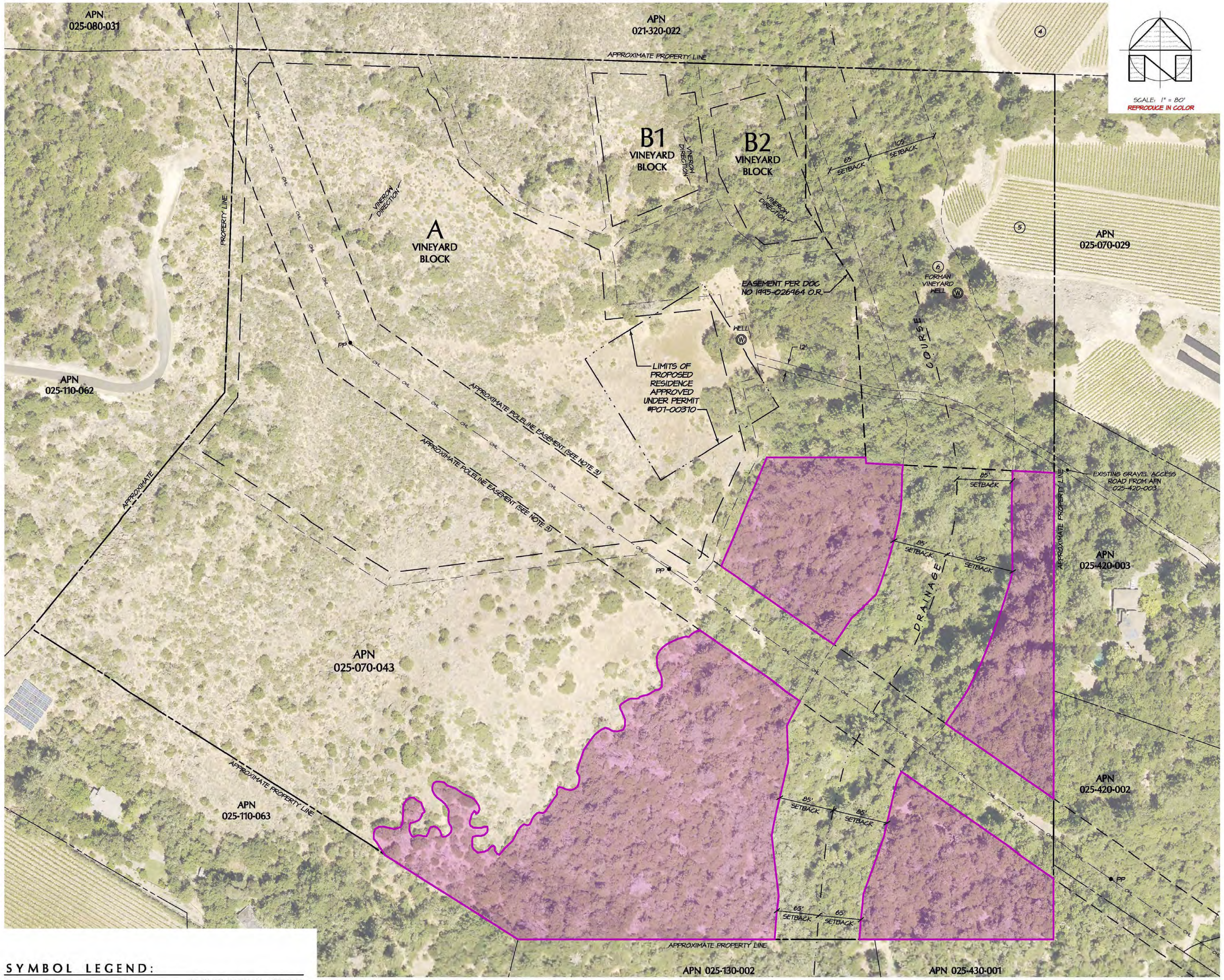
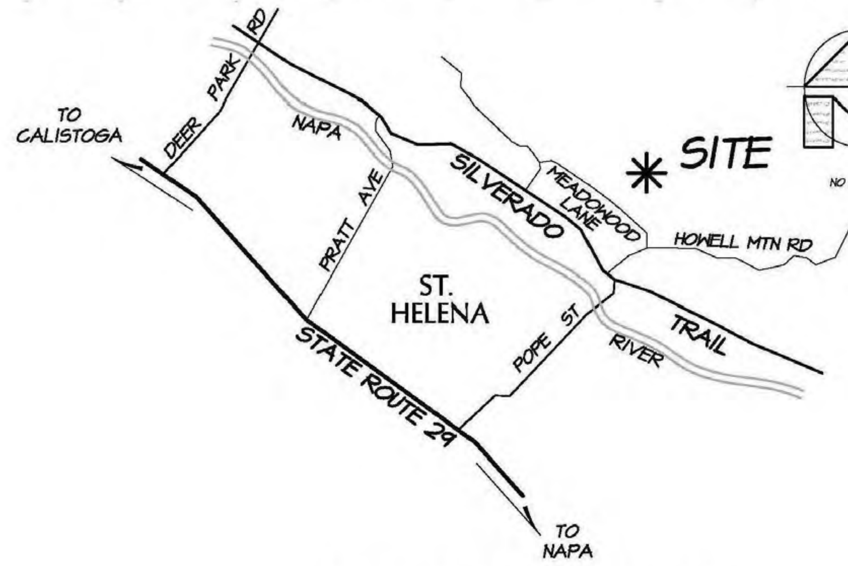
MATTHES VINEYARDS

TRACK I VINEYARD DEVELOPMENT AND EROSION CONTROL PLAN



SCALE: 1" = 80'
REPRODUCE IN COLOR



LOCATION MAP

NO SCALE

PROJECT INFORMATION:

PROPERTY OWNERS & APPLICANT:
WILLIAM MERRILL &
LEIGH SHERWOOD MATTHES
1508 SPRING STREET
ST. HELENA, CA 94574
(415) 517-6060

ASSESSOR'S PARCEL NUMBER:
025-070-043

PARCEL SIZE:
40.0± ACRES

PROJECT SIZE:
13.2± ACRES (DISTURBED AREA)
11.1± ACRES (VINEYARD AREA)

PARCEL ZONING:
AW

MUNICIPAL WATERSHED:
THIS PARCEL IS NOT IN A MUNICIPAL WATERSHED

NOTES:

1. THE 2018 AERIAL PHOTOGRAPH USED AS A BASE FOR THIS PLAN WAS PROVIDED BY NAPA COUNTY. ALL PROPERTY LINES, BUILDINGS, UTILITIES, WASTEWATER SYSTEM LOCATIONS, DIMENSIONS, AND DESCRIPTIONS SHOWN HEREON ARE APPROXIMATE AND SHALL BE VERIFIED IN THE FIELD.
2. THE 2018 AERIAL PHOTOGRAPH USED AS A BASE FOR THIS PLAN DOES NOT REPRESENT THE DESTRUCTION CAUSED FROM THE 2020 GLASS FIRE AND IS NOT REPRESENTATIVE OF THE MOST CURRENT SITE CONDITIONS.
3. THE ASSUMED 100' WIDE OVERHEAD LINE EASEMENT NOT LOCATABLE OF RECORD PER TITLE REPORT FORM NO. 1402.92, SECTION TWO, ITEM NO.5.

(4) EXISTING VINEYARD IS APPROVED UNDER NAPA COUNTY EROSION CONTROL PLAN #98278-ECPA.

(5) EXISTING VINEYARD IS OWNED AND OPERATED BY FOREMAN VINEYARD, GRANTED THROUGH EASEMENT DOCUMENT NO. 00279.

(6) THE EXISTING "FORMAN VINEYARD WELL" SERVES APN 025-070-029.

SHEET INDEX:*

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SUPPLEMENTAL EXHIBITS:
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SHEET EC9 WATER AVAILABILITY ANALYSIS EXHIBIT
SHEET EC10 VEGETATION AND WOODLAND RETENTION EXHIBIT
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SHEET EC12 PROPOSED (POST-DEVELOPMENT) HYDROLOGY CONDITIONS
SHEET EC13 PROPOSED HYDRAULIC ANALYSIS

* NOTE: SEE ALSO THE NARRATIVE SUPPLEMENT TO THE EROSION CONTROL PLAN WHICH SHALL BE CONSIDERED A PART OF THIS PLAN.

SYMBOL LEGEND:

Symbol	Description
— — — — (thin dashed)	EDGE OF POTENTIAL VINEYARD AVENUE
—— —— —— (heavy dashed)	EDGE OF POTENTIAL VINEYARD BLOCK
(magenta box)	VEGETATION CANOPY MITIGATION AREA (7.30± ACRES)

OVERALL SITE PLAN

SCALE: 1" = 80'

FEMA FLOOD DATA:

THIS PROJECT IS NOT LOCATED WITHIN A FLOODWAY OR FLOODPLAIN PER FLOOD INSURANCE RATE MAP (FIRM) PANEL NO. 06055C0264E, DATED SEPTEMBER 26, 2008. ZONE "X" IS DETERMINED TO BE OUTSIDE THE 0.2% ANNUAL CHANCE FLOODPLAIN IN AN UNINCORPORATED AREA OF NAPA COUNTY.

NO.	DATE	DESCRIPTION	SHEETS	BY
5	05-07-2025	NAPA COUNTY EMAIL COMMENTS DATED APRIL 30, 2025	EC5	DCB
4	05-08-2023	REISSUED; CHANGE ENGINEER OF RECORD	ALL	SGC
3	02-10-2023	NAPA COUNTY COMMENTS DATED JANUARY 04, 2023	EC1, EC3, EC5, EC10, & EC13	DCB
2	11-30-2022	REMOVED BLOCK "C" PER NAPA COUNTY COMMENTS DATED OCTOBER 12, 2022	EC1, EC2, EC4, EC5, EC8, EC10-EC12	DCB
1	04-19-2022	NAPA COUNTY COMMENTS DATED APRIL 19, 2021	EC1 - EC7, EC9 - EC12	DCB

REGISTERED PROFESSIONAL ENGINEER
PAUL NATHAN BARTELT
No. 45102
CIVIL
STATE OF CALIFORNIA

PREPARED UNDER THE DIRECTION OF

PAUL N. BARTELT 05-07-2025

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DES: MGG
DRWN: DCB / KP
CHKD: PNB

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1303 Jefferson Street, 200 B, Napa, CA 94559
www.barteltengineering.com
· Telephone: 707-258-1301 ·

MATTHES VINEYARDS
OVERALL SITE PLAN
NAPA COUNTY CALIFORNIA

DATE: MARCH 2021
JOB NO: 20-01
SHEET NO: EC1 OF 13 (5)

P21-00047-ECPA

5/8/2025 - 11:26 AM, DavidB, S:\LAND PROJECTS\2018-2022\2001\2020 ECP TRK 1\ACAD\PLANS\2001-ECP DLT5.DWG, 1-OSP, ARCH FULL BLEED D (36.00 X 24.00 INCHES), 1" = 1', PLOTTED @ BARTELT ENGINEERING, 707-258-1301

GENERAL NOTES:

1. ALL WORKMANSHIP AND MATERIALS FOR THE IMPROVEMENTS SHOWN ON THESE PLANS SHALL CONFORM TO THE REQUIREMENTS OF THE NAPA COUNTY ROAD & STREET STANDARDS AND/OR THE LATEST EDITION OF THE STATE OF CALIFORNIA STANDARD SPECIFICATIONS AND STANDARD PLANS, THE 2019 CALIFORNIA BUILDING CODE (C.B.C.), AND NAPA COUNTY ENVIRONMENTAL HEALTH STANDARDS.
2. CONTRACTOR SHALL PROVIDE SUBMITTALS FOR ALL MATERIALS TO BE USED ON THE PROJECT TO THE ENGINEER FOR APPROVAL PRIOR TO BIDDING, PURCHASING, OR INSTALLATION. CONTRACTOR SHOULD ALLOW AT LEAST FIVE (5) WORKING DAYS FOR INITIAL REVIEW OF EACH SUBMITTAL AND ADDITIONAL TIME IF COORDINATION WITH SUBSEQUENT SUBMITTALS IS REQUIRED. ALLOW FIVE (5) WORKING DAYS FOR EACH RESUBMITTAL. USE OF UNAPPROVED MATERIALS SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR.
3. ALL MATERIALS SHALL BE FURNISHED AND INSTALLED BY THE CONTRACTOR UNLESS OTHERWISE NOTED.
4. CONTRACTOR SHALL BE FULLY RESPONSIBLE FOR BEING FAMILIAR WITH THE SPECIFICATIONS, PROVISIONS, AND PROCEDURES REQUIRED BY NAPA COUNTY FOR THE WORK OUTLINED IN THESE PLANS. CONTRACTOR SHALL BE RESPONSIBLE FOR HAVING A COPY OF THE APPROVED PLANS AND ANY ADDENDUMS AT THE JOB SITE AT ALL TIMES.
5. CONTRACTOR SHALL BE APPROPRIATELY LICENSED WITH THE STATE OF CALIFORNIA TO PERFORM THE WORK OUTLINED IN THESE PLANS.
6. PRIOR TO THE COMMENCEMENT OF CONSTRUCTION, THE CONTRACTOR SHALL SECURE CONSTRUCTION PERMITS FROM NAPA COUNTY AND OTHER AGENCIES AS NECESSARY.
7. CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL APPROPRIATE PERMITS PRIOR TO THE START OF ANY WORK WITHIN A RIPARIAN AREA.
8. CONTRACTOR SHALL CONTACT BARTELT ENGINEERING TO ARRANGE A PRE-CONSTRUCTION MEETING FOR THE PURPOSE OF REVIEWING JOB REQUIREMENTS AND NAPA COUNTY PROCEDURES.
9. CONTRACTOR SHALL NOTIFY NAPA COUNTY STAFF AND THE ENGINEER AT LEAST THREE (3) WORKING DAYS PRIOR TO COMMENCEMENT OF WORK.
10. CONSTRUCTION AND GRADING ACTIVITIES ON THE SITE SHALL BE LIMITED TO BETWEEN 7:00 A.M. AND 7:00 P.M. DAILY.
11. CONTRACTOR SHALL PROVIDE EMERGENCY TELEPHONE NUMBERS TO THE NAPA COUNTY SHERIFF, FIRE, AND PUBLIC WORKS DEPARTMENTS AND KEEP THEM INFORMED DAILY REGARDING STREETS UNDER CONSTRUCTION AND DETOURS. DETOURS SHALL NOT BE PERMITTED UNLESS APPROVED IN WRITING BY THE NAPA COUNTY PUBLIC WORKS DEPARTMENT.
12. CONTRACTOR SHALL REQUEST INSPECTIONS A MINIMUM OF 48 HOURS IN ADVANCE BY CALLING NAPA COUNTY BUILDING AND ENGINEERING DIVISIONS INSPECTION HOTLINE AT (707) 253-4416 AND THE ENGINEER AT (707) 258-1301.
13. CONTRACTOR SHALL NOTIFY ALL PUBLIC OR PRIVATE UTILITY COMPANIES TWO (2) WORKING DAYS PRIOR TO COMMENCEMENT OF WORK ON THIS PROJECT TO VERIFY THE LOCATION OF EXISTING UTILITY LINES. CALL UNDERGROUND SERVICE ALERT (U.S.A.) TOLL FREE AT 811 OR 1-800-227-2600, 6:00 A.M. TO 7:00 P.M., MONDAY THROUGH FRIDAY OR SUBMIT TICKET ONLINE AT WWW.811EXPRESS.COM.
14. CONTRACTOR SHALL BE RESPONSIBLE FOR THE VERIFICATION OF ALL EXISTING UTILITIES IN THE FIELD. COSTS OF REPAIRING ANY DAMAGES OR INJURIES CAUSED BY THE CONTRACTOR SHALL BE BORNE BY THE CONTRACTOR. VARIOUS UNDERGROUND LINES WERE PLOTTED ON THE PLANS FROM THE INFORMATION OBTAINED FROM THE RESPECTIVE UTILITY COMPANIES AND/OR THE OWNER, THEREFORE, NO WARRANTY, EXPRESSED OR IMPLIED, IS MADE AS TO THE COMPLETENESS OR CORRECTNESS OF THEIR LOCATION.
15. EXISTING UTILITIES SHALL BE KEPT IN SERVICE AT ALL TIMES. UTILITIES THAT INTERFERE WITH THE WORK TO BE PERFORMED SHALL BE PROTECTED AS REQUIRED BY NAPA COUNTY, PG&E, AT&T, COMCAST, AND THE OWNER.
16. CONTRACTOR SHALL COORDINATE ALL NECESSARY UTILITY RELOCATIONS, IF REQUIRED, WITH THE APPROPRIATE UTILITY COMPANIES AND/OR THE OWNER.
17. CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTING EXISTING FACILITIES AND IMPROVEMENTS FROM DAMAGE RESULTING FROM CONTRACTOR'S WORK. ANY DAMAGE CAUSED BY CONTRACTOR SHALL BE REPAIRED AT THE CONTRACTOR'S EXPENSE.
18. CONTRACTOR SHALL PROVIDE AND MAINTAIN SUFFICIENT BARRICADES TO PROVIDE FOR THE SAFETY OF THE GENERAL PUBLIC TO THE SATISFACTION OF NAPA COUNTY AND THE OWNER.
19. CONTRACTOR AGREES THAT THEY 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. 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 ALL LIABILITY, REAL OR ALLEGED, IN CONNECTION WITH THE PERFORMANCE OF WORK ON THE PROJECT; EXCEPT FOR LIABILITY ARISING FROM THE SOLE NEGLIGENCE OF THE OWNER OR THE ENGINEER.
20. SHOULD ANY CONTRACTOR OR SUBCONTRACTOR FIND ANY DEFICIENCIES, ERRORS, CONFLICTS, OR OMISSIONS IN THESE PLANS AND SPECIFICATIONS OR SHOULD THERE BE ANY DOUBT AS TO THEIR MEANING OR INTENT, THE CONTRACTOR SHALL NOTIFY BARTELT ENGINEERING FOR A WRITTEN CLARIFICATION, ADDENDUM, ETC. SHOULD THE CONTRACTOR FAIL TO DO SO BEFORE SUBMITTING A PROPOSAL, THE CONTRACTOR CANNOT CLAIM ADDITIONAL COMPENSATION FOR WORK REQUIRED TO COMPLETE THE PROJECT.
21. THESE PLANS ARE INTENDED TO SHOW SITE IMPROVEMENTS FOR A TRACK I VINEYARD DEVELOPMENT. THIS DESIGN INCLUDES, BUT IS NOT LIMITED TO, GRADING AND STORM DRAINAGE. BARTELT ENGINEERING IS NOT RESPONSIBLE FOR GEOTECHNICAL ENGINEERING SERVICES.
22. ALL DIMENSIONS SHOWN ON THE PLANS SHOW MEASUREMENTS IN A HORIZONTAL PLANE. WRITTEN DIMENSIONS ALWAYS TAKE PRECEDENCE OVER SCALED DIMENSIONS. IF THERE IS A CONFLICT, NOTIFY BARTELT ENGINEERING AND OBTAIN CLARIFICATION. NO DEVIATION OR SUBSTITUTION SHALL BE ALLOWED WITHOUT OBTAINING WRITTEN APPROVAL FROM THE ENGINEER.
23. FADED BACKGROUND REPRESENTS EXISTING TOPOGRAPHIC FEATURES. THE TOPOGRAPHIC INFORMATION SHOWN ON THIS PLAN WAS TAKEN FROM THE "MAP OF TOPOGRAPHY BY AERIAL METHODS OF A PORTION OF THE LANDS OF MATTHES" PREPARED BY ALBION SURVEYS, DATED JANUARY 10, 2006. BARTELT ENGINEERING ASSUMES NO LIABILITY, REAL OR ALLEGED, REGARDING THE ACCURACY OF THE TOPOGRAPHIC INFORMATION SHOWN.

    BENCHMARK NOTE: DETERMINED THROUGH GPS OBSERVATION
    VERTICAL DATUM: NAVD88
    BASIS OF BEARING: CALIFORNIA COORDINATE SYSTEM, ZONE2, NAD 83
    CONTOUR INTERVAL: EVERY TWO (2) FEET, HIGHLIGHTED EVERY TEN (10) FEET.
24. THIS DRAWING DOES NOT REPRESENT A BOUNDARY SURVEY. BOUNDARY LINES SHOWN ARE APPROXIMATE AND FOR INFORMATIONAL PURPOSES ONLY.
25. THESE PLANS ARE INTENDED TO BE USED FOR CONSTRUCTION STAKING OF THE VINEYARD DEVELOPMENT SHOWN HEREON. ALL STAKING IS TO BE PERFORMED BY A LICENSED LAND SURVEYOR. IF THE CONTRACTOR OR SURVEYOR FINDS ANY DISCREPANCIES, CONTACT BARTELT ENGINEERING FOR A WRITTEN CLARIFICATION.
26. THE TERM "ENGINEER", AS CALLED OUT ON THIS SET OF PLANS, SHALL MEAN A REPRESENTATIVE OF BARTELT ENGINEERING.

