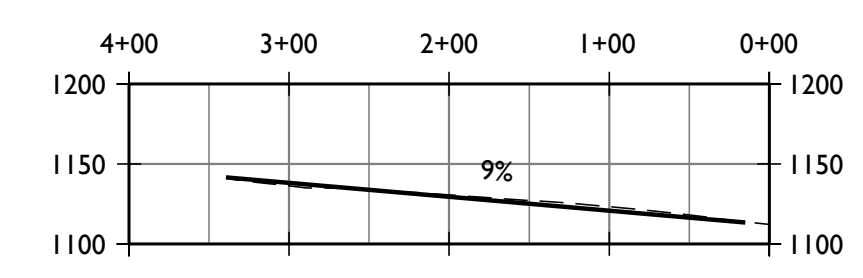
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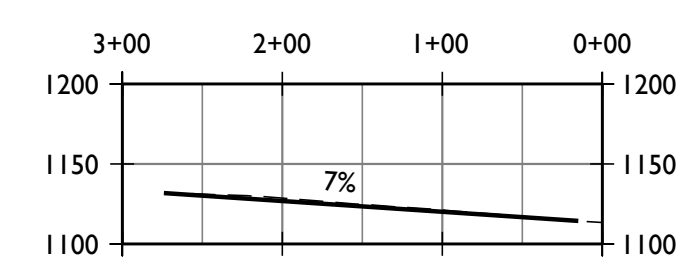
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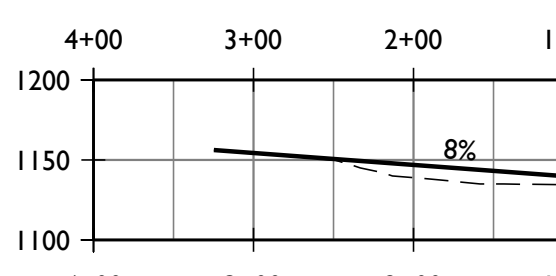
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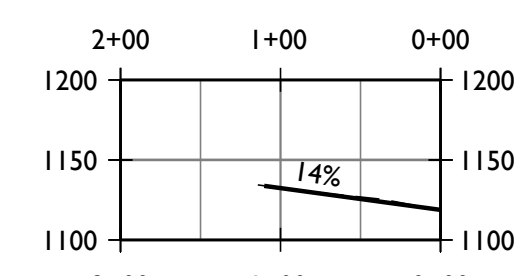
SECTION R - R



SECTION S - S



SECTION T - T



SECTION U - U

VINEYARD SLOPE SECTIONS

SCALE: 1" = 120'

PRITCHARD HILL PROPERTIES LLC
VINEYARD DEVELOPMENT EROSION CONTROL PLAN
VINEYARD SLOPE DETERMINATION SECTIONS

PREPARED UNDER THE
DIRECTION OF:



DRAWN BY:
PowerCAD LLC

CHECKED BY:
MRM

DATE:
NOVEMBER 11, 2022

REVISIONS: BY:
7/7/2020 YMS
PERMIT SUBMITTAL

1/ 4/7/2021 YMS
PLAN CHECK
COMMENTS

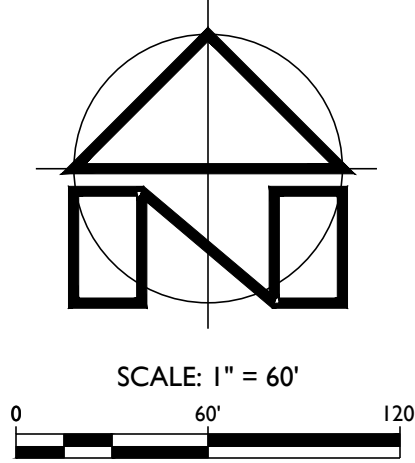
2/ 11/11/2022 YMS
PROJECT REVISION

JOB NUMBER:
15-132

FILE:
15-132ECP-SITESEC.DWG

ORIGINAL SIZE:
24" X 36"

SHEET NUMBER:



LEGEND:

	APPROXIMATE PROPERTY LINE
	VINEYARD AVENUE / LIMIT OF GRADING
	LIMIT OF VINEYARD BLOCK
	VINE ROWS & ROW DIRECTION
	BLUELINE STREAM
	SOIL TYPE BOUNDARY
	STRAW WATTLE SEDIMENT BARRIER
	TEMPORARY CONSTRUCTION FENCING
	WATERBAR
	ROCK ENERGY DISSIPATOR

SOILS TYPE LEGEND:

TYPE	DESCRIPTION
154	HENNEKE GRAVELLY LOAM, 30 TO 75 PERCENT SLOPES
176	ROCK OUTCROP-HAMBRIGHT COMPLEX, 50 TO 75 PERCENT SLOPES
178	SOBRANTE LOAM, 5 TO 30 PERCENT SLOPES
179	SOBRANTE LOAM, 30 TO 50 PERCENT SLOPES

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

NOTES:

- ALL CLEARING LIMITS SHALL BE MARKED BY THE ENGINEER OR SURVEYOR PRIOR TO CONSTRUCTION AND TEMPORARY CONSTRUCTION FENCING (ORANGE FENCING OR EQUIVALENT) SHALL BE INSTALLED ALONG THE CLEARING LIMITS PRIOR TO ANY LAND PREPARATION ACTIVITIES. THE TEMPORARY CONSTRUCTION FENCING SHALL BE ADJUSTED AROUND THE CANOPY OF ANY TREES THAT ARE TO REMAIN OUTSIDE OF THE CLEARING LIMITS WITH CANOPY THAT OVERHANGS INTO THE CLEARING LIMITS TO KEEP LAND PREPARATION ACTIVITIES OUTSIDE OF THE TREE CANOPY AREA.
- ALL STREAM SETBACKS SHALL BE VERIFIED BY THE ENGINEER PRIOR TO CONSTRUCTION.
- TRACK WALK ENTIRE DISTURBED AREA. SEE SURFACE ROUGHENING DETAIL SHEET C8.
- ALL TEMPORARY STAGING, STOCKPILE AND PARKING AREAS SHALL BE WITHIN THE PROPOSED DEVELOPMENT AREAS. NO STAGING, STOCKPILING, PARKING OR OTHER LAND DISTURBANCE SHALL OCCUR OUTSIDE OF THE PROPOSED DEVELOPMENT AREAS.

