REGAN VINEYARDS WINERY LLC

USE PERMIT

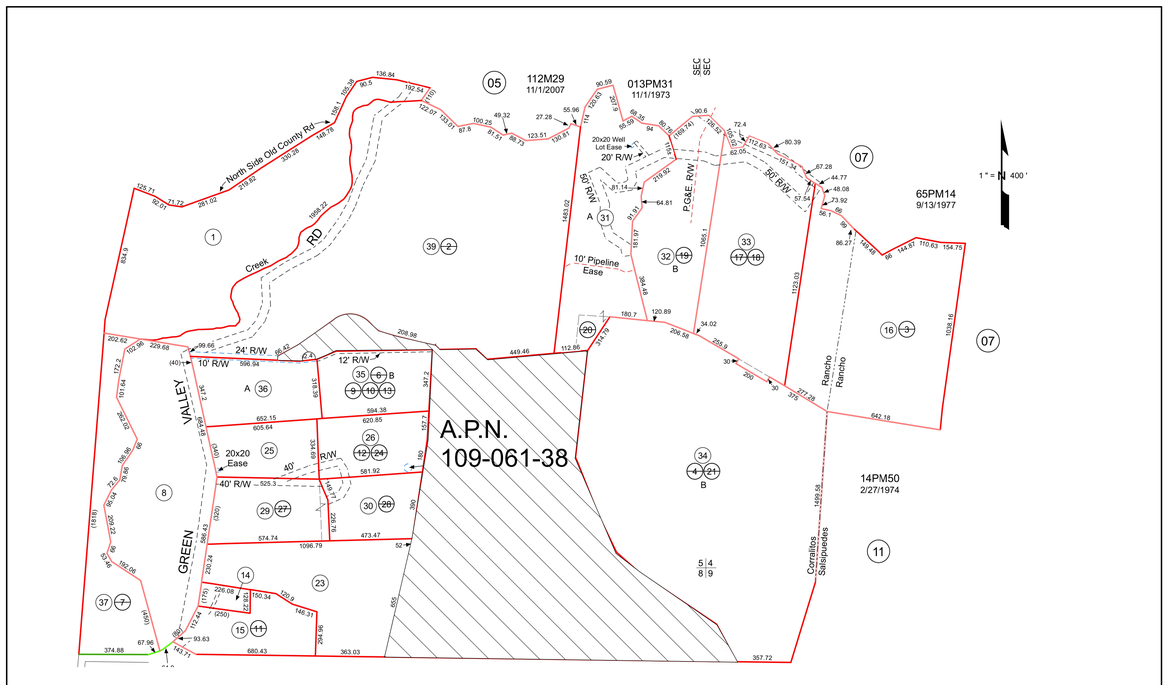
1600 GREEN VALLEY ROAD WATSONVILLE, CA 95076 APN 109-061-38

DIRECTIONS:

Take exit 426 to merge onto CA-152 E/Main St toward Watsonville/Gilroy 0.7 mi
Use the left 2 lanes to turn left onto S Green Valley Rd. Take Green Valley Road north approximately 6.4 miles. Property is on the right marked REGAN on a 6"x6"x36" post. Take right fork driveway .25 mile up to Regan front gates.

OWNER CONTACT INFORMATION:

John Bargetto
Aptos, CA 95003
Phone: 831-332-6159
Email: jbargetto@bargetto.com



CONSULTANTS:

ARCHITECT:

Hall & Bartley Architecture and Planning
P.O. Box 609
Santa Rosa, CA 95402
Phone 707.544.1642

CIVIL ENGINEER:

Michael F Goodhue
220 Playa De Ninos
Watsonville, Ca. 95076
Phone (831) 763-1661

GEOTECHNICAL ENGINEER:

Dees & Associates Inc.
501 Mission Street- Suyite A
Santa Cruz, CA 95060

GEOLOGIST:

Zinn Geology
Erik N. Zinn
112 Sage Hen Ave., Lewistown, MT 59457
License No.: LPG 6854, CEG2139
Email: enzinn@gmail.com
Phone: 831.334.4833

SEPTIC SYSTEM DESIGN

Meyer Engineering, Inc.
1796 Laurel Glen Road
Soquel, CA 95073
paul@meyerengineering.com
(831) 800 2244

TITLE 24:

A+ Energy
41 D Hanger Way
Watsonville, CA 95076

BUILDING DESIGNER:

Cadhomes Building Design
508 Santa Marguarita Drive
Aptos, CA 95003
Email: cadhomes@netscape.com
Cell: 831-345-6842

SHEET INDEX

BUILDING MATERIALS & FINISHES

METAL RAILINGS:
MATTE BLACK METAL

BODY COLOR:
BENJAMIN MOORE 174
SUNFLOWER FIELDS

EXTERIOR STONE:
SANTA CRUZ MOUNTAIN
GOLDEN GRANITE

ROOF COVERING
CLAY BARREL TILE

WINDOW FINISH
MILGARD MATTE BLACK METAL

109-061-38

REVISION TABLE

NUMBER	DATE	REVISED BY	DESCRIPTION

REGAN VINEYARDS
1400 GREEN VALLEY ROAD
WATSONVILLE, CA 95076

DRAWINGS PROVIDED BY:
CADHOMES BUILDING DESIGN
508 SANTA MARGUARITA DRIVE
APTOS, CA 95003 CONTACT:
PHONE 831-345-6842 OR EMAIL:
CADHOMES@NETSCAPE.COM

DATE:
12/1/2020

SCALE:

SHEET:
A1

REGAN VINEYARDS WINERY, LLC

USE PERMIT

1600 GREEN VALLEY ROAD

WATSONVILLE, SANTA CRUZ COUNTY, CALIFORNIA

ABBREVIATIONS

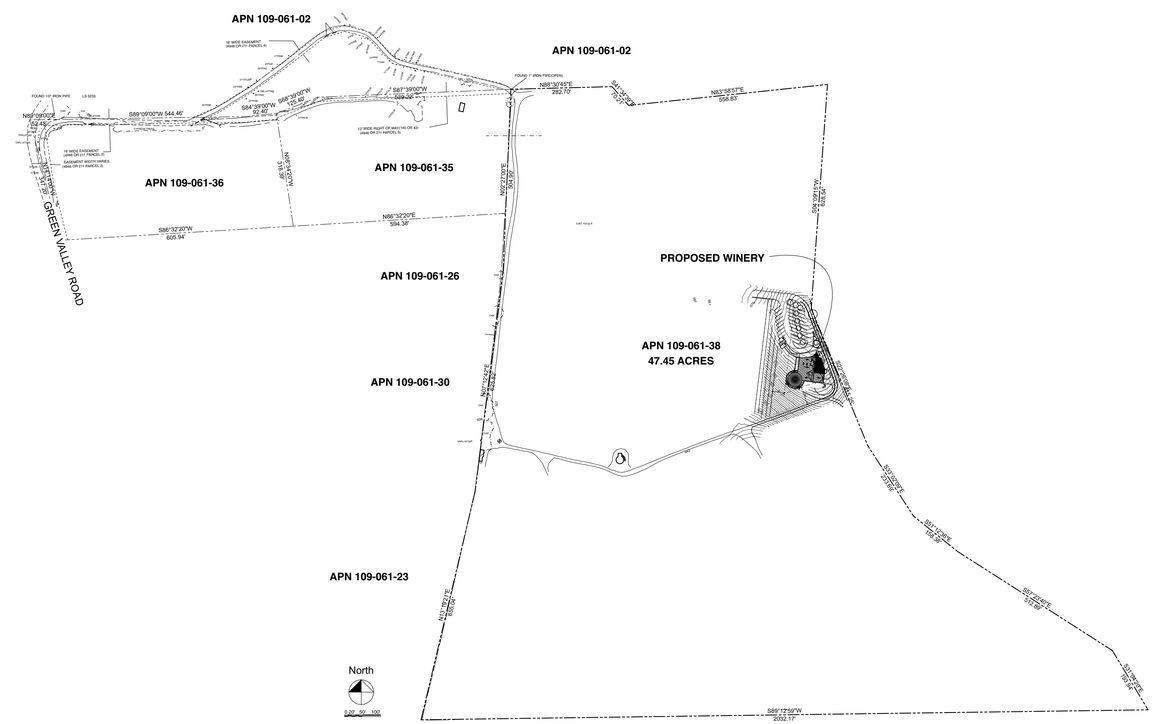
A.B.	ANCHOR BOLT	I.D.	INSIDE DIAMETER
A.C.	ASPHALT CONCRETE	I.E.	INVERT ELEVATION
ACCES.	ACCESSORIES	INT.	INTERIOR
A.D.	AREA DRAIN	INV.	INVERT
A.F.F.	ABOVE FINISH FLOOR	I.W.	INDUSTRIAL WASTE
AGG.	AGGREGATE	JST.	JOIST
AL.	ALUMINUM	LAV.	LAVATORY
A.P.	ACCESS PANEL	LB.	POUND(S)
APPROX.	APPROXIMATELY	L.F.	LINEAR FEET
ARCH'T	ARCHITECT	MAX.	MAXIMUM
BD.	BOARD	M.B.	MACHINE BOLT
BLDG.	BUILDING	MECH.	MECHANICAL
BLKG.	BLOCKING	MEMB.	MEMBRANE
BM.	BEAM	MFG.	MANUFACTURER
B.N.	BOUNDARY NAILING	M.H.	MANHOLE
B.O.	BOTTOM OF	MIN.	MINIMUM
B.S.	BOTH SIDES	MISC.	MISCELLANEOUS
BTU.	BRITISH THERMAL UNIT	M.I.W.	MALLEABLE IRON WASHER
CAB.	CABINET	MTL.	METAL
CARP.	CARPET	(N)	NEW
C.B.	CARRIAGE BOLT	N.G.	NATURAL GRADE
C.I.	CAST IRON	N.I.C.	NOT IN CONTRACT
C.J.	CONTROL JOINT	NO.	NUMBER
C.L.	CENTER LINE	N.T.S.	NOT TO SCALE
CLG.	CEILING	O/	OVER
CLOS.	CLOSET	O.C.	ON CENTER
CLR.	CLEAR	O.D.	OUTSIDE DIAMETER
C.M.P.	CORRUGATED METAL PIPE	O.F.R.D.	OVER FLOW ROOF DRAIN
C.M.U.	CONCRETE MASONRY UNIT	P.E.N.	PLYWOOD EDGE NAILING
COL.	COLUMN	P.L.	PROPERTY LINE
CONC.	CONCRETE	P.LAM.	PLASTIC LAMINATE
CONT.	CONTINUOUS	PLUMB.	PLUMBING
DBL.	DOUBLE	PLY.	PLYWOOD
D.F.	DOUGLAS FIR	P.S.F.	POUNDS PER SQUARE FOOT
DEPT.	DEPARTMENT	P.S.I.	POUNDS PER SQUARE INCH
D.I.	DROP INLET	P.T.D.F.	PRESSURE TREATED DOUGLAS FIR
DIA.	DIAMETER	PVC	POLYVINYL CHLORIDE
DIM.	DIMENSION	Q.T.	QUARRY TILE
D.J.	DOWEL JOINT	R	RADIUS OR RISER
DN.	DOWN	R.A.	RETURN AIR
D.S.	DOWN SPOUT	R.C.P.	REINFORCED CONCRETE PIPE
DWG.	DRAWINGS	R.D.	ROOF DRAIN
(E)	EXISTING	REFRIG.	REFRIGERATOR
EA.	EACH	REINF.	REINFORCED, REINFORCING
E.J.	EXPANSION JOINT	REQ'D	REQUIRED
EL.	ELEVATION, VERTICAL	R/W	RIGHT OF WAY
ELEC.	ELECTRICAL	RWD.	REDWOOD
ELEV.	ELEVATION	R.W.L.	RAIN WATER LEADER
EQ.	EQUAL	S.A.	SUPPLY AIR
E.S.	EACH SIDE	SCHED.	SCHEDULE
E.W.	EACH WAY	SHT.	SHEET
EXIST.	EXISTING	SIM.	SIMILAR
EXT.	EXTERIOR	S.N.	SEE NOTE
F.C.	FINISH CEILING	SPEC.	SPECIFICATION
F.D.	FLOOR DRAIN	SQ.	SQUARE
F.F.	FINISH FLOOR	S/S	STAINLESS STEEL
FIN.	FINISH	S.S.	SANITARY SEWER
F.O.	FACE OF	STA.	STATION
F.O.M.	FACE OF MASONRY	STD.	STANDARD
F.O.S.	FACE OF STUD	STOR.	STORAGE
FT.	FEET OR FOOT	STRUCT.	STRUCTURAL
FTG.	FOOTING	T & B	TOP AND BOTTOM
GA.	GAUGE	T & G	TONGUE AND GROOVE
GAL.	GALLON	TEMP.	TEMPORARY OR TEMPERED
GALV.	GALVANIZED	T.O.	TOP OF
G.B.	GRAB BAR	T.S.	TUBE STEEL
G.L.B.	GLUED-LAMINATED BEAM	TYP.	TYPICAL
G.S.	GRAVEL STOP	U.B.C.	UNIFORM BUILDING CODE
G.S.M.	GALVANIZED SHEET METAL	U.L.	UNDERWRITER'S LABORATORY
GYP.	GYPSUM	U.N.O.	UNLESS NOTED OTHERWISE
H.B.	HOSE BIBB	VERT.	VERTICAL
H.C.	HANDICAP	V.G.	VERTICAL GRAIN
HDR.	HEADER	V.I.F.	VERIFY IN FIELD
HDWR.	HARDWARE	W/	WITH
HORZ.	HORIZONTAL	W.C.	WATER CLOSET
H.P.	HORSE POWER	WD.	WOOD
HR.	HOUR	W.H.	WATER HEATER
HT.	HEIGHT	W.R.	WATER RESISTANT
		W/O	WITHOUT
		W.W.F.	WELDED WIRE FABRIC

DRAWING INDEX

SHEET	DESCRIPTION	DATE
UP.1	Title Sheet, Abbreviations,Plot Plan, Vicinity Map, Project Data, Drawing Index	10/27/2020
CIVIL		

SHEET	DESCRIPTION	DATE
ARCHITECTURE		
UP.2	Site Plan & Roof Plan	10/27/2020
UP.3	Floor Plans	10/27/2020
UP.4	Exterior Elevations	10/27/2020
UP.5	Building Sections	10/27/2020

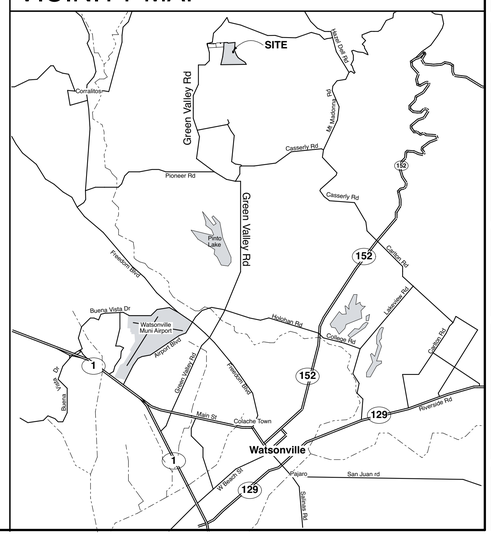
PLOT PLAN



PROJECT DATA

Owner:	Regan Vineyards Winery, LLC.
Address:	3535 North Main Street Soquel, Ca 95073
Assessor's Parcel Number:	109-061-38
Lot Size:	47.45 Acres
Floor Area: Main Floor:	
- Hospitality & Offices:	1,538 Sq.Ft.
- Guest Suite:	888 Sq.ft.
- Production Area:	1,861 Sq.ft.
- Circulation:	243 Sq.Ft.
Lower Floor:	
- Barrel Storage:	2,468 Sq.Ft.
- Garage & Storage:	979 Sq.Ft.
- Circulation:	202 Sq.Ft.
Covered Area:	
- Hospitality:	1,154 Sq.Ft.
- Production Work Area:	1,114 Sq.ft.
Terrace:	1,017 Sq.Ft.
Occupancy Group:	A-2, B, F-1, S-1, R-3
Construction Type:	VI
Sprinklered:	Yes

VICINITY MAP



/Volumes/Shared/PROJECTS/2020 Projects/2015 Regan Winery Use Permit/2015-2020-10-28-Regan Winery.pln10/29/20

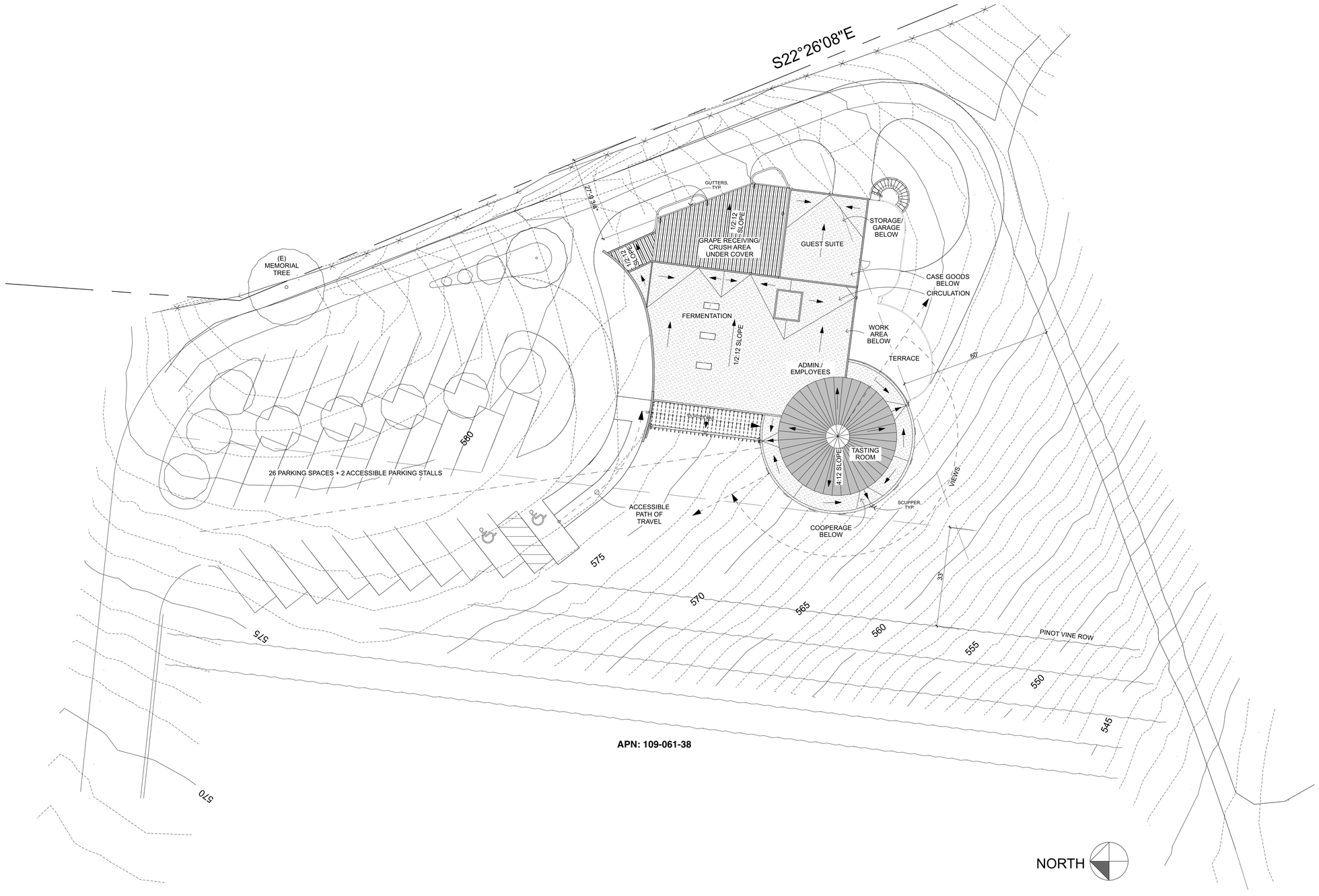
HALL&BARTLEY
ARCHITECTURE AND PLANNING
P.O.BOX 608, SANTA ROSA, CALIFORNIA 95402 (707) 544-1642

REGAN VINEYARDS WINERY, LLC
USE PERMIT
1600 GREEN VALLEY ROAD
WATSONVILLE SANTA CRUZ COUNTY CALIFORNIA

Title Sheet
LIST OF CONSULTANTS, ABBREVIATIONS, SYMBOLS, PROJECT DATA, VICINITY MAP, DRAWING INDEX

PROJECT	2015
DRAWN	AM
CHECK	JAH
SCALE	
DATE	10/27/2020

UP.1



1 SITE PLAN/ ROOF PLAN

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

0 8' 16' 32'

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ARCHITECTURE AND PLANNING
P.O.BOX 668, SANTA ROSA, CALIFORNIA 95402 (707) 544-1642

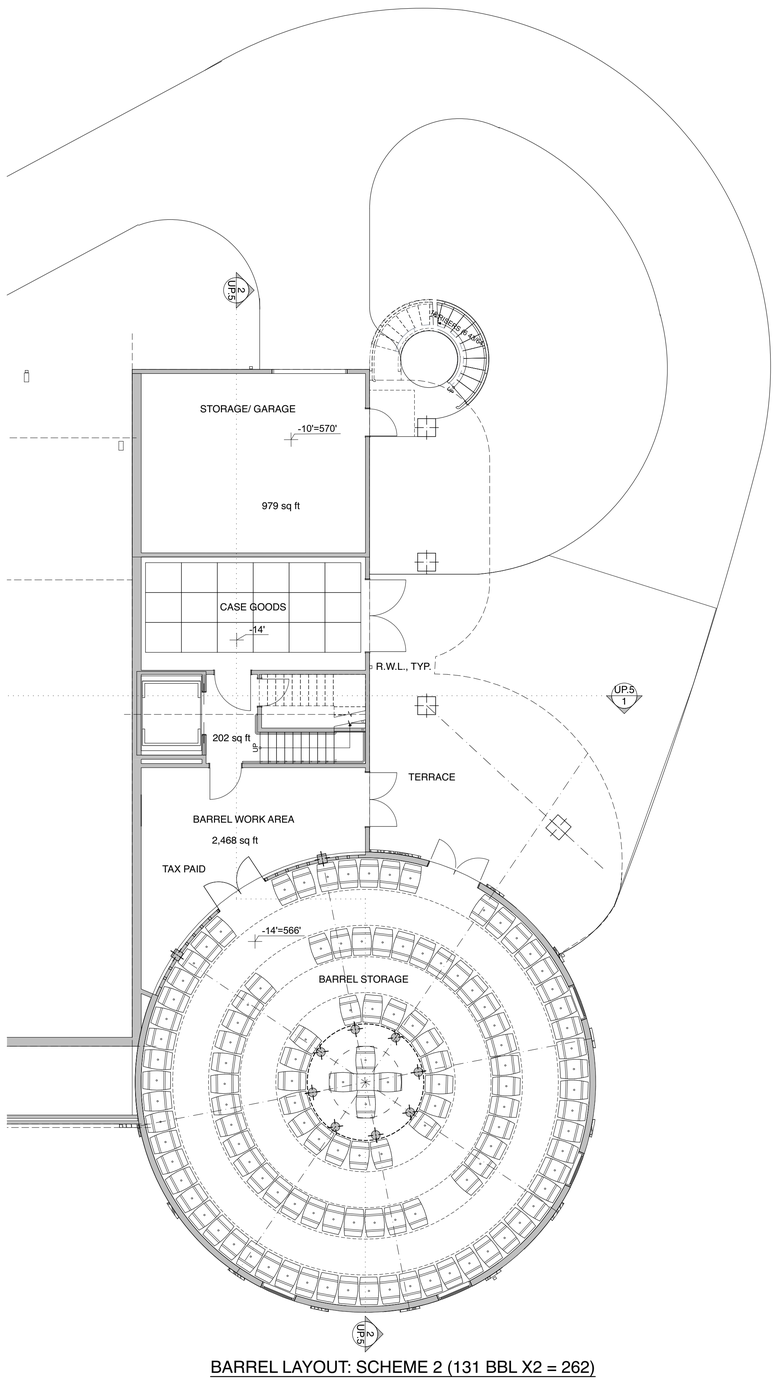
REGAN VINEYARDS WINERY, LLC
USE PERMIT
1600 GREEN VALLEY ROAD
WATSONVILLE SANTA CRUZ COUNTY CALIFORNIA

SITE PLAN/ ROOF PLAN

PROJECT	2015
DRAWN	AM
CHECK	JAH
SCALE	AS NOTED
DATE	10/27/2020

UP.2

/Volumes/Shared/PROJECTS/2020 Projects/2015 Regan Winery Use Permit/2015-2020-10-28-Regan Winery.pln10/29/20

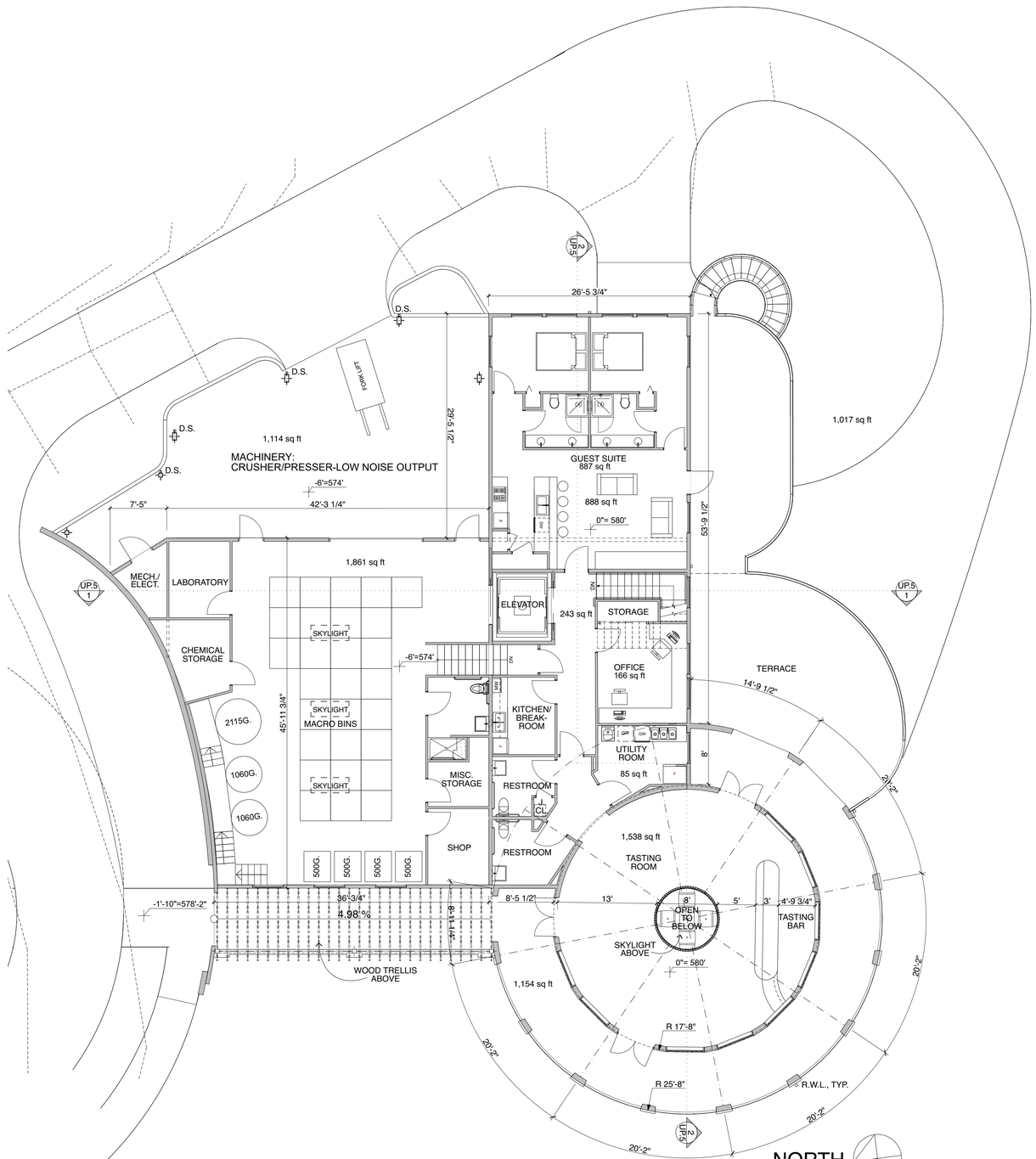


BARREL LAYOUT: SCHEME 2 (131 BBL X2 = 262)