PLANNING NOTES:

1. SHOULD HAZARDOUS MATERIALS BE ENCOUNTERED DURING CONSTRUCTION, NAPA COUNTY ENVIRONMENTAL HEALTH SHALL BE NOTIFIED AND APPROPRIATE REMEDIATION MEASURES SHALL BE UNDERTAKEN.
2. SHOULD GROUND-DISTURBING ACTIVITIES ASSOCIATED WITH CONSTRUCTION REVEAL THE PRESENCE OF POTENTIAL CULTURAL RESOURCES (E.G., ARTIFACT CONCENTRATIONS, STRUCTURAL DEBRIS, SKELETAL REMAINS), WORK WITHIN 50 FEET OF THE FIND SHALL BE SUSPENDED UNTIL A QUALIFIED CULTURAL RESOURCE SPECIALIST CAN EVALUATE THE DISCOVERY AND RECOMMEND APPROPRIATE MITIGATION MEASURES, CONSISTENT WITH THE CEQA GUIDELINES. AS PROJECT CONSTRUCTION PROCEEDS, THE DISCOVERY SHALL BE CLEARLY MARKED AND PROTECTED BY TEMPORARY FENCING IF CULTURAL RESEARCH OR RECOVERY TECHNIQUES ARE LONG-TERM IN NATURE.
3. SHOULD SKELETAL REMAINS BE ENCOUNTERED, THE NAPA COUNTY CORONER SHALL BE NOTIFIED. SHOULD THE CORONER DETERMINE THAT SUCH REMAINS ARE IN A CONTEXT SUGGESTING THE HISTORIC OR PREHISTORIC OCCUPANCY BY NATIVE AMERICANS, THE CALIFORNIA NATIVE AMERICAN HERITAGE COMMISSION SHALL BE NOTIFIED, SO IT MAY ARRANGE AT ITS DISCRETION FOR QUALIFIED NATIVE AMERICAN OR EQUIVALENT PARTICIPATION IN DETERMINING THE DISPOSITION OF SUCH REMAINS.
4. EXISTING WELLS SHALL BE PROTECTED DURING CONSTRUCTION. SUFFICIENT BARRICADES SHALL BE INSTALLED TO PROTECT EXISTING WELLS DURING FARMING OPERATIONS.

GRADING NOTES:

1. ALL MOVEMENT OF EARTH SHALL COMPLY WITH NAPA COUNTY ROAD & STREET STANDARDS, THE 2019 CALIFORNIA BUILDING CODE (C.B.C), NAPA COUNTY CONSERVATION REGULATIONS, AND THESE PLANS.
2. THE SITE SHALL BE VISUALLY INSPECTED BY THE CONTRACTOR TO DETERMINE THE EXTENT OF CLEARING, GRUBBING, AND GRADING WORK TO BE DONE. GRADING ON THE SITE WILL BE LIMITED TO THE EXCAVATIONS AND/OR FILLS AS SHOWN ON THESE PLANS.
3. IN THE ABSENCE OF A GEOTECHNICAL INVESTIGATION REPORT, ALL CUT AND FILL SLOPES SHALL BE 2:1 OR FLATTER.
4. REASONABLE MEASURES SHALL BE PROVIDED AND PRACTICED TO MINIMIZE ANY NUISANCE FROM DUST DURING GRADING AND CONSTRUCTION OPERATIONS. CONTRACTOR SHALL CONDUCT ALL GRADING OPERATIONS IN SUCH A MANNER AS TO PRECLUDE WIND BLOWN DIRT, DUST, AND RELATED DAMAGE TO NEIGHBORING PROPERTIES. SUFFICIENT WATERING TO CONTROL DUST IS REQUIRED AT ALL TIMES. CONTRACTOR SHALL ASSUME LIABILITY FOR CLAIMS RELATED TO WIND BLOWN MATERIAL. IF THE DUST CONTROL IS INADEQUATE AS DETERMINED BY NAPA COUNTY OR THE OWNER, CONSTRUCTION WORK SHALL BE SUSPENDED UNTIL CORRECTIVE MEASURES ARE TAKEN.
5. CONTRACTOR SHALL CONFORM TO EXISTING SURROUNDING TOPOGRAPHY AND OTHER IMPROVEMENTS WITH A SMOOTH TRANSITION IN GRADING AND AVOID ANY ABRUPT OR APPARENT CHANGES IN GRADES OR CROSS SLOPES, LOW SPOTS, OR HAZARDOUS CONDITIONS.
6. TREES THAT ARE REMOVED SHALL ALSO HAVE THEIR STUMPS AND MAJOR ROOT SYSTEMS REMOVED. AFTER A TREE OR A STUMP IS REMOVED THE RESULTING EARTH CAVITY SHALL BE CLEANED OF LARGER ROOTS (TWO (2) INCH DIAMETER AND LARGER). SOIL SHOULD BE REMOVED AND DISHED TO PROVIDE ACCESS FOR COMPACTION EQUIPMENT. ALL EARTHWORK, SCARIFICATION, BACKFILL, AND COMPACTION SHALL BE PERFORMED PER THESE PLANS AND NAPA COUNTY REQUIREMENTS.
7. TREE STUMPS AND ALL OTHER ORGANIC MATERIAL TO BE BURNED SHALL BE PILED AT STRATEGIC LOCATIONS WITHIN THE CLEARED AREAS. THESE PILES SHALL BE BURNED ONLY AFTER OBTAINING ALL REQUIRED APPROVALS FROM ALL GOVERNMENT AGENCIES, INCLUDING CALIFORNIA DEPARTMENT OF FORESTRY AND BAY AREA AIR QUALITY MANAGEMENT DISTRICT.
8. TREE STUMPS AND ALL OTHER ORGANIC MATERIAL TO BE REMOVED AS PART OF THE CONSTRUCTION SHALL BE CHIPPED AND/OR HAULED OFFSITE AND DISPOSED OF PROPERLY.

EROSION CONTROL NOTES:

1. ALL MAJOR GRADING SHOWN HEREIN SHALL BE WINTERIZED IF NOT YET COMPLETED PRIOR TO OCTOBER 15 OF EACH YEAR THAT THE PROJECT IS UNDER CONSTRUCTION. EXCEPTIONS INCLUDE, BUT ARE NOT LIMITED TO, PROVISIONS THAT THE MAJOR GRADING HAS PREDOMINANTLY BEEN COMPLETED AND THAT THERE COULD BE A DETRIMENTAL IMPACT ON THE ENVIRONMENT IF THE MAJOR GRADING REMAINS INCOMPLETE. A REQUEST TO ALLOW GRADING TO OCCUR BETWEEN OCTOBER 15 AND APRIL 1 SHALL BE SUBMITTED TO NAPA COUNTY PLANNING, BUILDING AND ENVIRONMENTAL SERVICES TWO (2) WORKING WEEKS PRIOR TO OCTOBER 15 OF EACH YEAR THAT THE PROJECT IS UNDER CONSTRUCTION. NO GRADING SHALL OCCUR AFTER OCTOBER 15 UNTIL APPROVAL HAS BEEN GRANTED BY THE NAPA COUNTY PLANNING, BUILDING AND ENVIRONMENTAL SERVICES DIRECTOR OR HIS REPRESENTATIVES.
2. THIS PLAN ADDRESSES EROSION AND SEDIMENT CONTROL MEASURES AND MINOR GRADING ASSOCIATED WITH THE CONSTRUCTION OF THE PROPOSED IMPROVEMENTS SHOWN ON THIS PLAN DURING THE WINTER SHUT-DOWN PERIOD (OCTOBER 15 TO APRIL 1).
3. ALL PERMANENT SEDIMENT/DETENTION DEVICES SHALL BE INSTALLED PRIOR TO OCTOBER 1 OF EACH YEAR WITHIN WHICH WORK TAKES PLACE.
4. SILT FENCE AND/OR STRAW WATTLE SEDIMENT BARRIERS WILL BE INSTALLED PRIOR TO OCTOBER 15 AND WILL REMAIN OPERABLE DURING THE WINTER SHUT-DOWN PERIOD (OCTOBER 15 TO APRIL 1).
5. CHANGES TO THIS EROSION AND SEDIMENT CONTROL PLAN TO MEET FIELD CONDITIONS WILL BE MADE ONLY WITH THE APPROVAL OF/OR AT THE DIRECTION OF BARTELT ENGINEERING.
6. THE CONTRACTOR WILL INFORM ALL CONSTRUCTION SITE WORKERS ABOUT THE MAJOR PROVISIONS OF THE EROSION AND SEDIMENT CONTROL PLAN AND SEEK THEIR COOPERATION IN AVOIDING THE DISTURBANCE OF THESE EROSION CONTROL MEASURES.
7. DURING THE WINTER SHUT-DOWN PERIOD (OCTOBER 15 TO APRIL 1) ALL SEDIMENT BARRIERS WILL BE INSPECTED AND REPAIRED AT THE END OF EACH WORKING DAY AND, IN ADDITION, AFTER EACH RAIN EVENT PRODUCING RUNOFF.
8. BETWEEN OCTOBER 15 AND APRIL 1, ALL PAVED AREAS WILL BE KEPT CLEAR OF DIRT, SEDIMENT, AND DEBRIS. THE PROJECT AREA WILL BE MAINTAINED SO THAT A MINIMUM OF SEDIMENT-LADEN RUNOFF LEAVES THE SITE.
9. THE SEEDED AREAS WILL BE REPAIRED, RESEEDED, AND MULCHED AS SOON AS POSSIBLE AFTER BEING DAMAGED.
10. ALL GRADED OR DISTURBED AREAS SHALL BE SEEDED IMMEDIATELY AFTER GRADING IS COMPLETE.
11. AREA TO BE SEEDED SHALL BE SCARIFIED TO A DEPTH OF FOUR (4) INCHES TO EIGHT (8) INCHES AND DRESSED TO PROVIDE A REASONABLY SMOOTH FIRM SURFACE.
12. THE SEED AND FERTILIZER WILL BE APPLIED BY HAND AT THE RATES SPECIFIED BELOW:

    LE BALLISTER'S QUICK COVER CROP APPLIED AT 50 POUNDS PER ACRE IN THE FOLLOWING PERCENTAGES:

ANNUAL RYEGRASS	50%
SOFT CHESS	20%
CRIMSON CLOVER	25%
ROSE CLOVER	5%

13. FERTILIZER USED SHALL BE ONE OF THE FOLLOWING SPECIFICATIONS:

16-20-0	250 POUNDS PER ACRE
12-12-12	400 POUNDS PER ACRE
15-15-15	300 POUNDS PER ACRE

14. STRAW MULCH SHALL BE APPLIED, BY HAND, TO ALL DISTURBED AREAS AT A RATE OF 4,000 POUNDS PER ACRE.
15. NORTH AMERICAN GREEN BIONET C125BN EROSION CONTROL BLANKETS SHALL BE INSTALLED OVER SEED ON ALL DISTURBED SLOPES 4:1 OR STEEPER.
16. TEMPORARY EROSION CONTROL BEST MANAGEMENT PRACTICES (BMP'S) MAY BE INSTALLED WITHIN THE NAPA COUNTY CONSERVATION REGULATIONS SETBACKS; HOWEVER, PERMANENT EROSION CONTROL BMP'S ARE NOT PERMITTED WITHIN THE SETBACKS.

TREE PRESERVATION NOTES:

1. WHERE UTILITY TRENCHES ARE REQUIRED WITHIN TREE DRIP LINES, TUNNEL UNDER OR AROUND THE ROOTS BY DRILLING, AUGER BORING, PIPE JACKING, OR DIGGING BY HAND.
2. TREE PRESERVATION STANDARDS WILL BE UTILIZED FOR THE PRESERVATION OF TREES LOCATED WITHIN 25 FEET OF THE LIMITS OF WORK. CONSTRUCTION ACTIVITY INCLUDES BUT IS NOT LIMITED TO GRADING, TRENCHING, EXCAVATING, OPERATION OR PARKING OF CONSTRUCTION EQUIPMENT, OR VEHICLES IN THE VICINITY OF A TREE TO BE PRESERVED WHICH HAS THE POTENTIAL TO HARM OR AFFECT THE HEALTH OR VIGOR OF THE TREE.
3. FENCING WILL BE LOCATED A MINIMUM OF ONE (1) FOOT BEYOND THE CANOPY DRIPLINE IF AVAILABLE SPACE AND LOGISTICS ALLOW, FENCE WILL BE PLACED AT A GREATER DISTANCE OR UP TO TWICE THE DIAMETER OF THE DRIPLINE AND AT EACH TREE WITHIN 25 FEET OF THE PROPOSED PROJECT DEVELOPMENT AREA.
4. FENCING WILL BE A MINIMUM OF FOUR (4) FEET IN HEIGHT AT ALL LOCATIONS, AND WILL FORM A CONTINUOUS BARRIER WITHOUT ENTRY POINTS AROUND ALL INDIVIDUAL TREES OR GROUP OF TREES. BARRIER TYPE FENCING SHALL BE CHAIN LINK OR ORANGE CONSTRUCTION FENCING. FENCING WILL BE INSTALLED IN A PROFESSIONAL MANNER WITH ADEQUATE UPRIGHTS AND APPROPRIATE ATTACHMENTS. CONCRETE FOOTINGS ARE NOT REQUIRED DUE TO THE NATURE OF THE FENCING.
5. CONTRACTORS AND SUBCONTRACTORS WILL DIRECT ALL EQUIPMENT, AND PERSONNEL TO REMAIN OUTSIDE THE FENCED AREA AT ALL TIMES UNTIL THE PROJECT IS COMPLETE AND WILL INSTRUCT PERSONNEL AND SUBCONTRACTORS AS TO THE PURPOSE AND IMPORTANCE OF FENCING AND PRESERVATION.
6. FENCING WILL REMAIN IN PLACE AND NOT BE REMOVED UNTIL ALL CONSTRUCTION ACTIVITIES ARE COMPLETED. THIS INCLUDES RIPPING AND GRADING ACTIVITIES, INSTALLATION OF UNDERGROUND UTILITIES OR IMPROVEMENTS, AND ANY OTHER CONSTRUCTION OR ACTIVITY WHICH MAY BE SCHEDULED FOR PROJECT DEVELOPMENT. THERE MAY BE OCCASION WHEN ACCESS IS REQUIRED, AND FENCING MAY BE TEMPORARILY MOVED TO FACILITATE THE WORK.
7. ROOTS OF SINGLE STANDING TREES OFTEN EXTEND TWO (2) TO THREE (3) TIMES THE DISTANCE OF THE ACTUAL DRIP LINE, AND FUNCTION PRIMARILY IN THE UPTAKE OF NUTRIENTS AND WATER. THE DRIP LINE IS ARBITRARILY ESTABLISHED AS THE MINIMUM ROOT AREA GENERALLY REQUIRED TO PRESERVE TREE HEALTH. LEAVE AS MUCH AREA AROUND THE CIRCUMFERENCE OF THE TREE BEYOND THE DRIP LINE TO FURTHER ENSURE TREE SURVIVAL AND HEALTH.
8. ORIGINAL GRADE WILL BE MAINTAINED IN THE IMMEDIATE AREA OF THE ROOT CROWN AND WHERE THE SOIL CONTACTS THE TREE TRUNK, AT ALL TIMES. NO INCREASE IN GRADE WILL BE ALLOWED UNDER ANY CIRCUMSTANCES IN THIS AREA.
9. ALL UNDERGROUND WORK WITHIN TREE DRIP LINES WILL BE AVOIDED WHEREVER POSSIBLE TO REDUCE NEGATIVE IMPACT ON TREES. THE LOCATION OF UNDERGROUND UTILITIES WELL OUTSIDE THE DRIP LINE IS RECOMMENDED AS PART OF THE PRESERVATION.
10. ALL GRADING WILL BE ACCOMPLISHED TO PREVENT THE CONCENTRATION OF RUNOFF NEAR EXISTING TREES. THE INTENT IS TO PREVENT ACCUMULATION OF EXCESS WATER IN THE ROOT ZONES OF EXISTING TREES.
11. NO STORING OF MATERIALS IS TO OCCUR WITHIN THE TREE PROTECTION ZONE.

MITIGATION MEASURES:

THE FOLLOWING MITIGATION MEASURES ARE TAKEN IN PART OR WHOLE FROM THE "BIOLOGICAL RESOURCE ASSESSMENT WITH BOTANICAL SURVEYS AND DELINEATION OF WATER OF THE U.S." FOR THE MATTHES VINEYARDS PROJECT, PREPARED BY NORTHWEST BIOSURVEY, DATED JUNE 23, 2020. UPDATED SEPTEMBER 2021, MAY 2022, AND FEBRUARY 2023.

1. DEER FENCING SHALL BE RESTRICTED TO CONTIGUOUS VINEYARD BLOCK BOUNDARIES IN ORDER TO PERMIT WILDLIFE PASSAGE BETWEEN VINEYARD BLOCKS.
2. REMOVAL OF TREES DURING THE NESTING SEASON (FEBRUARY 1 TO AUGUST 31) MUST BE PRECEDED BY A SURVEY FOR NESTING BIRDS CONDUCTED BY A QUALIFIES BIOLOGIST WITHIN 14 DAYS OF THE PROPOSED REMOVAL. IN THE EVENT THAT NESTING BIRDS ARE IDENTIFIED, A SUITABLE CONSTRUCTION BUFFER WILL BE ESTABLISHED AROUND THE NEST SITE UNTIL EITHER THE END OF THE NESTING SEASON OR UPON DETERMINATION BY A QUALIFIED BIOLOGIST THAT FLEDGING HAS BEEN COMPLETED, OR THAT THE NEST HAS BEEN ABANDONED. IT IS RECOMMENDED THAT TREES APPROVED FOR REMOVAL BE FELLED OUTSIDE OF THE NESTING SEASON. THIS WOULD ALSO PERTAIN TO REMOVAL OF CHAPARRAL HABITAT WHICH SHALL EITHER BE GRUBBED (REMOVED ABOVE GROUND LEVEL) IF NOT DURING THE GRADING SEASON, OR GRADED IF THIS CAN BE DONE DURING THE GRADING SEASON.
3. IN ORDER TO AVOID IMPACTS TO BATS WITH SENSITIVE REGULATORY STATUS, WORK PROPOSED WITHIN 50 FEET OF WOODLAND HABITAT DURING THE MATERNITY ROOSTING SEASON (APRIL 1 THOUGH SEPTEMBER 15), TREES WITH FEATURES CAPABLE OF SUPPORTING ROOSTING BATS SHALL BE SURVEYED FOR BAT ROOSTS OR EVIDENCE OF BAT ROOSTING (GUANO, URINE STAINING AND SCENT OR DEAD BATS) BY A QUALIFIED BIOLOGIST WITHIN 14 DAYS OF THE START OF THE PROJECT ACTIVITIES OR REMOVAL OF VEGETATION. IF ACTIVE ROOSTS ARE DISCOVERED, A BUFFER OF 50 FEET AROUND THE ACTIVE ROOST SHALL BE ESTABLISHED BY THE BIOLOGIST. REMOVAL MAY OCCUR ONCE ACTIVE ROOSTING CEASES AS DETERMINED BY THE BIOLOGIST. DOWNED TREES SHALL REMAIN ON THE GROUND FOR 24 HOURS IN ORDER TO ALLOW ANY REMAINING BATS TO LEAVE.
4. ALL MAPPED DRAINAGES AND REQUIRED SETBACKS (PURSUANT TO NAPA COUNTY CODE SECTION 18.108.025) SHALL BE AVOIDED.

