“F”

Graphics

Kallweit Residence P20-00100
Zoning Administrator Hearing Date June 30, 2021

PROJECT MATERIALS

SHEET METAL FASCIA: Δ1
AEP Span "Zinc Gray" Non-reflective

WINDOWS & DOORS
Fleetwood "Class I Black"
Glass to have non-reflective coating

STUCCO COLOR:
Benjamin Moore "Plymouth Rock"

CEMENT BOARD SIDING COLOR:
Benjamin Moore "Kendall Charcoal"

Δ1

ROOF:
Single membrane roof "Gray" Low reflectivity
Flat roof only visible from site when entering

EXTERIOR LIGHTING

L1
See sheet A1.1 for locations

NORA 4" RECESSED WET LOCATION DOWNLIGHT

- TITLE 24 COMPLIANT
- UL LISTED WET
- LED 800 LUMENS 3000K
- FIXTURE SIZE: 4" DIAMETER

L2
See sheet A1.1 for locations

NORA 4" RECESSED WET LOCATION DOWNLIGHT

- ADJUSTABLE PINHOLE REFLECTOR
- TITLE 24 COMPLIANT
- UL LISTED WET
- LED 800 LUMENS 3000K
- FIXTURE SIZE: 2" DIAMETER

L3
See sheet A1.1 for locations

HINKLEY ATLANTIS OUTDOOR MINIPOCKET DOWNLIGHT

- EXTRUDED ALUMINUM
- DARK SKY COMPLIANT
- TITLE 24 COMPLIANT
- UL LISTED WET
- SATIN BLACK
- LED 600 LUMENS 3000K
- FIXTURE SIZE: 9" W x 6" H x 4.3" D

NOTE: EXTERIOR LIGHTS TO BE CONTROLLED BY PHOTOCELL AND TIME SWITCH

CODES Δ1

All construction shall comply with all local codes and ordinances and the codes listed below:

2019 California Residential Code: CRC
2019 California Mechanical Code: CMC
2019 California Electrical Code: CEC
2019 California Plumbing Code: CPC
2019 California Fire Code
2019 California Building Energy Standards
2019 California Building Code: CBC
2019 Green Building Standards

County of Napa Municipal Code

PROJECT TEAM

OWNER
Keith Kallweit
440 Wellsley
Mill Valley, CA 94941
Tel: 650-224-5367
k.kallweit@gmail.com

ARCHITECT OF RECORD
Polsky Perlstein Architects
469B Magnolia Avenue
Larkspur CA 94939
Tel: 415-927-1156 x306
Contact: Laura VanAmburgh
laura@polskyarchitects.com

STRUCTURAL ENGINEER
JDF Engineering
405 W College Ave #E
Santa Rosa CA 95401
Tel: 707-575-0911
Contact: Kelly Johnson
jdf0911@sonic.net

CIVIL ENGINEER
Sherwood Design Engineers
2548 Mission Street
San Francisco CA 94110
Tel: 707-799-8218
Contact: Cody Anderson
canderson@sherwoodengineers.com

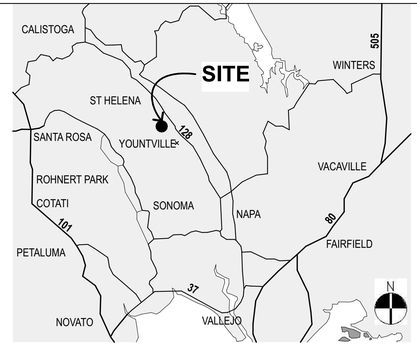
LANDSCAPE ARCHITECT
The Land Collaborative
26 Hamilton Drive, Suite A
Novato, CA 94949
Tel: 415-819-5263
Contact: Brett McPherson
bmcpherson@thelandcollaborative.com

SEPTIC ENGINEER
CMP Civil Engineering & Land Surveying Inc
1607 Capell Valley Road
Napa CA 94558
Tel: 707-512-0055
Contact: Joe Pridmore
joe@cmpengineering.com

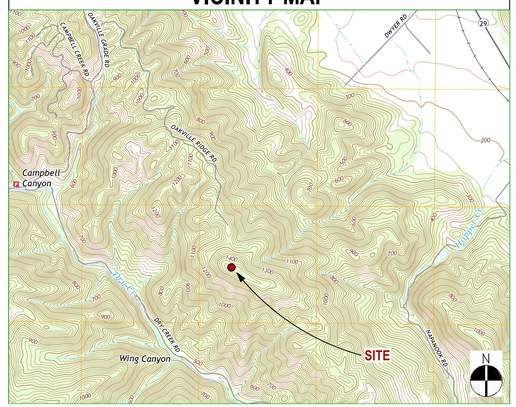
GEOTECHNICAL ENGINEER
PJC + Associates
600 Martin Avenue, Suite 210
Rohnert Park CA 94928
Tel: 707-584-4804
Contact: Patrick Conway
pat@pjcgeotech.com

SURVEYOR
CMP Civil Engineering & Land Surveying Inc
1607 Capell Valley Road
Napa CA 94558
Tel: 707-815-0988
Contact: Cameron Pridmore
cameron@cmpengineering.com

LOCATION MAP



VICINITY MAP



SCOPE OF WORK

CONSTRUCTION OF A NEW HOME, INCLUDING DETACHED GARAGE, DETACHED GYM BUILDING, NEW TERRACES, SWIMMING POOL, DRIVEWAY, PATHS & LANDSCAPE WALLS.

PROJECT DATA

Owners:	Keith Kallweit
Phone:	650-224-5367
Address:	Oakville Ridge Rd
Zoning Designation:	AW
Assessor's Parcel Number:	027-340-024
Actual Site Area (acres):	46.36
Occupancy Type:	R-3 (single family) & U-1 (garage)
Construction Type:	V-B fully sprinklered
Latitude	38.400938
Longitude	-122.413109

	Zoning Req't.		Existing Bldgs.		Proposed Project	
Floor Areas (SF)						
House						
Main Floor	3000		0		2,998	
Basement			0		223	
Gym			0		621	
Garage			0		1,132	
Total Floor Areas			0		4974	
Building Height						
House	35'		0		18'-4"	
Setbacks						
Front/East	NA		0		117'-5	
Side/South	NA		0		17'-8"	
Side/West	NA		0		13'-1"	
Side/North	NA		0		94'-11"	
Parking						
Required spaces	2	Δ1	0		Δ1 11	

INDEX OF DOCUMENTS

POLSKY PERLSTEIN ARCHITECTS
469B Magnolia Avenue
Larkspur CA 94939
Phone 415.927.1156
Fax 415.927.1667
www.polskyarchitects.com

KALLWEIT RESIDENCE

OAKVILLE RIDGE ROAD
NAPA CA
AP# 027-340-024

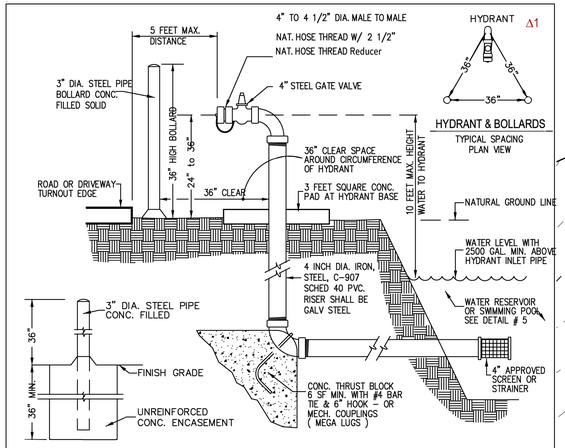
LICENSED ARCHITECT
JARED LEWIS POLSKY
No. C 14125
REN. 7-31-21
STATE OF CALIFORNIA

DATE	Δ	DESCRIPTION	BY
12 MAR '20		VIEWSHED APP	LV
13 JULY '20	Δ1	VIEWSHED REVISED	LV
11 NOV '20	Δ2	VIEWSHED REVISED	LV

PLOT DATE	11/18/20
DRAWN	LV
JOB #	1901
SCALE	

PROJECT INFORMATION

SHEET
A0.1



GUARD POST / BOLLARD
SECTION VIEW

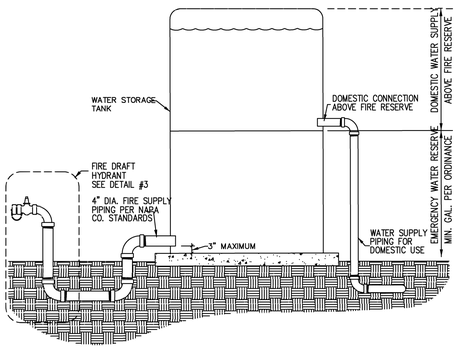
NOTES

- ALL DRAFT HYDRANTS SHALL BE "WET"
- LOCATION OF WET DRAFT HYDRANT SHALL BE BETWEEN 40' – 150' OF STRUCTURE, BUT NO CLOSER THAN 40 FEET.
- WATER STORAGE REQUIRED FOR DOMESTIC PURPOSES SHALL BE IN ADDITION TO THE REQUIRED STORAGE FOR FIRE PROTECTION. ALL PIPES OR VALVES FOR DOMESTIC WATER PURPOSES SHALL BE INSTALLED ABOVE THE LEVEL REQUIRED FOR FIRE PROTECTION. SEE WATER TANK DETAIL #4.
- A "BLUE DOT" REFLECTOR SHALL BE LOCATED ADJACENT TO WET DRAFT FIRE HYDRANT.
- WET DRAFT HYDRANT CONNECTION SHALL BE WITH IN 5 FEET OF DRIVEWAY TURNAROUND OR ROADWAY AND TO NOT BLOCK EGRESS/INGRESS.
- FIRE HYDRANT SHALL BE PAINTED "RED" AND SIGNAGE POSTED ON THE HYDRANT TO READ "WET DRAFT" IN ONE INCH MINIMUM HIGH WHITE LETTERS.

WET DRAFT HYDRANT	FIRE SAFE STANDARDS
CAL FIRE Napa County Fire Department	DATE: FEBRUARY 2016 REVISED: 01/2016 APPROVED 3

WATER TANK NOTES Δ1

- NO BUILDING PERMIT IS REQUIRED FOR WATER TANKS SUPPORTED DIRECTLY ON GRADE IF IT IS LESS THAN 5,000 GALLONS AND THE RATIO OF HEIGHT TO DIAMETER OR WIDTH DOES NOT EXCEED 2:1. FOR TANKS THAT DO NO MEET THE ABOVE A BUILDING PERMIT AND CONCRETE FOUNDATION IS REQUIRED.

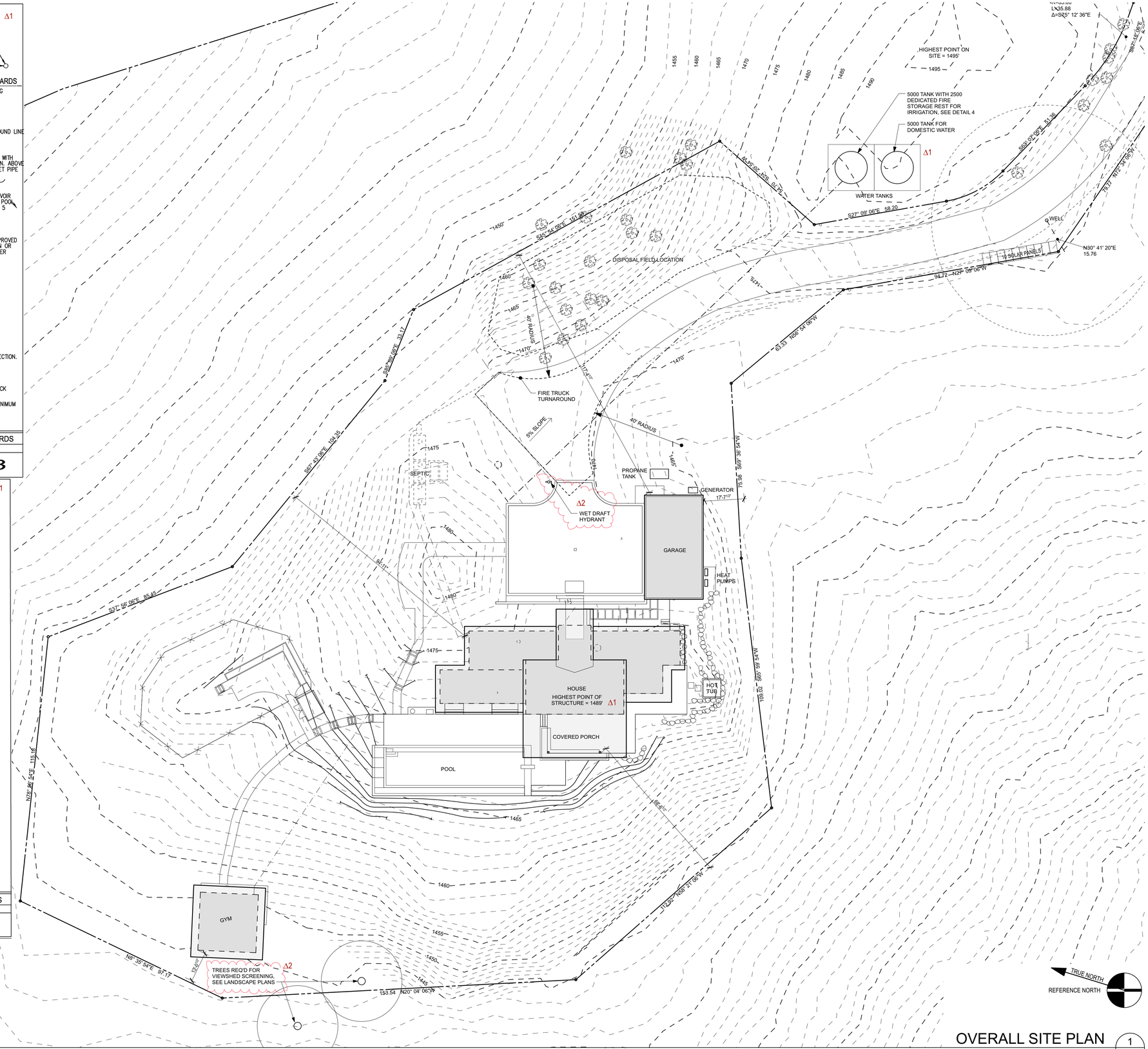


WATER STORAGE TANK

WATER SUPPLY NOTES

- FOR WATER TANK STORAGE CAPACITY REQUIREMENTS REFER TO NAPA COUNTY AMENDMENTS TO C.F.C. 2016
- WHEN MULTIPLE WATER TANKS ARE UTILIZED TO ACHIEVE THE REQUIRED VOLUME OF WATER, THE CONNECTION BETWEEN THE TANKS SHALL BE BY AN APPROVED 4" DIA. WATER LINE.

RESIDENTIAL WATER SUPPLY FROM TANK	FIRE SAFE STANDARDS
CAL FIRE Napa County Fire Department	DATE: FEBRUARY 2016 REVISED: 01/2016 APPROVED 4



OVERALL SITE PLAN
SCALE: 1" = 20'
1 A1.0

POLSKY PERLSTEIN ARCHITECTS
4698 Magnolia Avenue
Larkspur CA 94939
Phone 415 927 1135
Fax 415 927 1186
www.polskyarchitects.com

KALLWEIT RESIDENCE

OAKVILLE RIDGE ROAD
NAPA CA
AP# 027-340-024

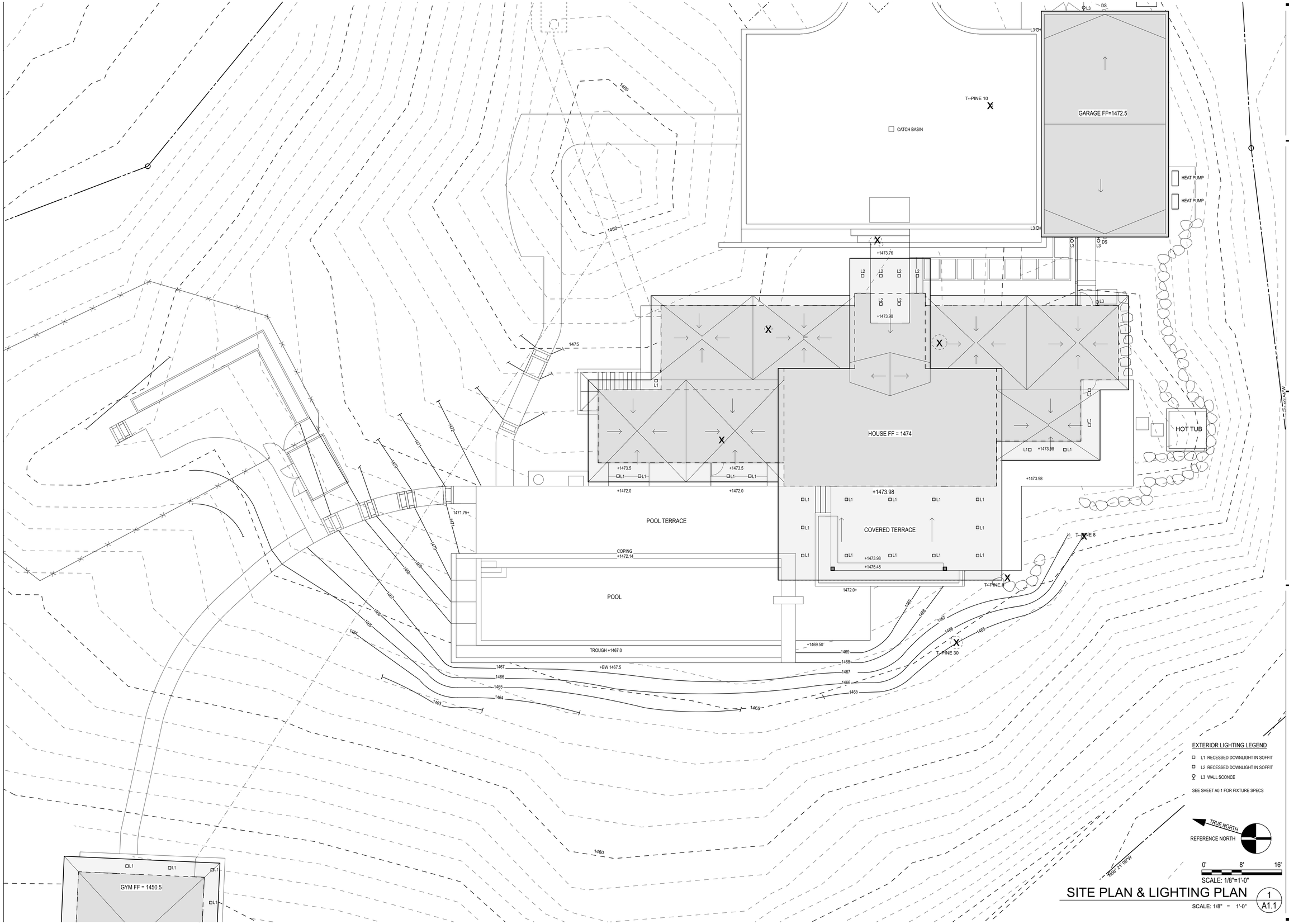
LICENSED ARCHITECT
MIKEL LEWIS POLSKY
No. C 14125
EXP. 7-31-21
STATE OF CALIFORNIA

DATE	Δ	DESCRIPTION	BY
12 MAR '20		VIEWSHED APP	LV
13 JULY '20	Δ1	VIEWSHED REVISED	LV
11 NOV '20	Δ2	VIEWSHED REVISED	LV

PLOT DATE	11/18/20
DRAWN	LV
JOB #	1901
SCALE	

SITE PLAN 1" = 20'

SHEET
A1.0



POLSKY PERLSTEIN ARCHITECTS
4698 Magnolia Avenue
Larkspur, CA 94939
Phone 415 927 1135
Fax 415 927 1667
www.polskyarchitects.com

KALLWEIT RESIDENCE

OAKVILLE RIDGE ROAD
NAPA CA
AP# 027-340-024

LICENSED ARCHITECT
MICHAEL LEWIS POLSKY
No. C 14125
REN. 7-31-21
STATE OF CALIFORNIA

DATE	Δ	DESCRIPTION	BY
12 MAR '20		VIEWSHED APP	LV
13 JULY '20	Δ1	VIEWSHED REVISED	LV
11 NOV '20	Δ2	VIEWSHED REVISED	LV

PLOT DATE	11/18/20
DRAWN	LV
JOB #	1901
SCALE	

EXTERIOR LIGHTING LEGEND

- L1 RECESSED DOWNLIGHT IN SOFFIT
- L2 RECESSED DOWNLIGHT IN SOFFIT
- L3 WALL SCONCE

SEE SHEET A0.1 FOR FIXTURE SPECS

TRUE NORTH
REFERENCE NORTH
RIDGE 21.06°W

0' 8' 16'
SCALE: 1/8"=1'-0"

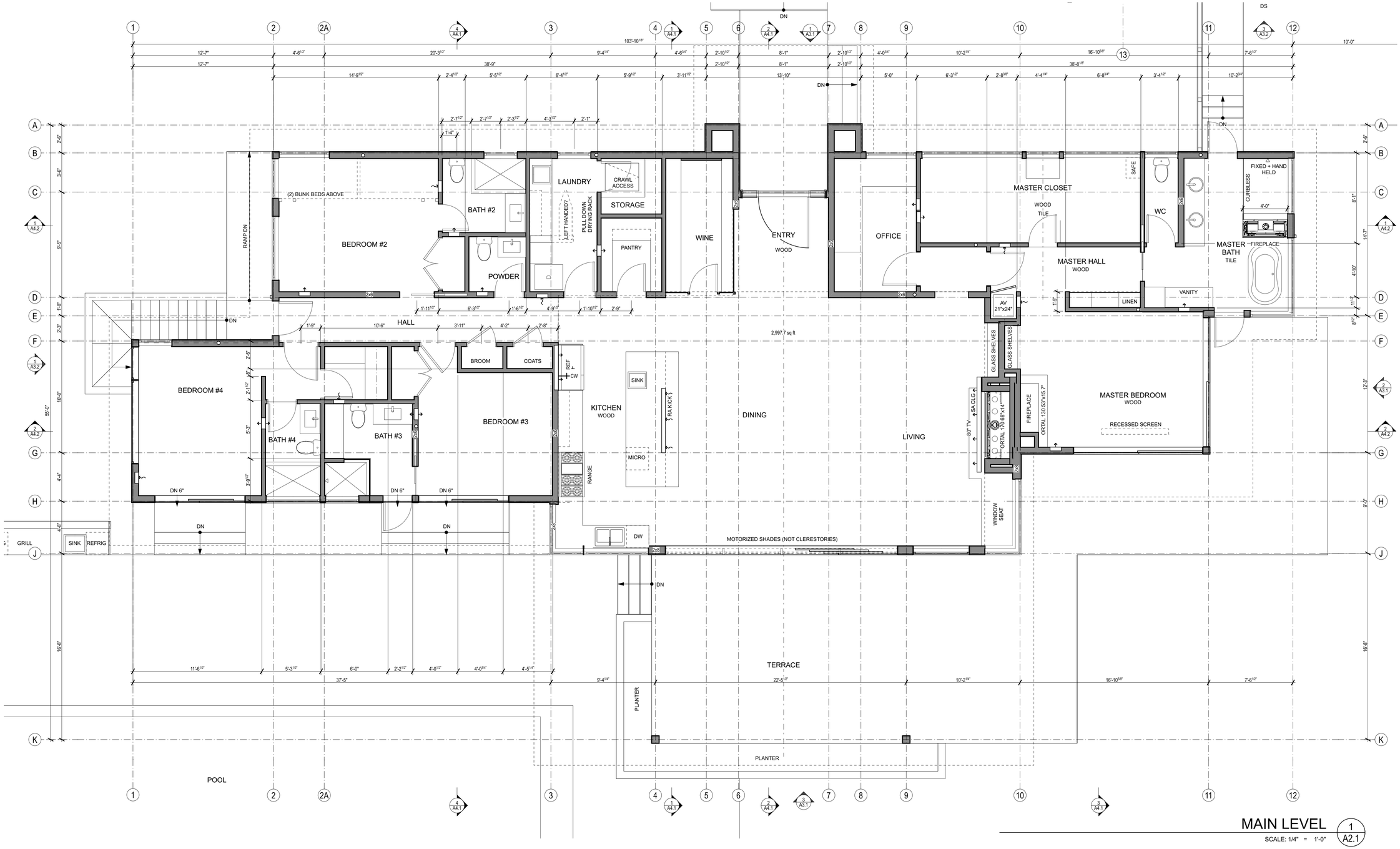
SITE PLAN & LIGHTING PLAN

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

1
A1.1

SITE PLAN 1/8"

SHEET
A1.1



MAIN LEVEL (1 / A2.1)

SCALE: 1/4" = 1'-0"

TRUE NORTH
REFERENCE NORTH

0' 4' 8'

SCALE: 1/4"=1'-0"

POLSKY PERLSTEIN ARCHITECTS
4698 Magnolia Avenue
Larkspur CA 94939
Phone 415 927 1135
Fax 415 927 1866
www.polskyarchitects.com

KALLWEIT RESIDENCE

OAKVILLE RIDGE ROAD
NAPA CA
AP# 027-340-024

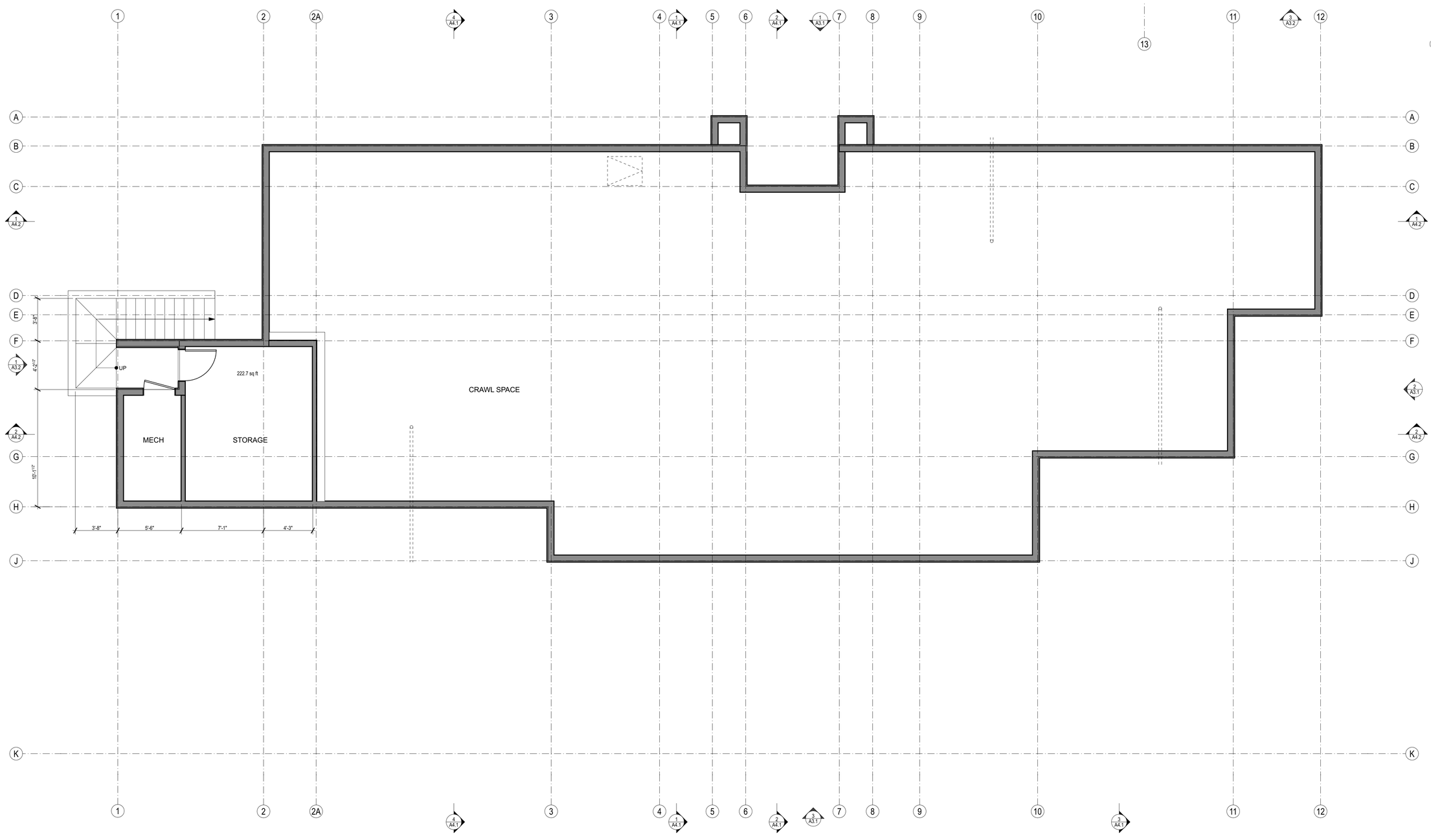
LICENSED ARCHITECT
ARIEL LEWIS POLSKY
NO. C 14125
REN. 7-31-21
STATE OF CALIFORNIA

DATE	Δ	DESCRIPTION	BY
12 MAR '20		VIEWSHED APP	LV
13 JULY '20	Δ1	VIEWSHED REVISED	LV
11 NOV '20	Δ2	VIEWSHED REVISED	LV

PLOT DATE	11/18/20
DRAWN	LV
JOB #	1901
SCALE	

MAIN FLOOR PLAN

SHEET
A2.1



LOWER FLOOR & CRAWL SPACE PLAN

SCALE: 1/4" = 1'-0"

1 / A2.2

TRUE NORTH

REFERENCE NORTH

0' 4' 8'

SCALE: 1/4"=1'-0"

POLSKY PERLSTEIN ARCHITECTS

4698 Magnolia Avenue
Larkspur, CA 94939
Phone 415 927 1135
Fax 415 927 1865
www.polskyarchitects.com

KALLWEIT RESIDENCE

OAKVILLE RIDGE ROAD
NAPA CA
AP# 027-340-024

LICENSED ARCHITECT
REGIS LEWIS POLSKY
No. C 14125
REN. 7-31-21
STATE OF CALIFORNIA

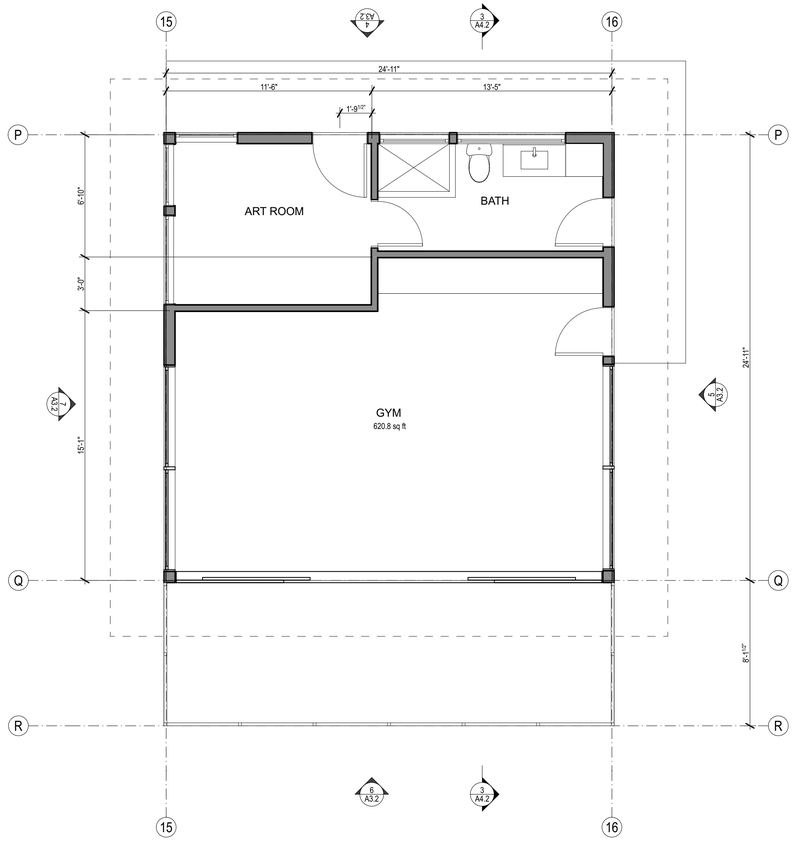
DATE	Δ	DESCRIPTION	BY
12 MAR '20		VIEWSHED APP	LV
13 JULY '20	Δ1	VIEWSHED REVISED	LV
11 NOV '20	Δ2	VIEWSHED REVISED	LV

PLOT DATE	11/18/20
DRAWN	LV
JOB #	1901
SCALE	

LOWER FLOOR & CRAWL SPACE PLAN

SHEET

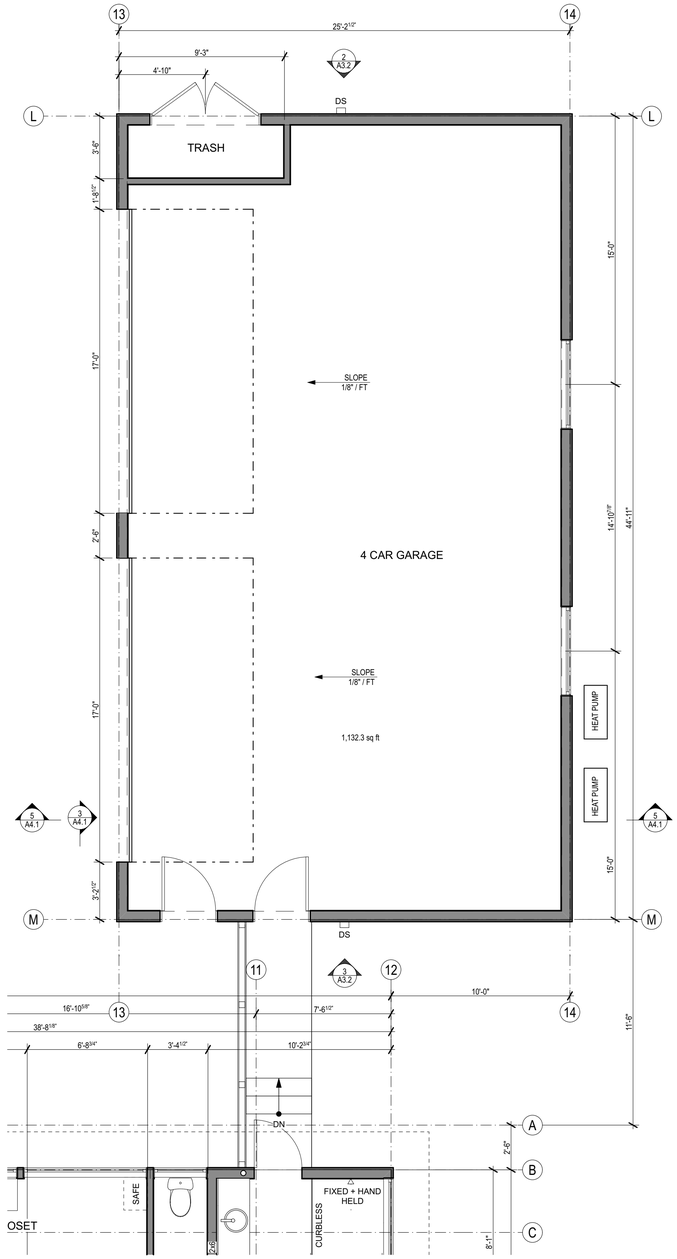
A2.2



GYM FLOOR PLAN

SCALE: 1/4" = 1'-0"

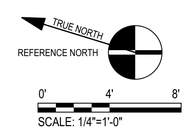
2 A2.3



GARAGE FLOOR PLAN

SCALE: 1/4" = 1'-0"

1 A2.3



SCALE: 1/4"=1'-0"

POLSKY PERLSTEIN ARCHITECTS
4698 Magnolia Avenue
Larkspur CA 94939
Phone 415 927 1135
Fax 415 927 1667
www.polskyarchitects.com

KALLWEIT RESIDENCE

OAKVILLE RIDGE ROAD
NAPA CA
AP# 027-340-024

LICENSED ARCHITECT
ANGELO LEWIS POLSKY
No. C 14125
REN. 7-31-21
STATE OF CALIFORNIA

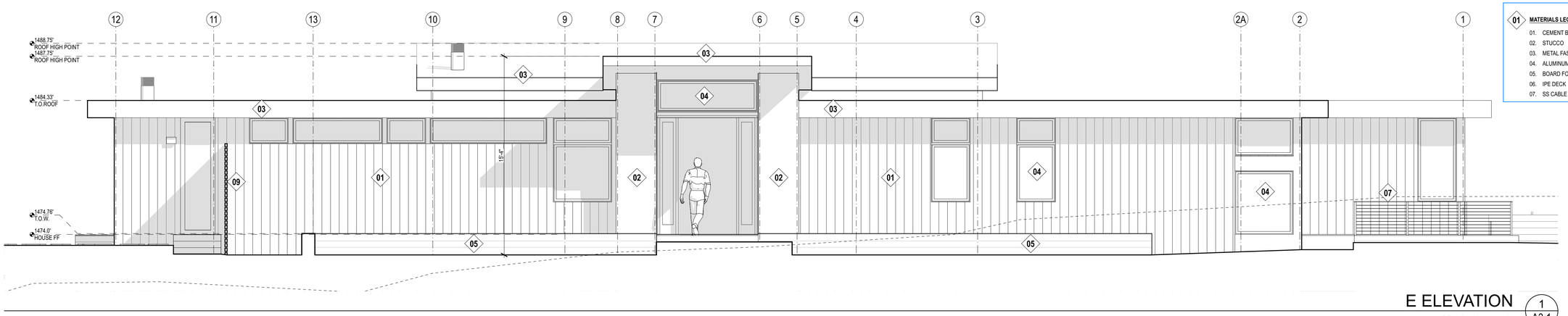
DATE	Δ	DESCRIPTION	BY
12 MAR '20		VIEWSHED APP	LV
13 JULY '20	Δ1	VIEWSHED REVISED	LV
11 NOV '20	Δ2	VIEWSHED REVISED	LV

PLOT DATE	11/18/20
DRAWN	LV
JOB #	1901
SCALE	

GARAGE + GYM PLANS

SHEET

A2.3

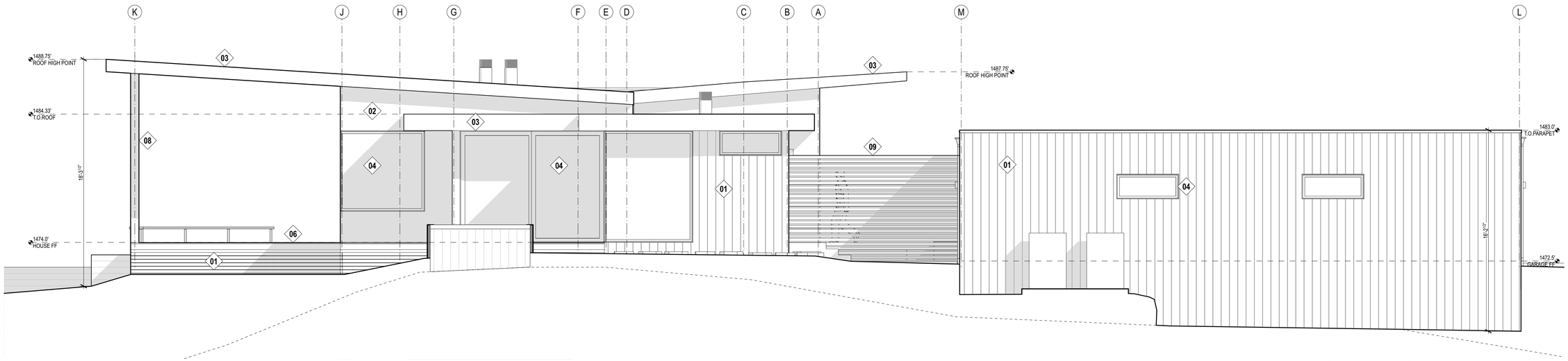


E ELEVATION (1 / A3.1)

SCALE: 1/4" = 1'-0"

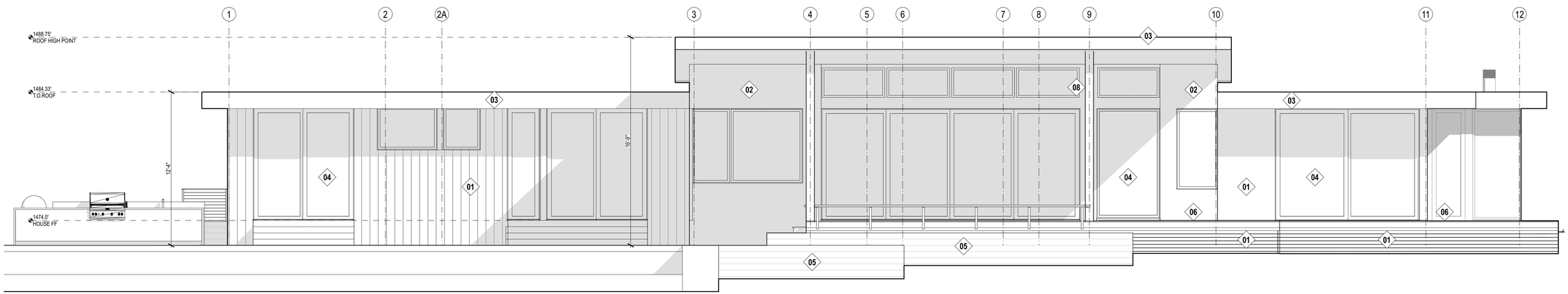
01 MATERIALS LEGEND:

01. CEMENT BOARD SIDING
02. STUCCO
03. METAL FASCIA
04. ALUMINUM WINDOWS & DOORS, TYP
05. BOARD FORMED CONCRETE
06. IPE DECK
07. SS CABLE RAILING



S ELEVATION (2 / A3.1)

SCALE: 1/4" = 1'-0"



W ELEVATION (3 / A3.1)

SCALE: 1/4" = 1'-0"

0' 4' 8'

SCALE: 1/4"=1'-0"

POLSKY PERLSTEIN ARCHITECTS
4698 Magnolia Avenue
Larkspur CA 94939
Phone 415 927 1135
Fax 415 927 1667
www.polskyarchitects.com

KALLWEIT RESIDENCE

OAKVILLE RIDGE ROAD
NAPA CA
AP# 027-340-024

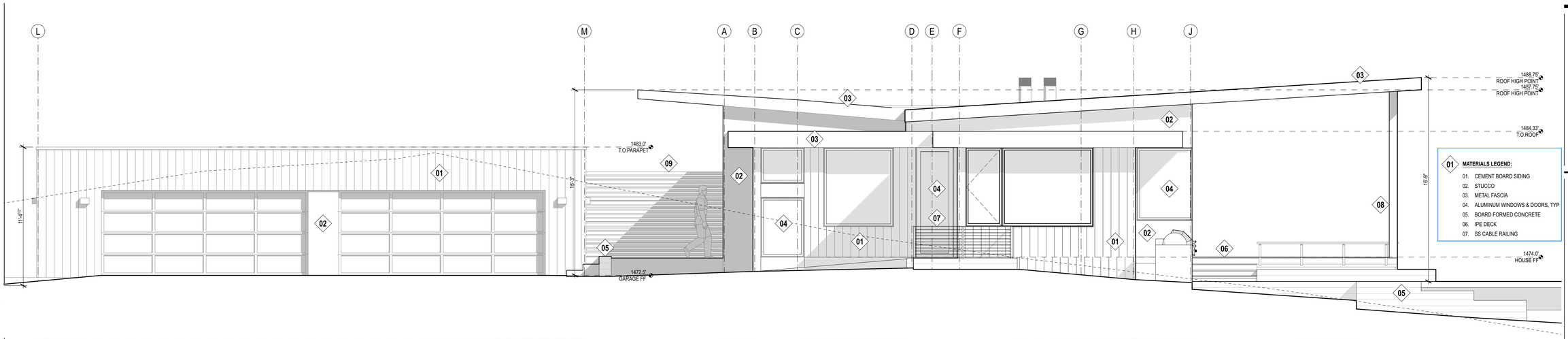
DATE	Δ	DESCRIPTION	BY
12 MAR '20		VIEWSHED APP	LV
13 JULY '20	Δ1	VIEWSHED REVISED	LV
11 NOV '20	Δ2	VIEWSHED REVISED	LV