EROSION CONTROL PLAN - VINEYARD BLOCKS 13, 14 AND 15

SCALE: 1" = 60'

PRITCHARD HILL PROPERTIES LLC
VINEYARD DEVELOPMENT EROSION CONTROL PLAN
EROSION CONTROL PLAN - VINEYARD BLOCKS 13, 14 AND 15

PREPARED UNDER THE
DIRECTION OF:



DRAWN BY:
PowerCAD LLC

CHECKED BY:
MRM

DATE:
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REVISIONS: BY:
7/7/2020 YMS
PERMIT SUBMITTAL

4/7/2021 YMS
PLAN CHECK
COMMENTS

11/11/2022 YMS
PROJECT REVISION

JOB NUMBER:
15-132

FILE:
15-132ECP-PLANS.DWG

ORIGINAL SIZE:
24" X 36"

SHEET NUMBER:

C4

OF

8

SCALE: 1" = 5'

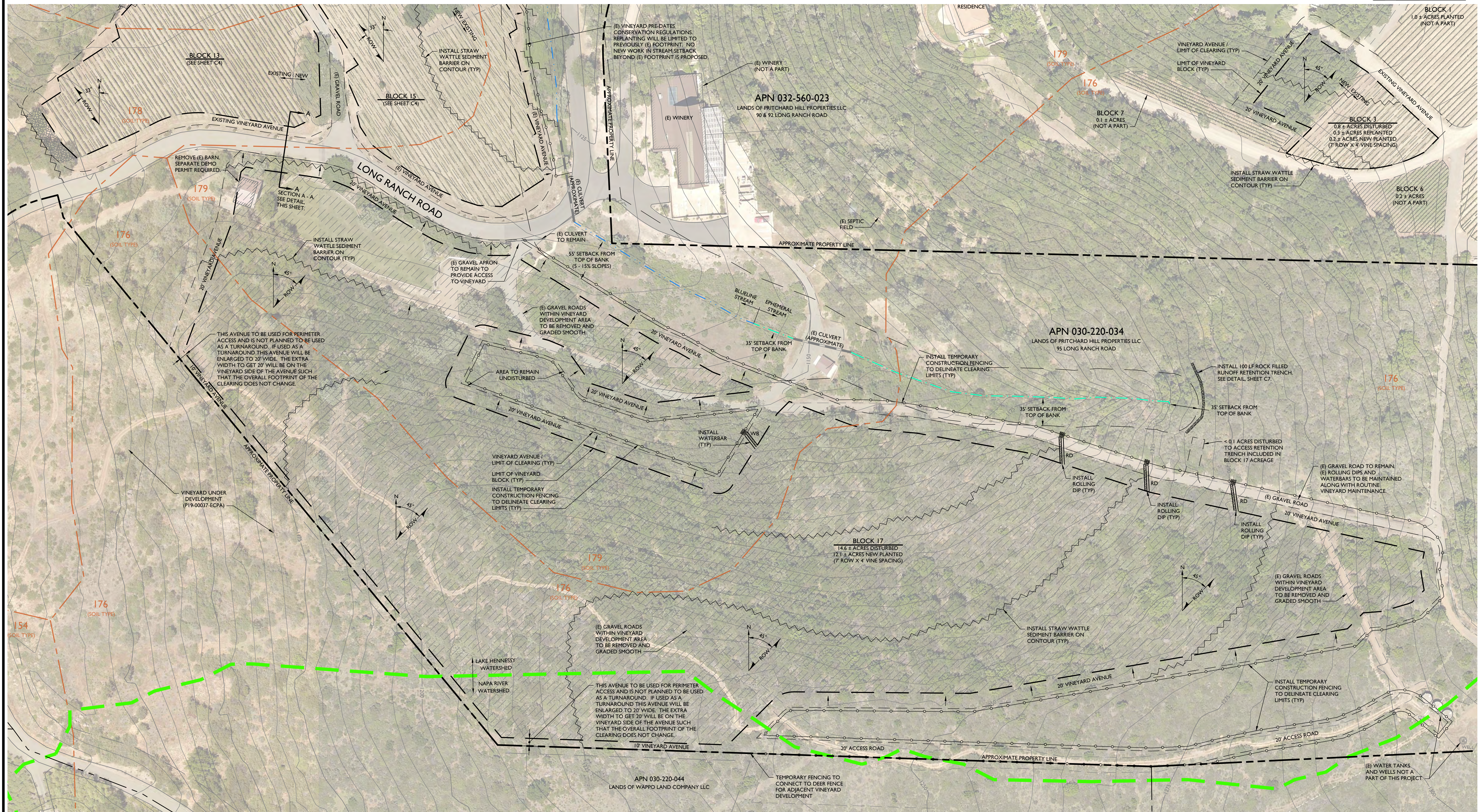
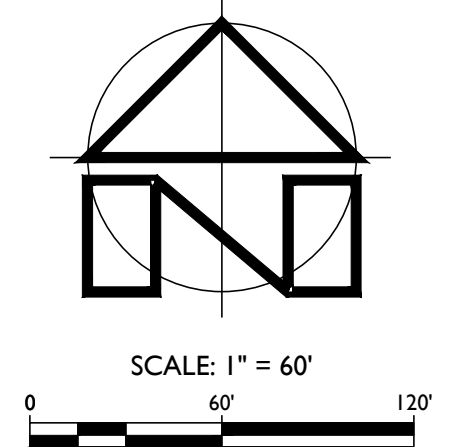
	APPROXIMATE PROPERTY LINE
	VINEYARD AVENUE / LIMIT OF GRADING
	LIMIT OF VINEYARD BLOCK
	VINE ROWS & ROW DIRECTION
	BLUELINE STREAM
	SOIL TYPE BOUNDARY
	STRAW WATTLE SEDIMENT BARRIER
	TEMPORARY CONSTRUCTION FENCING
	WATERBAR / ROLLING DIP
	ROCK ENERGY DISSIPATOR