NO.	DATE	DESCRIPTION	BY
5	05-07-2025	NO CHANGE TO THIS SHEET	DCB
4	05-08-2023	REISSUED; CHANGE ENGINEER OF RECORD	SGC
3	02-10-2023	NO CHANGES TO THIS SHEET	DCB
2	11-30-2022	REMOVED BLOCK "C" PER NAPA COUNTY COMMENTS DATED OCTOBER 12, 2022	DCB
1	04-19-2022	NAPA COUNTY COMMENTS DATED APRIL 19, 2021	DCB

REGISTERED PROFESSIONAL ENGINEER
PAUL NATHAN BARTELT
No. 45102
CIVIL
STATE OF CALIFORNIA

PREPARED UNDER THE DIRECTION OF

PAUL N. BARTELT 05-07-2025

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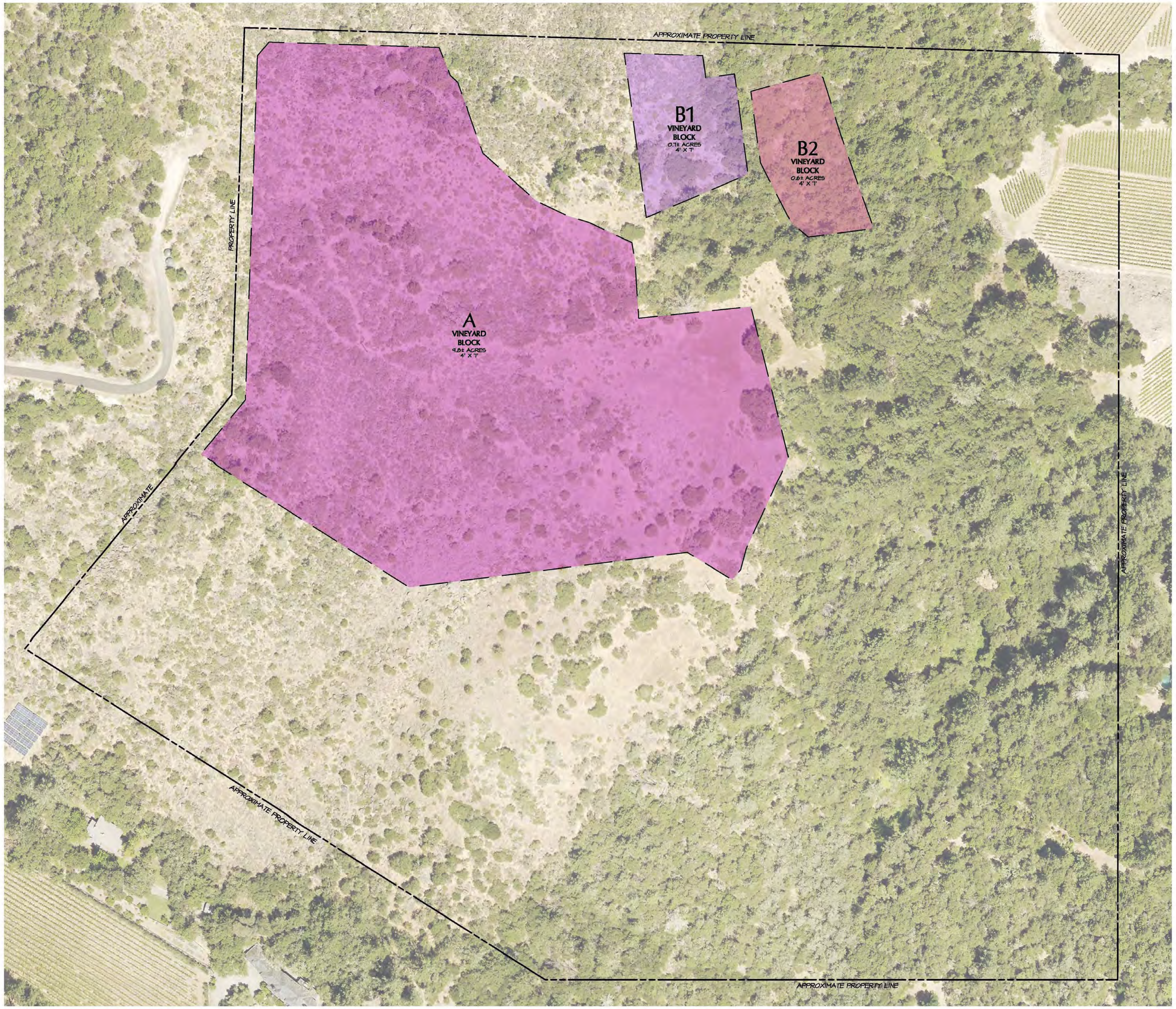
MATTHES VINEYARDS

NOTES SHEET

NAPA COUNTY CALIFORNIA

DATE: MARCH 2021
JOB NO: 20-01
SHEET NO: EC2
OF 13
5

5/8/2025 - 11:26 AM, DavidB, S:\LAND PROJECTS\2018-2022\2001\2020 ECP TRK 1\ACAD\PLANS\2001-ECP DLTS.DWG, 2-NOTES, ARCH FULL BLEED D (36.00 X 24.00 INCHES), 1" = 1', PLOTTED @ BARTELT ENGINEERING, 707-258-1301



SCALE: 1" = 80'
REPRODUCE IN COLOR

FARMING PRACTICES PLAN

SCALE: 1" = 80'

FARMING PRACTICES NOTES:

1. PROPOSED DEPTH OF RIPPING FOR INITIAL VINEYARD DEVELOPMENT IS 24 TO 36 INCHES.
2. VINEYARD BLOCK VINE SPACING IS FOUR (4) FEET BY SEVEN (7) FEET.
3. AFTER THE INITIAL THREE (3) YEAR DEVELOPMENT PERIOD, THE VINEYARD IS INTENDED TO BE FARMED WITH WHEELED OR TACK-DRIVEN VEHICLES.

   TILLAGE PRACTICE:

   BLOCKS A THROUGH B2 - NO-TILL (REFER TO LEGEND FOR COVER CROP REQUIREMENTS).
4. BLOCKS A THROUGH B2 WILL IMPLEMENT A MANUAL OR MECHANICAL WEED CONTROL ONLY.
5. THROUGHOUT THE LIFE OF THE VINEYARD IT MAY BE NECESSARY TO REESTABLISH THE VEGETATIVE COVER CROP. IN SUCH INSTANCES THE COVER CROP WILL BE MANAGED AS DESCRIBED IN THE "PROTOCOL FOR RE-PLANTING/RENEWAL OF APPROVED NON-TILLED VINEYARD COVER CROPS" AS DESCRIBED IN A MEMORANDUM FROM PATRICK LOWE, NAPA COUNTY CONSERVATION, DEVELOPMENT AND PLANNING DEPARTMENT, DATED APRIL 12, 2004. PRE-IRRIGATION OF THE COVER CROP MAY BE PERFORMED AS NECESSARY TO ESTABLISH AND MAINTAIN THE COVER CROP UNTIL THE ONSET OF WINTER RAINS. IF THE COVER CROP IS RE-ESTABLISHED TO 75% SURFACE COVER, STRAW MULCH WILL NOT BE REQUIRED.
6. PROTOCOL FOR RE-PLANTING/RENEWAL OF APPROVED NON-TILLED VINEYARD COVER CROPS.

   A. RATIONALE: UNDER NORMAL FARMING CONDITIONS NON-TILLED VINEYARD COVER CROPS MAY NEED TO BE ROUTINELY RE-ESTABLISHED, OR RENEWED, EVERY FOUR (4) TO FIVE (5) YEARS BASED ON FACTORS ROUTINELY ENCOUNTERED DURING VINEYARD FLOOR MANAGEMENT. THOSE FACTORS INCLUDE:
   - WEED MANAGEMENT AND WEED COMPETITION WITH THE SELECTED COVER CROP.
   - EXCESSIVE COMPETITION WITH VINES BY THE SELECTED COVER CROP.
   - POOR SEED DEVELOPMENT AND GERMINATION, WHERE THE SELECTED ANNUAL COVER CROP RELIES UPON ANNUAL SEED PRODUCTION FOR YEAR-TO-YEAR SUCCESSION.

   B. IN ADDITION, UNFORESEEN EVENTS MAY AFFECT VINEYARD FLOOR MANAGEMENT SYSTEMS IN A MUCH SHORTER TIME FRAME. IT MAY BECOME NECESSARY TO RE-ESTABLISH OR RENEW THE NON-TILLED COVER CROP ON A LIMITED EMERGENCY BASIS. SUCH LIMITED EMERGENCY SITUATIONS MIGHT INCLUDE UNFORESEEN EVENTS SUCH AS:
   - SUBSTANTIAL INFESTATION BY "PESTS", SUCH AS BURROWING RODENTS, INSECTS, FUNGI, ETC. THAT REDUCE THE VIGOR AND EFFECTIVENESS OF THE SELECTED COVER CROP.
   - CATASTROPHIC WEATHER CONDITIONS, SUCH AS PROLONGED DROUGHT OR UNSEASONABLE HEAVY RAINFALL.
   - DEGRADED SOIL STRUCTURE AND FUNCTION, SUCH AS COMPACTION, RUTTING, OR MOUNDING DUE TO UNAVOIDABLE VINEYARD OPERATIONS DURING WET SOIL CONDITIONS.
   - A TEMPORARY OR PERMANENT LOSS OF IRRIGATION WATER SUPPLY, LEADING TO INCREASED RELIANCE ON AMBIENT SOIL MOISTURE TO MAINTAIN COVER CROP PRODUCTION.
   - UNFORESEEN EXCAVATION OR GRADING TO REPAIR DAMAGED IRRIGATION OR RUNOFF CONTROL SYSTEMS.

   C. PROTOCOL: EROSION CONTROL PLANS SHOULD PROVIDE SITE-SPECIFIC SPECIFICATIONS FOR COVER CROP RE-ESTABLISHMENT OR RENEWAL FOR THE PREDICTABLE CIRCUMSTANCES MENTIONED ABOVE. HOWEVER, WHEN IT BECOMES NECESSARY, EITHER BY ROUTINE OR EMERGENCY, TO RE-ESTABLISH OR RENEW VINEYARD COVER CROP A PROTOCOL INCORPORATING THE FOLLOWING MEASURES SHOULD BE FOLLOWED:
   - SEEK PROFESSIONAL CONSULTATION, INCLUDING SOIL NUTRIENT ANALYSIS, TO DETERMINE THE REASONS FOR THE ORIGINAL COVER CROP'S FAILURE. ADJUST SOIL FERTILITY, IRRIGATION, AND SEED SELECTION ACCORDINGLY.
   - WHEN TILLAGE IS NECESSARY, ALTERNATE ROWS SHOULD BE TILLED, SEEDED, AND STRAW-MULCHED TO EFFECTIVELY ACCOMPLISH THE RE-ESTABLISHMENT/RENEWAL PROCESS OVER A TWO (2) YEAR PERIOD.

   D. TILLAGE AND RE-SEEDING SHOULD BE CONDUCTED IN THE FOLLOWING MANNER:
   - IN YEAR ONE (1), TILL TO PREPARE SEED BED AND SOW DESIRED COVER CROP IN EVERY OTHER ROW ("THE EVENS"), LEAVING THE ALTERNATE ROWS ("THE ODDS") UNTILLED AND MOWED ONLY.
   - MULCH ALL TILLED ROWS HAVING AN UP AND DOWN HILL (PERPENDICULAR TO CONTOUR) ROW DIRECTION WITH 4,000 POUNDS PER ACRE OF LOOSE STRAW, OR APPROVED EQUIVALENT, AFTER SEEDING.
   - TILLED ROWS WITH CROSS-SLOPE (PARALLEL TO CONTOUR) ROW DIRECTION AND SLOPE GRADIENTS LESS THAN 15% MAY NOT REQUIRE STRAW MULCH.
   - IN YEAR TWO (2), TILL TO PREPARE SEED BED AND SOW DESIRED COVER CROP IN "ODD" ROWS.
   - IN YEAR TWO (2), LEAVE "EVEN" ROWS UNTILLED AND MOWED ONLY.
   - MULCH ROWS TILLED IN YEAR TWO (2) AS SPECIFIED ABOVE.
   - PUT ALL RE-ESTABLISHMENT MEASURES IN PLACE BY THE REGULAR WINTERIZATION DEADLINE BASED UPON YOUR LOCATION.
   - IN YEAR THREE (3), RETURN ALL ROWS TO NON-TILLED CULTURE.

LEGEND:

NO-TILL WITH 83% VEGETATIVE COVER

NO-TILL WITH 88% VEGETATIVE COVER

NO-TILL WITH 90% VEGETATIVE COVER

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5	05-07-2025	NO CHANGE TO THIS SHEET	DCB
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3	02-10-2023	NAPA COUNTY COMMENTS DATED JANUARY 04, 2023	DCB
2	11-30-2022	NO CHANGE TO THIS SHEET	DCB
1	04-19-2022	NAPA COUNTY COMMENTS DATED APRIL 19, 2021	DCB

REGISTERED PROFESSIONAL ENGINEER
PAUL NATHAN BARTELT
No. 45102
CIVIL
STATE OF CALIFORNIA

PREPARED UNDER THE DIRECTION OF

PAUL N. BARTELT 05-07-2025

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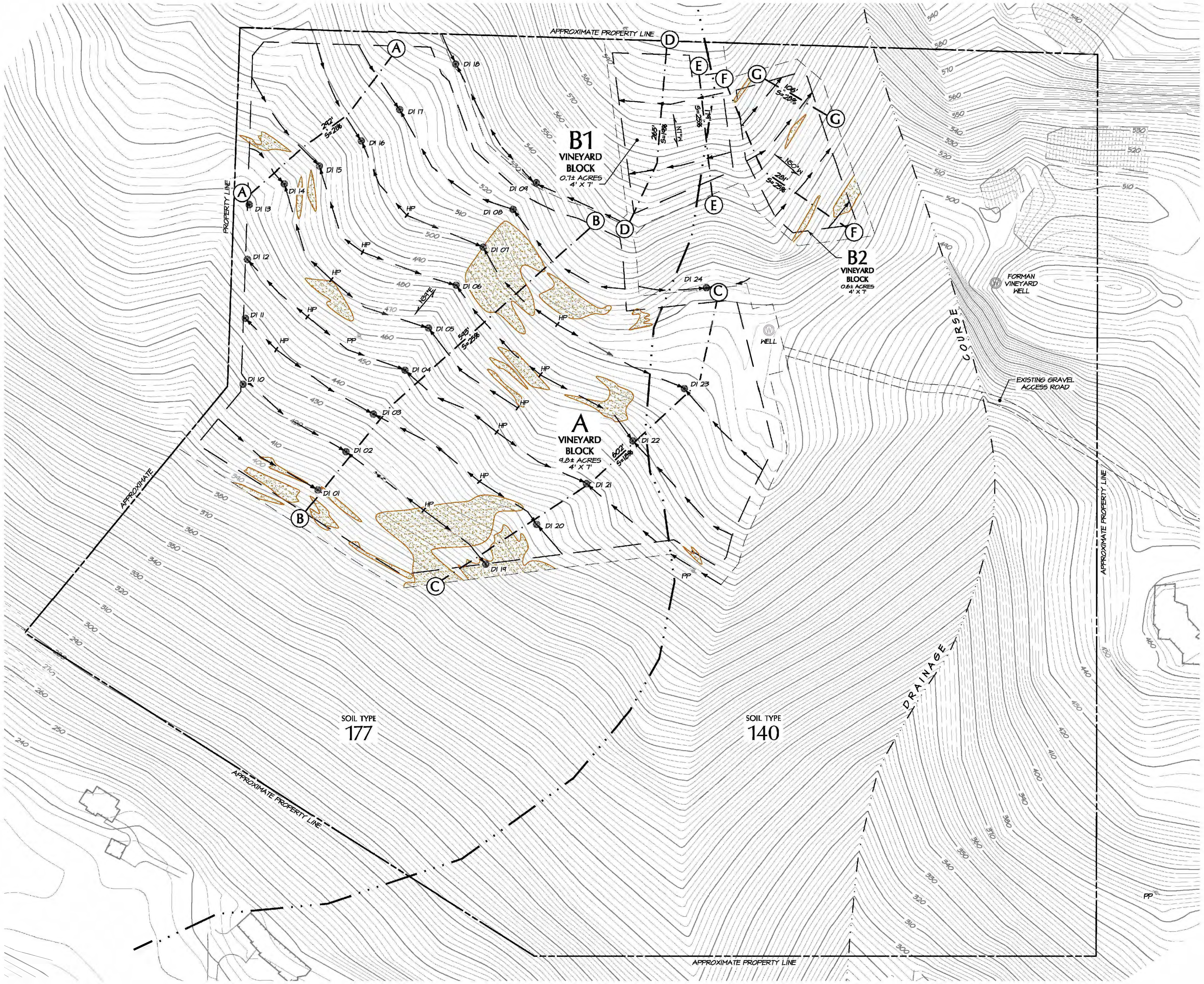
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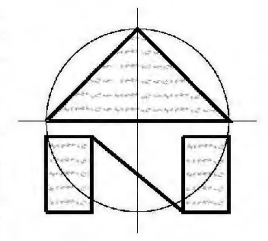
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MATTHES VINEYARDS
FARMING PRACTICES PLAN
NAPA COUNTY CALIFORNIA

DATE: MARCH 2021
JOB NO: 20-01
SHEET NO: EC3
OF 13
5

5/8/2025 - 12:11 PM, DavidB, S:\LAND PROJECTS\2018-2022\2001\2020 ECP TRK 1\ACAD\PLANS\2001-ECP DLT5.DWG, 3-FPP, ARCH FULL BLEED D (36.00 X 24.00 INCHES), 1" = 1', PLOTTED @ BARTELT ENGINEERING, 707-258-1301





SCALE: 1" = 80'
REPRODUCE IN COLOR

SOIL AND SLOPE SECTIONS- VINEYARD SITE PLAN

SCALE: 1" = 80'

SOIL TYPE LEGEND:

140 - FORWARD SILT LOAM, 12% TO 57% SLOPES

177 - ROCK OUTCROP-KIDD COMPLEX , 50% TO 75% SLOPES

LEGEND:

— — — — —	LIMITS OF CLEARING OR EDGE OF PROPOSED VINEYARD AVENUE
→ → →	PROPOSED DIVERSION SWALE (SEE DTL FOR SPECIFICATIONS)
— — —	EDGE OF EXISTING VINEYARD BLOCK
	EXISTING VINEYARD LAYOUT & VINEROW DIRECTION
	SOIL CLASSIFICATION BOUNDARY
	AREA WITHIN PROJECT WITH SLOPES GREATER THAN 30% (45,588± SQUARE FEET / 1.0± ACRES)
DI #	DROP INLET
HP	HIGH POINT
PP	EXISTING POWER POLE
BEARING	VINEROW DIRECTION

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REGISTERED PROFESSIONAL ENGINEER PAUL NATHAN BARTELT No. 45102 CIVIL STATE OF CALIFORNIA

PREPARED UNDER THE DIRECTION OF

PAUL N. BARTELT 05-01-2025

MATTHES VINEYARDS
VINEYARD SITE PLAN

NAPA COUNTY CALIFORNIA

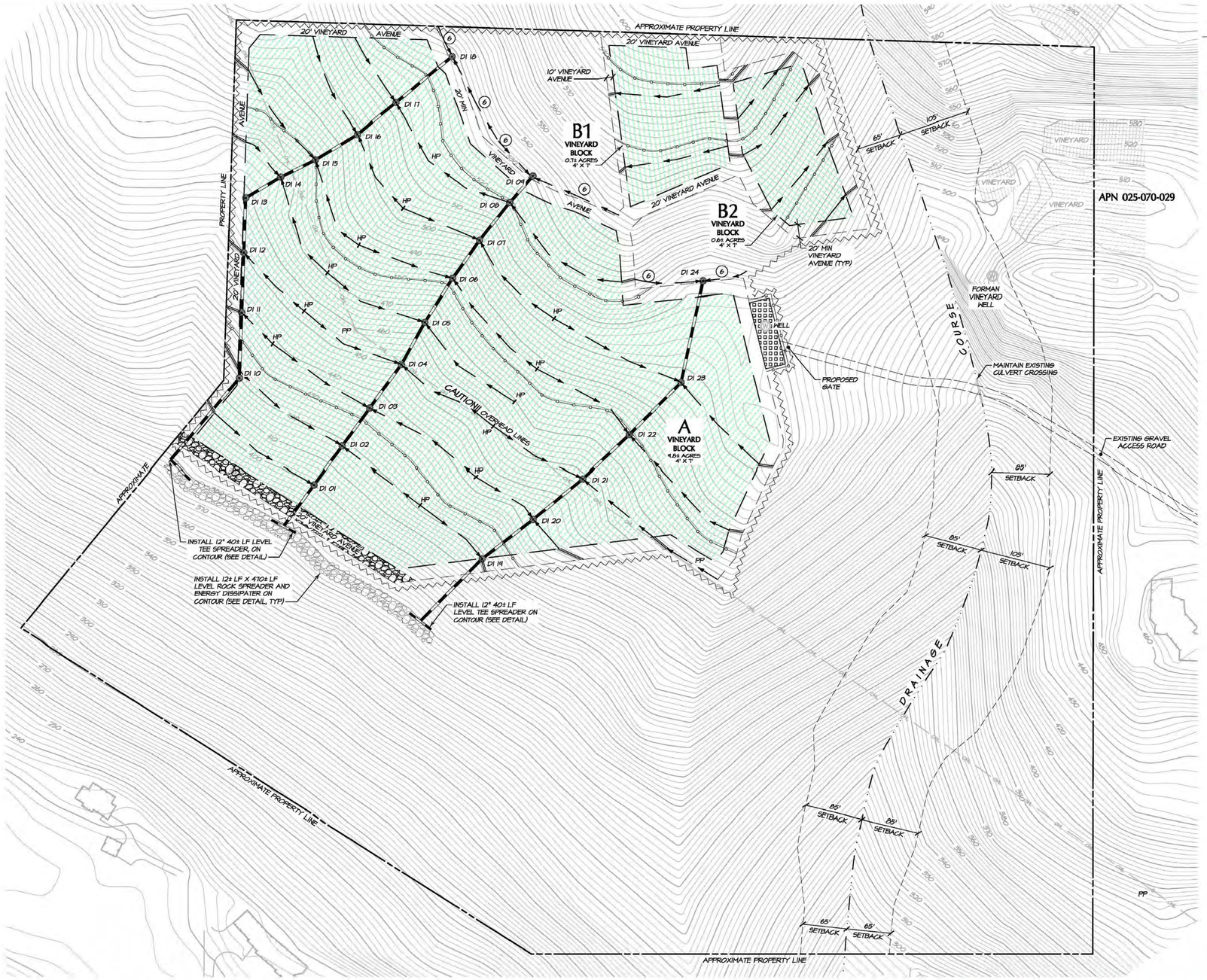
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DES: MGG
DRWN: DCB / KP
CHKD: PNB

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SHEET NO: EC4
OF 13

5/8/2025 - 12:12 PM, DavidB, S:\LAND PROJECTS\2018-2022\2001\2020 ECP TRK \ACAD\PLANS\2001-ECP DLT5.DWG, 4-SOIL_SLOPE, ARCH FULL BLEED D (36.00 X 24.00 INCHES), 1" = 1', PLOTTED @ BARTELT ENGINEERING, 707-258-1301



EROSION CONTROL PLAN

SCALE: 1" = 80'