PLOT DATE	11/18/20
DRAWN	LV
JOB #	1901
SCALE	

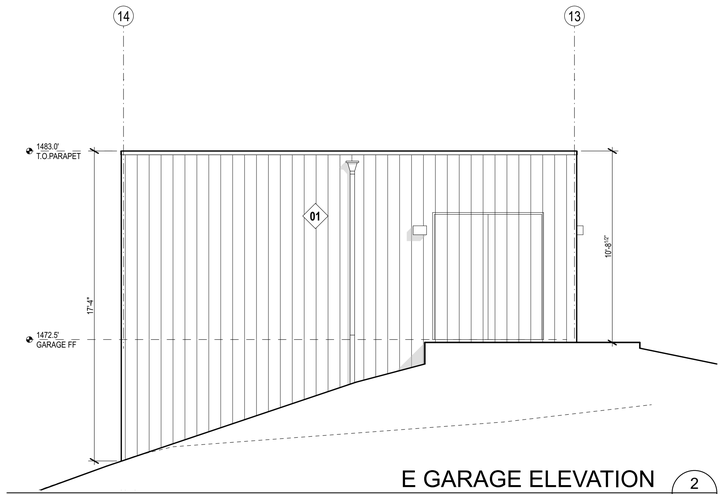
EXTERIOR ELEVATIONS

SHEET

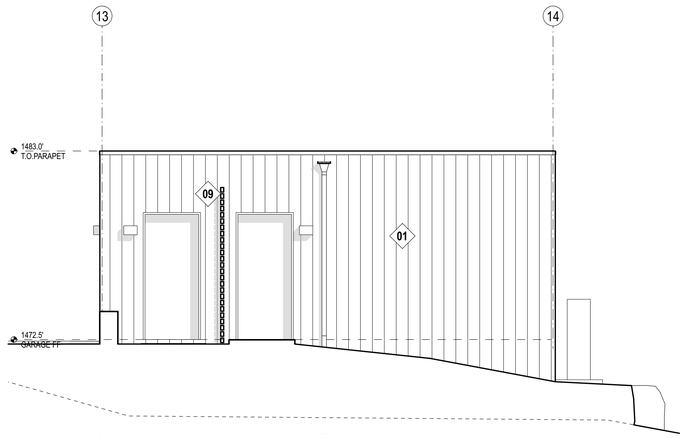
A3.1



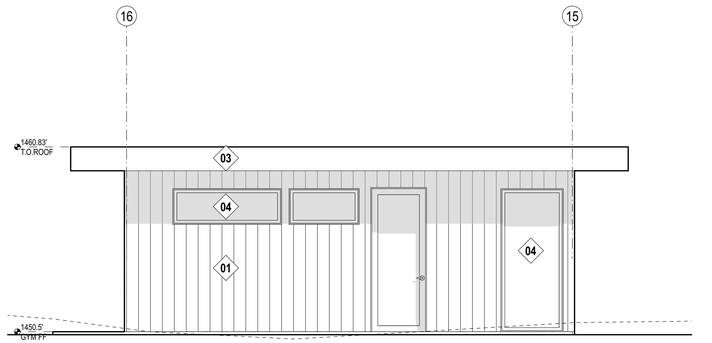
N ELEVATION (1 / A3.2)
SCALE: 1/4" = 1'-0"



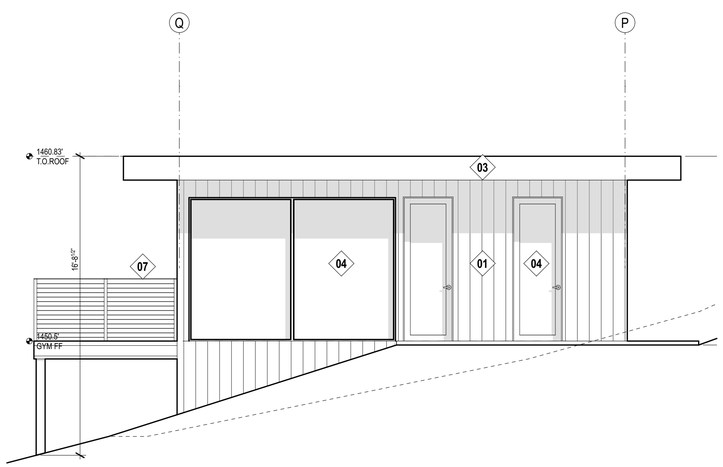
E GARAGE ELEVATION (2 / A3.2)
SCALE: 1/4" = 1'-0"



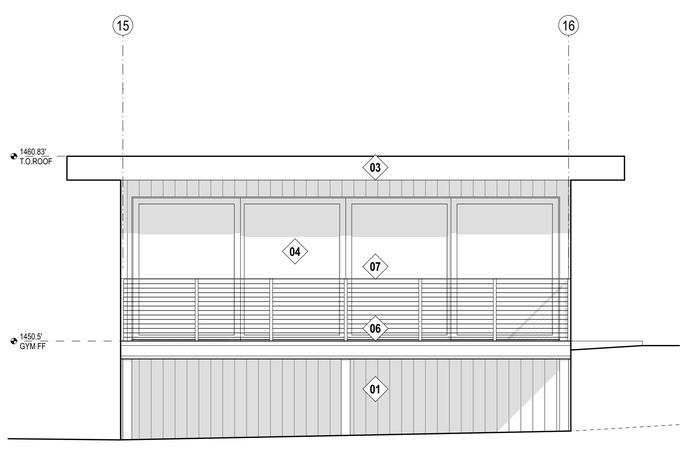
W GARAGE ELEVATION (3 / A3.2)
SCALE: 1/4" = 1'-0"



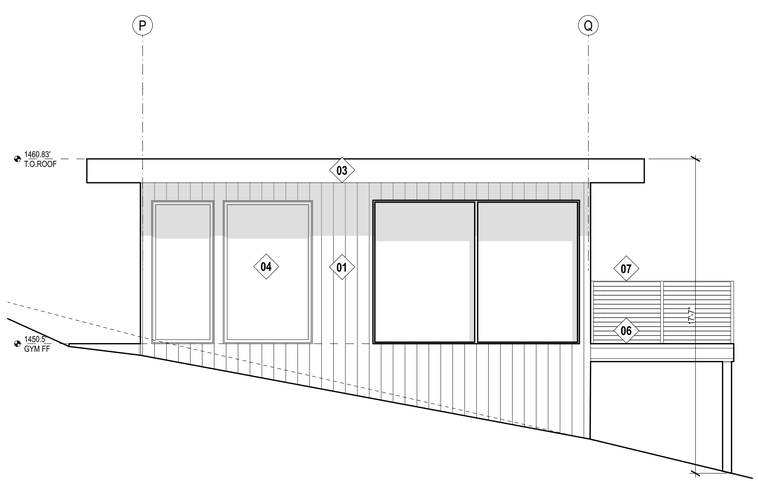
E GYM ELEVATION (4 / A3.2)
SCALE: 1/4" = 1'-0"



S GYM ELEVATION (5 / A3.2)
SCALE: 1/4" = 1'-0"



W GYM ELEVATION (6 / A3.2)
SCALE: 1/4" = 1'-0"



N GYM ELEVATION (7 / A3.2)
SCALE: 1/4" = 1'-0"

POLSKY PERLSTEIN ARCHITECTS
4698 Magnolia Avenue
Larkspur CA 94939
Phone 415 927 1135
Fax 415 927 1664
www.polskyarchitects.com

KALLWEIT RESIDENCE

OAKVILLE RIDGE ROAD
NAPA CA
AP# 027-340-024

LICENSED ARCHITECT
REED LEWIS POLSKY
No. C 14125
REN. 7-31-21
STATE OF CALIFORNIA

DATE	Δ	DESCRIPTION	BY
12 MAR '20		VIEWSHED APP	LV
13 JULY '20	Δ1	VIEWSHED REVISED	LV
11 NOV '20	Δ2	VIEWSHED REVISED	LV

PLOT DATE: 11/18/20
DRAWN: LV
JOB #: 1901
SCALE:

EXTERIOR ELEVATIONS

SHEET
A3.2

West Elevation 5 A3.3

East Elevation 1 A3.3

Southwest Elevation 6 A3.3

Northeast Elevation 2 A3.3

South elevation 7 A3.3

North Elevation 3 A3.3

Northwest Elevation of Gym 8 A3.3

Northwest Elevation 4 A3.3

POLSKY PERLSTEIN ARCHITECTS
4698 Magnolia Avenue
Larkspur, CA 94939
Phone 415 927 1135
Fax 415 927 1667
www.polskyarchitects.com

KALLWEIT RESIDENCE

OAKVILLE RIDGE ROAD
NAPA CA
AP# 027-340-024

LICENSED ARCHITECT
JARED LEWIS POLSKY
NO. C 14125
EXP. JUN. 7-31-21
STATE OF CALIFORNIA

DATE	Δ	DESCRIPTION	BY
12 MAR '20		VIEWSHED APP	LV
13 JULY '20	Δ1	VIEWSHED REVISED	LV
11 NOV '20	Δ2	VIEWSHED REVISED	LV

PLOT DATE	11/18/20
DRAWN	LV
JOB #	1901
SCALE	

3-D VIEWS

SHEET
A3.3

VICINITY MAP WIITH PROJECT SITE AND PHOTO VIEW LOCATIONS

VIEW 1 TAKEN FROM DRY CREEK ROAD LOOKING EAST

ZOOMED IN VIEW

POLSKY PERLSTEIN ARCHITECTS
4698 Magnolia Avenue
Larkspur, Ca 94939
Phone 415 927 1845
Fax 415 927 1848
www.polskyarchitects.com

KALLWEIT RESIDENCE

OAKVILLE RIDGE ROAD
NAPA CA
AP# 027-340-024

LICENSED ARCHITECT
JAMES LEWIS PERLSTEIN
No. C 14125
REN. 7-31-21
STATE OF CALIFORNIA

DATE	Δ	DESCRIPTION	BY
12 MAR '20		VIEWSHED APP	LV
13 JULY '20	Δ1	VIEWSHED REVISED	LV
11 NOV '20	Δ2	VIEWSHED REVISED	LV

PLOT DATE	11/19/20
DRAWN	LV
JOB #	1901
SCALE	

Δ2

VIEWSHED IMPACT SCREENING

SHEET

A3.4

ZOOMED IN VIEW

VIEW 2 TAKEN FROM MOUNT VEEDER ROAD
LOOKING NORTHEAST

ZOOMED IN VIEW

VIEW 3 TAKEN FROM MOUNT VEEDER ROAD
LOOKING NORTHEAST

POLSKY PERLSTEIN ARCHITECTS
4698 Magnolia Avenue
Larkspur, Ca 94939
Phone 415 927 1845
Fax 415 927 1847
www.polskyarchitects.com

KALLWEIT RESIDENCE

OAKVILLE RIDGE ROAD
NAPA CA
AP# 027-340-024

LICENSED ARCHITECT
JARED LEWIS POLSKY
NO. C 14125
EXP. JUNE, T-31-21
STATE OF CALIFORNIA

DATE	Δ	DESCRIPTION	BY
12 MAR '20		VIEWSHED APP	LV
13 JULY '20	Δ1	VIEWSHED REVISED	LV
11 NOV '20	Δ2	VIEWSHED REVISED	LV

PLOT DATE	11/19/20
DRAWN	LV
JOB #	1901
SCALE	

Δ2

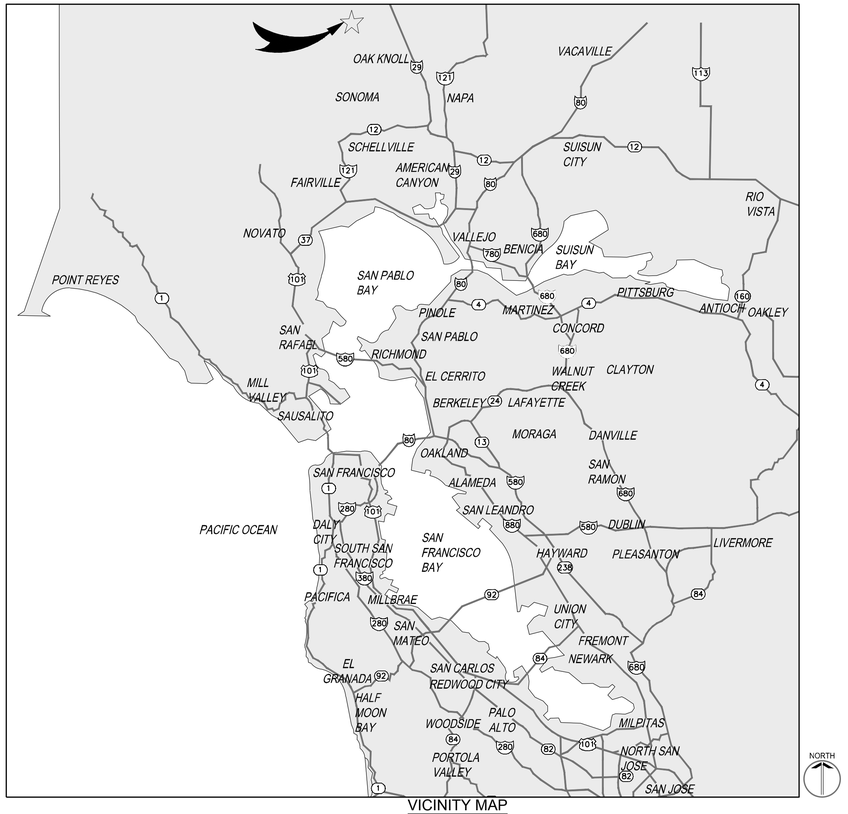
VIEWSHED IMPACT SCREENING

SHEET

A3.5

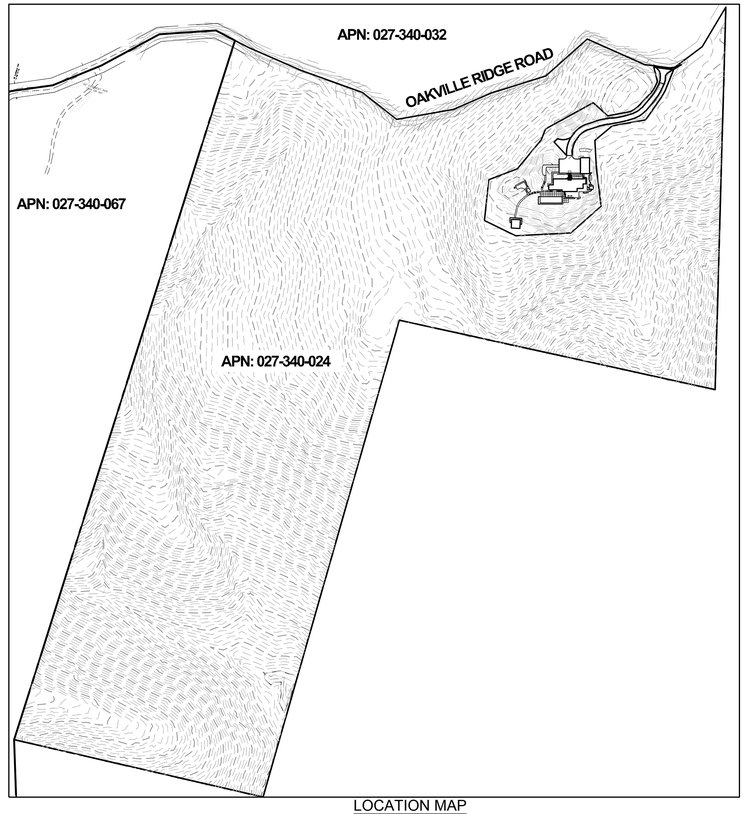
OAKVILLE RIDGE RESIDENCE

COUNTY OF NAPA, CALIFORNIA



VICINITY MAP

NTS



LOCATION MAP

SCALE: 1"=80'

ABBREVIATIONS

AB	AGGREGATE BASE
ABD	ABANDONED
AC	ASPHALT CONCRETE
AD	AREA DRAIN
ADA	AMERICANS WITH DISABILITIES ACT
BS	BOTTOM OF STEP
BW	BOTTOM OF WALL / BACK OF WALK
CB	CATCH BASIN
CF	CUBIC FEET
CL	CENTERLINE
CO	CLEAN OUT
CONC	CONCRETE
DEMO	DEMOLISH
DI	DRAINAGE INLET
DS	DOWN SPOUT
DW	DOMESTIC WATER
E	EAST
(E)	EXISTING
EB	ELECTRICAL BOX
EC	END CURVE
EL, ELEV	ELEVATION
ELEC	ELECTRIC
EP	EDGE OF PAVEMENT
EVA	EMERGENCY VEHICLE ACCESS
FC	FACE OF CURB
FFE	FINISHED FLOOR ELEVATION
FG	FINISH GRADE
FL	FLOWLINE
FS	FINISH SURFACE
FT	FEET
FW	FIRE WATER
G	GAS
GB	GRADE BREAK
GM	GAS METER
GV	GATE VALVE
HB	HOSEBIB
HDPE	HIGH-DENSITY POLYETHYLENE
HP	HIGH POINT/ HINGE POINT
HT	HEIGHT
INV	INVERT OF PIPE OR CHANNEL
IRR	IRRIGATION
JB	JUNCTION BOX
LA	LANDSCAPE ARCHITECT
LF	LINEAR FEET
LP	LIGHT POLE/ LOW POINT
LT	LEFT
MAX	MAXIMUM
MH	MANHOLE
MIN	MINIMUM
N	NORTH
NIC	NOT IN CONTRACT
NTS	NOT TO SCALE
OC	ON CENTER
(P)	PROPOSED
PA	PLANTED AREA
PED	PEDESTRIAN
PG&E	PACIFIC GAS & ELECTRIC
PIP	PROTECT IN PLACE
PIV	POST INDICATOR VALVE
PL	PROPERTY LINE
POC	POINT OF CONNECTION
PSI	POUNDS PER SQUARE INCH
PVMT	PAVEMENT
R, RAD	RADIUS
RC	RELATIVE COMPACTION
RCP	REINFORCED CONCRETE PIPE
REQ'D	REQUIRED
RET	RETAINING
RIM	TOP OF STRUCTURE GRATE/ COVER
RWL	RAINWATER LEADER
S	SLOPE
SAP	SEE ARCHITECTURAL PLANS
SD	STORM DRAIN
SDE	SHERWOOD DESIGN ENGINEERS
SDMH	STORM DRAIN MANHOLE
SEP	SEE ELECTRICAL PLANS
SF	SQUARE FEET
SLP	SEE LANDSCAPE PLANS
SMP	SEE MECHANICAL PLANS
SPD	SEE PLUMBING DRAWINGS
SQ	SQUARE
SS	SANITARY SEWER
SSCO	SANITARY SEWER CLEAN OUT
SSMH	SANITARY SEWER MANHOLE
SSP	SEE STRUCTURAL PLANS
STD	STANDARD
TB	TOP OF BANK
TBD	TO BE DETERMINED
TBM	TEMPORARY BENCHMARK
TBR	TO BE REMOVED
TC	TOP OF CURB
TD	TRENCH DRAIN
TEMP	TEMPORARY
TG	TOP OF GRATE
TS	TOP OF STEP
TW	TOP OF WALL
TYP	TYPICAL
UG	UNDERGROUND
U.O.N.	UNLESS OTHERWISE NOTED
VERT	VERTICAL
VIF	VERIFY IN FIELD
W	WATER
WM	WATER METER
WS	WATER SURFACE

CIVIL SCOPE OF WORK

THE CIVIL SCOPE OF WORK INCLUDES: PREPARATION OF EXISTING SITE, PROPOSED GRADING AND DRAINAGE OF RESIDENCE, STORMWATER CONTROL PLAN PER COUNTY REQUIREMENTS, EROSION CONTROL PLAN, AND NEW WATER UTILITIES.

APPLICABLE CODES AND STANDARDS

THE DESIGN SHOWN IN THESE DRAWINGS WAS BASED UPON THE FOLLOWING STANDARDS. IN THE EVENT OF CONFLICTING REQUIREMENTS, THE WORK SHALL FOLLOW THE MORE STRINGENT STANDARD OR THE ORDER LISTED BELOW.

1. 2020 NAPA COUNTY ROAD & STREET STANDARDS
2. 2019 BASMAA POST-CONSTRUCTION MANUAL

SHEET INDEX

PROJECT INFORMATION

PROPERTY OWNER:

KEITH KALLWEIT
KKALLWEIT@EA.COM
440 WELLESLEY AVE
MILL VALLEY, CA 94941

CIVIL:

SHERWOOD DESIGN ENGINEERS
2548 MISSION ST
SAN FRANCISCO, CA 94110
415-677-7300

ARCHITECT:

POLSKY PERLSTEIN ARCHITECTS
469 B MAGNOLIA AVE
LARKSPUR, CA 94939

LANDSCAPE ARCHITECT:

THE LAND COLLABORATIVE
19404 SONOMA HWY
SONOMA, CA 95476

APPROVED BY ENGINEERING MANAGER

SIGNATURE DATE

APPROVED BY NAPA COUNTY FIRE MARSHAL

SIGNATURE DATE

Underground Service Alert

CALL BEFORE YOU DIG

Call: TOLL FREE
1-800-227-2600

TWO WORKING DAYS BEFORE YOU DIG

SHERWOOD DESIGN ENGINEERS
2548 Mission Street
San Francisco, CA 94110
www.sherwoodengineers.com

REGISTERED PROFESSIONAL ENGINEER
CASEY ANDERSON
EXP: 9/30/21
No.84120
CIVIL
STATE OF CALIFORNIA

SCALE: 1" = 20'
0 1"
Note: If this graphic scale does not equal 1", this sheet has been modified from its original size.

NO	DATE	REVISION

PROJECT NO. 19-074
DATE 11/09/2020
DRAWN CL
DESIGNED CL
CHECKED CA

KALLWEIT RESIDENCE
OAKVILLE RIDGE
NAPA, CALIFORNIA

COVER SHEET

C0.0

EROSION CONTROL NOTES

1. THIS PLAN MAY NOT COVER ALL THE SITUATIONS THAT ARISE DURING CONSTRUCTION DUE TO UNANTICIPATED FIELD CONDITIONS. IN GENERAL, THE CONTRACTOR IS RESPONSIBLE FOR KEEPING SEDIMENT STORM RUNOFF AND NON-STORM RUNOFF FROM LEAVING THE SITE. PROTECTIVE DEVICES, PROVIDED ON THESE PLANS SHALL BE USED BY THE CONTRACTOR ON AN AS NEEDED BASIS TO INHIBIT SILT FROM LEAVING THE SITE AND ENTERING THE STORM DRAIN SYSTEM AND NATURAL WATERWAYS. TEMPORARY EROSION CONTROL DEVICES SHOWN ON GRADING PLAN WHICH INTERFERE WITH THE WORK SHALL BE RELOCATED OR MODIFIED WHEN THE INSPECTOR SO DIRECTS AS THE WORK PROGRESSES. EROSION AND SEDIMENT CONTROL MEASURES SHALL BE OPERABLE YEAR AROUND OR UNTIL VEGETATION IS ESTABLISHED ON SLOPED SURFACES.
2. EROSION CONTROL FACILITIES SHALL BE INSPECTED AND MAINTAINED DAILY AS WELL AS WHENEVER RAIN IS FORECAST. BREACHES IN DIKES AND SWALES TO BE REPAIRED AT THE CLOSE OF EACH DAY. THE NAME OF THE PERSON RESPONSIBLE FOR THE DAILY MAINTENANCE OF THESE FACILITIES SHALL BE ON RECORD WITH THE COUNTY ALONG WITH A PHONE NUMBER WHERE THEY CAN BE REACHED 24 HOURS A DAY. THESE FACILITIES SHALL CONTROL AND CONTAIN EROSION-CAUSED SILT DEPOSITS AND PROVIDE FOR THE SAFE DISCHARGE OF SILT FREE STORM WATER AND NON-STORM WATER DISCHARGE INTO EXISTING AND PROPOSED STORM DRAIN FACILITIES AND PRE-EXISTING DRAINAGE PATTERNS. DESIGN OF THESE FACILITIES MUST BE APPROVED AND UPDATED EACH YEAR BY THE CIVIL ENGINEER. (OCTOBER 1 TO APRIL 15)
3. ALL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE CONSTRUCTED AND MAINTAINED IN ACCORDANCE WITH THE PROVISIONS OF THE MOST RECENT CONSTRUCTION GENERAL PERMIT. CONTROL MEASURES ARE SUBJECT TO THE INSPECTION AND APPROVAL OF THE ENGINEERING DIVISION OF THE PUBLIC SERVICES DEPARTMENT OF NAPA COUNTY.
4. THE CONTRACTOR IS RESPONSIBLE FOR ENSURING THAT ALL SUB-CONTRACTORS AND SUPPLIERS ARE AWARE OF ALL STORM WATER QUALITY MEASURES & IMPLEMENT SUCH MEASURES. FAILURE TO COMPLY WITH THE APPROVED CONSTRUCTION WILL RESULT IN THE ISSUANCE OF CORRECTION NOTICES, CITATIONS, AND / OR A PROJECT STOP ORDER.
5. ALL LOOSE SOIL AND DEBRIS SHALL BE REMOVED FROM THE STREET AREAS UPON STARTING OPERATIONS AND PERIODICALLY THEREAFTER AS DIRECTED BY THE INSPECTOR. THE SITE SHALL BE MAINTAINED SO AS TO MINIMIZE SEDIMENT LADEN RUNOFF TO ANY STORM DRAIN SYSTEM.
6. THE CONTRACTOR SHALL INSTALL CONTROLLED ACCESS AND EGRESS. LOCATION TO BE APPROVED BY THE ENGINEER IN THE FIELD. CONSTRUCTION EGRESS WILL BE EQUIPPED WITH A TIRE WASH STATION, AS NEEDED. ALL DISCHARGE FROM THE TIRE WASH STATION WILL BE DIRECTED TO APPROPRIATE COLLECTION AREAS, AND NOT ALLOWED TO LEAVE THE SITE. ANY MUD OR SEDIMENT THAT IS TRACKED OFF-SITE ONTO PAVED AREAS WILL BE REMOVED AS NEEDED. POWER WASHING OF STREETS IS NOT PERMITTED. STREET CLEANING EQUIPMENT WILL HAVE SWEEPERS AND VACUUM CAPABILITY.
7. DURING THE RAINY SEASON, ALL PAVED AREAS ARE TO BE KEPT CLEAR OF EARTH MATERIAL AND DEBRIS. THE SITE IS TO BE MAINTAINED SO AS TO MINIMIZE SEDIMENT RUNOFF TO ANY STORM DRAIN SYSTEM OR ADJACENT LANDSCAPE.
8. DURING PERIODS WHEN STORMS ARE FORECASTED:
   a. EXCAVATED SOILS SHOULD NOT BE PLACED IN STREETS OR ON PAVED AREAS.
   b. ANY EXCAVATED SOILS SHOULD BE REMOVED FROM THE SITE BY THE END OF THE DAY.
   c. WHERE STOCKPILING IS NECESSARY, USE A TARPAULIN AND SURROUND THE STOCKPILED MATERIAL WITH SEDIMENT ROLLS, GRAVEL SEDIMENT BARRIER, SILT FENCE, OR OTHER RUNOFF CONTROLS.
   d. USE INLET CONTROLS AS NEEDED (E.G. ERTEC DRAIN INLET PROTECTION) FOR STORM DRAIN ADJACENT TO THE PROJECT SITE OR STOCKPILED SOIL.
9. THOROUGHLY SWEEP ALL PAVED AREAS EXPOSED TO SOIL EXCAVATION AND PLACEMENT.
10. STAND-BY CREWS SHALL BE ALERTED BY THE PERMITTEE OR CONTRACTOR FOR EMERGENCY WORK DURING RAINSTORMS.
11. AS A PART OF THE EROSION CONTROL MEASURES, UNDERGROUND STORM DRAIN FACILITIES AND CONCRETE SHALL BE INSTALLED COMPLETE AS SHOWN ON THE IMPROVEMENT PLANS AS APPROPRIATE FOR THE CURRENT PHASE. DRAINAGE INLET PROTECTION (SEDIMENT BARRIERS) SHALL BE INSTALLED AS SOON AS THE STORM DRAINAGE SYSTEM IS INSTALLED.
12. IT IS RECOMMENDED THAT ERTEC S-FENCE OR COMPARABLE PRODUCTS BE USED IN PLACE OF TRADITIONAL STRAW OR SEDIMENT ROLLS AND SILT FENCES. THESE PRODUCTS CAN BE REUSED AFTER THE COMPLETION OF THIS PROJECT. INSTALL PER MANUFACTURER'S RECOMMENDATIONS.
13. ALL GRADED AREAS, INCLUDING, BUT NOT LIMITED TO, CUT AND FILL SLOPES, DRIVEWAY, PATIOS, AND BUILDING PADS SHALL BE STABILIZED WITH HYDRAULICALLY APPLIED MATERIAL OR SOIL STABILIZER PER THIS PLAN.
14. PRIOR TO PAVING, EACH DROP INLET SHALL BE PROTECTED PER PLAN. AFTER PAVING IS COMPLETE AROUND EACH DROP INLET, PROTECTION SHALL REMAIN UNTIL ALL EXPOSED EARTHEN AREAS HAVE BEEN STABILIZED AND THE PROJECT SITE FACILITIES ARE OPERATIONAL, AT WHICH TIMES THESE MEASURES SHALL BE REMOVED.
15. TO MINIMIZE EROSION OF GRADED BANKS, ALL GRADED BANKS STEEPER THAN 2% AND HIGHER THAN 3 FEET, SHALL BE STABILIZED WITH SOILWORKS PRODUCT, HYDRO STRAW GUARD PLUS OR HYDRO STRAW BFM AND SEED, LANDSCAPED, OR SEALED. IF THE PERMANENT STORM DRAIN SYSTEM IS NOT INSTALLED BY OCTOBER 1, TEMPORARY DITCHES SHALL BE CONSTRUCTED TO CONTAIN THE STORM WATER AND DIRECT IT, IN A MANNER THAT AVOIDS EROSION OF THE BANKS, TO THE EROSION AND SEDIMENT CONTROL FACILITIES. FOLLOW THE DESIGN OF THESE FACILITIES IN THIS PLAN.
16. ALL CUT AND FILL SLOPES ARE TO BE PROTECTED TO PREVENT OVERBANK FLOW USING FIBER ROLLS (ERTEC S-FENCE), AS SPECIFIED ON THESE PLANS.
17. APPLY ATLAS DUST LOCK TO ALL GRADED AREAS, INCLUDING, BUT NOT LIMITED TO, CUT AND FILL SLOPES, DRIVEWAY, PATIOS, AND BUILDING PADS THAT DO NOT HAVE FINAL PAVEMENT OR PERMANENT STABILIZATION.
18. BORROW AREAS AND TEMPORARY STOCKPILES SHALL BE PROTECTED WITH APPROPRIATE EROSION CONTROL MEASURES PER PLAN TO THE SATISFACTION OF THE CITY ENGINEER.
19. SANDBAGS SHALL BE STOCKPILED ON SITE AND PLACED AT INTERVALS SHOWN ON GRADING AND EROSION CONTROL PLANS, WHEN THE RAIN FORECAST IS 40% OR GREATER, OR WHEN DIRECTED BY THE INSPECTOR. SANDBAGS MUST BE FULL. APPROVED SANDBAG FILL MATERIALS ARE SAND, DECOMPOSED GRANITE AND/OR GRAVEL, OR OTHER MATERIALS APPROVED BY THE INSPECTOR. AFTER RAINSTORMS, CONTRACTOR SHALL CHECK FOR AND REMOVE SEDIMENT TRAPPED BY SANDBAGS AT STAGING AREA AND ALONG DRIVEWAY. REPLACE SANDBAGS IF DETERIORATION IS EVIDENT.
20. CONTRACTOR SHALL BE RESPONSIBLE FOR ENSURING SAFETY OF VEHICLES OPERATING IN ROADWAY ADJACENT TO EROSION CONTROL FACILITIES. CONTRACTOR SHALL ENSURE THAT PONDING/FLOODING IN STREETS DOES NOT INTERFERE WITH TRAFFIC LANES AT ANY TIME.
21. DUST CONTROL SHOULD BE PRACTICED ON ALL CONSTRUCTION SITES WITH EXPOSED SOILS AS NEEDED ESPECIALLY IN WINDY OR WIND-PRONE AREAS. DUST CONTROL IS CONSIDERED A TEMPORARY MEASURE AND AS AN INTERMEDIATE TREATMENT BETWEEN SITE DISTURBANCE AND CONSTRUCTION, PAVING, OR REVEGETATION. REFER TO EROSION CONTROL AND SEDIMENT CONTROL FIELD MANUAL, 3RD EDITION, PREPARED BY THE CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD, SAN FRANCISCO BAY REGION.
22. ALL TREES WITHIN THE LIMITS OF WORK ALLOCATED TO REMAIN SHALL BE PROTECTED. SEE DEMOLITION PLAN FOR TREES TO BE REMOVED AND PROTECTED. REFER TO THE LANDSCAPE ARCHITECT FOR SPECIFIC TREE PROTECTION MEASURES OTHER THAN THOSE SPECIFIED IN THIS PLAN.
23. PRO-WATTLE MAY BE USED IN PLACE OF S-FENCE EXCEPT FOR PERIMETER PROTECTION AND TOP OF BANK PROTECTION AT SEDIMENT BASIN OUTLETS.
24. HYDRO STRAW GUARD PLUS OR HYDRO STRAW BFM TO BE APPLIED PER MANUFACTURER'S RECOMMENDATION AND PER THE DIRECTION OF THE CIVIL ENGINEER TO DISTURBED AREAS NOT TO RECEIVE STRUCTURAL FILL OR VEHICULAR TRAFFIC. SEED MIX PER LANDSCAPE ARCHITECT.

UTILITY NOTES

1. AVAILABLE INFORMATION CONCERNING THE EXTENT AND LOCATION OF EXISTING UTILITY STRUCTURES (WELL) IS SHOWN ON THE PLAN, BUT CONTRACTOR IS CAUTIONED IT DOES NOT NECESSARILY REPRESENT ACTUAL UTILITY LOCATIONS SIZES OR MATERIALS. IT IS THE CONTRACTOR'S RESPONSIBILITY TO VERIFY THE LOCATION OF ALL EXISTING UTILITIES PRIOR TO COMMENCING EXCAVATION OR BELOW GRADE DEMOLITION.
2. CONTACT UNDERGROUND UTILITY LOCATOR TO HAVE UTILITIES LOCATED AND MARKED NOT LESS THAN 2 WORKING DAYS, AND NOT MORE THAN 14 WORKING DAYS PRIOR TO EXCAVATION.
3. PIPES SHALL BE LAID TRUE TO PROPOSED LINE AND GRADE, WITH NO HORIZONTAL DEVIATIONS OR BELLIES. ALL PIPE JOINTS SHALL BE TIGHT AND FULLY SEALED, SO AS TO ACHIEVE WATER-TIGHT OR SOIL-TIGHT JOINTS, AS APPROPRIATE FOR THE SPECIFIC PIPE TYPE.
4. PROPOSED UTILITY STRUCTURES SHALL CONFORM TO THE DETAILS SHOWN ON THE PLANS AND SHALL BE INSTALLED VERTICALLY PLUMB ON A FULLY COMPACTED BASE. STRUCTURES SHALL BE BACKFILLED IN ACCORDANCE WITH THE APPLICABLE DETAIL PER PLAN, AND THE TOP OF EACH STRUCTURE SHALL BE SET SO ALL EXPOSED PORTIONS (FRAME, GRATE, COVER, ETC.) CONFORM TO ADJACENT GRADE UNLESS OTHERWISE NOTED.
5. IF A UTILITY OWNER REQUIRES THAT ALL WORK RELATING TO A SPECIFIC BOX RETROFIT OR REPLACEMENT BE EXECUTED BY ITS OWN FORCES OR BY A SEPARATE, UTILITY-CERTIFIED CONTRACTOR, THE CONTRACTOR SHALL PROVIDE INFORMATION TO AND COORDINATE WITH THAT OWNER, TO THE EXTENT NECESSARY TO FULLY FACILITATE THE RECONSTRUCTION WORK.
6. SEE CMP ENGINEERED WASTEWATER PLANS DATED OCTOBER 03, 2019, FOR DETAILS AND SPECIFICATIONS ON SELVAGE PUMP TANK, LEACH FIELD, AND ALL SANITARY SEWER MATERIALS.

GRADING NOTES

1. ALL GRADING AND DRAINAGE TO COMPLY WITH RECOMMENDATIONS IN SOILS REPORT ENTITLED GEOTECHNICAL INVESTIGATION: PROPOSED RESIDENCE, DETACHED GARAGE, SWIMMING POOL AND GYM, PREPARED BY PJC & ASSOCIATES, AUGUST 12, 2019.
2. ALL GRADING SHALL CONFORM WITH THE GRADING ORDINANCE.
3. THE CONTRACTOR OR ANY SUBCONTRACTOR SHALL NOTIFY UNDERGROUND SERVICE ALERT ONE CALL PROGRAM 48 HOURS IN ADVANCE OF PERFORMING EXCAVATION WORK BY CALLING THE TOLL-FREE NUMBER 800-227-2600. EXCAVATION IS BEING 18 OR MORE INCHES IN DEPTH BELOW THE EXISTING GROUND.
4. ACTUAL GRADING SHALL BEGIN WITHIN 30 DAYS OF VEGETATION REMOVAL OR THE AREA SHALL BE PLANTED TO CONTROL EROSION. SURFACE PLANT GROWTH ONLY, WHICH DOES NOT EXCEED 4 INCHES IN DEPTH.
5. CONTRACTOR SHALL NOTIFY THE COUNTY 48 HOURS PRIOR TO THE INTENTION TO COMMENCE WORK.
6. A COPY OF ALL COMPACTION TESTS AND FINAL GRADING REPORTS SHALL BE SUBMITTED TO THE CORRESPONDING AGENCY PRIOR TO SCHEDULING ANY INSPECTIONS.
7. PERMANENT CUT AND FILL SLOPES SHALL BE NO STEEPER THAN TWO HORIZONTAL TO ONE VERTICAL (2H:1V) PER GEOTECHNICAL ENGINEER'S REPORT. TEMPORARY CUT SLOPES SHALL BE REVIEWED AND APPROVED BY GEOTECHNICAL ENGINEER.
8. PROVIDE 5 FT OF 2% MINIMUM SLOPE FOR PAVED AREAS, 5% MINIMUM SLOPE FOR SOFTSCAPE AREAS AWAY FROM BUILDINGS ON ALL SIDES UNLESS NOTED OTHERWISE.
9. SOIL COMPACTION SHALL BE A MINIMUM OF 90% RELATIVE COMPACTION FOR FILLS. ROAD SUBGRADES SHALL BE COMPACTED TO A 95% RELATIVE COMPACTION PER THE 2020 NAPA COUNTY ROAD AND STREETS STANDARDS.
10. THE CONTRACTOR AGREES THAT IN ACCORDANCE WITH GENERALLY ACCEPTED CONSTRUCTION PRACTICES, CONSTRUCTION CONTRACTOR WILL BE REQUIRED TO ASSUME SOLE AND COMPLETE RESPONSIBILITY FOR THE JOB SITE CONDITIONS DURING THE COURSE OF CONSTRUCTION OF THE PROJECT, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY, THAT THIS REQUIREMENT SHALL BE MADE TO APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS.
11. TREE PROTECTION FENCING SHALL BE INSTALLED IN PROJECT SCOPE PRIOR TO CONSTRUCTION. SEE EROSION CONTROL PLAN IN THIS PERMIT SET.
12. GRADING OR ANY OTHER OPERATION THAT CREATES DUST SHALL BE STOPPED IMMEDIATELY IF DUST AFFECTS ADJACENT PROPERTIES. MUD TRACKED ONTO STREETS OR ADJACENT PROPERTIES SHALL BE REMOVED IMMEDIATELY AS DIRECTED BY A COUNTY INSPECTOR.
13. THIS PLAN REFERENCES AN EXISTING TOPOGRAPHIC SURVEY PREPARED BY ALBION SURVEYS, INC. ON MAY 10, 2019, AN EXISTING TOPOGRAPHIC SURVEY BY CMP CIVIL ENGINEERING & LAND SURVEYING IN NOVEMBER OF 2016, AND L.I.D.A.R. DATA FROM THE NAPA COUNTY 2002/2003 ORTHOPHOTOGRAPHY PROJECT. THE CONTRACTOR IS RESPONSIBLE FOR VERIFICATION OF EXISTING TOPOGRAPHICAL INFORMATION PRIOR TO COMMENCEMENT OF ANY CONSTRUCTION.

UNAUTHORIZED CHANGES AND USE

1. SHERWOOD DESIGN ENGINEERS, LTD. SHALL NOT BE RESPONSIBLE FOR CONSTRUCTION MEANS, METHODS, TECHNIQUES, OR PROCEDURES UTILIZED BY THE CONTRACTOR, FOR THE SAFETY OF THE PUBLIC OR CONTRACTOR'S EMPLOYEES, OR FOR THE FAILURE OF THE CONTRACTOR TO CARRY OUR THE WORK IN ACCORDANCE WITH THE CONTRACT DOCUMENTS.
2. THE CIVIL DESIGN ENGINEER PREPARING THESE PLANS WILL NOT BE RESPONSIBLE FOR, OR LIABLE FOR, UNAUTHORIZED CHANGES TO OR USES OF THESE PLANS. CHANGES TO THE PLANS MUST BE IN WRITING AND MUST BE APPROVED BY THE PREPARER OF THESE PLANS. ANY MODIFICATIONS TO THIS DOCUMENT, WITHOUT THE WRITTEN PERMISSION OF SHERWOOD DESIGN ENGINEERS, LTD., SHALL RENDER THE PLANS INVALID AND UNUSABLE.
3. NO PART OF THIS DOCUMENT MAY BE REPRODUCED, STORED IN A RETRIEVAL SYSTEM, OR TRANSMITTED IN ANY FORM OR BY ANY MEANS ELECTRONIC, MECHANICAL, PHOTOCOPYING, RECORDING, OR OTHERWISE WITHOUT THE PRIOR WRITTEN PERMISSION OF SHERWOOD DESIGN ENGINEERS, LTD., EXCEPT THAT ANY REGULATORY AUTHORITY MAY REPRODUCE AND TRANSMIT COPIES, AS REQUIRED, IN CONJUNCTION WITH PERFORMANCE OF OFFICIAL BUSINESS UNDER ITS JURISDICTION.