1. ALL CLEARING LIMITS SHALL BE MARKED BY THE ENGINEER OR SURVEYOR PRIOR TO CONSTRUCTION AND TEMPORARY CONSTRUCTION FENCING (ORANGE FENCING OR EQUIVALENT) SHALL BE INSTALLED ALONG THE CLEARING LIMITS PRIOR TO ANY LAND PREPARATION ACTIVITIES. THE TEMPORARY CONSTRUCTION FENCING SHALL BE ADJUSTED AROUND THE CANOPY OF ANY TREES THAT ARE NOT TO BE REMOVED. THE CLEARING LIMITS WITH CANOPY THAT OVERHANGS INTO THE CLEARING LIMITS TO KEEP LAND PREPARATION ACTIVITIES OUTSIDE OF THE TRAIL CANOPY AREA.
2. ALL STREAM SETBACKS SHALL BE VERIFIED BY THE ENGINEER PRIOR TO CONSTRUCTION.
3. TRACK WALK ENTIRE DISTURBED AREA. SEE SURFACE ROUGHENING DETAIL, SHEET C8.
4. ALL TEMPORARY STAGING, STOCKPILE AND PARKING AREAS SHALL BE WITHIN THE PROPOSED DEVELOPMENT AREAS. NO STAGING, STOCKPILING, PARKING OR OTHER LAND DISTURBANCE SHALL OCCUR OUTSIDE OF THE PROPOSED DEVELOPMENT AREAS.

<u>TYPE</u>	<u>DESCRIPTION</u>
-------------	--------------------

154 HENNEKE GRAVELLY LOAM, 30 TO 75 PERCENT SLOPES
176 ROCK OUTCROP-HAMBRIGHT COMPLEX, 50 TO 75 PERCENT SLOPES
178 SOBRANTE LOAM, 5 TO 30 PERCENT SLOPES
179 SOBRANTE LOAM, 30 TO 50 PERCENT SLOPES

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



SCALE: 1" = 60'

PREPARED UNDER THE
DIRECTION OF:



DRAWN BY:
PowerCAD LLC

CHECKED BY:
MRM

DATE:
NOVEMBER 11, 2022

REVISIONS:	BY:
7/7/2020	YM
PERMIT SUBMITTAL	

	4/7/2021	YM
	PLAN CHECK COMMENTS	
	11/11/2022	YM

2 PROJECT REVISION

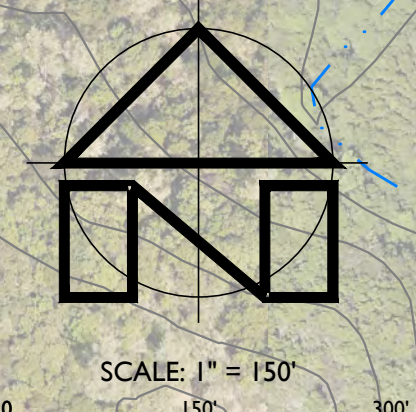
JOB NUMBER:
15-132

FILE:
15-132ECP-PLANS.DWG

ORIGINAL SIZE:
24" X 36"

SHEET NUMBER:

C5



SCALE: 1" = 150'