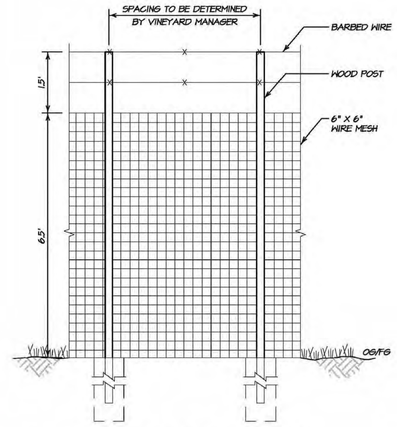
SCALE: 1" = 80'
REPRODUCE IN COLOR

LEGEND:

- LIMITS OF CLEARING OR EDGE OF PROPOSED VINEYARD AVENUE
- EDGE OF PROPOSED VINEYARD BLOCK
- PROPOSED VINEYARD LAYOUT & VINEROW DIRECTION
- EDGE OF EXISTING VINEYARD BLOCK
- EXISTING VINEYARD LAYOUT & VINEROW DIRECTION
- EXISTING STORM DRAIN
- INSTALL DEER FENCE (SEE DETAIL FOR SPECIFICATIONS)
- INSTALL DIVERSION SWALE (SEE DETAIL FOR SPECIFICATIONS)
- INSTALL 12" STORM DRAIN LINE @ S=2% MIN
- INSTALL TEMPORARY STRAW WATTLE SEDIMENT BARRIER ON CONTOUR (SEE DETAIL)
- INSTALL WATER BAR (SEE DETAIL)
- INSTALL ROCK-LINED VINEYARD AVENUE (SEE DETAIL)
- 30' X 100' STAGING, MATERIAL, AND EQUIPMENT STORAGE AREA
- DI # — INSTALL 12" DIAMETER AGRICULTURAL DROP INLET (SEE DETAIL)
- HP — HIGH POINT
- PP — EXISTING POWER POLE

INSTALLATION OF DEER FENCE

1. PERMANENT FENCING SHALL BE INSTALLED AS SHOWN ON THE PLAN OUTSIDE OF THE CONSERVATION SETBACK AND IN A MANNER THAT MAINTAINS PROTECTIVE SETBACKS AND BUFFERS AND KEEPS WILDLIFE MOVEMENT CORRIDORS UNIMPEDED. DEER FENCING SHALL BE:
   - A. INSTALLED SO AS NOT TO RESTRICT THE MOVEMENT OF LARGER TERRESTRIAL WILDLIFE.
   - B. LIMITED TO THE PERIMETER OF THE VINEYARD BLOCKS; CONTIGUOUS VINEYARD BLOCKS MAY BE FENCED AS ONE (1), PROVIDING THAT PROTECTIVE BUFFERS ARE MAINTAINED AND WILDLIFE MOVEMENT REMAINS UNOBSTRUCTED.
   - C. WIRE MESH WITH OPENINGS NO SMALLER THAN SIX (6) INCHES.
2. ALL PROPERTY LINE FENCING, OTHER THAN DEER FENCING ALONG THE EDGES OF CONTIGUOUS VINEYARD BLOCKS, SHALL BE BARBED WIRE OR OTHER SIMILAR FIELD FENCING THAT DOES NOT RESTRICT THE MOVEMENT OF TERRESTRIAL WILDLIFE.
3. THE PROPERTY OWNER SHALL IMPLEMENT THIS PLAN IN A PHASED MANNER COORDINATED WITH THE DEVELOPMENT OF THE NEWLY PROPOSED VINEYARD.



DEER FENCE DETAIL

NO SCALE

NOTES:

1. AFTER THE EXISTING VEGETATION HAS BEEN REMOVED, THE SOIL RIPPED, AND ROCK RAKED, THE DISTURBED AREA WILL BE TRACK-WALKED, SEEDED, AND STRAW MULCHED (SEE DETAIL).
3. SEDIMENT BARRIERS SHALL BE INSTALLED PRIOR TO OCTOBER 15, FOLLOWING THE REMOVAL OF THE EXISTING VEGETATION AND ROCK OUTCROPS. ONCE VINES ARE PLANTED, THE EXTENT OF ANNUAL SEDIMENT BARRIER INSTALLATION SHALL BE DETERMINED BASED ON THE OWNER'S ABILITY TO ESTABLISH A COVER CROP AS OUTLINED IN THE FARMING PRACTICE PLAN. PROOF THAT THE VINEYARD AREA HAS STABILIZED, AND THAT POTENTIAL EROSION CAN BE MINIMIZED THROUGH ANNUAL SEEDING, MULCHING, AND THE ESTABLISHMENT OF A HEALTHY COVER CROP.
4. ALL PROPOSED IRRIGATION LINES WILL BE INSTALLED WITHIN THE LIMITS OF THE PROPOSED ACCESS ROADS, VINEYARD AVENUES, AND/OR VINEYARD BLOCKS.
5. ALL ROCK EXTRACTED DURING SOIL PREPARATION SHALL BE USED ONSITE AS DIRECTED BY THE ENGINEER.
6. INSTALL ROCK-LINED DIVERSION SWALE AS SHOWN ON PLAN (SEE DETAIL).

VINEYARD SUMMARY TABLE:

VINEYARD BLOCKS	NET ACREAGE	GROSS ACREAGE
A	9.8± ACRES	11.3± ACRES
B1	0.7± ACRES	1.0± ACRES
B2	0.6± ACRES	0.9± ACRES
TOTAL:	11.1± ACRES	13.2± ACRES

NO.	DATE	DESCRIPTION	BY
5	05-07-2025	NAPA COUNTY EMAIL COMMENTS DATED APRIL 30, 2025	DCB
4	05-08-2023	REISSUED, CHANGE ENGINEER OF RECORD, UPDATED LEGEND, ADDED ROCK-LINED SWALE NOTE	SSG
3	02-10-2023	NAPA COUNTY COMMENTS DATED JANUARY 04, 2023	DCB
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REGISTERED PROFESSIONAL ENGINEER — PAUL NATHAN BARTELT — No. 45102 — CIVIL — STATE OF CALIFORNIA

PREPARED UNDER THE DIRECTION OF

PAUL N. BARTELT 05-07-2025

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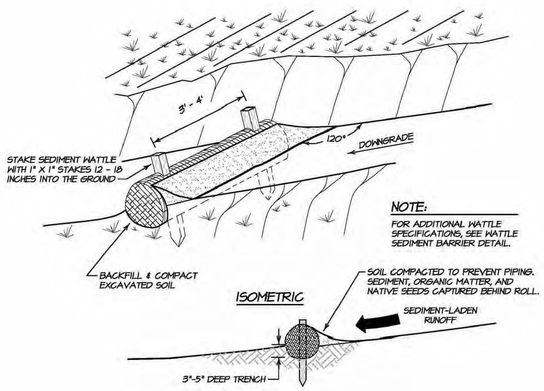
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MATTHES VINEYARDS
EROSION CONTROL PLAN
NAPA COUNTY CALIFORNIA

DATE: MARCH 2021
JOB NO: 20-01
SHEET NO: EC5
OF 13
5

5/19/2025 - 7:47 AM dandb, S:\LAND PROJECTS\2018-2022\2001\2020 EOP TRK \VACAPA AVE\2020 EOP PLTS.DWG, 5-EOP, ARCH FULL BLEED D (36.00 X 24.00 INCHES), 1" = 1', PLOTTED @ BARTELT ENGINEERING, 707-258-1301

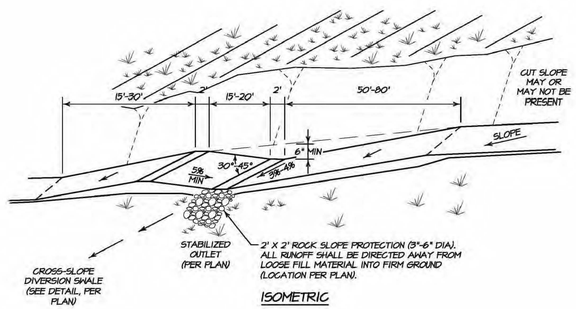


CROSS SECTION

MAXIMUM DISTANCE BETWEEN WATTLEBARS				
EROSION HAZARD	ROAD OR AVENUE SLOPE			
	10% OR LESS	11% - 25%	26% - 50%	50% OR MORE
VERY SEVERE	100'	75'	50'	50'
SEVERE	150'	100'	75'	50'
MODERATE	200'	150'	100'	75'
LOW	300'	200'	150'	100'

WATTLEBAR DETAIL

NO SCALE

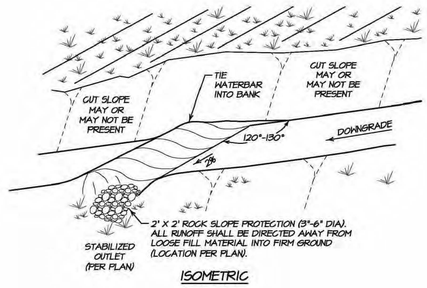


ISOMETRIC

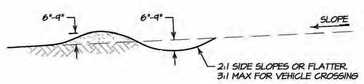
MAXIMUM DISTANCE BETWEEN ROLLING DIPS				
EROSION HAZARD	ROAD OR AVENUE SLOPE			
	10% OR LESS	11% - 25%	26% - 50%	50% OR MORE
VERY SEVERE	100'	75'	50'	50'
SEVERE	150'	100'	75'	50'
MODERATE	200'	150'	100'	75'
LOW	300'	200'	150'	100'

ROLLING DIP DETAIL

NO SCALE



ISOMETRIC



CROSS SECTION

MAXIMUM DISTANCE BETWEEN WATERBARS				
EROSION HAZARD	ROAD OR AVENUE SLOPE			
	10% OR LESS	11% - 25%	26% - 50%	50% OR MORE
EXTREME	100'	75'	50'	50'
HIGH	150'	100'	75'	50'
MODERATE	200'	150'	100'	75'
LOW	300'	200'	150'	100'

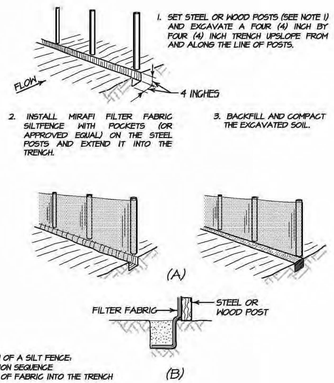
REFERENCE CALIFORNIA FOREST PRACTICE RULES

WATERBAR DETAIL

NO SCALE

INSTALLATION OF SILT FENCE SEDIMENT BARRIER

1. LAY OUT A SUITABLE FENCE LINE AND SET POSTS ALONG IT. ON SLOPES, ALIGN THE FENCE ALONG THE CONTOUR AS CLOSELY AS POSSIBLE. IN SMALL SWALES, CURVE THE FENCE LINE UPSTREAM AT THE ENDS TO DIRECT THE FLOW TOWARD THE MIDDLE OF THE FENCE.
2. SPACE POSTS ON SIX (6) FOOT CENTERS AND DRIVE THEM A MINIMUM OF 12 INCHES INTO THE GROUND. POSTS FOR SILT FENCES CAN BE EITHER 1-1/2 INCHES MINIMUM DIAMETER HARD WOOD OR 1.33 POUNDS PER FOOT STEEL WITH A MINIMUM LENGTH OF FIVE (5) FEET. STEEL POSTS MUST HAVE PROJECTIONS FOR FASTENING WIRE TO THEM.
3. FASTEN THE FILTER FABRIC TO THE UPHILL SIDE OF THE FENCE POSTS, AND EXTEND TO SIX (6) TO EIGHT (8) INCHES INTO THE TRENCH. THE HEIGHT OF THE FENCE SHOULD NOT EXCEED 36 INCHES. DO NOT STAPLE FABRIC ONTO TREES. CUT THE FILTER FABRIC FROM A CONTINUOUS ROLL TO AVOID THE USE OF JOINTS. WHEN JOINTS ARE NECESSARY, SPLICE THE FILTER CLOTH AT A SUPPORT POST, WITH A MINIMUM SIX (6) INCHES OVERLAP, AND SECURELY FASTEN BOTH ENDS TO THE POST.
4. BACKFILL THE TRENCH OVER THE TOE OF THE FABRIC AND COMPACT THE SOIL.
5. PREFABRICATED SILT FENCE WITH POSTS MAY BE USED AS AN ALTERNATE TO SETTING STEEL OR WOOD POSTS.



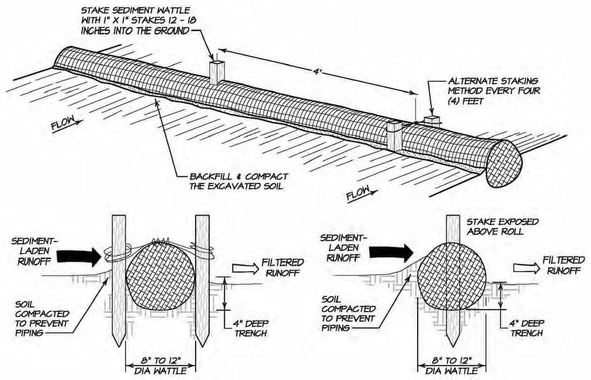
CONSTRUCTION OF A SILT FENCE:
(A) INSTALLATION SEQUENCE.
(B) EXTENSION OF FABRIC INTO THE TRENCH

SILT FENCE SEDIMENT BARRIER DETAIL

NO SCALE

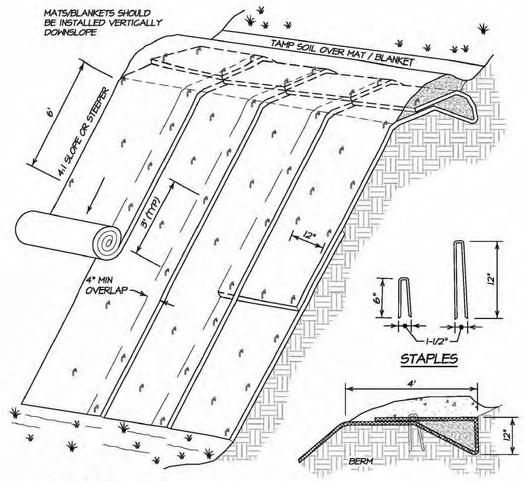
INSTALLATION OF WATTLE SEDIMENT BARRIER

1. PREPARE THE SLOPE BEFORE THE WATTLING PROCEDURE IS STARTED. SHALLOW GULLIES SHOULD BE SMOOTHED AS WORK PROGRESSES.
2. DIG SMALL TRENCHES ACROSS THE SLOPE ON CONTOUR, TO PLACE ROLLS IN. THE TRENCH SHOULD BE DEEP ENOUGH TO ACCOMMODATE HALF THE THICKNESS OF THE ROLL. WHEN THE SOIL IS LOOSE AND UNCOMPACTED, THE TRENCH SHOULD BE DEEP ENOUGH TO BURY THE ROLL 2/3 OF ITS THICKNESS BECAUSE THE GROUND WILL SETTLE.
3. IT IS CRITICAL THAT ROLLS ARE INSTALLED PERPENDICULAR TO WATER MOVEMENT, PARALLEL TO THE SLOPE CONTOUR. START BUILDING TRENCHES AND INSTALL ROLLS FROM THE BOTTOM OF THE SLOPE AND WORK UP.
4. CONSTRUCT TRENCHES AT CONTOUR INTERVALS DEPENDING ON STEEPNESS OF SLOPE. THE STEEPER THE SLOPE, THE CLOSER TOGETHER THE TRENCHES. LAY THE ROLL ALONG THE TRENCHES FITTING IT SNUGLY AGAINST THE SOIL. MAKE SURE NO GAPS EXIST BETWEEN THE SOIL AND THE STRAW WATTLE.
5. USE A STRAIGHT BAR TO DRIVE HOLES THROUGH THE WATTLE AND INTO THE SOIL FOR THE WILLOW OR WOODEN STAKES. DRIVE THE STAKE THROUGH PREPARED HOLE INTO SOIL. LEAVE ONLY ONE (1) OR TWO (2) INCHES OF STAKE EXPOSED ABOVE ROLL.
6. INSTALL STAKES AT LEAST EVERY FOUR (4) FEET APART THROUGH THE WATTLE AS SHOWN BELOW.
7. STRAW WATTLE SHALL BE 100% BIODEGRADABLE.
8. WATTLES AND STAKES SHALL BE REMOVED AND DISPOSED OF PROPERLY OFFSITE ONCE COVER CROP IS ESTABLISHED AND NOTICE IS RECEIVED FROM ENGINEER.



WATTLE SEDIMENT BARRIER DETAIL

NO SCALE



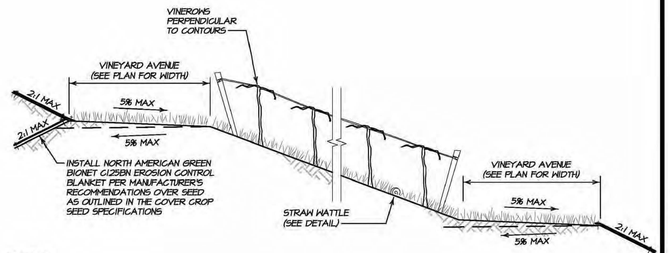
ISOMETRIC VIEW

NOTES:

1. SLOPE SURFACE SHALL BE FREE OF ROCKS, CLODS, STICKS AND GRASS. MATS/BLANKETS SHALL HAVE GOOD SOIL CONTACT.
2. APPLY PERMANENT SEEDING BEFORE PLACING BLANKETS.
3. LAY NORTH AMERICAN GREEN BIONET C125BN BLANKETS LOOSELY OVER SEED AND STAKE OR STAPLE TO MAINTAIN DIRECT CONTACT WITH THE SOIL. DO NOT STRETCH.

SLOPE STABILIZATION & EROSION CONTROL BLANKET INSTALLATION DETAIL

NO SCALE

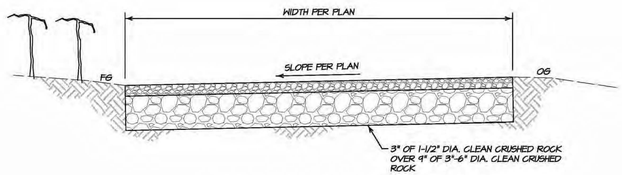


NOTES:

1. SEED AND MULCH ALL DISTURBED AREAS PER SEEDING SPECIFICATIONS OUTLINED IN THE EROSION CONTROL NOTES.
2. IRRIGATION OF SEEDED AREAS PRIOR TO THE RAINY SEASON IS HIGHLY RECOMMENDED TO ESTABLISH A HEALTHY COVER CROP.