DEMOLITION NOTES

1. WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE PROJECT PLANS AND SPECIFICATIONS. THE GEOTECHNICAL REPORT IS AN INTEGRAL PART OF THE CONTRACT DOCUMENTS AND ALL EARTHWORK SHALL BE PERFORMED IN ACCORDANCE WITH THE RECOMMENDATIONS CONTAINED THEREIN.
2. THE CONTRACTOR SHALL FAMILIARIZE HIMSELF OR HERSELF WITH THE GEOTECHNICAL REPORTS, ENTITLED GEOTECHNICAL INVESTIGATION: PROPOSED RESIDENCE, DETACHED GARAGE, SWIMMING POOL AND GYM, PREPARED BY PJC & ASSOCIATES, AUGUST 12, 2019. THE CONTRACTOR SHALL KEEP A COPY OF THESE REPORTS ON SITE.
3. SEDIMENT AND EROSION CONTROL MEASURES, AS SHOWN ON THESE PLANS, SHALL BE INSTALLED PRIOR TO START OF DEMOLITION.
4. EXISTING UTILITIES AND UNDERGROUND FACILITIES INDICATED ARE FOR INFORMATION ONLY. IT IS THE CONTRACTOR'S RESPONSIBILITY TO VERIFY THE LOCATION AND DEPTH WITH THE APPROPRIATE AGENCIES AND /OR FIELD INVESTIGATION.
5. THE CONTRACTOR OR ANY SUBCONTRACTOR SHALL NOTIFY UNDERGROUND SERVICE ALERT ONE CALL PROGRAM 48 HOURS IN ADVANCE OF PERFORMING EXCAVATION WORK BY CALLING THE TOLL-FREE NUMBER 800-227-2600. EXCAVATION IS DEFINED AS REMOVING MATERIAL 18 INCHES OR MORE BELOW EXISTING GRADE.
6. THE CONTRACTOR SHALL PHOTO DOCUMENT EXISTING CONDITIONS OF ADJACENT BUILDINGS AND STRUCTURES PRIOR TO COMMENCEMENT OF WORK.
7. ALL AREAS TO BE IMPROVED SHALL BE STRIPPED LOOSE SURFACE SOIL AND AGGREGATE BASE. ANY RESULTING EXCAVATIONS THAT EXTEND BELOW FINISHED SUBGRADE SHALL BE BACKFILLED PER GEOTECHNICAL ENGINEER'S RECOMMENDATIONS.
8. ALL EXCAVATED AND DEMOLISHED MATERIALS NOT SPECIFIED TO BE REUSED SHALL BE IMMEDIATELY DISPOSED OF ACCORDING TO LOCAL REGULATIONS AND REQUIREMENTS AND NOT ALLOWED TO STOCKPILE ON SITE.
9. ALL EXISTING STRUCTURES TO REMAIN AND BE PROTECTED FROM DAMAGE UNLESS OTHERWISE INDICATED ON THE DRAWINGS.
10. CONSTRUCTION CONTRACTOR AGREES THAT IN ACCORDANCE WITH GENERALLY ACCEPTED CONSTRUCTION PRACTICES, CONSTRUCTION CONTRACTOR WILL BE REQUIRED TO ASSUME SOLE AND COMPLETE RESPONSIBILITY FOR JOB SITE CONDITIONS DURING THE COURSE OF CONSTRUCTION OF THE PROJECT, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY. THIS REQUIREMENT SHALL BE MADE TO APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS. CONSTRUCTION CONTRACTOR FURTHER AGREES TO DEFEND, INDEMNIFY AND HOLD THE ENGINEER HARMLESS FROM ANY AND ALL LIABILITY, REAL OR ALLEGED, IN CONNECTION WITH THE PERFORMANCE OF WORK ON THIS PROJECT, EXCEPTING LIABILITY ARISING FROM THE SOLE NEGLIGENCE OF THE ENGINEER.
11. THE CONTRACTOR IS RESPONSIBLE FOR PROVIDING 24-HOUR PER DAY DUST CONTROL.

ENVIRONMENTAL PROTECTION

1. EROSION AND SEDIMENT CONTROL MEASURES AS REQUIRED BY NAPA COUNTY SHALL BE INSTALLED AND MAINTAINED BY THE CONTRACTOR THROUGHOUT PROJECT CONSTRUCTION. FAILURE TO PROPERLY INSTALL AND MAINTAIN APPROVED EROSION CONTROL BEST MANAGEMENT PRACTICES (BMPs) WILL RESULT IN A STOPPAGE OF WORK.

EXISTING CONDITIONS AND DOCUMENTATION

1. EXISTING TOPOGRAPHIC INFORMATION, ON AND OFFSITE IMPROVEMENTS, AND EXISTING UTILITIES SHOWN ON THESE PLANS IS BASED ON SURVEY PREPARED BY ALBION SURVEYS, INC. ON MAY 10, 2019, EXISTING TOPOGRAPHIC SURVEY BY CMP CIVIL ENGINEERING & LAND SURVEYING IN NOVEMBER OF 2016, AND L.I.D.A.R. DATA FROM THE NAPA COUNTY 2002/2003 ORTHOPHOTOGRAPHY PROJECT. GRADES ENCOUNTERED ON-SITE MAY VARY FROM THOSE SHOWN. CONTRACTOR SHALL REVIEW THE PLANS AND SPECIFICATIONS AND CONDUCT FIELD INVESTIGATIONS TO VERIFY EXISTING CONDITIONS AT THE PROJECT SITE.
   a. VERTICAL DATUM BASED ON NAVD88 HORIZONTAL DATUM BASED ON NAD83 CALIFORNIA COORDINATE SYSTEM ZONE II PER TRIMBLE GPS OBSERVATIONS USING OPUS SOLUTION.
2. THE PROJECT SURVEY IS NOT MEANT TO BE A FULL CATALOG OF EXISTING CONDITIONS. INFORMATION REGARDING EXISTING SURFACE OR SUBSURFACE IMPROVEMENTS AND UTILITIES SHOWN ON THESE PLANS REFLECTS INCOMPLETE AVAILABLE INFORMATION AS OF THE DATE OF DESIGN. CONTRACTOR SHALL CONDUCT FIELD INVESTIGATIONS AND/OR CONTACT THE APPROPRIATE UTILITY AGENCY AS REQUIRED TO VERIFY THE LOCATION AND ELEVATION OF EXISTING SUBSURFACE IMPROVEMENTS AND UTILITIES (WHETHER SHOWN ON THESE PLANS OR NOT) PRIOR TO THE COMMENCEMENT OF WORK. CONTRACTOR SHALL NOTIFY THE ENGINEER IMMEDIATELY UPON DISCOVERY OF ANY DISCREPANCIES BETWEEN EXISTING CONDITIONS IN THE FIELD AND INFORMATION SHOWN ON THESE PLANS.
3. EXISTING SOIL AND GEOTECHNICAL CONDITIONS AND RECOMMENDATIONS FOR THE CONSTRUCTION OF PROPOSED IMPROVEMENTS ARE SET FORTH IN THE PROJECT SOILS REPORT: GEOTECHNICAL INVESTIGATION: GEOTECHNICAL INVESTIGATION: PROPOSED RESIDENCE, DETACHED GARAGE, SWIMMING POOL AND GYM, PREPARED BY PJC & ASSOCIATES, AUGUST 12, 2019. THESE REPORTS AREA AN INTEGRAL PART OF THE CONTRACT DOCUMENTS AND ALL EARTHWORK SHALL BE PERFORMED IN ACCORDANCE WITH THE RECOMMENDATIONS CONTAINED THEREIN.THE CONTRACTOR SHALL KEEP A COPY OF THE GEOTECHNICAL REPORT ON-SITE.

FLOODPLAIN CONSTRUCTION NOTES & REQUIREMENTS

1. PROJECT AREA DETERMINED TO BE OUTSIDE THE 0.2% ANNUAL CHANCE FLOODPLAIN ZONE X PER EFFECTIVE MAP NUMBER: 06055C0395E PANEL 395 OF 650.

GENERAL NOTES

1. THE DESIGN SHOWN IN THESE DOCUMENTS WAS BASED ON THE FOLLOWING:
   A. 2020 NAPA COUNTY ROAD AND STREET STANDARDS.
   B. 2019 BAY AREA STORMWATER MANAGEMENT AGENCIES POST-CONSTRUCTION MANUAL
2. THE SUBSURFACE OF THE CONSTRUCTION SITE MAY BE SENSITIVE FOR PALEONTOLOGICAL RESOURCES. IF PALEONTOLOGICAL RESOURCES ARE ENCOUNTERED DURING PROJECT SUBSURFACE CONSTRUCTION, ALL GROUND-DISTURBING ACTIVITIES WITHIN 50 FEET SHALL BE REDIRECTED AND THE COMMUNITY DEVELOPMENT AGENCY, PLANNING DIVISION SHALL BE CONTACTED, AS WELL AS OTHER CONSULTING AGENCIES AS APPROPRIATE, AND A QUALIFIED PALEONTOLOGIST TO ASSESS THE SITUATION, AND MAKE RECOMMENDATIONS FOR THE TREATMENT OF THE DISCOVERY. PROJECT PERSONNEL SHALL NOT COLLECT OR MOVE ANY PALEONTOLOGICAL MATERIALS. PALEONTOLOGICAL RESOURCES INCLUDE FOSSIL PLANTS AND ANIMALS, AND SUCH TRACE FOSSIL EVIDENCE OF PAST LIFE AS TRACKS. ANCIENT MARINE SEDIMENTS MAY CONTAIN INVERTEBRATE FOSSILS SUCH AS SNAILS, CLAM AND OYSTER SHELLS, SPONGES, AND PROTOZOA, AND VERTEBRATE FOSSILS SUCH AS FISH, WHALE, AND SEA LION BONES. VERTEBRATE LAND MAMMALS MAY INCLUDE BONES OF MAMMOTH, CAMEL, SABER-TOOTH CAT, HORSE, AND BISON. PALEONTOLOGICAL RESOURCES ALSO INCLUDE PLANT IMPRINTS, PETRIFIED WOOD, AND ANIMAL TRACKS.
3. IF HUMAN REMAINS ARE ENCOUNTERED DURING PROJECT ACTIVITIES, WORK WITHIN 50 FEET OF THE DISCOVERY SHALL BE REDIRECTED AND THE COUNTY CORONER NOTIFIED IMMEDIATELY. AT THE SAME TIME, AN ARCHAEOLOGIST SHALL BE CONTACTED TO ASSESS THE SITUATION AND CONSULT WITH AGENCIES AS APPROPRIATE. PROJECT PERSONNEL SHALL NOT COLLECT OR MOVE ANY HUMAN REMAINS AND ASSOCIATED MATERIALS. IF THE HUMAN REMAINS ARE OF NATIVE AMERICAN ORIGIN, THE CORONER MUST NOTIFY THE NATIVE AMERICAN HERITAGE COMMISSION WITHIN 24 HOURS OF THIS IDENTIFICATION. THE NATIVE AMERICAN HERITAGE COMMISSION WLL IDENTIFY A MOST LIKELY DESCENDANT (MLD) TO INSPECT THE SITE AND PROVIDE RECOMMENDATIONS FOR THE PROPER TREATMENT OF THE REMAINS AND ASSOCIATED GRAVE GOODS.
4. EXISTING PROPERTY LINES AND EASEMENTS SHOWN ON THIS PLAN ARE APPROXIMATE.
5. PROJECT IS LOCATED AT LATITUDE OF 38.401° N AND LONGITUDE OF 122.413° W ACCORDING TO GPS MEASUREMENTS AS TAKEN FROM THE GEOTECHNICAL REPORT.
6. REFER TO FIRST AMERICAN TITLE COMPANY OF NAPA ORDER NO. 00210404-CW FOR PROPERTY GRANT DEED AND PRELIMINARY TITLE REPORT.

SHERWOOD DESIGN ENGINEERS
2548 Mission Street
San Francisco, CA 94110
www.sherwoodengineers.com

REGISTERED PROFESSIONAL ENGINEER
CINDY ANDERSEN
EXP: 9/30/21
No.84120
CIVIL
STATE OF CALIFORNIA

SCALE: 1" = 20'
0 1"
Note: If this graphic scale does not equal 1", this sheet has been modified from its original size.

NO	DATE	REVISION

PROJECT NO. 19-074

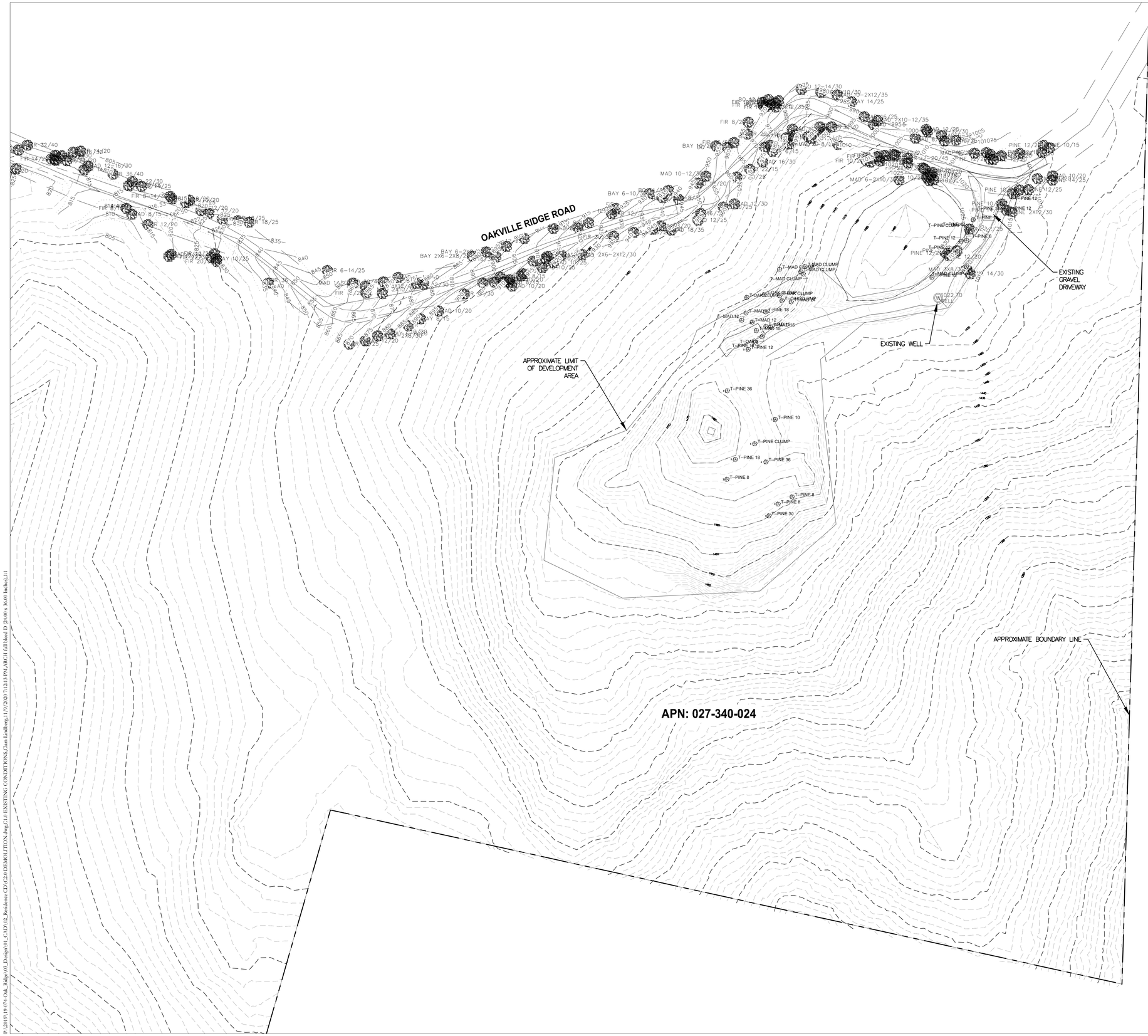
DATE	11/09/2020
DRAWN	CL
DESIGNED	CL
CHECKED	CA

KALLWEIT RESIDENCE
OAKVILLE RIDGE
NAPA, CALIFORNIA

NOTES AND SPECIFICATIONS

C0.1

P:\2019\19-074-Oak_Ridge\03_Design\01_CAD\02_Residence CD\C0.0 COVER.dwg,C0.1 NOTES AND SPECIFICATIONS.dwg,Clare Lindberg,11/9/2020 7:10:53 PM,ARCH full bleed D (36.00 x 24.00 Inches),1:1



SHERWOOD
DESIGN ENGINEERS
2548 Mission Street
San Francisco, CA 94110
www.sherwoodengineers.com

REGISTERED PROFESSIONAL ENGINEER
CASEY ANDERSON
EXP: 9/30/21
No.84120
CIVIL
STATE OF CALIFORNIA

SCALE: 1" = 20'
0 1"
Note: If this graphic scale does not equal 1", this sheet has been modified from its original size

NO	DATE	REVISION

PROJECT NO.	19-074
DATE	11/09/2020
DRAWN	CL
DESIGNED	CL
CHECKED	CA

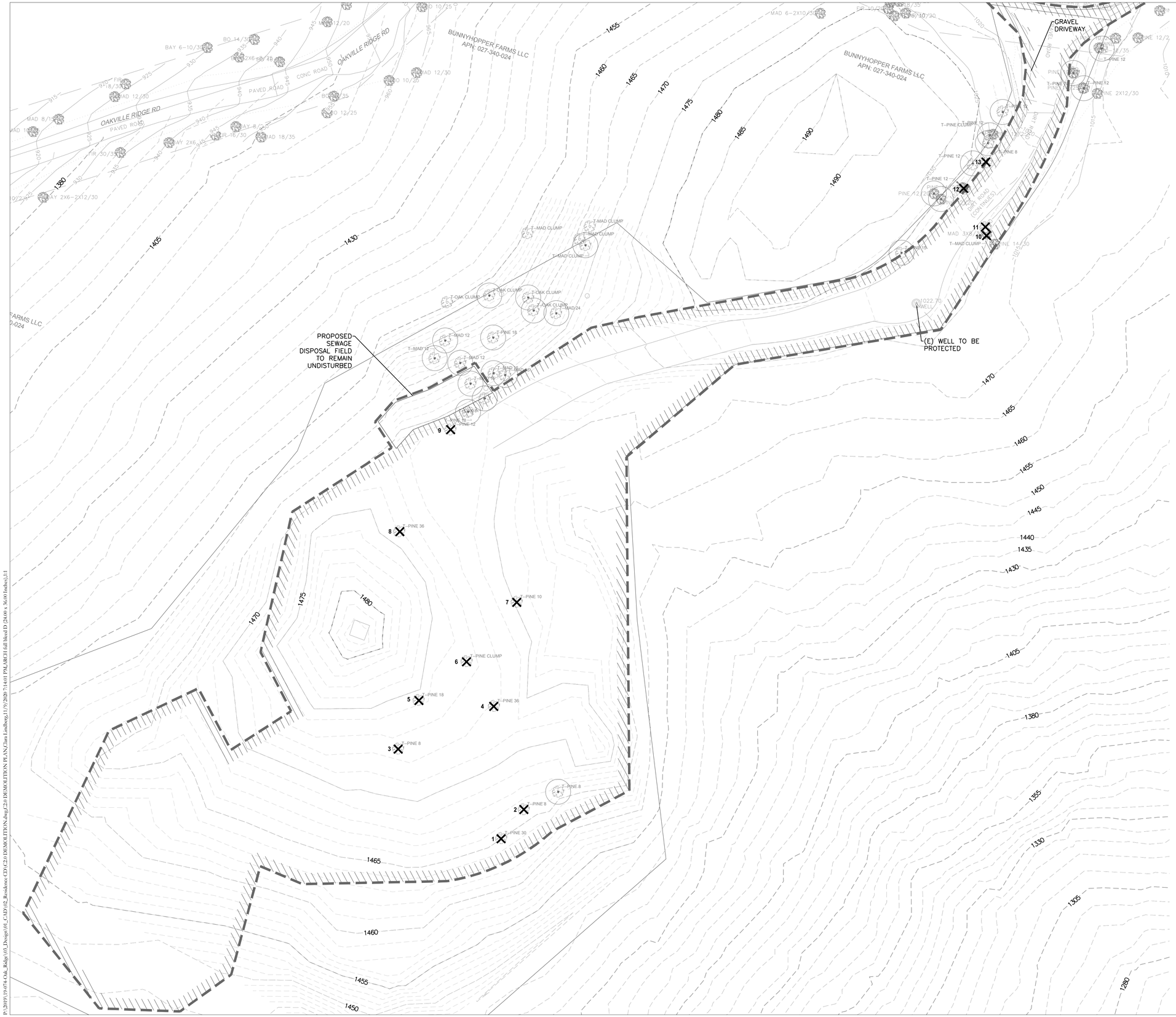
KALLWEIT RESIDENCE
OAKVILLE RIDGE
NAPA, CALIFORNIA

0 25' 50' 100' NORTH

EXISTING CONDITIONS

C1.0

P:\2019\19-074-Oak_Ridge\03_Design\01_CAD\02_Residence CD\C2.0 DEMOLITION.dwg,C1.0 EXISTING CONDITIONS,Clara Lindberg,11/9/2020 7:12:13 PM,ARCH full bleed D (24.00 x 36.00 Inches),1:1



LEGEND:

LIMIT OF WORK	
CLEAR AND GRUB	
(E) TREE TO BE REMOVED, SLP	#X
(E) TREE TO REMAIN, PIP, SLP	*

NOTES:

1. CONTRACTOR IS RESPONSIBLE TO LEGALLY DISPOSE OF ALL REMOVED MATERIALS AT THE CONTRACTORS EXPENSE.
2. THE CONTRACTOR AGREES THAT, IN ACCORDANCE WITH GENERALLY ACCEPTED CONSTRUCTION PRACTICES, THE CONTRACTOR WILL BE REQUIRED TO ASSUME SOLE AND COMPLETE RESPONSIBILITY FOR JOB SITE CONDITIONS DURING THE COURSE OF CONSTRUCTION OF THE PROJECT, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY. THIS REQUIREMENT SHALL BE MADE TO APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS.
3. THE GENERAL CONTRACTOR IS RESPONSIBLE FOR COORDINATING ALL OF THE WORK PERFORMED BY HIS SUBCONTRACTORS, WITHOUT EXCEPTION.
4. THE CONTRACTOR SHALL IDENTIFY A RESPONSIBLE CONTACT, WHO IS AN EMPLOYEE OF THE CONTRACTOR, AND A 24-HOUR TELEPHONE NUMBER TO CALL TO RESOLVE PROBLEMS WITH NOISE, DUST OR OTHER CONSTRUCTION-RELATED ISSUES.
5. CONSTRUCTION ACTIVITY SHALL BE RESTRICTED TO THE HOURS APPROVED BY THE COUNTY OF NAPA.

TREE DEMOLITION

NUMBER	TRUNK DIAMETER (INCHES)	SPECIES	STATUS (ALIVE/DEAD)
1	30	PINE	DEAD
2	8	PINE	ALIVE
3	8	PINE	ALIVE
4	36	PINE	ALIVE
5	18	PINE	ALIVE
6	CLUMP	PINE	DEAD
7	10	PINE	ALIVE
8	36	PINE	DEAD
9	10	PINE	ALIVE
10	CLUMP	MADRONE	ALIVE
11	CLUMP	MADRONE	ALIVE
12	12	PINE	ALIVE
13	12	PINE	ALIVE

SHERWOOD DESIGN ENGINEERS
2548 Mission Street
San Francisco, CA 94110
www.sherwoodengineers.com

REGISTERED PROFESSIONAL ENGINEER
CASEY ANDERSON
EXP: 9/30/21
No.84120
CIVIL
STATE OF CALIFORNIA

SCALE: 1" = 20'
0 1"
Note: If this graphic scale does not equal 1", this sheet has been modified from its original size.

NO	DATE	REVISION

PROJECT NO. 19-074
DATE 11/09/2020
DRAWN CL
DESIGNED CL
CHECKED CA

KALLWEIT RESIDENCE
OAKVILLE RIDGE
NAPA, CALIFORNIA

DEMOLITION PLAN

C2.0

DRIVEWAY CENTERLINE

Line Table		
Line #	Length	Direction
L1	5.21	N72° 38' 33.75"E
L2	5.00	S72° 55' 17.75"E
L3	26.00	S35° 03' 11.24"E
L4	16.00	N24° 51' 50.79"W
L5	25.00	N33° 51' 25.63"W
L6	36.50	N66° 26' 19.66"W
L7	3.56	N84° 24' 42.09"W
L8	25.82	S77° 30' 34.32"W

Curve Table			
Curve #	Length	Radius	Delta
C1	46.70	77.87	34.36
C2	43.86	70.50	35.65
C3	40.96	270.00	8.69
C4	27.27	183.00	8.54
C5	31.09	60.75	29.32
C6	50.27	183.00	15.74
C7	17.26	56.50	17.50

SHERWOOD DESIGN ENGINEERS
2548 Mission Street
San Francisco, CA 94110
www.sherwoodengineers.com

REGISTERED PROFESSIONAL ENGINEER
CASEY ANDERSON
EXP: 9/30/21
No.84120
CIVIL
STATE OF CALIFORNIA

SCALE: 1" = 20'
0 1"
Note: If this graphic scale does not equal 1", this sheet has been modified from its original size.

NO	DATE	REVISION

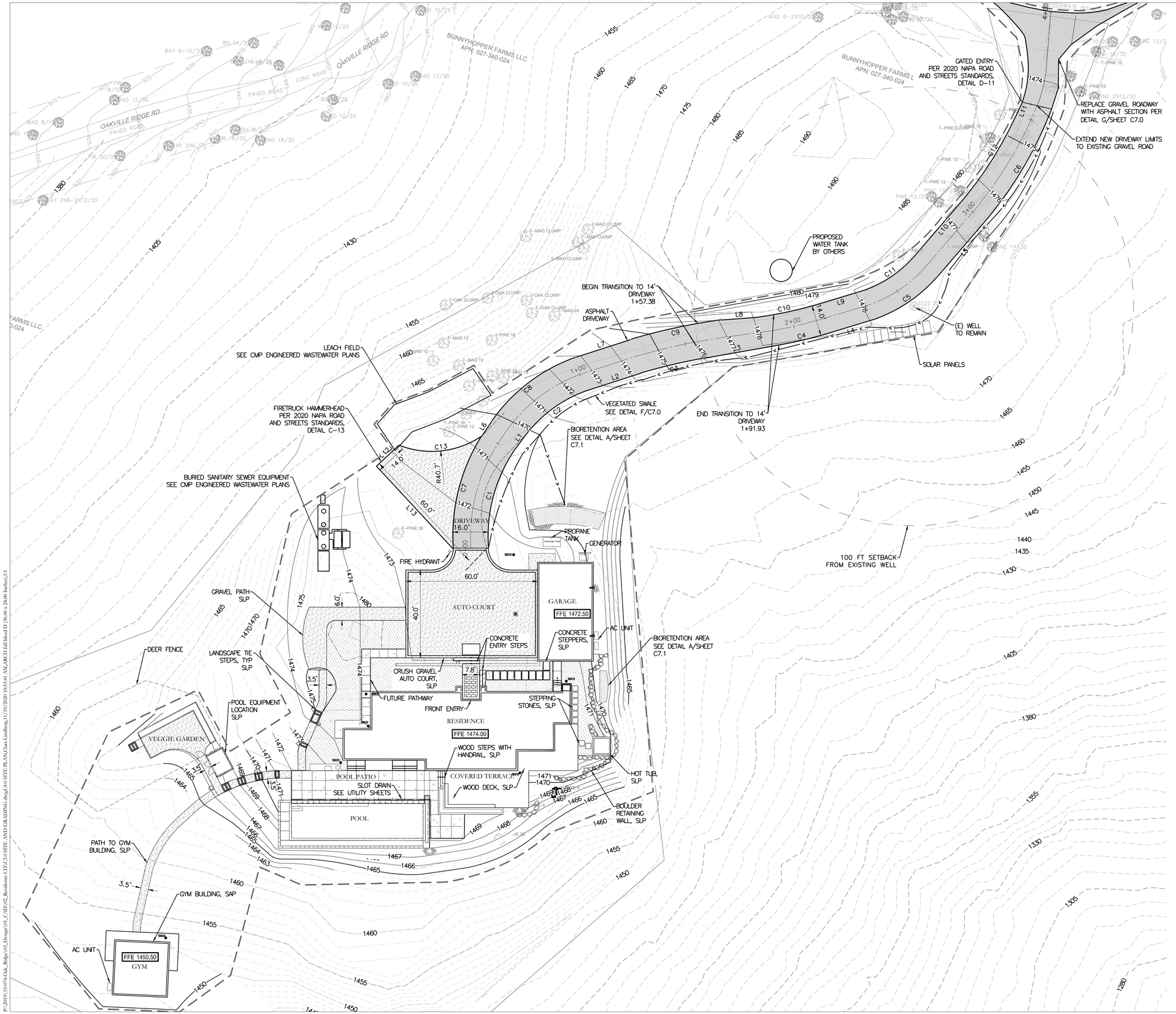
PROJECT NO. 19-074
DATE 11/09/2020
DRAWN CL
DESIGNED CL
CHECKED CA

KALLWEIT RESIDENCE
OAKVILLE RIDGE
NAPA, CALIFORNIA

KEY MAP

C3.0

0 10' 20' 40' NORTH



LEGEND

- ASPHALT DRIVEWAY SEE DETAIL G/7.0
- CRUSHED GRAVEL PAVING, SLP
- CONCRETE PAVING, SLP
- FRONT PORCH FIELD PAVING, SLP
- FIRE RATED TURFBLOCK PAVING, SLP
- PLANTER AREA, SLP
- BIORETENTION AREA
- MINOR CONTOUR 1476
- MAJOR CONTOUR 1475
- LIMITS OF DISTURBED AREA
- VEGETATED DRAINAGE SWALE SEE DETAIL F/C7.0
- DRAINAGE DIRECTION
- FINISH FLOOR ELEVATION FFE 1474

NOTES

1. NO STRUCTURE, IMPROVEMENT, GRADING, EARTHMOVING ACTIVITY, VEGETATION REMOVAL OR DEVELOPMENT SHALL BE PERMITTED ON A SLOPE GREATER THAN FIFTY PERCENT
2. SEE LANDSCAPE PLANS FOR ADDITIONAL ARCHITECTURAL SITE DETAILS
3. SEE LANDSCAPE PLANS FOR GRADING IN POOL AREA
4. SEE LANDSCAPE PLANS FOR LANDSCAPE AND WALKWAYS MATERIAL AND FINISHES.
5. STOCKPILE AND CONCRETE WASHOUT TO BE LOCATED BY CONTRACTOR PER DETAILS ON SHEET C7.2

DRIVEWAY/TURNOUT LINE AND CURVE TABLES

Line Table		
Line #	Length	Direction
L1	8.67	S70°22'38.81"E
L2	26.00	S35°03'11.24"E
L3	34.54	S27°04'54.90"E
L4	25.33	N33°52'27.87"W
L5	36.64	N66°25'15.18"W
L6	8.25	S73°12'28.33"E
L7	26.00	S35°03'11.24"E
L8	16.08	S21°17'50.46"E
L9	25.00	N33°51'25.63"W
L10	36.50	N66°26'19.66"W
L11	6.46	N82°21'53.01"W
L12	14.00	S59°59'56.31"E
L13	51.60	N30°05'49.86"E

Curve Table			
Curve #	Length	Radius	Delta
C1	47.86	69.83	039.27
C2	34.32	60.12	032.71
C3	31.45	262.00	006.88
C4	19.79	190.00	005.97
C5	34.67	67.75	029.32
C6	56.46	174.50	018.54
C7	53.41	85.00	036.00
C8	48.84	78.50	035.65
C9	42.17	278.00	008.69
C10	26.22	176.00	008.54
C11	27.51	53.75	029.32
C12	43.79	176.00	014.26
C13	39.42	40.65	055.56

0 10' 20' 40' NORTH

SHERWOOD DESIGN ENGINEERS
2548 Mission Street
San Francisco, CA 94110
www.sherwoodengineers.com

REGISTERED PROFESSIONAL ENGINEER
CODY ANDERSON
EXP: 9/30/21
No.84120
CIVIL
STATE OF CALIFORNIA

SCALE: 1" = 20'
0 1"
Note: If this graphic scale does not equal 1", this sheet has been modified from its original size.

NO	DATE	REVISION

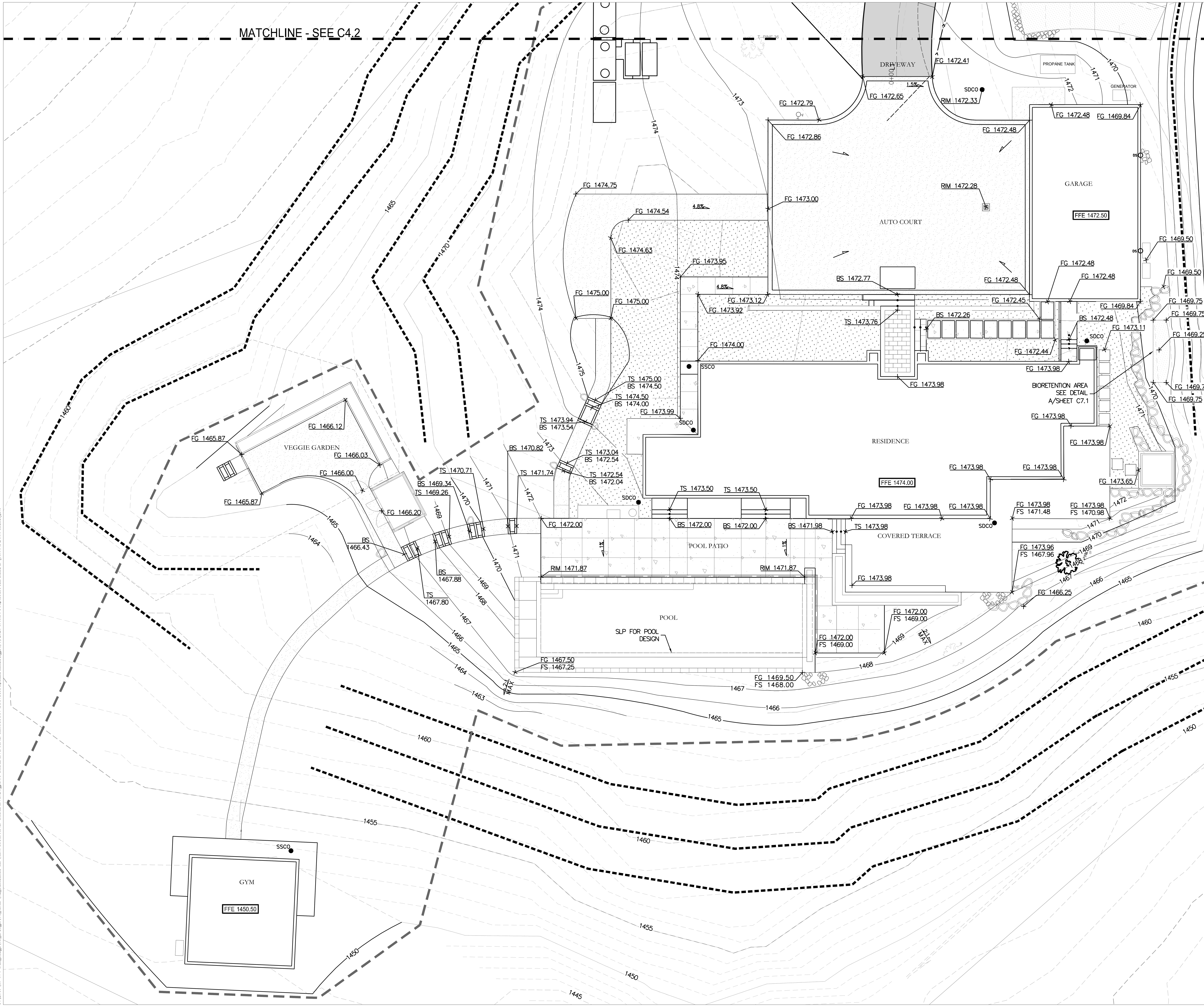
PROJECT NO. 19-074
DATE 11/09/2020
DRAWN CL
DESIGNED CL
CHECKED CA

KALLWEIT RESIDENCE
OAKVILLE RIDGE
NAPA, CALIFORNIA

SITE PLAN

C4.0

P:\2019\19-074-Oak_Ridge\03_Design\01_CAD\02_Residence CD\C4.0 SITE AND GRADING.dwg/C4.0 SITE PLAN/Clara Lindberg,11/19/2020 10:53:41 AM,ARCH full bleed D (36.00 x 24.00 Inches),1:1

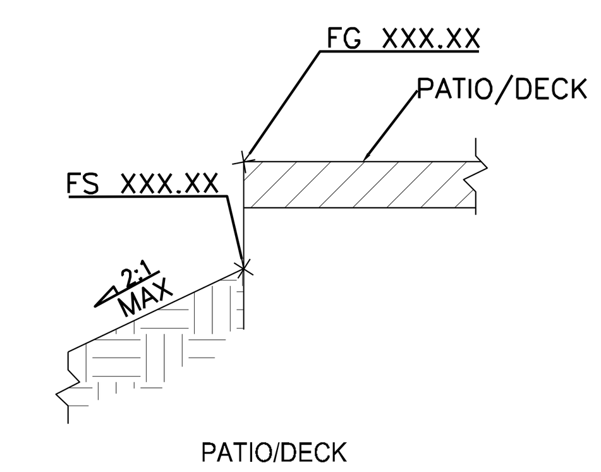


LEGEND

ASPHALT DRIVEWAY SEE DETAIL G/7.0	▨
CRUSHED GRAVEL PAVING, SLP	▨
CONCRETE PAVING, SLP	▨
FRONT PORCH FIELD PAVING, SLP	▨
FIRE RATED TURFBLOCK PAVING, SLP	▨
PLANTER AREA, SLP	▨
BIORETENTION AREA	▨
MINOR CONTOUR	1476
MAJOR CONTOUR	1475
LIMITS OF DISTURBED AREA	— — —
VEGETATED DRAINAGE SWALE SEE DETAIL F/C7.0	— > — > —
DRAINAGE DIRECTION	→
FINISH FLOOR ELEVATION	FFE 1474
SILT FENCE DROP INLET	■
FIBER ROLLS	- - - -

NOTES

1. NO STRUCTURE, IMPROVEMENT, GRADING, EARTHMOVING ACTIVITY, VEGETATION REMOVAL OR DEVELOPMENT SHALL BE PERMITTED ON A SLOPE GREATER THAN FIFTY PERCENT
2. SEE LANDSCAPE PLANS FOR ADDITIONAL ARCHITECTURAL SITE DETAILS
3. SEE LANDSCAPE PLANS FOR GRADING IN POOL AREA
4. SEE LANDSCAPE PLANS FOR LANDSCAPE AND WALKWAYS MATERIAL AND FINISHES.
5. STOCKPILE AND CONCRETE WASHOUT TO BE LOCATED BY CONTRACTOR PER DETAILS ON SHEET C7.2



1 GRADING KEY

SCALE: NTS

0 5' 10' 20'

NORTH

SHERWOOD
DESIGN ENGINEERS
2548 Mission Street
San Francisco, CA 94110
www.sherwoodengineers.com

REGISTERED PROFESSIONAL ENGINEER
CODY ANDERSON
EXP: 9/30/21
No.84120
CIVIL
STATE OF CALIFORNIA

SCALE: 1" = 10'

0 1"

Note: If this graphic scale does not equal 1", this sheet has been modified from its original size.

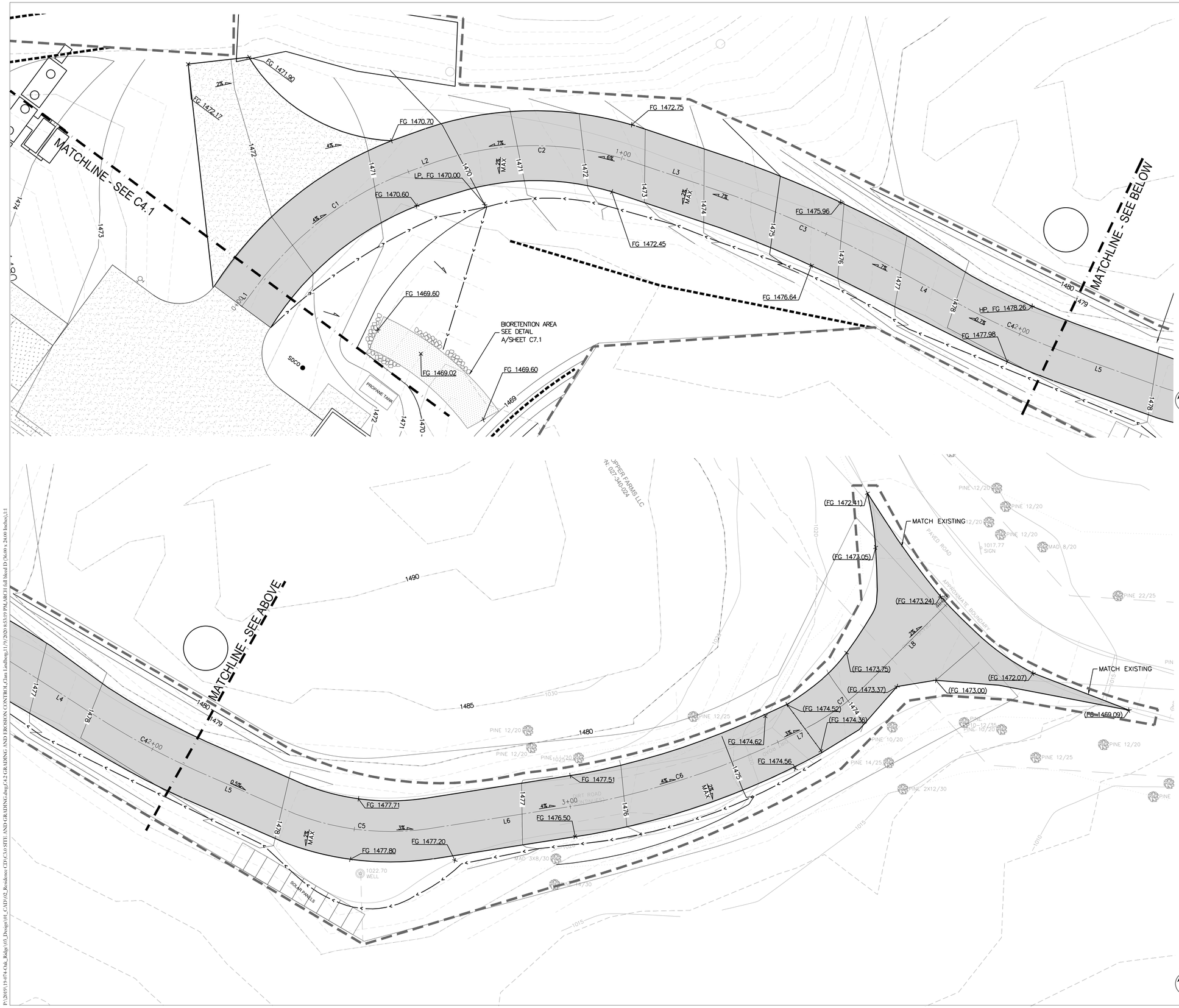
NO	DATE	REVISION

PROJECT NO.	19-074
DATE	11/09/2020
DRAWN	CL
DESIGNED	CL
CHECKED	CA

KALLWEIT RESIDENCE
OAKVILLE RIDGE
NAPA, CALIFORNIA

GRADING AND EROSION CONTROL

C4.1



LEGEND

- ASPHALT DRIVEWAY SEE DETAIL G/7.0
- CRUSHED GRAVEL PAVING, SLP
- CONCRETE PAVING, SLP
- FRONT PORCH FIELD PAVING, SLP
- FIRE RATED TURFBLOCK PAVING, SLP
- PLANTER AREA, SLP
- BIORETENTION AREA
- MINOR CONTOUR 1476
- MAJOR CONTOUR 1475
- LIMITS OF DISTURBED AREA
- VEGETATED DRAINAGE SWALE SEE DETAIL F/C7.0
- DRAINAGE DIRECTION
- FINISH FLOOR ELEVATION FFE 1474
- SILT FENCE DROP INLET
- FIBER ROLLS

NOTES

1. NO STRUCTURE, IMPROVEMENT, GRADING, EARTHMOVING ACTIVITY, VEGETATION REMOVAL OR DEVELOPMENT SHALL BE PERMITTED ON A SLOPE GREATER THAN FIFTY PERCENT
2. SEE LANDSCAPE PLANS FOR ADDITIONAL ARCHITECTURAL SITE DETAILS
3. SEE LANDSCAPE PLANS FOR GRADING IN POOL AREA
4. SEE LANDSCAPE PLANS FOR LANDSCAPE AND WALKWAYS MATERIAL AND FINISHES.
5. STOCKPILE AND CONCRETE WASHOUT TO BE LOCATED BY CONTRACTOR PER DETAILS ON SHEET C7.2

SHERWOOD DESIGN ENGINEERS
2548 Mission Street
San Francisco, CA 94110
www.sherwoodengineers.com

REGISTERED PROFESSIONAL ENGINEER
CASEY ANDERSON
EXP: 9/30/21
No.84120
CIVIL
STATE OF CALIFORNIA

SCALE: 1" = 10'
0 1"
Note: If this graphic scale does not equal 1", this sheet has been modified from its original size.