APPROXIMATE PROPERTY LINE

EXISTING FENCE

EXISTING FENCE TO BE REMOVED

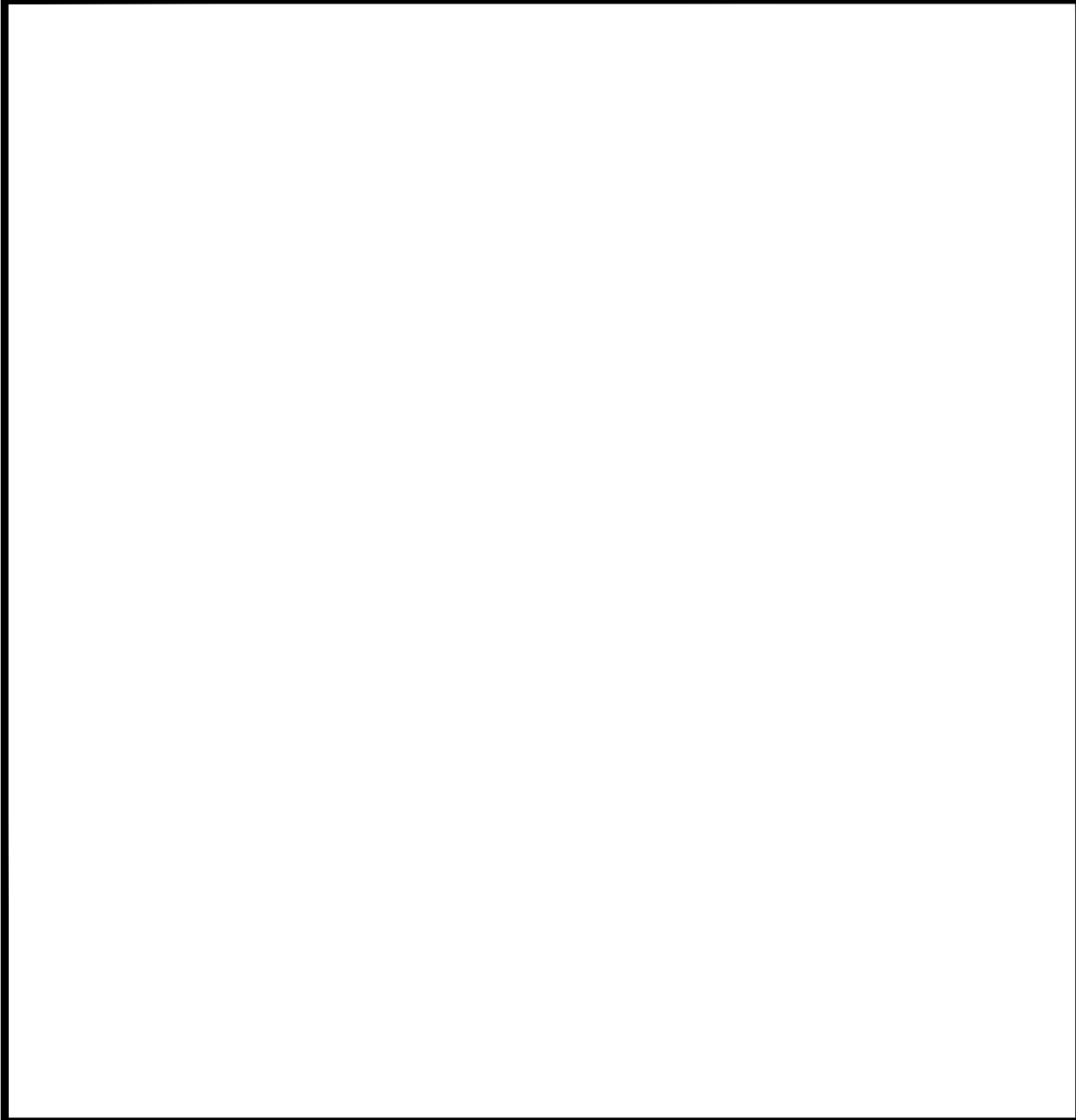
NEW FENCE

EXISTING GATE

NEW GATE