2 BASEMENT FLOOR PLAN

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

0 4' 8' 16'



1 MAIN FLOOR PLAN

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

0 4' 8' 16'

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ARCHITECTURE AND PLANNING
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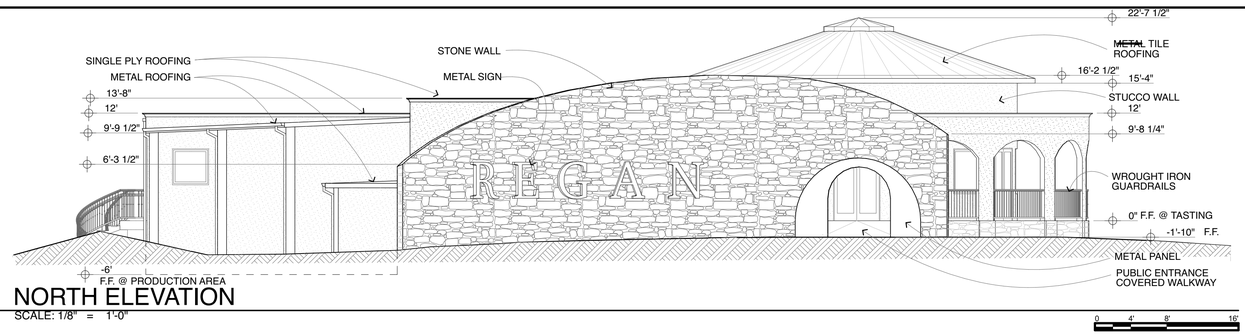
REGAN VINEYARDS WINERY, LLC
USE PERMIT
1600 GREEN VALLEY ROAD
WATSONVILLE SANTA CRUZ COUNTY CALIFORNIA

FLOOR PLANS

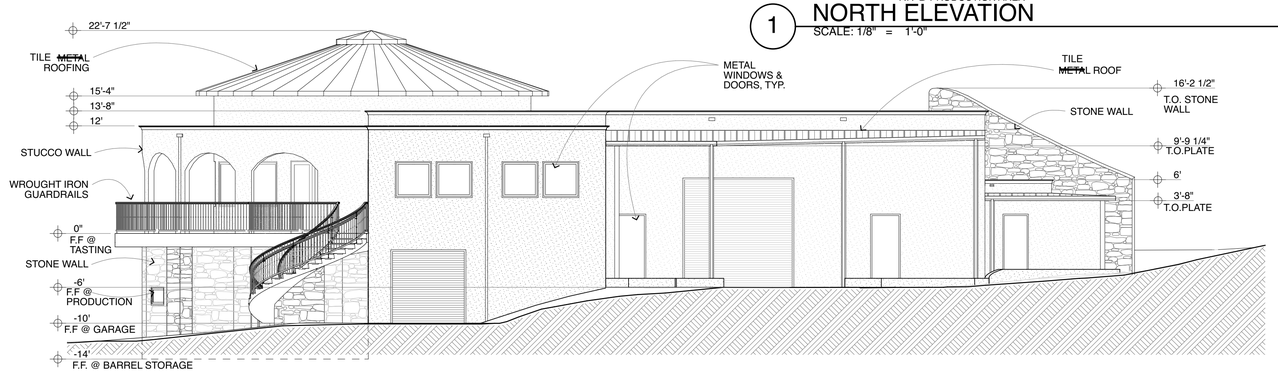
PROJECT	2015
DRAWN	AM
CHECK	JAH
SCALE	AS NOTED
DATE	10/27/2020

UP.3



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

0 4' 8' 16'



2 EAST ELEVATION
SCALE: 1/8" = 1'-0"

0 4' 8' 16'

3 SOUTH ELEVATION
SCALE: 1/8" = 1'-0"

0 4' 8' 16'

4 WEST ELEVATION
SCALE: 1/8" = 1'-0"

0 4' 8' 16'

HALL&BARTLEY
ARCHITECTURE AND PLANNING
P.O.BOX 690, SANTA ROSA, CALIFORNIA 95402 (707) 544-1642

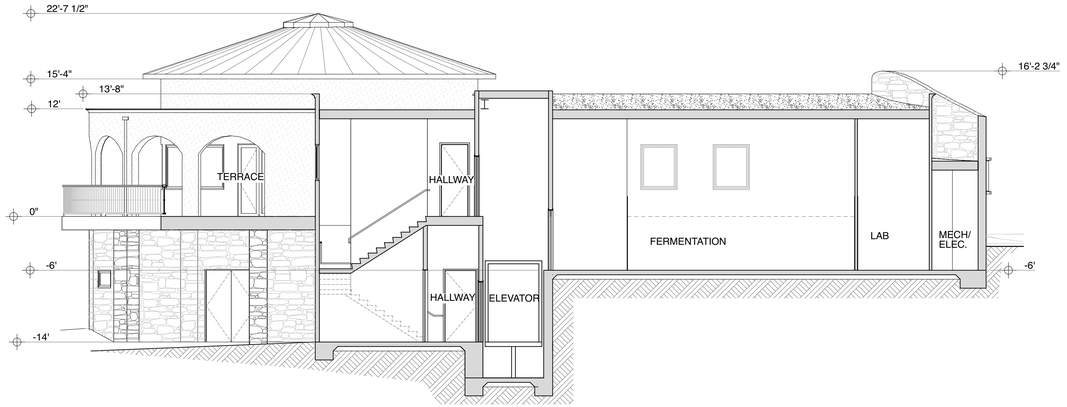
REGAN VINEYARDS WINERY, LLC
USE PERMIT
1600 GREEN VALLEY ROAD
WATSONVILLE SANTA CRUZ COUNTY CALIFORNIA

EXTERIOR ELEVATIONS

PROJECT	2015
DRAWN	AM
CHECK	JAH
SCALE	AS NOTED
DATE	10/27/2020

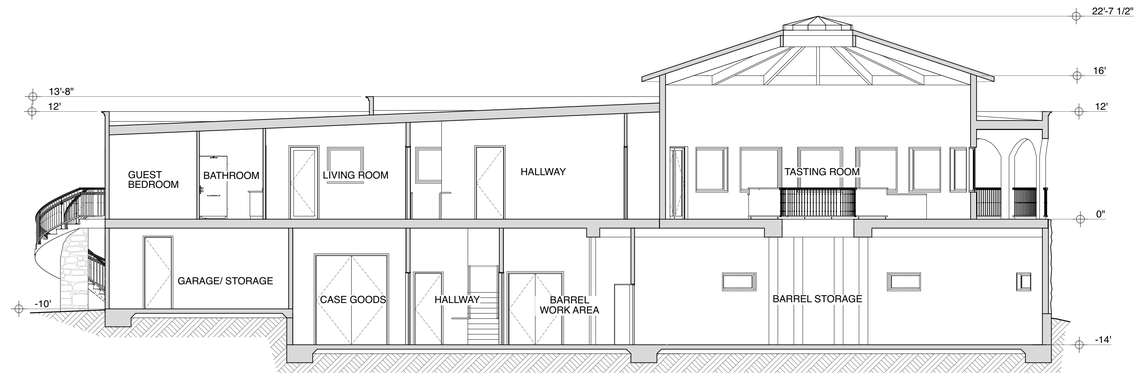
UP.4

/Volumes/Shared/PROJECTS/2020 Projects/2015 Regan Winery Use Permit/2015-2020-10-28-Regan Winery.pln10/29/20



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

0 4' 8' 16'



2 CROSS SECTION
SCALE: 1/8" = 1'-0"

0 4' 8' 16'

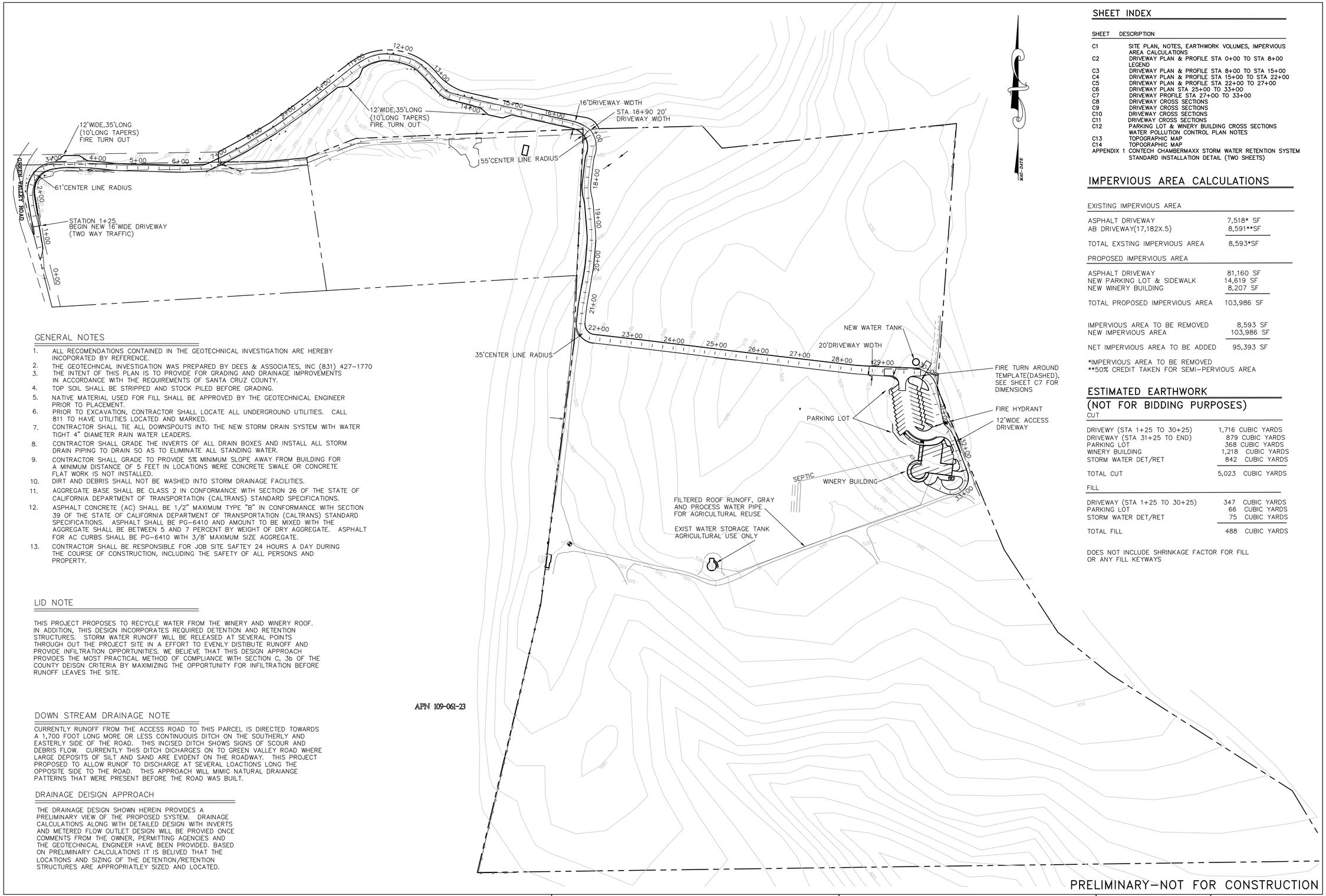
HALL&BARTLEY
ARCHITECTURE AND PLANNING
P.O.BOX 699, SANTA ROSA, CALIFORNIA 95402 (707) 544-1642

REGAN VINEYARDS WINERY, LLC
USE PERMIT
1600 GREEN VALLEY ROAD CALIFORNIA
WATSONVILLE SANTA CRUZ COUNTY

BUIDLING SECTIONS

PROJECT	2015
DRAWN	AM
CHECK	JAH
SCALE	AS NOTED
DATE	10/27/2020

UP.5



GENERAL NOTES

1. ALL RECOMENDATIONS CONTAINED IN THE GEOTECHNICAL INVESTIGATION ARE HEREBY INCOPORATED BY REFERENCE.
2. THE GEOTECHNCAL INVESTIGATION WAS PREPARED BY DEES & ASSOCIATES, INC (831) 427–1770
3. THE INTENT OF THIS PLAN IS TO PROVIDE FOR GRADING AND DRAINAGE IMPROVEMENTS IN ACCORDANCE WITH THE REQUIREMENTS OF SANTA CRUZ COUNTY.
4. TOP SOIL SHALL BE STRIPPED AND STOCK PILED BEFORE GRADING.
5. NATIVE MATERIAL USED FOR FILL SHALL BE APPROVED BY THE GEOTECHNICAL ENGINEER PRIOR TO PLACEMENT.
6. PRIOR TO EXCAVATION, CONTRACTOR SHALL LOCATE ALL UNDERGROUND UTILITIES. CALL 811 TO HAVE UTILITIES LOCATED AND MARKED.
7. CONTRACTOR SHALL TIE ALL DOWNSPOUTS INTO THE NEW STORM DRAIN SYSTEM WITH WATER TIGHT 4" DIAMETER RAIN WATER LEADERS.
8. CONTRACTOR SHALL GRADE THE INVERTS OF ALL DRAIN BOXES AND INSTALL ALL STORM DRAIN PIPING TO DRAIN SO AS TO ELIMINATE ALL STANDING WATER.
9. CONTRACTOR SHALL GRADE TO PROVIDE 5% MINIMUM SLOPE AWAY FROM BUILDING FOR A MINIMUM DISTANCE OF 5 FEET IN LOCATIONS WERE CONCRETE SWALE OR CONCRETE FLAT WORK IS NOT INSTALLED.
10. DIRT AND DEBRIS SHALL NOT BE WASHED INTO STORM DRAINAGE FACILITIES.
11. AGGREGATE BASE SHALL BE CLASS 2 IN CONFORMANCE WITH SECTION 26 OF THE STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION (CALTRANS) STANDARD SPECIFICATIONS.
12. ASPHALT CONCRETE (AC) SHALL BE 1/2" MAXIMUM TYPE "B" IN CONFORMANCE WITH SECTION 39 OF THE STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION (CALTRANS) STANDARD SPECIFICATIONS. ASPHALT SHALL BE PG–6410 AND AMOUNT TO BE MIXED WITH THE AGGREGATE SHALL BE BETWEEN 5 AND 7 PERCENT BY WEIGHT OF DRY AGGREGATE. ASPHALT FOR AC CURBS SHALL BE PG–6410 WITH 3/8' MAXIMUM SIZE AGGREGATE.
13. CONTRACTOR SHALL BE RESPONSIBLE FOR JOB SITE SAFTEY 24 HOURS A DAY DURING THE COURSE OF CONSTRUCTION, INCLUDING THE SAFETY OF ALL PERSONS AND PROPERTY.

LID NOTE

THIS PROJECT PROPOSES TO RECYCLE WATER FROM THE WINERY AND WINERY ROOF. IN ADDITION, THIS DESIGN INCORPORATES REQUIRED DETENTION AND RETENTION STRUCTURES. STORM WATER RUNOFF WILL BE RELEASED AT SEVERAL POINTS THROUGH OUT THE PROJECT SITE IN A EFFORT TO EVENLY DISTIBUTE RUNOFF AND PROVIDE INFILTRATION OPPORTUNITIES. WE BELIEVE THAT THIS DESIGN APPROACH PROVIDES THE MOST PRACTICAL METHOD OF COMPLIANCE WITH SECTION C, 3b OF THE COUNTY DEISGN CRITERIA BY MAXIMIZING THE OPPORTUNITY FOR INFILTRATION BEFORE RUNOFF LEAVES THE SITE.

DOWN STREAM DRAINAGE NOTE

CURRENTLY RUNOFF FROM THE ACCESS ROAD TO THIS PARCEL IS DIRECTED TOWARDS A 1,700 FOOT LONG MORE OR LESS CONTINUOUIS DITCH ON THE SOUTHERLY AND EASTERLY SIDE OF THE ROAD. THIS INCISED DITCH SHOWS SIGNS OF SCOUR AND DEBRIS FLOW. CURRENTLY THIS DITCH DICHARGES ON TO GREEN VALLEY ROAD WHERE LARGE DEPOSITS OF SILT AND SAND ARE EVIDENT ON THE ROADWAY. THIS PROJECT PROPOSED TO ALLOW RUNOF TO DISCHARGE AT SEVERAL LOACTIONS LONG THE OPPOSITE SIDE TO THE ROAD. THIS APPROACH WILL MIMIC NATURAL DRAIANGE PATTERNS THAT WERE PRESENT BEFORE THE ROAD WAS BUILT.

DRAINAGE DEISIGN APPROACH

THE DRAINAGE DESIGN SHOWN HEREIN PROVIDES A PRELIMINARY VIEW OF THE PROPOSED SYSTEM. DRAINAGE CALCULATIONS ALONG WITH DETAILED DESIGN WITH INVERTS AND METERED FLOW OUTLET DESIGN WILL BE PROVIED ONCE COMMENTS FROM THE OWNER, PERMITTING AGENCIES AND THE GEOTECHNICAL ENGINEER HAVE BEEN PROVIDED. BASED ON PRELIMINARY CALCULATIONS IT IS BELIVED THAT THE LOCATIONS AND SIZING OF THE DETENTION/RETENTION STRUCTURES ARE APPROPRIATLEY SIZED AND LOCATED.

SHEET INDEX

IMPERVIOUS AREA CALCULATIONS

EXISTING IMPERVIOUS AREA	
ASPHALT DRIVEWAY	7,518* SF
AB DRIVEWAY(17,182X.5)	8,591**SF
TOTAL EXSTING IMPERVIOUS AREA	8,593*SF

PROPOSED IMPERVIOUS AREA	
ASPHALT DRIVEWAY	81,160 SF
NEW PARKING LOT & SIDEWALK	14,619 SF
NEW WINERY BUILDING	8,207 SF
TOTAL PROPOSED IMPERVIOUS AREA	103,986 SF
IMPERVIOUS AREA TO BE REMOVED	8,593 SF
NEW IMPERVIOUS AREA	103,986 SF
NET IMPERVIOUS AREA TO BE ADDED	95,393 SF

*IMPERVIOUS AREA TO BE REMOVED
**50% CREDIT TAKEN FOR SEMI–PERVIOUS AREA

ESTIMATED EARTHWORK
(NOT FOR BIDDING PURPOSES)

CUT	
DRIVEWY (STA 1+25 TO 30+25)	1,716 CUBIC YARDS
DRIVEWAY (STA 31+25 TO END)	879 CUBIC YARDS
PARKING LOT	368 CUBIC YARDS
WINERY BUILDING	1,218 CUBIC YARDS
STORM WATER DET/RET	842 CUBIC YARDS
TOTAL CUT	5,023 CUBIC YARDS

FILL	
DRIVEWAY (STA 1+25 TO 30+25)	347 CUBIC YARDS
PARKING LOT	66 CUBIC YARDS
STORM WATER DET/RET	75 CUBIC YARDS
TOTAL FILL	488 CUBIC YARDS

DOES NOT INCLUDE SHRINKAGE FACTOR FOR FILL OR ANY FILL KEYWAYS

PRELIMINARY–NOT FOR CONSTRUCTION

FOR REDUCED PLANS ORIGINAL SCALE IN INCHES 0 1 2 3

SHEET NAME:

DRAWING NAME:

BY	REVISION	DATE

11/25/20

LICENSED LAND SURVEYOR · MICHAEL F. GOODWIN · No. 8362 · Exp. 12/31/20 · STATE OF CALIFORNIA

REGISTERED PROFESSIONAL ENGINEER · MICHAEL F. GOODWIN · No. 43754 · Exp. 9/30/21 · CIVIL · STATE OF CALIFORNIA

PROJECT ENGINEER

MFG Engineers, Inc
PO BOX 1914,
APTOS, CA. 95001
(831) 763–1661
CEL (831) 601–9519

APN 109–061–38

REGAN VINEYARDS WINERY

GRADING & DRAINAGE PLAN

DRAWN: MFG

CHECKED: MFG

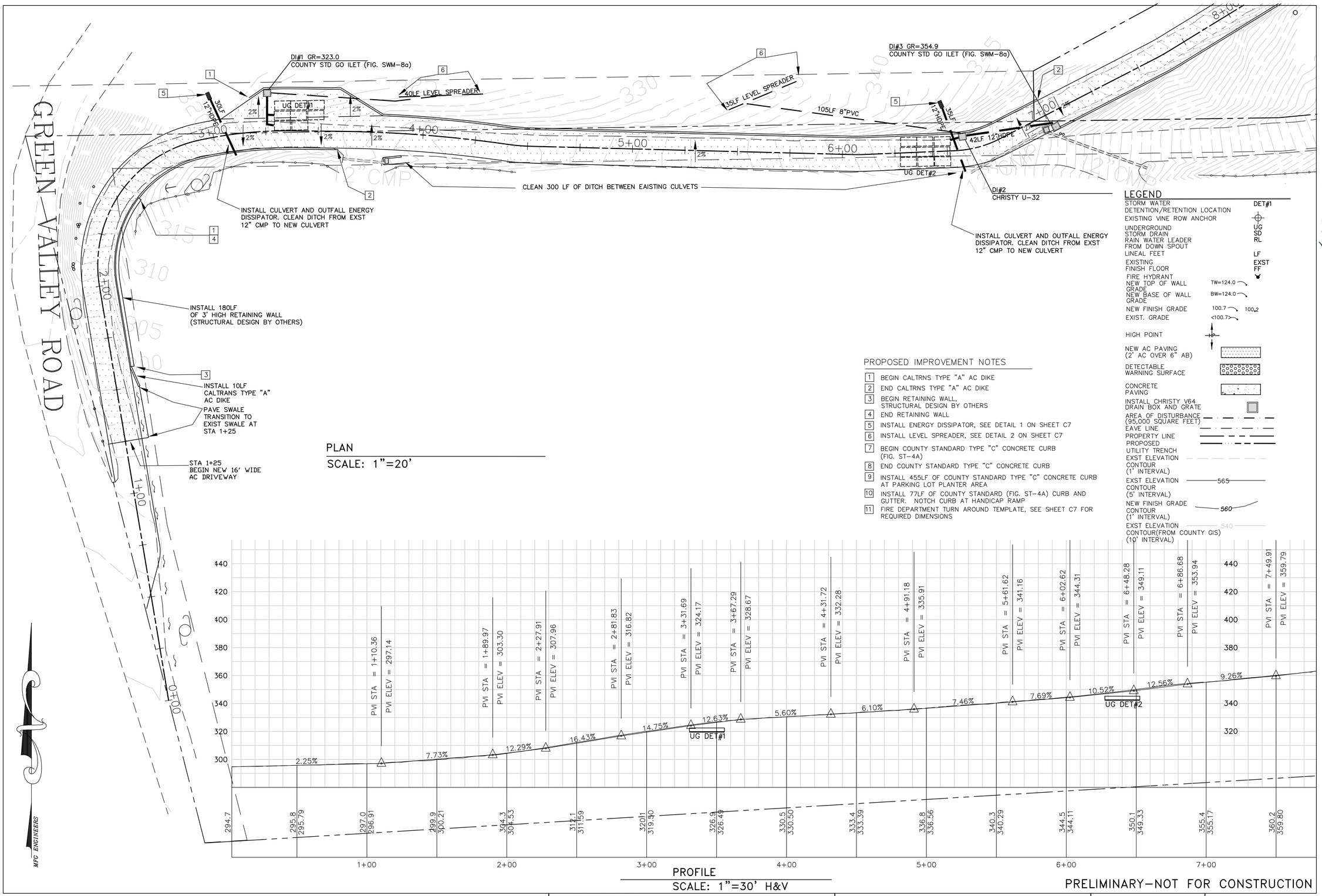
DATE: 10/2020

SCALE: 1"=100'

JOB NO.

SHEET

C1 OF 14



PLAN

SCALE: 1"=20'

PROPOSED IMPROVEMENT NOTES

1. BEGIN CALTRNS TYPE "A" AC DIKE
2. END CALTRNS TYPE "A" AC DIKE
3. BEGIN RETAINING WALL, STRUCTURAL DESIGN BY OTHERS
4. END RETAINING WALL
5. INSTALL ENERGY DISSIPATOR, SEE DETAIL 1 ON SHEET C7
6. INSTALL LEVEL SPREADER, SEE DETAIL 2 ON SHEET C7
7. BEGIN COUNTY STANDARD TYPE "C" CONCRETE CURB (FIG. ST-4A)
8. END COUNTY STANDARD TYPE "C" CONCRETE CURB
9. INSTALL 455LF OF COUNTY STANDARD TYPE "C" CONCRETE CURB AT PARKING LOT PLANTER AREA
10. INSTALL 77LF OF COUNTY STANDARD (FIG. ST-4A) CURB AND GUTTER. NOTCH CURB AT HANDICAP RAMP
11. FIRE DEPARTMENT TURN AROUND TEMPLATE, SEE SHEET C7 FOR REQUIRED DIMENSIONS

LEGEND

STORM WATER DETENTION/RETENTION LOCATION	DET#1
EXISTING VINE ROW ANCHOR	
UNDERGROUND STORM DRAIN	UG SD
RAIN WATER LEADER FROM DOWN SPOUT	RL
LINEAL FEET	LF
EXISTING FINISH FLOOR	EXST FF
FIRE HYDRANT	
NEW TOP OF WALL GRADE	TW=124.0
NEW BASE OF WALL GRADE	BW=124.0
NEW FINISH GRADE	100.7 100.2
EXIST. GRADE	<100.7>
HIGH POINT	HP
NEW AC PAVING (2" AC OVER 6" AB)	
DETECTABLE WARNING SURFACE	
CONCRETE PAVING	
INSTALL CHRISTY V64 DRAIN BOX AND GRATE	
AREA OF DISTURBANCE (95,000 SQUARE FEET)	
EAVE LINE	
PROPERTY LINE	
PROPOSED UTILITY TRENCH	
EXST ELEVATION CONTOUR (1' INTERVAL)	
EXST ELEVATION CONTOUR (5' INTERVAL)	565
NEW FINISH GRADE CONTOUR (1' INTERVAL)	560
EXST ELEVATION CONTOUR(FROM COUNTY GIS) (10' INTERVAL)	540

PROFILE

SCALE: 1"=30' H&V

PRELIMINARY-NOT FOR CONSTRUCTION

MFG ENGINEERS

FOR REDUCED PLANS ORIGINAL SCALE IN INCHES 0 1 2 3

SHEET NAME:

DRAWING NAME:

DATE	REVISION	BY

11/25/20

LICENSED LAND SURVEYOR MICHAEL F. GOODRICH No. 7857 Exp. 12/31/20 STATE OF CALIFORNIA

REGISTERED PROFESSIONAL ENGINEER MICHAEL F. GOODRICH No. 43754 Exp. 6/30/21 CIVIL STATE OF CALIFORNIA

PROJECT ENGINEER

MFG Engineers, Inc
PO BOX 1914
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(831) 763-1661
CEL (831) 601-9519

APN 109-061-38

REGAN VINEYARDS WINERY

GRADING & DRAINAGE PLAN

DRAWN: MFG

CHECKED: MFG

DATE: 10/2020

SCALE: NOTED

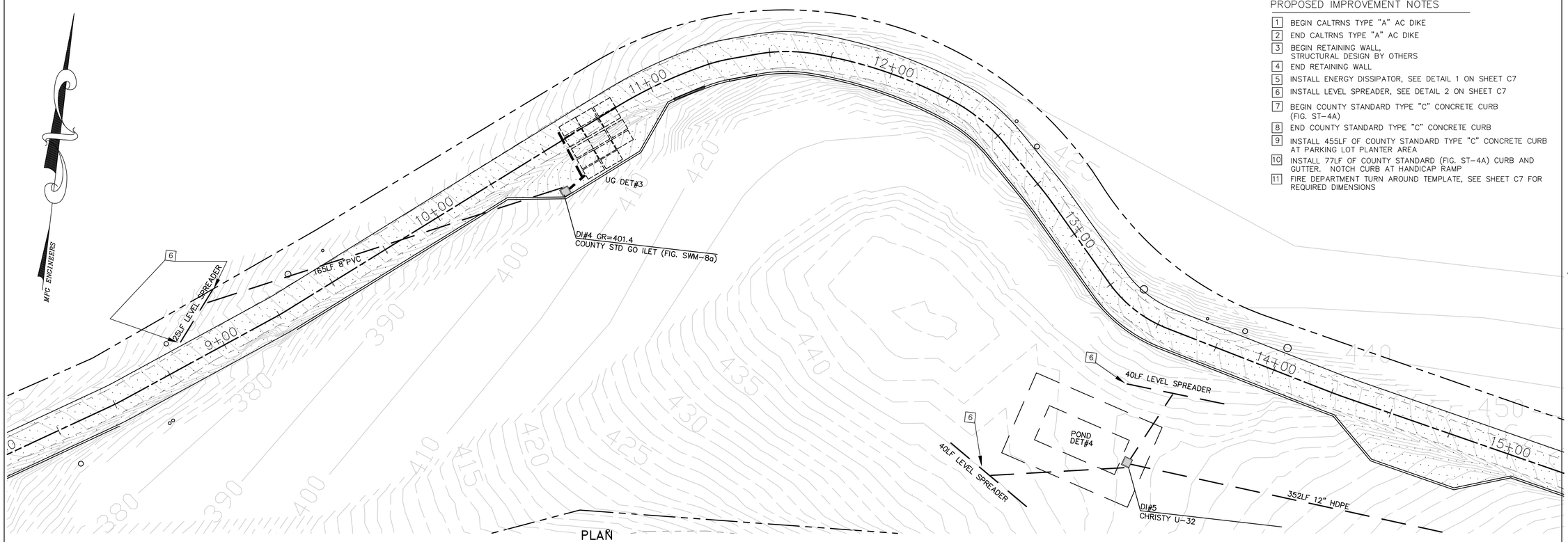
JOB NO.