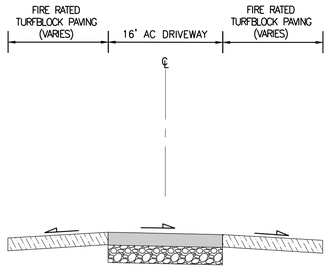
NO	DATE	REVISION

PROJECT NO.	19-074
DATE	11/09/2020
DRAWN	CL
DESIGNED	CL
CHECKED	CA

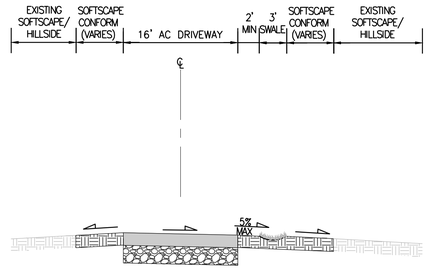
KALLWEIT RESIDENCE
OAKVILLE RIDGE
NAPA, CALIFORNIA

GRADING AND EROSION CONTROL

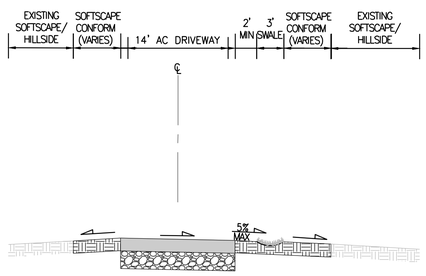
C4.2



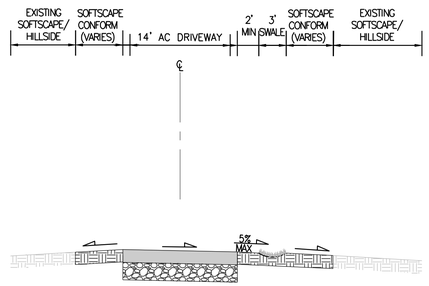
SECTION 0+00
SCALE:
H 1"=10'
V NTS



SECTION 1+00
SCALE:
H 1"=10'
V NTS



SECTION 2+00
SCALE:
H 1"=10'
V NTS



SECTION 3+00
SCALE:
H 1"=10'
V NTS

SHERWOOD
DESIGN ENGINEERS
2548 Mission Street
San Francisco, CA 94110
www.sherwoodengineers.com

REGISTERED PROFESSIONAL ENGINEER
CODY ANDERSON
EXP: 9/30/21
No.84120
CIVIL
STATE OF CALIFORNIA

SCALE: 1" = 10'
0 1"
Note: If this graphic scale does not equal 1", this sheet has been modified from its original size.

NO	DATE	REVISION

PROJECT NO. 19-074
DATE 11/09/2020
DRAWN CL
DESIGNED CL
CHECKED CA

KALLWEIT RESIDENCE
OAKVILLE RIDGE
NAPA, CALIFORNIA

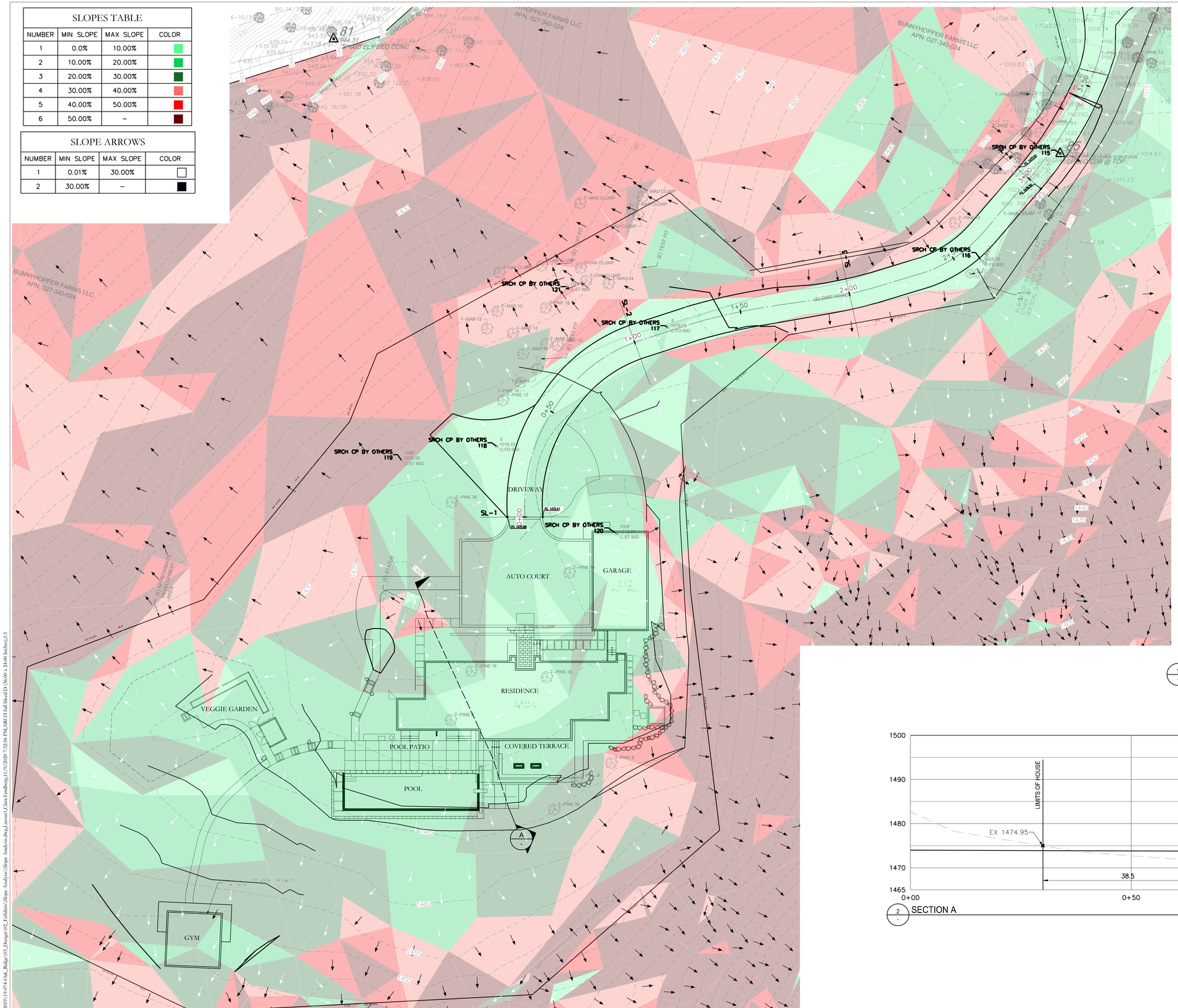
TYPICAL DRIVEWAY SECTIONS

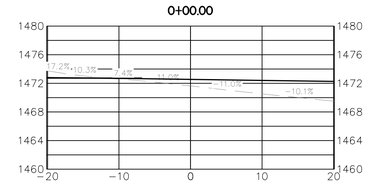
C4.3

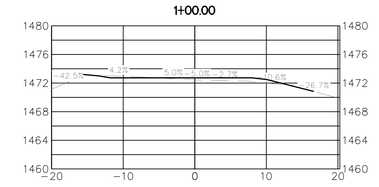
0 5' 10' 20'

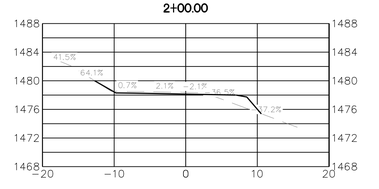
SLOPES TABLE			
NUMBER	MIN SLOPE	MAX SLOPE	COLOR
1	0.0%	10.00%	
2	10.00%	20.00%	
3	20.00%	30.00%	
4	30.00%	40.00%	
5	40.00%	50.00%	
6	50.00%	–	

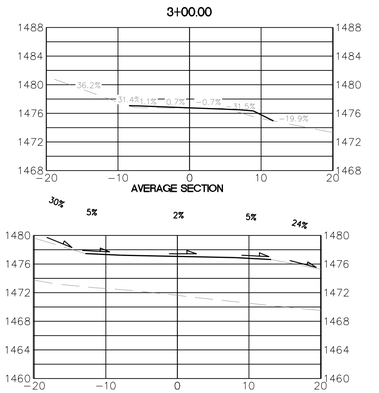
SLOPE ARROWS			
NUMBER	MIN SLOPE	MAX SLOPE	COLOR
1	0.01%	30.00%	
2	30.00%	–	











1 - DRIVEWAY SECTIONS

SCALE: 1"=10'

2 - SECTION A

SCALE: 1"=10'

0 5' 10' 20'

0 10' 20' 40' NORTH

SHERWOOD DESIGN ENGINEERS
2548 Mission Street
San Francisco, CA 94110
www.sherwoodengineers.com

REGISTERED PROFESSIONAL ENGINEER
CASEY ANDERSON
EXP: 9/30/21
No.84120
CIVIL
STATE OF CALIFORNIA

SCALE:
0 1"
Note: If this graphic scale does not equal 1", this sheet has been modified from its original size.

NO	DATE	REVISION

PROJECT NO.	19-074
DATE	11/09/2020
DRAWN	CL
DESIGNED	CL
CHECKED	CA

KALLWEIT RESIDENCE
OAKVILLE RIDGE
NAPA, CALIFORNIA

SLOPE ANALYSIS

C4.4

MATCHLINE - SEE C5.1

LEGEND

PRESSURIZED SEPTIC TRANSPORT LINE	SS SS
FIRE WATER LINE	FW FW
DOMESTIC WATER LINE	DW DW
WATER LINE	W W W
ELECTRICAL LINE	E E E
CLEANOUT SEE DETAIL D/C7.0	SSCO
FIRE HYDRANT SEE NAPA COUNTY FIRE	
CLEAN OUT SEE DETAIL D/C7.0	SDCO
LEVEL SPREADER SEE DETAIL A/C7.1	
SLOT DRAIN SEE DETAIL A/C7.0	
BUILDING FOUNDATION SUBDRAIN SEE DETAIL C/C7.0	UD UD
DOWNSPOUT	DS
OUTFALL SEE DETAIL B/C7.0	
STORM DRAIN LINE	SD SD
CATCH BASIN SEE DETAIL H/C7.0	

NOTES

1. SITE ELECTRICAL DISTRIBUTION BY OTHERS
2. GRAVEL TRENCHES SHALL BE IN CRAWL SPACE OF SUBDRAIN LINE AT 4' INTERVALS
3. FIRE HYDRANT TO BE INSTALLED FREE OF OBSTRUCTIONS DUE TO ADJACENT LANDSCAPING OR VEHICLES.

APPROXIMATE UNDERGROUND ELECTRICAL AND COMMUNICATION CONDUIT ROUTE SERVING WASTEWATER SYSTEM.

4" SCH 40 PVC SEPTIC TRANSPORT LINE, L=62 LF, S=2.0% MIN

4" FW NON-PRESSURIZED DEDICATED DRAFT LINE

FIRE HYDRANT SEE NOTE 3

DRIVEWAY

PROPANE TANK

4" HDPE SD, 18 LF S=6.9%

GENERATOR

SDCO RIM 1472.33 INV 1470.59

4" HDPE SD, 28 LF S=2.0%

SDCB RIM 1472.28 INV 1471.15

GARAGE

AUTO COURT

4" FW

2" DW

4" HDPE SD, 39 LF S=0.9%

INV 1469.45

LEVEL SPREADER SEE DETAIL A/C7.1

SWEEPING T 90 AT INTERSECTION OF TRANSPORT LINE WITH 4" SEPTIC LINE FROM RESIDENCE. USE REDUCERS AS NECESSARY

SEE PLUMBING PLANS FOR CONTINUATION (TYP)

SSCO

SEE PLUMBING PLANS FOR CONTINUATION (TYP)

SEE ELECTRICAL PLANS FOR CONTINUATION (TYP)

4" SUBDRAIN, 57 LF SEE NOTE 2

4" SUBDRAIN, 40 LF SEE NOTE 2

RESIDENCE

4" SUBDRAIN, 70 LF SEE NOTE 2

4" SUBDRAIN, 30 LF SEE NOTE 2

4" SUBDRAIN, 87 LF SEE NOTE 2

SDCO

COVERED TERRACE

4" HDPE SD, 17 LF S=2.0% MIN

OUTFALL INV 1468.50

POOL PATIO

RIM 1471.87 INV 1471.26

SLOT DRAIN, 60 LF

RIM 1471.87 INV 1470.96

POOL

SLOT DRAIN, 19 LF

RIM 1471.71 INV 1470.81

OUTFALL INV 1467.50

PRESSURIZED SCH 40 PVC SEPTIC TRANSPORT LINE, L=156 LF

SSCO

SEE PLUMBING PLANS FOR CONTINUATION (TYP)

GYM

VEGGIE GARDEN

(E) APPROXIMATE LEVEL OPENING AREA

S37° 05' 06"E 104.05

S37° 05' 06"E 85.45

S89° 36' 54"W 75.98

S7° 17' 58" 35' 54"E

112.92' N68° 21' 06"W

1470

1475

1460

1455

1450

0 5' 10' 20'

NORTH

SHERWOOD DESIGN ENGINEERS
2548 Mission Street
San Francisco, CA 94110
www.sherwoodengineers.com

REGISTERED PROFESSIONAL ENGINEER
CODY ANDERSON
EXP: 9/30/21
No.84120
CIVIL
STATE OF CALIFORNIA

SCALE: 1" = 10'
0 1"
Note: If this graphic scale does not equal 1", this sheet has been modified from its original size.

NO	DATE	REVISION

PROJECT NO. 19-074

DATE	11/09/2020
DRAWN	CL
DESIGNED	CL
CHECKED	CA

KALLWEIT RESIDENCE
OAKVILLE RIDGE
NAPA, CALIFORNIA

UTILITY PLAN

C5.0

P:\2019\19-074-Oak_Ridge\03_Design\01_CAD\02_Residence CD\C4.0 UTILITY.dwg,C4.0 UTILITIES,Clara Lindberg,11/19/2020 10:59:22 AM,ARCH E full bleed D (36.00 x 24.00 Inches),1:1

2000 GALLON SELVAGE PUMP TANK

GEOFLOW PRESSURIZED DRIP TYPE LEACH FIELD, SEE CMP ENGINEERED WASTEWATER PLANS

4" FW NON-PRESSURIZED DEDICATED DRAFT LINE

MATCHLINE - SEE C5.0

MATCHLINE - SEE ABOVE

MATCHLINE - SEE BELOW

PROPOSED WATER TANK BY OTHERS

LEVEL SPREADER, SEE DETAIL A/C7.1

CONNECTION TO EXISTING WELL, DESIGN BY OTHERS

(E) WELL

(E) TEST PIT

(E) DIRT ROAD

DRIVEWAY

PROPANE TANK

SOLAR PANELS

DIRT ROAD (CONTINUES)

PAVED ROAD

GRAVEL ROAD

APPROXIMATE (E) PAVED DRIVEWAY BOUNDARY

JPPER FARMS LLC
APN: 027-340-024

469.35

63.33 N56° 54' 06"W

S63° 07' 06"E 51.36

R=45.00 L=28.25
Δ=S45° 08' 08"E

S27° 38' 08"E 54.70

S87° 18' 06"E 84.72

R=85.00
L=35.88
Δ=S75° 12' 35"E

S59° 38' 51"E
55.55

N89° 36' 54"E 40.38'

S87° 18' 06"E 84.72

Δ=N10° 04' 06"W
L=20.09 R=115.00

79.77 N72° 34' 06"W

N30° 41' 20"E
15.76

1022.70
WELL

1017.77
SIGN

T-PINE 18
T-OAK CLUMP
T-MAD 12
T-MAD 24
T-MAD 15
T-PINE 12
T-OAK 8
T-PINE CLUMP
T-PINE 15
T-MAD CLUMP
T-PINE 8
T-PINE 2X12/30
T-MAD 3X8/30
PINE 12/20
PINE 12/25
PINE 14/30
PINE 15/30
PINE 22/25
MAD 8/20

1030
1025
1020
1015
1010
1005

NORTH

0 5' 10' 20'

LEGEND

PRESSURIZED SEPTIC TRANSPORT LINE	SS SS
FIRE WATER LINE	FW FW
DOMESTIC WATER LINE	DW DW
WATER LINE	W W W
ELECTRICAL LINE	E E E
CLEAN OUT SEE DETAIL D/C7.0	SDCO
LEVEL SPREADER SEE DETAIL A/C7.1	
SLOT DRAIN SEE DETAIL A/C7.0	
BUILDING FOUNDATION SUBDRAIN SEE DETAIL C/C7.0	UD UD
DOWNSPOUT	
OUTFALL SEE DETAIL B/C7.0	
STORM DRAIN LINE	SD SD
CATCH BASIN SEE DETAIL H/C7.0	

NOTES

1. SITE ELECTRICAL DISTRIBUTION BY OTHERS
2. GRAVEL TRENCHES SHALL BE IN CRAWL SPACE OF SUBDRAIN LINE AT 4' INTERVALS.
3. FIRE HYDRANT TO BE INSTALLED FREE OF OBSTRUCTIONS DUE TO ADJACENT LANDSCAPING OR VEHICLES.

SHERWOOD DESIGN ENGINEERS
2548 Mission Street
San Francisco, CA 94110
www.sherwoodengineers.com

REGISTERED PROFESSIONAL ENGINEER
CASEY ANDERSON
EXP: 9/30/21
No.84120
CIVIL
STATE OF CALIFORNIA

SCALE: 1" = 10'
0 1"
Note: If this graphic scale does not equal 1", this sheet has been modified from its original size.

NO	DATE	REVISION

PROJECT NO. 19-074

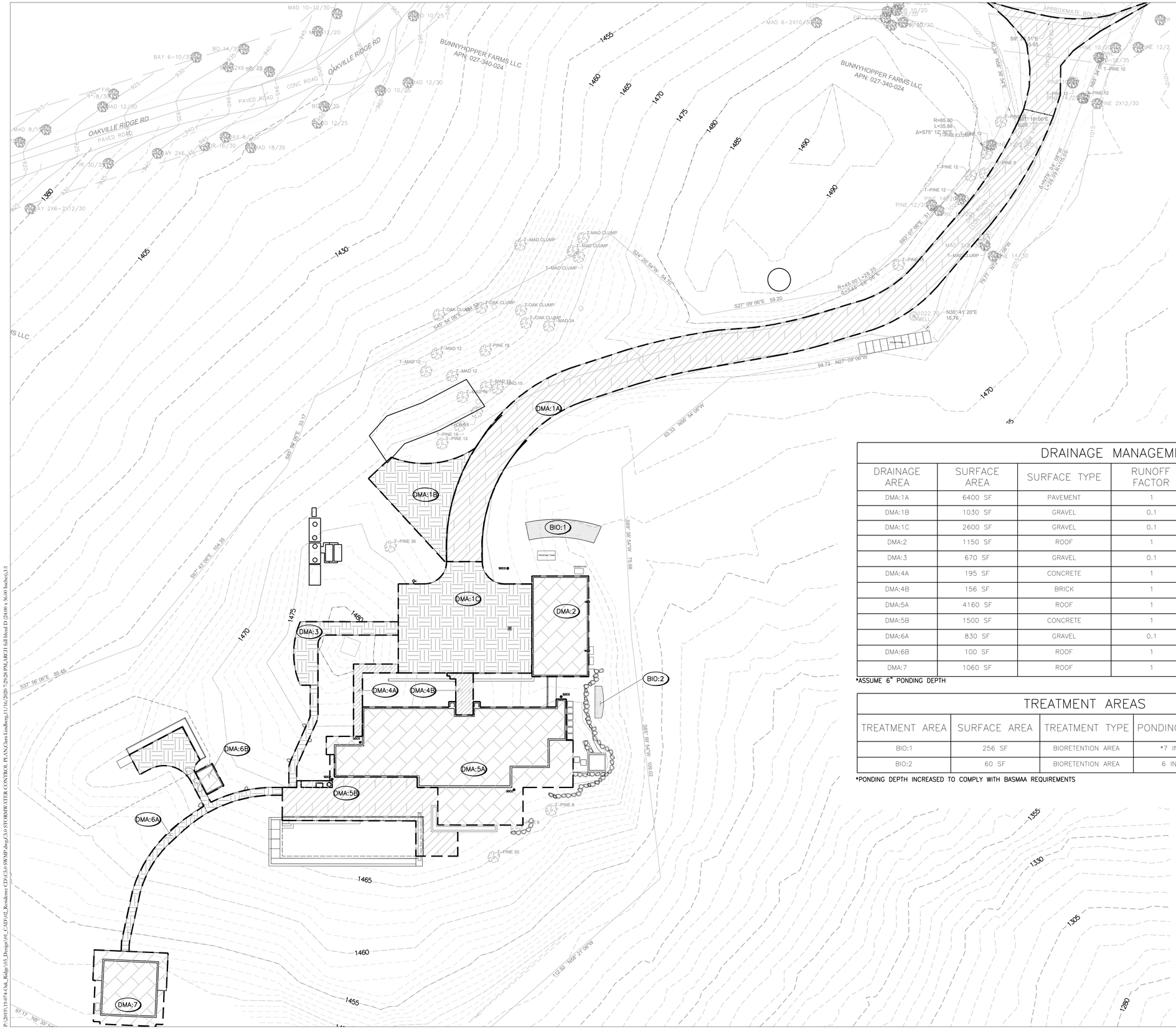
DATE 11/09/2020
DRAWN CL
DESIGNED CL
CHECKED CA

KALLWEIT RESIDENCE
OAKVILLE RIDGE
NAPA, CALIFORNIA

UTILITY PLAN

C5.1

P:\2019\19-074 Oak_Ridge\03_Design\01_CAD\02_Residence CD\C4.0 UTILITY.dwg,C4.1 UTILITIES,Claus Lindberg,11/16/2020 7:27:07 PM,ARCH full bleed D (36.00 x 24.00 Inches),1:1



LEGEND

- IMPERVIOUS AREA
- ROOF AREA
- PERVIOUS AREA
- TREATMENT AREA
- DRAINAGE AREA
- DMA/BIO LABEL — XX:#

NOTES

1. ALL LANDSCAPE/PLANTING AREA IS ASSUMED SELF-TREATING.
2. ALL CALCULATIONS ARE BASED ON THE '4 PERCENT METHOD' PER THE BASMAA POST-CONSTRUCTION MANUAL

DRAINAGE MANAGEMENT AREAS

DRAINAGE AREA	SURFACE AREA	SURFACE TYPE	RUNOFF FACTOR	TREATMENT	*TREATMENT REQUIRED	TREATMENT PROVIDED
DMA:1A	6400 SF	PAVEMENT	1	BIORETENTION AREA	256F	256 SF
DMA:1B	1030 SF	GRAVEL	0.1	BIORETENTION AREA	5 SF	
DMA:1C	2600 SF	GRAVEL	0.1	BIORETENTION AREA	10 SF	
DMA:2	1150 SF	ROOF	1	BIORETENTION AREA	46 SF	52 SF
DMA:3	670 SF	GRAVEL	0.1	PERVIOUS AREA	N/A	N/A
DMA:4A	195 SF	CONCRETE	1	PERVIOUS AREA	N/A	N/A
DMA:4B	156 SF	BRICK	1	PERVIOUS AREA	N/A	N/A
DMA:5A	4160 SF	ROOF	1	PERVIOUS AREA	N/A	N/A
DMA:5B	1500 SF	CONCRETE	1	PERVIOUS AREA	N/A	N/A
DMA:6A	830 SF	GRAVEL	0.1	PERVIOUS AREA	N/A	N/A
DMA:6B	100 SF	ROOF	1	PERVIOUS AREA	N/A	N/A
DMA:7	1060 SF	ROOF	1	PERVIOUS AREA	N/A	N/A

*ASSUME 6" PONDING DEPTH

TREATMENT AREAS

TREATMENT AREA	SURFACE AREA	TREATMENT TYPE	PONDING DEPTH	AREAS TREATED
BIO:1	256 SF	BIORETENTION AREA	*7 INCHES	DMA:1
BIO:2	60 SF	BIORETENTION AREA	6 INCHES	DMA:2

*PONDING DEPTH INCREASED TO COMPLY WITH BASMAA REQUIREMENTS

0 10' 20' 40' NORTH

SHERWOOD DESIGN ENGINEERS
2548 Mission Street
San Francisco, CA 94110
www.sherwoodengineers.com

REGISTERED PROFESSIONAL ENGINEER
CASEY ANDERSON
EXP: 9/30/21
No.84120
CIVIL
STATE OF CALIFORNIA

SCALE: 1" = 20'
0 1"
Note: If this graphic scale does not equal 1", this sheet has been modified from its original size.

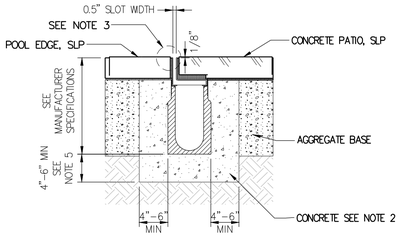
NO	DATE	REVISION

PROJECT NO. 19-074
DATE 11/09/2020
DRAWN CL
DESIGNED CL
CHECKED CA

KALLWEIT RESIDENCE
OAKVILLE RIDGE
NAPA, CALIFORNIA

STORMWATER CONTROL PLAN

C6.0

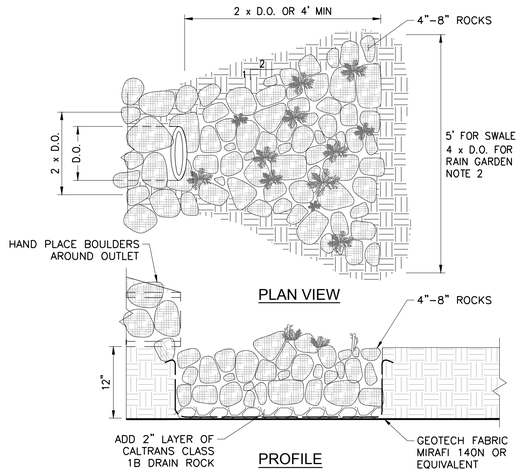


NOTES

1. ACO STAINLESS STEEL BRICK SLOT 100 (ADA RATED) WITH KLASSIKDRAIN K100 CHANNEL SYSTEM (OR APPROVED EQUAL).
2. A MINIMUM CONCRETE STRENGTH OF 3000 PSI IS RECOMMENDED. THE CONCRETE SHOULD BE VIBRATED TO ELIMINATE AIR POCKETS.
3. PAVING TO BE 1/8" ABOVE CHANNEL EDGE. A BEAD OF SEALANT CAN BE USED BETWEEN THE RAIL & CONCRETE.
4. REFER TO ACO'S LATEST INSTALLATION INSTRUCTIONS FOR COMPLETE DETAILS.
5. CONCRETE BASE THICKNESS AND INSTALLATION SHALL BE COORDINATED WITH STRUCTURAL SLAB (SAP, SSP)
6. CONTACT ACO FOR RECOMMENDATIONS ON DRAINING WHEN USING OPTIONAL MEMBRANE MATERIAL WITH BRICKSLOT.

A SLOT DRAIN

SCALE: NTS

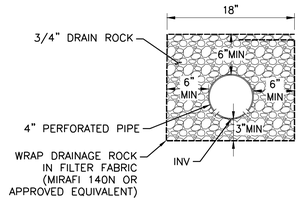


NOTES

1. INITIAL WIDTH OF STONE APRON SHALL BE AT A MINIMUM EQUAL TO TWICE THE OUTLET PIPE DIAMETER (D.O.).
2. AT A MINIMUM THE APRON SHALL FAN OUT AT 2:1 (LONGITUDINAL:LATERAL) UP TO AN ULTIMATE WIDTH EQUAL TO THAT OF THE RECEIVING SWALE; IN THE CASE OF A RAIN GARDEN, FOUR (4) TIMES THE OUTLET PIPE DIAMETER.
3. ALL STONE PLACEMENT TO BE APPROVED BY ENGINEER IN THE FIELD PRIOR TO CONSTRUCTION.

B STORM DRAIN OUTFALL

SCALE: NTS

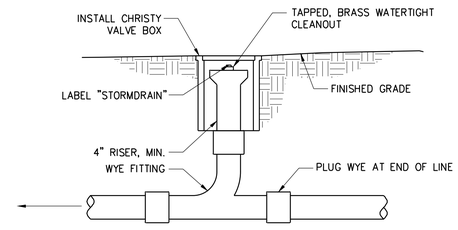


NOTES

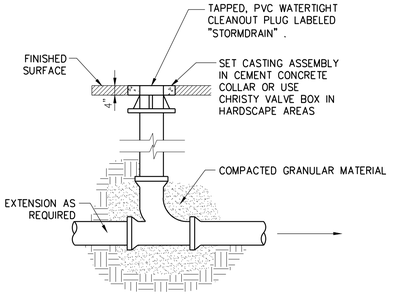
1. INSTALL PERFORATED PIPE WITH PERFORATIONS FACING DOWN.
2. WRAP DRAIN ROCK IN FILTER FABRIC (MIRAFI 140N OR APPROVED EQUIVALENT) AS INDICATED.
3. SEE PLANS FOR LOCATION AND INVERT ELEVATIONS OF SUBDRAIN.
4. SUBDRAIN SHALL BE INSTALLED WITH A MINIMUM 1.5 FEET OF COVER.

C SUBDRAIN

SCALE: NTS



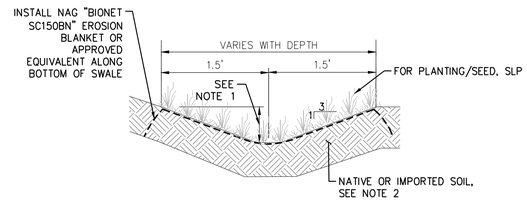
SOFTSCAPE



HARDSCAPE

D CLEANOUT

SCALE: NTS



NOTES

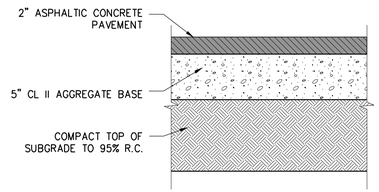
1. DEPTH VARIES PER PLAN ELEVATIONS, FROM 2" MIN TO 6" MAX
2. COMPACT NATIVE OR IMPORTED SOIL TO NO MORE THAN 85% RELATIVE COMPACTION.

E NOT USED

SCALE: NTS

F VEGETATED SWALE

SCALE: NTS

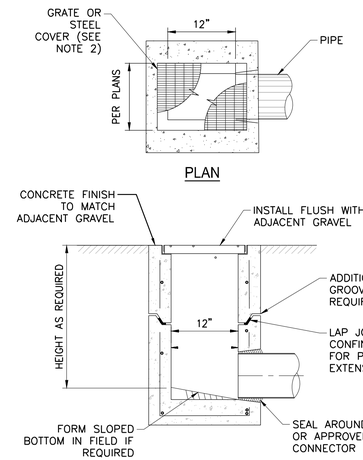


NOTE

1. WHERE TYPICAL ASPHALT SECTION INSTALL OVER ENCOUNTERED UNSUITABLE SOILS, MAY BE INSTALLED WITH A GEOGRID BETWEEN THE SUBGRADE AND SUBBASE AS PER GEOTECHINCAL REPORT.

G ASPHALT SECTION

SCALE: NTS



SECTION

NOTES

1. CATCH BASIN/JUNCTION BOXES SHALL BE SQUARE UNLESS OTHERWISE NOTED.
2. CATCH BASINS SHALL BE FURNISHED WITH CAST IRON GRATE OR STEEL GRATE PER SPECIFICATION.
3. STAINLESS STEEL MATERIAL SAMPLES SHALL BE SENT TO LANDSCAPE ARCHITECT FOR REVIEW AND APPROVAL.

H CATCH BASIN

SCALE: NTS

SHERWOOD
DESIGN ENGINEERS
2548 Mission Street
San Francisco, CA 94110
www.sherwoodengineers.com

REGISTERED PROFESSIONAL ENGINEER
CASEY ANDERSON
EXP: 9/30/21
No.84120
CIVIL
STATE OF CALIFORNIA

SCALE: 1" = 20'
0 1"
Note: If this graphic scale does not equal 1", this sheet has been modified from its original size.

NO	DATE	REVISION

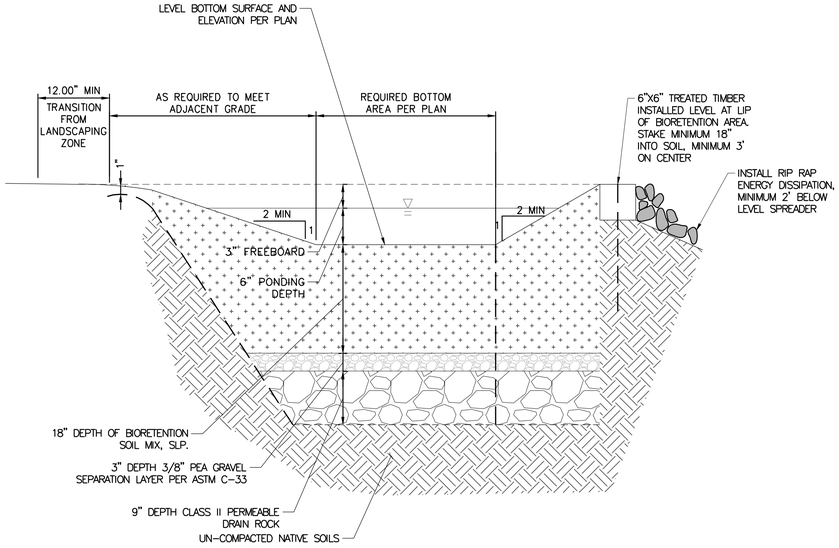
PROJECT NO. 19-074

DATE	11/09/2020
DRAWN	CL
DESIGNED	CL
CHECKED	CA

KALLWEIT RESIDENCE
OAKVILLE RIDGE
NAPA, CALIFORNIA

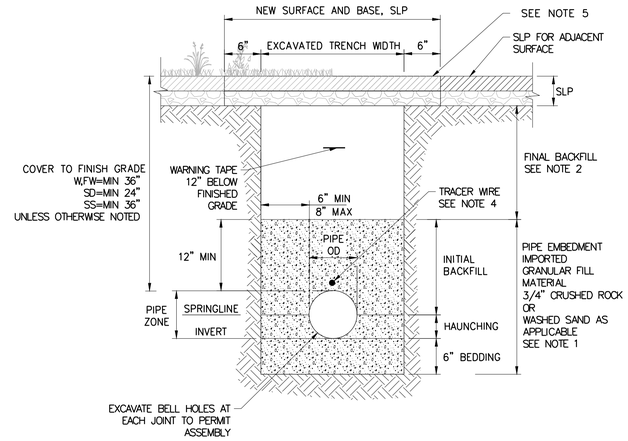
DETAILS

C7.0



A BIORETENTION AREA

SCALE: NTS



B UTILITY TRENCH

SCALE: NTS

NOTES

1. FOR WATER AND FIRE WATER USE WASHED SAND AND FOR STORM DRAIN AND SANITARY SEWER USE GRANULAR FILL MATERIAL, 3/4" CRUSHED ROCK FOR BEDDING, HAUNCHING AND INITIAL BACKFILL MATERIAL. SAND MATERIAL SHALL BE COMPACTED TO 90% PROCTOR DENSITY. REFER TO PROJECT SPECIFICATIONS ACCORDINGLY.
2. FINAL BACKFILL SHALL CONSIST OF EXCAVATED NATIVE SOIL WHERE SUITABLE FOR FILL, COMPACTED TO 90% PROCTOR DENSITY IN NON-TRAFFIC AREAS. IF EXCAVATED MATERIAL IS NOT SUITABLE, USE IMPORTED GRANULAR MATERIAL. 3/4" CRUSHED ROCK AS APPROVED BY GEOTECHNICAL ENGINEER.
3. BACKFILL SHALL BE PLACED IN LAYERS NOT TO EXCEED 8" MAXIMUM.
4. FOR WATER AND FIRE WATER MAINS INSTALL SINGLE STRAND 12" COPPER WIRE.
5. REMOVE A MINIMUM 6" OF PAVEMENT SURFACE BEYOND EDGE OF TRENCH WHEN INSTALLING UTILITY UNDER EXISTING SURFACE WHERE APPLICABLE PER PLAN.

SHERWOOD
DESIGN ENGINEERS
2548 Mission Street
San Francisco, CA 94110
www.sherwoodengineers.com

REGISTERED PROFESSIONAL ENGINEER
CASEY ANDERSON
EXP: 9/30/21
No.84120
CIVIL
STATE OF CALIFORNIA

SCALE: 1" = 20'
0 1"
Note: If this graphic scale does not equal 1", this sheet has been modified from its original size.

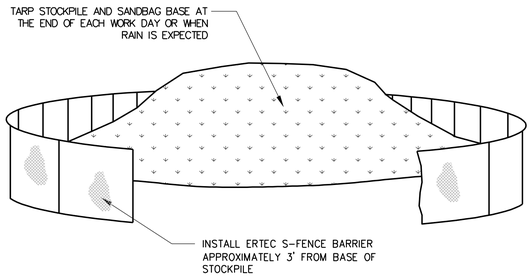
NO	DATE	REVISION

PROJECT NO. 19-074
DATE 11/09/2020
DRAWN CL
DESIGNED CL
CHECKED CA

KALLWEIT RESIDENCE
OAKVILLE RIDGE
NAPA, CALIFORNIA

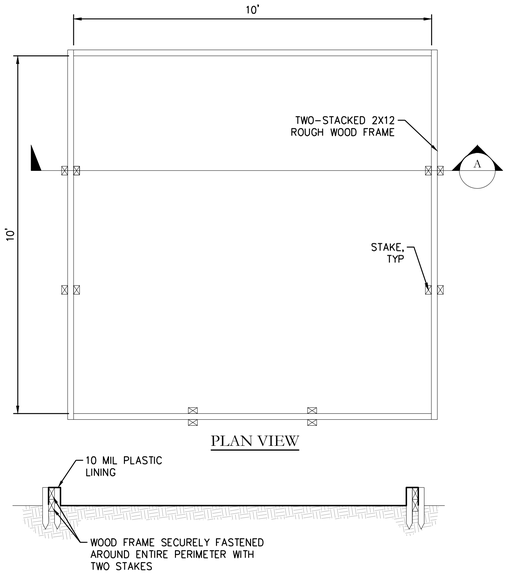
DETAILS

C7.1



A STOCKPILE PROTECTION

SCALE: NTS



PLAN VIEW

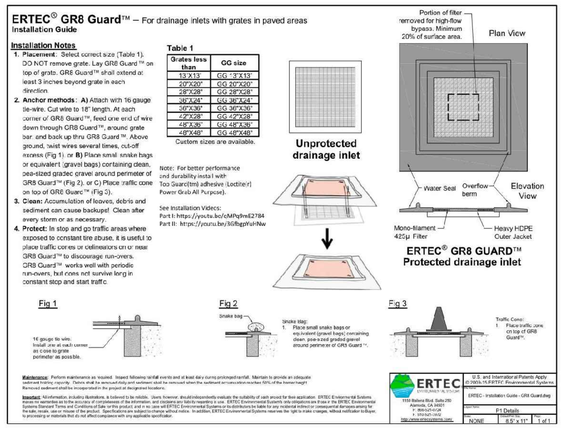
SECTION A-A

NOTES

1. ACTUAL LAYOUT DETERMINED IN FIELD
2. THE CONCRETE WASHOUT SIGN SHALL BE INSTALLED WITHIN 30FT OF THE TEMPORARY CONCRETE WASHOUT FACILITY

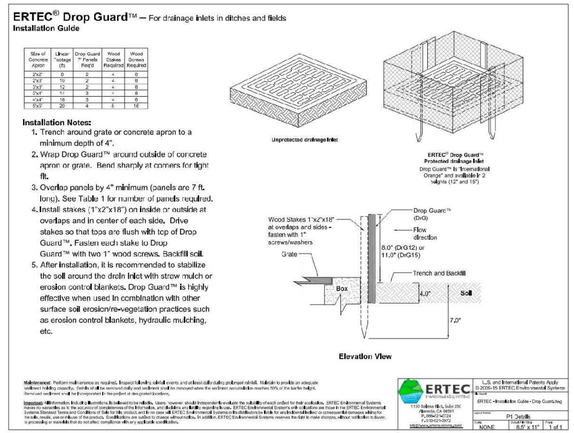
B CONCRETE WASHOUT

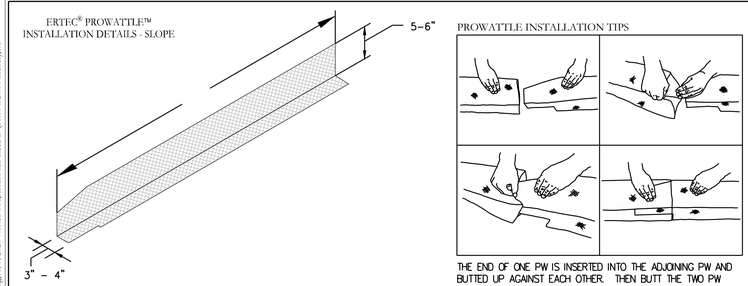
SCALE: NTS



C INLET PROTECTION (ERTEC OR EQUIVALENT)

SCALE: NTS





PROWATTLE INSTALLATION TIPS

THE END OF ONE PW IS INSERTED INTO THE ADJOINING PW AND BUTTED UP AGAINST EACH OTHER. THEN BUTT THE TWO PW SEGMENTS TOGETHER FIRMLY.