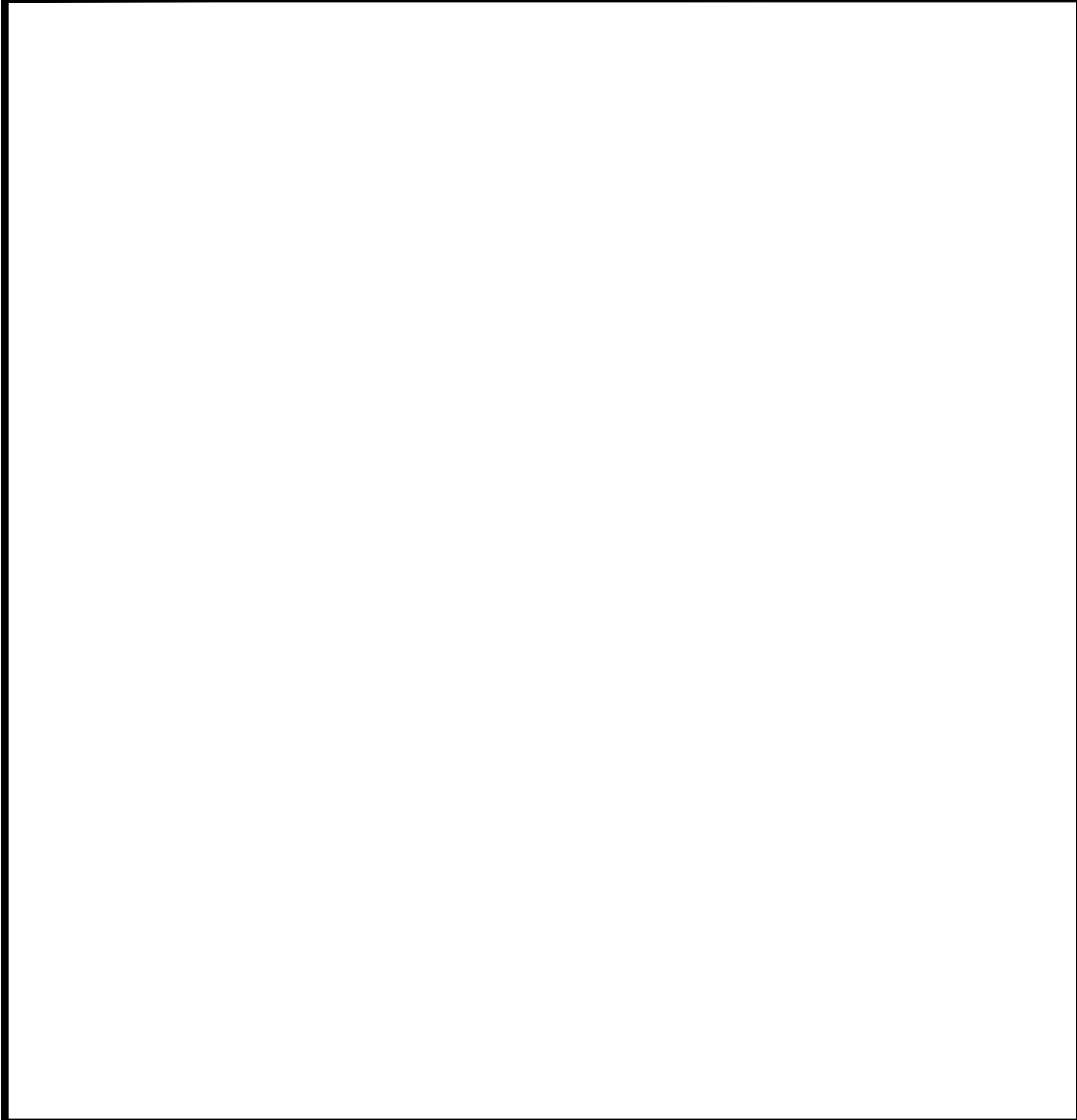
EXISTING WATER LINE

NEW WATER LINE

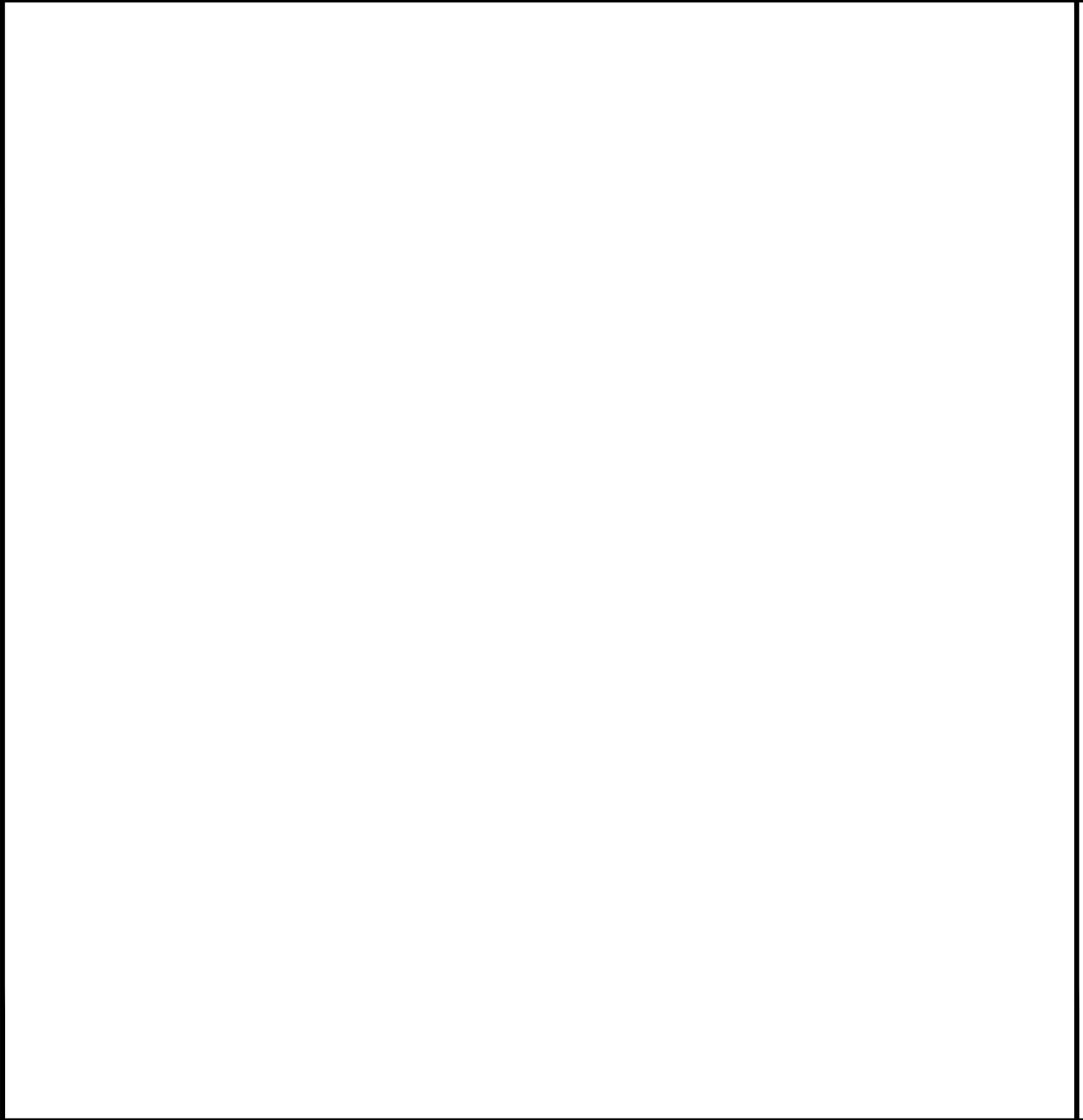


NOTES:
1. TRENCH SHALL BE EXCAVATED TO ORIGINAL GROUNDLINE