VINEYARD SECTION

NO SCALE



GRAVEL VINEYARD AVENUE DETAIL

NO SCALE

NO.	DATE	DESCRIPTION	BY
5	05-07-2025	NO CHANGE TO THIS SHEET	DCB
4	05-08-2023	REISSUED; CHANGE ENGINEER OF RECORD	SSG
3	02-10-2023	NO CHANGE TO THIS SHEET	DCB
2	11-30-2022	NO CHANGE TO THIS SHEET	DCB
1	04-19-2022	NAPA COUNTY COMMENTS DATED APRIL 19, 2021	DCB

REGISTERED PROFESSIONAL ENGINEER
PAUL NATHAN BARTELT
No. 45102
CIVIL
STATE OF CALIFORNIA

PREPARED UNDER THE DIRECTION OF

PAUL N. BARTELT 05-07-2025

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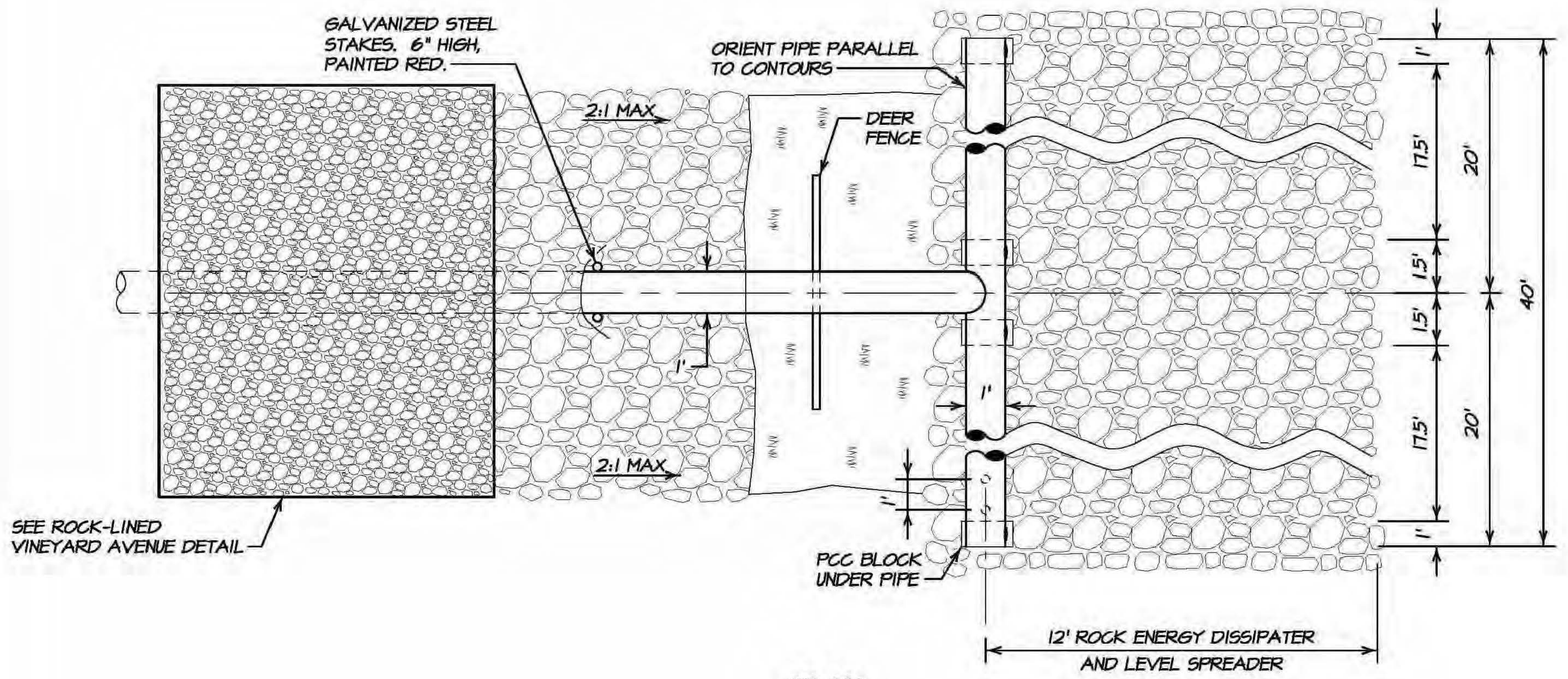
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Telephone: 707-258-1301

DES: MSG
DRWN: DCB / KP
CHKD: PNB

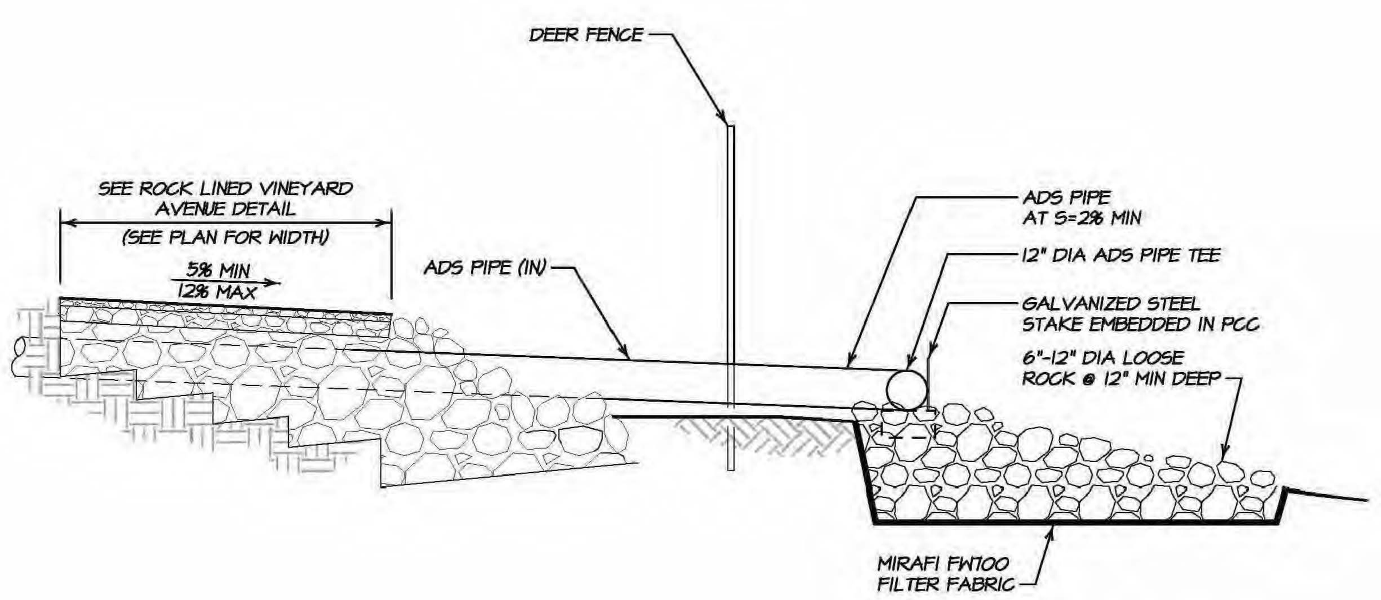
MATTHES VINEYARDS
DETAIL SHEET
NAPA COUNTY CALIFORNIA

DATE: MARCH 2021
JOB NO: 20-01
SHEET NO: EC6
OF 13
5

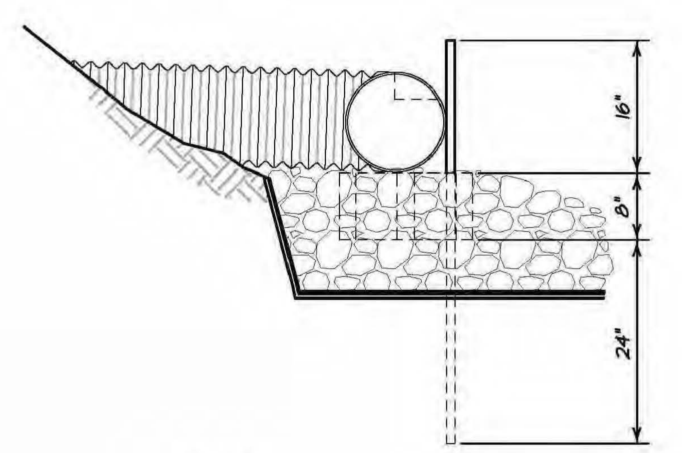
5/8/2025 - 12:12 PM, David B, S:\LAND PROJECTS\2018-2022\2001\2020 ECP TRK 1\ACAD\PLANS\2020 ECP PLTS.DWG, 6-DETAILS, ARCH FULL BLEED D (36.00 X 24.00 INCHES), 1" = 1', PLOTTED @ BARTELT ENGINEERING, 707-258-1301



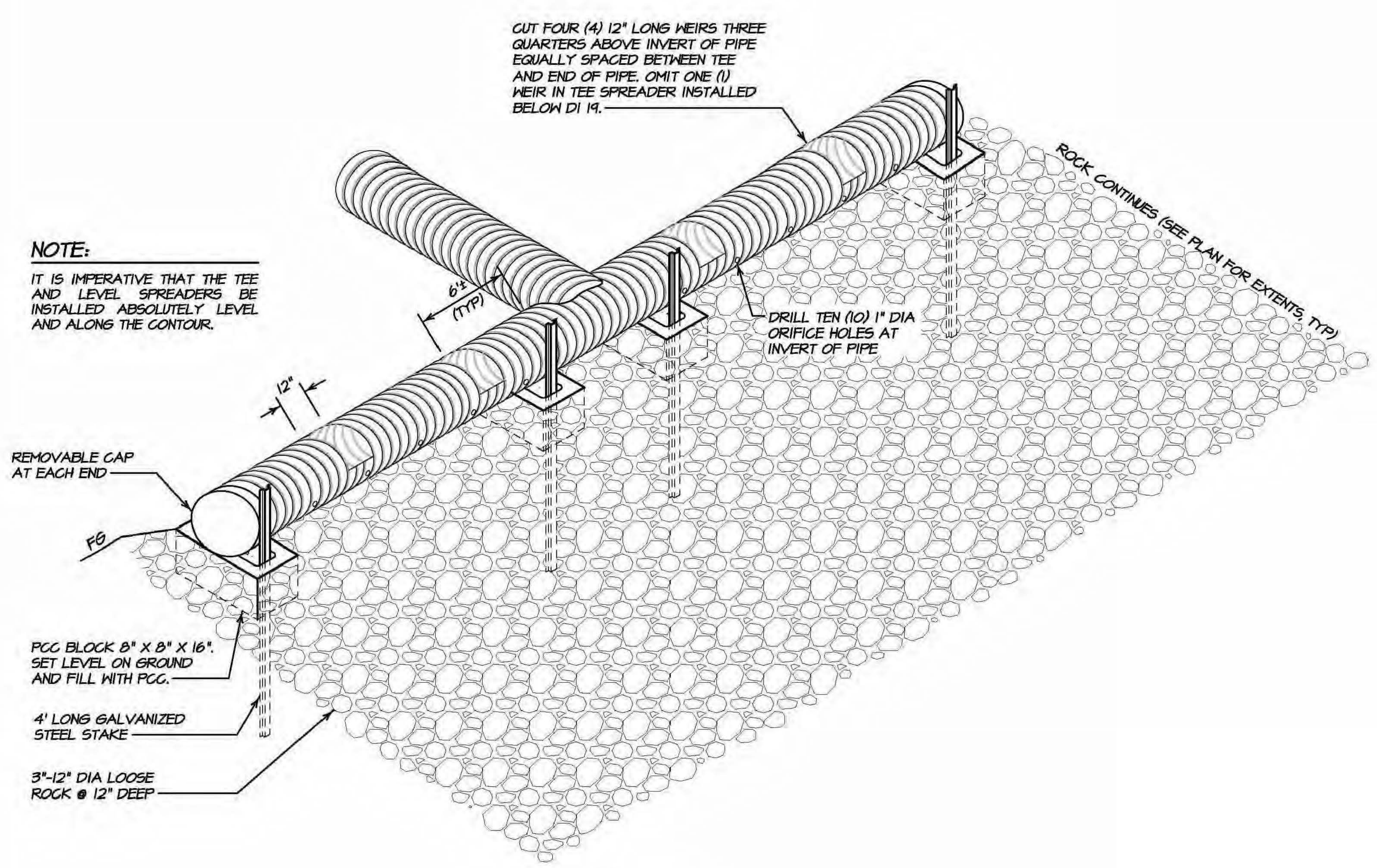
PLAN



PROFILE



SECTION



NOTE:

IT IS IMPERATIVE THAT THE TEE AND LEVEL SPREADERS BE INSTALLED ABSOLUTELY LEVEL AND ALONG THE CONTOUR.

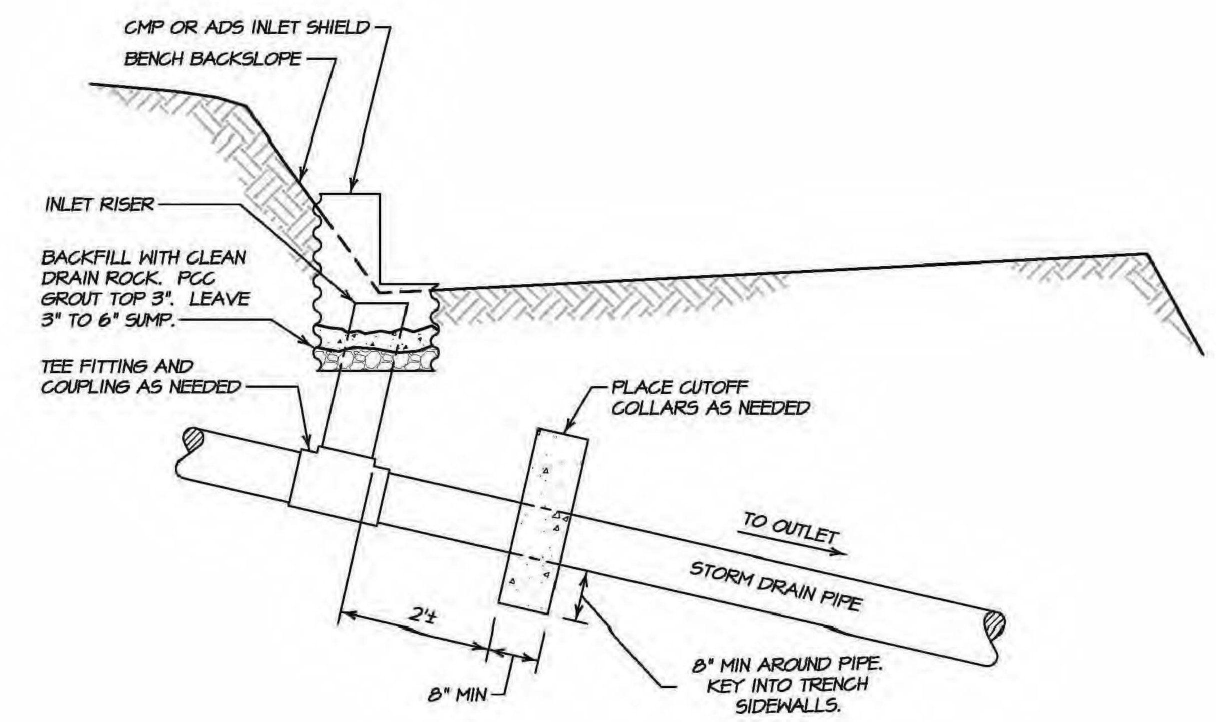
ISOMETRIC

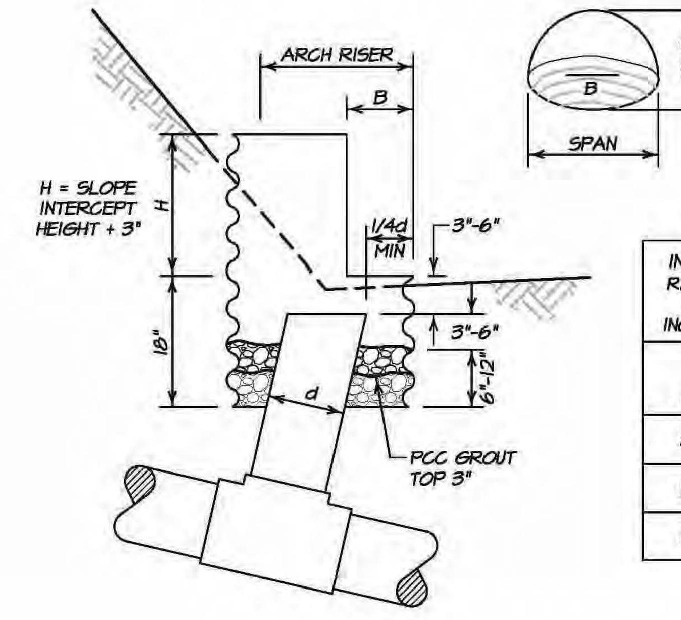
TEE SPREADER DETAIL

NO SCALE

DESIGN & INSTALLATION NOTES:

1. COMPACT BACKFILL ALONG PIPELINE AND THEN EXCAVATE FOR INLET SHIELD.
2. TO REDUCE INTRUSION INTO BENCH, ARCH PIPE OF EQUAL AREA MAY BE USED FOR SHIELD.
3. TO MINIMIZE DEBRIS FROM ENTERING INTO STORM DRAIN SYSTEM: INSTALL BEEHIVE INLET RISER GRATE OR INLET SHIELD TRASH RACK (12 GAUGE, 2" X 4" WELD WIRE MESH, 12 INCH HIGH BY TWICE (2X) THE SHIELD DIAMETER. CUT STUBS OF WELD WIRE MESH PUSHED INTO THE GROUND).
4. SEE PLAN FOR DROP INLET LOCATION(S) AND RISER SIZE(S).

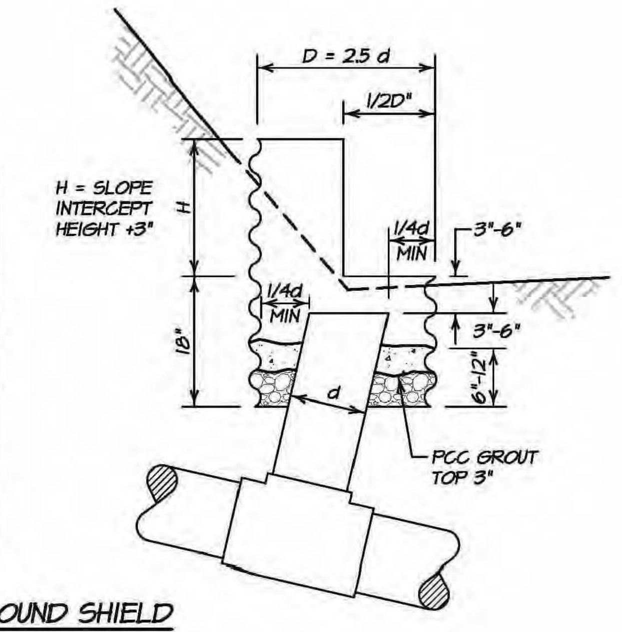




INLET RISER d, INCHES	ARCH SHIELD SIZE		MAX DESIGN FLOW INTO RISER (CFS) RISER LIP BELOW SHIELD LIP BY		WEIR LENGTH, INCHES	B, INCHES
	SPAN INCHES	RISE INCHES	6"	3"		
8	17	13	1.4	1.2	21.0	4 1/8
10	24	18	2.2	1.8	29.6	5 5/8
12	35	24	3.1	2.6	42.8	8 1/8
15	49	33	4.9	4.2	61.0	11 3/8

ARCH SHIELD

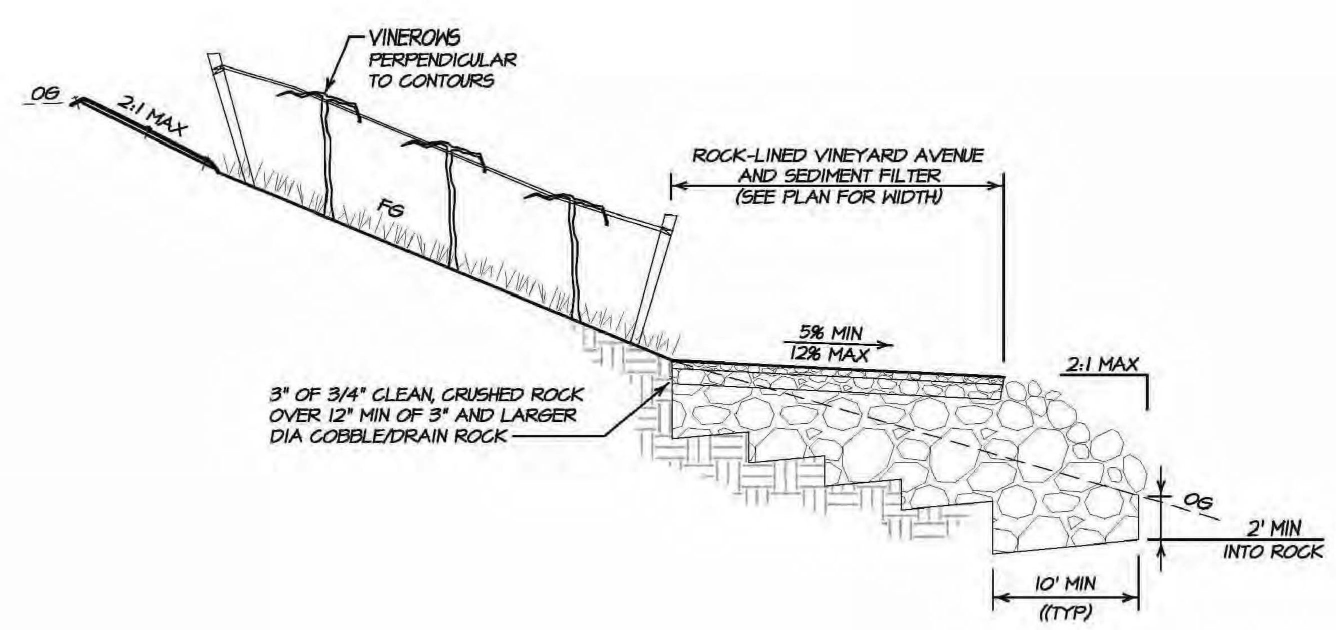
INLET RISER d INCHES	SHIELD D INCHES	MAX DESIGN FLOW INTO RISER (CFS). RISER LIP TO SIT BELOW SHIELD LIP BY:		
		12"	6"	3"
8	18	1.7	1.2	0.8
10	24	2.6	1.8	1.0
12	30	3.8	2.6	1.2
15	36	5.8	4.0	1.5
18	36	8.4	5.2	2.7



ROUND SHIELD

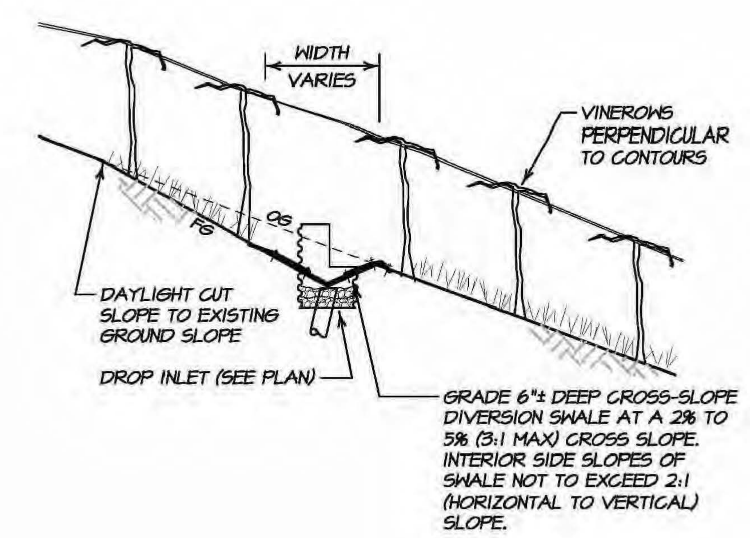
AGRICULTURAL DROP INLET DETAIL

NO SCALE



ROCK-LINED VINEYARD AVENUE DETAIL

NO SCALE

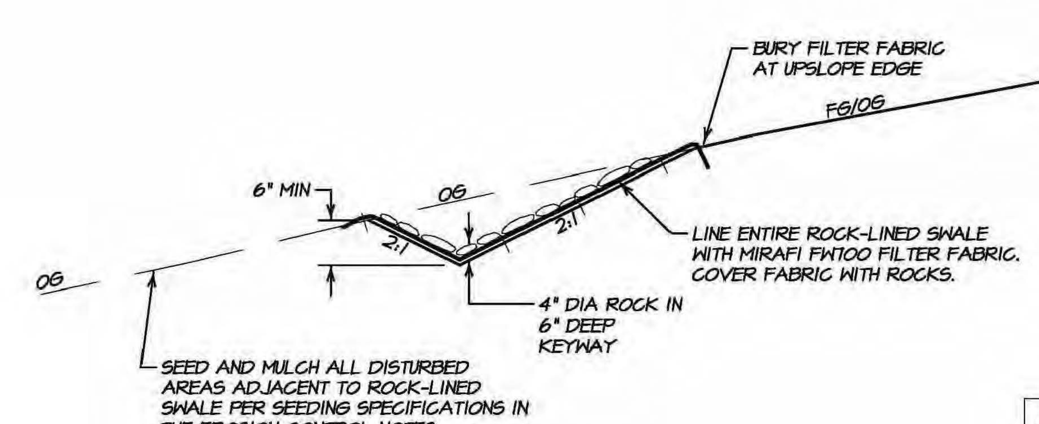


NOTES:

1. GRADE SWALE ENTIRELY IN CUT WHERE POSSIBLE. IF FILL IS USED ON BERM, FILL MUST BE MOISTURE CONDITIONED AND COMPACTED TO ACHIEVE 90 PERCENT RELATIVE COMPACTION.
2. NORTH AMERICAN GREEN BIONET C125BN EROSION CONTROL BLANKET SHALL BE INSTALLED OVER SEED AS OUTLINED IN THE COVER CROP SEED SPECIFICATIONS ALONG THE ENTIRE DIVERSION SWALE. BLANKETS SHALL EXTEND OVER ENTIRE BERM AND UPSLOPE OF FLOW AND INSTALLED PER MANUFACTURER'S SPECIFICATIONS.
3. IRRIGATION OF SEEDED AREAS ALONG DIVERSION SWALES PRIOR TO THE RAINY SEASON IS HIGHLY RECOMMENDED TO ESTABLISH A HEALTHY COVER CROP.