FOR SLOPE INSTALLATION PROWATTLE SHALL BE INSTALLED AS FOLLOWS:

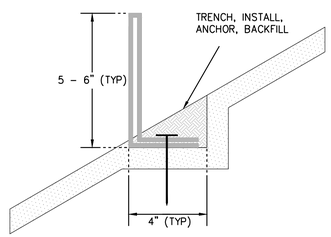
1. A SHELF-CUT SHALL BE CONSTRUCTED 4" HORIZONTALLY INTO THE SLOPE.
2. STAKES SHALL BE INSTALLED ON SLOPES. INSTALL STAKES 5 FEET APART. STAKES SHALL BE DRIVEN FLUSH WITH THE TOP OF THE PROWATTLE. WOOD STAKES SHALL BE AT MINIMUM 1" X 1" X 12". REBAR J-HOOK STAKES (#3 OR #4) MUST BE A MINIMUM OF 18" LONG.
3. PROWATTLE SHALL BE PLACED AS FOLLOWS:

FEET APART ALONG THE SLOPE	SLOPE INCLINATION (VERTICAL:HORIZONTAL)
10 FEET	1:2 AND STEEPER
15 FEET	1:2 TO 1:4
20 FEET	1:4 AND 1:10
50 FEET	1:10 AND FLATTER

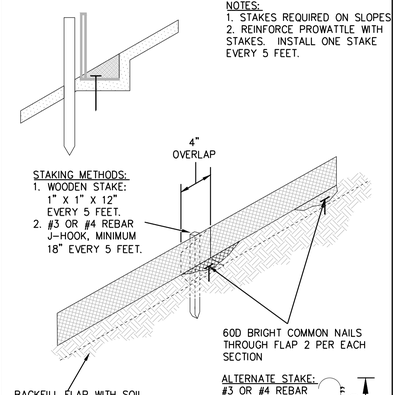
4. THE SHELF-CUT FOR PROWATTLE SHALL BE CLEARED OF OBSTRUCTIONS INCLUDING, BUT NOT LIMITED TO, ROCKS, CLODS, AND DEBRIS GREATER THAN 1" IN DIAMETER PRIOR TO INSTALLATION.
5. PROWATTLE SHALL BE INSTALLED PARALLEL TO THE SLOPE CONTOUR.
6. PROWATTLE SHALL BE INSTALLED PRIOR TO THE APPLICATION OF OTHER TEMPORARY EROSION CONTROL OR SOIL STABILIZATION MATERIALS IN THE SAME AREA.
7. WHEN NO LONGER REQUIRED, PROWATTLE CAN BE REMOVED AND REUSED. CRACK LOOSE AND SHAKE SEDIMENT FROM PROWATTLE SEGMENT. IT IS NOT NECESSARY TO CLEAN PROWATTLE OF ALL REMAINING SEDIMENT PRIOR TO REUSE (IT IS NOT NECESSARY TO PRESSURE-WASH PROWATTLE BETWEEN INSTALLATIONS). THE RESIDUAL SEDIMENT THAT REMAINS ON THE FILTER CAN BE BENEFICIAL AS A SECONDARY FILTER (FILTER CAKE) UPON SUBSEQUENT INSTALLATIONS. PRIOR TO REUSE, PERFORM 2-STEP QUALITY INSPECTION AS PER INSTALLATION GUIDE (WWW.ERTECSYSTEMS.COM).

** NOT TO SCALE **
ERTEC Environmental Systems
http://www.ertecsystems.com/
1150 Ballena Blvd. Suite 250 Alameda, CA 94501
P: 866-521-0724
F: 510-521-3972
U.S. and International Patents Apply © 2009 ERTEC Environmental Systems
ERTEC - Installation Details - ProWattle.dwg
P1 Slope Details
8.5" x 11"
1 of 3

ERTEC® PROWATTLE™ INSTALLATION DETAILS - SLOPE



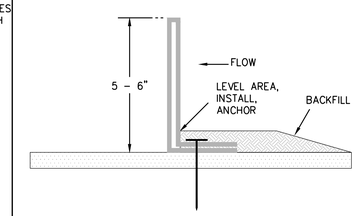
NOTES:
1. INSERT ADJOINING SEGMENTS. CHAMFERED END FITS INSIDE ADJOINING SEGMENT.
2. USE 6" NAILS (60D BRIGHT-COMMON). INSTALL 2 NAILS PER EACH 7' SEGMENT. ONE AT OVERLAP AND ONE MID-SEGMENT.
3. INSTALL NAILS FLUSH WITH FLAP SO THAT FLAP IS IN GOOD CONTACT WITH SOIL.
4. COVER FLAP WITH SOIL TO PREVENT UNDERCUTTING.
5. REINFORCE WITH STAKES AS SHOWN – ONE STAKE EVERY 5 FEET. IT IS NOT NECESSARY TO FASTEN THE STAKES TO PROWATTLE. POSITION STAKE ON DOWNSTREAM SIDE OF PROWATTLE TO MINIMIZE LEANING.



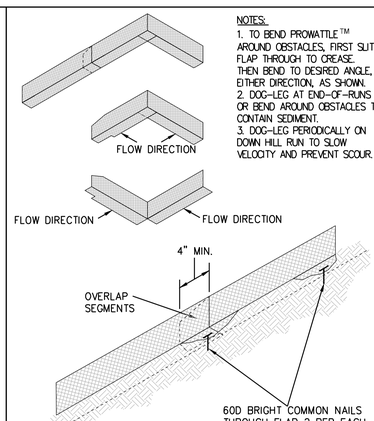
NOTES:
1. STAKES REQUIRED ON SLOPES.
2. REINFORCE PROWATTLE WITH STAKES. INSTALL ONE STAKE EVERY 5 FEET.

** NOT TO SCALE **
ERTEC Environmental Systems
http://www.ertecsystems.com/
1150 Ballena Blvd. Suite 250 Alameda, CA 94501
P: 866-521-0724
F: 510-521-3972
U.S. and International Patents Apply © 2009 ERTEC Environmental Systems
ERTEC - Installation Details - ProWattle.dwg
P2 Slope Details
8.5" x 11"
2 of 3

ERTEC® PROWATTLE™ INSTALLATION DETAILS - PERIMETER



NOTES:
1. INSERT ADJOINING SEGMENTS. CHAMFERED END FITS INSIDE ADJOINING SEGMENT.
2. USE 6" NAILS (60D BRIGHT-COMMON). INSTALL 2 NAILS PER EACH 7' SEGMENT. ONE AT OVERLAP AND ONE MID-SEGMENT.
3. INSTALL NAILS FLUSH WITH FLAP SO THAT FLAP IS IN GOOD CONTACT WITH SOIL.
4. COVER FLAP WITH 1" OF SOIL TO PREVENT UNDERCUTTING – NOT NECESSARY TO TRENCH.
5. STAKES MIGHT BE REQUIRED. IF SO, INSTALL AS NECESSARY.



NOTES:
1. TO BEND PROWATTLE™ AROUND OBSTACLES, FIRST SLIT FLAP THROUGH TO CREASE. THEN BEND TO DESIRED ANGLE, IN EITHER DIRECTION, AS SHOWN.
2. DOG-LEG AT END-OF-RUNS OR BEND AROUND OBSTACLES TO CONTAIN SEDIMENT.
3. DOG-LEG PERIODICALLY ON DOWN HILL RUN TO SLOW VELOCITY AND PREVENT SCOUR.

MAINTENANCE: PERFORM MAINTENANCE AS REQUIRED. INSPECT FOLLOWING RAINFALL EVENTS AND AT LEAST DAILY DURING PROLONGED RAINFALL. MAINTAIN TO PROVIDE AN ADEQUATE SEDIMENT HOLDING CAPACITY. DEBRIS SHALL BE REMOVED DAILY AND SEDIMENT SHALL BE REMOVED WHEN THE SEDIMENT ACCUMULATION REACHES 50% OF THE BARRIER HEIGHT. REMOVED SEDIMENT SHALL BE INCORPORATED IN THE PROJECT AT DESIGNATED LOCATIONS.

IMPORTANT: ALL INFORMATION, INCLUDING ILLUSTRATIONS, IS BELIEVED TO BE RELIABLE. USERS, HOWEVER, SHOULD INDEPENDENTLY EVALUATE THE SUITABILITY OF EACH PRODUCT FOR THEIR APPLICATION. ERTEC ENVIRONMENTAL SYSTEMS MAKES NO WARRANTIES AS TO THE ACCURACY OF COMPLETENESS OF THE INFORMATION, AND DISCLAIMS ANY LIABILITY REGARDING ITS USE. ERTEC ENVIRONMENTAL SYSTEMS ONLY OBLIGATIONS ARE THOSE IN THE ERTEC ENVIRONMENTAL SYSTEMS STANDARD TERMS AND CONDITIONS OF SALE FOR THIS PRODUCT, AND IN NO CASE WILL ERTEC ENVIRONMENTAL SYSTEMS OR ITS DISTRIBUTORS BE LIABLE FOR ANY INCIDENTAL, INDIRECT OR CONSEQUENTIAL DAMAGES ARISING FOR THE SALE, RESALE, USE OR MISUSE OF THE PRODUCT. SPECIFICATIONS ARE SUBJECT TO CHANGE WITHOUT NOTICE. IN ADDITION, ERTEC ENVIRONMENTAL SYSTEMS RESERVES THE RIGHT TO MAKE CHANGES, WITHOUT NOTIFICATION TO BUYER, TO PROCESSING OR MATERIALS THAT DO NOT AFFECT COMPLIANCE WITH ANY APPLICABLE SPECIFICATION.

** NOT TO SCALE **
ERTEC Environmental Systems
http://www.ertecsystems.com/
1150 Ballena Blvd. Suite 250 Alameda, CA 94501
P: 866-521-0724
F: 510-521-3972
U.S. and International Patents Apply © 2009 ERTEC Environmental Systems
ERTEC - Installation Details - ProWattle.dwg
P3 Perimeter
8.5" x 11"
3 of 3

C PROWATTLE (ERTEC OR EQUIVALENT)

SCALE: NTS

SHERWOOD DESIGN ENGINEERS
2548 Mission Street
San Francisco, CA 94110
www.sherwoodengineers.com

REGISTERED PROFESSIONAL ENGINEER CODY ANDERSON EXP: 9/30/21 No.84120 CIVIL STATE OF CALIFORNIA

SCALE: 1" = 20'
0 1"
Note: If this graphic scale does not equal 1", this sheet has been modified from its original size

NO	DATE	REVISION

PROJECT NO. 19-074
DATE 11/09/2020
DRAWN CL
DESIGNED CL
CHECKED CA

KALLWEIT RESIDENCE
OAKVILLE RIDGE
NAPA, CALIFORNIA

DETAILS

C7.2

P:\2019\19-074-Oak_Ridge\03_Design\01_CAD\02_Residence CD\C7.0 DETAILS.dwg,C7.2 DETAILS,Clara Lindberg,11/9/2020 7:19:53 PM,ARCH full bleed D (36.00 x 24.00 Inches),1:1

OAKVILLE RIDGE DRIVEWAY IMPROVEMENTS

COUNTY OF NAPA, CALIFORNIA

CIVIL SCOPE OF WORK

THE CIVIL SCOPE OF WORK INCLUDES: IMPROVEMENTS TO OAKVILLE RIDGE ROAD, A PRIVATE RESIDENTIAL DRIVEWAY IN NAPA COUNTY, INCLUDING CLEARING OF VEGETATION, IMPROVEMENTS TO SURFACING MATERIAL, AND CONSTRUCTION OF NEW TURNOUTS.

APPLICABLE CODES AND STANDARDS

THE DESIGN SHOWN IN THESE DRAWINGS WAS BASED UPON THE FOLLOWING STANDARDS. IN THE EVENT OF CONFLICTING REQUIREMENTS, THE WORK SHALL FOLLOW THE MORE STRINGENT STANDARD OR THE ORDER LISTED BELOW.

1. 2020 NAPA COUNTY ROAD & STREET STANDARDS

SURVEY

1. EXISTING TOPOGRAPHIC INFORMATION SHOWN ON THESE PLANS IS BASED ON SURVEY PREPARED BY ALBION SURVEYS, INC DATED JULY 2016 AND MAY 2019. GRADES ENCOUNTERED ON-SITE MAY VARY FROM THOSE SHOWN. CONTRACTOR SHALL REVIEW THE PLANS AND SPECIFICATIONS AND CONDUCT FIELD INVESTIGATIONS TO VERIFY EXISTING CONDITIONS AT THE PROJECT SITE.
2. CONSTRUCTION STAKING SHALL BE PERFORMED BY A LAND SURVEYOR REGISTERED IN THE STATE OF CALIFORNIA.

GRADING NOTES

1. ALL GRADING SHALL COMPLY WITH APPLICABLE PERMITS, LOCAL ORDINANCES AND RECOMMENDATIONS OF THE GEOTECHNICAL REPORT TO BE OBTAINED BY OWNER.
2. SEDIMENT AND EROSION CONTROL MEASURES, AS SPECIFIED IN THE PROJECT PLANS AND DETAILS SHALL BE INSTALLED PRIOR TO START OF GRADING ACTIVITIES.
3. WHEN GRADING ACTIVITIES COMMENCE MORE THAN 30 DAYS AFTER GRUBBING ACTIVITIES, THE AREA SHALL BE SEEDED WITH PLANT MATERIAL TO CONTROL EROSION. ROOT DEPTH OF SUCH PLANT MATERIAL NOT TO EXCEED 4 INCHES.
4. ALL COMPACTION TESTS AND FINAL GRADING REPORT SHALL BE SUBMITTED TO THE OWNER'S REPRESENTATIVE PRIOR TO SCHEDULING INSPECTIONS.
5. CUT AND/OR FILL SLOPES SHALL NOT EXCEED SLOPE RECOMMENDED BY GEOTECHNICAL ENGINEER.
6. PROVIDE FINISHED GRADE AS SHOWN ON PLANS. MAINTAIN MIN. 3% SLOPE AWAY FROM BUILDING IN SOFTSCAPE OR 1.5% AWAY FROM BUILDING IN HARDSCAPE.
7. PROVIDE MIN. SOIL COMPACTION OF 90% RELATIVE COMPACTION FOR FILLS BENEATH PROPOSED FLATWORK; 95% RELATIVE COMPACTION FOR FILLS BENEATH VEHICULAR PAVEMENT; AND 85% IN SOFTSCAPE OR LANDSCAPE AREAS, UNLESS OTHERWISE NOTED.

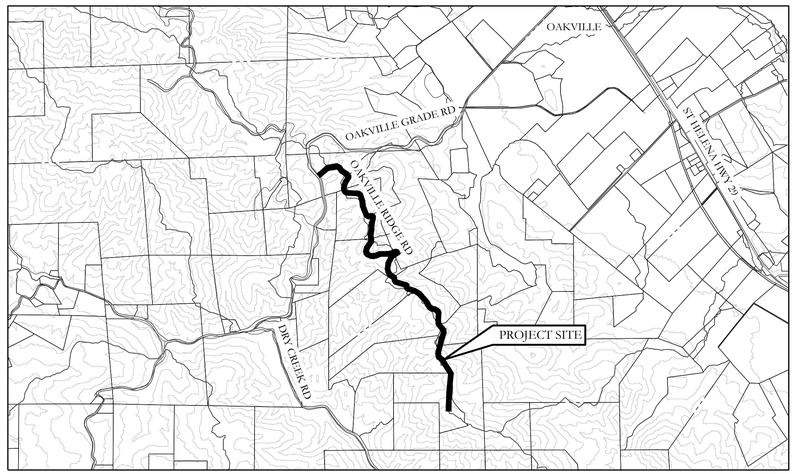
UNAUTHORIZED CHANGE AND USE

1. SHERWOOD DESIGN ENGINEERS, LTD. SHALL NOT BE RESPONSIBLE FOR CONSTRUCTION MEANS, METHODS, TECHNIQUES, OR PROCEDURES UTILIZED BY THE CONTRACTOR, FOR THE SAFETY OF THE PUBLIC OR CONTRACTOR'S EMPLOYEES, OR FOR THE FAILURE OF THE CONTRACTOR TO CARRY OUR THE WORK IN ACCORDANCE WITH THE CONTRACT DOCUMENTS.
2. THE CIVIL DESIGN ENGINEER PREPARING THESE PLANS WILL NOT BE RESPONSIBLE FOR, OR LIABLE FOR, UNAUTHORIZED CHANGES TO OR USES OF THESE PLANS. CHANGES TO THE PLANS MUST BE IN WRITING AND MUST BE APPROVED BY THE PREPARER OF THESE PLANS. ANY MODIFICATIONS TO THIS DOCUMENT, WITHOUT THE WRITTEN PERMISSION OF SHERWOOD DESIGN ENGINEERS, LTD., SHALL RENDER THE PLANS INVALID AND UNUSABLE.
3. NO PART OF THIS DOCUMENT MAY BE REPRODUCED, STORED IN A RETRIEVAL SYSTEM, OR TRANSMITTED IN ANY FORM OR BY ANY MEANS ELECTRONIC, MECHANICAL, PHOTOCOPYING, RECORDING, OR OTHERWISE WITHOUT THE PRIOR WRITTEN PERMISSION OF SHERWOOD DESIGN ENGINEERS, LTD., EXCEPT THAT ANY REGULATORY AUTHORITY MAY REPRODUCE AND TRANSMIT COPIES, AS REQUIRED, IN CONJUNCTION WITH PERFORMANCE OF OFFICIAL BUSINESS UNDER ITS JURISDICTION.

GENERAL

1. REFER TO FIRST AMERICAN TITLE COMPANY OF NAPA ORDER NO. 00210404-CW FOR PROPERTY GRANT DEED AND PRELIMINARY TITLE REPORT.

SHEET INDEX



VICINITY MAP
SCALE: 1"=2000'

ABBREVIATIONS

AB	AGGREGATE BASE	(P)	PROPOSED
ABD	ABANDONED	PA	PLANTED AREA
AC	ASPHALT CONCRETE	PED	PEDESTRIAN
ACWS	ASPHALT CONCRETE WEARING SURFACE	PG&E	PACIFIC GAS & ELECTRIC
AD	AREA DRAIN	PIP	PROTECT IN PLACE
ADA	AMERICANS WITH DISABILITIES ACT	PIV	POST INDICATOR VALVE
BS	BOTTOM OF STEP	PL	PROPERTY LINE
BW	BOTTOM OF WALL / BACK OF WALK	POC	POINT OF CONNECTION
C&G	CURB & GUTTER	PRW	PRESSURIZED RAINWATER
CB	CATCH BASIN	PSI	POUNDS PER SQUARE INCH
CF	CUBIC FEET	PUE	PUBLIC UTILITY EASEMENT
CL	CENTERLINE	PVMT	PAVEMENT
CO	CLEAN OUT	R, RAD	RADIUS
CONC	CONCRETE	RC	RELATIVE COMPACTION
CS	CRAWL SPACE	RCP	REINFORCED CONCRETE PIPE
DEMO	DEMOLISH	REQ'D	REQUIRED
DI	DRAINAGE INLET	RET	RETAINING
DS	DOWN SPOUT	RIM	TOP OF STRUCTURE GRATE/ COVER
DW	DOMESTIC WATER	RW	RAINWATER
E	EAST	RWL	RAINWATER LEADER
(E)	EXISTING	S	SLOPE
EB	ELECTRICAL BOX	SAP	SEE ARCHITECTURAL PLANS
EC	END CURVE	SCO	SOFTSCAPE CLEANOUT
EL, ELEV	ELEVATION	SD	STORM DRAIN
ELEC	ELECTRIC	SDE	SHERWOOD DESIGN ENGINEERS
EP	EDGE OF PAVEMENT	SDMH	STORM DRAIN MANHOLE
EVA	EMERGENCY VEHICLE ACCESS	SEP	SEE ELECTRICAL PLANS
FC	FACE OF CURB	SF	SQUARE FEET
FFE	FINISHED FLOOR ELEVATION	SLP	SEE LANDSCAPE PLANS
FG	FINISH GRADE	SMP	SEE MECHANICAL PLANS
FH	FIRE HYDRANT	SPD	SEE PLUMBING DRAWINGS
FL	FLOWLINE	SPRK	FW SPRINKLER LINE
FS	FINISH SURFACE	SQ	SQUARE
FT	FEET	SS	SANITARY SEWER
FW	FIRE WATER	SSCO	SANITARY SEWER CLEAN OUT
G	GAS	SSMH	SANITARY SEWER MANHOLE
GB	GRADE BREAK	SSP	SEE STRUCTURAL PLANS
GM	GAS METER	STD	STANDARD
GV	GATE VALVE	STM	STEAM
GW	GRAY WATER	SW	SIDEWALK
HB	HOSEBIB	TB	TOP OF BANK
HDPE	HIGH-DENSITY POLYETHYLENE	TBD	TO BE DETERMINED
HP	HIGH POINT/ HINGE POINT	TBM	TEMPORARY BENCHMARK
HT	HEIGHT	TBR	TO BE REMOVED
HV	HIGH VOLTAGE	TC	TOP OF CURB
INV	INVERT OF PIPE OR CHANNEL	TD	TRENCH DRAIN
IRR	IRRIGATION	TEL	TELEPHONE
JB	JUNCTION BOX	TEMP	TEMPORARY
JP	JOINT POLE	TG	TOP OF GRATE
LA	LANDSCAPE ARCHITECT	TS	TOP OF STEP
LF	LINEAR FEET	TW	TOP OF WALL
LG	LIP OF GUTTER	TYP	TYPICAL
LP	LIGHT POLE/ LOW POINT	UG	UNDERGROUND
LT	LEFT	U.O.N.	UNLESS OTHERWISE NOTED
MAX	MAXIMUM	VERT	VERTICAL
MH	MANHOLE	VIF	VERIFY IN FIELD
MIN	MINIMUM	W	WATER
N	NORTH	WALK	WALKWAY/SIDEWALK
NFC	NOT FOR CONSTRUCTION	WM	WATER METER
NIC	NOT IN CONTRACT	WS	WATER SURFACE
NTS	NOT TO SCALE		
OC	ON CENTER		

APPROVED BY ENGINEERING MANAGER

SIGNATURE DATE

APPROVED BY NAPA COUNTY FIRE MARSHAL

SIGNATURE DATE

Underground Service Alert

CALL BEFORE YOU DIG

Call: TOLL FREE

1-800-227-2600

TWO WORKING DAYS BEFORE YOU DIG

PRELIMINARY NOT FOR CONSTRUCTION

SHERWOOD DESIGN ENGINEERS
2548 MISSION STREET
San Francisco, CA 94110
www.sherwoodengineers.com

OAKVILLE RIDGE RESIDENCE
DRIVEWAY IMPROVEMENTS
PARCEL 027-340-024 OAKVILLE RIDGE ROAD
COUNTY OF NAPA, CA

SCALE: SEE DWG
Note: If this drawing is not 24"x36", it has been revised from its original size. Scale is no longer applicable.

REVISIONS

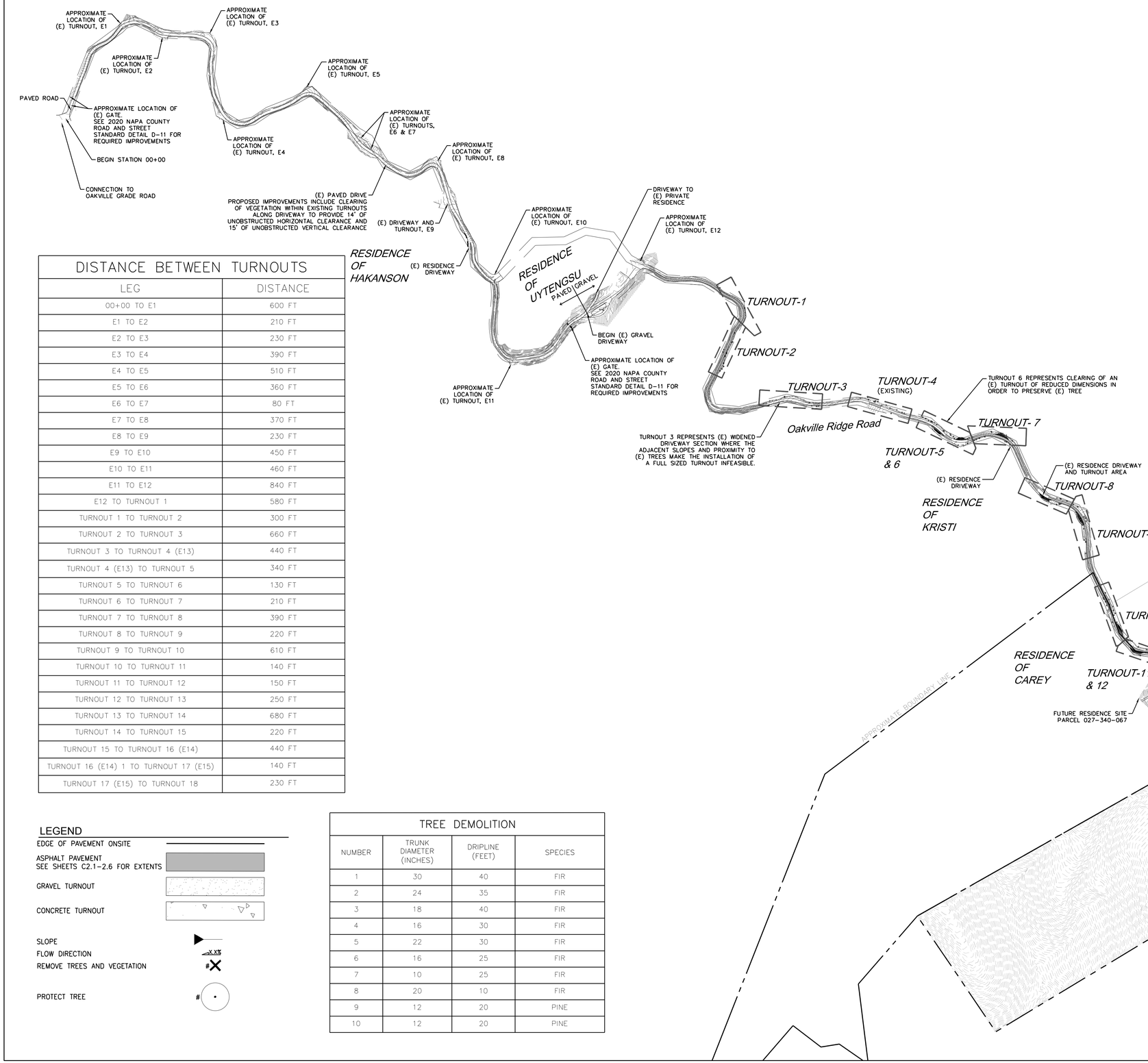
NO	DATE	ISSUE

DRAWING TITLE: COVER SHEET

PROJECT #: 19-074
DATE: 8/02/19
DWN BY: CL
DGN BY: CL
CHKD BY: CA

DRAWING NO: C0.0

P:\2019\19-074 Oak_Ridge\01_Design\01_CAD\01_CD\C0.1 -COVER SHEET.dwg,C0.0 COVER SHEET,Clara Lindberg,11/19/2020 8:09:20 PM,ARCH full bleed D (36.00 x 24.00 Inches),1:1



DISTANCE BETWEEN TURNOUTS	
LEG	DISTANCE
00+00 TO E1	600 FT
E1 TO E2	210 FT
E2 TO E3	230 FT
E3 TO E4	390 FT
E4 TO E5	510 FT
E5 TO E6	360 FT
E6 TO E7	80 FT
E7 TO E8	370 FT
E8 TO E9	230 FT
E9 TO E10	450 FT
E10 TO E11	460 FT
E11 TO E12	840 FT
E12 TO TURNOUT 1	580 FT
TURNOUT 1 TO TURNOUT 2	300 FT
TURNOUT 2 TO TURNOUT 3	660 FT
TURNOUT 3 TO TURNOUT 4 (E13)	440 FT
TURNOUT 4 (E13) TO TURNOUT 5	340 FT
TURNOUT 5 TO TURNOUT 6	130 FT
TURNOUT 6 TO TURNOUT 7	210 FT
TURNOUT 7 TO TURNOUT 8	390 FT
TURNOUT 8 TO TURNOUT 9	220 FT
TURNOUT 9 TO TURNOUT 10	610 FT
TURNOUT 10 TO TURNOUT 11	140 FT
TURNOUT 11 TO TURNOUT 12	150 FT
TURNOUT 12 TO TURNOUT 13	250 FT
TURNOUT 13 TO TURNOUT 14	680 FT
TURNOUT 14 TO TURNOUT 15	220 FT
TURNOUT 15 TO TURNOUT 16 (E14)	440 FT
TURNOUT 16 (E14) 1 TO TURNOUT 17 (E15)	140 FT
TURNOUT 17 (E15) TO TURNOUT 18	230 FT

LEGEND

EDGE OF PAVEMENT ONSITE

ASPHALT PAVEMENT
SEE SHEETS C2.1-2.6 FOR EXTENTS

GRAVEL TURNOUT

CONCRETE TURNOUT

SLOPE

FLOW DIRECTION

REMOVE TREES AND VEGETATION

PROTECT TREE

TREE DEMOLITION			
NUMBER	TRUNK DIAMETER (INCHES)	DRIPLINE (FEET)	SPECIES
1	30	40	FIR
2	24	35	FIR
3	18	40	FIR
4	16	30	FIR
5	22	30	FIR
6	16	25	FIR
7	10	25	FIR
8	20	10	FIR
9	12	20	PINE
10	12	20	PINE

PRELIMINARY NOT FOR CONSTRUCTION

SHERWOOD
DESIGN ENGINEERS
2548 MISSION STREET
San Francisco, CA 94110
www.sherwoodengineers.com

OAKVILLE RIDGE RESIDENCE DRIVEWAY IMPROVEMENTS

PARCEL 027-340-024 OAKVILLE RIDGE ROAD
COUNTY OF NAPA, CA

SCALE:
None if this drawing is not 24"x36", it has been revised from its original size. Scale is no longer applicable.

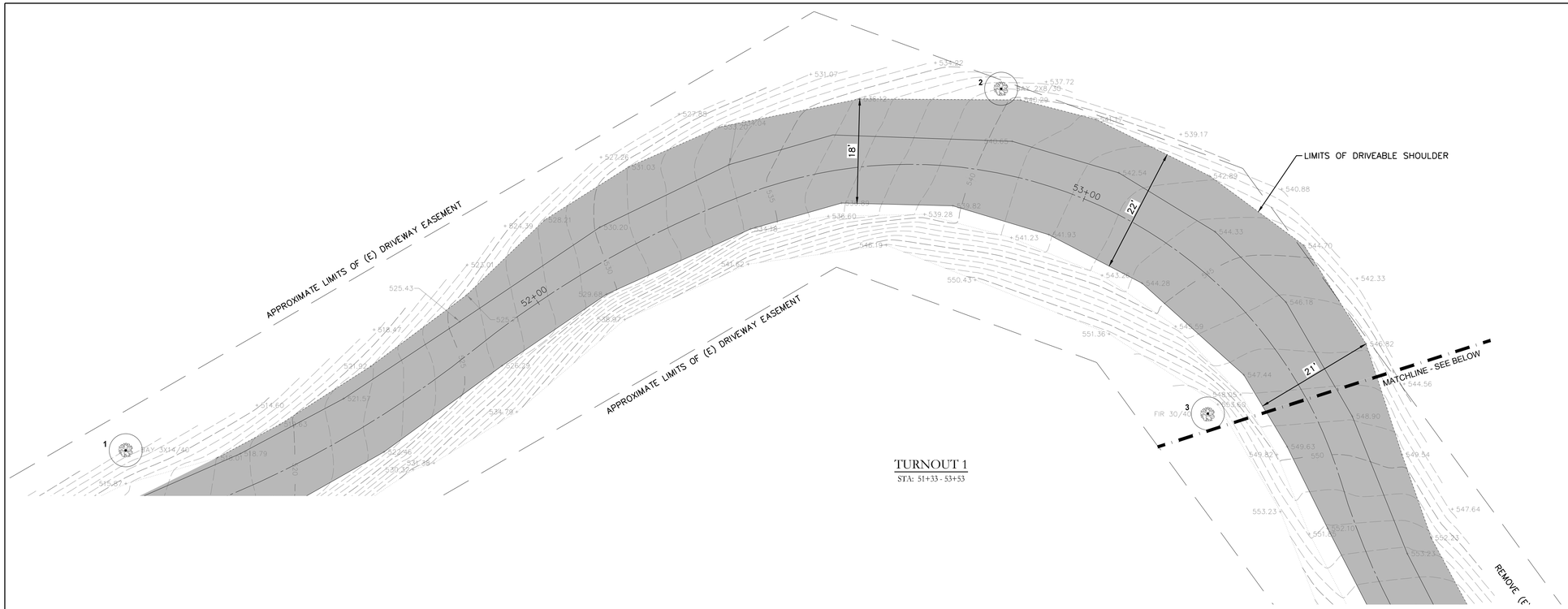
REVISIONS

NO	DATE	ISSUE

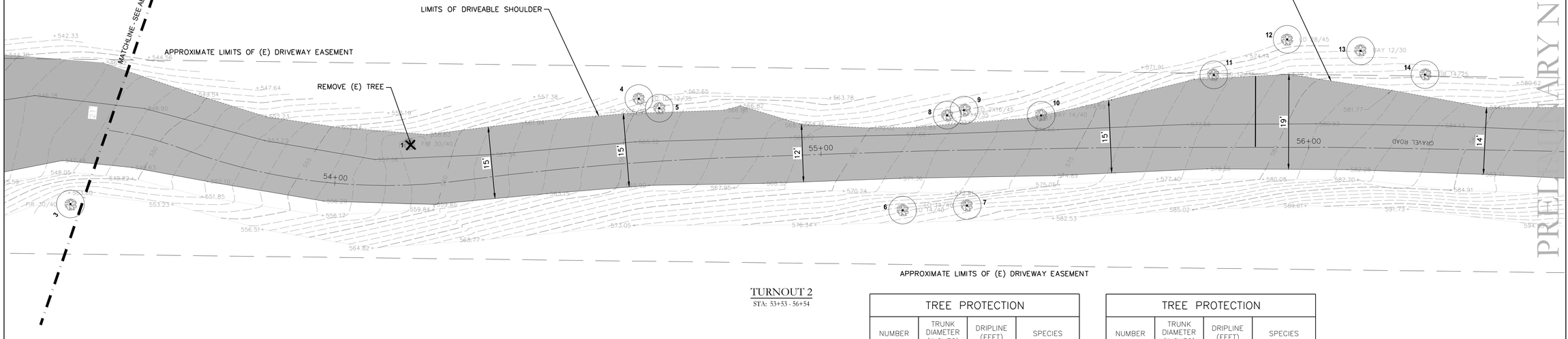
DRAWING TITLE:
ROAD ALIGNMENT - OVERALL

PROJECT #: 19-074
DATE: 8/02/19
DWN BY: CL
DGN BY: CL
CHKD BY: CA

DRAWING NO:
C1.0



TURNOUT 1
STA: 51+33 - 53+53

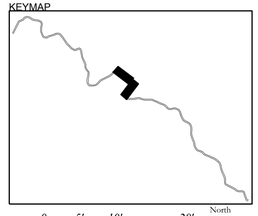


TURNOUT 2
STA: 53+53 - 56+54

TREE PROTECTION			
NUMBER	TRUNK DIAMETER (INCHES)	DRIPLINE (FEET)	SPECIES
1	14	40	BAY
2	8	39	BAY
3	30	40	FIR

TREE PROTECTION			
NUMBER	TRUNK DIAMETER (INCHES)	DRIPLINE (FEET)	SPECIES
4	16	50	LIVE OAK
5	10–12	35	LIVE OAK
6	14	40	LIVE OAK
7	14	40	LIVE OAK
8	14	35	LIVE OAK
9	16	45	LIVE OAK
10	14	40	BAY
11	12	35	LIVE OAK
12	28	45	LIVE OAK
13	12	30	BAY
14	14	25	FIR

KEYMAP



0 5' 10' 20' North

PRELIMINARY NOT FOR CONSTRUCTION

SHERWOOD
DESIGN ENGINEERS
2548 MISSION STREET
San Francisco, CA 94110
www.sherwoodengineers.com

OAKVILLE RIDGE RESIDENCE
DRIVEWAY IMPROVEMENTS

PARCEL 027-340-024 OAKVILLE RIDGE ROAD
COUNTY OF NAPA, CA

SCALE:
Scale of the drawing in our 24"x36" is has been revised from its original size. Scale is no longer applicable.

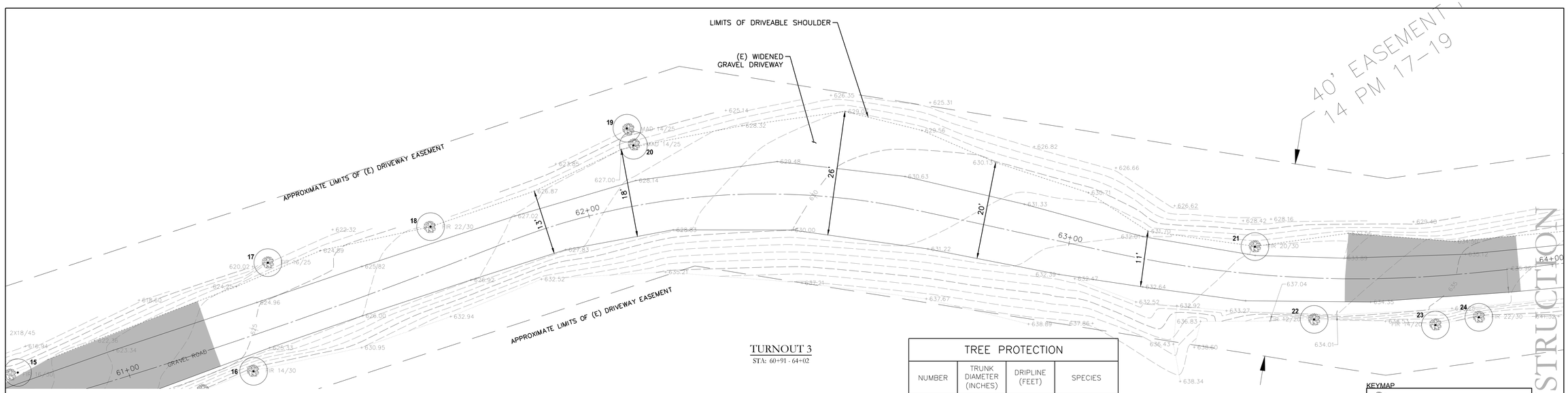
REVISIONS

NO	DATE	ISSUE

DRAWING TITLE:
ROAD ALIGNMENT

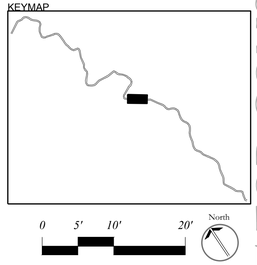
PROJECT #: 19-074
DATE: 8/02/19
DWN BY: CL
DGN BY: CL
CHKD BY: CA

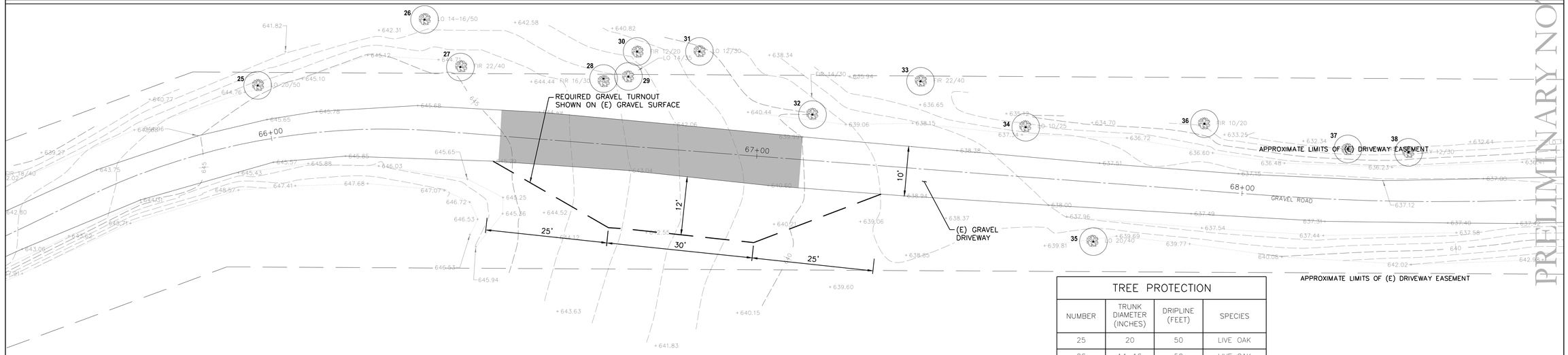
DRAWING NO:
C1.1



TURNOUT 3
STA: 60+91 - 64+02

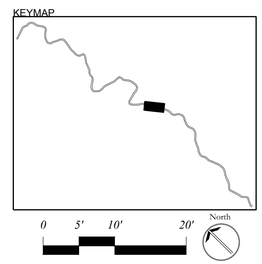
TREE PROTECTION			
NUMBER	TRUNK DIAMETER (INCHES)	DRIPLINE (FEET)	SPECIES
15	16	30	FIR
16	14	30	FIR
17	16	25	FIR
18	22	30	FIR
19	14	25	MADRONE
20	14	25	MADRONE
21	20	30	FIR
22	12	20	FIR
23	14	20	FIR
24	22	30	FIR





TURNOUT 4 (E13)
STA: 65+41 - 68+66

TREE PROTECTION			
NUMBER	TRUNK DIAMETER (INCHES)	DRIPLINE (FEET)	SPECIES
25	20	50	LIVE OAK
26	14-16	50	LIVE OAK
27	22	40	FIR
28	16	30	FIR
29	14	35	LIVE OAK
30	12	20	FIR
31	12	30	LIVE OAK
32	14	30	FIR
33	22	40	FIR
34	10	25	FIR
35	20	40	LIVE OAK
36	10	20	FIR
37	12	45	LIVE OAK
38	12	30	BAY



PRELIMINARY NOT FOR CONSTRUCTION

SHERWOOD
DESIGN ENGINEERS
2548 MISSION STREET
San Francisco, CA 94110
www.sherwoodengineers.com

OAKVILLE RIDGE RESIDENCE
DRIVEWAY IMPROVEMENTS

PARCEL 027-340-024 OAKVILLE RIDGE ROAD
COUNTY OF NAPA, CA

SCALE:
Scale of this drawing is now 24"x36", it has been revised from its original size. Scale is no longer applicable.