SHEET

C2 OF 14

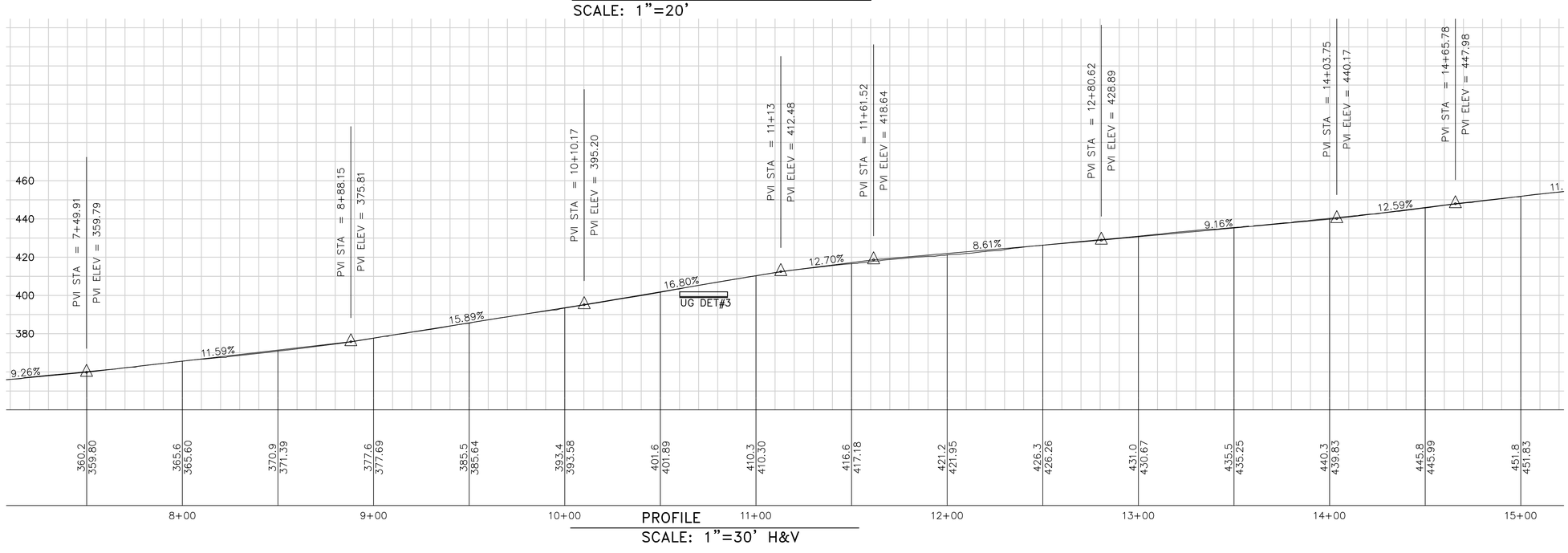
PROPOSED IMPROVEMENT NOTES

1. BEGIN CALTRNS TYPE "A" AC DIKE
2. END CALTRNS TYPE "A" AC DIKE
3. BEGIN RETAINING WALL, STRUCTURAL DESIGN BY OTHERS
4. END RETAINING WALL
5. INSTALL ENERGY DISSIPATOR, SEE DETAIL 1 ON SHEET C7
6. INSTALL LEVEL SPREADER, SEE DETAIL 2 ON SHEET C7
7. BEGIN COUNTY STANDARD TYPE "C" CONCRETE CURB (FIG. ST-4A)
8. END COUNTY STANDARD TYPE "C" CONCRETE CURB
9. INSTALL 455LF OF COUNTY STANDARD TYPE "C" CONCRETE CURB AT PARKING LOT PLANTER AREA
10. INSTALL 77LF OF COUNTY STANDARD (FIG. ST-4A) CURB AND GUTTER. NOTCH CURB AT HANDICAP RAMP
11. FIRE DEPARTMENT TURN AROUND TEMPLATE, SEE SHEET C7 FOR REQUIRED DIMENSIONS



PLAN

SCALE: 1"=20'



PROFILE

SCALE: 1"=30' H&V

PRELIMINARY-NOT FOR CONSTRUCTION

FOR REDUCED PLANS ORIGINAL SCALE IN INCHES 0 1 2 3

SHEET NAME:

DRAWING NAME:

BY	REVISION	DATE

11/25/20

LICENSED LAND SURVEYOR MICHAEL F GOODHUE No. 7997 Exp. 12/31/20 STATE OF CALIFORNIA

REGISTERED PROFESSIONAL ENGINEER MICHAEL F GOODHUE No. 43754 Exp. 6/30/21 CIVIL STATE OF CALIFORNIA

PROJECT ENGINEER

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APN 109-061-38

REGAN VINEYARDS WINERY

GRADING & DRAINAGE PLAN

DRAWN: MFG

CHECKED: MFG

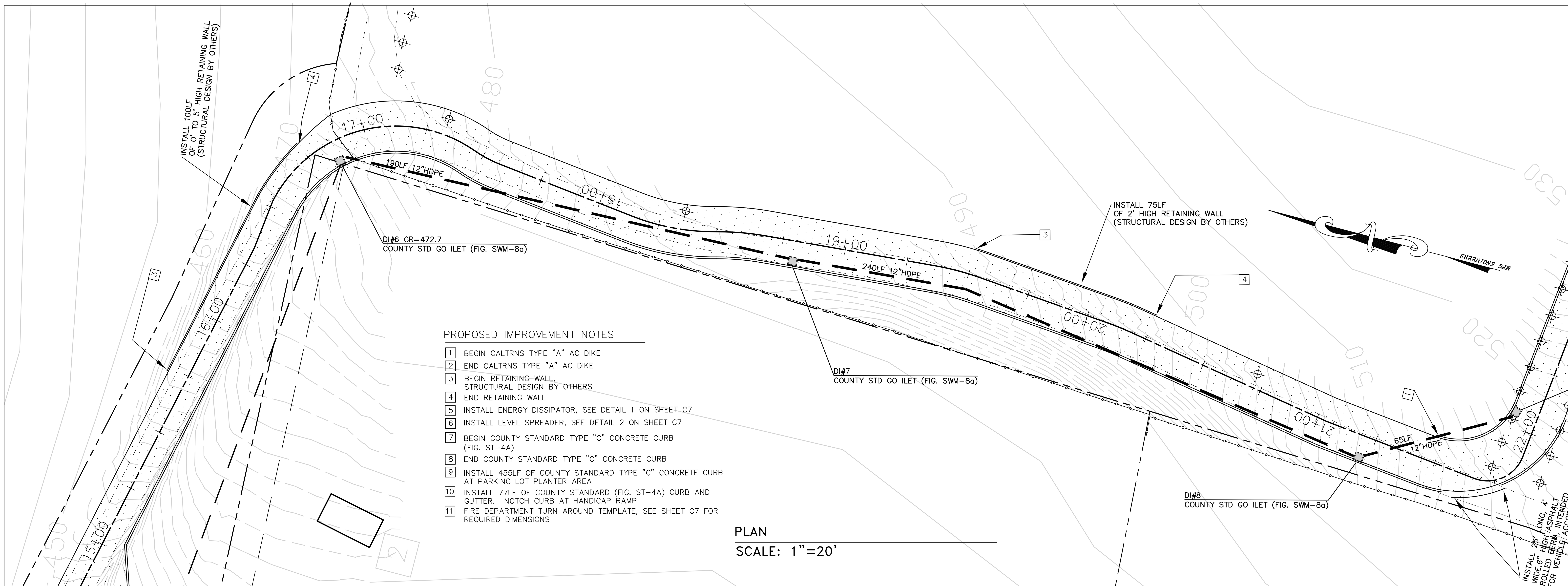
DATE: 10/2020

SCALE: NOTED

JOB NO.

SHEET

C3 OF 14



PROPOSED IMPROVEMENT NOTES

1. BEGIN CALTRNS TYPE "A" AC DIKE
2. END CALTRNS TYPE "A" AC DIKE
3. BEGIN RETAINING WALL, STRUCTURAL DESIGN BY OTHERS
4. END RETAINING WALL
5. INSTALL ENERGY DISSIPATOR, SEE DETAIL 1 ON SHEET C7
6. INSTALL LEVEL SPREADER, SEE DETAIL 2 ON SHEET C7
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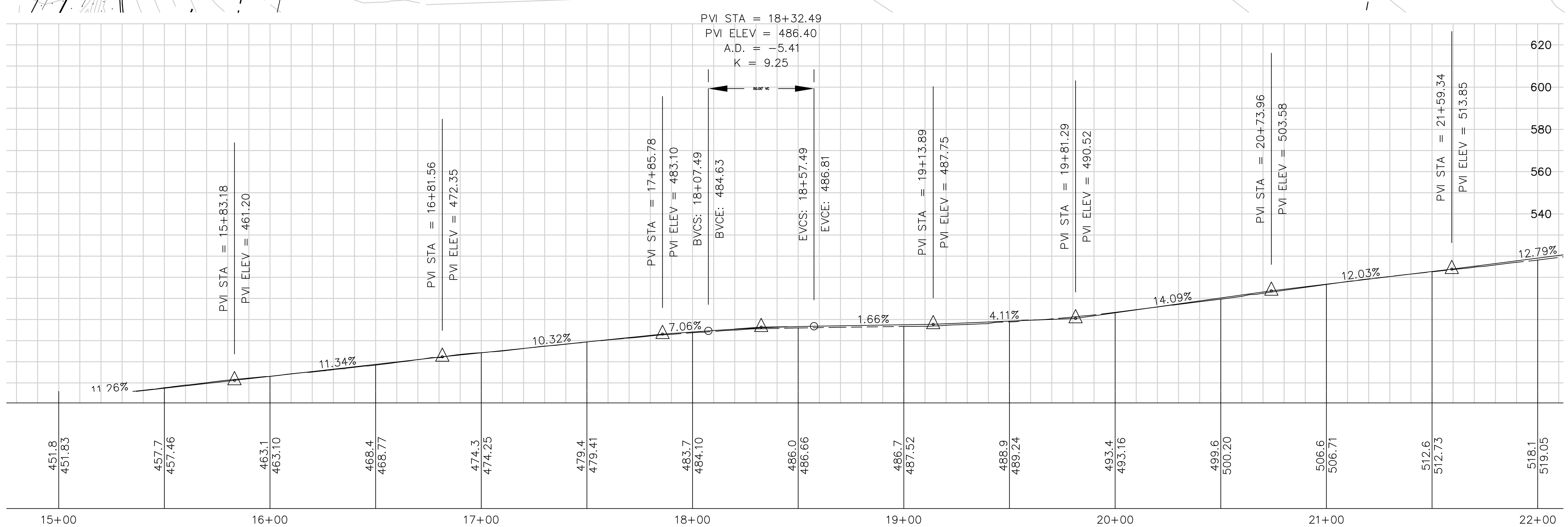
8. END COUNTY STANDARD TYPE "C" CONCRETE CURB
9. INSTALL 455LF OF COUNTY STANDARD TYPE "C" CONCRETE CURB AT PARKING LOT PLANTER AREA
10. INSTALL 77LF OF COUNTY STANDARD (FIG. ST-4A) CURB AND GUTTER. NOTCH CURB AT HANDICAP RAMP
11. FIRE DEPARTMENT TURN AROUND TEMPLATE, SEE SHEET C7 FOR REQUIRED DIMENSIONS

PLAN
SCALE: 1"=20'



PROFILE
SCALE: 1"=30' H&V

LEGEND

STORM WATER DETENTION/RETENTION LOCATION	DET#1
EXISTING VINE ROW ANCHOR	
UNDERGROUND	UG
STORM DRAIN	SD
RAIN WATER LEADER FROM DOWN SPOUT	RL
LINEAL FEET	LF
EXISTING	EXST
FINISH FLOOR	FF
FIRE HYDRANT	
NEW TOP OF WALL GRADE	TW=124.0
NEW BASE OF WALL GRADE	BW=124.0
NEW FINISH GRADE	100.7 100.2
EXIST. GRADE	<100.7>
HIGH POINT	HP
NEW AC PAVING (2' AC OVER 6" AB)	
DETECTABLE WARNING SURFACE	
CONCRETE PAVING	
INSTALL CHRISTY V64 DRAIN BOX AND GRATE	
AREA OF DISTURBANCE (95,000 SQUARE FEET)	
EAVE LINE	
PROPERTY LINE	
PROPOSED UTILITY TRENCH	
EXST ELEVATION CONTOUR (1' INTERVAL)	
EXST ELEVATION CONTOUR (5' INTERVAL)	565
NEW FINISH GRADE CONTOUR (1' INTERVAL)	560
EXST ELEVATION CONTOUR(FROM COUNTY GIS) (10' INTERVAL)	540

PRELIMINARY-NOT FOR CONSTRUCTION

FOR REDUCED PLANS ORIGINAL SCALE IN INCHES 0 1 2 3

SHEET NAME:

DRAWING NAME:

DATE	REVISION	BY

11/25/20

LICENSED LAND SURVEYOR MICHAEL F GOODHUE No. 7867 Exp. 12/31/20 STATE OF CALIFORNIA

REGISTERED PROFESSIONAL ENGINEER MICHAEL F GOODHUE No. 43754 Exp. 6/30/21 CIVIL STATE OF CALIFORNIA

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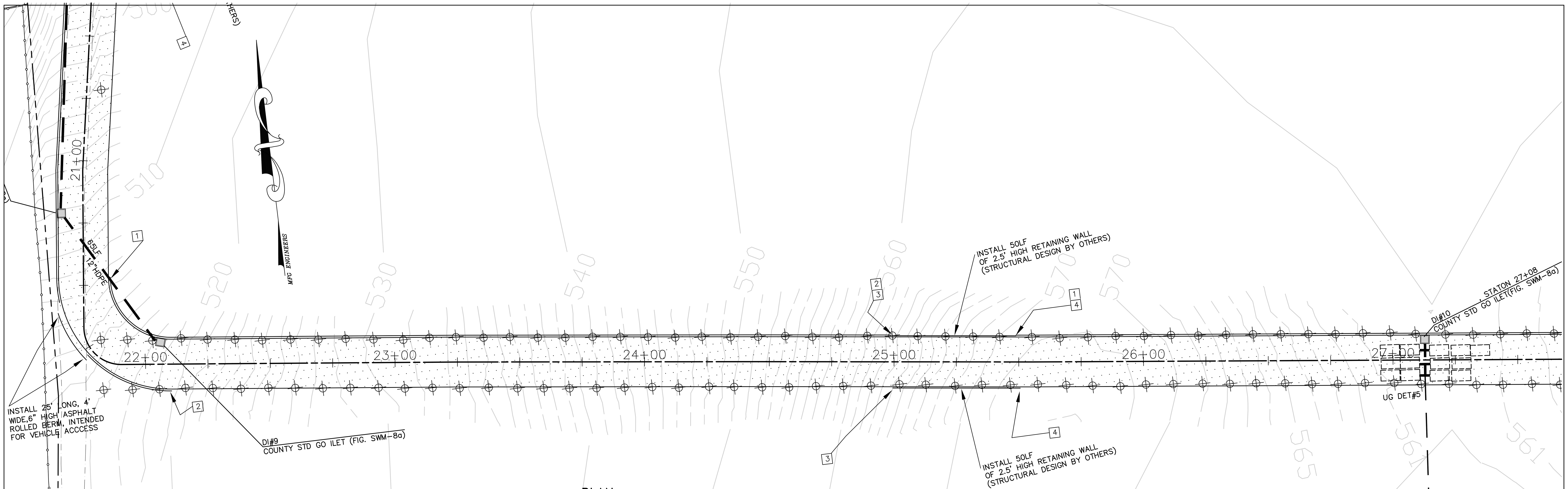
APN 109-061-38

REGAN VINEYARDS WINERY

GRADING & DRAINAGE PLAN

DRAWN: MFG
CHECKED: MFG
DATE: 10/2020
SCALE: NOTED
JOB NO.
SHEET C4 OF 14



PLAN
SCALE: 1"=20'

PROPOSED IMPROVEMENT NOTES

1. BEGIN CALTRNS TYPE "A" AC DIKE
2. END CALTRNS TYPE "A" AC DIKE
3. BEGIN RETAINING WALL, STRUCTURAL DESIGN BY OTHERS
4. END RETAINING WALL
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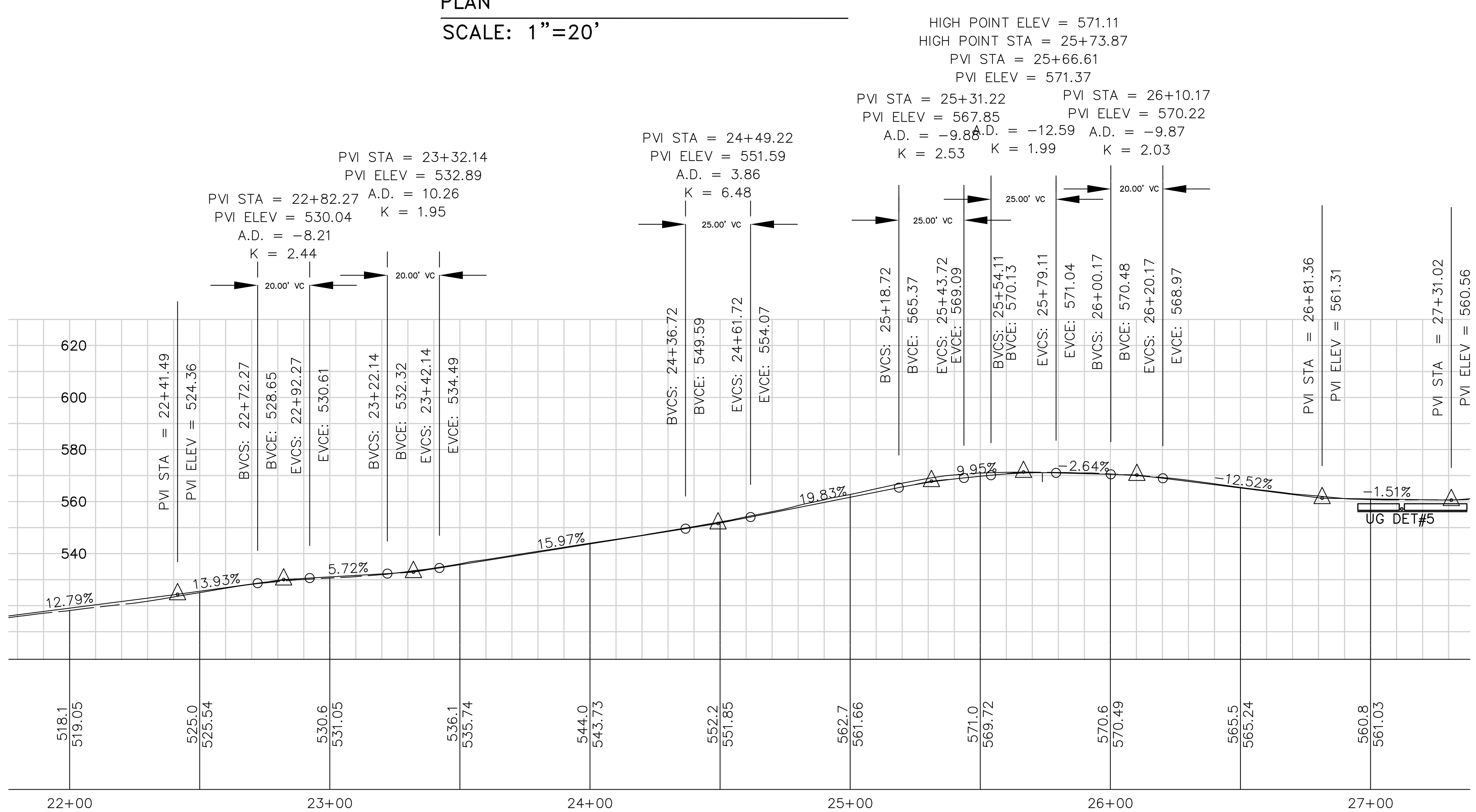
11. FIRE DEPARTMENT TURN AROUND TEMPLATE, SEE SHEET C7 FOR REQUIRED DIMENSIONS



PROFILE
SCALE: 1"=30' H&V

LEGEND

STORM WATER DETENTION/RETENTION LOCATION	DET#1
EXISTING VINE ROW ANCHOR	
UNDERGROUND	UG
STORM DRAIN	SD
RAIN WATER LEADER FROM DOWN SPOUT	RL
LINEAL FEET	LF
EXISTING	EXST
FINISH FLOOR	FF
FIRE HYDRANT	
NEW TOP OF WALL GRADE	TW=124.0
NEW BASE OF WALL GRADE	BW=124.0
NEW FINISH GRADE	100.7 100.2
EXIST. GRADE	<100.7>
HIGH POINT	HP
NEW AC PAVING (2' AC OVER 6" AB)	
DETECTABLE WARNING SURFACE	
CONCRETE PAVING	
INSTALL CHRISTY V64 DRAIN BOX AND GRATE	
AREA OF DISTURBANCE (95,000 SQUARE FEET)	
EAVE LINE	
PROPERTY LINE	
PROPOSED UTILITY TRENCH	
EXST ELEVATION CONTOUR (1' INTERVAL)	
EXST ELEVATION CONTOUR (5' INTERVAL)	565
NEW FINISH GRADE CONTOUR (1' INTERVAL)	560
EXST ELEVATION CONTOUR(FROM COUNTY GIS) (10' INTERVAL)	540

PRELIMINARY-NOT FOR CONSTRUCTION

FOR REDUCED PLANS ORIGINAL SCALE IN INCHES 0 1 2 3

SHEET NAME:

DRAWING NAME:

REVISION	DATE	BY
	11/25/20	

PROJECT ENGINEER

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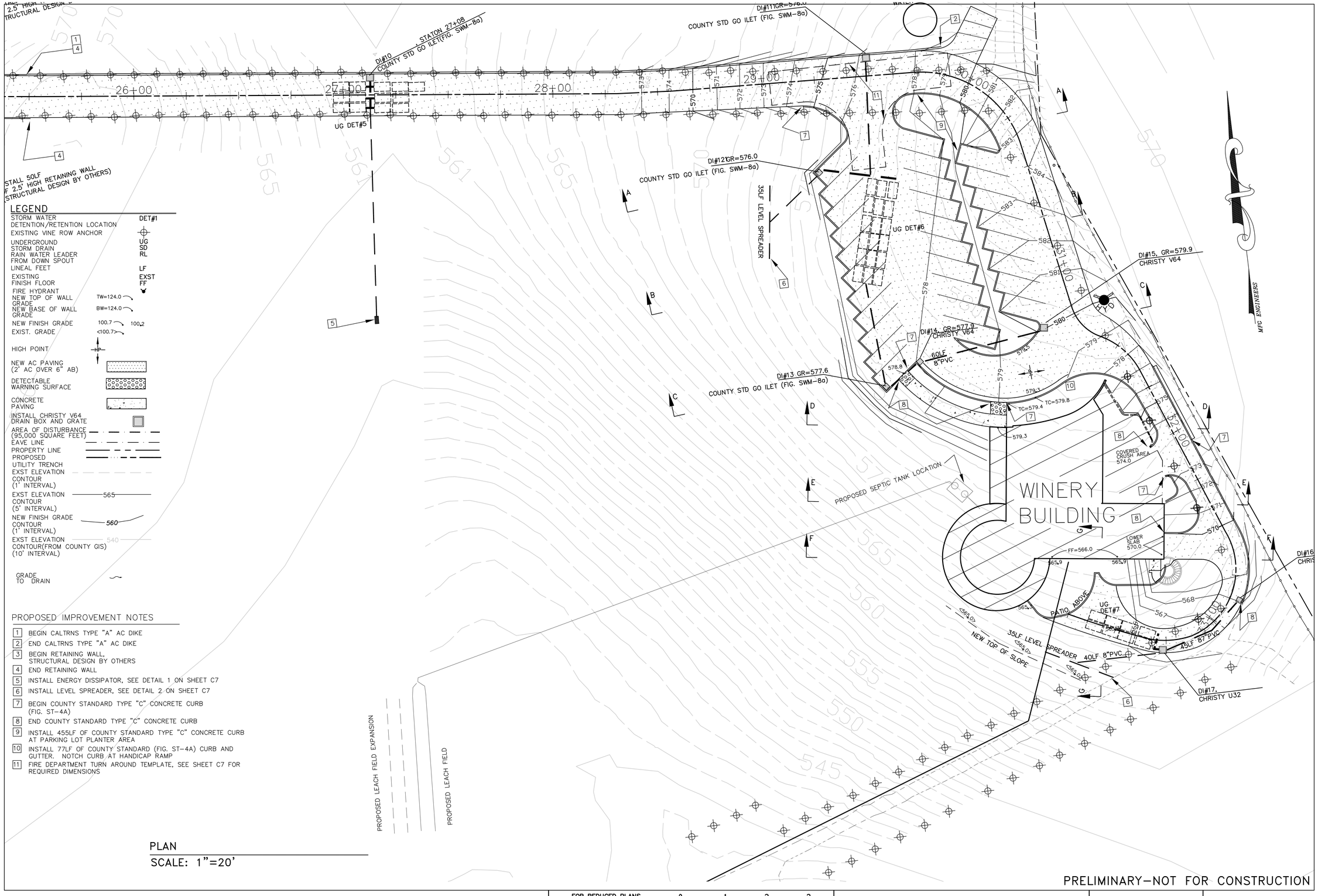
CEL (831) 601-9519

APN 109-061-38
REGAN VINEYARDS WINERY
GRADING & DRAINAGE PLAN

DRAWN: MFG
CHECKED: MFG
DATE: 10/2020
SCALE: NOTED
JOB NO.
SHEET
C5 OF 14



LEGEND

STORM WATER DETENTION/RETENTION LOCATION	DET#1
EXISTING VINE ROW ANCHOR	
UNDERGROUND STORM DRAIN	UG SD
RAIN WATER LEADER FROM DOWN SPOUT	RL
LINEAL FEET	LF
EXISTING FINISH FLOOR	EXST FF
FIRE HYDRANT	
NEW TOP OF WALL GRADE	TW=124.0
NEW BASE OF WALL GRADE	BW=124.0
NEW FINISH GRADE	100.7
EXIST. GRADE	<100.7>
HIGH POINT	HP
NEW AC PAVING (2" AC OVER 6" AB)	
DETECTABLE WARNING SURFACE	
CONCRETE PAVING	
INSTALL CHRISTY V64 DRAIN BOX AND GRATE	
AREA OF DISTURBANCE (95,000 SQUARE FEET)	
EAVE LINE	
PROPERTY LINE	
PROPOSED UTILITY TRENCH	
EXST ELEVATION CONTOUR (1' INTERVAL)	
EXST ELEVATION CONTOUR (5' INTERVAL)	565
NEW FINISH GRADE CONTOUR (1' INTERVAL)	560
EXST ELEVATION CONTOUR(FROM COUNTY GIS) (10' INTERVAL)	540
GRADE TO DRAIN	