AND SHALL BE LEVEL FROM END TO END.

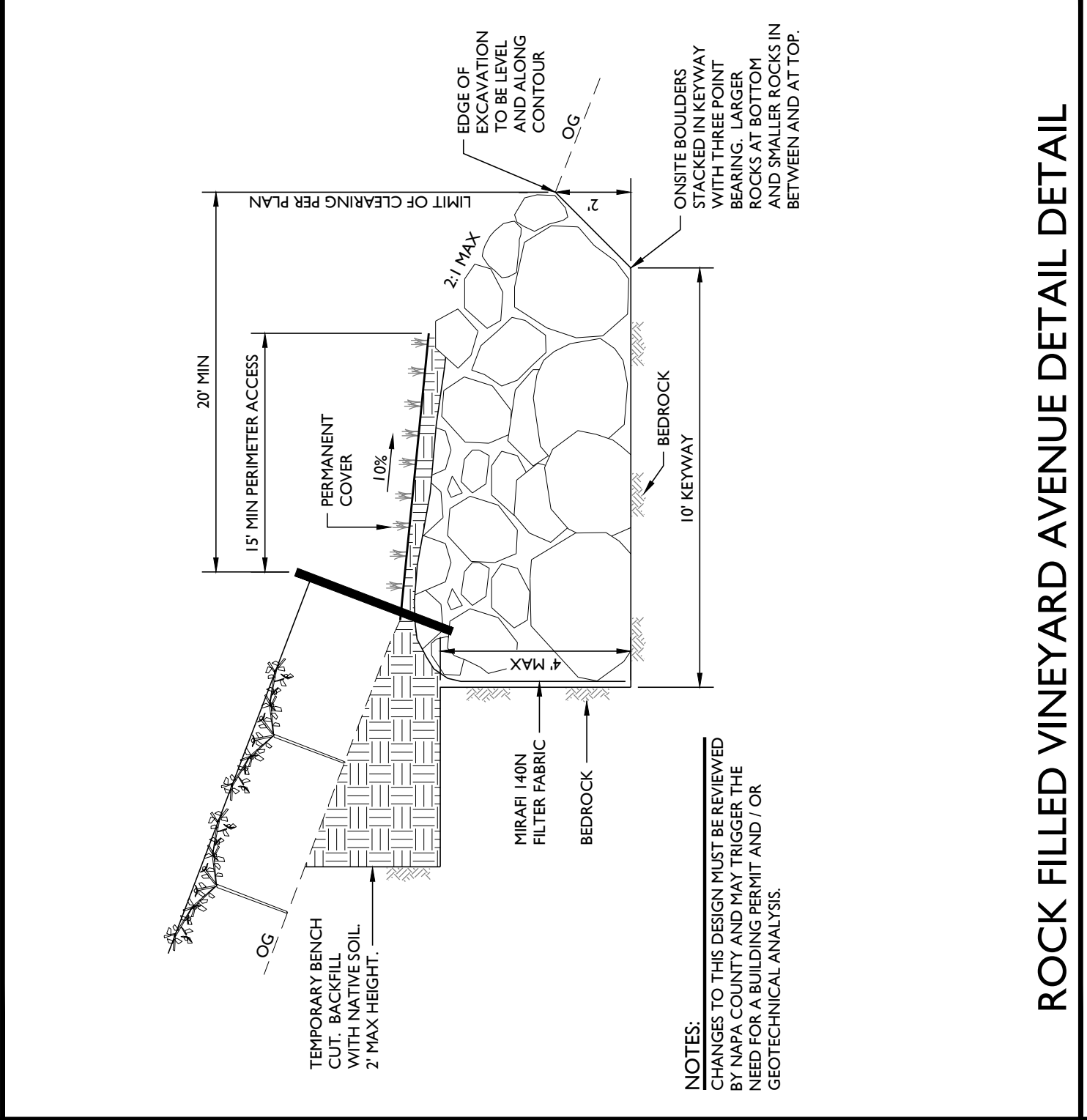
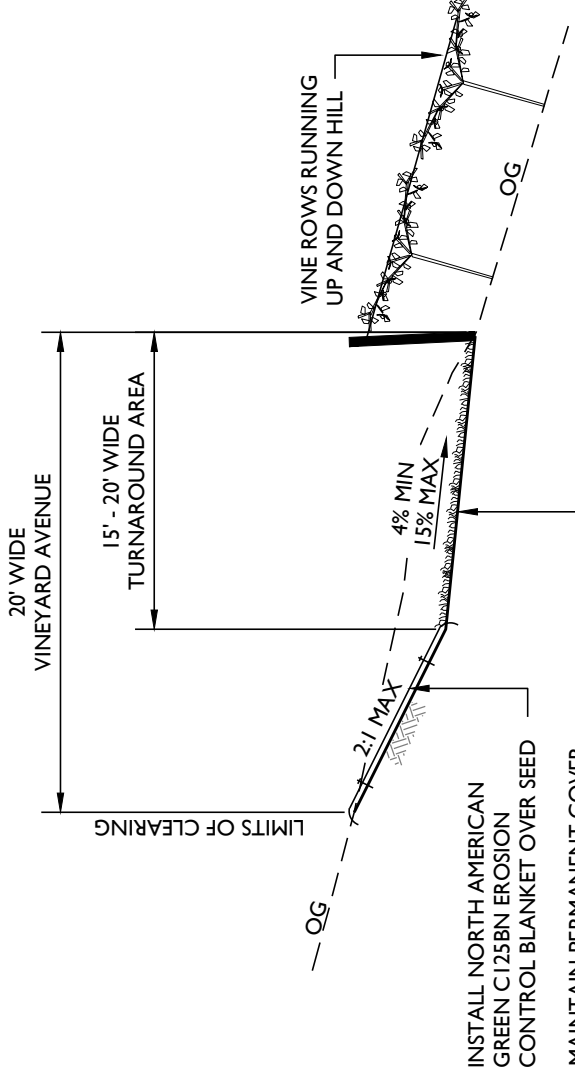
ROCK FILLED RETENTION TRENCH DETAIL