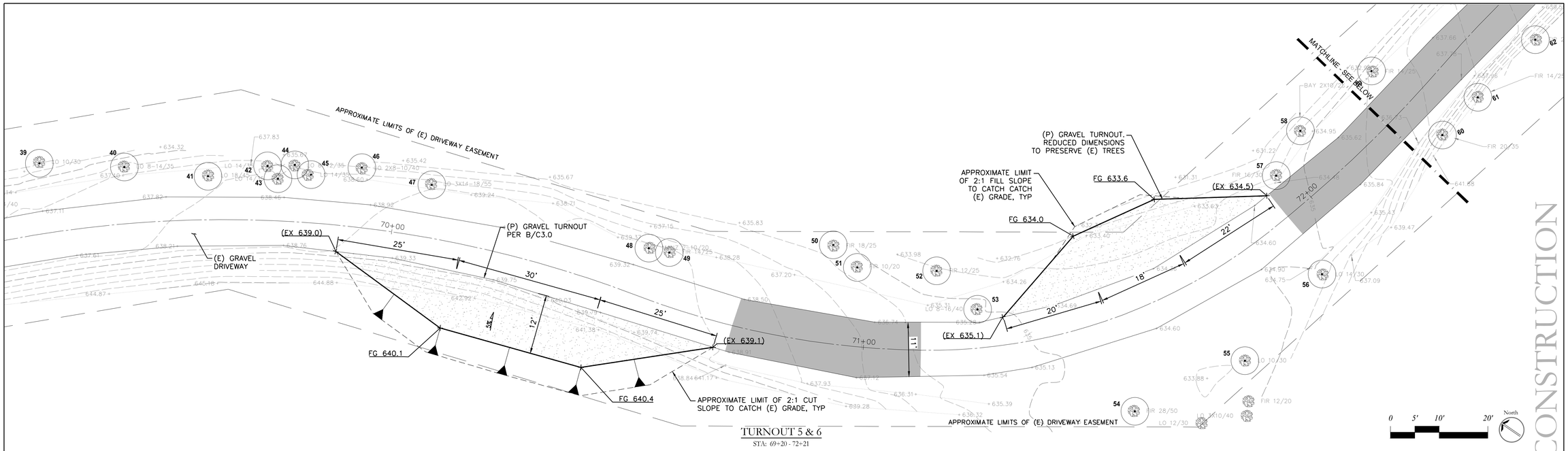
REVISIONS

NO	DATE	ISSUE

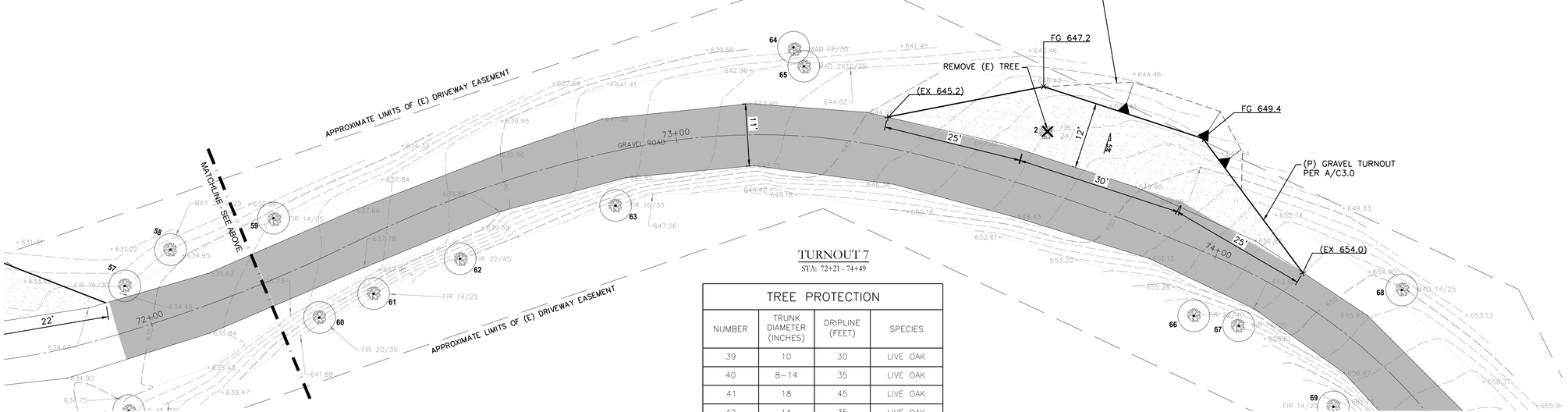
DRAWING TITLE:
ROAD ALIGNMENT

PROJECT #:	19-074
DATE:	8/02/19
DWN BY:	CL
DGN BY:	CL
CHKD BY:	CA

DRAWING NO:
C1.2



TURNOUT 5 & 6
STA: 69+20 - 72+21

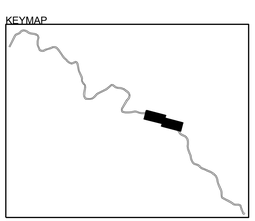


TURNOUT 7
STA: 72+21 - 74+49

TREE PROTECTION			
NUMBER	TRUNK DIAMETER (INCHES)	DRIPLINE (FEET)	SPECIES
39	10	30	LIVE OAK
40	8–14	35	LIVE OAK
41	18	45	LIVE OAK
42	14	35	LIVE OAK
43	14	35	LIVE OAK
44	8–12	35	LIVE OAK
45	14	35	LIVE OAK
46	8–10	40	LIVE OAK
47	14–18	55	LIVE OAK
48	10	20	MANZ
49	14	25	FIR
50	18	25	FIR
51	10	20	FIR
52	12	25	FIR
53	8–16	40	LIVE OAK
54	28	50	FIR
55	10	30	LIVE OAK
56	14	30	LIVE OAK
57	16	30	FIR
58	10	25	BAY

TREE PROTECTION			
NUMBER	TRUNK DIAMETER (INCHES)	DRIPLINE (FEET)	SPECIES
59	14	25	FIR
60	20	35	FIR
61	14	25	FIR
62	22	45	FIR
63	16	30	FIR
64	12	30	MADRONE
65	12	35	MADRONE
66	22	40	FIR
67	14	25	FIR
68	14	25	MAD
69	14	25	FIR

KEYMAP



PRELIMINARY NOT FOR CONSTRUCTION

SHERWOOD DESIGN ENGINEERS
2548 MISSION STREET
San Francisco, CA 94110
www.sherwoodengineers.com

OAKVILLE RIDGE RESIDENCE DRIVEWAY IMPROVEMENTS

PARCEL 027-340-024 OAKVILLE RIDGE ROAD
COUNTY OF NAPA, CA

SCALE:
Scale if this drawing is not 24"x36", it has been revised from its original size. Scale is no longer applicable.

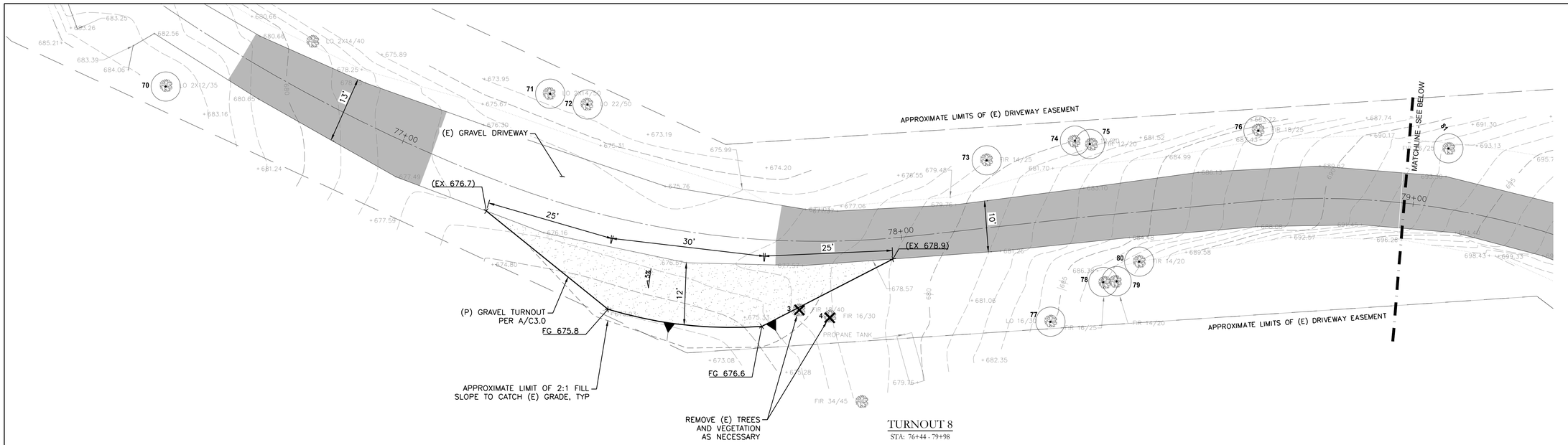
REVISIONS

NO	DATE	ISSUE

DRAWING TITLE:
ROAD ALIGNMENT

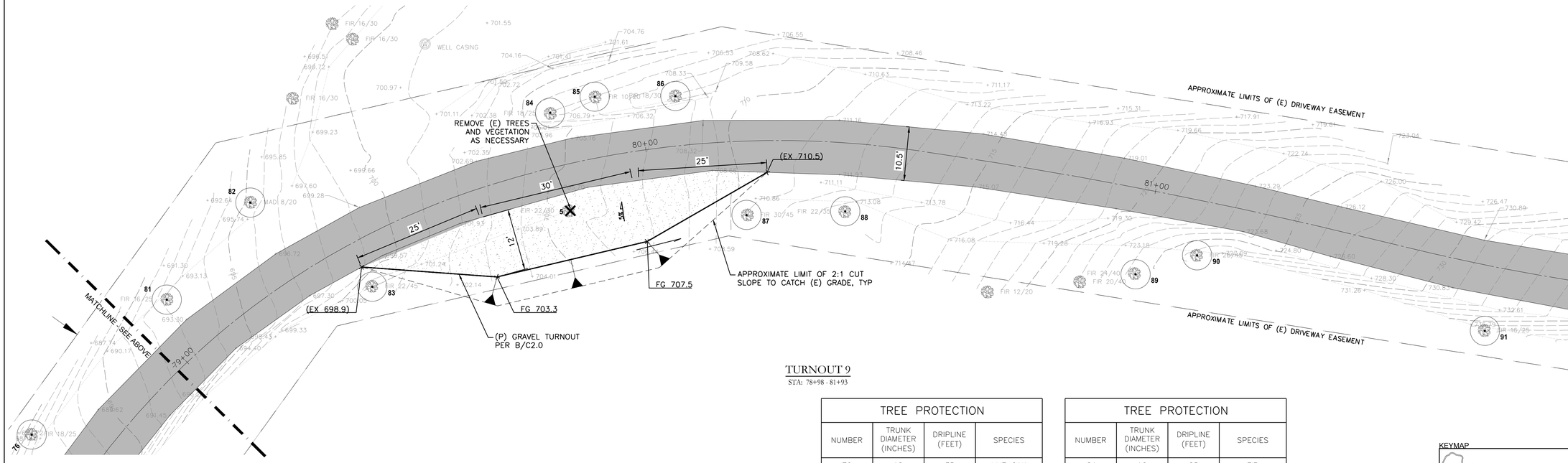
PROJECT #: 19-074
DATE: 8/02/19
DWN BY: CL
DGN BY: CL
CHKD BY: CA

DRAWING NO:
C1.3



TURNOUT 8
STA: 76+44 - 79+98

0 5' 10' 20' North

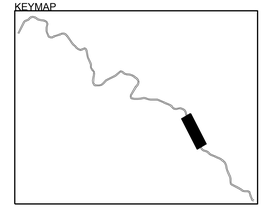


TURNOUT 9
STA: 78+98 - 81+93

TREE PROTECTION			
NUMBER	TRUNK DIAMETER (INCHES)	DRIPLINE (FEET)	SPECIES
70	12	35	LIVE OAK
71	14	50	LIVE OAK
72	22	50	LIVE OAK
73	14	25	FIR
74	12	20	FIR
75	12	20	FIR
76	18	25	FIR
77	16	30	LIVE OAK
78	16	25	FIR
79	14	20	FIR
80	14	20	FIR

TREE PROTECTION			
NUMBER	TRUNK DIAMETER (INCHES)	DRIPLINE (FEET)	SPECIES
81	16	25	FIR
82	8	20	MADRONE
83	22	45	FIR
84	18	25	FIR
85	18	30	FIR
86	10	20	FIR
87	30	45	FIR
88	22	35	FIR
89	20	40	FIR
90	28	45	FIR
91	16	25	FIR

KEYMAP



0 5' 10' 20' North

PRELIMINARY NOT FOR CONSTRUCTION

SHERWOOD
DESIGN ENGINEERS
2548 MISSION STREET
San Francisco, CA 94110
www.sherwoodengineers.com

OAKVILLE RIDGE RESIDENCE
DRIVEWAY IMPROVEMENTS

PARCEL 027-340-024 OAKVILLE RIDGE ROAD
COUNTY OF NAPA, CA

SCALE:
Scale of this drawing is for 24"x36", it has been revised from its original size. Scale is no longer applicable.

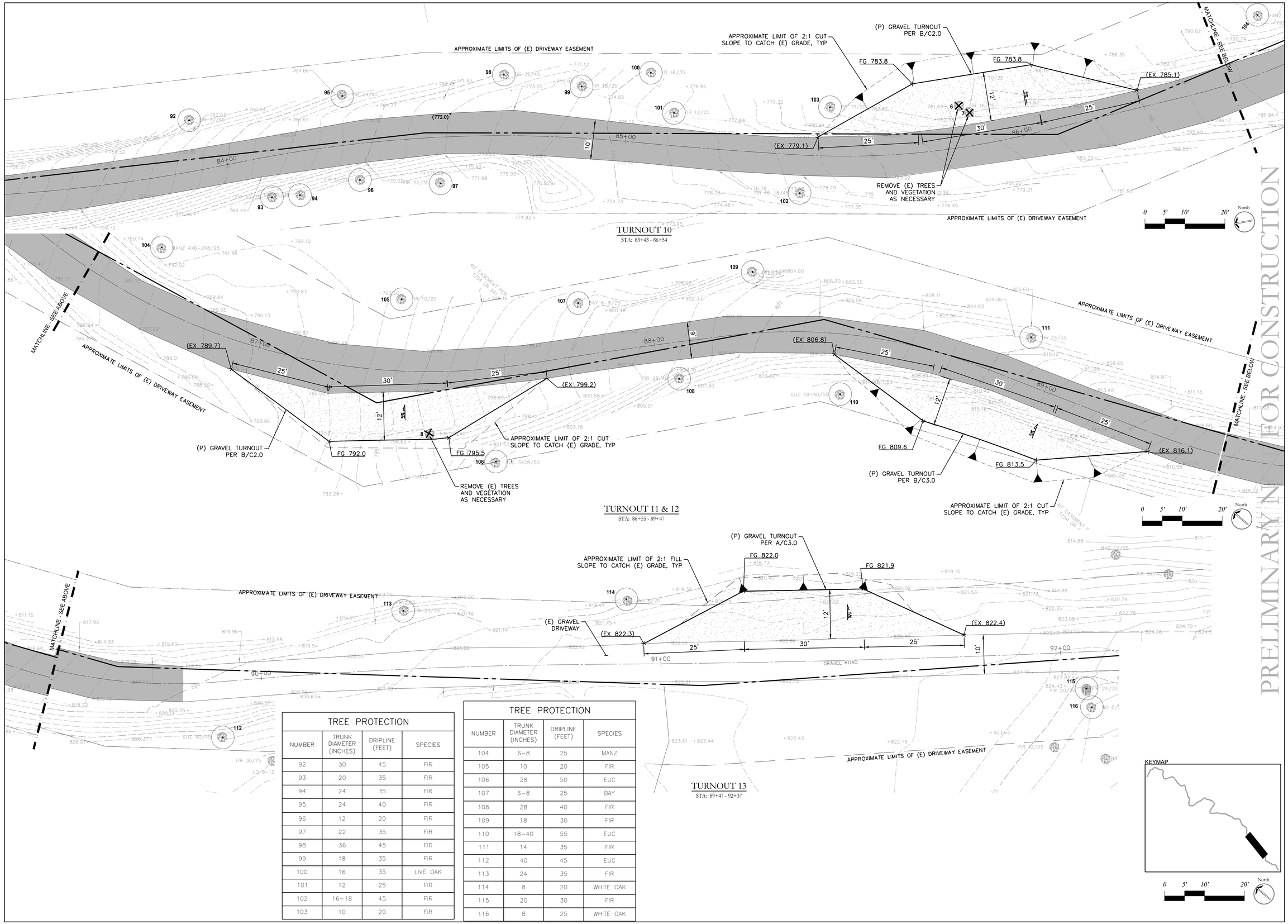
REVISIONS

NO	DATE	ISSUE

DRAWING TITLE:
ROAD ALIGNMENT

PROJECT #:	19-074
DATE:	8/02/19
DWN BY:	CL
DGN BY:	CL
CHKD BY:	CA

DRAWING NO:
C1.4



TREE PROTECTION			
NUMBER	TRUNK DIAMETER (INCHES)	DRIPLINE (FEET)	SPECIES
92	30	45	FIR
93	20	35	FIR
94	24	35	FIR
95	24	40	FIR
96	12	20	FIR
97	22	35	FIR
98	36	45	FIR
99	18	35	FIR
100	16	35	LIVE OAK
101	12	25	FIR
102	16–18	45	FIR
103	10	20	FIR

TREE PROTECTION			
NUMBER	TRUNK DIAMETER (INCHES)	DRIPLINE (FEET)	SPECIES
104	6–8	25	MANZ
105	10	20	FIR
106	28	50	EUC
107	6–8	25	BAY
108	28	40	FIR
109	18	30	FIR
110	18–40	55	EUC
111	14	35	FIR
112	40	45	EUC
113	24	35	FIR
114	8	20	WHITE OAK
115	20	30	FIR
116	8	25	WHITE OAK

KEYMAP

PRELIMINARY NOT FOR CONSTRUCTION

SHERWOOD DESIGN ENGINEERS
2548 MISSION STREET
San Francisco, CA 94110
www.sherwoodengineers.com

OAKVILLE RIDGE RESIDENCE DRIVEWAY IMPROVEMENTS

PARCEL 027-340-024 OAKVILLE RIDGE ROAD
COUNTY OF NAPA, CA

SCALE:
None if this drawing is not 24"x36", it has been revised from its original size. Scale is no longer applicable.

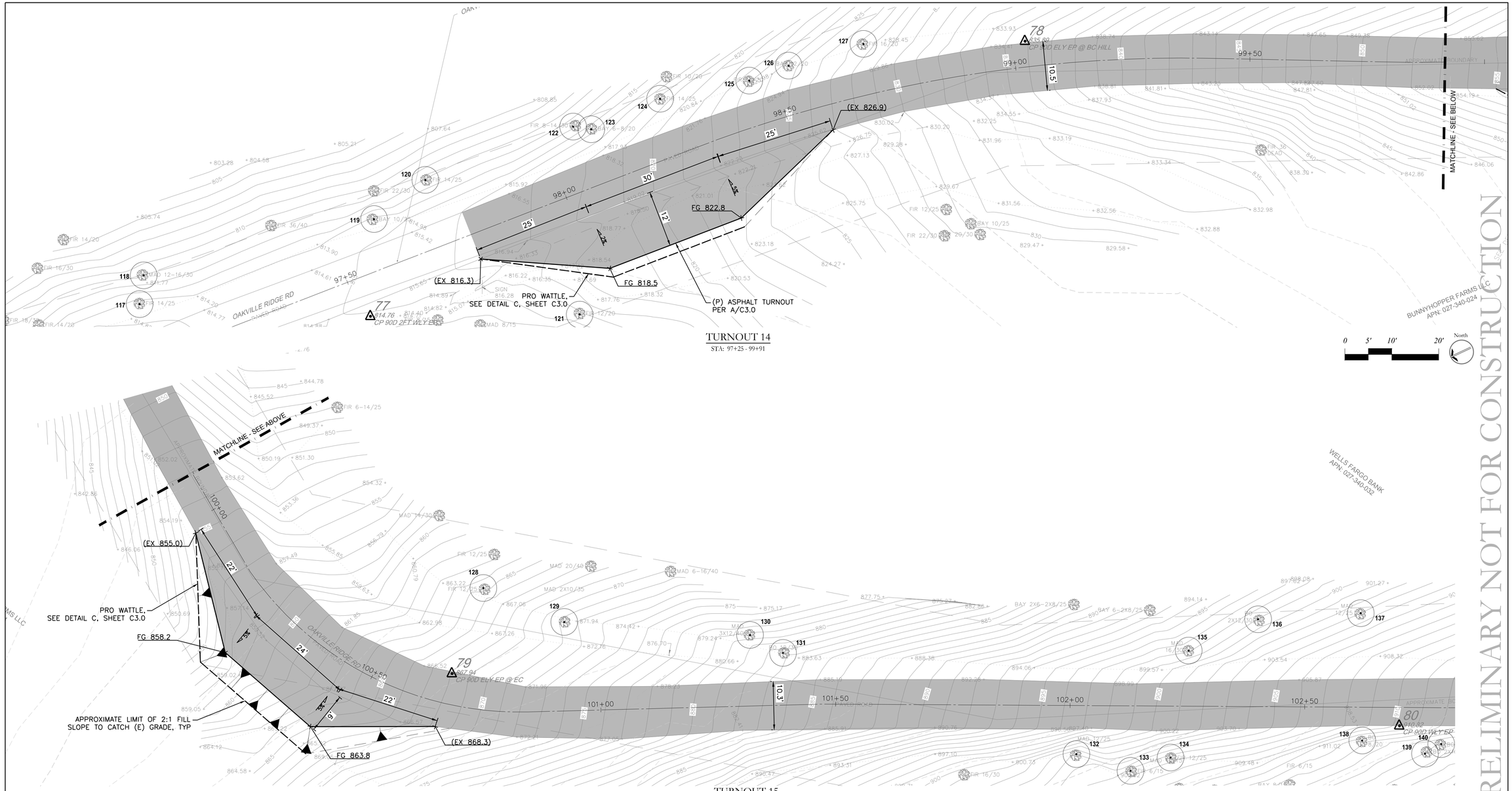
REVISIONS

NO	DATE	ISSUE

DRAWING TITLE:
ROAD ALIGNMENT

PROJECT #: 19-074
DATE: 8/02/19
DWN BY: CL
DGN BY: CL
CHKD BY: CA

DRAWING NO:
C1.5



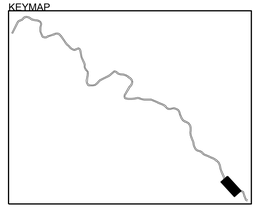
TURNOUT 14
STA: 97+25 - 99+91

TURNOUT 15
STA: 99+70 - 101+95

TREE PROTECTION			
NUMBER	TRUNK DIAMETER (INCHES)	DRIPLINE (FEET)	SPECIES
117	14	25	FIR
118	12–16	30	MADRONE
119	10	25	BAY
120	14	25	FIR
121	12	20	FIR
122	8–14	30	FIR
123	6–8	20	BAY
124	14	25	FIR
125	12	20	FIR
126	12	20	BAY
127	16	20	FIR

TREE PROTECTION			
NUMBER	TRUNK DIAMETER (INCHES)	DRIPLINE (FEET)	SPECIES
128	12	25	FIR
129	10	35	MADRONE
130	12	40	MADRONE
131	12	30	BLACK OAK
132	12	25	MADRONE
133	6	15	FIR
134	12	25	FIR
135	16	30	MADRONE
136	12	30	BLACK OAK
137	12	25	MADRONE
138	8	20	BLACK OAK
139	10	30	BLACK OAK
140	8	20	BLACK OAK

KEYMAP



PRELIMINARY NOT FOR CONSTRUCTION

SHERWOOD
DESIGN ENGINEERS
2548 MISSION STREET
San Francisco, CA 94110
www.sherwoodengineers.com

OAKVILLE RIDGE RESIDENCE
DRIVEWAY IMPROVEMENTS

PARCEL 027-340-024 OAKVILLE RIDGE ROAD
COUNTY OF NAPA, CA

SCALE:
None if this drawing is not 24"x36", it has been revised from its original size. Scale is no longer applicable.

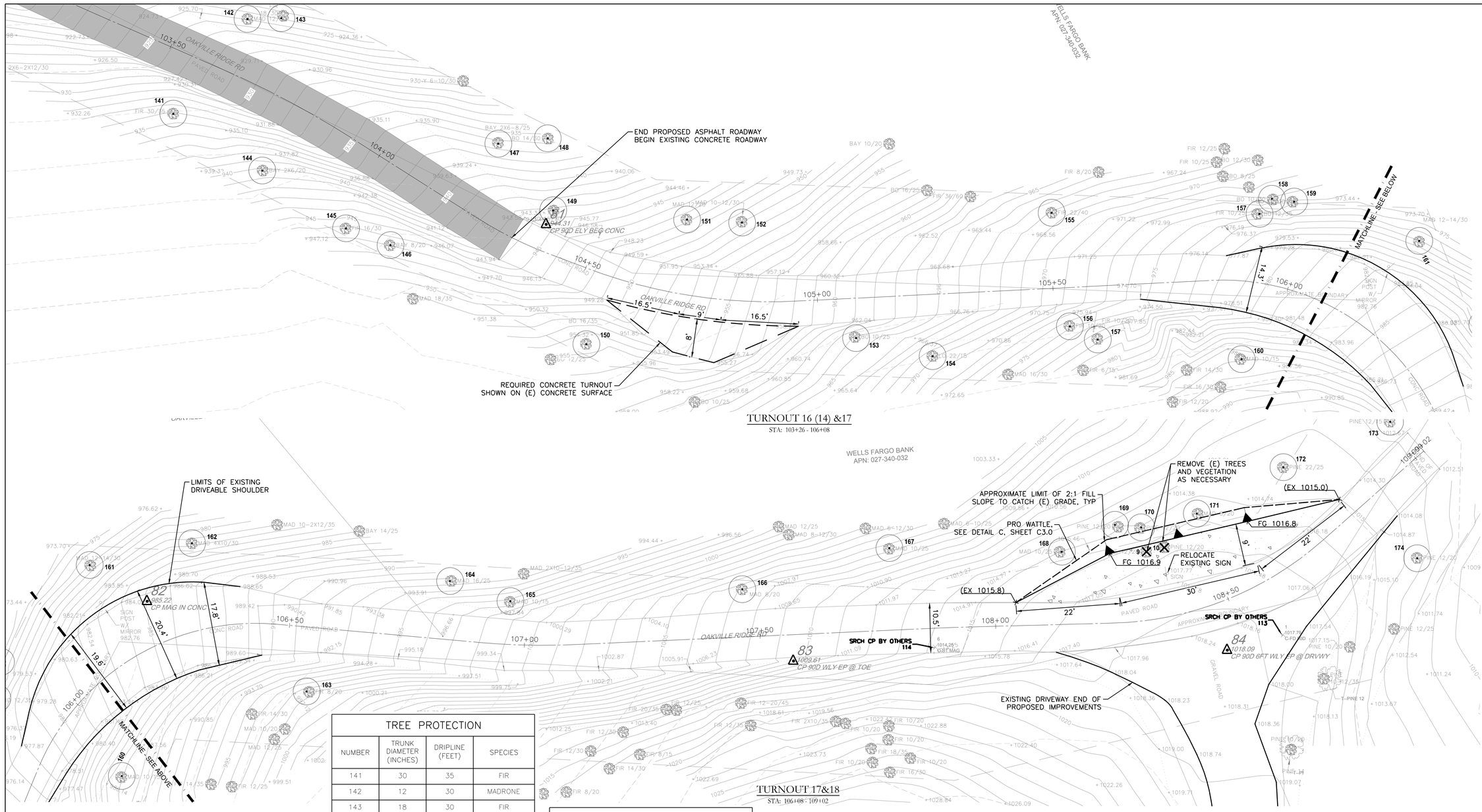
REVISIONS

NO	DATE	ISSUE

DRAWING TITLE:
ROAD ALIGNMENT

PROJECT #:	19-074
DATE:	8/02/19
DWN BY:	CL
DGN BY:	CL
CHKD BY:	CA

DRAWING NO:
C1.6



TURNOUT 16 (14) &17
STA: 103+26 - 106+08

TURNOUT 17&18
STA: 106+08 - 109+02

TREE PROTECTION			
NUMBER	TRUNK DIAMETER (INCHES)	DRIPLINE (FEET)	SPECIES
141	30	35	FIR
142	12	30	MADRONE
143	18	30	FIR
144	6	20	BAY
145	16	30	FIR
146	8	20	BAY
147	6–8	25	BAY
148	14	30	BLACK OAK
149	16	30	BLACK OAK
150	16	35	BLACK OAK
151	12	20	MADRONE
152	10–12	30	MADRONE
153	10	25	BLACK OAK
154	22	15	LIVE OAK
155	22	40	FIR
156	10	20	FIR
157	10	20	FIR
158	12	35	BLACK OAK
159	10	30	BLACK OAK
160	10	15	MADRONE

TREE PROTECTION			
NUMBER	TRUNK DIAMETER (INCHES)	DRIPLINE (FEET)	SPECIES
161	12–14	30	MADRONE
162	10	30	MADRONE
163	8	20	FIR
164	16	25	MADRONE
165	10	15	MADRONE
166	8	20	MADRONE
167	10	25	MADRONE
168	10	25	MADRONE
169	12	20	PINE
170	12	20	PINE
171	8	20	MADRONE
172	22	25	PINE
173	12	15	PINE
174	12	20	PINE

KEYMAP

0 5' 10' 20' North

PRELIMINARY NOT FOR CONSTRUCTION

SHERWOOD
DESIGN ENGINEERS
2548 MISSION STREET
San Francisco, CA 94110
www.sherwoodengineers.com

OAKVILLE RIDGE RESIDENCE
DRIVEWAY IMPROVEMENTS

PARCEL 027-340-024 OAKVILLE RIDGE ROAD
COUNTY OF NAPA, CA

SCALE:
Scale of this drawing is 11" x 17", it has been revised from its original size. Scale is no longer applicable.

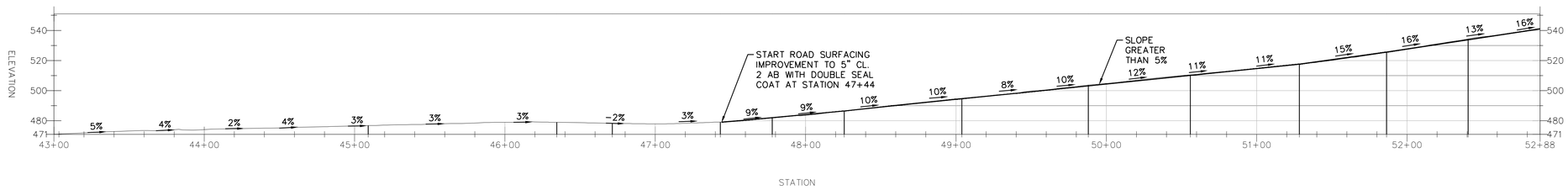
REVISIONS

NO	DATE	ISSUE

DRAWING TITLE:
ROAD ALIGNMENT

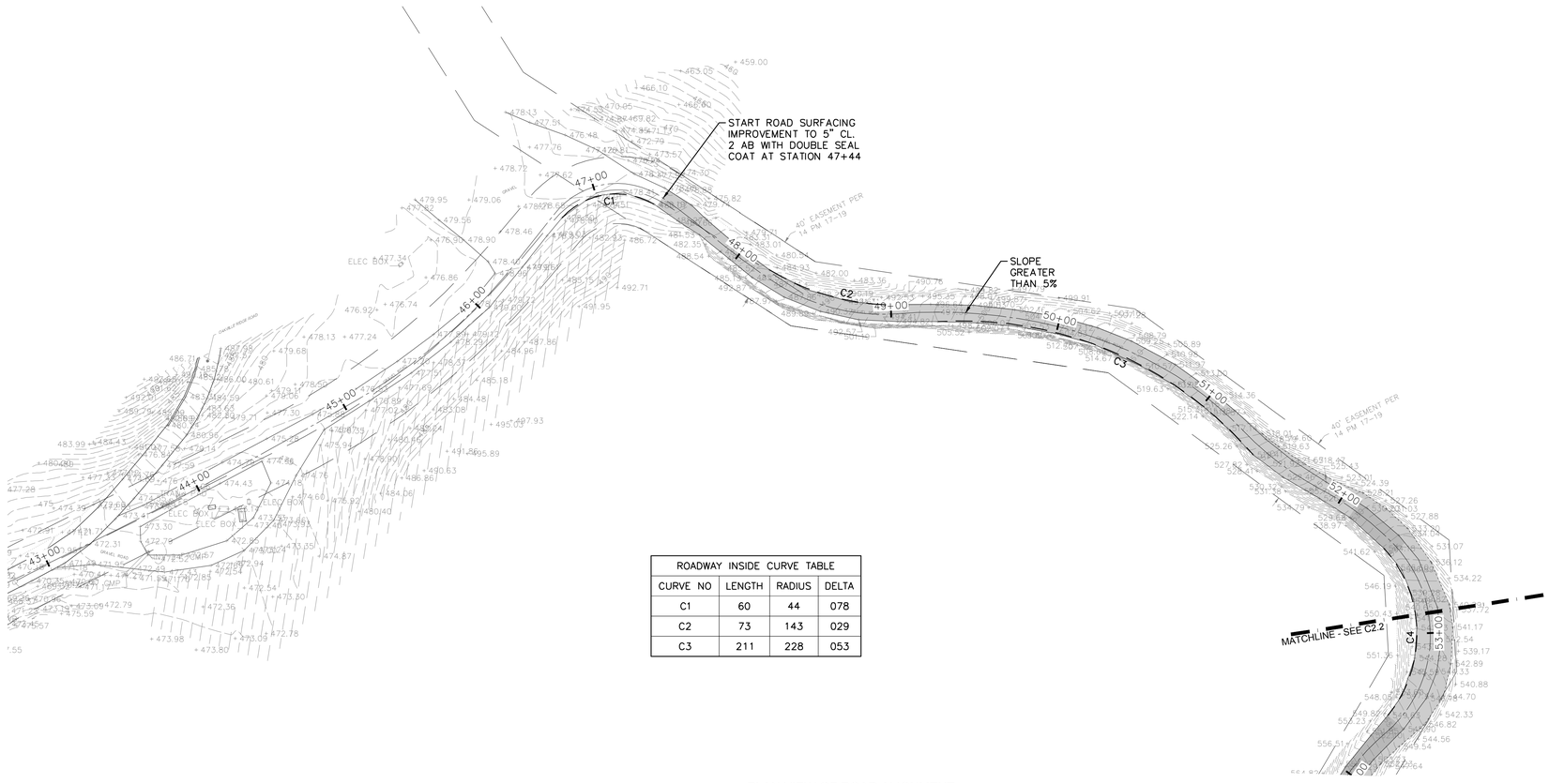
PROJECT #: 19-074
DATE: 8/02/19
DWN BY: CL
DGN BY: CL
CHKD BY: CA

DRAWING NO:
C1.7



PROFILE VIEW OF ROAD ALIGNMENT

SCALE: 1"=40'



ROADWAY INSIDE CURVE TABLE			
CURVE NO	LENGTH	RADIUS	DELTA
C1	60	44	078
C2	73	143	029
C3	211	228	053

PLAN VIEW OF ROAD ALIGNMENT

SCALE: 1"=40'

0 20' 40' 80'

North

PRELIMINARY NOT FOR CONSTRUCTION

SHERWOOD
DESIGN ENGINEERS
2548 MISSION STREET
San Francisco, CA 94110
www.sherwoodengineers.com

OAKVILLE RIDGE RESIDENCE
DRIVEWAY IMPROVEMENTS

PARCEL 027-340-024 OAKVILLE RIDGE ROAD
COUNTY OF NAPA, CA

SCALE:
Scale of this drawing is for 24"x36", it has been revised from its original size. Scale is no longer applicable.

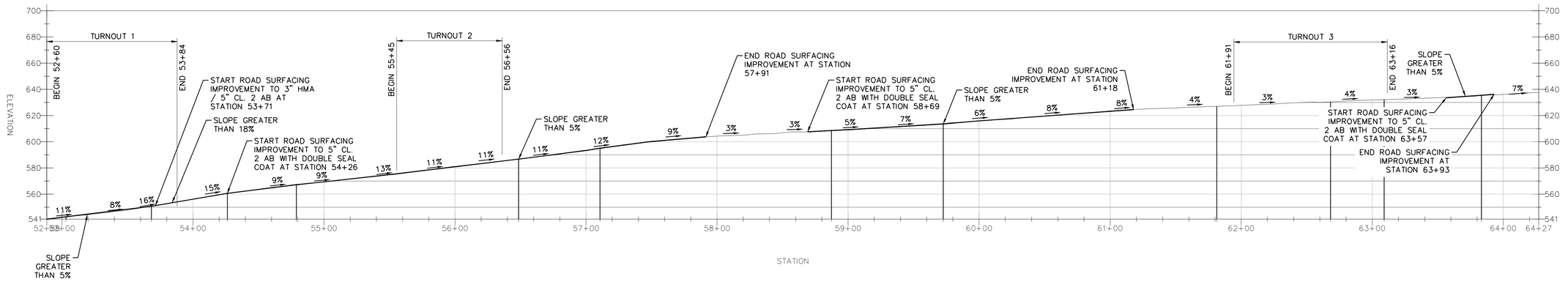
REVISIONS

NO	DATE	ISSUE

DRAWING TITLE:
ROAD PLAN & PROFILE

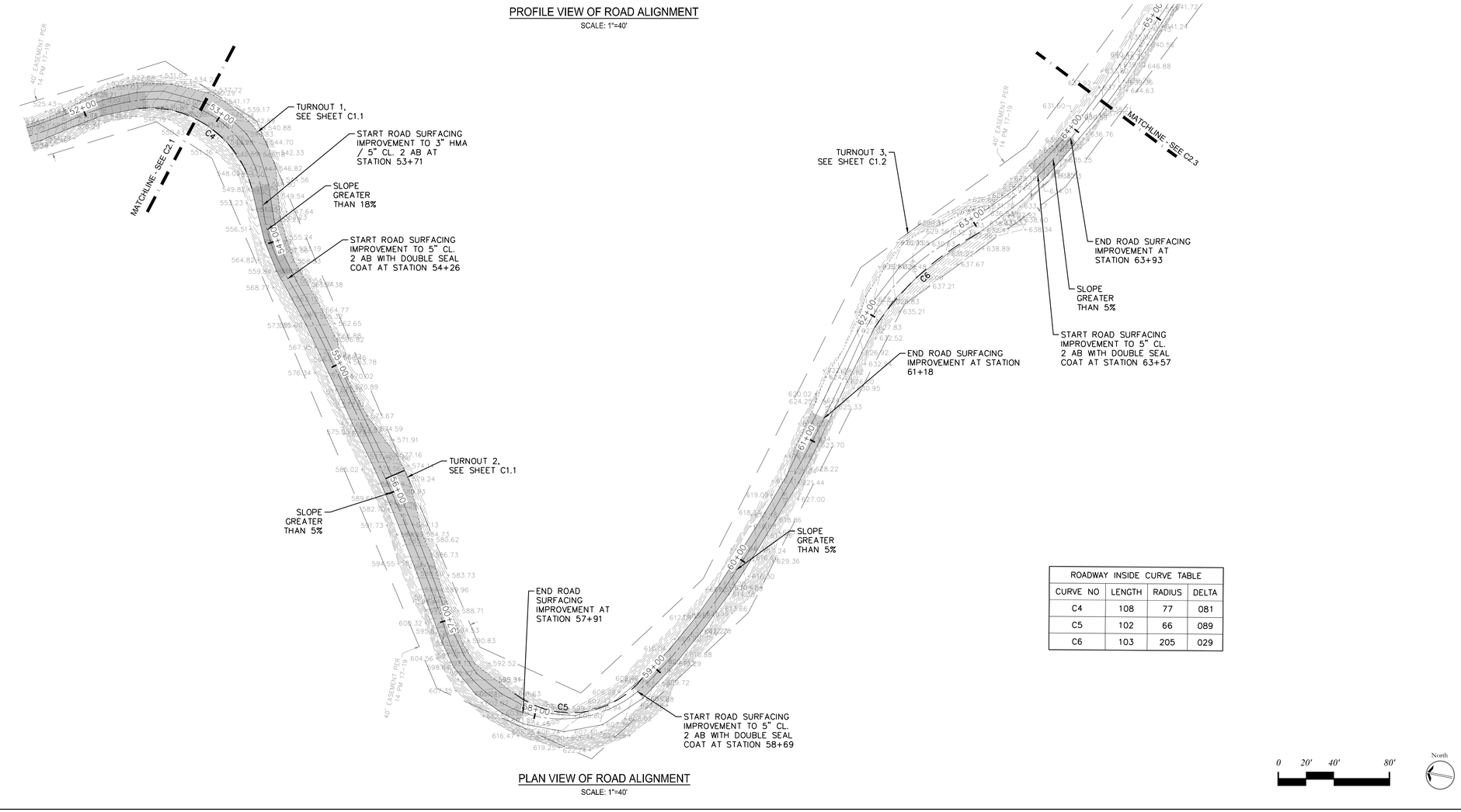
PROJECT #: 19-074
DATE: 8/02/19
DWN BY: CL
DGN BY: CL
CHKD BY: CA

DRAWING NO:
C2.1



PROFILE VIEW OF ROAD ALIGNMENT

SCALE: 1"=40'



PLAN VIEW OF ROAD ALIGNMENT

SCALE: 1"=40'

ROADWAY INSIDE CURVE TABLE			
CURVE NO	LENGTH	RADIUS	DELTA
C4	108	77	081
C5	102	66	089
C6	103	205	029

0 20' 40' 80'

North

PRELIMINARY NOT FOR CONSTRUCTION

SHERWOOD DESIGN ENGINEERS
2548 MISSION STREET
San Francisco, CA 94110
www.sherwoodengineers.com

OAKVILLE RIDGE RESIDENCE
DRIVEWAY IMPROVEMENTS
PARCEL 027-340-024 OAKVILLE RIDGE ROAD
COUNTY OF NAPA, CA

SCALE: Scale of this drawing is 24"x36", it has been revised from its original size. Scale is no longer applicable.

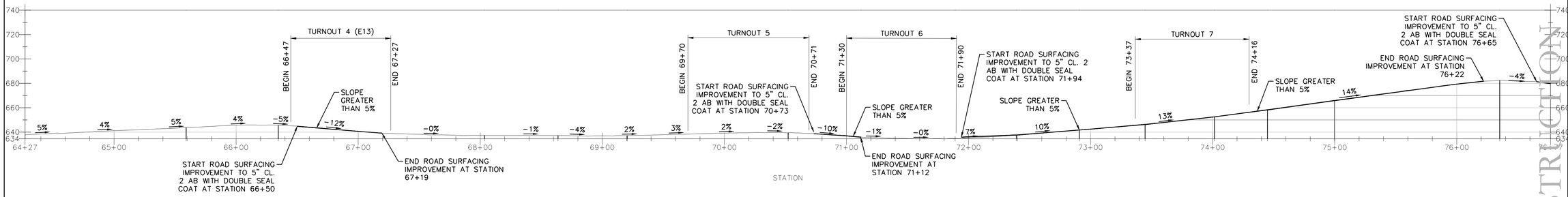
REVISIONS

NO	DATE	ISSUE

DRAWING TITLE: ROAD PLAN & PROFILE

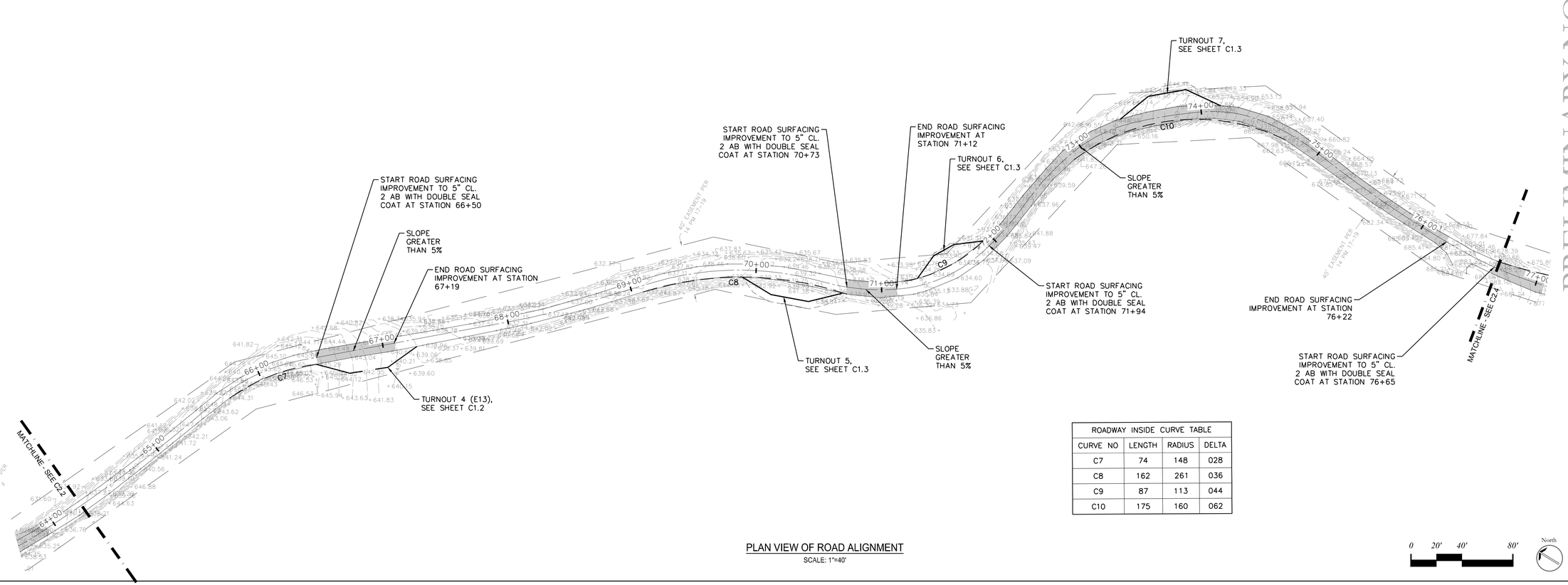
PROJECT #: 19-074
DATE: 8/02/19
DWN BY: CL
DGN BY: CL
CHKD BY: CA

DRAWING NO: C2.2



PROFILE VIEW OF ROAD ALIGNMENT

SCALE: 1"=40'



PLAN VIEW OF ROAD ALIGNMENT

SCALE: 1"=40'

ROADWAY INSIDE CURVE TABLE			
CURVE NO	LENGTH	RADIUS	DELTA
C7	74	148	028
C8	162	261	036
C9	87	113	044
C10	175	160	062

0 20' 40' 80'

North

PRELIMINARY NOT FOR CONSTRUCTION

SHERWOOD
DESIGN ENGINEERS
2548 MISSION STREET
San Francisco, CA 94110
www.sherwoodengineers.com

OAKVILLE RIDGE RESIDENCE
DRIVEWAY IMPROVEMENTS

PARCEL 027-340-024 OAKVILLE RIDGE ROAD

COUNTY OF NAPA, CA

SCALE:
Scale of this drawing is not 24"x36", it has been revised from its original size. Scale is no longer applicable.