PROPOSED IMPROVEMENT NOTES

1. BEGIN CALTRNS TYPE "A" AC DIKE
2. END CALTRNS TYPE "A" AC DIKE
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10. INSTALL 77LF OF COUNTY STANDARD (FIG. ST-4A) CURB AND GUTTER. NOTCH CURB AT HANDICAP RAMP
11. FIRE DEPARTMENT TURN AROUND TEMPLATE, SEE SHEET C7 FOR REQUIRED DIMENSIONS

PLAN

SCALE: 1"=20'

PRELIMINARY-NOT FOR CONSTRUCTION

FOR REDUCED PLANS ORIGINAL SCALE IN INCHES 0 1 2 3

SHEET NAME:

DRAWING NAME:

BY	REVISION	DATE

11/25/20

LICENSED LAND SURVEYOR — MICHAEL F. GOODHUE — No. 7857 — Exp. 12/31/20 — STATE OF CALIFORNIA

REGISTERED PROFESSIONAL ENGINEER — MICHAEL F. GOODHUE — No. 43754 — Exp. 9/30/21 — CIVIL — STATE OF CALIFORNIA

PROJECT ENGINEER

MFG Engineers, Inc
PO BOX 1914
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(831) 763-1661
CEL (831) 601-9519

APN 109-061-38

REGAN VINEYARDS WINERY

GRADING & DRAINAGE PLAN

DRAWN: MFG

CHECKED: MFG

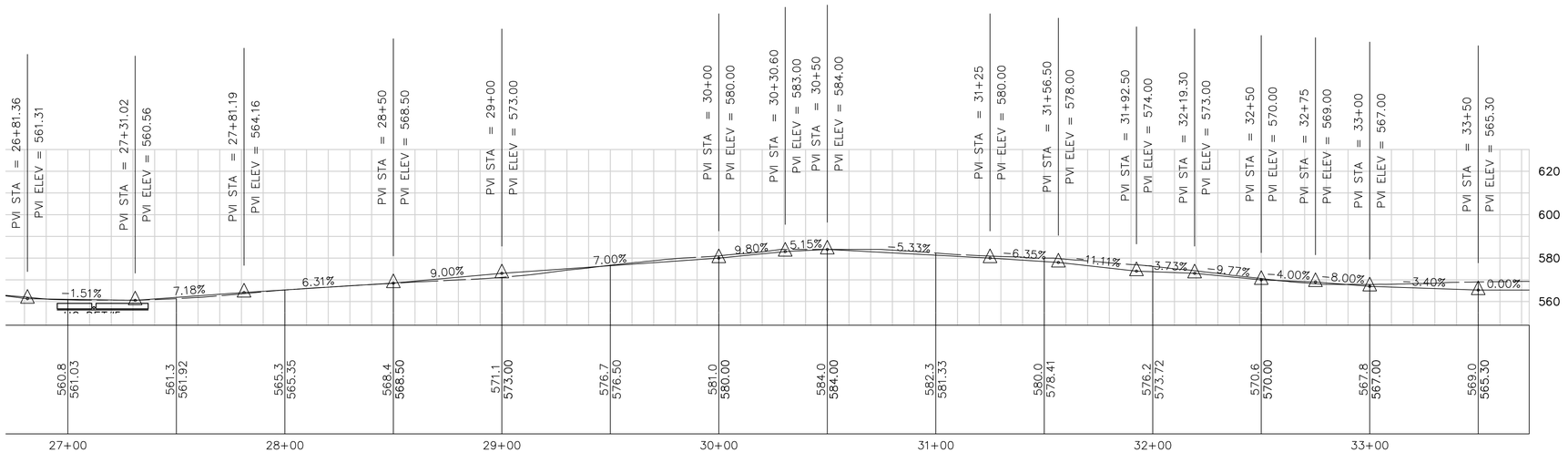
DATE: 10/2020

SCALE: NOTED

JOB NO.

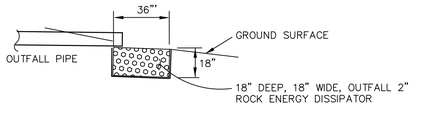
SHEET

C6 OF 14



PROFILE

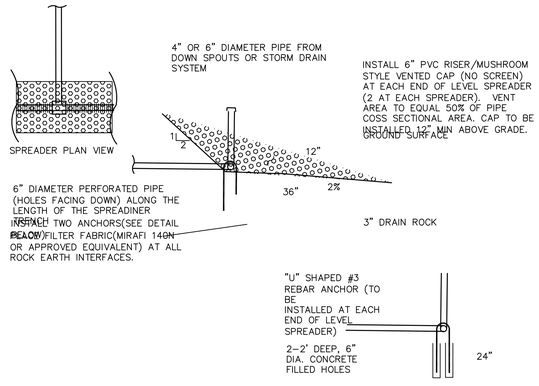
SCALE: 1"=30' H&V



DETAIL 1

ENERGY DISSIPATOR

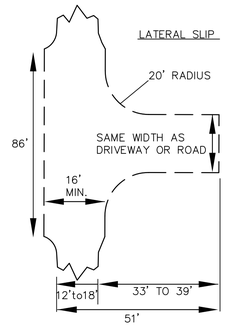
SCALE: NONE



DETAIL 2

LEVLE SPREADER

SCALE: NONE



FIRE DEPARTMNET

RURN AROUND DIMENSIONS

SCALE: NONE

PRELIMINARY-NOT FOR CONSTRUCTION

FOR REDUCED PLANS ORIGINAL SCALE IN INCHES 0 1 2 3

SHEET NAME:

DRAWING NAME:

DATE	REVISION	BY

11/25/20

LICENSED LAND SURVEYOR MICHAEL F. GOODWIN No. 7867 Exp. 12/31/20 STATE OF CALIFORNIA

REGISTERED PROFESSIONAL ENGINEER MICHAEL F. GOODWIN No. 43754 Exp. 6/30/21 CIVIL STATE OF CALIFORNIA

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(831) 763-1661
CEL (831) 601-9519

APN 109-061-38

REGAN VINEYARDS WINERY

GRADING & DRAINAGE PLAN

DRAWN: MFG

CHECKED: MFG

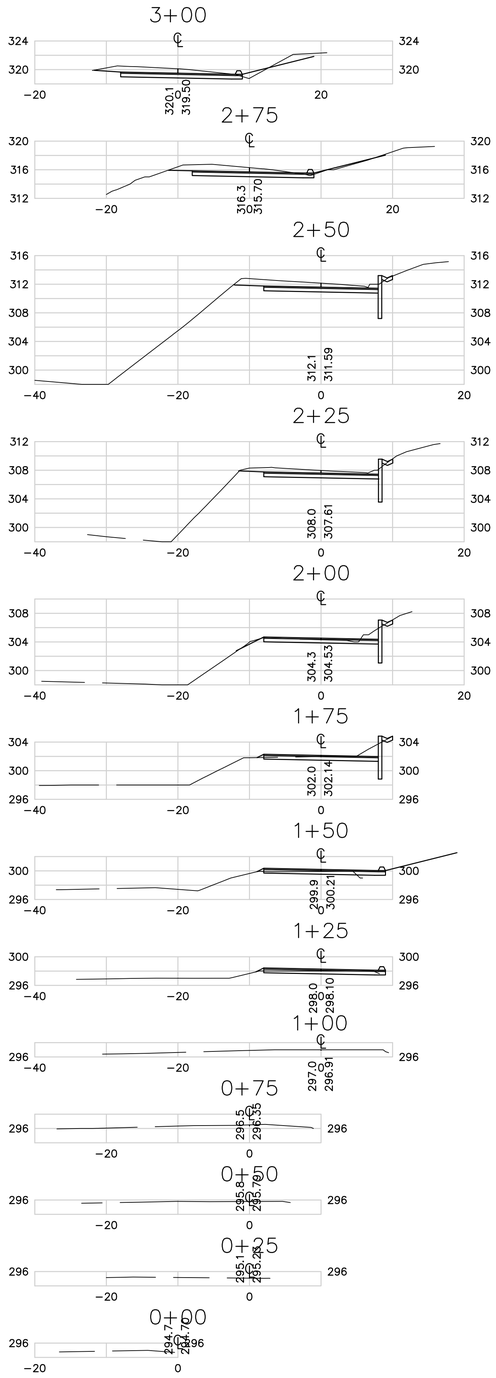
DATE: 10/2020

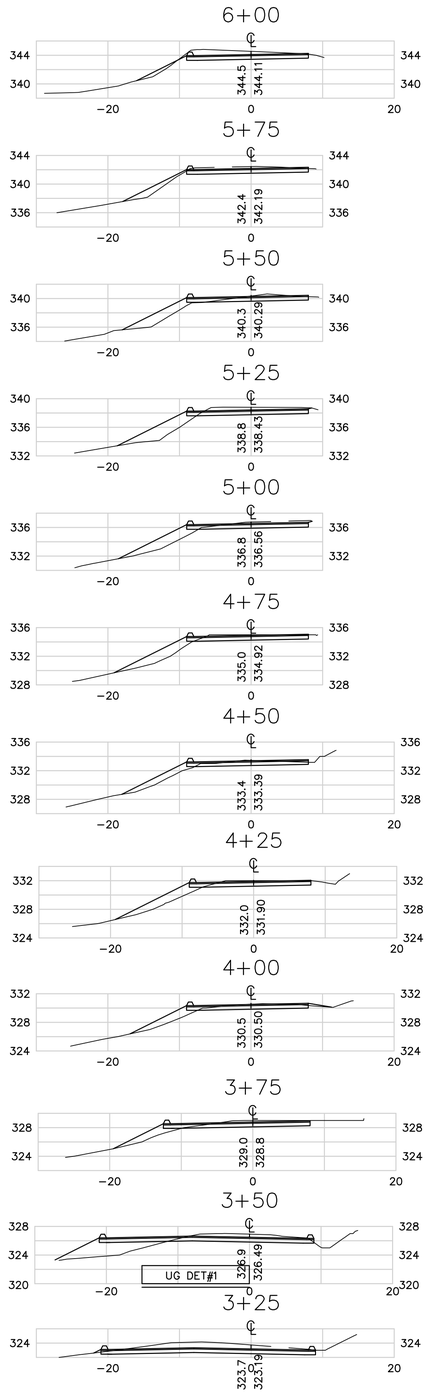
SCALE: 1"=30'

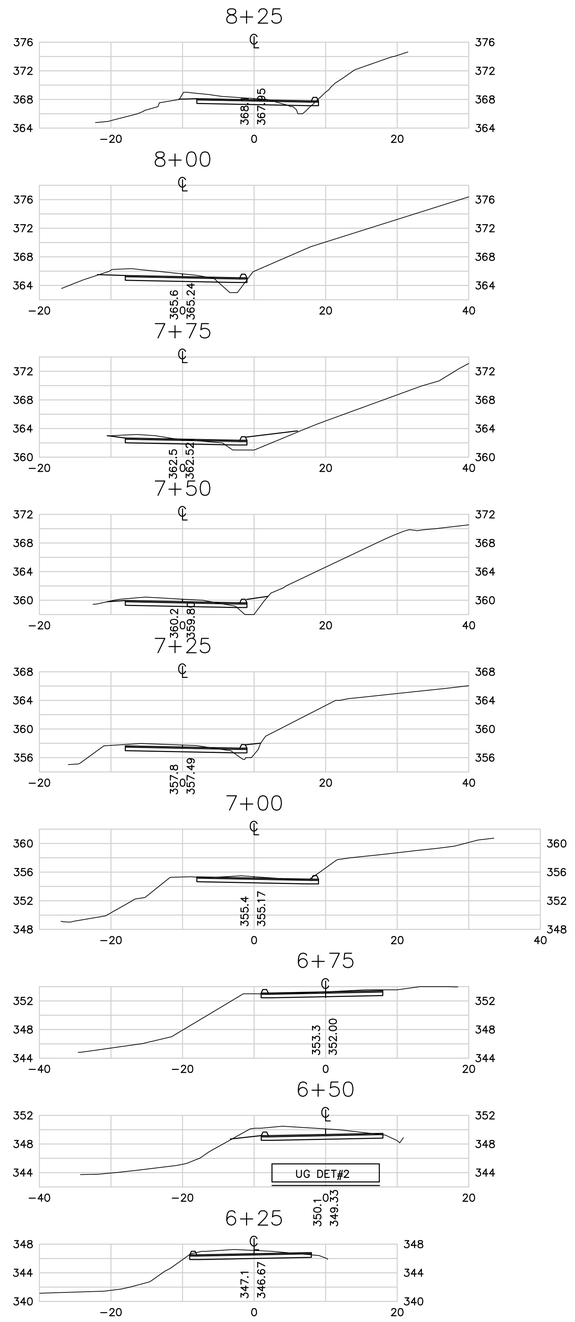
JOB NO.

SHEET

C7 OF 14







PRELIMINARY–NOT FOR CONSTRUCTION

FOR REDUCED PLANS
ORIGINAL SCALE IN INCHES 0 1 2 3

SHEET NAME:

DRAWING NAME:

BY	REVISION	DATE

LICENSED LAND SURVEYOR · MICHAEL F. GOODHUE · No. 7887 · Exp. 12/31/20 · STATE OF CALIFORNIA

11/25/20

REGISTERED PROFESSIONAL ENGINEER · MICHAEL F. GOODHUE · No. 43174 · Exp. 6/30/21 · CIVIL · STATE OF CALIFORNIA

PROJECT ENGINEER

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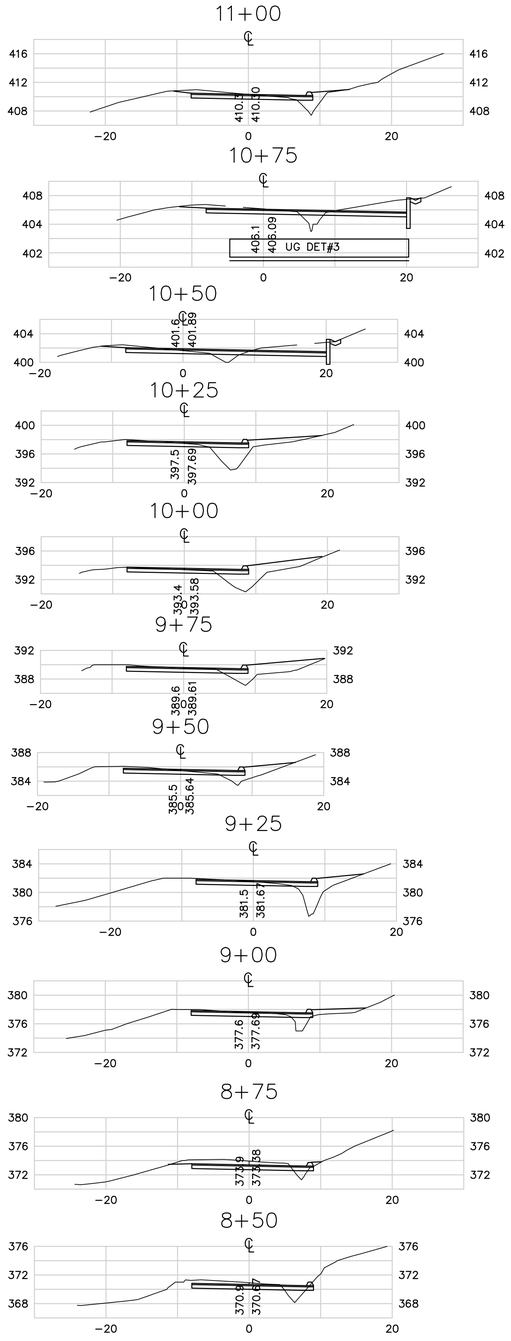
CEL (831) 601-9519

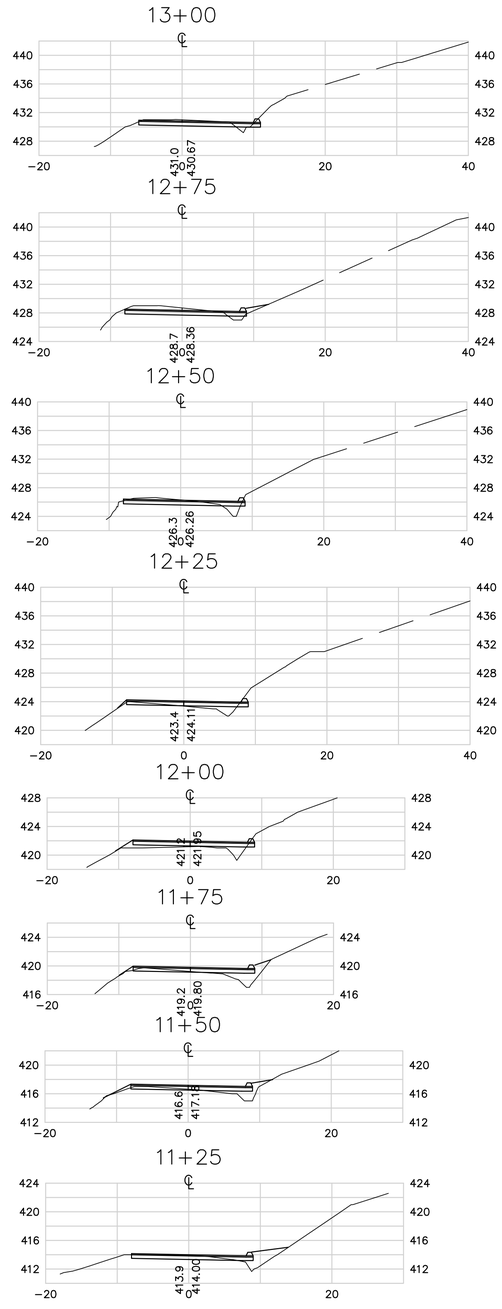
APN 109-061-38

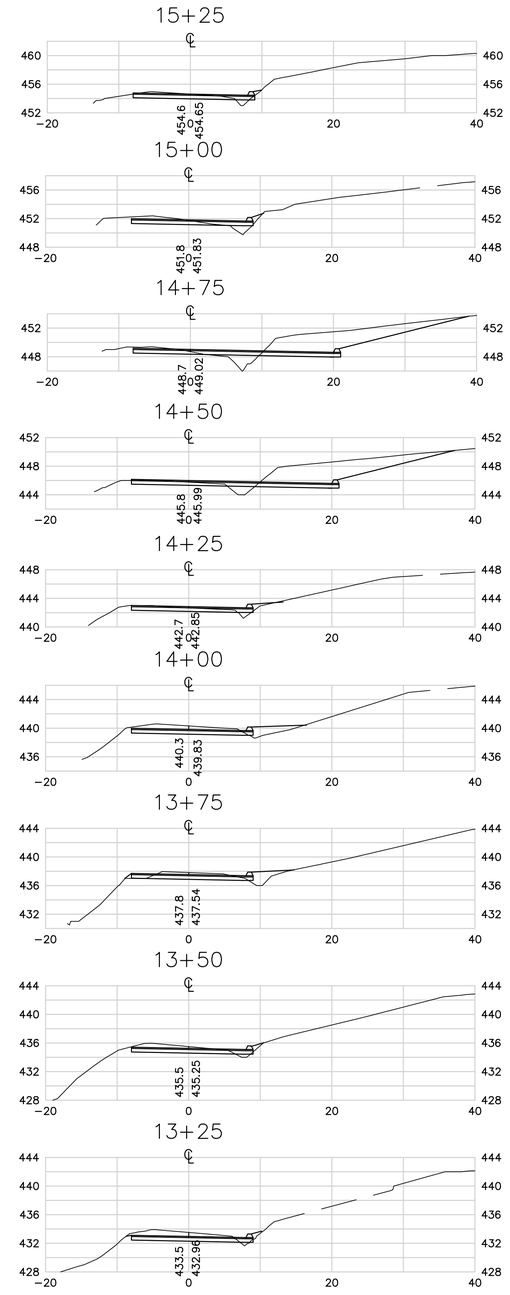
REGAN VINEYARDS WINERY

GRADING & DRAINAGE PLAN

DRAWN: MFG
CHECKED: MFG
DATE: 10/2020
SCALE: 1"=30'
JOB NO.
SHEET
C8 OF 14







PRELIMINARY–NOT FOR CONSTRUCTION

FOR REDUCED PLANS ORIGINAL SCALE IN INCHES 0 1 2 3

SHEET NAME:

DRAWING NAME:

BY	REVISION	DATE

LICENSED LAND SURVEYOR MICHAEL F. GOODHUE No. 7997 Exp. 12/31/20 STATE OF CALIFORNIA

11/25/20

REGISTERED PROFESSIONAL ENGINEER MICHAEL F. GOODHUE No. 43134 Exp. 6/30/21 CIVIL STATE OF CALIFORNIA

PROJECT ENGINEER

MFG Engineers, Inc
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CEL (831) 601-9519

APN 109-061-38

REGAN VINEYARDS WINERY

GRADING & DRAINAGE PLAN

DRAWN: MFG

CHECKED: MFG

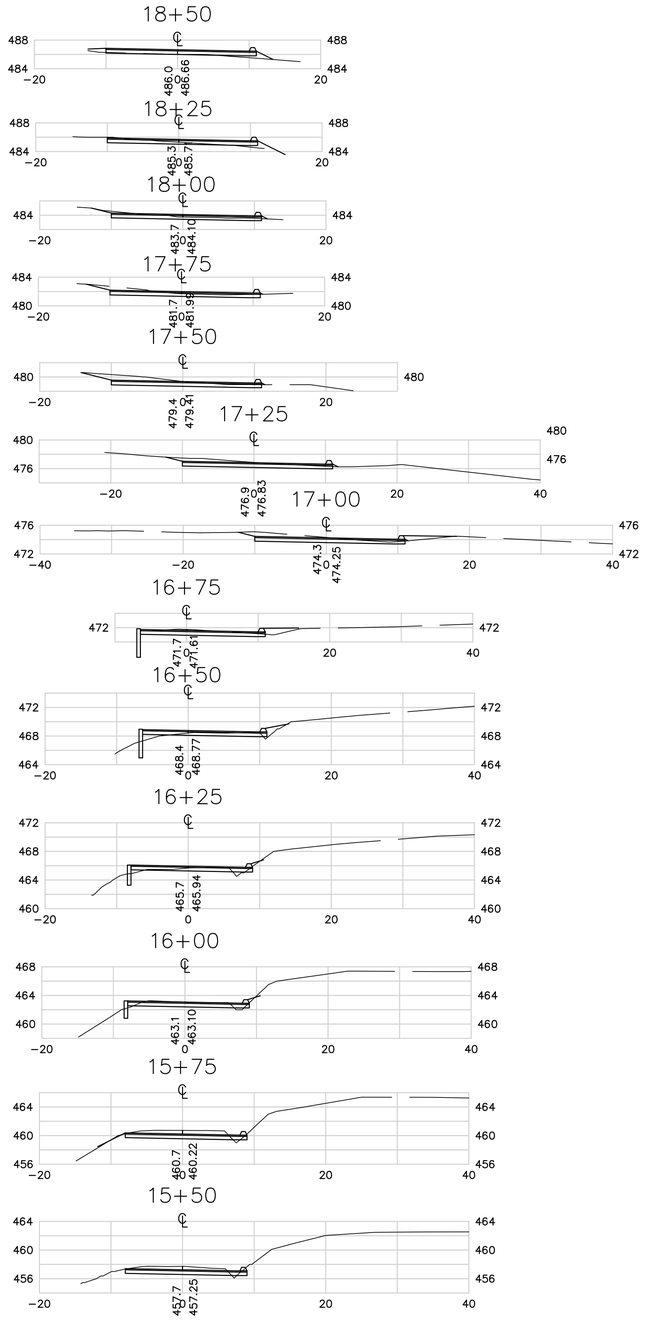
DATE: 10/2020

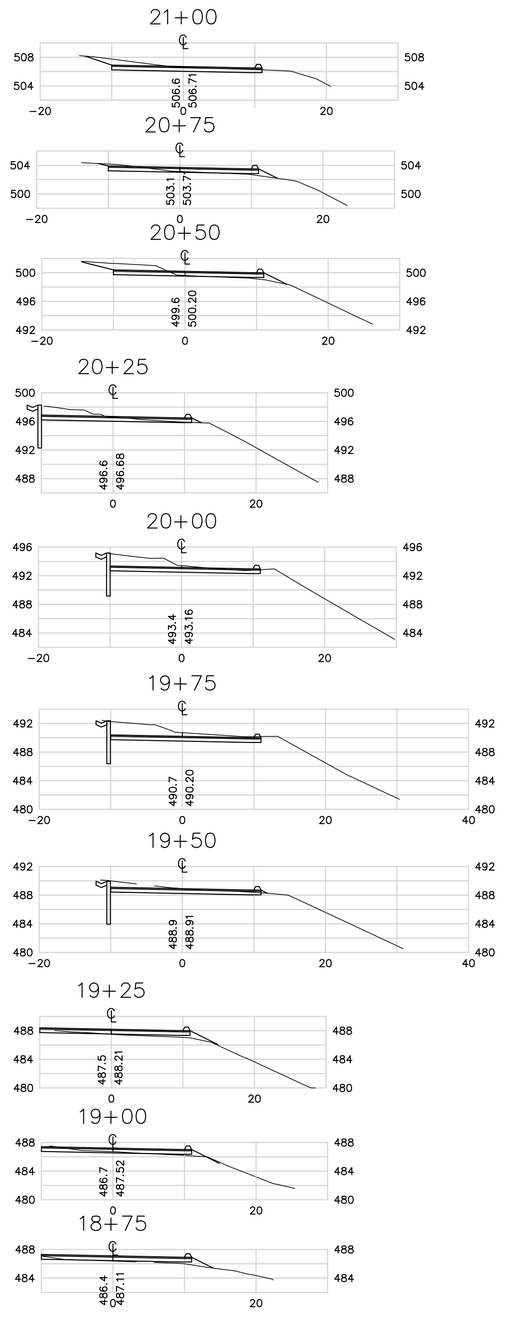
SCALE: 1"=30'

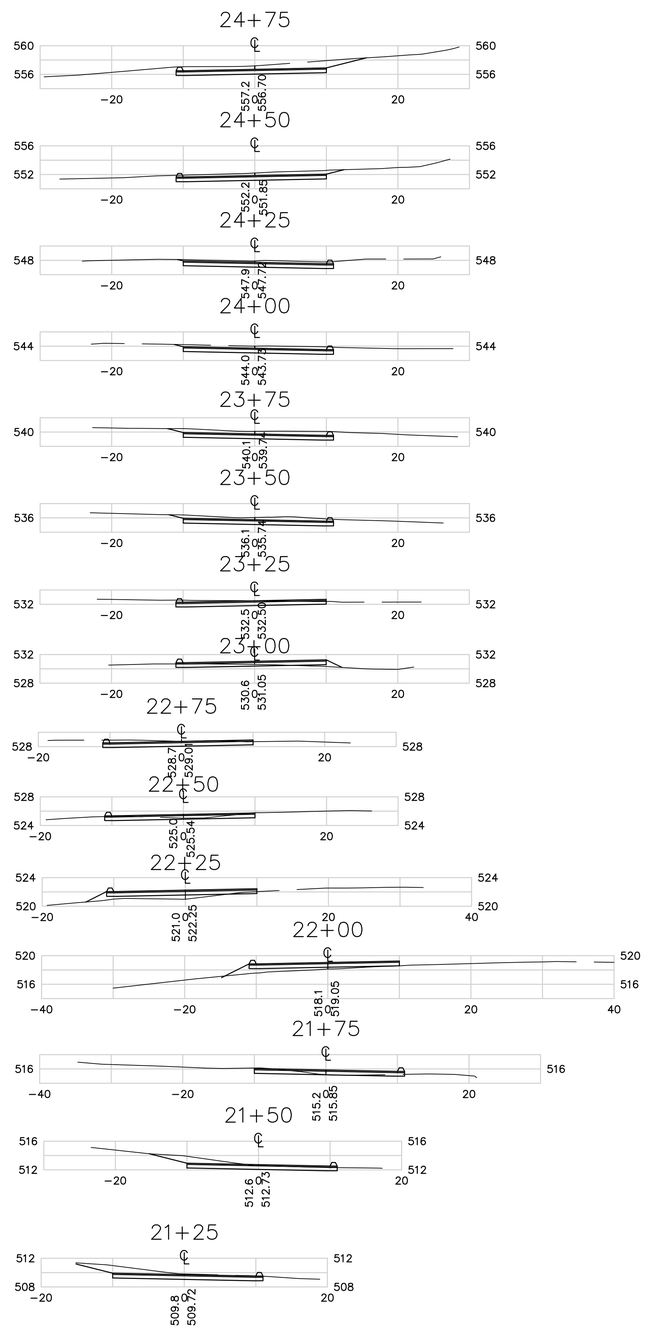
JOB NO.