OUTSLOPED VINEYARD AVENUE
AT TOP OF BLOCK DETAIL

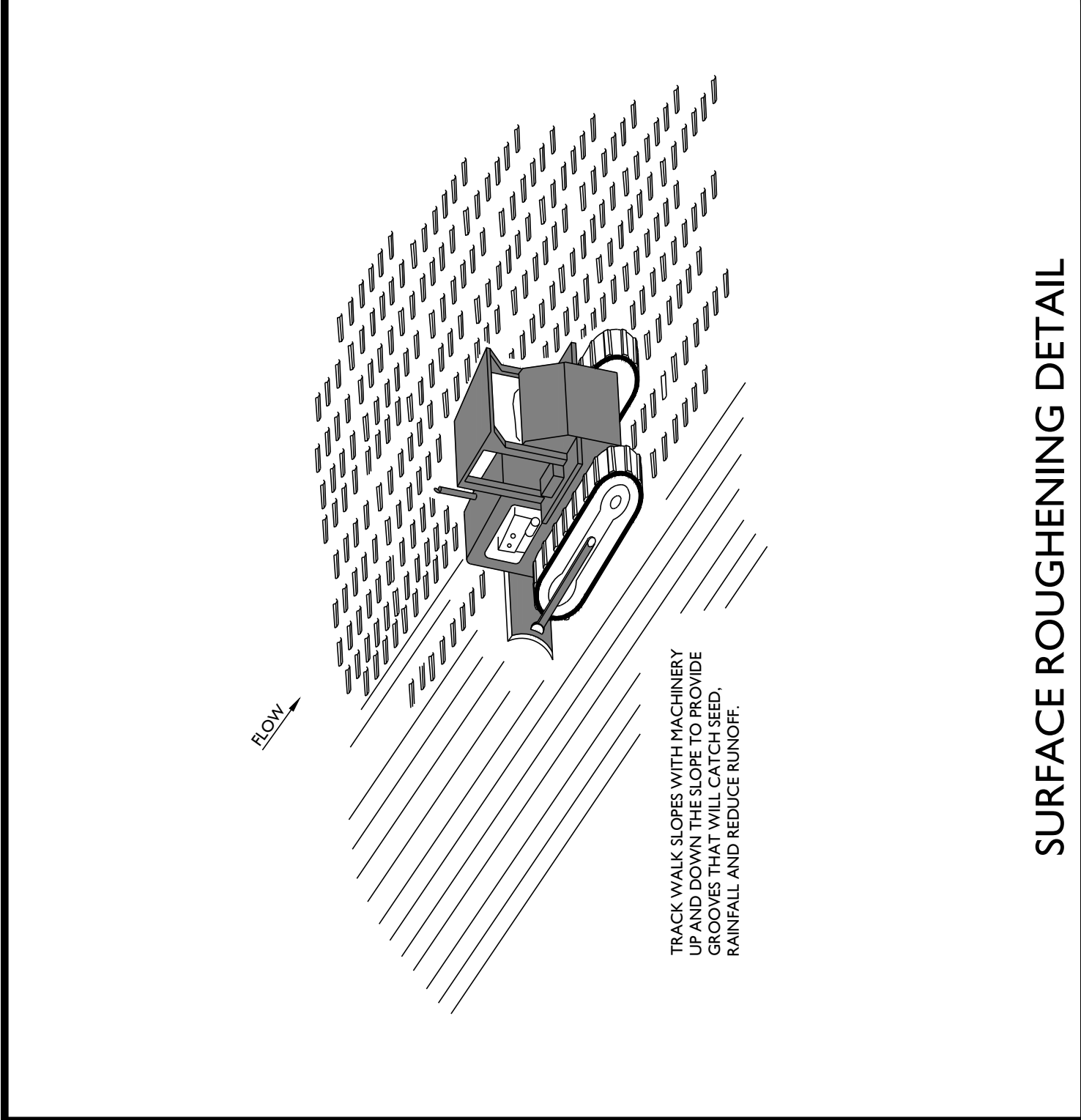


OUTSLOPED VINEYARD AVENUE
AT BOTTOM OF BLOCK DETAIL

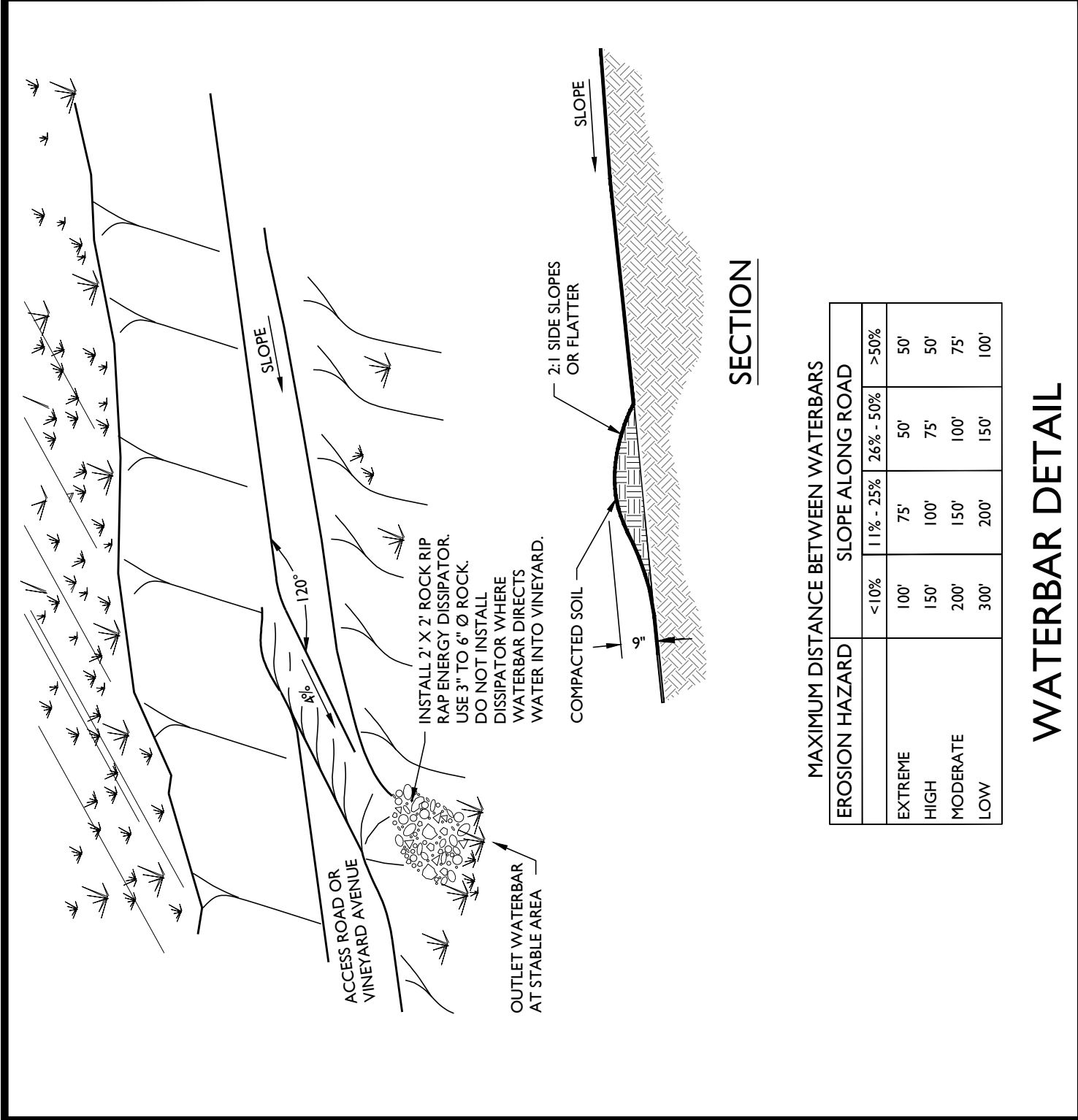


NOTES:
CHANGES TO THIS DESIGN MUST BE REVIEWED BY THE DESIGNER. ANY CHANGES MUST BE NEEDED FOR A BUILDING PERMIT AND / OR GEOTECHNICAL ANALYSIS.