CROSS-SLOPE DIVERSION SWALE SECTION

NO SCALE



ROCK-LINED SWALE DETAIL

NO SCALE

NO.	DATE	DESCRIPTION	BY
5	05-07-2025	NO CHANGE TO THIS SHEET	DCB
4	05-08-2023	REISSUED; CHANGE ENGINEER OF RECORD; ADDED ROCK-LINED SWALE DETAIL	SGC
3	02-10-2023	NO CHANGE TO THIS SHEET	DCB
2	11-30-2022	NO CHANGE TO THIS SHEET	DCB
1	04-19-2022	NAPA COUNTY COMMENTS DATED APRIL 19, 2021	DCB

REGISTERED PROFESSIONAL ENGINEER
PAUL NATHAN BARTELT
No. 45102
CIVIL
STATE OF CALIFORNIA

PREPARED UNDER THE DIRECTION OF

PAUL N. BARTELT 05-07-2025

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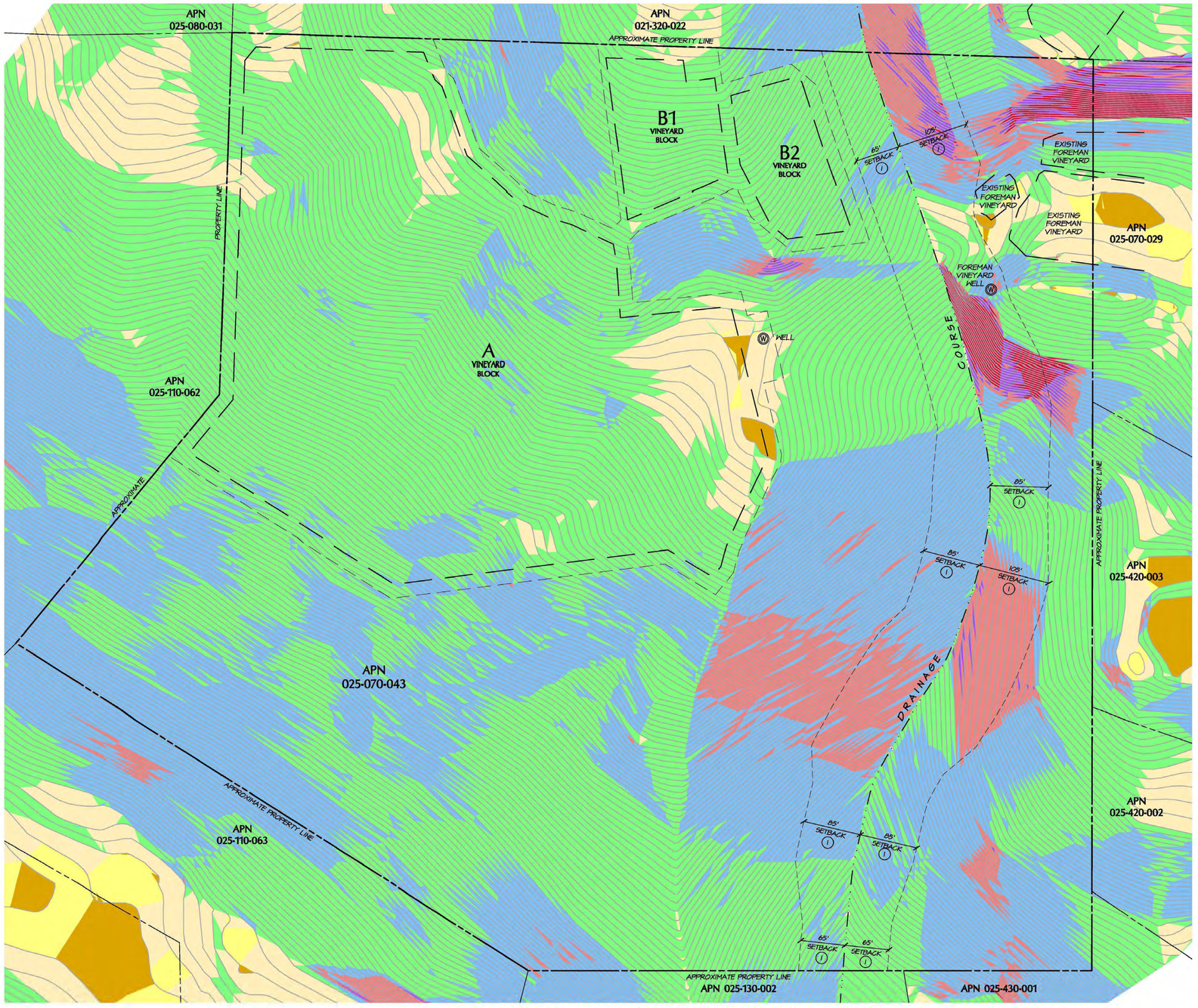
DES: MGG
DRWN: DCB / KP
CHKD: PNB

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MATTHES VINEYARDS
DETAIL SHEET

NAPA COUNTY CALIFORNIA

DATE: MARCH 2021
JOB NO: 20-01
SHEET NO: EC7
OF 13
5



SLOPE ANALYSIS EXHIBIT

SCALE: 1" = 80'

SCALE: 1" = 80'

REPRODUCE IN COLOR

SLOPE ANALYSIS LEGEND:

SLOPE (PERCENT)	REQUIRED SETBACK
0% < 1% SLOPES	35 FEET
1% TO 5% SLOPES	45 FEET
5% TO 15% SLOPES	55 FEET
15% TO 30% SLOPES	65 FEET
30% TO 40% SLOPES	85 FEET
40% TO 50% SLOPES	105 FEET
50% TO 60% SLOPES	125 FEET
60% AND ABOVE SLOPES	150 FEET

NOTES:

1. THE SETBACK TO THE DRAINAGE COURSE VARIES BASED ON THE SLOPE OF THE GROUND ADJACENT TO THE DRAINAGE COURSE. THE SETBACKS ARE OUTLINED IN THE NAPA COUNTY CONSERVATION REGULATIONS SECTION 18.108.025. THE SETBACKS SHOWN MAY CHANGE BASED ON THE ACCURACY OF THE TOPOGRAPHIC MAPPING, A BIOLOGICAL ASSESSMENT, OR NAPA COUNTY STAFF INTERPRETATION.
2. AREA WITHIN PROJECT WITH SLOPES GREATER THAN 30% (45,588± SQUARE FEET / 1.0± ACRES).

LEGEND:

EDGE OF POTENTIAL VINEYARD AVENUE

EDGE OF POTENTIAL VINEYARD BLOCK

NO.	DATE	DESCRIPTION	BY
5	05-01-2025	NO CHANGE TO THIS SHEET	DCB
4	05-08-2023	REISSUED, CHANGE ENGINEER OF RECORD	SSG
3	02-10-2023	NO CHANGE TO THIS SHEET	DCB
2	11-30-2022	REMOVED BLOCK "C" PER NAPA COUNTY COMMENTS DATED OCTOBER 12, 2022	DCB
1	04-14-2022	NAPA COUNTY COMMENTS DATED APRIL 19, 2021	DCB

REGISTERED PROFESSIONAL ENGINEER
PAUL NATHAN BARTELT
No. 45102
CIVIL
STATE OF CALIFORNIA

PREPARED UNDER THE DIRECTION OF

PAUL N. BARTELT 05-01-2025

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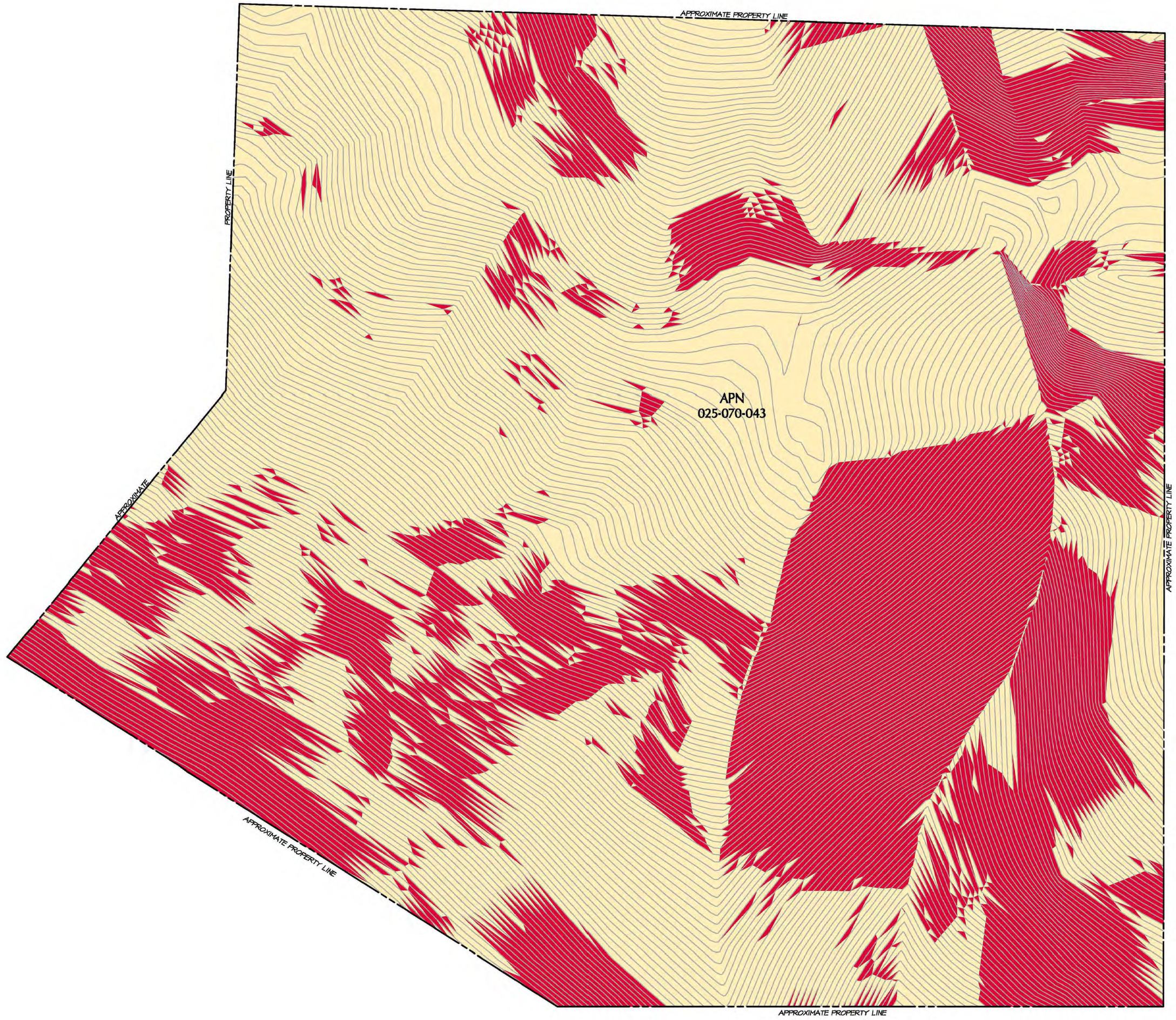
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DES. MSG
DRWN. DCB / KP
CHKD. PNB

MATTHES VINEYARDS
SLOPE ANALYSIS EXHIBIT
NAPA COUNTY CALIFORNIA

DATE: MARCH 2021
JOB NO: 20-01
SHEET NO: EC8
OF 13 5

5/8/2025 - 12:13 PM, Dave@ 5:\LAND PROJECTS\2020-2029\2020\20220 ECP TRK (ACAD\EXHIBITS\2021-SA.DWG, EC8-SA, ARCH FULL BLEED D (36.00 X 24.00 INCHES), 1" = 1', PLOTTED @ BARTELT ENGINEERING, 707-258-1301



SCALE: 1" = 80'

REPRODUCE IN COLOR

WATER AVAILABILITY ANALYSIS EXHIBIT

SCALE: 1" = 80'

SLOPE ANALYSIS LEGEND:

SLOPE (PERCENT)	APPROXIMATE AREA
0% TO 30% SLOPES	24.7± ACRES
30% AND ABOVE SLOPES	15.3± ACRES
TOTAL:	40.0± ACRES

NO.	DATE	DESCRIPTION	BY
5	05-07-2025	NO CHANGE TO THIS SHEET	DCB
4	05-08-2023	REISSUED, CHANGE ENGINEER OF RECORD	SGC
3	02-10-2023	NO CHANGE TO THIS SHEET	DCB
2	11-30-2022	NO CHANGE TO THIS SHEET	DCB
1	04-19-2022	NO CHANGE TO THIS SHEET	DCB

REGISTERED PROFESSIONAL ENGINEER
PAUL NATHAN BARTELT
No. 45102
CIVIL
STATE OF CALIFORNIA

PREPARED UNDER THE DIRECTION OF

PAUL N. BARTELT 05-07-2025

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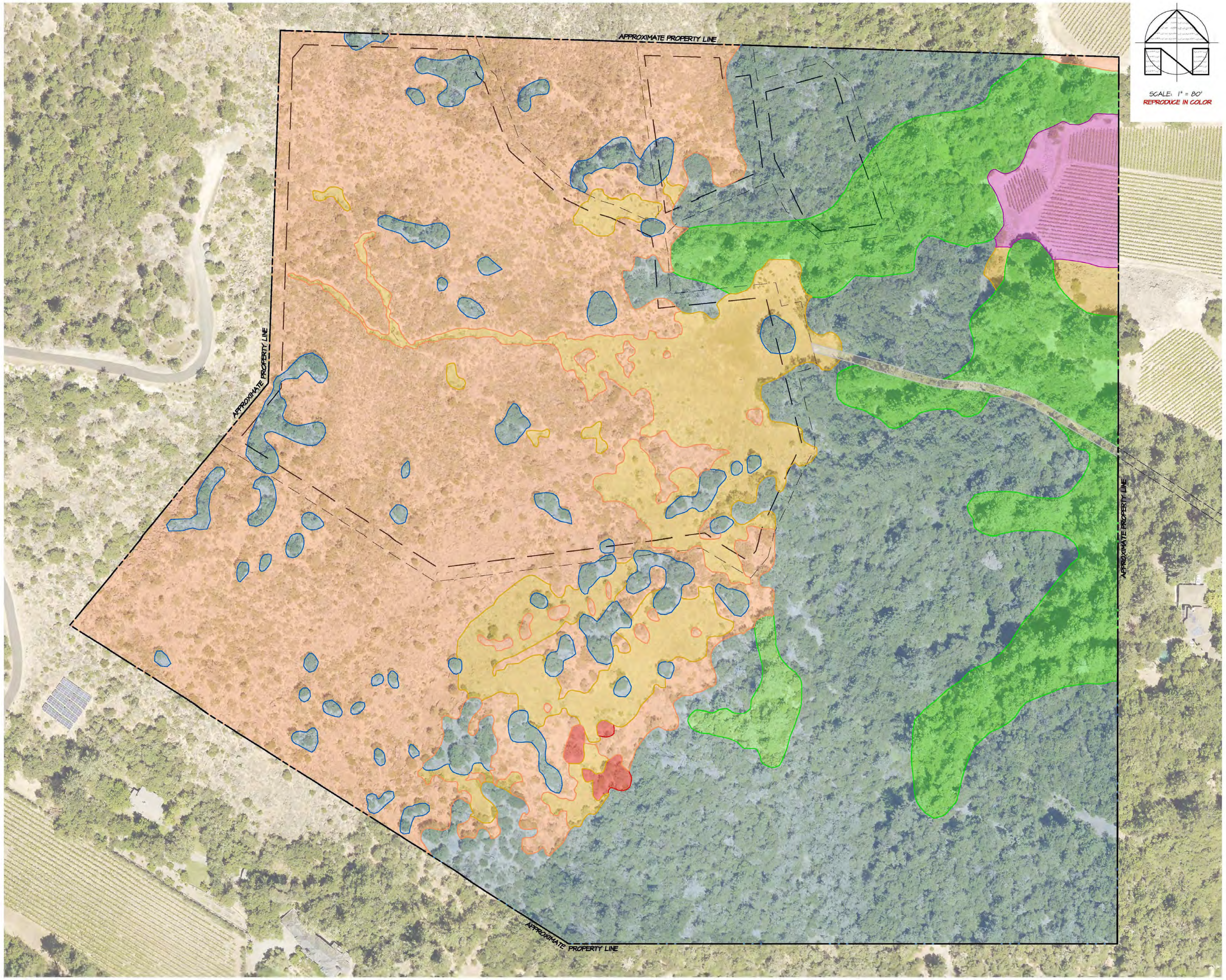
DES: MSG
DRWN: DCB / KP
CHKD: PNB

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1303 Jefferson Street, 200 B, Napa, CA 94559
www.bartelengineering.com
Telephone: 707-258-1301

MATTHES VINEYARDS
WATER AVAILABILITY ANALYSIS EXHIBIT
NAPA COUNTY CALIFORNIA

DATE: MARCH 2021
JOB NO: 20-01
SHEET NO: EC9
OF 13
5

5/8/2025 - 12:14 PM, David B, S:\LAND PROJECTS\2018-2022\2020\20220 ECP TRK (MCAD)\EXHIBITS\20220-HAA.DWG, EC4-HAA, ARCH FULL BLEED D (36.00 X 24.00 INCHES), 1" = 1', PLOTTED @ BARTELT ENGINEERING, 707-258-1301



SCALE: 1" = 80'
REPRODUCE IN COLOR

VEGETATION & WOODLAND RETENTION EXHBIT

SCALE: 1" = 80'

PROJECT COVERAGE SUMMARY TABLE

2018 BASELINE CONDITIONS	
CONIFEROUS CANOPY	5.09± ACRES
OAK WOODLAND CANOPY	15.66± ACRES
SHRUB (GRASS/BRUSH)	18.87± ACRES
VINEYARD	0.76± ACRES
RUDERAL	0.14± ACRES
TOTAL PARCEL AREA	40.52± ACRES
TOTAL VEGETATION CANOPY	20.75± ACRES
PROPOSED CONDITIONS	
CONIFEROUS CANOPY	4.83± ACRES
OAK WOODLAND CANOPY	13.49± ACRES
SHRUB (GRASS/BRUSH)	8.14± ACRES
VINEYARD	13.92± ACRES
RUDERAL	0.14± ACRES
TOTAL PARCEL AREA	40.52± ACRES
TOTAL VEGETATION CANOPY	18.32± ACRES

VEGETATION CANOPY SUMMARY TABLE

VEGETATION CANOPY BASELINE AREA	20.75± ACRES
VEGETATION CANOPY REMOVED AREA	2.43± ACRES
VEGETATION CANOPY RETAINED AREA	18.32± ACRES
PERCENT VEGETATION CANOPY REMOVED	11.71%
3:1 MINIMUM VEGETATION CANOPY RETENTION AREA	7.29± ACRES
PERCENT VEGETATION CANOPY RETAINED	88.28%

* VEGETATION CANOPY COVER - THE BIOTIC COMMUNITIES CLASSIFIED AS OAK WOODLAND, RIPARIAN OAK WOODLAND, OR CONIFEROUS FOREST BASED ON THE CURRENT MANUAL OF CALIFORNIA VEGETATION (MCV) AND AS DESCRIBED IN THE NAPA COUNTY BASELINE DATA REPORT (2005 OR AS AMENDED)." SEE NAPA COUNTY CODE 18.108.030

NOTES:

1. THE LIMITS OF THE VEGETATION CANOPY WERE TAKEN FROM THE "BIOLOGICAL RESOURCE ASSESSMENT WITH BOTANICAL SURVEYS AND DELINEATION OF WATER OF THE U.S." FOR THE MATTHES VINEYARDS PROJECT, PREPARED BY NORTHWEST BIOSURVEY, DATED JUNE 23, 2020, AND UPDATED SEPTEMBER 22, 2021, MAY 11, 2022, AND DECEMBER 05, 2022
2. THIS PARCEL IS NOT IN A MUNICIPAL WATERSHED OR IN A GROUND WATER DEFICIENT AREA.
3. THE UNDERLYING 2018 PHOTOGRAPH SHOWN HEREON WAS SUPPLIED BY NAPA COUNTY GEOGRAPHIC INFORMATION SYSTEM.
4. THE 2018 AERIAL PHOTOGRAPH USED AS A BASE FOR THIS PLAN WAS PROVIDED BY NAPA COUNTY. ALL PROPERTY LINES, BUILDINGS, UTILITIES, WASTEWATER SYSTEM LOCATIONS, DIMENSIONS, AND DESCRIPTIONS SHOWN HEREON ARE APPROXIMATE AND SHALL BE VERIFIED IN THE FIELD.