REVISIONS

NO	DATE	ISSUE

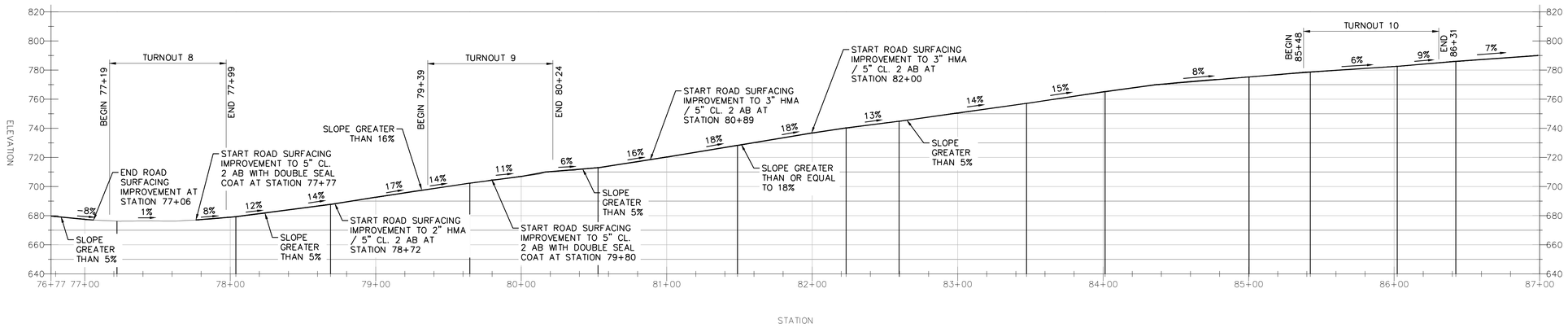
DRAWING TITLE:

ROAD PLAN & PROFILE

PROJECT #:	19-074
DATE:	8/02/19
DWN BY:	CL
DGN BY:	CL
CHKD BY:	CA

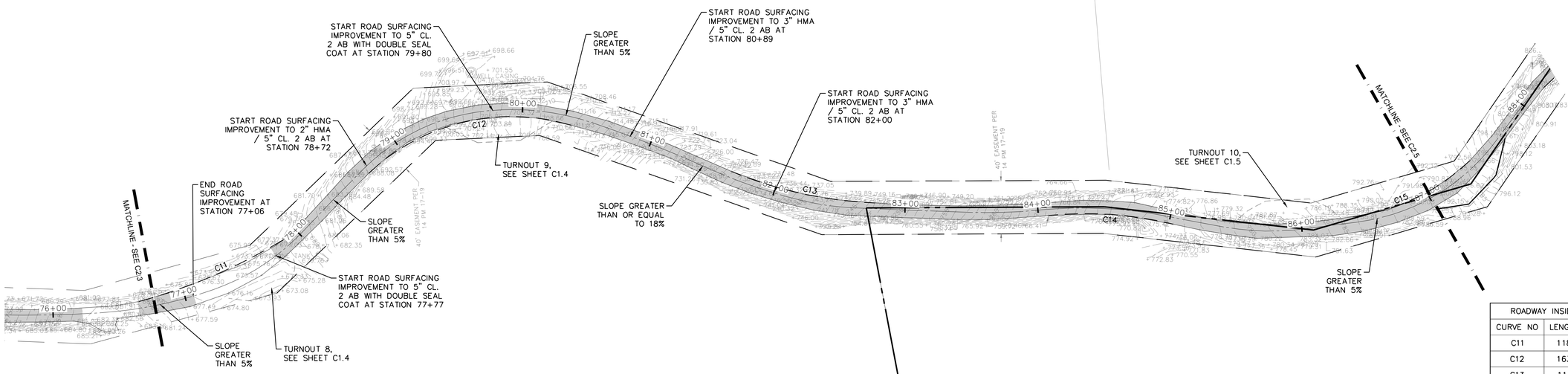
DRAWING NO:

C2.3



PROFILE VIEW OF ROAD ALIGNMENT

SCALE: 1"=40'



PLAN VIEW OF ROAD ALIGNMENT

SCALE: 1"=40'

ROADWAY INSIDE CURVE TABLE			
CURVE NO	LENGTH	RADIUS	DELTA
C11	118	417	016
C12	163	157	060
C13	111	309	021
C14	94	276	020
C15	99	159	036

PRELIMINARY NOT FOR CONSTRUCTION

SHERWOOD
DESIGN ENGINEERS
2548 MISSION STREET
San Francisco, CA 94110
www.sherwoodengineers.com

OAKVILLE RIDGE RESIDENCE
DRIVEWAY IMPROVEMENTS

PARCEL 027-340-024 OAKVILLE RIDGE ROAD
COUNTY OF NAPA, CA

SCALE:
Scale of this drawing is set 24"x36", it has been revised from its original size. Scale is no longer applicable.

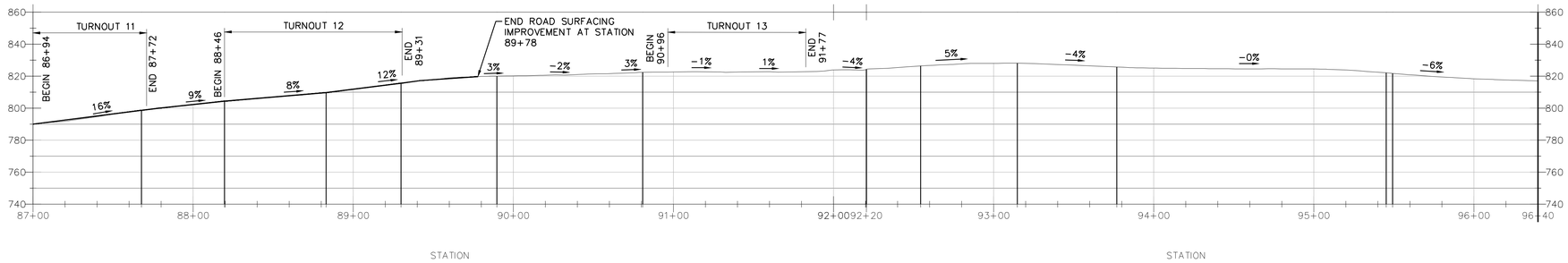
REVISIONS

NO	DATE	ISSUE

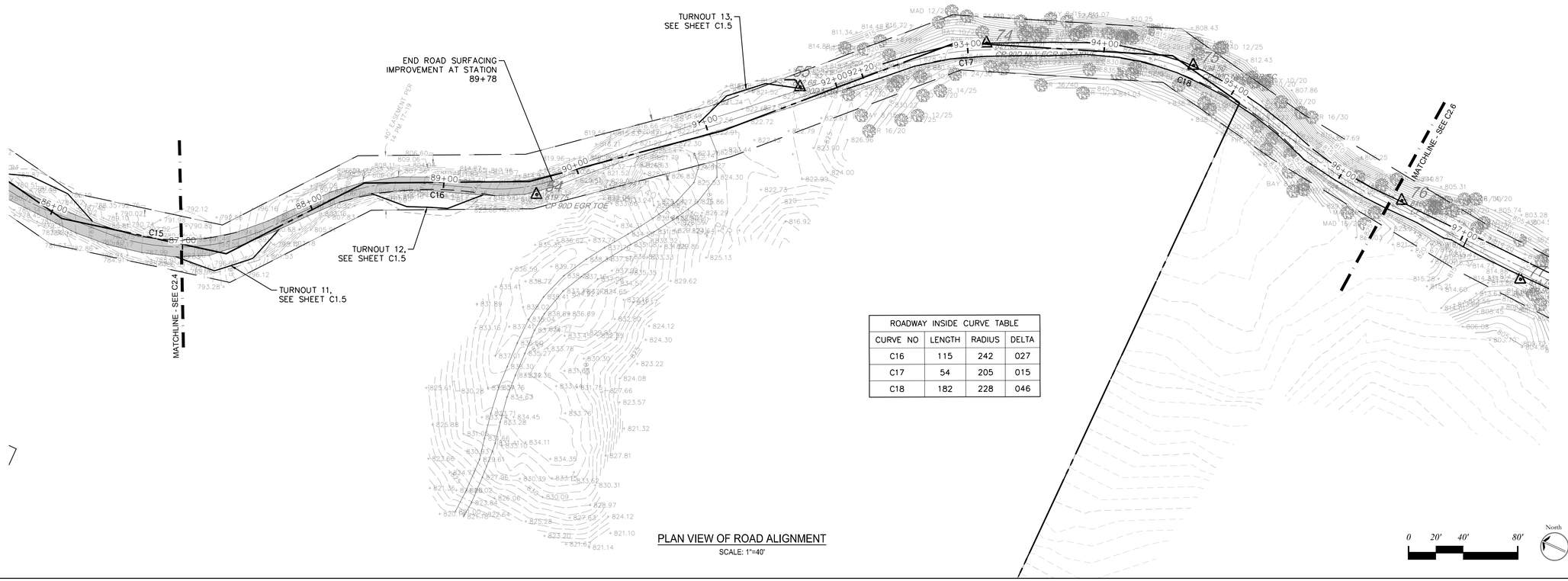
DRAWING TITLE:
ROAD PLAN & PROFILE

PROJECT #: 19-074
DATE: 8/02/19
DWN BY: CL
DGN BY: CL
CHKD BY: CA

DRAWING NO:
C2.4



PROFILE VIEW OF ROAD ALIGNMENT
SCALE: 1"=40'



ROADWAY INSIDE CURVE TABLE			
CURVE NO	LENGTH	RADIUS	DELTA
C16	115	242	027
C17	54	205	015
C18	182	228	046

PLAN VIEW OF ROAD ALIGNMENT
SCALE: 1"=40'

0 20' 40' 80'

North

PRELIMINARY NOT FOR CONSTRUCTION

SHERWOOD
DESIGN ENGINEERS
2548 MISSION STREET
San Francisco, CA 94110
www.sherwoodengineers.com

OAKVILLE RIDGE RESIDENCE
DRIVEWAY IMPROVEMENTS

PARCEL 027-340-024 OAKVILLE RIDGE ROAD
COUNTY OF NAPA, CA

SCALE:
Scale if this drawing is not 24"x36", it has been revised from its original size. Scale is no longer applicable.

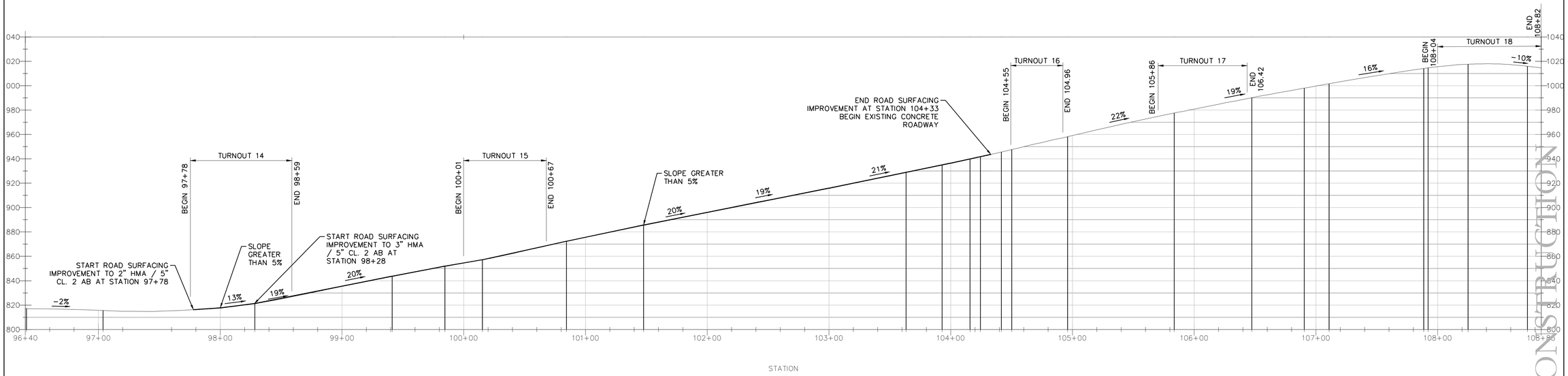
REVISIONS

NO	DATE	ISSUE

DRAWING TITLE:
ROAD PLAN & PROFILE

PROJECT #: 19-074
DATE: 8/02/19
DWN BY: CL
DGN BY: CL
CHKD BY: CA

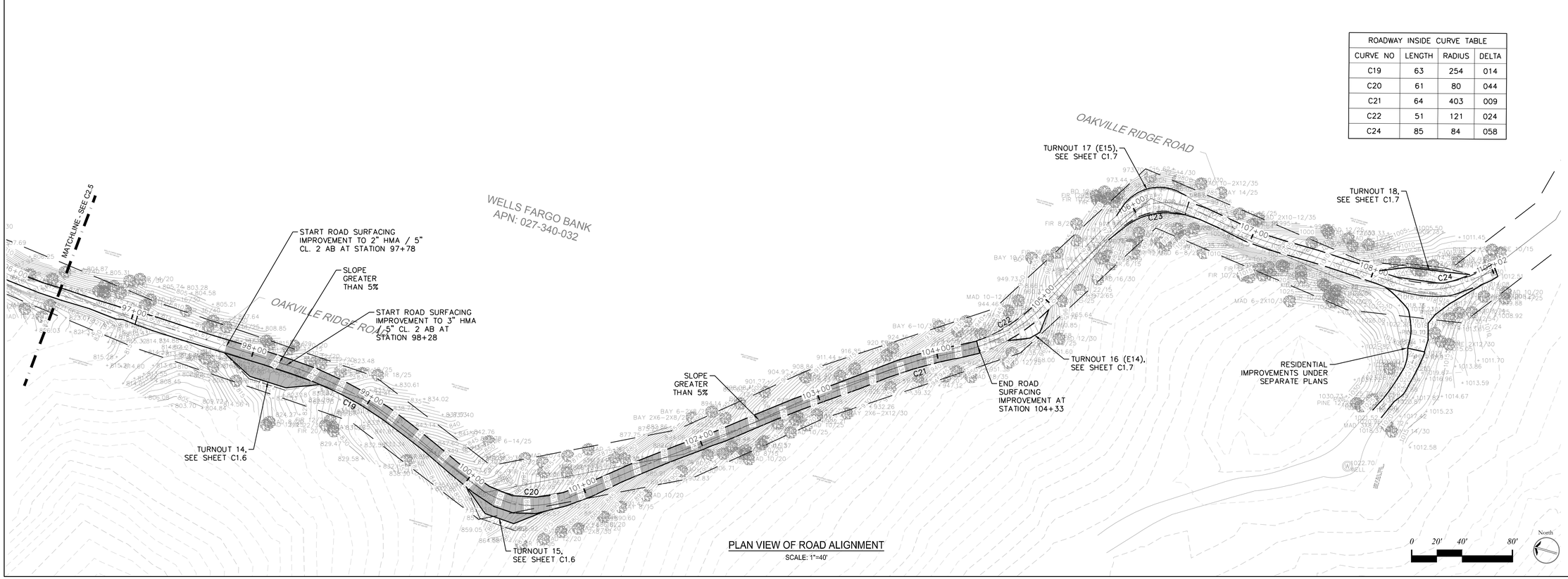
DRAWING NO:
C2.5



PROFILE VIEW OF ROAD ALIGNMENT

SCALE: 1"=40'

ROADWAY INSIDE CURVE TABLE			
CURVE NO	LENGTH	RADIUS	DELTA
C19	63	254	014
C20	61	80	044
C21	64	403	009
C22	51	121	024
C24	85	84	058



PLAN VIEW OF ROAD ALIGNMENT

SCALE: 1"=40'

PRELIMINARY NOT FOR CONSTRUCTION

SHERWOOD
DESIGN ENGINEERS
2548 MISSION STREET
San Francisco, CA 94110
www.sherwoodengineers.com

OAKVILLE RIDGE RESIDENCE DRIVEWAY IMPROVEMENTS

PARCEL 027-340-024 OAKVILLE RIDGE ROAD

COUNTY OF NAPA, CA

SCALE: Scale of this drawing is not 24"x36", it has been revised from its original size. Scale is no longer applicable.

REVISIONS		
NO	DATE	ISSUE

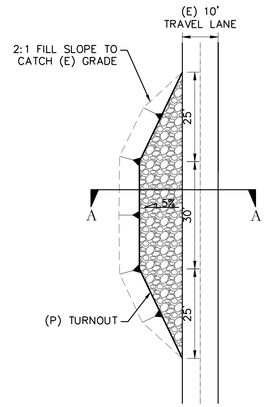
DRAWING TITLE:

ROAD PLAN & PROFILE

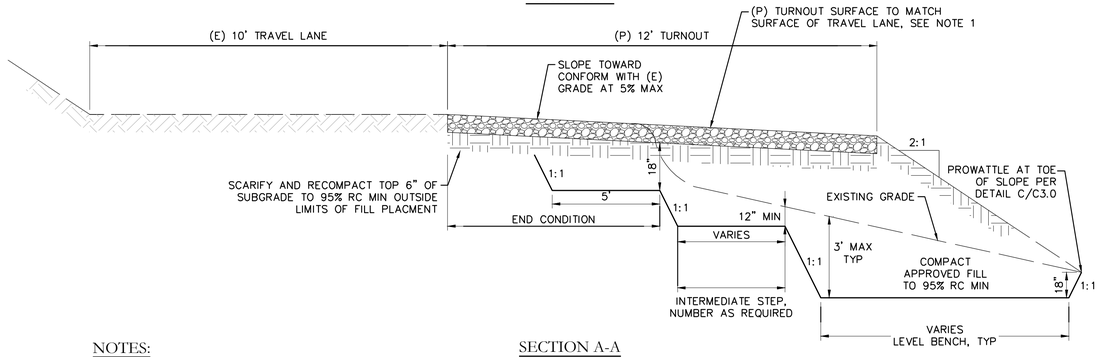
PROJECT #:	19-074
DATE:	8/02/19
DWN BY:	CL
DGN BY:	CL
CHKD BY:	CA

DRAWING NO:

C2.6



PLAN VIEW



SECTION A-A

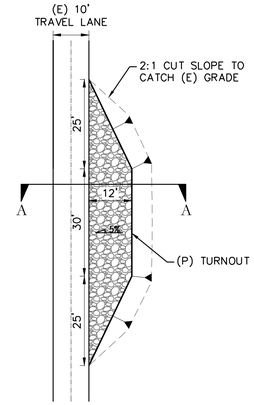
NOTES:

1. REPEAT INTERMEDIATE BENCH CONDITION AS REQUIRED BY FILL.
2. TRAVEL LANE SURFACE PER 2020 NAPA COUNTY ROAD & STREET STANDARDS DETAIL C-10:

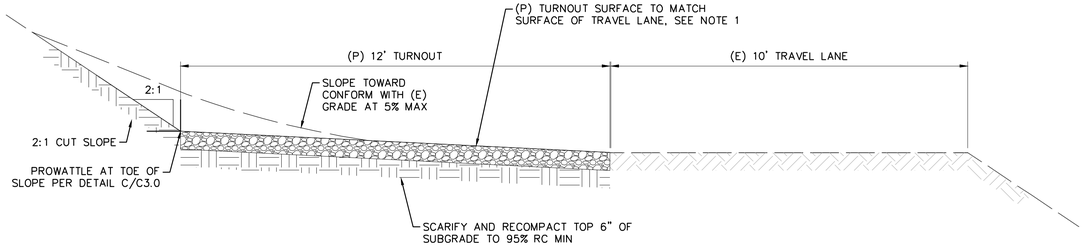
SURFACE	ROAD GRADE
5" CL. 2 AB	0%-5%
5" CL. 2 AB WITH DOUBLE SEAL COAT	5%-16%
2" HMA/5" CL. 2 AB	16%-18%
3" HMA/5" CL. 2AB	18%-20%

A C3.0 TURNOUT FILL CONDITION

SCALE: NTS



PLAN VIEW



SECTION A-A

NOTES:

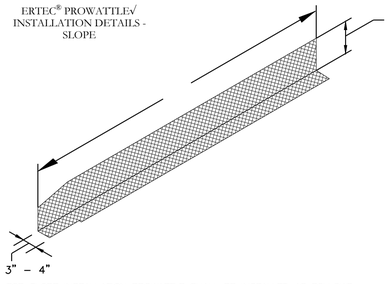
1. TRAVEL LANE SURFACE PER 2020 NAPA COUNTY ROAD & STREET STANDARDS DETAIL C-10:

SURFACE	ROAD GRADE
5" CL. 2 AB	0%-5%
5" CL. 2 AB WITH DOUBLE SEAL COAT	5%-16%
2" HMA/5" CL. 2 AB	16%-18%
3" HMA/5" CL. 2AB	18%-20%

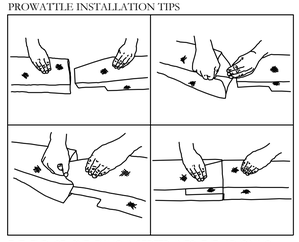
B C3.0 TURNOUT CUT CONDITION

SCALE: NTS

ERTEC® PROWATTLE√ INSTALLATION DETAILS - SLOPE



PROWATTLE INSTALLATION TIPS



THE END OF ONE PW IS INSERTED INTO THE ADJOINING PW AND BUTTED UP AGAINST EACH OTHER. THEN BUTT THE TWO PW SEGMENTS TOGETHER FIRMLY.

FOR SLOPE INSTALLATION PROWATTLE SHALL BE INSTALLED AS FOLLOWS:

1. A SHELF-CUT SHALL BE CONSTRUCTED 4" HORIZONTALLY INTO THE SLOPE.
2. STAKES SHALL BE INSTALLED ON SLOPES. INSTALL STAKES 5 FEET APART. STAKES SHALL BE DRIVEN FLUSH WITH THE TOP OF THE PROWATTLE. WOOD STAKES SHALL BE AT MINIMUM: 1" X 1" X 12". REBAR J-HOOK STAKES (#3 OR #4) MUST BE A MINIMUM OF 18" LONG.
3. PROWATTLE SHALL BE PLACED AS FOLLOWS:

FEET APART ALONG THE SLOPE	SLOPE INCLINATION (VERTICAL:HORIZONTAL)
10 FEET	1:2 AND STEEPER
15 FEET	1:2 TO 1:4
20 FEET	1:4 AND 1:10
50 FEET	1:10 AND FLATTER

4. THE SHELF-CUT FOR PROWATTLE SHALL BE CLEARED OF OBSTRUCTIONS INCLUDING, BUT NOT LIMITED TO, ROCKS, CLODS, AND DEBRIS GREATER THAN 1" IN DIAMETER PRIOR TO INSTALLATION.
5. PROWATTLE SHALL BE INSTALLED PARALLEL TO THE SLOPE CONTOUR.
6. PROWATTLE SHALL BE INSTALLED PRIOR TO THE APPLICATION OF OTHER TEMPORARY EROSION CONTROL OR SOIL STABILIZATION MATERIALS IN THE SAME AREA.
7. WHEN NO LONGER REQUIRED, PROWATTLE CAN BE REMOVED AND REUSED. CRACK LOOSE AND SHAKE SEDIMENT FROM PROWATTLE SEGMENT. IT IS NOT NECESSARY TO CLEAN PROWATTLE OF ALL REMAINING SEDIMENT PRIOR TO REUSE (IT IS NOT NECESSARY TO PRESSURE-WASH PROWATTLE BETWEEN INSTALLATIONS). THE RESIDUAL SEDIMENT THAT REMAINS ON THE FILTER CAN BE BENEFICIAL AS A SECONDARY FILTER (FILTER CAKE) UPON SUBSEQUENT INSTALLATIONS. PRIOR TO REUSE, PERFORM 2-STEP QUALITY INSPECTION AS PER INSTALLATION GUIDE (WWW.ERTECSYSTEMS.COM).

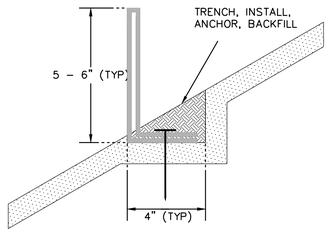
** NOT TO SCALE **

ERTEC Environmental Systems
http://www.ertecsystems.com/
1150 Ballena Blvd. Suite 250 Alameda, CA 94501
P: 866-521-0724 F: 510-521-3972

U.S. and International Patents Apply ©2009 ERTEC Environmental Systems

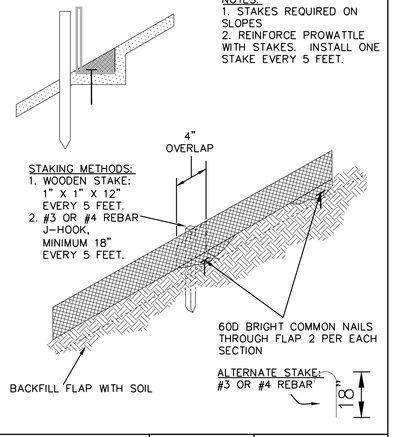
ERTEC - Installation Details - ProWattle.dwg
P1 Slope Details
8.5" x 11" | 1 of 3

ERTEC® PROWATTLE√ INSTALLATION DETAILS - SLOPE



NOTES:

1. INSERT ADJOINING SEGMENTS. CHAMFERED END FITS INSIDE ADJOINING SEGMENT.
2. USE 6" NAILS (60D BRIGHT-COMMON). INSTALL 2 NAILS PER EACH 7' SEGMENT. ONE AT OVERLAP AND ONE MID-SEGMENT.
3. INSTALL NAILS FLUSH WITH FLAP SO THAT FLAP IS IN GOOD CONTACT WITH SOIL.
4. COVER FLAP WITH SOIL TO PREVENT UNDERCUTTING.
5. REINFORCE WITH STAKES AS SHOWN - ONE STAKE EVERY 5 FEET. IT IS NOT NECESSARY TO FASTEN THE STAKES TO PROWATTLE. POSITION STAKE ON DOWNSTREAM SIDE OF PROWATTLE TO MINIMIZE LEANING.



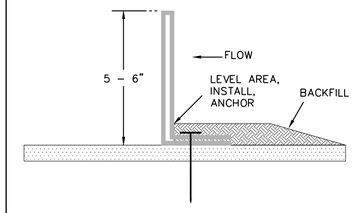
** NOT TO SCALE **

ERTEC Environmental Systems
http://www.ertecsystems.com/
1150 Ballena Blvd. Suite 250 Alameda, CA 94501
P: 866-521-0724 F: 510-521-3972

U.S. and International Patents Apply ©2009 ERTEC Environmental Systems

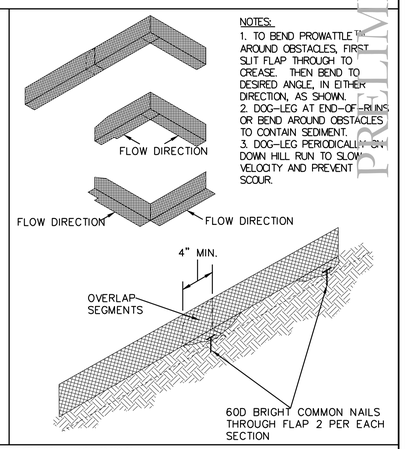
ERTEC - Installation Details - ProWattle.dwg
P2 Slope Details
8.5" x 11" | 2 of 3

ERTEC® PROWATTLE™ INSTALLATION DETAILS - PERIMETER



NOTES:

1. INSERT ADJOINING SEGMENTS. CHAMFERED END FITS INSIDE ADJOINING SEGMENT.
2. USE 6" NAILS (60D BRIGHT-COMMON). INSTALL 2 NAILS PER EACH 7' SEGMENT. ONE AT OVERLAP AND ONE MID-SEGMENT.
3. INSTALL NAILS FLUSH WITH FLAP SO THAT FLAP IS IN GOOD CONTACT WITH SOIL.
4. COVER FLAP WITH 1" OF SOIL TO PREVENT UNDERCUTTING - NOT NECESSARY TO TRENCH.
5. STAKES MIGHT BE REQUIRED. IF SO, INSTALL AS NECESSARY.



MAINTENANCE: PERFORM MAINTENANCE AS REQUIRED. INSPECT FOLLOWING RAINFALL EVENTS AND AT LEAST DAILY DURING PROLONGED RAINFALL. MAINTAIN TO PROVIDE AN ADEQUATE SEDIMENT HOLDING CAPACITY. DEBRIS SHALL BE REMOVED DAILY AND SEDIMENT SHALL BE REMOVED WHEN THE SEDIMENT ACCUMULATION REACHES 50% OF THE BARRIER HEIGHT. REMOVED SEDIMENT SHALL BE INCORPORATED IN THE PROJECT AT DESIGNATED LOCATIONS.

IMPORTANT: ALL INFORMATION, INCLUDING ILLUSTRATIONS, IS BELIEVED TO BE RELIABLE. USERS, HOWEVER, SHOULD INDEPENDENTLY EVALUATE THE SUITABILITY OF EACH PRODUCT FOR THEIR APPLICATION. ERTEC ENVIRONMENTAL SYSTEMS MAKES NO WARRANTIES AS TO THE ACCURACY OF COMPLETENESS OF THE INFORMATION, AND DISCLAIMS ANY LIABILITY REGARDING ITS USE. ERTEC ENVIRONMENTAL SYSTEMS ONLY OBLIGATIONS ARE THOSE IN THE ERTEC ENVIRONMENTAL SYSTEMS STANDARD TERMS AND CONDITIONS OF SALE FOR THIS PRODUCT, AND IN NO CASE WILL ERTEC ENVIRONMENTAL SYSTEMS OR ITS DISTRIBUTORS BE LIABLE FOR ANY INCIDENTAL INDIRECT OR CONSEQUENTIAL DAMAGES ARISING FOR THE SALE, RESALE, USE OR MISUSE OF THE PRODUCT. SPECIFICATIONS ARE SUBJECT TO CHANGE WITHOUT NOTICE. IN ADDITION, ERTEC ENVIRONMENTAL SYSTEMS RESERVES THE RIGHT TO MAKE CHANGES, WITHOUT NOTIFICATION TO BUYER, TO PROCESSING OR MATERIALS THAT DO NOT AFFECT COMPLIANCE WITH ANY APPLICABLE SPECIFICATION.

** NOT TO SCALE **

ERTEC Environmental Systems
http://www.ertecsystems.com/
1150 Ballena Blvd. Suite 250 Alameda, CA 94501
P: 866-521-0724 F: 510-521-3972

U.S. and International Patents Apply ©2009 ERTEC Environmental Systems

ERTEC - Installation Details - ProWattle.dwg
P3 Perimeter
8.5" x 11" | 3 of 3

C C3.0 PROWATTLE INSTALLATION

SCALE: NTS

P:\2019\19-074\Oak_Ridge\03_Design\01_CAD\01_CD\C3.0 DETAILS.dwg,C3.0 DETAILS,dwg,Lauri Landberg,11/7/2020 11:10:22 PM,ARCH full bleed D (36.00 x 24.00 Inches),1:1

PRELIMINARY NOT FOR CONSTRUCTION

REGISTERED PROFESSIONAL ENGINEER
CINDY ANDERSON
EXP: 12/31/17
No. 84720
CIVIL
STATE OF CALIFORNIA

SHERWOOD DESIGN ENGINEERS
2548 MISSION STREET
San Francisco, CA 94110
www.sherwoodengineers.com

OAKVILLE RIDGE RESIDENCE
DRIVEWAY IMPROVEMENTS
PARCEL 027-340-024 OAKVILLE RIDGE ROAD
COUNTY OF NAPA, CA

SCALE: None if this drawing is no 24"x36", it has been revised from its original size. Scale is no longer applicable.

REVISIONS

NO	DATE	ISSUE

DRAWING TITLE: DETAILS

PROJECT #: 19-074
DATE: 8/02/19
DWN BY: CL
DGN BY: CL
CHKD BY: CA

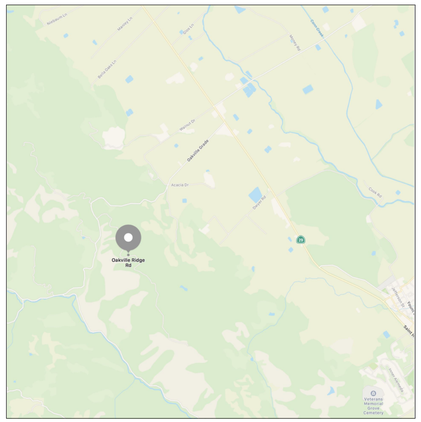
DRAWING NO: C3.0

KALLWEIT RESIDENCE

LANDSCAPING AND SITE IMPROVEMENTS

OAKVILLE RDIGE RD.
NAPA, CA 94558
AP: 027-340-024

VICINITY MAP



ABBREVIATIONS & SYMBOLS

X / L-X	ELEVATION CALLOUT	DEPT.	DEPARTMENT	H.B.	HOSE BIB	SPEC.	SPECIFICATION
X / L-X	SECTION CALLOUT	D.F.	DOUGLAS FIR	H.P.	HIGH POINT	SQ.	SQUARE
	ALIGN	DET.	DETAIL	HDWD.	HARDWOOD	S.ST.	STAINLESS STEEL
&	AND	DI	DROP INLET	HORIZ.	HORIZONTAL	STD.	STANDARD
@	AT	DIM.	DIMENSION	HT.	HEIGHT	STL.	STEEL
℄	CENTERLINE	DN.	DOWN	INST.	INSTALL	STOR.	STORAGE
#	POUND/NUMBER	DR.	DOOR	JT.	JOINT	STR.	STRUCTURAL
(E)	EXISTING	DS.	DOWNSPOUT	MAX.	MAXIMUM	SYM.	SYMMETRICAL
(N)	NEW	DWG.	DRAWING	MECH.	MECHANICAL	TRD.	TREAD
A.C.	AIR CONDITIONING	E	ELECTRIC	MFR.	MANUFACTURER	T.C.	TOP OF CURB
A.D.	AREA DRAIN	EA.	EACH	MH.	MANHOLE	T.P.	TOP OF PIER/COLUMN
ADJ.	ADJUSTABLE	E.J.	EXPANSION JOINT	MIN.	MINIMUM	T.W.	TOP OF WALL
APPROX.	APPROXIMATE	EL.	ELEVATION	MISC.	MISCELLANEOUS	TYP.	TYPICAL
ARCH.	ARCHITECTURAL	E.M.	ELECTRIC METER	N.I.C.	NOT IN CONTRACT	U.O.N.	UNLESS OTHERWISE NOTED
BD.	BOARD	ENCL.	ENCLOSURE	NO./ #	NUMBER	VERT.	VERTICAL
BLDG.	BUILDING	ENG.	ENGINEER	NOM.	NOMINAL	W/	WITH
B.W.	BOTTOM OF WALL	E.P.	ELECTRICAL PANELBOARD	N.T.S.	NOT TO SCALE	WD.	WOOD
C	CABLE	EQ.	EQUAL	O.C.	ON CENTER	W.M.	WATER METER
C.B.	CATCH BASIN	EXST.	EXISTING	O.C.E.W.	ON CENTER EACH WAY	W/O	WITHOUT
CEM.	CEMENT	EXP.	EXPANSION	O.E.	OR EQUAL	WP.	WATERPROOF
CER.	CERAMIC	EXT.	EXTERIOR	P.A.	PLANTING AREA		
C.J.	CONTROL JOINT	FIN.	FINISH	P.L.	PROPERTY LINE		
CLR.	CLEAR	FIN.GR.	FINISH GRADE	P.O.B.	POINT OF BEGINNING		
CONC.	CONCRETE	FL.	FLOOR	R.	RISER		
CONN.	CONNECTION	FLASH'G	FLASHING	RAD.	RADIUS		
CONT.	CONTINUOUS	F.O.F.	FACE OF FINISH	REF.	REFERENCE		
CTSK.	COUNTERSUNK	FT.	FOOT/FEET	REINF.	REINFORCED		
CTR.	CENTER	FTG.	FOOTING	REQ.	REQUIRED		
DBL.	DOUBLE	FUT.	FUTURE	RM.	ROOM		
		G	GAS	RWD.	REDWOOD		
		GAL.	GALLON	RWD.	REDWOOD		
		GALV.	GALVANIZED	SHT.	SHEET		
		GR.	GRADE	SIM.	SIMILAR		

INDEX TO DRAWINGS:

GENERAL NOTES

1. ALL WORK SHALL CONFORM TO OR EXCEED THE REQUIREMENTS OF THE **2016 EDITION OF THE CALIFORNIA BUILDING CODE**, REGARDLESS OF WHAT IS SHOWN OR NOT SHOWN IN THE CONTRACT DOCUMENTS. ALL WORK SHALL COMPLY WITH THE FOLLOWING CODES.

THE CURRENT UNIVERSAL BUILDING CODES AND STANDARDS AS ADOPTED BY CALIFORNIA WILL BE ENFORCED BY THE COUNTY OF MARIN

- CALIFORNIA BUILDING CODE
- CALIFORNIA PLUMBING CODE
- CALIFORNIA MECHANICAL CODE
- CALIFORNIA ELECTRICAL CODE
- CALIFORNIA ENERGY CODE
- CALIFORNIA FIRE CODE
- CALIFORNIA RESIDENTIAL CODE

2. THE CONTRACTOR SHALL COMPLY WITH THE COUNTY OF NAPA ORDINANCE AND ALL OTHER APPLICABLE STATE OR LOCAL ORDINANCES. IN THE EVENT OF A CONFLICT, THE MORE STRINGENT REQUIREMENTS SHALL APPLY.

3. CONFLICTS IN THE CONTRACT DOCUMENTS: IN CASE OF DISCREPANCIES OR CONFLICTS IN INFORMATION OR REQUIREMNTS WITHIN THE DRAWINGS, SPECS, OR BETWEEN THE DRAWINGS AND THE SPECS, THE MOST EXPENSIVE REQUIREMENT SHOWN OR SPECIFIED SHALL BE THE BASIS OF THE CONTRACT FOR CONSTRUCTION.

4. WRITTEN DIMENSIONS TAKE PRECEDENCE OVER GRAPHIC SCALE SHOWN ON THE DRAWINGS. DO NOT SCALE DRAWINGS. ALL DIMENSIONS ARE SHOWN TO THE FACE OF FINISH UNLESS OTHERWISE NOTED.

5. ALL SYSTEMS AND ASSEMBLIES SHALL BE COMPLETE AND OPERATIVE THOUGH NOT FULLY DESCRIBED IN THE CONTRACT DOCUMENTS. IN THE EVENT CERTAIN FEATURES OF THE CONSTRUCTION ARE NOT FULLY SHOWN ON THE DRAWINGS OR CALLED FOR IN THE SPECS, THEN THEIR CONSTRUCTION SHALL BE OF THE SAME CHARACTER OF SIMILAR CONDITIONS SHOWN OR CALLED FOR.

6. UNLESS OTHERWISE NOTED ALL CONNECTIONS AND FASTENERS SHALL BE CONCEALED. THE USE OF SURFACE FASTENERS SHALL BE APPROVED BY THE LANDSCAPE ARCHITECT. ALL EXTERIOR FASTENERS SHALL BE HOT-DIPPED GALVANIZED OR STAINLESS STEEL.

7. THE OWNER AND ARCHITECT SHALL NOT BE RESPONSIBLE FOR:CONSTRUCTION MEANS,METHODS OR TECHNIQUES, SEQUENCES OR PROCEDURES OF THE CONTRACTOR; SAFETY PRECAUTIONS AND PROGRAMS OF THE CONTRACTOR; OR FAILURE OF THE CONTRACTOR TO PERFORM THE WORK IN ACCORDANCE WITH THE CONTRACT DOCUMENTS.

8. THESE DRAWINGS MAY NOT BE TO SCALE AND ARE FOR: ILLUSTRATION PURPOSED ONLY. THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND EXISTING CONDTIONS IN THE FIELD PRIOR TO EXECUTING THE WORK.

9. LARGER SCALE DRAWINGS TAKE PRECEDENCE OVER SMALLER DRAWINGS.

10. INSTALL ALL MATERIALS, EQUIPMENT, FIXTURES, APPLIANCES AND ACCESSORIES IN CONFORMANCE WITH THE MANUFACTURER'S REQUIREMENTS AND RECOMMENDATIONS. ALL WORK SHALL BE INSTALLED PLUMB, LEVEL AND TRUE IN ACCORDANCE WITH THE CONTRACT DOCUMENTS.

11. THE CONTRACTOR SHALL HOLD HARMLESS THE OWNER, THE ARCHITECT AND THE **COUNTY OF NAPA** FROM ALL LIABILITIES AND DAMAGES RESULTING FROM HIS CONSTRUCTION OPERATIONS.

12. ANY AMBIGUITY OR DISCREPANCY DISCOVERED BY THE USE OF THESE PLANS SHALL BE REPORTED IMMEDIATELY TO THE ARCHITECT.

13. DESIGN-BUILD SYSTEMS: THE ELECTRICAL, LIGHTING AND IRRIGATION WORK SHALL BE "DESIGN-BUILD" PER THE CRITERIA OF THE CONTRACT DOCUMENTS. THE CONTRACTOR SHALL PROVIDE THE DESIGN AND CONSTRUCTION OF THESE SYSTEMS INTO THE WORK. THE LAYOUT OF THESE SYSTEMS ON THE DRAWINGS IS SCHEMATIC IN NATURE AND ONLY INTENDED TO INDICATE THE OVERALL SCOPE OF THE WORK. THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR ENSURING THE PROPOSED SYSTEMS ARE IN COMPLIANCE WITH ALL CALCULATIONS AND SPECIFICATIONS AS MAY BE REQUIRED FOR THE ISSUANCE OF BUILDING PERMITS FOR THESE SYSTEMS.

14. SPOT ELEVATIONS INDICATED ARE CRITICAL ELEVATIONS. INTERVIENING ELEVATIONS NOT SPECIFICALLY NOTED SHALL BE INTERPOLATED FROM ELEVATIONS SHOWN. A MINIMUM SLOPE OF EXTERIOR SURFACES SHALL BE 2% U.O.N.