SHEET

C9 OF 14







PRELIMINARY–NOT FOR CONSTRUCTION

FOR REDUCED PLANS ORIGINAL SCALE IN INCHES 0 1 2 3

SHEET NAME:

DRAWING NAME:

BY	REVISION	DATE

LICENSED LAND SURVEYOR MICHAEL F GOODHUE No. 7857 Exp. 12/31/20 STATE OF CALIFORNIA

11/25/20

REGISTERED PROFESSIONAL ENGINEER MICHAEL F GOODHUE No. 43754 Exp. 6/30/21 CIVIL STATE OF CALIFORNIA

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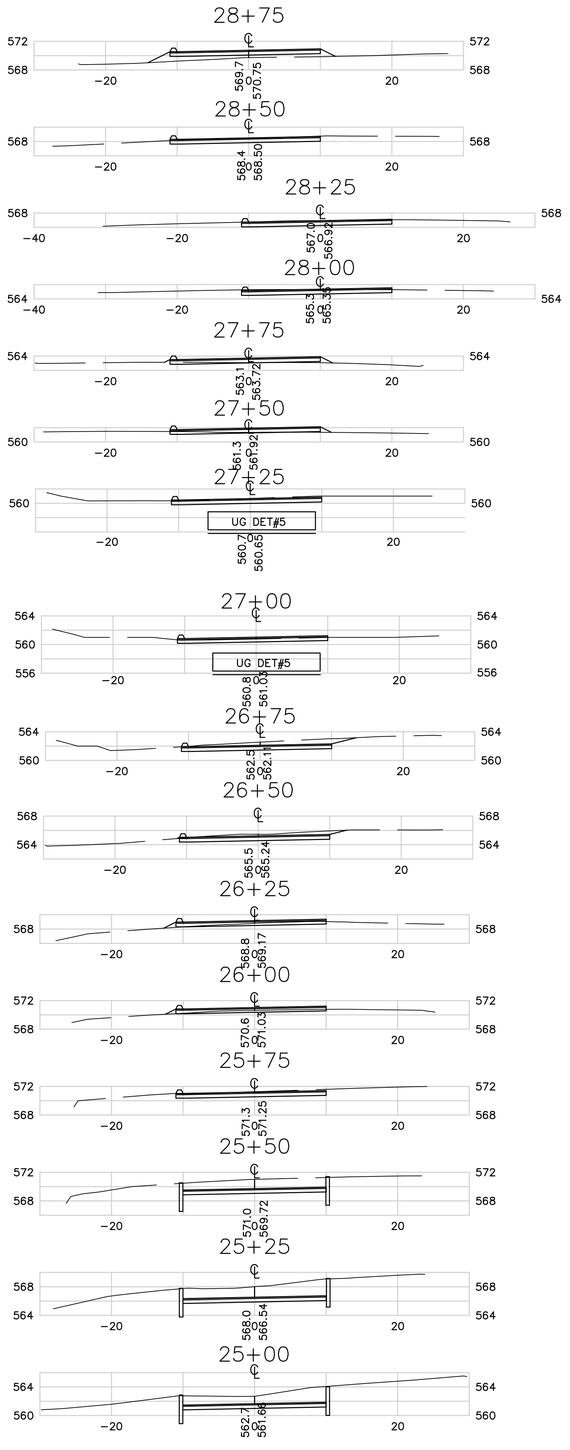
CEL (831) 601-9519

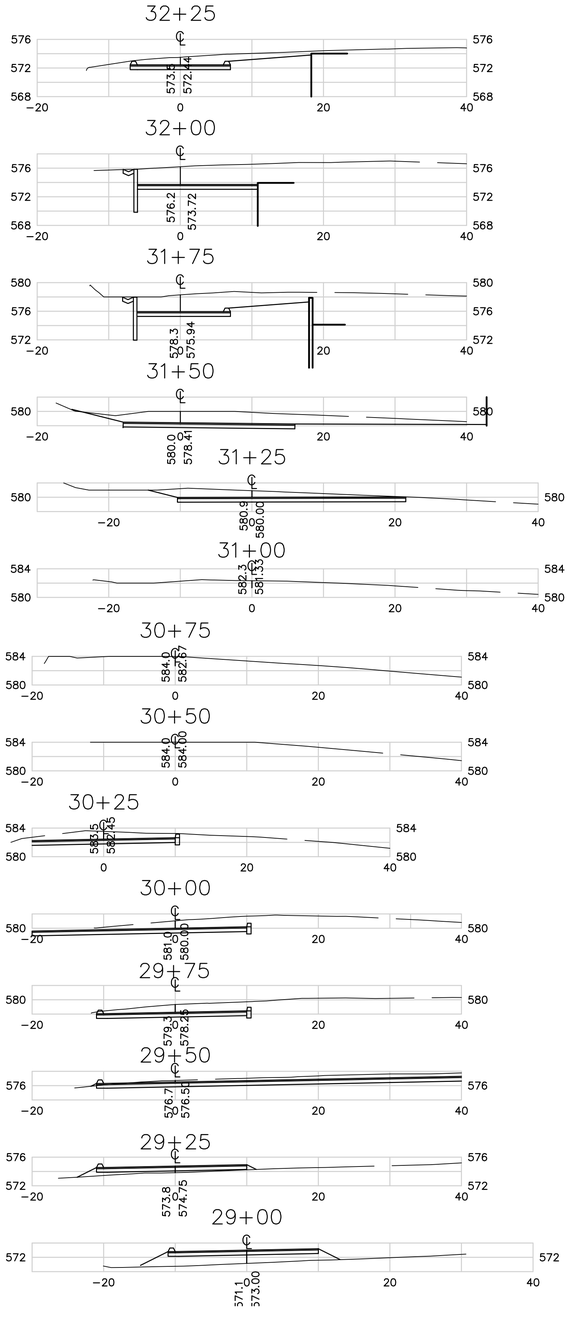
APN 109-061-38

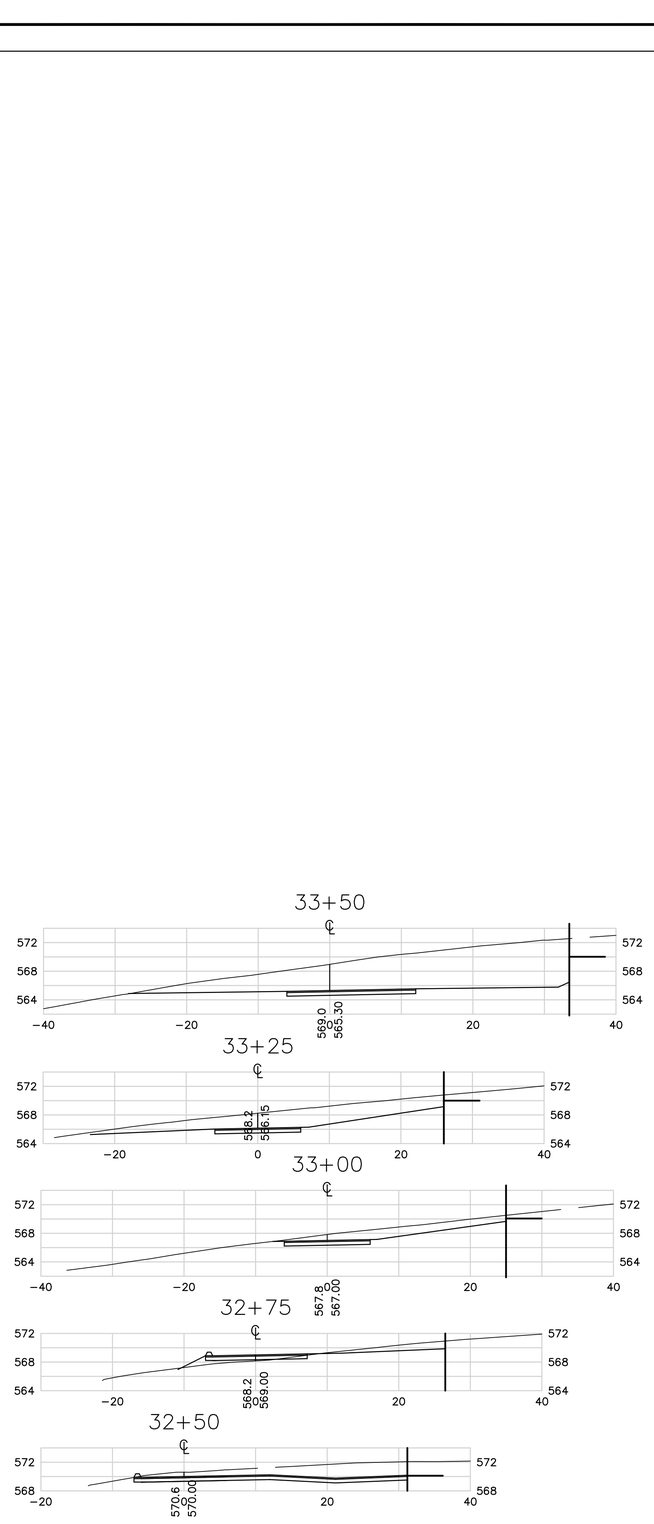
REGAN VINEYARDS WINERY

GRADING & DRAINAGE PLAN

DRAWN: MFG
CHECKED: MFG
DATE: 10/2020
SCALE: 1"=30'
JOB NO.
SHEET C
10 OF 14







PRELIMINARY–NOT FOR CONSTRUCTION

FOR REDUCED PLANS ORIGINAL SCALE IN INCHES 0 1 2 3

SHEET NAME:

DRAWING NAME:

BY	DATE	REVISION

LICENSED LAND SURVEYOR MICHAEL F. GOODHUE No. 7867 Exp. 12/31/20 STATE OF CALIFORNIA

11/25/20

REGISTERED PROFESSIONAL ENGINEER MICHAEL F. GOODHUE No. 43734 Exp. 6/30/21 CIVIL STATE OF CALIFORNIA

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CEL (831) 601-9519

APN 109-061-38

REGAN VINEYARDS WINERY

GRADING & DRAINAGE PLAN

DRAWN: MFG

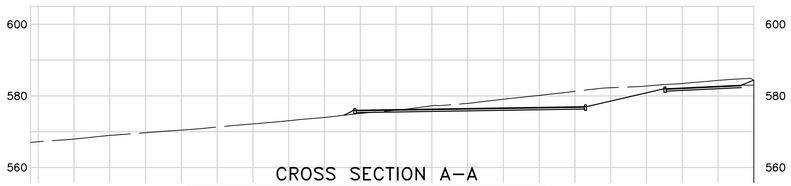
CHECKED: MFG

DATE: 10/2020

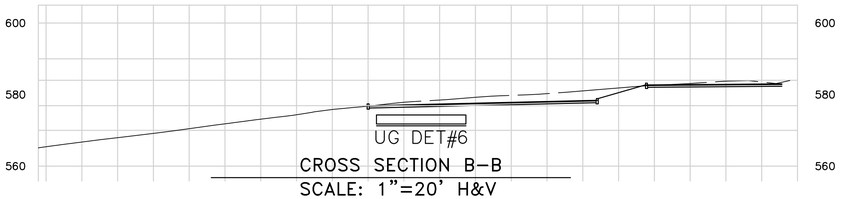
SCALE: 1"=30'

JOB NO.

C SHEET 11 OF 14



CROSS SECTION A–A
SCALE: 1"=20' H&V



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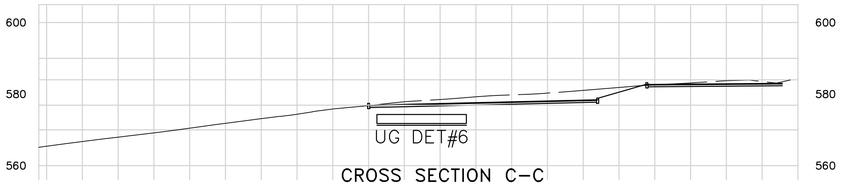

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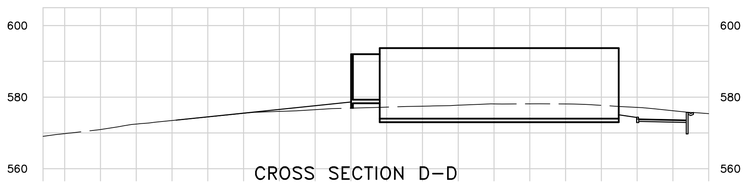

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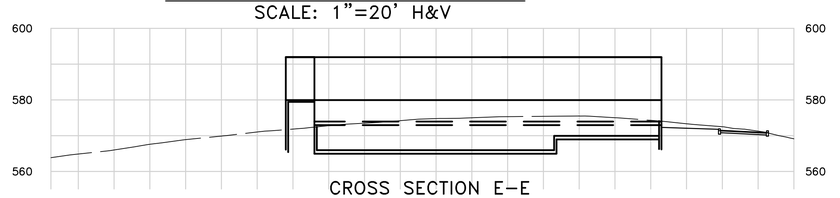

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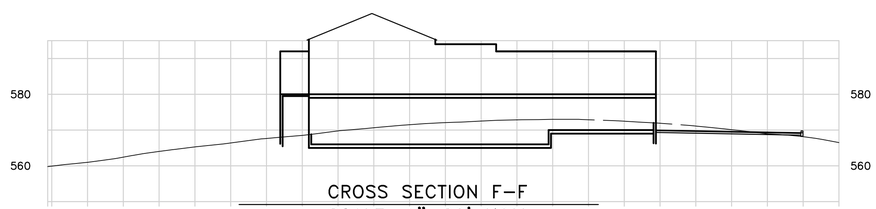

CROSS SECTION F–F
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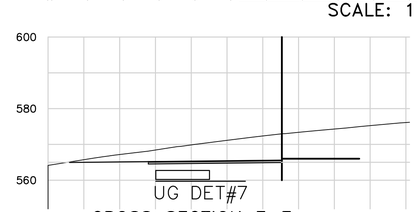
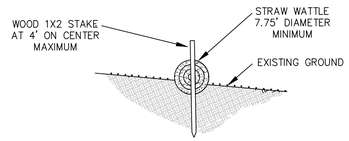


CROSS SECTION F–F
SCALE: 1"=20' H&V

AREA OF DISTURBANCE=95,000 SQUARE FEET



SECTION
STRAW WATTLE DETAIL
NO SCALE

EROSION CONTROL REQUIREMENTS

THE FOLLOWING EROSION CONTROL AND HOUSE KEEPING MEASURES ARE INTENDED TO CONTROL THE RELEASE OF SILT, DUST, GARBAGE AND ANY OTHER POLLUTANTS FROM THE SITE OR INTO THE ATMOSPHERE AND SOIL DURING CONSTRUCTION. THESE MEASURES ARE INTNEDED TO COMPLY WITH FEDERAL, STATE AND LOCAL REQUIREMENTS THROUGH THE USE OF BEST MANAGEMENT PRACTICES (BMP's)LISTED BELOW.

1. COVER OF BARE SOIL: ONE OF THE FOLLOWING MEASURES SHALL BE USED TO COVER BARE SOIL DURING THE WINTER SEASON (OCTOBER 15TH TO APRIL 15TH);

   SEED AND STRAW MULCH
   SEED AND STRAW MULCH SHALL BE USED IN DISURBED AREAS AS A MEANS FOR TEMPORARY EROSION CONTROL UNTIL PERMANENT STABILIZATION IS ESTABLISHED. IT MAY BE USED ON SLOPES UPTO 3:1 H:V (33%).

   SEED AND STRAW MULCH SHALL CONSIST OF SPREADING SEED (A MINIMUM OF 5 LBS/1000 SQ FT) OVER DISTURBED AREAS AND THEN PLACING A UNIFORM LAYER OF STRAW (2–3 BALES/1000 SQ FT) AND INCORPORATING IT INTO THE SOIL WITH A STUDDED ROLLER OR ANCHORING IT WITH A TACKIFIER STABILIZING EMULSION.

   SEED SHALL BE ANNUAL WINTER BARLEY AND THE STRAW SHALL BE DERIVED FROM RICE BARLY OR WHEAT.

   EROSION CONTROL BLANKETS (GEOTEXTILE OR EROSION MATS)
   EROSION CONTROL BLANKETS ARE REQUIRED ON SLOPES STEEPER THAN 3:1, HOWEVER THEY MAY BE USED ON GROUND SURFACES FLATTER THAN 3:1 IN LIEU OF SEED AND STRAW MULCH. SEEDING MUST BE PLACED ON THE DISTURBED GROUND PRIOR TO PLACEMENT OF THE EROSION CONTOL BLANKET AND DESCRIBED IN THE SEED AND STRAW MULCH SECTION ABOVE.

2. SEDIMENT CONTROL:

   FIBER ROLLS (WATTLES) SHALL BE PLACED AT THE DOWN SLOPE PERIMETER OF DISTURBANCE LIMITS TO PREVENT OR LIMIT SEDIMENT FROM LEAVING THE SITE. IN URBAN AREAS OR SITES DIRECTLY ADJACENT TO STREETS, FIBER ROLES SHALL BE PLACED AT THE BACK OF SIDEWALK OR CURB TO LIMIT SEDIMENT FROM ENTERING THE STREET.

   STORM DRAIN INLET PROTECTION:
   ALL STORM DRAIN INLETS ON THE SITE (NEW AND EXISTING) AND EXISTING DOWNSTREAM OFFSITE INLETS SHALL RECIEVED STORM DRAIN INLET PROTECTION AS SHOWN ON THE STORM DRAIN INLET PROTECT DETAIL ON THIS PLAN.

3. STABILIZED CONSTRUCTION EXIT:
   THIS DESIGNER DOES NOT BELIEVE THAT A STABILIZED CONSTRUCTION EXIT WOULD BE EFFECTIVE FOR THIS PROJECT. CONTRACTROR SHALL EFFECTIVELY LIMIT OFF SITE TRACKING BY SWEEPING THE STREET DAILIY IF NECESSARY AND BY OTHER MEANS AS DEVISED BY THE CONTRACTOR OR DIRECTED BY THE COUNTY INSPECTOR.

4. ROCKED ACCESS AREAS:
   CONTRACTOR SHALL PROVIDE A ROCKED ACCESS AREA WERE CONSTRUCTION VEHICLES PARK, TRAVEL AND WORK. ROCKED ACCESS AREAS SHALL CONSIST OF 6" OF COMPACETED BASE ROCK OR DRAIN ROCK. ROCKED ACCESS AREAS ARE INTENDED TO KEEP CONSTRUCTION VEHICLES OFF OF BARE SOIL.

5. HOUSE KEEPING REQUIREMENTS:

   DUST CONTROL/WIND EROSION CONTROL:
   CONTRACTOR SHALL EFFECTIVELY LIMIT DUST AND WIND EROSION BY WATERING THE SITE AS NEEDED AND KEEPING ALL MATERIAL STOCK PILES COVERED WHEN NOT IN USE.

   CONSTRUCTION MATERIALS:
   ALL LOOSE OF STOCKPILED CONSTRUCTION MATERIALS THAT ARE NOT ACTIVELY BEING USED (I.E. SOIL SPOILS, AGGREGATE FLY ASH, STUCCO, HYDRATED LIME, ETC) SHALL BE COVERED AND BERMED.
   ALL CHEMICALS SHALL BE STORED IN WATERTGHT CONTAINERS (WITH APPROPRIATE SECONDARY CONTAINMENT TO PREVENT ANY SPILLAGE OR LEAKAGE) OR IN A STORAGE SHED, COMPLETELY ENCLOSED.
   EXPOSURE OF CONSTRUCTION MATERIALS TO PRECIPITATION SHALL BE MINIMIZED. THIS DOES NOT INCLUDE THOSE MATERIALS AND EQUIPMENT THTA ARE INTENDED TO BE OUTSIDE.
   BEST MANAGEMENT PRACTICES TO LIMIT AND PREVENT THE OFF–SITE TRACKING OF LOOSE CONSTRUCTION MATERIALS SHALL BE IMPLEMENTED.

   WASTE MANAGEMENT:
   DISPOSAL OF ANY RINSE OR WASH WATER OR MATERIALS ON IMPERVIOUS OR PERVIOUS SURFACES OR INTO THE STORM DRAIN SYSTEM SHALL BE PREVENTED.
   SANITATION FACILITIES SHALL BE CONTAINED (E.G. PORTABLE TOILETS) TO PREVENT DISCHARGES OF POLLUTANTS. PORTABLE TIOLETS SHALL BE LOCATED A MINIMUM OF 20' FROM DRAIN INLETS, STREETS, DRIVEWAYS, DRAINAGE FACILITIES, STREAMS OR OTHER RIPARIAN AREAS.
   SANITATION FACILITIES SHALL BE INSECTED REGULARLY AND CLEANED AND REPLACED AS NECESSARY.
   COVER WASTE AND DISPOSAL CONTAINERS AT THE END OF EACH WORK DAY AND DURING EACH RAIN EVENT.
   DISCHARGES FROM WASTE DISPSOAL CONTAINERS TO THE STORM WATER DRAINAGE SYSTEM SHALL BE PREVENTED.
   STOCKPILED WASTE MATERIAL SHALL BE CONTAINED AND SECURELY PROTECTED FROM WIND AND RAIN AT ALL TIMES UNLESS ACTIVELY BEING USED.
   PROCEDURES THAT EFFECTIVELY ADDRESS HAZARDOUS AND NON–HAZARDOUS SPILLS SHALL BE IMPLEMENTED.
   EQUIPMENT AND MATERIALS FOR CLEANUP OF SPILLS SHALL BE AVAILABLE ON SITE SO THAT SPILLS AND LEAKS CAN AND SHALL BE CLEANED IMMEDIATLEY AND DISPOSED OF PROPERLY.
   CONCRETE WASHOUT AREAS AND OTHER WASHOUT AREAS THAT CONTAIN POSSIBLE POLLUTANTS SHALL BE CONSTRUCTED TO EFFIECTIVELY CONTAIN POLLUTANTS SO THAT THERE IS NO DISCHARGE INTO THE SOIL OR SURROUNDING AREA.

6. VEHICLE STORAGE & MAINTENANCE:
   MEASURES SHALL BE TAKEN TO PREVENT OIL, GREASE OR FUEL FROM LEAKING ONTO THE GROUND OR INTO STORM DRAINS OR SURFACE WATERS.
   ALL EQUIPMENT OR VEHICLES, WHICH ARE TO BE FUELED , MAINTAINED AND STORED ON SITE SHALL BE IN A DESIGNATED AREA FITTED WITH APPROPRIATE BMP's.
   LEAKS SHALL BE IMMEDIATELY CLEANED AND LEAKED MATERIALS SHALL BE DISPOSED OF PROPERLY.

7. LANDSCAPE MATERIALS:
   CONTAIN STOCKPILED AND STORED MATERIALS SUCH AS MULCHES, TOPSOIL, FERTILIZERS AND OTHER LANDSCAPE MATERILS WHEN THEY ARE NOT BEING ACTIVELY USED.
   DISCONTINUE THE APPLICATION OF ANY ERODIBLE LANDSCPAE MATERIALS WITHIN 2 DAYS BEFORE A FORECAST RAIN EVENT OR DURING PERIODS OF RAIN.
   APPLY ERODIBLE LANDSCAPE MATERIAL AT QUANTITIES AND APPLICATION RATES ACCORDING TO MAUFACTURES' RECOMENDATIONS OR BASED ON WRITTEN SPECIFICATIONS BY KNOWLEDGEABLE AND EXPERIENCED PERSONNEL.