LEGEND:

- DOUGLAS FIR FOREST (CONIFEROUS CANOPY)
- COAST LIVE OAK FOREST (OAK WOODLAND CANOPY)
- BLUE OAK WOODLAND (OAK WOODLAND CANOPY)
- MIXED CHAPARRAL (SHRUB)
- WILD OAT GRASS (SHRUB)
- VINEYARD
- RUDERAL
- EDGE OF POTENTIAL VINEYARD AVENUE
- EDGE OF POTENTIAL VINEYARD BLOCK

NO.	DATE	DESCRIPTION	BY
5	05-07-2025	NO CHANGE TO THIS SHEET	DCB
4	05-08-2023	REISSUED; CHANGE ENGINEER OF RECORD	SGC
3	02-10-2023	NAPA COUNTY COMMENTS DATED JANUARY 04, 2023	DCB
2	11-30-2022	REMOVED BLOCK "C" PER NAPA COUNTY COMMENTS DATED OCTOBER 12, 2022	DCB
1	04-19-2022	NAPA COUNTY COMMENTS DATED APRIL 19, 2021	DCB

REGISTERED PROFESSIONAL ENGINEER
PAUL NATHAN BARTELT
No. 45102
CIVIL
STATE OF CALIFORNIA

PREPARED UNDER THE DIRECTION OF

PAUL N. BARTELT 05-07-2025

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DES: MGG
DRWN: DCB
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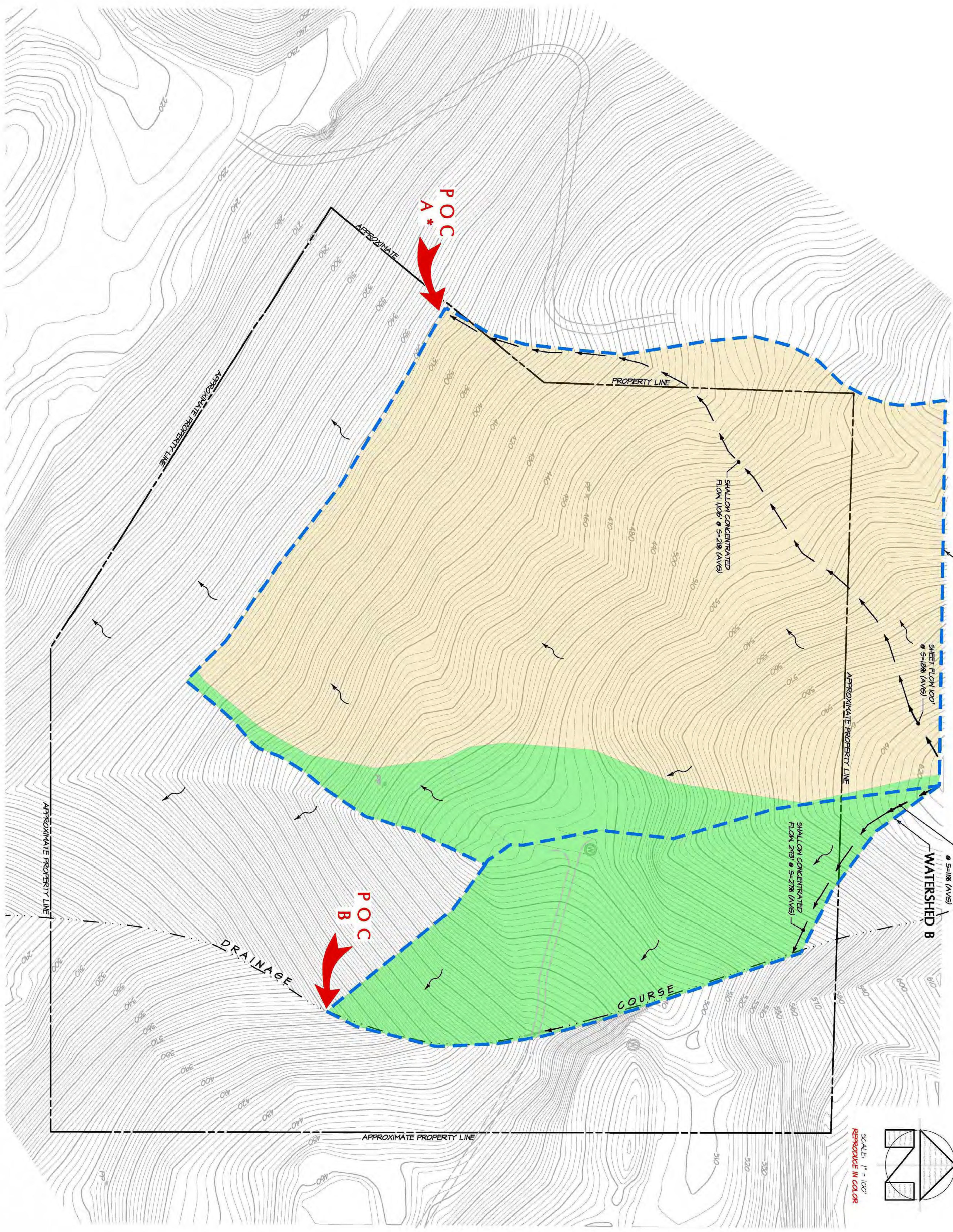
MATTHES VINEYARDS
VEGETATION & WOODLAND RETENTION EXHBIT
NAPA COUNTY CALIFORNIA

DATE: MARCH 2021
JOB NO: 20-01
SHEET NO: EC10 OF 13 (5)

5/8/2025 - 12:15 PM, DavidB, S:\LAND PROJECTS\2018-2022\2001\2020 EGP TRK 1\ACAD\EXHIBITS\2001-BIO_TOVEG.DWG, EC10-TO_VEG, ARCH FULL BLEED D (36.00 X 24.00 INCHES), 1" = 1', PLOTTED @ BARTELT ENGINEERING, 707-258-1301

EXISTING (PRE-DEVELOPMENT) HYDROLOGY CONDITIONS

SCALE: 1" = 100'



NO.	DATE	DESCRIPTION	BY
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1	04-19-2022	NAPA COUNTY COMMENTS DATED APRIL 19, 2021	DCB

HATCH LEGEND:

HYDROLOGIC SOIL GROUP AND CURVE NUMBER C	D	LAND USE
77	83	BRUSH - BRUSH, WEED, GRASS MIXTURE WITH BRUSH THE MAJOR ELEMENT (POOR)
73	82	WOODS (FAIR)

LEGEND:

- LIMIT OF WATERSHED
- DRAINAGE COURSE FLOWLINE
- EXISTING STORM DRAIN
- POC — POINT OF CONCENTRATION
- POC* — LINEAR POINT OF CONCENTRATION (CFS/FT)
- EXISTING WELL
- DIRECTION OF SURFACE FLOW

PREPARED UNDER THE DIRECTION OF

REGISTERED PROFESSIONAL ENGINEER — PAUL NATHAN BARTELT — No. 45102 — CIVIL — STATE OF CALIFORNIA

PAUL N. BARTELT 05-07-2025

MATTHES VINEYARDS

EXISTING (PRE-DEVELOPMENT) HYDROLOGY CONDITIONS

DRAINAGE EXHIBIT

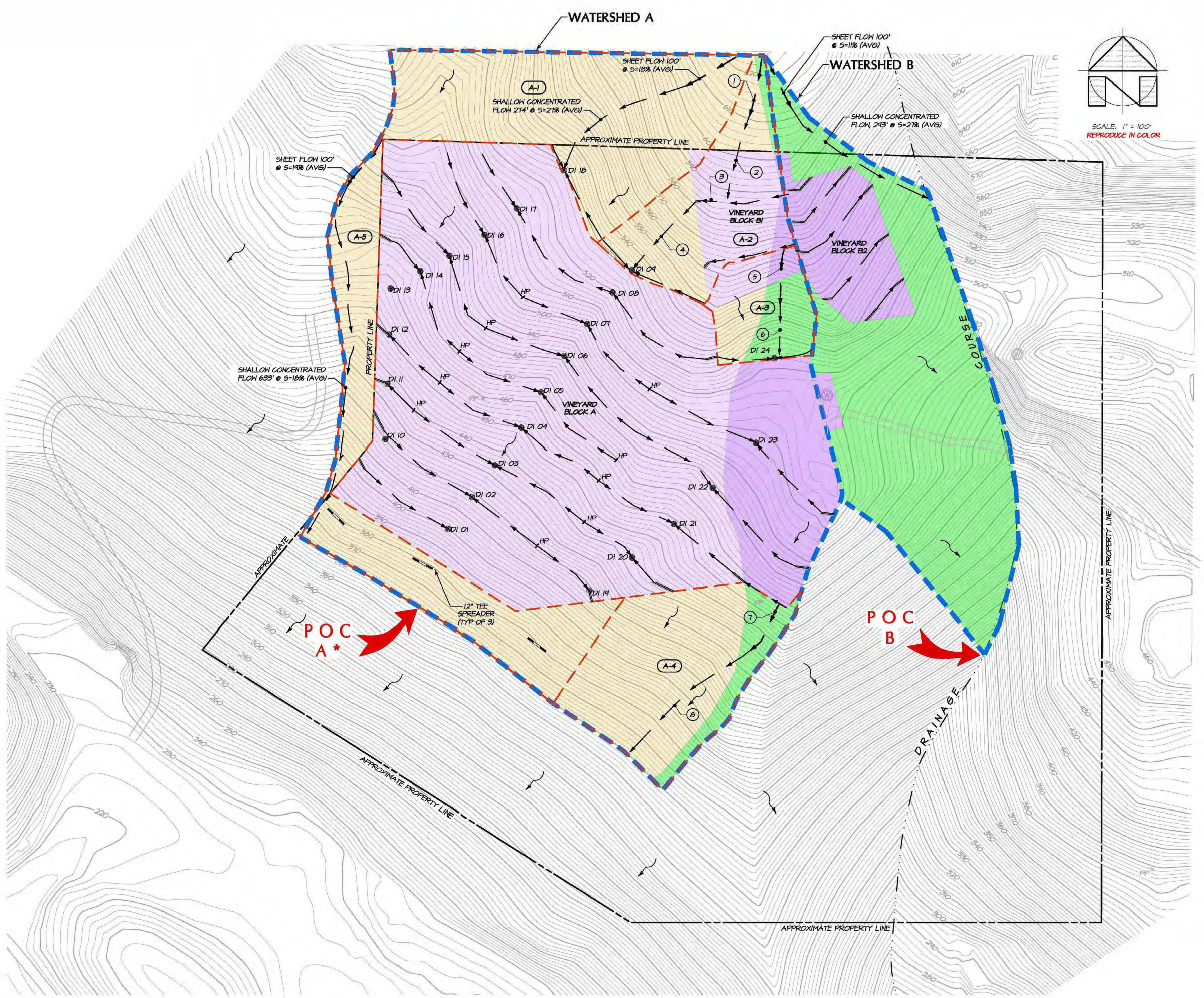
NAPA COUNTY CALIFORNIA

DATE: MARCH 2021
JOB NO: 20-01
SHEET NO: EC11 OF 13 (5)

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PROPOSED (POST-DEVELOPMENT) HYDROLOGY CONDITIONS

SCALE: 1" = 100'

NOTES:

1. SHEET FLOW 100' @ S=12% (AVG)
2. SHALLOW CONCENTRATED FLOW 151' @ S=15% (AVG)
3. CHANNELIZED FLOW 40' @ S=2% MIN
4. SHALLOW CONCENTRATED FLOW 159' @ S=32% (AVG)
5. SHEET FLOW 100' @ S=26% (AVG)
6. SHALLOW CONCENTRATED FLOW 89' @ S=25% (AVG)
7. SHEET FLOW 100' @ S=29% (AVG)
8. SHALLOW CONCENTRATED FLOW 279' @ S=28% (AVG)

HATCH LEGEND:

HYDROLOGIC SOIL GROUP AND CURVE NUMBER C	D	LAND USE
77	83	BRUSH - BRUSH, WEED, GRASS MIXTURE WITH BRUSH THE MAJOR ELEMENT (POOR)
73	82	WOODS (FAIR)
75	81	VINEYARD (>75% GRASS COVERAGE, GOOD)

LEGEND:

- LIMIT OF WATERSHED
- LIMIT OF SUB-WATERSHED
- DRAINAGE COURSE FLOWLINE
- DIVERSION SWALE (SEE DETAIL)
- DI — AGRICULTURAL DROP INLET
- POC — POINT OF CONCENTRATION
- POC* — LINEAR POINT OF CONCENTRATION (CFS/FT)
- EXISTING WELL
- DIRECTION OF SURFACE FLOW
- (A-X) — SUB-WATERSHED

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1	04-19-2022	NAPA COUNTY COMMENTS DATED APRIL 19, 2021	DCB

REGISTERED PROFESSIONAL ENGINEER
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No. 45102
CIVIL
STATE OF CALIFORNIA

PREPARED UNDER THE DIRECTION OF

PAUL N. BARTELT 05-07-2025

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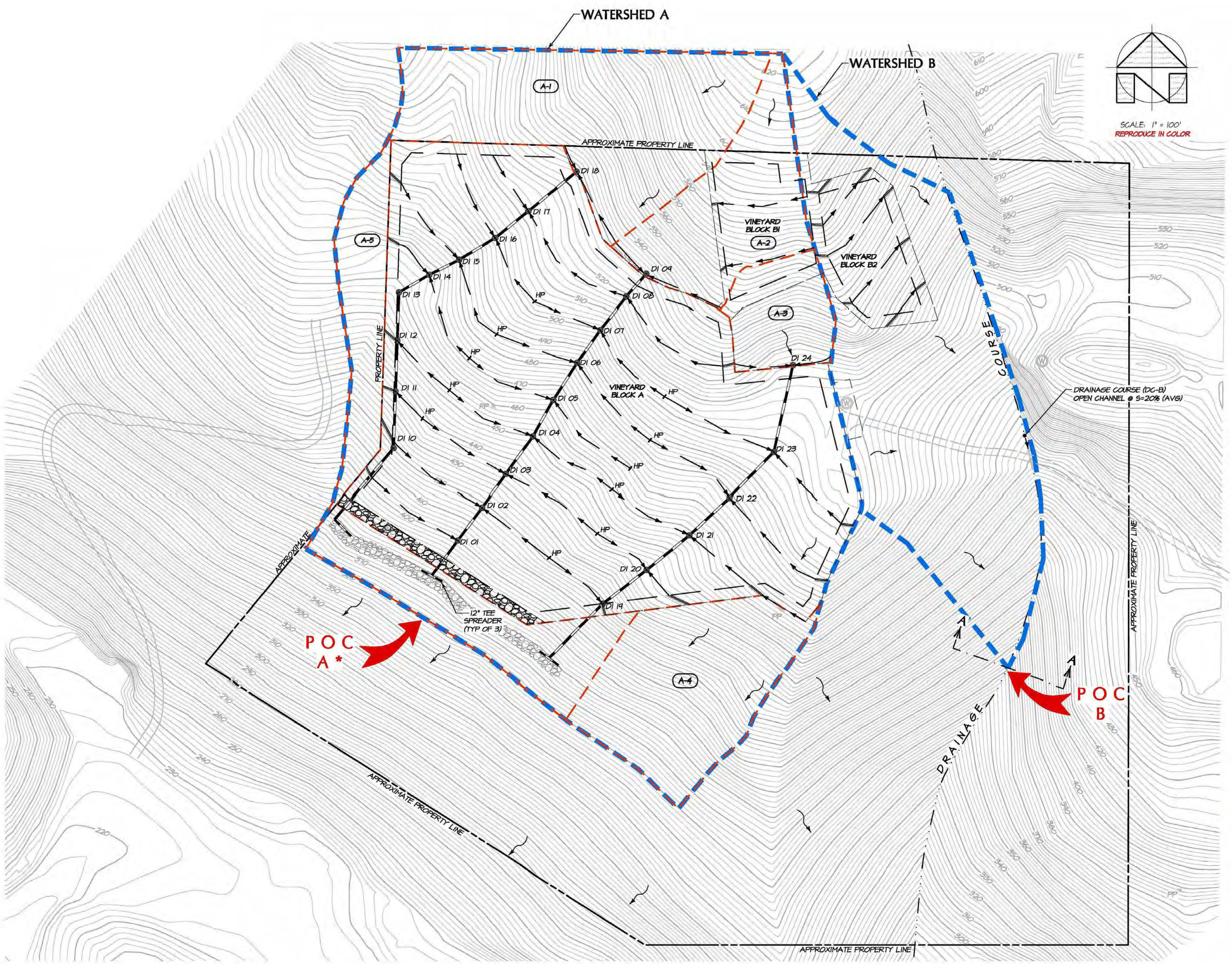
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MATTHES VINEYARDS
PROPOSED (POST-DEVELOPMENT) HYDROLOGY CONDITIONS
DRAINAGE EXHIBIT
NAPA COUNTY CALIFORNIA

DATE: MARCH 2021
JOB NO: 20-01
SHEET NO: EC12 OF 13

5/8/2025 - 12:16 PM, DavidB, S:\LAND PROJECTS\2018-2022\2001\2020 ECP TRK \ACAD\EXHIBITS\2001-DRNG.DWG, EC12-POST, ARCH FULL BLEED D (36.00 X 24.00 INCHES), 1" = 1', PLOTTED @ BARTELT ENGINEERING, 707-258-1301



LEGEND:

(rock symbol)	ROCK
(blue dashed line)	LIMIT OF WATERSHED
(red dashed line)	LIMIT OF SUB-WATERSHED
(dash-dot arrow line)	DRAINAGE COURSE FLOWLINE
(arrow line)	DIVERSION SWALE (SEE DETAIL)
(grey line)	EXISTING STORM DRAIN
(black/white line with DI)	12" STORM DRAIN LINE @ S=2% MIN AND DI
POC	POINT OF CONCENTRATION
POC*	LINEAR POINT OF CONCENTRATION (CFS/FT)
DI	AGRICULTURAL DROP INLET
(W)	EXISTING WELL
(arrow)	DIRECTION OF SURFACE FLOW
(A-X)	SUB-WATERSHED

PROPOSED HYDRAULIC ANALYSIS

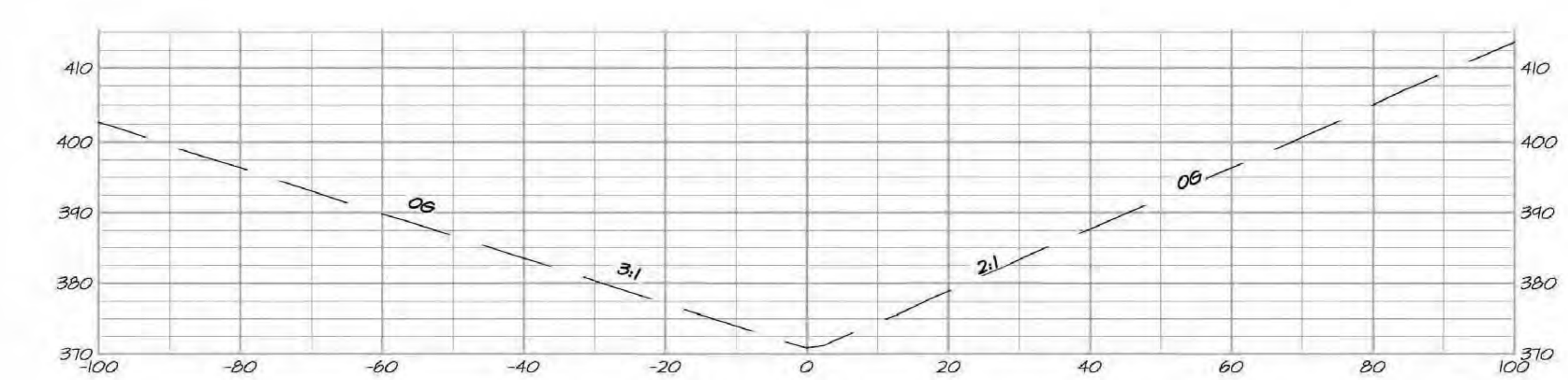
SCALE: 1" = 100'