ROCK FILLED VINEYARD AVENUE DETAIL DETAIL

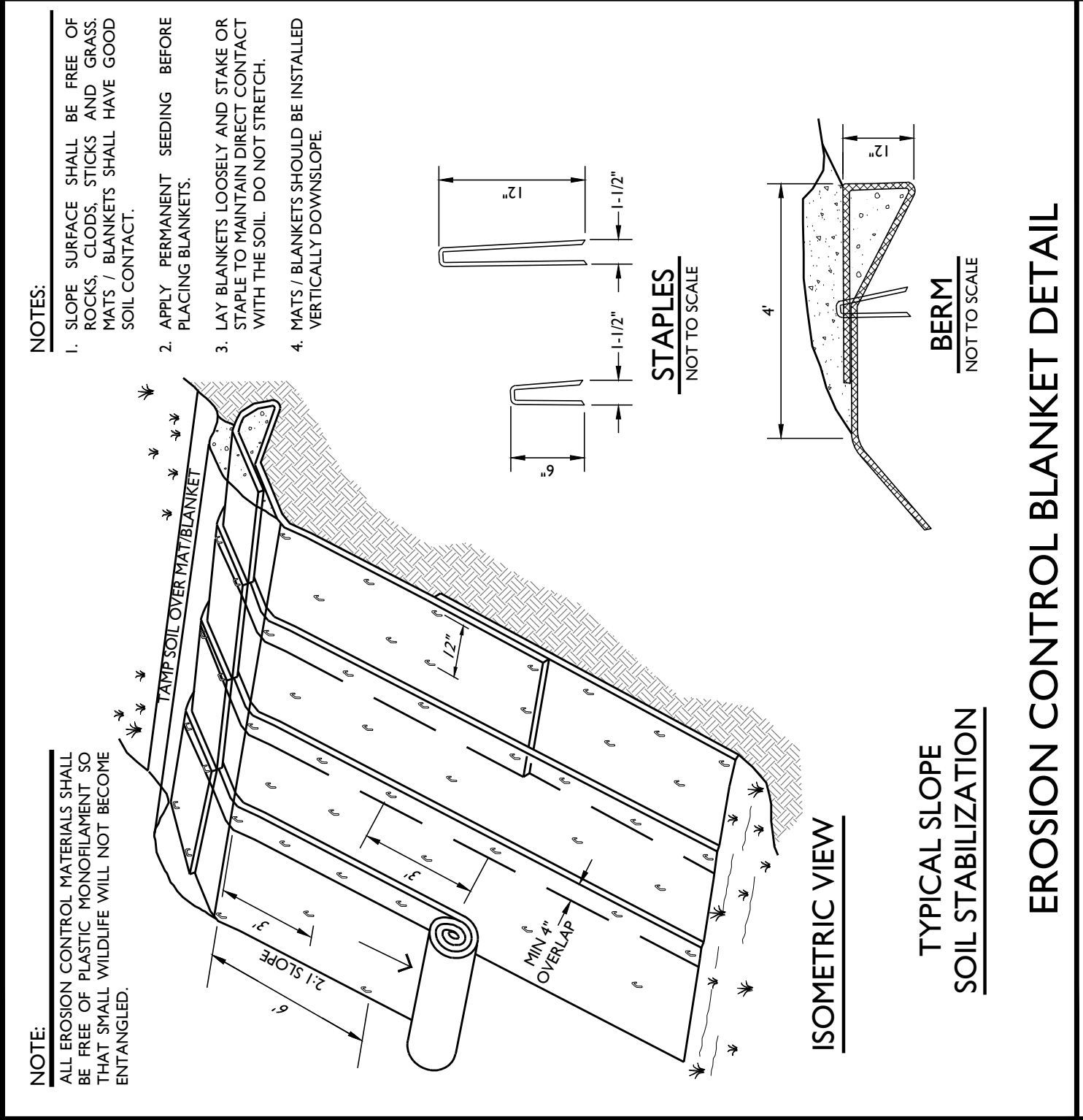


SURFACE ROUGHENING DETAIL

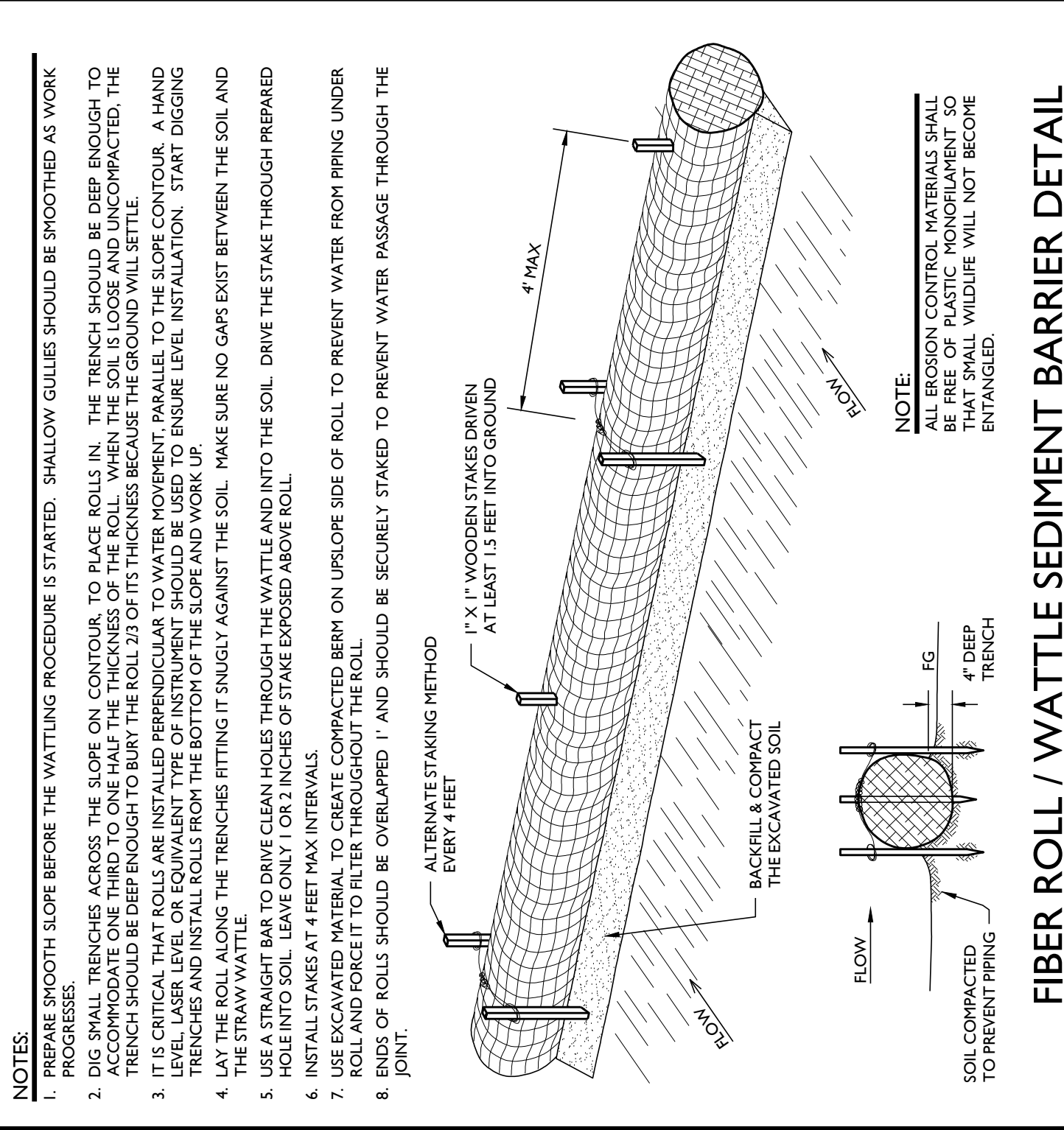


EROSION HAZARD	SLOPE ALONG ROAD				
	<10%	11% - 25%	26% - 50%	>50%	
EXTREME	100'	75'	50'	50'	
HIGH	150'	100'	75'	50'	
MODERATE	200'	150'	100'	75'	
LOW	300'	200'	150'	100'	

WATERBAR DETAIL



EROSION CONTROL BLANKET DETAIL



FIBER ROLL / WATTLE SEDIMENT BARRIER DETAIL