PRELIMINARY–NOT FOR CONSTRUCTION

FOR REDUCED PLANS ORIGINAL SCALE IN INCHES 0 1 2 3

SHEET NAME:

DRAWING NAME:

BY	REVISION	DATE

LICENSED LAND SURVEYOR MICHAEL F GOODHUE No. 7907 Exp. 12/31/20 STATE OF CALIFORNIA

11/25/20

REGISTERED PROFESSIONAL ENGINEER MICHAEL F GOODHUE No. 43754 Exp. 6/30/21 CIVIL STATE OF CALIFORNIA

PROJECT ENGINEER

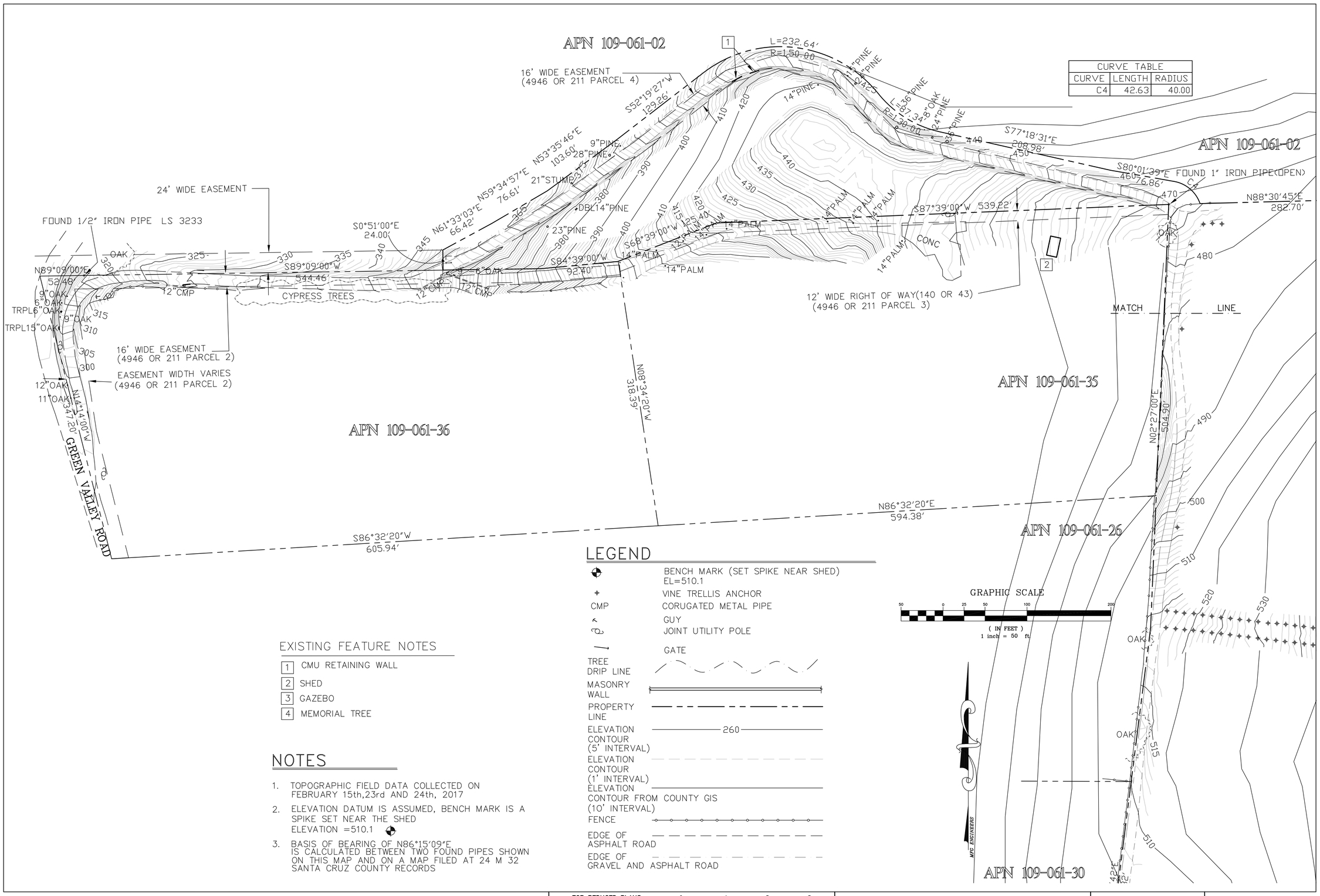
MFG Engineers, Inc
PO BOX 1914
APTOS, CA. 95001
(831) 763–1661
CEL (831) 601–9519

APN 109–061–38

REGAN VINEYARDS WINERY

GRADING & DRAINAGE PLAN

DRAWN: MFG
CHECKED: MFG
DATE: 10/2020
SCALE: NOTED
JOB NO.
SHEET C
12 OF 14



CURVE TABLE		
CURVE	LENGTH	RADIUS
C4	42.63	40.00

EXISTING FEATURE NOTES

1. CMU RETAINING WALL
2. SHED
3. GAZEBO
4. MEMORIAL TREE

NOTES

1. TOPOGRAPHIC FIELD DATA COLLECTED ON FEBRUARY 15th,23rd AND 24th, 2017
2. ELEVATION DATUM IS ASSUMED, BENCH MARK IS A SPIKE SET NEAR THE SHED ELEVATION =510.1
3. BASIS OF BEARING OF N86°15'09"E IS CALCULATED BETWEEN TWO FOUND PIPES SHOWN ON THIS MAP AND ON A MAP FILED AT 24 M 32 SANTA CRUZ COUNTY RECORDS

LEGEND

- BENCH MARK (SET SPIKE NEAR SHED) EL=510.1
- VINE TRELLIS ANCHOR
- CMP CORUGATED METAL PIPE
- GUY
- JOINT UTILITY POLE
- GATE
- TREE DRIP LINE
- MASONRY WALL
- PROPERTY LINE
- ELEVATION CONTOUR (5' INTERVAL) 260
- ELEVATION CONTOUR (1' INTERVAL)
- ELEVATION CONTOUR FROM COUNTY GIS (10' INTERVAL)
- FENCE
- EDGE OF ASPHALT ROAD
- EDGE OF GRAVEL AND ASPHALT ROAD

GRAPHIC SCALE

50 0 25 50 100 200

(IN FEET)
1 inch = 50 ft

FOR REDUCED PLANS ORIGINAL SCALE IN INCHES 0 1 2 3

BY	REVISION	DATE
MFG	1 ADDED TOP OF WATER TANK & SEPTIC LEACH FIELD AREA (BASED ON 10/9/20 FIELD SURVEY) ADDED LOT LINE ADJUSMENT BOUNDARY & 24' WIDE EASEMENT	10/14/20

LICENSED LAND SURVEYOR MICHAEL F. GOODRICH No. 8792 Exp. 12/31/20 STATE OF CALIFORNIA

REGISTERED PROFESSIONAL ENGINEER MICHAEL F. GOODRICH No. 43754 Exp. 6/30/21 CIVIL STATE OF CALIFORNIA

11/25/20

PROJECT ENGINEER

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PO BOX 1914
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CEL (831) 601-9519

APN 109-061-05

REGAN VINEYARDS

TOPOGRAPHIC MAP

DRAWN:	MFG
CHECKED:	MFG
DATE:	2/2017
SCALE:	1"=50'
JOB NO.	
SHEET	C
	13 OF 14

SHEET NAME:

DRAWING NAME:

EXISTING FEATURE NOTES

1. CMU RETAINING WALL
2. SHED
3. GAZEBO
4. MEMORIAL TREE

LEGEND

- BENCH MARK (SET SPIKE NEAR SHED) EL=510.1
- VINE TRELLIS ANCHOR
- CMP CORUGATED METAL PIPE
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- FENCE
- EDGE OF ASPHALT ROAD
- EDGE OF GRAVEL AND ASPHALT ROAD

NOTES

1. TOPOGRAPHIC FIELD DATA COLLECTED ON FEBRUARY 15th,23rd AND 24th, 2017
2. ELEVATION DATUM IS ASSUMED, BENCH MARK IS A SPIKE SET NEAR THE SHED ELEVATION =510.1
3. BASIS OF BEARING OF N86°15'09"E IS CALCULATED BETWEEN TWO FOUND PIPES SHOWN ON THIS MAP AND ON A MAP FILED AT 24 M 32 SANTA CRUZ COUNTY RECORDS

GRAPHIC SCALE
50 0 25 50 100 200
(IN FEET)
1 inch = 50 ft.

FOR REDUCED PLANS ORIGINAL SCALE IN INCHES 0 1 2 3

SHEET NAME:

DRAWING NAME:

BY	REVISION	DATE

REGISTERED PROFESSIONAL ENGINEER • MICHAEL F. GOODHUE • No. 43754 • Exp. 6/30/17 • CIVIL • STATE OF CALIFORNIA

LICENSED LAND SURVEYOR • MICHAEL F. GOODHUE • No. 7887 • Exp. 12/31/18 • STATE OF CALIFORNIA

11/25/20

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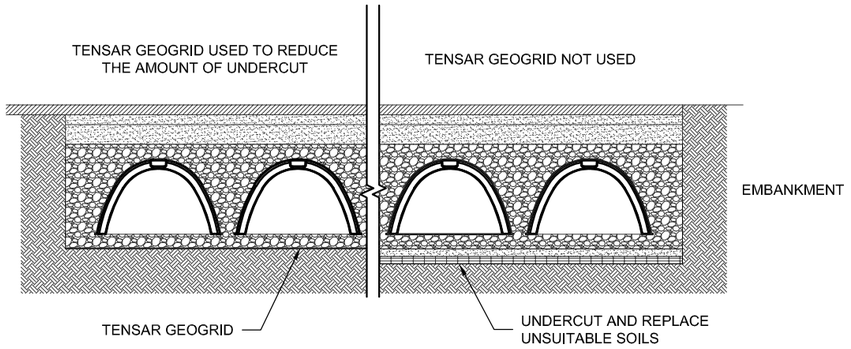
APN 109-061-05

REGAN VINEYARDS

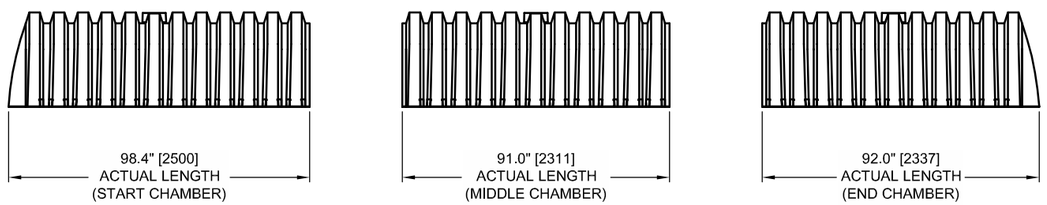
TOPOGRAPHIC MAP

DRAWN:	MFG
CHECKED:	MFG
DATE:	2/2017
SCALE:	1"=50'
JOB NO.	
SHEET	C
	14 OF 14



SECTION VIEW

TYPICAL FOUNDATION DETAIL



ELEVATION VIEW

TYPICAL CHAMBER ROW DETAIL

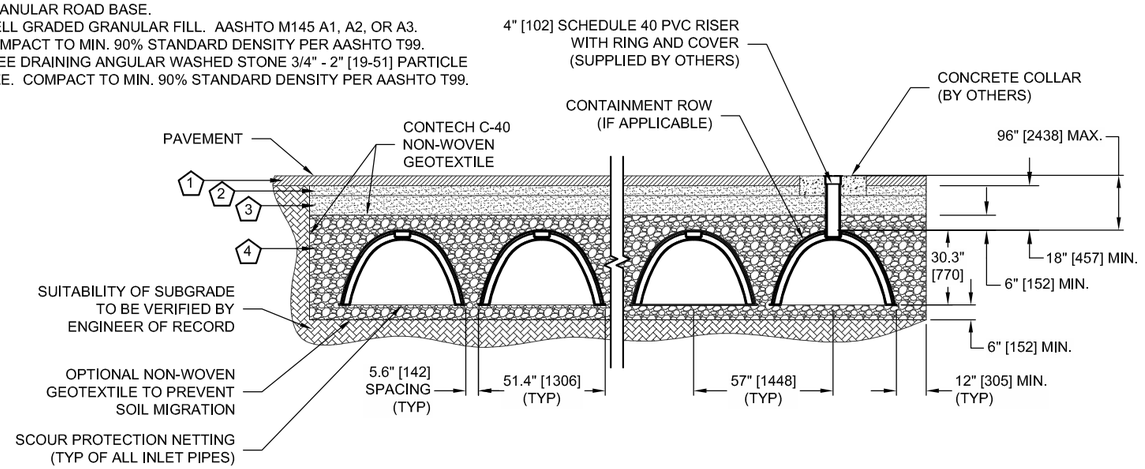
BACKFILL MATERIAL
THE CHAMBER SYSTEM INCORPORATES TWO TYPES OF BACKFILL MATERIAL

FREE DRAINING ANGULAR WASHED STONE 3/4 TO 2-INCH [19 TO 51] PARTICLE SIZE COMPACTED TO 90% AASHTO T99 IS USED AROUND THE CHAMBERS. THIS MATERIAL IS USED AROUND THE CHAMBERS AND WITHIN A MINIMUM OF 6-INCHES (152 MM) BELOW AND 6-INCHES [152] ABOVE THE CHAMBERS. THE REMAINING SPACE SHOULD BE FILLED WITH AN ANGULAR, WELL-GRADED GRANULAR FILL MEETING THE REQUIREMENTS OF AASHTO M145 A1, A2 OR A3, COMPACTED TO 95% AASHTO T99.

CONTECH C-40 NON-WOVEN GEOTEXTILE SHOULD BE USED BETWEEN THE TWO LAYERS OF BACKFILL MATERIAL. SEE DETAIL BELOW.

KEY

1. RIGID OR FLEXIBLE PAVEMENT.
2. GRANULAR ROAD BASE.
3. WELL GRADED GRANULAR FILL. AASHTO M145 A1, A2, OR A3. COMPACT TO MIN. 90% STANDARD DENSITY PER AASHTO T99.
4. FREE DRAINING ANGULAR WASHED STONE 3/4" - 2" [19-51] PARTICLE SIZE. COMPACT TO MIN. 90% STANDARD DENSITY PER AASHTO T99.



TYPICAL SECTION VIEW

(H20/H25 LIVE LOAD)
PER AASHTO 12

CHAMBERMaxx™
PATENT PENDING

CONTECH®
ENGINEERED SOLUTIONS LLC
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CHAMBERMAXX STORMWATER RETENTION SYSTEM STANDARD INSTALLATION DETAIL

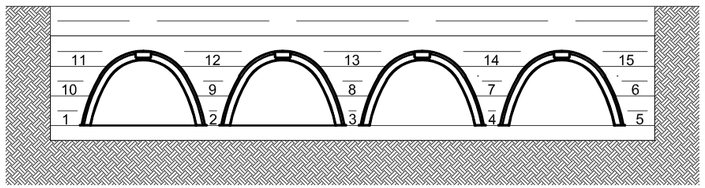
BACKFILL PLACEMENT

PLACE BACKFILL MATERIAL IN 6 TO 8-INCH [152 TO 203] LOOSE LIFTS AND COMPACT. USE MECHANICAL HAND TAMPERS OR APPROVED COMPACTING EQUIPMENT TO COMPACT ALL BACKFILL AND EMBANKMENT IMMEDIATELY ADJACENT TO EACH SIDE OF THE INSTALLATION AND OVER TOP OF THE INSTALLATION TO A MINIMUM DEPTH OF 18-INCHES [457]. PLACE BACKFILL SO THERE IS NO MORE THAN A TWO LIFT DIFFERENTIAL BETWEEN ANY OF THE CHAMBERS AT ANYTIME DURING THE BACKFILLING PROCESS. ADVANCE THE BACKFILL ALONG THE LENGTH OF THE CHAMBER SYSTEM AT THE SAME RATE TO AVOID DIFFERENTIAL LOADING ON THE CHAMBERS. BACKFILLING AT DIFFERENTIAL HEIGHTS FROM ONE SIDE OF THE CHAMBER TO THE OTHER IN EXCESS OF 16" [407] CAN CAUSE CHAMBER DISTORTION OR POTENTIAL COLLAPSE. ADVANCE BALANCED LIFTS ACROSS THE WIDTH OF THE SYSTEM EVENLY ALONG THE LENGTH OF THE CHAMBERS AS YOU BACKFILL. SEE TYPICAL BACKFILL SEQUENCE.

USE ONLY LIGHTWEIGHT TRACKED DOZERS (D-4 DOZER OR SMALLER) NOT EXCEEDING 1,100 LBS/SF [0.54 kg/cm^2] GROUND PRESSURE TO SPREAD BACKFILL LIFTS OVER TOP OF THE CHAMBER SYSTEM. MAINTAIN A MINIMUM OF 6-INCH [152] COVER ON TOP OF CHAMBERS FOR THE INITIAL LIFTS. FOR LARGE SYSTEMS USE CONVEYOR SYSTEMS, BACKHOES WITH LONG REACHES OR DRAGLINES WITH STONE BUCKETS TO PLACE BACKFILL. ONCE MINIMUM COVER FOR CONSTRUCTION LOADING ACROSS THE ENTIRE WIDTH OF THE SYSTEM IS REACHED, ADVANCE THE EQUIPMENT TO THE END OF THE RECENTLY PLACED FILL, AND BEGIN THE SEQUENCE AGAIN UNTIL THE SYSTEM IS COMPLETELY BACKFILLED. THIS TYPE OF CONSTRUCTION SEQUENCE PROVIDES ROOM FOR STOCKPILED BACKFILL DIRECTLY BEHIND THE BACKHOE, AS WELL AS THE MOVEMENT OF CONSTRUCTION TRAFFIC. MATERIAL STOCKPILES ON TOP OF THE BACKFILLED CHAMBER SYSTEM SHOULD BE LIMITED TO SIX FEET IN TOTAL HEIGHT ABOVE THE STRUCTURE AND MUST PROVIDE BALANCED LOADING ACROSS ALL CHAMBERS. TO DETERMINE THE PROPER COVER OVER THE CHAMBERS TO ALLOW THE MOVEMENT OF CONSTRUCTION EQUIPMENT, CONTACT YOUR LOCAL CONTECH REPRESENTATIVE.

EQUIPMENT RESTRICTIONS DURING CHAMBERMAXX INSTALLATION

BACKFILL LEVEL (SEE TYP. SECTION VIEW ON SHEET 1)	ALLOWABLE CONSTRUCTION EQUIPMENT*
4 - BEDDING	NO RESTRICTIONS.
4 - BACKFILL TO TOP OF CHAMBERS	NO EQUIPMENT IS PERMITTED ON OR NEARBY THE CHAMBERS. CONVEYORS OR EXCAVATORS LOCATED SUCH THAT THEIR LOADS DO NOT INFLUENCE THE CHAMBERS SHOULD BE USED TO PLACE THE BACKFILL STONE. STONE SHOULD BE WORKED BETWEEN THE CHAMBERS BY HAND.
4 - BACKFILL OVER THE TOP OF THE CHAMBERS	NO WHEEL LOADS SHOULD BE APPLIED OVER THE SYSTEM. ONCE 6" [152] OF STONE HAS BEEN PLACED OVER THE CROWN OF THE CHAMBERS, LIGHTWEIGHT TRACKED DOZERS WITH A MAXIMUM GROUND PRESSURE OF 1,100 PSF ARE PERMITTED OVER THE STRUCTURE. DOZERS MUST SPREAD STONE WORKING IN A DIRECTION PARALLEL WITH THE CHAMBER ROWS; NOT WORKING ACROSS THE CHAMBER ROWS. ALSO, ONLY SMALL, WALK BEHIND COMPACTION EQUIPMENT CAN BE USED OVER THE CHAMBERS UNTIL A MINIMUM OF 12" [305] OF COVER IS OVER THE CHAMBERS.
2 OR 3 - SELECT FILL OVER THE CHAMBERS	ONCE 18" [457] OF COMPACTED MATERIAL IS OVER THE CHAMBERS, HIGHWAY VEHICLES WITH AXLE LOADS OF 32,000 POUNDS OR LESS CAN BE OPERATED OVER THE STRUCTURES. FRONT END LOADERS CAN BE OPERATED OVER THE STRUCTURES AS LONG AS THE MAXIMUM WHEEL LOAD DOES NOT EXCEED 16,000 POUNDS. COMPACTION EQUIPMENT CAN BE OPERATED OVER THE STRUCTURES AS LONG AS THE DYNAMIC FORCE FROM THE DRUM DOES NOT EXCEED 20,000 POUNDS AND THE GROSS VEHICLE WEIGHT DOES NOT EXCEED 12,000 POUNDS.
*ASK YOUR CONTECH REPRESENTATIVE IF YOU HAVE QUESTIONS ABOUT THE USE OF SPECIFIC PIECES OF CONSTRUCTION EQUIPMENT.	



TYPICAL BACKFILL SEQUENCE

NOTES
1. 36" (900 MM) OF STABILIZED COVER MATERIALS OVER THE CHAMBERS IS REQUIRED FOR FULL DUMP TRUCK TRAVEL AND DUMPING.
2. DURING PAVING OPERATIONS, DUMP TRUCK AXLE LOADS ON 18" (450 MM) OF COVER MAY BE NECESSARY. PRECAUTIONS SHOULD BE TAKEN TO AVOID RUTTING OF THE ROAD BASE LAYER, TO ENSURE THAT COMPACTION REQUIREMENTS HAVE BEEN MET, AND THAT A MINIMUM OF 18" (450 MM) OF COVER EXISTS OVER THE CHAMBERS. CONTACT CONTECH FOR ADDITIONAL GUIDANCE ON ALLOWABLE AXLE LOADS DURING PAVING.
3. MINI-EXCAVATORS (<8,000LBS / 3,628KG) CAN BE USED WITH AT LEAST 12" 930MM) OF STONE OVER THE CHAMBERS.
4. STORAGE OF MATERIALS SUCH AS CONSTRUCTION MATERIALS, EQUIPMENT, SPOILS, ETC. SHOULD NOT BE LOCATED OVER THE CHAMBERMAXX SYSTEM. PLEASE CONTACT CONTECH FOR MORE INFORMATION.
5. ALLOWABLE TRACK LOADS BASED ON VEHICLE TRAVEL ONLY. EXCAVATORS SHALL NOT OPERATE ON CHAMBER BEDS UNTIL THE TOTAL BACKFILL REACHES 3 FEET (900MM) OVER THE ENTIRE BED.

CHAMBERMaxx™
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CONTECH® ENGINEERED SOLUTIONS LLC
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CHAMBERMAXX STORMWATER RETENTION SYSTEM STANDARD INSTALLATION DETAIL

ABBREVIATIONS

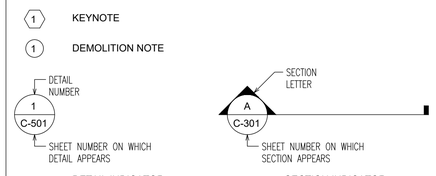
Ø	DIAMETER	MAX	MAXIMUM
		MEP	MECHANICAL/ELECTRICAL/PLUMBING
AB	AGGREGATE BASE	MH	MANHOLE
ABDN	ABANDONED	MIN	MINIMUM
AC	ACRE, ASPHALT CONCRETE	MIPT	MALE IRON PIPE THREAD
ACP	ASBESTOS CEMENT PIPE	MJ	MECHANICAL JOINT
ACM	ASBESTOS CONTAINING MATERIAL	MPVC	MIDPOINT OF VERTICAL CURVE
AD	AREA DRAIN	MON	MONUMENT
AGG	AGGREGATE		
ALGN	ALIGNMENT	N	NORTHING COORDINATE
ARV	AIR RELEASE VALVE	(N)	NEW
ASB	AGGREGATE SUBBASE	NC	NORMALLY CLOSED
ASPH	ASPHALT	NIC	NOT IN CONTRACT
		NO	NUMBER
BC	BEGIN CURVE	NTS	NOT TO SCALE
BEG	BEGIN		
BFP	BACK FLOW PREVENTER		
BLDC	BUILDING CORNER	OHE	OVERHEAD ELECTRIC
BLDG	BUILDING	O.R.	OFFICIAL RECORDS
BMP	BEST MANAGEMENT PRACTICES		
BOD	BOTTOM OF DOCK	(P)	PROPOSED
BOL	BOLLARD	P	PAVEMENT ELEVATION
BSW	BACK OF SIDEWALK	PA	PLANTER AREA
BVC	BEGIN VERTICAL CURVE	PB	PULL BOX
BW	FINISHED GRADE AT BOTTOM OF WALL	PCC	POINT OF COMPOUND CURVATURE PORTLAND CEMENT CONCRETE
C	CONCRETE OR CIVIL	PE	PLAIN END
CB	CATCH BASIN	PED	PEDESTRIAN
C&G	CURB AND GUTTER	PERF	PERFORATED
CG&S/W	CURB, GUTTER & SIDEWALK	PH	POTHOLE
CI	CAST IRON OR CURB INLET	PID	POINT ID
CIP	CAST IRON PIPE	PIV	POST INDICATOR VALVE
CL	CENTERLINE	PL	PROPERTY LINE
CLR	CLEAR	PM	PARKING METER
CLSM	CONTROLLED LOW-STRENGTH MATERIAL	PMH	POWER MANHOLE
CMN	COMMUNICATION	PO	PUSH-ON
CMP	CORRUGATED METAL PIPE	POC	POINT ON CURVE
CO	CLEAN OUT	POI	POINT OF INTERSECTION
CONC	CONCRETE	PP	POWER POLE
CONST	CONSTRUCTION OR CONSTRUCT	PRC	POINT OF REVERSE CURVATURE
CONF	CONFORM TO EXISTING	PRV	PRESSURE REDUCING VALVE
CSC	CITY OF SANTA CLARA	PRUE	PRIVATE UTILITY EASEMENT
CU	CUBIC	PT	POINT OF TANGENCY
CY	CUBIC YARD	PUE	PUBLIC UTILITY EASEMENT
		PVC	POLYVINYL CHLORIDE PIPE
D=	DELTA (CURVE)		
DCDA	DOUBLE CHECK DETECTOR ASSEMBLY	R	RIGHT
DEMO	DEMOLISH	R=	RADIUS (CURVE)
DEPT	DEPARTMENT	RC	RELATIVE COMPACTION
DET	DETAIL	RCP	REINFORCED CONCRETE PIPE
DI	DROP INLET, DUCTILE IRON	RJ	RESTRAINED JOINT
DIA	DIAMETER	RP	RADIUS POINT
DIP	DUCTILE IRON PIPE	RPBFP	REDUCED PRESSURE BACKFLOW PREVENTER
DOM	DOMESTIC	RPPA R	EDUCED PRESSURE PRINCIPLE ASSEMBLY
DW	DOMESTIC WATER	RSC	RECEIVING AND SUPPORT CENTER
DWG	DRAWING	RW	RECYCLED WATER
		R/W, ROW	RIGHT OF WAY
E	EASTING COORDINATE, ELECTRIC		
EC	END CURVE	S	SOUTH, SLOPE
EG	EXISTING GRADE	S.A.D.	SEE ARCHITECTURAL DRAWINGS
EL, ELEV	ELEVATION	SD	STORM DRAIN
ELEC	ELECTRICAL	SDCB	STORM DRAIN CATCH BASIN
EP	EDGE OF PAVEMENT	SDI	STORM DRAIN INLET
EVA	EMERGENCY VEHICLE ACCESS	SDMH	STORM DRAIN MANHOLE
EX,EXIST, (E)	EXISTING	SDCO	STORM DRAIN CLEANOUT
		S.E.D.	SEE ELECTRICAL DRAWINGS
(F)	FUTURE	SF	SILT FENCE
FA	FIRE ALARM	SG	SUBGRADE
F/C,FC	FACE OF CURB	SHLDR	SHOULDER
FD	FOUND	SHT	SHEET
FDC	FIRE DEPARTMENT CONNECTION	SL	STREETLIGHT
FF,FFE	FINISHED FLOOR ELEVATION	S.L.D.	SEE LANDSCAPE DRAWINGS
FG	FINISH GRADE	SMH	SIGNAL MANHOLE
FH	FIRE HYDRANT	S.M.D	SEE MECHANICAL DRAWINGS
FIPT	FEMALE IRON PIPE THREAD	S.P.D	SEE PLUMBING DRAWINGS
FL	FLOW LINE, FLANGE	SS	SANITARY SEWER
FLG	FLANGE	S.S.D.	SEE STRUCTURAL DRAWINGS
FM	FLOWMETER/FORCE MAIN	SSD	SUBSURFACE DRIP
FOUND	FOUNDATION	SSCO	SANITARY SEWER CLEANOUT
FS	FINISHED SURFACE	SSFM	SANITARY SEWER FORCE MAIN
FT	FOOT, FEET	SSMH	SANITARY SEWER MANHOLE
FW	FIRE WATER	SSPS	SANITARY SEWER PUMP STATION
		STA	STATION
G	GAS, GROUND ELEVATION	STD	STANDARD
GB	GRADE BREAK	STL	STEEL
GI	GALVANIZED IRON	S/W	SIDEWALK
GRD, G	GROUND	SVP	SILICON VALLEY POWER
GV	GATE VALVE		
		T	TELEPHONE
HMA	HOT MIX ASPHALT	TC	TOP OF CURB
HORIZ	HORIZONTAL	TD	TRENCH DRAIN
HT	HEIGHT	TEL	TELEPHONE
HP	HIGH POINT	TEMP	TEMPORARY
		TFC	TOP FACE OF CURB
INV	INVERT	THK	THICK
INST	INSTALL	TOD	TOP OF DOCK
IRR	IRRIGATION	TOE	TOE OF SLOPE
		TW,TOW	TOP OF WALL
JP	JOINT POLE	TS	TOP OF SLAB
JT	JOINT TRENCH	TYP	TYPICAL
		UON	UNLESS OTHERWISE NOTED
L	LEFT	U/G	UNDERGROUND
L=	LENGTH (CURVE)		
LF	LINEAR FEET	VC	VERTICAL CURVE
LAT	LATERAL		
LIP	LIP OF GUTTER	W	WEST, WATER
LP	LIGHT POLE, LOW POINT	WM	WATER METER
LPFH	FIRE HYDRANT	WV	WATER VALVE
LS	LANDSCAPE	WWF	WELDED WIRE FABRIC
LSA	LANDSCAPE ARCHITECT	W/	WITH
MA	MEDICAL AIR	YDS	YARDS