STRUCTURE SCHEDULE

STRUCTURE	RIM	INVERT (IN)	INVERT (OUT)
DI 01	400.0±	(12") 394.00	(12") 394.00
DI 02	418.0±	(12") 411.00	(12") 411.00
DI 03	434.1±	(12") 430.00	(12") 430.00
DI 04	450.0±	(12") 446.00	(12") 446.00
DI 05	464.1±	(12") 460.00	(12") 460.00
DI 06	482.1±	(12") 478.00	(12") 478.00
DI 07	500.0±	(12") 496.00	(12") 496.00
DI 08	519.0±	(12") 515.00	(12") 515.00

STRUCTURE	RIM	INVERT (IN)	INVERT (OUT)
DI 09	531.0±	N/A	(12") 526.00
DI 10	420.0±	(12") 416.00	(12") 416.00
DI 11	436.0±	(12") 432.00	(12") 432.00
DI 12	450.0±	(12") 445.00	(12") 445.00
DI 13	458.0±	(12") 454.00	(12") 454.00
DI 14	466.2±	(12") 462.00	(12") 462.00
DI 15	479.6±	(12") 476.00	(12") 476.00
DI 16	498.1±	(12") 494.00	(12") 494.00

STRUCTURE	RIM	INVERT (IN)	INVERT (OUT)
DI 17	512.5±	(12") 508.00	(12") 508.00
DI 18	527.4±	N/A	(12") 523.00
DI 19	418.3±	(12") 414.00	(12") 414.00
DI 20	441.5±	(12") 437.00	(12") 437.00
DI 21	458.5±	(12") 454.00	(12") 454.00
DI 22	478.6±	(12") 474.00	(12") 474.00
DI 23	498.1±	(12") 494.00	(12") 494.00
DI 24	512.6±	N/A	(12") 508.00



SECTION A-A

HORIZONTAL SCALE: 1" = 20'
VERTICAL SCALE: 1" = 20'

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REGISTERED PROFESSIONAL ENGINEER
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CIVIL
STATE OF CALIFORNIA

PREPARED UNDER THE DIRECTION OF

PAUL N. BARTELT 05-07-2025

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MATTHES VINEYARDS
PROPOSED HYDRAULIC ANALYSIS
DRAINAGE EXHIBIT
NAPA COUNTY CALIFORNIA

DATE: MARCH 2021
JOB NO: 20-01
SHEET NO: EC13
OF 13
5

5/8/2025 - 12:17 PM, DavidB, S:\LAND PROJECTS\2018-2022\2001\2020 ECP TRK \ACAD\EXHIBITS\2001-DRNG.DWG, EC13-HYDRA, ARCH FULL BLEED D (36.00 X 24.00 INCHES), 1" = 1', PLOTTED @ BARTELT ENGINEERING, 707-258-1301

NARRATIVE SUPPLEMENT
TO THE
TRACK I VINEYARD EROSION CONTROL PLAN
FOR
MATTHES VINEYARD
MEADOWOOD ROAD
NAPA COUNTY, CA
APN 025-070-043

Prepared For:

William & Leigh Matthes
1508 Spring Street
St. Helena, CA 94574

Prepared By:

Bartelt Engineering
1303 Jefferson Street, 200 B
Napa, CA 94559
(707) 258-1301

Paul N. Bartelt, P.E.
Principal Engineer



6-9-2023

June 2023 – Revised (USLE Only)
May 2023 - Reissued
February 2023 – Revised
November 2022 – Revised
September 2022 - Revised
March 2021
Job No. 20-01

BARTELT ENGINEERING

BARTELT ENGINEERING

NARRATIVE SUPPLEMENT TO THE TRACK I VINEYARD DEVELOPMENT & EROSION CONTROL PLAN FOR MATTHES VINEYARD MEADOWOOD LANE, NAPA COUNTY, CALIFORNIA APN 025-070-043

1. **The nature and purpose of all/any land clearing, grading or earthmoving activity, the amount of cut & fill, the location of spoils storage and disposal area, the total number of acres of grading involved including but not limited to roads, vineyard avenues, trenching for irrigation or pipes, reservoirs, wells, water tanks, septic systems, etc. Indicate the areas of land clearing, grading or earthmoving activity that will occur on 30% or greater slopes. (Note: slopes shall be calculated in whole percentages)**

   The purpose of this erosion control plan is to provide construction plans, specifications, and erosion and sediment mitigation measures for the land preparation and planting of three (3) vineyard blocks located at APN 025-070-043 located on Meadowood Lane in St. Helena, CA (address to be assigned). The 40.0± acre subject parcel is located approximately one and one-half (1-1/2) miles north east of the City of St. Helena (see location map and site plan on the Track I Vineyard Development and Erosion Control Plan prepared by Bartelt Engineering).

   The Track I vineyard development will occur in one (1) phase that will consist of planting Vineyard Blocks A, B1, and B2 as shown on the Track I Vineyard Development and Erosion Control Plan. Planting of the vineyard blocks will have a cumulative disturbed area of 13.2± acres with 11.1± acres of planted vineyard.

2. **Comprehensive description of existing site conditions, including topography, vegetation (including under-story and canopy cover) and soils. Provide extent of tree cover canopy covered and shrub and brush without a tree canopy covered areas in acres for each parcel. Identify and indicate the project boundaries in watershed, including municipal watershed, and in the water deficient area. The plan preparer is required to visit the site and the narrative must include the date, purpose and persons making each visit. The description shall verify the source or validity of the topographic map. Wide angle or panoramic photographs documenting existing site conditions shall be provided. A photo location map indicating the date of the site visit and by whom it was made shall accompany such documentation.**

   The subject parcel is mostly undeveloped and consists of rock outcrops, vegetated areas, and portions of two (2) existing vineyards blocks not owned by the property owner. A drainage course is located on the easterly side of subject parcel and runs in a northerly to southerly direction towards the Napa River. Vegetation coverage on the subject parcel consists of coniferous canopy, oak woodland canopy, shrub, and vineyard. Coverage areas are based on the subject parcel size and vegetated mapping provided by the project Biologist. Refer to the Track I Vineyard Development and Erosion Control Plan for additional information. The proposed vineyard blocks are located within the Meadowood Creek sub-watershed of the Napa River Watershed.

The subject parcel is not located in a municipal watershed or a groundwater deficient area.

The existing ground slopes within the proposed vineyard blocks vary from 18% to 28% with the average slope being approximately 23% for the entire proposed vineyard development. The slopes of the vineyard site have been calculated using a 1"= 100' topographic map (drafted scale) with a two (2) foot contour interval. Based on the aerial topography, approximately 1.0± acre (cumulative, not contiguous) within the proposed vineyard block development is on slopes greater than 30%; but, based on site visits, it is believed that the majority of the area is representative of rock faces and not ground surfaces. Rock spoils generated as a result of land disturbing activity will be used onsite as part of the erosion control measures. Actual slopes may vary throughout the vineyard blocks. Slope sections are shown on the Track I Vineyard Development and Erosion Control Plan.

Land disturbing activity will include ripping and discing of the soil, then planting of the proposed vineyard blocks as shown on the Track I Vineyard Development and Erosion Control Plan. The vines will be planted generally perpendicular to contour with a seven (7) foot vine row spacing and a four (4) foot spacing between vines for all vineyard blocks. Grading will include minor cuts and fills for land smoothing only and not result in any significant cut or fill amounts.

Representatives from Bartelt Engineering have visited the site on numerous occasions to verify the existing site conditions.

The aerial image shown on the plans was provided by Napa County and shows the existing conditions in 2018. The control survey was performed by Albion Surveys dated January 10, 2006.

3. **All natural and man-made features on-site including but not limited to streams, watercourses (drainage, channels, etc.), wetlands, riparian habitat, lakes, reservoirs, roads, water tanks, septic systems, reservoirs, ponds, etc. Indicate which ones may be affected by the proposed activity. For blueline and County-definition streams indicate top, toe and slope of bank, channel depth and existing and proposed setback conditions. The entire length of blueline streams and 41 County-named streams on the parcel(s) shall be included in photo documentation (a recent aerial may be included). Provide the name and distance of the nearest blueline and/or County-definitional stream(s) to the project site.**

Existing man-made and natural features on site include: an access road, vineyards, two (2) wells, PG&E high-voltage transmission utility poles, mixed chaparral and grass, wooded areas, trees, weeds, brush, rock outcrops, and a drainage course. A drainage course is located on the easterly side of subject parcel and runs in a northerly to southerly direction towards the Napa River. A 2018 (pre-2020 Glass Wildfire) aerial photo with the drainage course is shown on the Track I Vineyard Development and Erosion Control Plan. All proposed vineyard blocks are located outside of the required Napa County setbacks for the drainage course which varies throughout the parcel. In addition, the proposed vineyard blocks are not located

within areas that have been designated to contain sensitive, rare, threatened, or endangered plant or animal habitats. Refer to the Biology Report for additional information.

No archeological or cultural resource sites were found within the limits of the proposed vineyard blocks. Refer to the Cultural Resources Evaluation for additional information.

4. Location and source of water for irrigation or other uses. Provide copies of all necessary permits.

Irrigation water will be supplied to the proposed vineyard blocks by the existing onsite well located east of the proposed vineyard Block A. The other well, a non-project well identified as the "Forman Vineyard Well" on the Track I Vineyard Development and Erosion Control Plan, supplies water to the existing vineyards located east of the drainage course on the project parcel. These existing vineyards and the non-project well are operated by the neighbor and not the property owner.

5. Soil types/soil series identified in the Soil Conservation Service (SCS) Napa County Soil Survey, or if prepared, a site-specified soils report.

The USDA Custom Soil Survey Soil Report identifies the following soil types on and/or adjacent to the parcel:

- Forward silt loam, 12 to 57 percent slopes (map symbol 140)
- Rock outcrop-Kidd complex, 50 to 75 percent slopes (map symbol 177)

Refer to USDA Custom Soil Survey Soil Report and the Track I Vineyard Development and Erosion Control Plan for the approximate locations of each.

6. Critical areas of erosion and slope instability such as gullies, landslides, etc. within or potentially effecting the "development site: (i.e., the area disturbed by the project) or potentially affected by the work to be undertaken within the development site. In the case of landslides a report indicating the probable effects of the planned work on slope stability and erosion levels shall be prepared and submitted by a registered geologist.

According to the United States Department of Agriculture (USDA) Natural Resources Conservation Service (NRCS) Custom Soil Resources Report for the subject parcel, the soil types found within the proposed vineyard development areas have a slight to severe hazard of erosion. A reconnaissance of the vineyard development areas did not reveal any areas of erosion or slope instability.

7. Any erosion calculations prepared.

Universal Soil Loss Equation (USDA, 1987) calculations are attached.

8. Any/all proposed erosion control methods including, but not limited to:

The proposed erosion control methods are specified on the Track I Vineyard Development and Erosion Control Plan and outlined below. The proposed vineyard development consists primarily of land ripping and discing, constructing new trellis systems, installing new irrigation systems, and planting the vineyard blocks. Vegetative cover in the form of a grass cover crop will be established and maintained within the vineyard blocks and on all adjacent disturbed areas.

a) All drainage systems and facilities, walls, cribbing or other erosion protection devices to be constructed with, or as a part of the proposed work.

Diversion swales are proposed within the vineyard blocks as shown on the Track I Vineyard Development and Erosion Control Plan. The diversions capture runoff and either direct it off the block over rock slope protection elements or towards agricultural drop inlets where it is piped to tee-spreaders. The tee-spreaders discharge onto energy dissipaters and level spreaders to return concentrated runoff to its pre-development sheet flow regime. Prefabricated silt fences and/or straw wattle sediment barriers will be installed where sediment barriers are shown on the Track I Vineyard Development and Erosion Control Plan and where it is deemed appropriate during the course of construction and maintenance. The straw wattle sediment barriers are intended to provide temporary sediment control while the cover crop is getting established. The silt fence and/or straw wattle sediment barriers will be ground keyed for stability to prevent the transportation of surface erosion sediment off the hillside and into watercourses. An installation detail for the silt fence and/or the straw wattle sediment barrier is shown on the Track I Vineyard Development and Erosion Control Plan. The Vineyard Manager may select either of both the silt fence and straw wattle sediment barrier options for sediment barriers.

Erosion control measures will also include the installation of waterbars and/or rolling dips on all perimeter avenues over 10% and/or as shown on the Track I Vineyard Development and Erosion Control Plan. The waterbars and/or rolling dips will be graded at an angle to the perimeter avenue to channel runoff into diversion swales, drop inlets, or rock energy dissipators around the vineyard. Waterbars and/or rolling dips are spaced at intervals depending on the steepness of the slope. Construction details for the waterbars and rolling dips are shown on the Track I Vineyard Development and Erosion Control Plan. Storm drain, drop inlets, outfalls, pipes, and rock energy dissipaters will be installed and maintained as required.

b) Proposed vegetative erosion control measures including location, type and quantity of seed, mulch, fertilizer and irrigation; timing and methods of planting, mulching and maintenance of plant material and slopes until a specified percentage of plant coverage is uniformly established.

Removal of existing vegetation, minor grading, and ripping within the proposed vineyard block sites is expected to occur in the spring of 2023. Erosion control measures such as straw wattles, seed, and straw mulch will be installed to stabilize the vineyard blocks during the first winter. Vineyard staking and planting of the vines will occur in the spring and summer of 2024. It is intended to cultivate every vine row during the first three (3) years to encourage proper establishment of the vine root system. During this three (3) year period the vine rows will be annually seeded, fertilized, and mulched by October 15th to establish a minimum cover crop density of 90% for Vineyard Block A, 88% for Vineyard Block B1, and 83% for Vineyard Block B2. After the initial three (3) year development period, vine rows will be farmed to establish a permanent no-till cover crop.

Vineyard areas will be seeded and straw mulched as needed each fall to stabilize the development areas as well as any other erosion prone areas. Seed may be applied by hand, mechanical seed drill, or by mechanical broadcaster. Straw will be applied at 4,000 pounds per acre. Irrigation of the cover crop is highly recommended prior to the rainy season. The seeding specification for the cover crop is shown on the Track I Vineyard Development and Erosion Control Plan. This mix of annual grasses should be able to reseed itself under natural conditions. A program of mulching and reseeding disturbed areas every year will assure that appropriate plant residues and densities will be achieved in the vineyard and avenues. The cover crop will be maintained with a surface mowing program to avoid soil disruption which might increase erosion potential. Maximum cover density will be developed and the cover crop will be monitored in late fall and late spring to time the mowing in order to allow for the maturing of seed heads to ensure regermination and also to verify stand purity. The mowing and/or cultivation program will be the primary defense against non-native weed infestation. In areas where the soil is too poor to adequately support the cover crop, remedial soil amendments such as lime, gypsum, and/or compost will be applied as needed based on laboratory analysis of the soils in the area(s) requiring remedial amendments. Weed control will only be done under precise manual or mechanical methods minimizing vegetation removal. If required, herbicides may be used in the vineyard for the first three (3) growing seasons of the new vines to manage vigorous cover crop growth. Fertilization and mulching of the seed mix will be required and performed as detailed on the Track I Vineyard Development and Erosion Control Plan.

All disturbed areas will be seeded by October 15th of each year. Straw bales used for mulch will be stockpiled and tarped at the top of each vineyard block by October 1st of each year. All winterization activities will be complete by October 15th unless the owner/applicant applies for and receives an

extension of time in which to complete winterization, in which case seeding and spreading straw mulch on all disturbed areas will occur within one (1) week of the end of harvest of the vineyard block or within one (1) week of a total of two inches of rainfall that occurs after October 15th of any given year.

Vineyard avenues, access roads, or staging areas that are not rocked will be seeded with a permanent cover crop to achieve minimum densities of 90% for Vineyard Block A, 88% for Vineyard Block B1, and 83% for Vineyard Block B2.

9. Storm water stabilization measures to handle any increased peak rates of runoff from the development of the site that would result in flooding or channel degradation downstream. Include calculations of estimated increased runoff and/or explanation of why an increase is/is not expected.

Refer to the Drainage Analysis for the Matthes Vineyards prepared by Bartelt Engineering for additional information on stormwater runoff and the Track I Vineyard Development and Erosion Control Plan for the proposed stormwater improvements.

10. An implementation schedule showing the following:

a) The proposed vegetation clearing, earthmoving/grading and construction/planting schedule.

April (Groundbreaking Year)	Remove existing vegetation, complete site ripping and grading.
Prior to October 15	Complete winterization of the site. Apply seed and fertilizer for temporary cover crop over entire project area, including vineyard and adjacent disturbed areas. Install temporary erosion control measures including silt fence and straw wattle sediment barriers.
October to April	Maintain erosion and sediment control devices in good working order during rainy season. Inspect after all rain events producing significant runoff. Re-seed temporary cover crop as necessary to maintain appropriate cover over entire project area.
April to October (Planting Year)	Complete grading. Install vineyard avenues and permanent erosion control measures (sediment filters, waterbars and/or rolling dips, diversion swales, and rock energy dissipators). Install drop inlets and storm drain pipes. Install irrigation system, install trellis system, and plant rootstock.

Prior to October 15	Complete winterization of the site. Apply seed and fertilizer for temporary cover crop over entire project area, including vineyard, and adjacent disturbed areas. Install temporary erosion control measures including silt fence and straw wattle sediment barriers. Maintain stormdrain infrastructure as needed.
Winter	Maintain erosion and sediment control devices in good working order during rainy season. Inspect after all rain events producing significant runoff. Re-seed temporary cover crop as necessary to maintain appropriate cover over entire project area.
Spring (Following Completion of Planting)	See annual maintenance schedule.

b) The proposed schedule for winterizing the site (by October 15th of each year the permit is in effect, except in a municipal watershed, where the deadline for completion is September 1st).

Annual Maintenance

Vineyard Development for the First Three (3) Years:

1. Cultivate every vine row to properly establish the root system of the young vines. Weed control will be performed manually or mechanically.

2. Establish and maintain a cover crop with the required percent of vegetal coverage shown for each block on the plans during the rainy season (December – March).

3. Mulch vineyard at rate of 4,000 pounds of straw per acre as needed.

Vineyard Maintenance After Year Three (3) of Development:

1. Establish and maintain a permanent non-tilled cover crop with the required percent of vegetal coverage shown for each block on the plans during the rainy season (December – March).

2. Mulch vineyard at rate of 4,000 pounds of straw per acre as needed.

Farming Activities Scheduled Throughout Calendar Year

January

a. Maintain and monitor vineyard avenues, waterbars, and erosion control measures during rain events
b. Pruning and tying vines
c. Pruning wounds spray protection

February

a. Maintain and monitor vineyard avenues, waterbars, and erosion control measures during rain events
b. Pruning and tying vines
c. Pruning wounds spray protection
d. Shred or burn pruned canes

March

a. Maintain and monitor vineyard avenues, waterbars, and erosion control measures during rain events
b. Finish pruning and tying vines
c. Pruning wounds spray protection
d. Shred or burn pruned canes
e. Mow cover crops in vine rows and vineyard avenues in preparation for frost season (first pass)

April

a. Maintain and monitor vineyard avenues, waterbars, and erosion control measures during rain events
b. Sulfur application to protect against powdery mildew
c. Shoot thinning

May

a. Mow cover crops on vine rows and vineyard avenues (second pass)
b. Sulfur application to protect against powdery mildew
c. Lateral removal

June

a. Sulfur application to protect against powdery mildew
b. Hedging vine canopy

July

a. Sulfur application to protect against powdery mildew
b. Leaf removal

August

a. Pre-harvest cleaning and maintenance of all diversion ditches and storm drain systems by October 15th

September

a. Start harvest
b. If required, spread and incorporate soil amendments (compost, gypsum, dolomite, etc.) in all vine rows after harvest
c. Start erosion control measures for vineyard blocks

October

a. Finish harvest
b. Seed all vine rows or areas with a weak cover crop by October 15th
c. If required, spread and incorporate soil amendments (compost, gypsum, dolomite, etc.) in all vine rows after harvest
d. Finalize erosion control measures in all blocks and avenues on or before October 15th
e. Spread straw mulch by October 15th –or–
f. Spread straw mulch within one week of the end of harvest of the individual vineyard blocks or within one (1) week of a total of two (2) inches of rainfall that occurs after October 15th (with approved extension from Napa County Planning, Building & Environmental Services)
g. Maintain and monitor vineyard avenues, waterbars, and erosion control measures during rain events

November

a. Maintain and monitor vineyard avenues, waterbars, and erosion control measures during rain events.

December

a. Maintain and monitor vineyard avenues, waterbars, and erosion control measures during rain events

c) The proposed schedule for installation of all interim erosion and sediment control measures (including vegetative measures) and the stage of completion of such devices/measures at the end of the grading season (i.e., on October 15th [except in 5 designated municipal watersheds where it is September 1st] of each year the permit will be in effect).

See sections 10.a and 10.b of this Narrative Supplement above and the Notes on the Track I Vineyard Development and Erosion Control Plan.

d) The proposed schedule for installation of any permanent erosion and sediment control devises required.

See sections 10.a and 10.b of this Narrative Supplement above and the Notes on the Track I Vineyard Development and Erosion Control Plan.

11. The estimated cost of implementation of the erosion and sediment control measures.

Typical erosion control cost for a project of this size can range from $30,000.00 to $50,000.00 per acre.