CIVIL SYMBOLS LEGEND

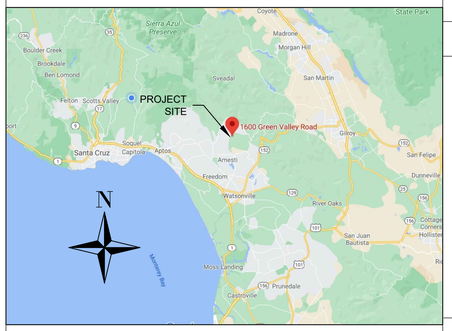
SURVEY TOPO AND SITE IMPROVEMENTS

6" CURB & GUTTER	STORM DRAIN CLEANOUT
EDGE OF AC PAVEMENT	ELECTRIC VAULT COVER
6" VERTICAL CURB	PULL BOX
DOMESTIC WATER MAIN	HIGH VOLTAGE ELECTRIC
ELECTRIC LINE	TELEPHONE MANHOLE
FLUSH LINE	POWER POLE
FORCE MAIN	GUY WIRE & ANCHOR
GAS LINE	JOINT POLE
IRRIGATION LINE	STREET LIGHT
OVERHEAD WIRES	ELECTROLIER
OVERHEAD ELECTRIC	TRAFFIC SIGNAL
OVERHEAD TELEPHONE	TRAFFIC SIGNAL
RECYCLED WATER	PEDESTRIAN LIGHT
SANITARY SEWER LINE	PEDESTRIAN PUSH BUTTON
STORM DRAIN LINE	CROSSWALK DETECTOR
STREET LIGHT CONDUIT	STREET LIGHT PULLBOX
TELECOMMUNICATIONS	SIGN (AS NOTED)
TELEPHONE LINE	THRUST BLOCK
TELEVISION LINE	CAP
WATER LINE	GATE VALVE
UNDERGROUND ELECTRIC	BUTTERFLY VALVE
TRENCH DRAIN	DEMO
METAL BEAM GUARD RAIL	WELL
SILT FENCE	PUMP
CHAIN LINK FENCE	BALL VALVE
FLOW LINE	ACTUATED BALL VALVE
CONTOUR ELEVATION LINE	SOLENOID VALVE
CENTER LINE	AIR/VACUUM BREAKER
PROPERTY LINE	PRESSURE REGULATOR
MONUMENT LINE	SSD FILTER
EASEMENT LINE	ISOLATION VALVE
FINISH GRADE (TC 24.52 / FG)	CHECK VALVE
SURFACE DRAINAGE SLOPE (2.0%)	FLOW METER
SPOT ELEVATION (x 95.94 / 95.94)	PRESSURE GAUGE
GRADE BREAK	PRESSURE SWITCH
LIMIT OF WORK/GRADING	FLOAT VALVE
IRRIGATION BOX	
GAS METER	
GAS VALVE	
WATER METER	
WATER VALVE	
WATER METER OR BFP	
FIRE HYDRANT	
FIRE DEPARTMENT CONNECTION	
WATER TAPPING SADDLE	
SEWER MANHOLE	
SEWER CLEANOUT	
SEWER LAMP HOLE	
SEWER VENT	
STORM DRAIN MANHOLE	
CATCH BASIN	
CURB INLET	
DRAINAGE INLET	

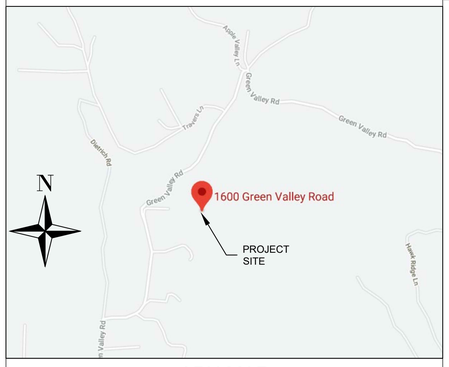
ANNOTATION



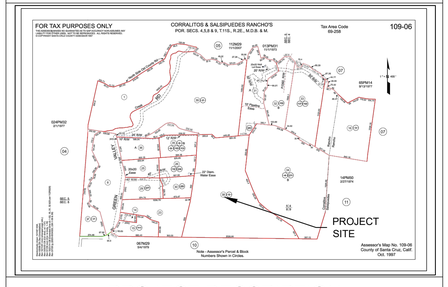
SITE VICINITY



SITE LOCATION



APN MAP



PROJECT DESCRIPTION

GENERAL: NEW SEPTIC SYSTEM

BASIS: NEW WINERY

GENERAL SHEET NOTES

1. ABBREVIATIONS AND SYMBOLS ON THIS SHEET APPLY ONLY TO THE CIVIL DRAWINGS, REFER TO OTHER DISCIPLINES FOR APPLICABLE ABBREVIATIONS AND SYMBOLS NOT PROVIDED HERE.
2. THIS IS A STANDARD ABBREVIATION AND LEGEND SHEET, THEREFORE, SOMEABBREVIATIONS AND LEGEND SYMBOLS MAY APPEAR ON THIS SHEET AND MAY NOT BE UTILIZED ON THIS PROJECT.
3. DO NOT SCALE DRAWINGS.
4. ALL WORK AND MATERIALS SHALL BE IN FULL ACCORDANCE WITH THE CURRENTLY REQUIRED VERSION OF THE FOLLOWING CODE:
   - 4.1. CALIFORNIA BUILDING CODE
   - 4.2. CALIFORNIA PLUMBING CODE
   - 4.3. CALIFORNIA MECHANICAL CODE
   - 4.4. CALIFORNIA ELECTRICAL CODE
   - 4.5. ALL APPLICABLE LOCAL, STATE, AND FEDERAL CODES AND ORDINANCES
5. NOTHING ON THE ENCLOSED DRAWINGS IS TO BE CONSTRUED AS REQUIRING OR PERMITTING WORK THAT IS CONTRARY TO THE CODES, ORDINANCES, OR REGULATIONS DESCRIBED ABOVE.
6. ANY DEVIATIONS FROM THE PROPOSED PLANS SHALL BE DISCUSSED WITH THE PROJECT ENGINEER PRIOR TO MAKING CHANGES IN THE FIELD.

INDEX

PROJECT DESIGN AND OPERATION NOTES

DESIGN FLOWS, VOLUMES, AND TREATMENT

FACILITY TYPE: COMMERCIAL (WINERY)
UNIT FLOW BASIS: OCCUPANCY
MAXIMUM # OF EMPLOYEES (MAX ONLY OCCURS 3-4 WEEKENDS PER YEAR): 6 EMPLOYEES
MAXIMUM # OF VISITORS (MAX ONLY OCCURS DURING SPECIAL EVENTS 2-3 WEEKENDS PER YEAR): 75 VISITORS
MAXIMUM # OF OVERNIGHT GUESTS: 4 GUESTS
UNIT FLOW RATES: 20 GPD/EMPLOYEE, 3 GPD/VISITOR (WINE TASTING ONLY, WITH NO MEALS) & 60 GPD/OVERNIGHT GUEST (NO PRIVATE BATHTUB)
ESTIMATED TOTAL FLOW: 585 GPD
DESIGN FLOWS: 600 GPD TREATMENT AND 585 GPD DISPOSAL
TREATMENT CATEGORY: ENHANCED (FAST PERCOLATION)
DESIGN TREATMENT SYSTEM: ADVANTEX AX20N NITROGEN REDUCTION MODEL (500 GPD)
NEW SEPTIC TANK VOLUME: 2,000 GALLONS
NEW AX20N TREATMENT POD VOLUME: 400 GALLONS
TOTAL VOLUME OF ENHANCED TREATMENT SYSTEM: 2,400 GALLONS
WASTEWATER STRENGTH: DOMESTIC STRENGTH
DOMESTIC STRENGTH DEFINITION: <220 MG/L BOD, <80 MG/L TSS, <60 MG/L TN
NSF CERTIFICATION:ANSI/NSF STANDARDS 40 AND 245

SOIL TESTING RESULTS AND DISPOSAL DESIGN

SOIL TESTING WAS CONDUCTED BY SHERWOOD DESIGN ENGINEERS, LLC. (SDE). THE SOIL TESTING INFORMATION BELOW HAS BEEN EXTRACTED FROM THE "RESULTS OF SITE EVALUATION" PREPARED BY SDE, DATED SEPTEMBER 26, 2019. SDE FOUND THAT THE PROPOSED DISPOSAL SITE IS SUITABLE FOR CONVENTIONAL SEPTIC LEACHFIELD DISPOSAL.

TEST TRENCH

Depth Below Grade	Observations	Soil Type/Group
3.5'	Dark brown, very fine with a small portion of clumps (no less than 0.5"), slightly moist, very soft	Clay Loam / OL-CL
6'	Brown to yellowish-red, clumps (0.25"-0.5") of clayey loam, very soft, crumbled easily, with medium grains	Silty Clay Loam to Sandy Clay Loam / CL
8.75'	Small clumps (0.25"-0.5") of yellowish-orange clayey loam, very soft, crumbled easily, with fine grains	Silty Clay Loam to Sandy Clay Loam/ CL

NO GROUNDWATER WAS ENCOUNTERED, NO SEEPAGE WAS NOTED, AND NO FORMATIONS CONTAING CONTINOUS CHANNELS, CRACKS OR FRACTURES WERE OBSERVED

SITE PERCOLATION TEST:

Percolation Test Hole	Hole Depth (ft)	Average Fall	
		Min/In	In/Hr
1-3	2.7	2.72	22.0
1-6	5.4	4.39	13.7
1-8	7.6	5.03	11.9
2-3	3.2	2.07	29.0
2-6	3.6	2.52	23.8
2-8	5.8	2.89	20.8

DESIGN AREA APPLICATION RATE: 1.2 GPD/SF
REQUIRED EFFECTIVE LEACHING AREA: 488 SF
DESIGN PRIMARY EFFECTIVE LEACHING AREA: 520 SF
100%+ DESIGN FUTURE EXPANSION EFFECTIVE AREA: 520 SF
DESIGN PRIMARY TRENCH GEOMETRY: 2 X 1.5'W X 3'D (2' EFFECTIVE) X 65'L
MAX EFFECTIVE AREA/LF: 4SF/LF

WATER SUPPLY: PRIVATE WELL

MINIMUM ELECTRICAL USAGE AND REQUIREMENTS

TREATMENT SYSTEM PUMP REQUIRED DEDICATED SERVICE: 115 V / 30A
CONTROLS DEDICATED SERVICE: 115V / 20A

OWNER IS RESPONSIBLE FOR GENERAL OPERATION AND MAINTENANCE OF THE WASTEWATER SYSTEM

THE SEPTIC/WASTEWATER SYSTEM SHALL BE INSTALLED BY A QUALIFIED PROFESSIONAL.

No.	Revision/Issue	Date

PEM 11/21/2020 MYE_Borgetto_Septic Plans.dwg

NOT FOR CONSTRUCTION

PRELIMINARY PLANS

COVER SHEET

REGAN VINEYARDS WINERY
SITE IMPROVEMENT PROJECT
1600 GREEN VALLEY ROAD
WATSONVILLE, CA 95076
APN: 109-061-38

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STATE OF CALIFORNIA

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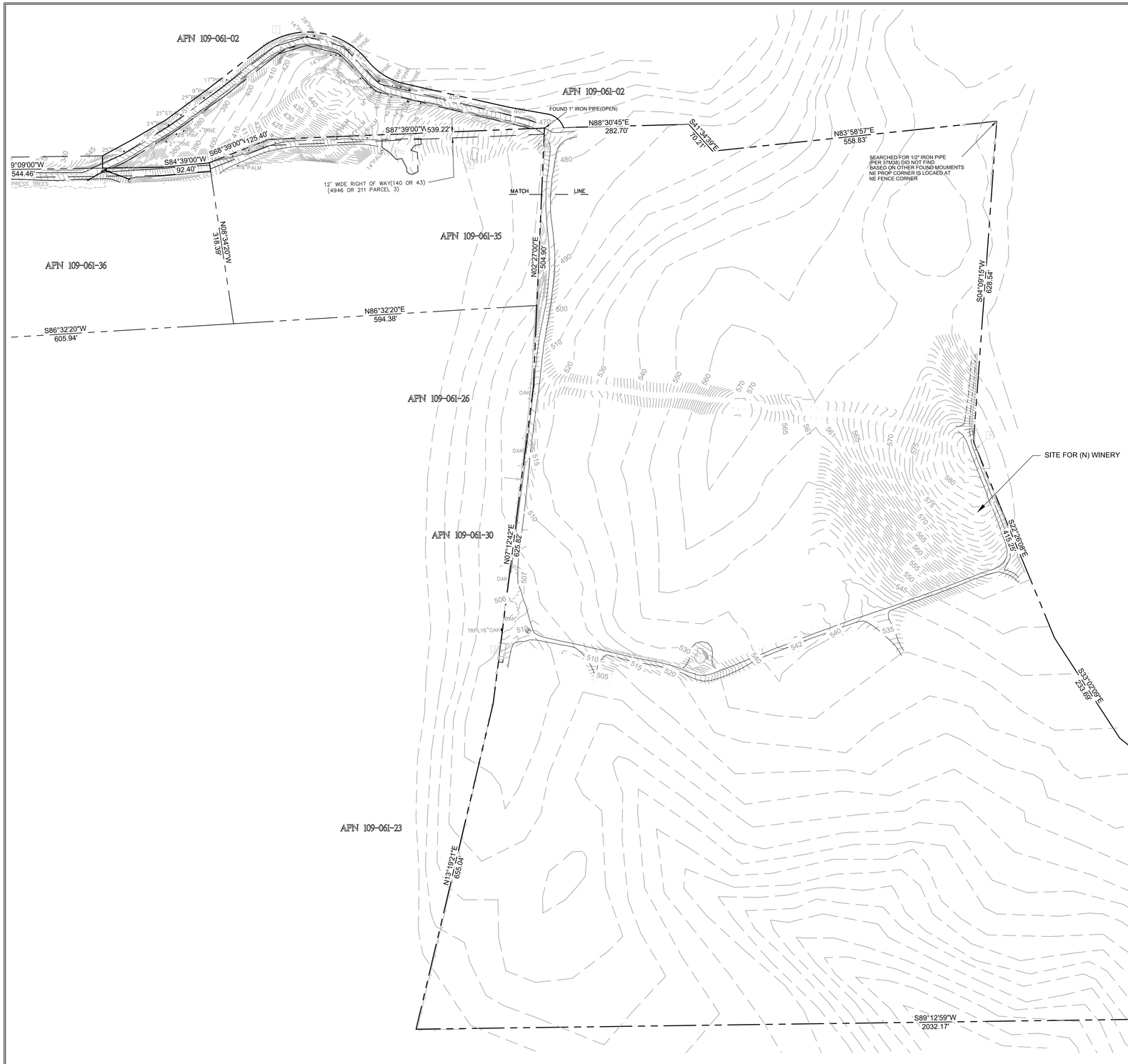
PEM	PEM
Project No. 202019	Scale AS SHOWN
Date NOV 2020	
Sheet No. WW1	

1 OF 5



1 EXISTING SITE LAYOUT
SCALE: 1" = 100'

No.	Revision/Issue	Date

NOT FOR CONSTRUCTION

PRELIMINARY PLANS:

EXISTING SITE LAYOUT

REGAN VINEYARDS WINERY
SITE IMPROVEMENT PROJECT
1600 GREEN VALLEY ROAD
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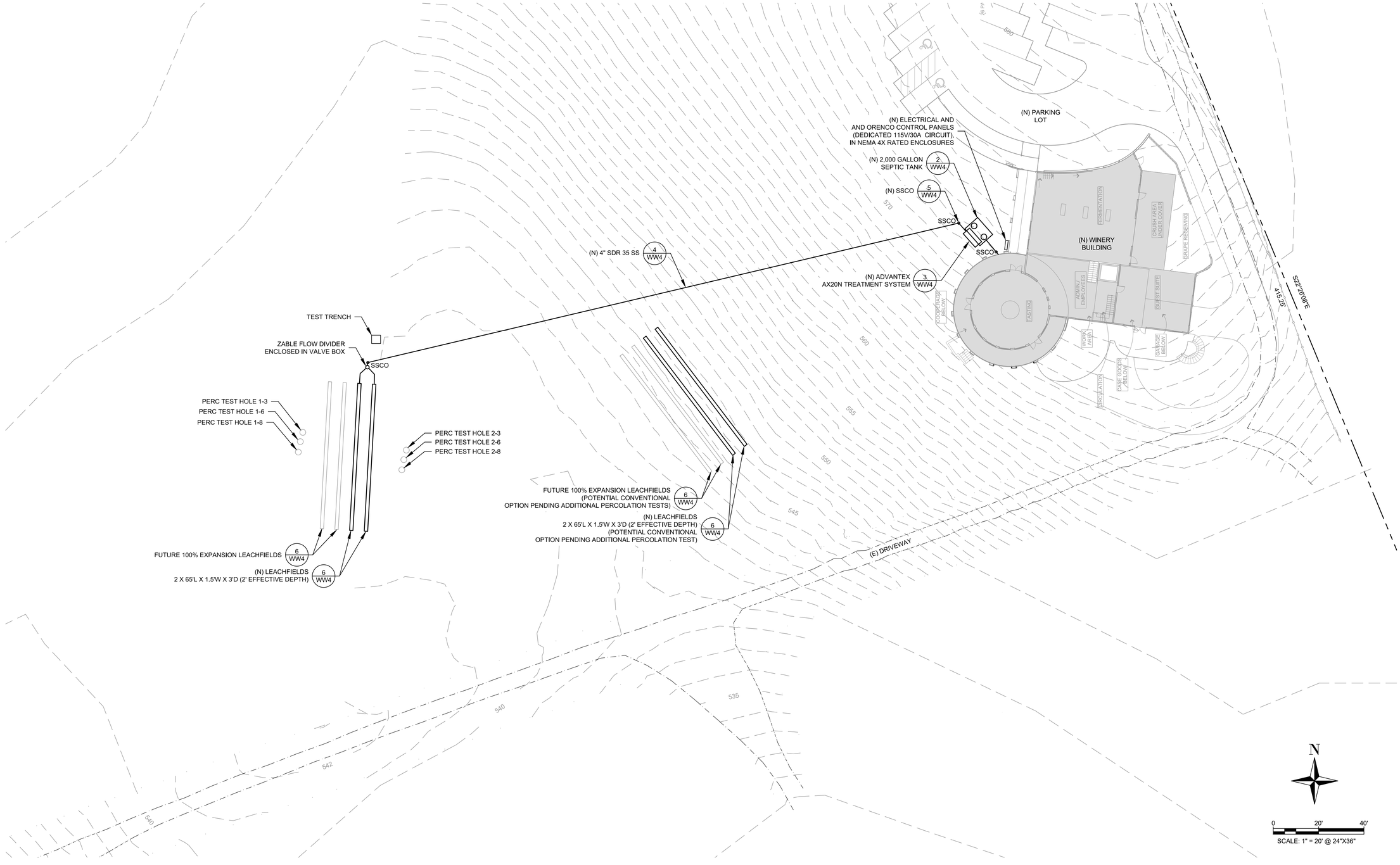
PEM	PEM
Project No. 202019	Scale AS SHOWN
Date NOV 2020	
Sheet No. WW2	



1 WASTEWATER SYSTEM PLAN
SCALE: 1" = 20'

No.	Revision/Issue	Date

NOT FOR CONSTRUCTION

PRELIMINARY PLANS

WASTEWATER SYSTEM PLAN

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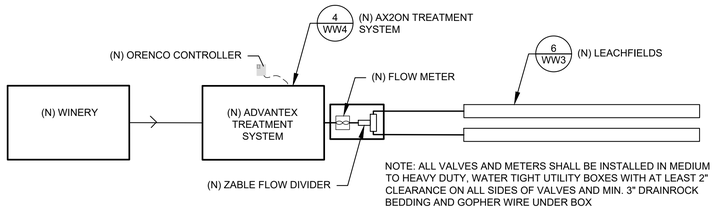
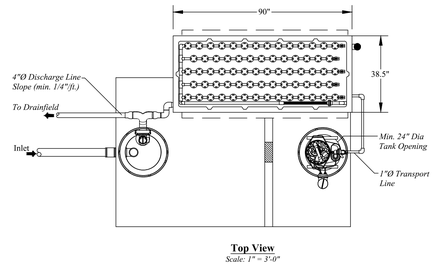
Project No.	Scale
202019	AS SHOWN
Date	
NOV 2020	
Sheet No.	

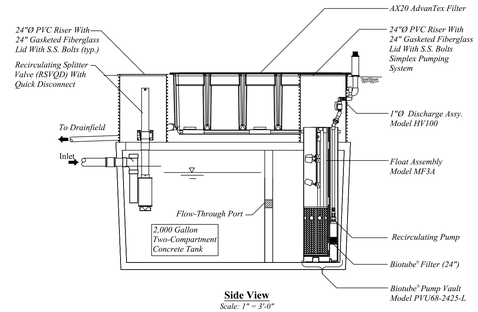
WW3



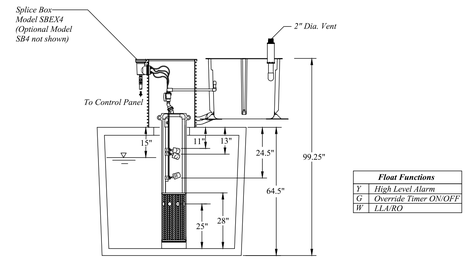
1 WASTEWATER TREATMENT AND DISPOSAL SYSTEM SCHEMATIC
SCALE: AS DIMENSIONED



Top View
Scale: 1" = 3'-0"

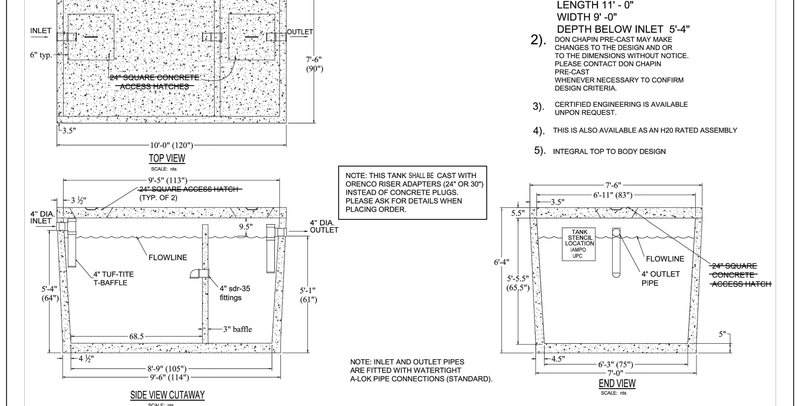


Side View
Scale: 1" = 3'-0"

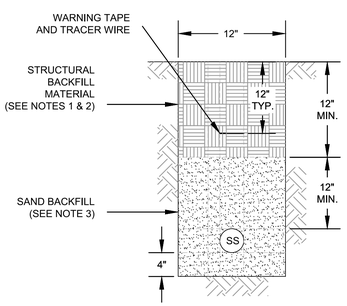


End View
Scale: 1" = 3'-0"

3 ADVANTEX AX20N MODE 3A ENHANCED TREATMENT SYSTEM (WITH 2,000 GALLON CONCRETE WATERTIGHT SEPTIC TANK)
SCALE: AS DIMENSIONED



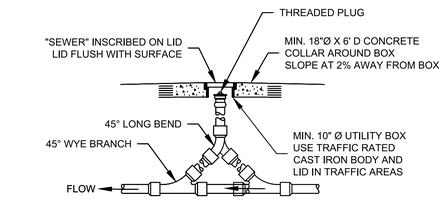
2 2,000 GALLON CONCRETE SEPTIC TANK (CHAPIN PRE-CAST WATERTIGHT CONC.OR EQUIV.)
SCALE: AS DIMENSIONED



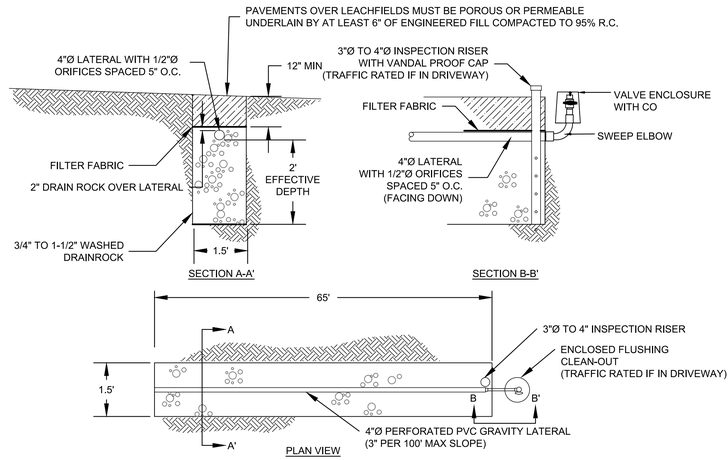
4 SS UTILITY TRENCH DETAIL
SCALE: AS DIMENSIONED

UTILITY TRENCH NOTES:

1. UTILITY TRENCH STRUCTURAL BACKFILL UNDER DRIVEWAYS AND ROADS SHALL BE COMPACTED TO 95% RELATIVE COMPACTION.
2. UTILITY TRENCH STRUCTURAL BACKFILL UNDER NON-TRAFFIC AREAS SHALL BE COMPACTED TO 90% RELATIVE COMPACTION.
3. ALL SAND BACKFILL SHALL BE COMPACTED TO 90% RELATIVE COMPACTION.
4. SS=SANITARY SEWER
5. SANITARY SEWER LINES SHALL BE INSTALLED WITH A 10' MINIMUM SEPARATION FROM ALL POTABLE WATER LINES.
6. IF SANITARY SEWER AND WATER LINES MUST CROSS, THE SANITARY SEWER SHALL BE LOCATED AT LEAST 2' BELOW THE WATER LINE.



5 SS CLEANOUT
SCALE: AS DIMENSIONED



6 CONVENTIONAL LEACHFIELD
SCALE: AS DIMENSIONED

No.	Revision/Issue	Date

PRELIMINARY PLANS: NOT FOR CONSTRUCTION

WASTEWATER SYSTEM SCHEMATIC AND DETAILS

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GENERAL SPECIFICATIONS

THE FOLLOWING SPECIFICATIONS ARE FOR THE INSTALLATION OF THE ENHANCED WASTEWATER TREATMENT SYSTEM AT THE LOCATION SPECIFIED IN THE BORDER OF THESE DESIGN PLANS. THE ACCOMPANIED PLANS PRESENT THE GENERAL LAYOUT, PLUMBING CONFIGURATION, AND CONSTRUCTION DETAILS.

MATERIAL SPECIFICATIONS

THE FOLLOWING ARE MATERIAL SPECIFICATIONS FOR THE WASTEWATER SYSTEM COMPONENTS. ALL MATERIALS USED FOR THE CONSTRUCTION OF THIS PROJECT SHALL CONFORM TO THE FOLLOWING SPECIFICATIONS AND AS DESCRIBED IN THE ACCOMPANIED PLANS OR AN ENGINEER APPROVED EQUIVALENT.

1. SUBSURFACE TANKS

THE SUBSURFACE TANKS INCLUDE THE 2,000 GALLON CONCRETE WATER-TIGHT SEPTIC TANK AND ADVANTEX AX20N TREATMENT SYSTEM.

1.1. 2,000 GALLON CONCRETE WATER-TIGHT SEPTIC TANK AND AX20N TREATMENT SYSTEM. THE SYSTEM SHALL BE CAPABLE OF TREATING DESIGN FLOW OF AT LEAST 600 GPD. DIMENSIONS, FITTING SIZES AND LOCATIONS, AND OPTIONAL ACCESSORIES SHALL BE INCLUDED AS SHOWN ON TANK DRAWINGS. THE TANK SHALL BE WATERTIGHT AND TESTED IN THE FIELD AFTER INSTALLATION. THE AX20N SYSTEM SHALL BE INSTALLED PER MANUFACTURER RECOMMENDATIONS.

1.2. PRODUCT STORAGE. THE SUBSURFACE TANKS SHALL BE CAPABLE OF STORING SEPTAGE LIMITED TO THE COLLECTION AND STORAGE OF HUMAN SOLID OR LIQUID ORGANIC WASTE.

1.3. PIPING. SDR35 PVC PIPE, SCHEDULE 40 PVC PIPE, OR ABS PIPE SHALL BE USED FOR INLET AND OUTLET PIPING AS SHOWN ON DRAWINGS. ALL PIPING SHALL BE FACTORY SEALED TO ENABLE FIELD TIGHTNESS TESTING WITH AT LEAST ONE PIPE OPENING PROVIDED WITH A THREADED FITTING FOR CONNECTING A PRESSURE TEST MANIFOLD.

1.4. ACCESS OPENINGS. ALL ACCESS OPENINGS SHALL BE 30 INCHES IN DIAMETER OR LARGER AS SHOWN ON THE PLANS, SHALL BE MANUFACTURED OF FIBERGLASS, CONCRETE OR CAST IRON WITH RESPECT TO SPECIFIED TRAFFIC RATING. LOCATIONS SHALL BE AS SHOWN ON TANK DRAWINGS. EACH MANHOLE SHALL HAVE A WATERTIGHT RISER TO FINISH GRADE.

1.5. RISERS. RISERS SHALL BE REQUIRED FOR ACCESS TO INTERNAL VAULTS AND ACCESS INTO THE TANKS FOR SEPTAGE PUMPING. ALL RISERS SHALL BE CONSTRUCTED WITH WATERTIGHT SEALS PROVIDED. RISERS SHALL BE A MINIMUM OF 30" IN NOMINAL DIAMETER WHEN THE DEPTH OF BURY IS 36" OR GREATER. TO ENSURE PRODUCT COMPATIBILITY, RISERS, LIDS, AND ATTACHMENT COMPONENTS SHALL BE SUPPLIED BY A SINGLE MANUFACTURER AND, WHERE APPLICABLE, SHALL BE FACTORY EQUIPPED WITH THE FOLLOWING:

1.5.1. ADHESIVE. WHEN BONDING TO THE RISER RINGS, AN EPOXY PROVIDED BY THE MANUFACTURER SHALL BE USED. ADHESIVES AND SEALANTS SHALL BE WATERPROOF, CORROSION RESISTANT, AND APPROVED FOR THE INTENDED APPLICATION. THE RISER-TO-TANK CONNECTION SHALL BE WATERTIGHT AND STRUCTURALLY SOUND. THE RISER-TO-TANK CONNECTION SHALL BE CAPABLE OF WITHSTANDING A VERTICAL UPLIFT OF 5,000 POUNDS TO PREVENT RISER SEPARATION DUE TO TANK SETTLEMENT, FROST HEAVE, AND VEHICLE TRAFFIC OVER THE TANK.

1.5.2. LIDS. ONE LID SHALL BE FURNISHED WITH EACH ACCESS RISER. LIDS SHALL BE WATERPROOF, CORROSION RESISTANT, AND UV RESISTANT. LIDS SHALL BE FLAT, WITH NO NOTICEABLE UPWARD DOME. LIDS SHALL NOT ALLOW WATER TO POND ON THEM. LIDS SHALL FORM A WATERTIGHT SEAL WITH THE TOP OF RISER. TRAFFIC-RATED LIDS SHALL BE CAPABLE OF WITHSTANDING A TRUCK WHEEL LOAD (36 SQUARE INCHES) OF 2500 POUNDS FOR 60 MINUTES WITH A MAXIMUM VERTICAL DEFLECTION OF 1-1/2". LIDS SHALL BE PROVIDED WITH TAMPER-RESISTANT STAINLESS STEEL FASTENERS AND A TOOL FOR FASTENER REMOVAL. TAMPER-RESISTANT FASTENERS INCLUDE RECESSED DRIVES, SUCH AS HEX, TORX, AND SQUARE. FASTENERS THAT CAN BE REMOVED WITH COMMON SCREWDRIVERS, SUCH AS SLOTTED AND PHILLIPS, OR FASTENERS THAT CAN BE REMOVED WITH STANDARD TOOLS, SUCH AS PLIERS OR CRESCENT WRENCHES, ARE NOT CONSIDERED TAMPER-RESISTANT. TO PREVENT A TRIPPING HAZARD, FASTENERS SHALL NOT EXTEND ABOVE THE SURFACE OF THE LID.

1.5.3. RISER INSTALLATION. RISER INSTALLATION SHALL BE IN ACCORDANCE WITH THE MANUFACTURER'S INSTRUCTIONS.

2. PIPING AND FITTINGS

THE TYPE OF PIPE MATERIALS AND FITTINGS SHALL BE AS DESIGNATED ON THE PLANS AND SHALL COMPLY WITH THE FOLLOWING:

2.1. FITTINGS AND COUPLINGS
THE FITTINGS AND COUPLINGS FOR PVC PIPES SHALL BE THREADED OR SLIP-FITTED TAPERED SOCKET SOLVENT WELD. THREADED ADAPTERS SHALL BE PROVIDED WITH SOCKET PIPE FOR CONNECTIONS TO THREADED PIPE.

3. VALVES

3.1. GENERAL
VALVES SHALL BE OF THE SIZE, TYPE, AND CAPACITY DESIGNATED ON THE PLANS OR IN THE SPECIFICATIONS AND SHALL COMPLY WITH THE REQUIREMENTS SPECIFIED HEREIN. ALL VALVES ON PRESSURIZED PORTIONS OF THE SYSTEM SHALL BE CAPABLE OF SATISFACTORY PERFORMANCE AT WORKING PRESSURE OF 150 PSI. ALL VALVES ON GRAVITY PORTIONS OF THE SYSTEM SHALL BE RATED FOR AT LEAST TWICE THE ESTIMATED STATIC HEAD ABOVE THE VALVE. VALVES SHALL BE DESIGNED TO PERMIT DISASSEMBLY TO REPLACE SEALING COMPONENTS WITHOUT REMOVAL OF THE VALVE BODY FROM THE PIPELINE, SUCH AS TRUE UNION BALL VALVES AND CHECK VALVES.

4. ADDITIONAL COMPONENTS

ALL COMPONENTS SHALL BE INSTALLED PER MANUFACTURER RECOMMENDATIONS. IF THERE IS A CONFLICT BETWEEN MANUFACTURER RECOMMENDATIONS, AND THE DESIGN PLANS, THE PROJECT ENGINEER SHALL BE CONTACTED FOR APPROVAL OF INSTALLATION CONFIGURATION.

5. ADDITIONAL COMPONENTS

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6. LEACHFIELDS

THE LEACHFIELD SYSTEM SHALL PROVIDE ADDITIONAL TREATMENT AND DISPOSAL OF THE WASTEWATER. THE SYSTEM SHALL BE CONSTRUCTED AS SHOWN ON PLANS.

6.1. CLEAN DRAIN ROCK
THE DRAIN ROCK SHALL BE LOCATED AS SHOWN IN THE ACCOMPANYING PLANS. THE ROCK SHALL BE CLEAN, DOUBLE WASHED GRAVEL RANGING FROM 3/4"Ø TO 1-½"Ø WITH FINES LESS THAN 1%.

6.2. FILTER FABRIC
THE FILTER FABRIC SHALL BE PLACED ON TOP OF THE GRAVEL ROCK BED. THE FABRIC SHALL BE A GEOTEXTILE SYNTHETIC FILTER FABRIC SUCH AS MIRAFI 1100N, DUPONT TYPAR (4 OR 6 OZ/SQ YD), OR APPROVED EQUIVALENT. THE FABRIC SHALL COVER AN AREA SUCH THAT IT EXTENDS 1 FOOT BEYOND THE TRENCH IN EACH DIRECTION.

6.3. SOIL COVER
THE SOIL COVER SHALL BE PLACED OVER THE LEACHFIELDS TO REDUCE EROSION AND SLOPE INSTABILITY. THE SOIL SHALL BE A SANDY LOAM TO INCREASE THE POTENTIAL FOR AIR THROUGH THE DEPTH OF THE SOIL. THE SOIL SHALL BE COMPACTED TO A MINIMUM OF 90% RELATIVE COMPACTION IN LANDSCAPE AREAS AND 95% RELATIVE COMPACTION IN DRIVEWAYS AND ROADWAYS.

CONSTRUCTION SPECIFICATIONS

THE CONSTRUCTION OF THE PROJECT SHALL CONFORM TO THE PLANS AND FOLLOWING SPECIFICATIONS. ALL NECESSARY CONSTRUCTION PERMITS SHALL BE OBTAINED PRIOR TO COMMENCEMENT OF ALL SITE WORK.

1. PRECONSTRUCTION CONFERENCE

THE CONTRACTOR SHALL HAVE A PRECONSTRUCTION MEETING WITH THE ENGINEER AND OWNER AT LEAST ONE WEEK PRIOR TO COMMENCEMENT OF SITE WORK. THE ENGINEER SHALL BE CONTACTED 48 HOURS PRIOR TO THE MEETING CONFERENCE. THE MEETING SHOULD BE CONDUCTED TO REVIEW THE DESIGN, MATERIAL, AND CONSTRUCTION SPECIFICATIONS. ALL CONTRACTOR PROPOSED REVISIONS IN THE DESIGN SHALL BE APPROVED BY THE ENGINEER. THE INSTALLATION MUST BE INSPECTED BY THE ENGINEER FOR CONFORMANCE TO THE DESIGN.

2. STAKING

THE CONTRACTOR WILL PROVIDE SUFFICIENT HORIZONTAL AND VERTICAL CONTROL FOR INSTALLATION OF THE WORK AT DATUM POINTS NECESSARY TO ESTABLISH ALIGNMENT AND GRADE. THE PROTECTION AND CARE OF THE STAKES ONCE SET, SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.

3. EXCAVATION

ALL EXCAVATION WORK SHALL BE MADE TO THE LINES, GRADES AND DIMENSIONS SHOWN IN THE ACCOMPANIED PLANS. EXCAVATIONS SHALL BE PERFORMED IN THE DAY AND IN A MANNER THAT MINIMIZES EROSION, FLOODING AND SEDIMENTATION. EXCAVATED SOILS THAT ARE TO BE STOCKPILED ON-SITE SHALL BE PLACED IN A LOCATION AND MANNER THAT MINIMIZES EROSION AND CONTROLS SEDIMENTATION.

THE CONTRACTOR SHALL TAKE EXTRA PRECAUTION WHERE EXCAVATION EQUIPMENT MAY ENCOUNTER EXISTING UNDERGROUND UTILITIES AND OTHER FACILITIES OF ANY NATURE. CONTRACTOR SHALL PERSON HIS OPERATION IN SUCH A MANNER AND SHALL EXERCISE THE GREATEST OF CARE SO AS NOT TO INJURE IN ANY MANNER EXISTING UNDERGROUND UTILITIES, MAINS OR FACILITIES OF ANY NATURE. SHOULD THE CONTRACTOR INJURE, BREAK OR DAMAGE EXISTING UNDERGROUND UTILITIES, MAINS, OR FACILITIES OF ANY NATURE IN ANY MANNER, THEY SHALL REPAIR THE SAME AT THEIR OWN EXPENSE. IF IT DOES NOT APPEAR FEASIBLE THAT THE CONTRACTOR CAN MAKE NEEDED REPAIRS, THEN SUCH REPAIRS SHALL BE MADE BY THE OWNER AND THE CONTRACTOR SHALL BE CHARGED FOR SUCH REPAIRS.

4. POLLUTION CONTROL

4.1. WATER POLLUTION
THE CONTRACTOR SHALL BE RESPONSIBLE FOR ENSURING THAT ALL PERMITTING REQUIREMENTS RELEVANT TO THE CONSTRUCTION OF THE PROJECT ARE MET AT ALL TIMES. ACTIONS BY THE CONTRACTOR, THE SUBCONTRACTORS OR EMPLOYEES THEREOF RESULTING IN NONCOMPLIANCE OF PERMITTING REQUIREMENTS MAY BE GROUNDS FOR TERMINATION OF THIS CONTRACT.

4.2. NOISE POLLUTION
IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO KEEP NOISE POLLUTION, DUE TO THESE CONSTRUCTION ACTIVITIES, AS LOW AS POSSIBLE.

4.3. SOIL CONTAMINATION
THE CONTRACTOR SHALL NOT ALLOW REGULATED MATERIALS TO SPILL ON THE PROJECT SITE. ANY SPILLAGE OR REGULATED MATERIALS RESULTING FROM THE CONTRACTOR'S OPERATION SHALL BE REMOVED IMMEDIATELY BY THE CONTRACTOR AT THE CONTRACTOR'S EXPENSE.

4.4. STORAGE OF REGULATED MATERIALS
THE STORAGE AND USE OF ANY REGULATED MATERIALS SHALL MEET ALL REQUIREMENTS OF LOCAL, STATE, AND FEDERAL REGULATORY AGENCIES. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO SATISFY THE REQUIREMENTS OF ANY REGULATORY AGENCY FOR THE STORAGE, MONITORING, USAGE, TRANSPORTATION, SAFETY, REPORTING, OR ANY OTHER REQUIREMENTS REGARDING THE MANAGEMENT OF REGULATED MATERIALS ON AND OFF THE PROJECT SITE.

5. SITE WORK

5.1. MOBILIZATION
THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL PREPARATORY WORK AND PLACEMENT OF MATERIALS IN A STAGING AREA REQUIRED FOR CONSTRUCTION OPERATIONS INCLUDING, BUT NOT LIMITED TO, THOSE NECESSARY FOR THE MOVEMENT OF PERSONNEL, EQUIPMENT, SUPPLIES, AND INCIDENTALS TO THE PROJECT SITE; FOR THE ESTABLISHMENT OF FACILITIES NECESSARY FOR WORK ON THE PROJECT; PROVIDING POLLUTION CONTROL MEASURES; AND FOR ALL OTHER WORK AND OPERATIONS WHICH MUST BE PERFORMED.

THE CONTRACTOR SHALL PROVIDE MATERIALS, NOT SPECIFICALLY DESCRIBED BUT REQUIRED FOR PROPER COMPLETION OF THE WORK OF THIS SECTION, AS SELECTED BY THE CONTRACTOR SUBJECT TO THE APPROVAL OF THE COUNTY.

5.2. CLEARING AND GRUBBING
CLEAR THE SITE AS SHOWN ON THE DRAWINGS AND AS SPECIFIED IN THIS SECTION. CLEARING AND GRUBBING SHALL CONSIST OF ALL WORK INCLUDING, BUT NOT LIMITED TO, SALVAGED MATERIALS REMOVAL, PROVIDING AND INSTALLING TEMPORARY EROSION CONTROL, AND PLACEMENT OF TREES, TREE BRANCHES, TREE STUMPS, BRUSH, ROOTS, BOULDERS, SHRUBS, SEDIMENT, AND ALL OBJECTIONABLE MATERIALS IN AN AGREED UPON LOCATION ADJACENT TO THE WORK SITE.

EXAMINE THE AREAS AND CONDITIONS UNDER WHICH THE WORK OF THIS SECTION WILL BE PERFORMED. CORRECT CONDITIONS DETRIMENTAL TO TIMELY AND PROPER COMPLETION OF THE WORK. DO NOT PROCEED UNTIL UNSATISFACTORY CONDITIONS ARE CORRECTED.

ALL WASTES DISPOSAL SHALL BE CONDUCTED AS FOLLOWS:
A. REMOVE WASTE FROM CLEARING OPERATIONS.
B. DISPOSE OF AWAY FROM THE SITE IN A LEGAL MANNER.
C. DO NOT STORE OR PERMIT DEBRIS TO ACCUMULATE ON THE JOB SITE.
D. DO NOT BURN DEBRIS AT THE SITE.

6. DELETERIOUS MATERIALS

MATERIALS CONTAINING AN EXCESS OF 5% (BY WEIGHT) OF VEGETATION OR OTHER DELETERIOUS MATTER MAY BE UTILIZED IN AREAS OF LANDSCAPING OR OTHER NON-STRUCTURAL FILLS. DELETERIOUS MATERIAL INCLUDES ALL VEGETATIVE AND NON-MINERAL MATTER, AND ALL NON-REDUCIBLE STONE, RUBBLE AND/OR MINERAL MATTER OF GREATER THAN 6 INCHES.

7. UTILITY TRENCHES

A. A SELECT, NONCORROSIVE, GRANULAR, EASILY COMPACTED MATERIAL SHOULD BE USED AS BEDDING AND SHADING IMMEDIATELY AROUND UTILITY PIPES. THE SITE SOILS MAY BE USED FOR TRENCH BACKFILL ABOVE THE SELECT MATERIAL. IF OBTAINING COMPACTION IS DIFFICULT WITH THE SITE SOILS, USE OF A MORE EASILY COMPACTED SAND MAY BE DESIRABLE. THE UPPER FOOT OF BACKFILL IN LANDSCAPED OR OTHER OPEN AREAS SHOULD CONSIST OF NATIVE MATERIAL TO REDUCE THE POTENTIAL FOR SEEPAGE OF WATER INTO THE BACKFILL.
B. TRENCH BACKFILL IN THE UPPER 12 INCHES OF SUBGRADE BENEATH AREAS TO RECEIVE PAVEMENT SHOULD BE COMPACTED TO A MINIMUM OF 95 PERCENT OF MAXIMUM DRY DENSITY. TRENCH BACKFILL IN OTHER AREAS SHOULD BE COMPACTED TO A MINIMUM OF 90 PERCENT OF MAXIMUM DRY DENSITY. JETTING OF UTILITY TRENCH BACKFILL SHOULD NOT BE ALLOWED.

8. PIPE INSTALLATION

8.1. GENERAL
PIPE SHALL BE JOINED BY SOCKET TYPE SOLVENT-WELDED FITTINGS OR THREADED FITTINGS. PLASTIC PIPE SHALL BE CUT SQUARE, EXTERNALLY CHAMFERED APPROXIMATELY 10 TO 15 DEGREES, AND ALL BURRS AND FINS REMOVED. SOLVENT-WELDED JOINTS SHALL BE MADE IN ACCORDANCE WITH ASTM D 2855. THE SOLVENT RECOMMENDED BY THE MANUFACTURER SHALL BE USED.

CARE SHALL BE EXERCISED IN ASSEMBLING A PIPELINE WITH SOLVENT WELDED JOINTS SO THAT STRESS ON PREVIOUSLY MADE JOINTS IS AVOIDED. HANDLING OF THE PIPES FOLLOWING JOINTING, SUCH AS LOWERING THE ASSEMBLED PIPELINE INTO THE TRENCH, SHALL NOT OCCUR PRIOR TO THE SET TIMES SPECIFIED BY THE MANUFACTURER.
SOLVENTS SHALL BE APPLIED TO PIPE ENDS IN SUCH A MANNER THAT NO MATERIAL IS DEPOSITED ON THE INTERIOR SURFACE OF THE PIPE OR EXTRUDED INTO THE INTERIOR OF THE PIPE DURING JOINTING. EXCESS CEMENT ON THE EXTERIOR OF THE JOINT SHALL BE WIPED CLEAN IMMEDIATELY AFTER ASSEMBLY.

THREADED PIPE JOINTS SHALL BE MADE USING TEFLON TAPE OR OTHER APPROVED JOINTING MATERIAL. SOLVENT SHALL NOT BE USED WITH THREADED JOINTS. PLASTIC PIPE WHICH HAS BEEN NICKED, SCARRED, OR OTHERWISE DAMAGED SHALL BE REMOVED AND REPLACED. PLASTIC PIPE SHALL BE SNAKED FROM SIDE TO SIDE IN THE TRENCH TO ALLOW 1 FOOT OF EXPANSION AND CONTRACTION PER 100 FEET OF STRAIGHT RUN.
THE PIPELINE SHALL NOT BE EXPOSED TO WATER FOR 24 HOURS AFTER THE LAST SOLVENT-WELDED JOINT IS MADE.

8.2 GRAVITY PIPE
GRAVITY PIPE FOR WASTEWATER SHALL PROVIDE 2 FT VERTICAL AND 10 FT HORIZONTAL CLEARANCE FROM WATER LINES, AND SHALL CROSS SUCH LINES AS NEARLY AS POSSIBLE TO 90 DEGREES, IF CROSSING CAN NOT BE AVOIDED.

PIPE SLOPES SHALL NOT BE LESS THAN 2% FOR 4"Ø PIPE. PIPES SHALL ENTER AND LEAVE CONNECTIONS AS CLOSE TO PARALLEL AS POSSIBLE, BUT IN NO WAY TO EXCEED AN ANGLE OF 45°. 90° TEE CONNECTIONS ARE NOT ALLOWED.

8.3 GENERAL TRENCHING
EXCAVATION OF PIPE TRENCHES SHALL FOLLOW NEAT AND PARALLEL LINES, WITH TRENCH WIDTH, IN GENERAL, TO BE ONE FOOT, WITH SUCH WIDENING, AS REQUIRED TO PLACE VALVES AND FITTINGS WITH A MINIMUM OF 4 INCH CLEARANCE TO TRENCH WALL. THE TRENCH SHALL BE NO LESS THAN 24 INCHES DEEP, EXCEPT WHEN IT IS NECESSARY, TO AVOID UNDERGROUND OBSTRUCTIONS OR ROCKY CONDITIONS. IN ALL CASES, THE PIPE SHALL BE PLACED ON A BEDDING OF IMPORTED OR NATIVE MATERIAL PROVIDING CONTINUOUS SUPPORT THROUGHOUT ITS LENGTH.

BACKFILL FOR THE PIPE TO THE TOP OF THE PIPE PLUS 4 INCHES SHALL BE SELECTED OR IMPORTED SANDY MATERIAL, FREE OF STONE, CLAY, LIMBS OR OTHER DELETERIOUS MATERIALS IN EXCESS OF 1/2 INCH MAXIMUM DIMENSION, PLACED AND TAMPED AND/OR PADDLED ABOUT THE PIPE TO ENSURE PROPER BEDDING PRIOR TO COMPLETION OF TRENCH FILL. THE REMAINING BACKFILL SHALL BE PLACED AT 90% RELATIVE COMPACTION.

9. FLUSHING AND TESTING

AFTER COMPLETION, ALL PIPELINES SHALL BE THOROUGHLY FLUSHED TO REMOVE DIRT, SCALE, OR OTHER MATERIAL. AFTER FLUSHING, THE LINE SHALL BE PRESSURE TESTED. ALL EQUIPMENT, MATERIALS AND LABOR NECESSARY TO PERFORM THE TESTS SHALL BE FURNISHED BY THE CONTRACTOR AND ALL TESTS SHALL BE CONDUCTED IN THE PRESENCE OF THE OWNER OR ENGINEER.

THE CONTRACTOR SHALL PERFORM A TEST TO DEMONSTRATE THAT THE TANKS AND BASINS ARE WATER TIGHT. THE INLET AND OUTLET PIPES OF THE TANKS SHALL BE CAPPED AND THE TANKS SHALL BE COMPLETELY FILLED WITH WATER. THE WATER LEVEL SHALL REMAIN CONSTANT FOR MORE THAN 24 HOURS, OR DURATION BY THE REVIEWING AGENCY JURISDICTION, WHICHEVER IS GREATER, TO DETERMINE IF IT IS WATER TIGHT.

10. OPERATIONAL TEST

THE PERFORMANCE OF ALL COMPONENTS OF THE SYSTEMS SHALL BE EVALUATED BY THE CONTRACTOR.

DURING THE TEST PERIOD AND AT LEAST 15 DAYS PRIOR TO FINAL INSPECTION, THE SYSTEM SHALL OPERATE SATISFACTORILY DURING SUCH PERIOD. ALL NECESSARY REPAIRS, REPLACEMENTS, AND ADJUSTMENTS SHALL BE MADE UNTIL ALL EQUIPMENT, ELECTRICAL WORK, CONTROLS, AND INSTRUMENTATION ARE FUNCTIONING IN ACCORDANCE WITH THE CONTRACTORS DOCUMENTS OR MANUFACTURER SPECIFICATIONS.

11. AS-BUILT DRAWINGS

THE CONTRACTOR SHALL PROVIDE THE OWNER WITH A SET OF AS-BUILT DRAWINGS OF THE LAYOUT AND CONSTRUCTION OF THE SYSTEM.

12. OTHER ITEMS

ANY PROCEDURES NOT NOTED OR INCLUDED IN THE ENGINEERING PLANS OR SPECIFICATIONS SHALL BE APPROVED BY THE PROJECT ENGINEER PRIOR TO IMPLEMENTATION.

EROSION CONTROL NOTES:

GENERAL. THE CONTRACTOR SHALL INSTALL, MAINTAIN AND INSPECT EROSION CONTROL AND TEMPORARY STORMWATER CONTROL MEASURES TO CONTROL SEDIMENT AND RUNOFF IN ACCORDANCE WITH THESE PLANS AND THE LOCAL JURISDICTION.

1.1. THE CONSTRUCTION OF THIS PROJECT IS NOT EXPECTED TO OCCUR DURING THE WINTER SEASON (OCTOBER 15TH THROUGH APRIL 15TH).

1.2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR EROSION AND SEDIMENT CONTROL BMP INSTALLATION AND MAINTENANCE.

1.3. ALL GRADING SHALL CONFORM TO THE LOCAL GRADING ORDINANCE, EROSION CONTROL ORDINANCES, AND CALIFORNIA BUILDING CODE.

1.4. ALL DISTURBED SURFACES SHALL BE PREPARED AND MAINTAINED TO CONTROL EROSION AND TO ESTABLISH NATIVE OR NATURALIZED VEGETATIVE GROWTH COMPATIBLE WITH THE AREA. THIS CONTROL SHALL CONSIST OF: A. EFFECT TEMPORARY PLANTING SUCH AS RYE GRASS, SOME OTHER FAST-GERMINATION SEED, AND MULCHING WITH STRAW AND/OR OTHER SLOPE STABILIZATION MATERIAL; B) PERMANENT PLANTING OF NATIVE OR NATURALIZED DROUGHT RESISTANT SPECIES OF SHRUBS, TREES, OR OTHER VEGETATION, PURSUANT TO THE COUNTY'S LANDSCAPE CRITERIA, WHEN THE PROJECT IS COMPLETED; C) MULCHING, FERTILIZING, WATERING OR OTHER METHODS MAY BE REQUIRED TO ESTABLISH NEW VEGETATION, ON SLOPES LESS THAN 20%, TOPSOIL SHOULD BE STOCKPILED AND REAPPLIED.

SEED AND MULCH. ALL AREAS ON- AND OFF-SITE EXPOSED DURING CONSTRUCTION ACTIVITIES, IF NOT PERMANENTLY LANDSCAPED PER PLAN, SHALL BE PROTECTED BY MULCHING AND/OR HAND BROADCASTING OF THE FOLLOWING STERIL, WEED FREE, SEED MIX AND INCORPORATED OVER ALL DISTURBED SLOPES:

BROMUS CARINATUS 10#/ACRE
LEYMUS TRITICOIDES 8#/AC.
HORDEUM BRACHYANTHERUM 5#/AC.
FESTUCA RUBRA 8#/AC.
DESCHAMPSIA CESPITOSA 8#/AC.

THE MIX/APPLICATION SHALL ALSO CONTAIN:
- FERTILIZER (6-3-3) SHALL BE HAND BROADCAST AND INCORPORATED AT 30-LB/ACRE OVER ENTIRE AREA.
- MYCHORRHIZAL FUNGI SHALL BE ADDED AT 50 LB/ ACRE.
- IF HYDROSEEDING, ADD MULCH AND TACKIFIER TO ABOVE.

ALL EXCAVATED MATERIAL SHALL BE REMOVED TO AN APPROVED DISPOSAL SITE OR DISPOSED OF ON-SITE IN A MANNER THAT WILL NOT CAUSE EROSION.

CONCRETE WASHOUT. TEMPORARY CONCRETE WASHOUT FACILITIES SHALL BE LOCATED A MINIMUM OF 50 FEET FROM STORM DRAIN INLETS, OPEN DRAINAGE FACILITIES, AND WATERCOURSES. THE CONCRETE WASHOUT FACILITY SHALL BE BELOW GRADE AND CONSTRUCTED WITH A MINIMUM LENGTH AND MINIMUM WIDTH OF 10 FEET. TEMPORARY CONCRETE FACILITIES SHALL BE CONSTRUCTED AND MAINTAINED IN SUFFICIENT QUANTITY AND SIZE TO CONTAIN ALL LIQUID AND CONCRETE WASTE GENERATED BY WASHOUT OPERATIONS. THE WASHOUT SHALL HAVE A 10 MIL POLYETHYLENE PLASTIC LINER. WHEN CONCRETE WASHOUT FACILITIES ARE NO LONGER REQUIRED FOR THE WORK, THE HARDENED CONCRETE AND MATERIALS FOR THE WASHOUT SHALL BE REMOVED AND DISPOSED OF. HOLES, DEPRESSIONS, OR OTHER GROUND DISTURBANCES CAUSED BY THE REMOVAL OF THE CONCRETE WASHOUT SHOULD BE BACKFILLED AND REPAIRED.

OTHER PROVISIONS. IF CONSTRUCTION OCCURS BETWEEN OCTOBER 15TH AND APRIL 15TH, EXPOSED SOIL NOT INVOLVED IN IMMEDIATE CONSTRUCTION ACTIVITY SHALL BE PROTECTED FROM EROSION AT ALL TIMES. AFTER APRIL 15TH, EROSION CONTROL MEASURES SHALL BE IN PLACE DURING INCLEMENT WEATHER.

EROSION CONTROL MEASURES SHALL BE KEPT IN PLACE BY THE CONTRACTOR UNTIL NATIVE VEGETATION HAS BEEN ESTABLISHED AND PROVIDES NECESSARY SLOPE COVER (MINIMUM 70% COVER).

PRELIMINARY PLANS: NOT FOR CONSTRUCTION

WASTEWATER SYSTEM SPECIFICATIONS

REGAN VINEYARDS WINERY
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PEM	PEM
Project No.	Scale
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No.	Revision/Issue	Date