15. INSURANCE: EACH CONTRACTOR SHALL MAINTAIN INSURANCE IN FULL FORCE AND EFFECT FOR THE LIFE OF THE CONTRACT, AND GIVE EVIDENCE OF SAME OR A CERTIFICATE INDICATING ITS EXISTENCE DELIVERED TO THE OWNER AND THE ARCHITECT AND GENERAL CONTRACTOR THE POLICIES LISTED HEREIN:

a) WORKER'S COMPENSATION COVERING CONTRACTOR'S FULL LIABILITY UNDER "THE WORKMAN'S COMPENSATION AND SAFETY ACTS."

b) COMPREHENSIVE GENERAL LIABILITY INSURANCE IN THE FOLLOWING AMOUNTS:
BODILY INJURY: $1,000,000
PROPERTY DAMAGE: $1,000,000

c) COMPREPENSIVE AUTO LIABILITY INSURANCE IN THE FOLLOWING AMOUNTS:
BODILY INJURY: $1,000,000 EACH PERSON
PROPERTY DAMAGE: $1,000,000 EACH OCCURANCE

16. CONTRACTOR'S LIABILITY INSURANCE SHALL INCLUDE THE "OWNER" AND THE "ARCHITECT" AS ADDITIONAL INSURED. CONTRACTOR IS TO PROVIDE CERTIFICATE OF INSURANCE TO EACH OF THE ADDITIONAL INSURED PRIOR TO COMMENCING WORK. PROGRESS PAYMENTS WILL BE WITHHELD UNTIL CERTIFICATES ARE RECEIVED BY THE OWNER AND THE ARCHITECT.

17. GUARANTEE: UNLESS SPECIFICALLY STATED TO THE CONTRARY IN THE DRAWINGS, THE CONTRACTOR SHALL FURNISH A WRITTEN GUARANTEE TO THE EFFECT THAT ALL MATERIALS AND WORKMANSHIP FURNISHED UNDER THE CONTRACT SHALL BE GUARANTEED FOR ONE YEAR FROM THE DATE OF FINAL ACCEPTANCE TO BE FREE FROM DEFECTS AND FAULTY WORKMANSHIP AND THAT ANY SUCH DEFECTS SHALL BE PROMPLY REPAIRED OR REPLACED WITHOUT ADDITIONAL COST TO THE OWNER.

LAYOUT NOTES

DIMENSIONS ARE TO FACE OF OR CENTERLINE OF UNLESS OTHERWISE NOTED. THE CONTRACTOR SHALL FIELD VERIFY DIMENSIONS AND NOTIFY THE LANDSCAPE ARCHITECT OF ANY DISCREPANCIES PRIOR TO PROCEEDING. WRITTEN DIMENSIONS SUPERSEDE SCALED DISTANCES AND DIMENSIONS. ALL LANDSCAPE ELEMENTS TO BE LOCATED AS INDICATED ON PLAN OR AS FIELD-ADJUSTED BY THE LANDSCAPE ARCHITECT. LANDSCAPE ARCHITECT TO VERIFY LAYOUT IN FIELD PRIOR TO COMMENCEMENT OF CONSTRUCTION.

THE CONTRACTOR IS TO VERIFY THE LOCATIONS OF ALL ON-SITE UTILITIES BEFORE COMMENCING WITH HIS WORK. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE REPAIR OF ANY DAMAGED UTILITIES.

CONTRACTORS ARE TO EXERCISE EXTREME CARE IN BACKFILLING AND COMPACTING AND EXCAVATING OR TRENCHING IN AREAS PREVIOUSLY COMPACTED.

STUMPS AND ROOTS SHALL BE REMOVED FROM THE SOIL TO A DEPTH OF AT LEAST 12" BELOW THE SURFACE OF THE GROUND IN THE AREA TO BE OCCUPIED BY THE BUILDING. PER SEC.3304 OF CBC.

PROTECTION GUIDELINES FOR EXISTING TREES

PERFORM THE FOLLOWING PRIOR TO AND DURING DEVELOPMENT:

(1) AVOID ADDING BACKFILL OVER THE ROOT ZONES OF EXISTING TREES.

(2) AVOID COMPACTING SOIL OVER THE ROOT ZONES. DO NOT TRAFFIC WITH HEAVY EQUIPMENT, PILE DEBRIS OR MATERIALS, OR LEAVE EQUIPMENT STANDING OVER THE ROOT ZONES OF THE TREES.

(3) INSTALL PROTECTION WIRE FENCE AROUND THE TREE ROOT ZONE AND TRUNK INTENDED TO BE PRESERVED. IF DEVELOPMENT IS INTENDED WITHIN THE DRIP LINE, OTHER PRECAUTIONS CAN BE TAKEN, SUCH AS PLACING HAY BALES AROUND THE TRUNKS SO THE BARK IS NOT STRUCK WITH EQUIPMENT.

(4) WHEN REMOVING LARGE LIMBS, THE FINAL CUT SHOULD NOT BE FLUSH WITH THE TRUNK OF THE TREE. THIS REMOVES THE BRANCH COLLAR THAT CONTAINS A CHEMICAL BARRIER ZONE THAT CONTROLS ROTTING ORGANISMS. TRADITIONAL SURGERY PAINT SHOULD NOT BE USED, IT IS OF NO VALUE AND MAY PROMOTE ROT.

(5) USE AERATION SYSTEMS SUCH AS TILES, GEOTEXTILES, WELLS, AND WALLS AS AN ALTERNATIVE TO PAVING OVER ROOT ZONES.

(6) WHEN WORKING WITHIN THE ROOT ZONE, DIG TRENCHES AND TUNNELS BY HAND TO AVOID UNNECESSARY ROOT DAMAGE.

(7) ANY ROOT OVER 3" IN DIAMETER THAT IS DAMAGED SHOULD BE CUT FLUSH TO ELIMINATE JAGGED EDGES.

(8) IRRIGATE THE ROOT ZONE WITH A SOAKER HOSE PER DIRECTION OF L.A. SPREAD MULCH OR WOOD CHIPS OVER THE SURFACE TO REDUCE EVAPORATION.

THE LAND COLLABORATIVE
TLC
LANDSCAPE ARCHITECTURE & LANDSCAPE CONSTRUCTION
26 HAMILTON DRIVE SUITE A
NOVATO, CA 94949
415-819-5263
info@TheLandCollaborative.com

LICENSED LANDSCAPE ARCHITECT
BRETT HARDIN MCPHERSON No. 4981
Signature
Date
Expiration Date 11-30-
STATE OF CALIFORNIA

KALLWEIT RESIDENCE
Oakville Ridge Rd.
Napa, CA 94558
AP: 027-340-024

DRAWN BY DD

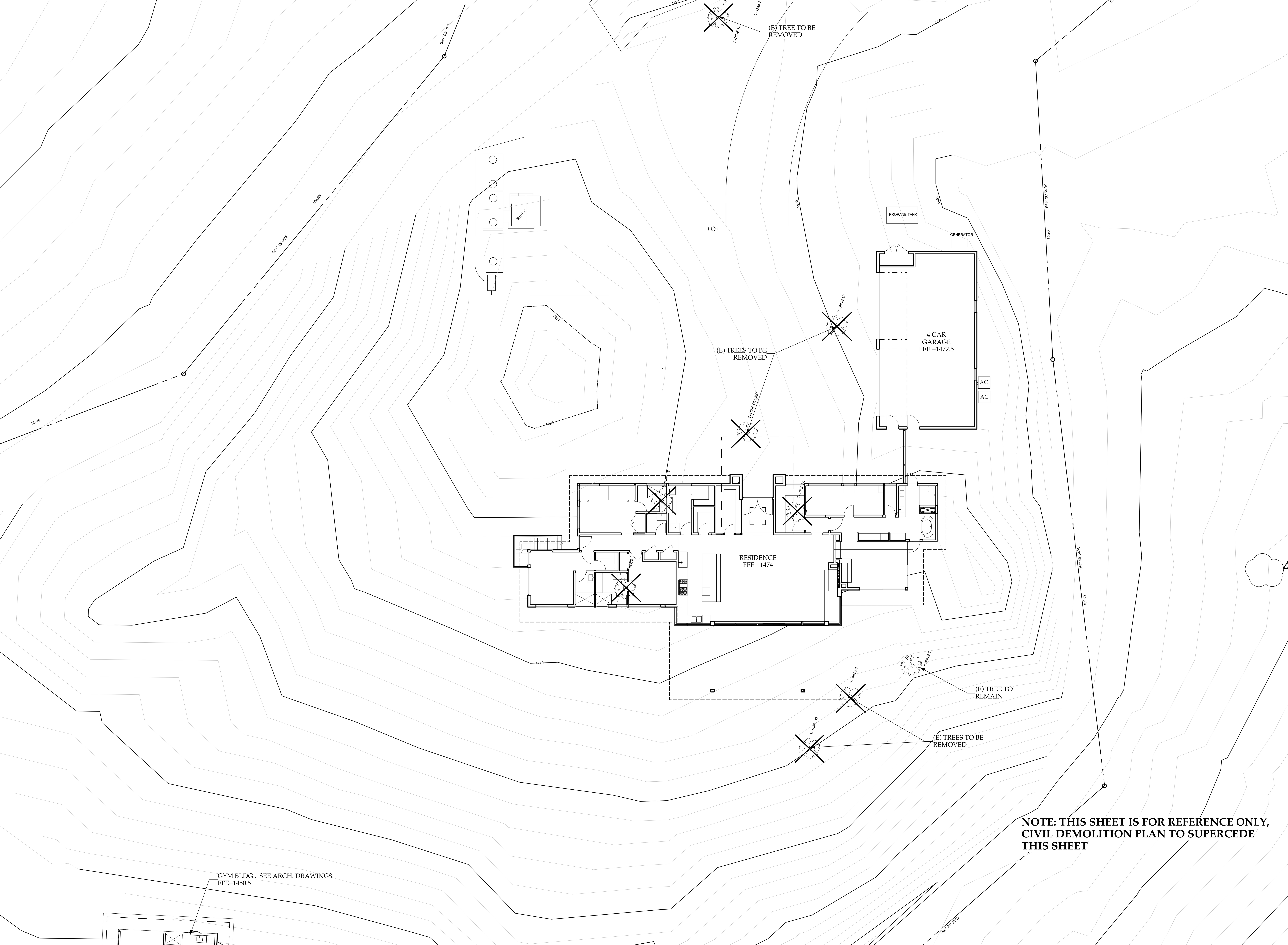
SCALE 1"=10'-0"

DATE	ISSUE
02/13/2020	VIEWSHED PROTECTION PROGRAM SUBMITTAL
06/26/2020	VIEWSHED PROTECTION PROGRAM **RESUBMITTAL**
11/16/2020	VIEWSHED PROTECTION PROGRAM **RESUBMITTAL**

NORTH

COVERSHEET

L-0



NOTE: THIS SHEET IS FOR REFERENCE ONLY, CIVIL DEMOLITION PLAN TO SUPERCEDE THIS SHEET

THE LAND COLLABORATIVE
TLC
LANDSCAPE ARCHITECTURE & LANDSCAPE CONSTRUCTION
26 HAMILTON DRIVE SUITE A
NOVATO, CA 94949
415-819-5263
info@TheLandCollaborative.com

LICENSED LANDSCAPE ARCHITECT · BRETT HARDING McPHERSON No. 4691 · STATE OF CALIFORNIA

KALLWEIT RESIDENCE

Oakville Ridge Road
Napa, CA 94558
AP: 027-340-024

DRAWN BY DD

SCALE 1"=10'-0"

DATE	**ISSUE**
02/13/2020	VIEWSHED PROTECTION PROGRAM SUBMITTAL
06/26/2020	VIEWSHED PROTECTION PROGRAM **RESUBMITTAL**
11/16/2020	VIEWSHED PROTECTION PROGRAM **RESUBMITTAL**

2

DEMOLITION PLAN

L-1

GRADING & DRAINAGE LEGEND

+ (93.5) —— (E) SPOT ELEVATION

+ 93.5 —— PROPOSED SPOT ELEVATION

DIRECTION OF SLOPE / FLOW

C.O. / CLEAN OUT

(E) CONTOURS

(90) 90 PROPOSED CONTOUR LINES

AREA DRAIN: 4" ATRIUM GRATE #90 (BLACK) BY 'NDS'

4" TIGHT LINES TO BE RIGED PVC PIPE, SCH #40 OR ASTM D-3034 SDR 35, 1 % SLOPE MINIMUM

SLOT DRAIN. 'BRICKSLOT' BY ACODRAIN

WALL DRAIN

DRAINAGE DISSIPATOR, SEE DETAIL THIS SHEET

CATCH BASIN

GRADING & DRAINAGE NOTES

SEE CIVIL DRAWINGS

S89° 55' 00"E

S89° 43' 09"E

N89° 37' 08"W

DRIVEWAY

PROPANE TANK

GENERATOR

P.A.

REMOVE MOUND (SHOWN HATCHED) SEE CIVIL PLANS

ATRIUM DRAIN, TYP.

AUTO COURT +1472.50

CATCH BASIN, TYP.

4 CAR GARAGE FFE +1472.5

+1472.50

+1475.50

GRAVEL PATH

CONCRETE STEPPERS, TYP.

TW 1474.76

+1472.26

TW 1474.76

AC

AC

1469.5+

+1472.50

+1473.76

1472.26+

FRONT ENTRY

+1472.26

BS 1472.48

+1473.98

MULCH PATH

BW +1469.25

TS 1475.0

BS 1474.0

BS 1473.5

LANDSCAPE TIE STEPS, TYP.

+1474.0

+1474.0

TW 1472.0+

TW 1475.32

BW 1473.65

+1473.98+

+1472.32 SPA

+BW 1470.0

RESIDENCE FFE +1474

+1474.0

+1473.98

DECK

BW 1469.00

+1471.50

VEGGIE GARDEN

+1466.50

TW 1468.33

+1466.50

BS 1469.34

BS 1470.82

TS 1471.74

TS 1471.50+

TS 1470.71

TS 1469.26

TS 1467.8

BS 1466.43

BS 1467.88

+1472.0

+1472.0

+1472.0

ATRIUM DRAIN, TYP.

SLOT DRAIN, TYP.

POOL PATIO

1%

TW 1472.14

COPING +1472.14

HP+

+1473.98

+1475.48

+1473.98

+1471.48

BW 1469.00

+1471.48

BW 1468.98

TW 1471.0

TW 1470.0

TW 1469.0

POOL

POOL PATIO

TW 1472.98

1472.0+

TROUGH +1467.0

+1469.50–1469

+BW 1467.5

TW 1469.65

GYM BLDG.. SEE ARCH. DRAWINGS FFE+1450.5

DECK

NOTE: THIS SHEET IS FOR REFERENCE ONLY, CIVIL GRADING/DRAINAGE PLAN TO SUPERCEDE THIS SHEET

THE LAND COLLABORATIVE
TLC
LANDSCAPE ARCHITECTURE & LANDSCAPE CONSTRUCTION
26 HAMILTON DRIVE SUITE A
NOVATO, CA 94949
415-819-5263
info@TheLandCollaborative.com

LICENSED LANDSCAPE ARCHITECT
KIMBERLY A. THOMPSON
No. 6178
Renewal Date 1.31.2021
STATE OF CALIFORNIA

KALLWEIT RESIDENCE

Oakville Ridge Road
Napa, CA 94558
AP: 027-340-024

DRAWN BY DD

SCALE 1"=10'-0"

DATE	ISSUE
02/13/2020	VIEWSHED PROTECTION PROGRAM SUBMITTAL
06/26/2020	VIEWSHED PROTECTION PROGRAM **RESUBMITTAL**
11/16/2020	VIEWSHED PROTECTION PROGRAM **RESUBMITTAL**

NORTH

GRADING/ DRAINAGE PLAN

L-2

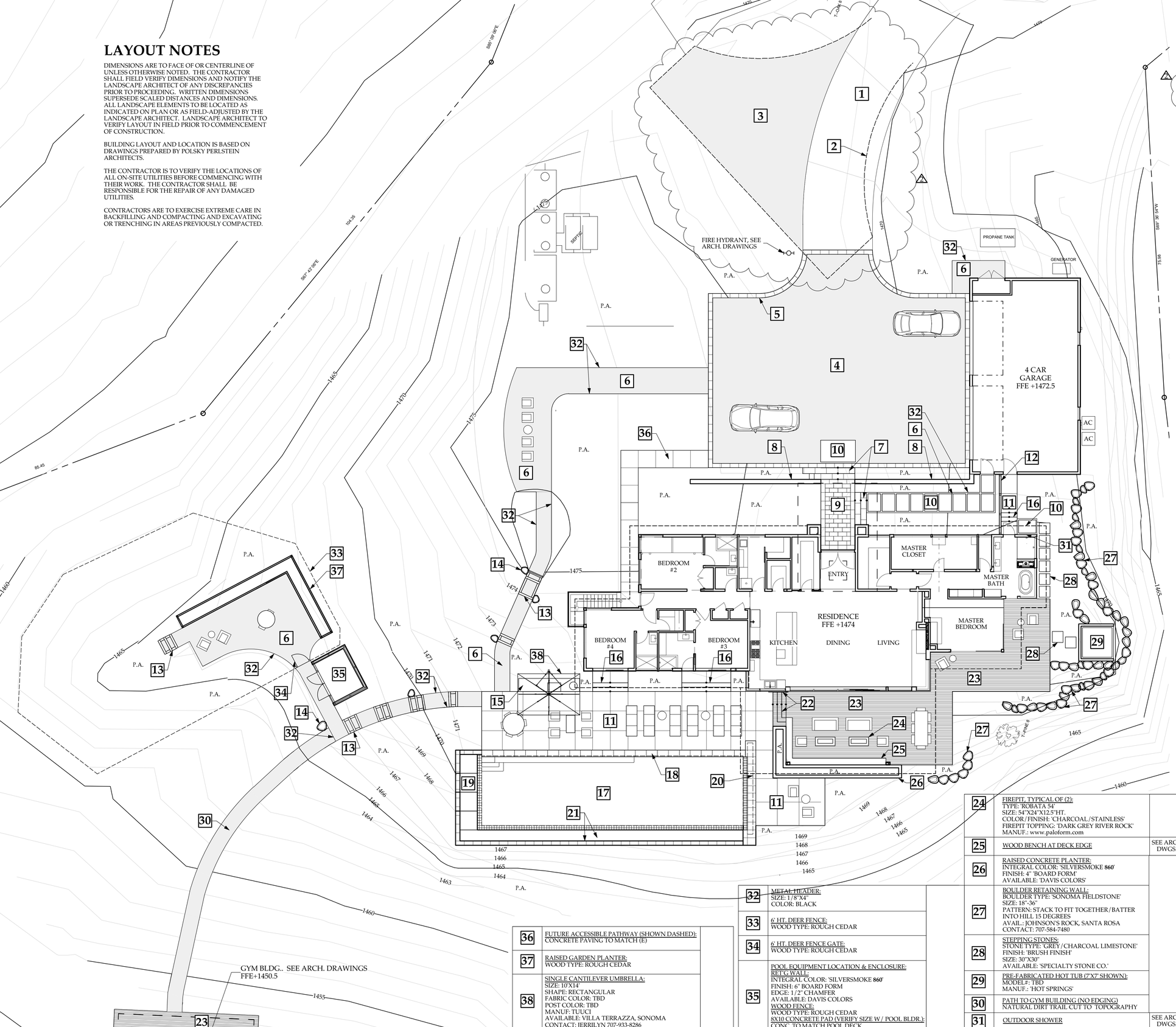
LAYOUT NOTES

DIMENSIONS ARE TO FACE OF OR CENTERLINE OF UNLESS OTHERWISE NOTED. THE CONTRACTOR SHALL FIELD VERIFY DIMENSIONS AND NOTIFY THE LANDSCAPE ARCHITECT OF ANY DISCREPANCIES PRIOR TO PROCEEDING. WRITTEN DIMESIONS SUPERSEDE SCALED DISTANCES AND DIMENSIONS. ALL LANDSCAPE ELEMENTS TO BE LOCATED AS INDICATED ON PLAN OR AS FIELD-ADJUSTED BY THE LANDSCAPE ARCHITECT. LANDSCAPE ARCHITECT TO VERIFY LAYOUT IN FIELD PRIOR TO COMMENCEMENT OF CONSTRUCTION.

BUILDING LAYOUT AND LOCATION IS BASED ON DRAWINGS PREPARED BY POLSKY PERLSTEIN ARCHITECTS.

THE CONTRACTOR IS TO VERIFY THE LOCATIONS OF ALL ON-SITE UTILITIES BEFORE COMMENCING WITH THEIR WORK. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE REPAIR OF ANY DAMAGED UTILITIES.

CONTRACTORS ARE TO EXERCISE EXTREME CARE IN BACKFILLING AND COMPACTING AND EXCAVATING OR TRENCHING IN AREAS PREVIOUSLY COMPACTED.



MATERIALS LEGEND

SYMBOL	DESCRIPTION	
1	NEW ASPHALT DRIVEWAY	SEE CIVIL DWGS.
2	FIRE TRUCK HAMMERHEAD, SHOWN DASHED	SEE CIVIL DWGS.
3	FIRE TRUCK PAVING: 3/8" CRUSHED GRAVEL PAVING, TYPE: TRINITY AVAILABLE: WHEELER ZAMARONI, SANTA ROSA CONTACT: 707-543-8400	
4	AUTO COURT: 3/8" CRUSHED GRAVEL PAVING TYPE: TRINITY AVAILABLE: WHEELER ZAMARONI, SANTA ROSA CONTACT: 707-543-8400	
5	COLORED CONCRETE BANDING: SIZE: 12" WIDE INTEGRAL COLOR: 'SILVERSMOKE **860**' FINISH: LIGHT SAND, USE 'TOP COAT' SYSTEM AVAILABLE: DAVIS COLORS	
6	3/8" CRUSHED GRAVEL PAVING: TYPE: TRINITY AVAILABLE: WHEELER ZAMARONI, SANTA ROSA CONTACT: 707-543-8400	
7	COLORED CONCRETE ENTRY STEPS: INTEGRAL COLOR: 'SILVERSMOKE **860**' SIZE: 16" TREAD NOSE: 1/2" RADIUS FINISH: LIGHT SAND, USE 'TOP COAT' SYSTEM AVAILABLE: DAVIS COLORS	
8	FREESTANDING 30" HT. CONCRETE WALL: INTEGRAL COLOR: 'SILVERSMOKE **860**' FINISH: 4" 'BOARD FORM' EDGE: 1/2" CHAMFER AVAILABLE: DAVIS COLORS	
9	FRONT PORCH: FIELD PAVING: STONE: 'GREY/CHARCOAL LIMESTONE' FINISH: 'BRUSH FINISH' SIZE: 12"X24" PATTERN: SEE LAYOUT PLAN AVAILABLE: 'SPECIALTY STONE CO.' CONTACT: PAT PINCKNEY 707-953-7964 GROUT: JT. SIZE: 1/8" GROUT COLOR: '78 STERLING SILVER' GROUT TYPE: 'LATICRETE' 12" CONCRETE BANDING: INTEGRAL COLOR: 'SILVERSMOKE **860**' FINISH: LIGHT SAND, USE 'TOP COAT' SYSTEM AVAILABLE: DAVIS COLORS	
10	COLORED CONCRETE STEPPERS: INTEGRAL COLOR: 'SILVERSMOKE **860**' FINISH: LIGHT SAND, USE 'TOP COAT' SYSTEM AVAILABLE: DAVIS COLORS	
11	COLORED CONCRETE PAVING: INTEGRAL COLOR: 'SILVERSMOKE **860**' FINISH: LIGHT SAND, USE 'TOP COAT' SYSTEM AVAILABLE: DAVIS COLORS	
12	PRIVACY SCREEN BETWEEN BUILDINGS	SEE ARCH DWGS.
13	LANDSCAPE TIE STEPS W/ GRAVEL TREADS: 3/8" CRUSHED GRAVEL TYPE: 'TRINITY' AVAILABLE: WHEELER ZAMARONI, SANTA ROSA CONTACT: 707-543-8400	
14	LANDSCAPE BOULDER PLACEMENT: TYPE: "SONOMA FIELDSTONE' SIZE: 18"-36" AVAIL.: JOHNSON'S ROCK,SANTA ROSA 707-584-7480	
15	OUTDOOR KITCHEN: CABINETRY: 'NU BLACK HAMMERTONE' HARDWARE: 'STANDARD' MANUF.: 'DANVER KITCHENS' COUNTERTOP: 'VEGHA, NATURAL COLLECTION' MANUF.: 'DEKTON' AVAILABLE: DCD FABRICATION, CONTACT: KATIE WAGER-SMITH 707-761-2271	
16	COLORED CONCRETE STEPS: INTEGRAL COLOR: 'SILVERSMOKE **860**' SIZE: 12" TREAD NOSING: 1/2" RADIUS FINISH: LIGHT SAND, USE 'TOP COAT' SYSTEM AVAILABLE: DAVIS COLORS	
17	16'X60' POOL W / DOUBLE VANISHING EDGE: POOL DEPTH: 4'-8' PLASTER: FINISH: 'PRIMERA STONE' COLOR: 'TAHOE COAST' MANUF.: WET EDGE TECHNOLOGIES WATERLINE TILE: TYPE: 'P551 SAPPHIRE' SIZE: CUT TO 3X9 MANUF.: 'DAL TILE' GROUT: JT. SIZE: 1/8" COLOR: '42 PLATINUM' AVAILABLE: 'LATICRETE'	
18	STONE POOL COPING: STONE TYPE: 'GREY/CHARCOAL LIMESTONE' SIZE: 2"X18"X30" FINISH: 'HONED' EDGE: 'EASED' AVAILABLE: 'SPECIALTY STONE CO.' CONTACT: PAT PINCKNEY 707-953-7964 GROUT: JT. SIZE: 1/8" GROUT COLOR: '78 STERLING SILVER' AVAILABLE: 'LATICRETE'	
19	POOL TROUGH SPILLWAY: STEPS: 'GREY/CHARCOAL LIMESTONE' TO MATCH POOL COPING OR OPTION TO MATCH POOL TILE	
20	POOL COVER VAULT W/ REMOVABLE STONE COPING	
21	POOL TROUGH: PLASTER: FINISH: 'PRIMERA STONE' COLOR: 'TAHOE COAST'; MANUF.: 'WET EDGE TECHNOLOGIES' WATERLINE TILE: TYPE: 'P551 SAPPHIRE' SIZE: 3X9 (CUT TO SIZE) MANUF.: 'DAL TILE' WALL FACE: TILE TYPE: 'P551 SAPPHIRE' SIZE: 3X9 (CUT TO SIZE) PATTERN: 'RUNNING BOND' MANUF.: 'DAL TILE' TROUGH WALL CAP: TO MATCH POOL COPING	
22	WOOD STEPS AND HANDRAIL	SEE ARCH DWGS.
23	WOOD DECK	SEE ARCH DWGS.
24	FIREPIT, TYPICAL OF (2): TYPE: 'ROBATA 54' SIZE: 54"X24"X12.5"HT. COLOR / FINISH: 'CHARCOAL /STAINLESS' FIREPIT TOPPING: 'DARK GREY RIVER ROCK' MANUF.: www.paloform.com	
25	WOOD BENCH AT DECK EDGE	SEE ARCH DWGS.
26	RAISED CONCRETE PLANTER: INTEGRAL COLOR: 'SILVERSMOKE **860**' FINISH: 4" 'BOARD FORM' AVAILABLE: 'DAVIS COLORS'	
27	BOULDER RETAINING WALL: BOULDER TYPE: 'SONOMA FIELDSTONE' SIZE: 18"-36" PATTERN: STACK TO FIT TOGETHER / BATTER INTO HILL 15 DEGREES AVAIL.: JOHNSON'S ROCK, SANTA ROSA CONTACT: 707-584-7480	
28	STEPPING STONES: STONE TYPE: 'GREY / CHARCOAL LIMESTONE' FINISH: 'BRUSH FINISH' SIZE: 30"X30" AVAILABLE: 'SPECIALTY STONE CO.'	
29	PRE-FABRICATED HOT TUB (7'X7' SHOWN): MODEL#: TBD MANUF.: 'HOT SPRINGS'	
30	PATH TO GYM BUILDING (NO EDGING) NATURAL DIRT TRAIL CUT TO TOPOGRAPHY	
31	OUTDOOR SHOWER	SEE ARCH DWGS.
32	METAL HEADER: SIZE: 1/8"X4" COLOR: BLACK	
33	6' HT. DEER FENCE: WOOD TYPE: ROUGH CEDAR	
34	6' HT. DEER FENCE GATE: WOOD TYPE: ROUGH CEDAR	
35	POOL EQUIPMENT LOCATION & ENCLOSURE: RET.G WALL: INTEGRAL COLOR: 'SILVERSMOKE **860**' FINISH: 6" BOARD FORM EDGE: 1/2" CHAMFER AVAILABLE: DAVIS COLORS WOOD FENCE: WOOD TYPE: ROUGH CEDAR 8X10 CONCRETE PAD (VERIFY SIZE W / POOL BLDR.): CONC. TO MATCH POOL DECK	
36	FUTURE ACCESSIBLE PATHWAY (SHOWN DASHED): CONCRETE PAVING TO MATCH (E)	
37	RAISED GARDEN PLANTER: WOOD TYPE: ROUGH CEDAR	
38	SINGLE CANTILEVER UMBRELLA: SIZE: 10'X14' SHAPE: RECTANGULAR FABRIC COLOR: TBD POST COLOR: TBD MANUF: TUUCI AVAILABLE: VILLA TERRAZZA, SONOMA CONTACT: JERRILYN 707-933-8286	

THE LAND COLLABORATIVE
TLC
LANDSCAPE ARCHITECTURE & LANDSCAPE CONSTRUCTION
26 HAMILTON DRIVE SUITE A
NOVATO, CA 94949
415-819-5263
info@TheLandCollaborative.com

LICENSED LANDSCAPE ARCHITECT
CHRISTOPHER M. LITTLE
No. 6064
Renewal Date 1.31.2021
STATE OF CALIFORNIA

KALLWEIT RESIDENCE

Oakville Ridge Road
Napa, CA 94558
AP: 027-340-024

DRAWN BY	DD
SCALE	1" = 10'-0"

DATE	ISSUE
02/13/2020	VIEWSHED PROTECTION PROGRAM SUBMITTAL
06/26/2020	VIEWSHED PROTECTION PROGRAM **RESUBMITTAL**
11/16/2020	VIEWSHED PROTECTION PROGRAM **RESUBMITTAL**

NORTH

MATERIALS/ LAYOUT PLAN

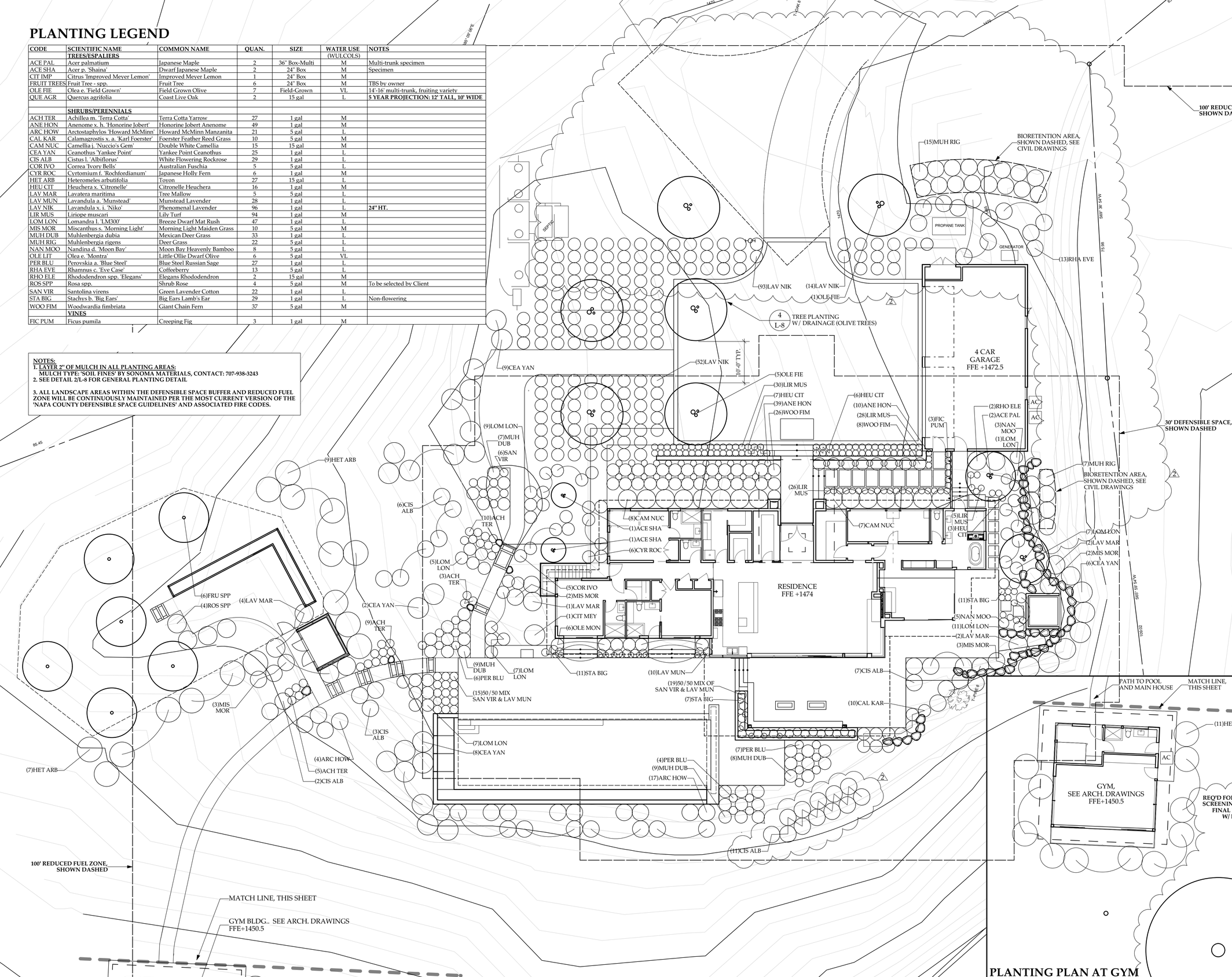
L-3

PLANTING LEGEND

CODE	SCIENTIFIC NAME	COMMON NAME	QUAN.	SIZE	WATER USE (WULCOLS)	NOTES
	TREES/ESPALIERS					
ACE PAL	Acer palmatium	Japanese Maple	2	36" Box-Multi	M	Multi-trunk specimen
ACE SHA	Acer p. 'Shaina'	Dwarf Japanese Maple	2	24" Box	M	Specimen
CIT IMP	Citrus 'Improved Meyer Lemon'	Improved Meyer Lemon	1	24" Box	M	
FRUIT TREES	Fruit Tree - spp.	Fruit Tree	6	24" Box	M	TBS by owner
OLE FIE	Olea e. 'Field Grown'	Field Grown Olive	7	Field-Grown	VL	14'-16' multi-trunk, fruiting variety
QUE AGR	Quercus agrifolia	Coast Live Oak	2	15 gal	L	**5 YEAR PROJECTION: 12' TALL, 10' WIDE**
	SHRUBS/PERENNIALS					
ACH TER	Achillea m. 'Terra Cotta'	Terra Cotta Yarrow	27	1 gal	M	
ANE HON	Anenome x. h. 'Honorine Jobert'	Honorine Jobert Anenome	49	1 gal	M	
ARC HOW	Arctostaphylos 'Howard McMinn'	Howard McMinn Manzanita	21	5 gal	L	
CAL KAR	Calamagrostis x. a. 'Karl Foerster'	Foerster Feather Reed Grass	10	5 gal	M	
CAM NUC	Camellia j. 'Nuccio's Gem'	Double White Camellia	15	15 gal	M	
CEA YAN	Ceanothus 'Yankee Point'	Yankee Point Ceanothus	25	1 gal	L	
CIS ALB	Cistus l. 'Albiflorus'	White Flowering Rockrose	29	1 gal	L	
COR IVO	Correa 'Ivory Bells'	Australian Fuschia	5	5 gal	L	
CYR ROC	Cyrtomium f. 'Rochfordianum'	Japanese Holly Fern	6	1 gal	M	
HET ARB	Heteromeles arbutifolia	Toyon	27	15 gal	L	
HEU CIT	Heuchera x. 'Citronelle'	Citronelle Heuchera	16	1 gal	M	
LAV MAR	Lavatera maritima	Tree Mallow	5	5 gal	L	
LAV MUN	Lavandula a. 'Munstead'	Munstead Lavender	28	1 gal	L	
LAV NIK	Lavandula x. i. 'Niko'	Phenomenal Lavender	96	1 gal	L	**24" HT.**
LIR MUS	Liriope muscari	Lily Turf	94	1 gal	M	
LOM LON	Lomandra l. 'LM300'	Breeze Dwarf Mat Rush	47	1 gal	L	
MIS MOR	Miscanthus s. 'Morning Light'	Morning Light Maiden Grass	10	5 gal	M	
MUH DUB	Muhlenbergia dubia	Mexican Deer Grass	33	1 gal	L	
MUH RIG	Muhlenbergia rigens	Deer Grass	22	5 gal	L	
NAN MOO	Nandina d. 'Moon Bay'	Moon Bay Heavenly Bamboo	8	5 gal	L	
OLE LIT	Olea e. 'Montra'	Little Ollie Dwarf Olive	6	5 gal	VL	
PER BLU	Perovskia a. 'Blue Steel'	Blue Steel Russian Sage	27	1 gal	L	
RHA EVE	Rhamnus c. 'Eve Case'	Coffeeberry	13	5 gal	L	
RHO ELE	Rhododendron spp. 'Elegans'	Elegans Rhododendron	2	15 gal	M	
ROS SPP	Rosa spp.	Shrub Rose	4	5 gal	M	To be selected by Client
SAN VIR	Santolina virens	Green Lavender Cotton	22	1 gal	L	
STA BIG	Stachys b. 'Big Ears'	Big Ears Lamb's Ear	29	1 gal	L	Non-flowering
WOO FIM	Woodwardia fimbriata	Giant Chain Fern	37	5 gal	M	
	VINES					
FIC PUM	Ficus pumila	Creeping Fig	3	1 gal	M	

NOTES:
1. LAYER 2" OF MULCH IN ALL PLANTING AREAS:
MULCH TYPE: 'SOIL FINES' BY SONOMA MATERIALS, CONTACT: 707-938-3243
2. SEE DETAIL 2/L-8 FOR GENERAL PLANTING DETAIL

3. ALL LANDSCAPE AREAS WITHIN THE DEFENSIBLE SPACE BUFFER AND REDUCED FUEL ZONE WILL BE CONTINUOUSLY MAINTAINED PER THE MOST CURRENT VERSION OF THE 'NAPA COUNTY DEFENSIBLE SPACE GUIDELINES' AND ASSOCIATED FIRE CODES.



PLANTING PLAN AT GYM SCALE: 1"=10'-0"

THE LAND COLLABORATIVE
TLC
LANDSCAPE ARCHITECTURE & LANDSCAPE CONSTRUCTION
26 HAMILTON DRIVE SUITE A
NOVATO, CA 94949
415-819-5263
info@TheLandCollaborative.com

LICENSED LANDSCAPE ARCHITECT — DAVID DESIMONE — No. 6362 — Renewal Date 1-31-2021 — STATE OF CALIFORNIA

KALLWEIT RESIDENCE

Oakville Ridge Road
Napa, CA 94558
AP: 027-340-024

DRAWN BY DD
SCALE 1"=10'-0"

DATE	ISSUE
02/13/2020	VIEWSHED PROTECTION PROGRAM SUBMITTAL
1 06/26/2020	VIEWSHED PROTECTION PROGRAM **RESUBMITTAL**
2 11/16/2020	VIEWSHED PROTECTION PROGRAM **RESUBMITTAL**

NORTH

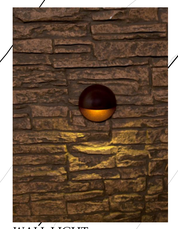
PLANTING PLAN

L-4

LIGHTING IMAGES

DOWNLIGHT

PATH LIGHT



WALL LIGHT

LIGHTING LEGEND

SYMBOL	TYPE	MODEL#	MANUF.	QUANTITY
✦	Path Light	JS-LED-TA-ZD-3LED-18RA-FB	Fx Luminaire	50
●	Canopy Light	VE-ZD-3LED-FB	Fx Luminaire	12
- - -	LED Step Strip Light	TBD	TBD	See plan
▬	Wall Light	PO-RD-ZD-1LED-FB	Fx Luminaire	9
T	Transformer	Luxor	Fx Luminaire	3

LIGHTING NOTES

PROVIDE SWITCHING , TRANSFORMER LAYOUT, AND WIRE SIZE FOR REVIEW BY LANDSCAPE ARCHITECT.

SIZE LOW VOLTAGE WIRE BASED ON A MAX. ALLOWABLE VOLTAGE DROP OF 50%.

TRANSFORMERS SIZED TO MAXIMUM CAPACITY OF LIGHT FIXTURE.

DESIGN LOAD IS TO NOT EXCEED 80% OF TRANSFORMER CAPACITY.

PROVIDE ALL NECESSARY LOAD DESIGN AND CODE COMPLIANCE FOR PERMIT REQUIREMENTS. THE CONTRACTOR WILL ACQUIRE AND THE OWNER WILL PAY FOR THE PERMIT. THE WORK IS TO COMPLY WITH ALL APPLICABLE CODES AND STANDARDS AND MEET ALL TESTING REQUIREMENTS.

FIXTURE LOCATIONS AND WIRE LAYOUTS ARE DIAGRAMMATIC AND APPROXIMATE: BEFORE INSTALLATION, REVIEW ADJACENT ARCHITECTURAL FEATURES WITH THE LANDSCAPE ARCHITECT AND INSTALL AS DIRECTED. ARRANGE TRANSFORMERS AND CONTROLLER IN AN ORDERLY FASHION TO ALLOW ACCESS AS NECESSARY.

REFER TO THE PLAN FOR LIGHT FIXTURE LOCATION. UTILIZE (E) CONDUIT TIE TO (E) SWITCHING WHERE POSSIBLE.

BALANCE LOADS TO THE TRANSFORMERS, IDENTIFY "CENTER OF LOAD," CONNECT WIRE FROM TRANSFORMER TO "CENTER OF LOAD."

PROVIDE 120 VOLT POWER TO EACH REMOTE TRANSFORMER CONNECT TO SWITCH IN HOUSE PER DIRECTION AND ACCEPTANCE OF OWNER.

THE LAND COLLABORATIVE
TLC
LANDSCAPE ARCHITECTURE & LANDSCAPE CONSTRUCTION
26 HAMILTON DRIVE SUITE A
NOVATO, CA 94949
415-819-5263
info@TheLandCollaborative.com

LICENSED LANDSCAPE ARCHITECT
JAMES IVERSON
No. 6178
Renewal Date 1/31/2021
STATE OF CALIFORNIA

KALLWEIT RESIDENCE

Oakville Ridge Road
Napa, CA 94558
AP: 027-340-024

DRAWN BY DD

SCALE 1"=10'-0"

DATE	ISSUE
02/13/2020	VIEWSHED PROTECTION PROGRAM SUBMITTAL
1 06/26/2020	VIEWSHED PROTECTION PROGRAM **RESUBMITTAL**
2 11/16/2020	VIEWSHED PROTECTION PROGRAM **RESUBMITTAL**

NORTH

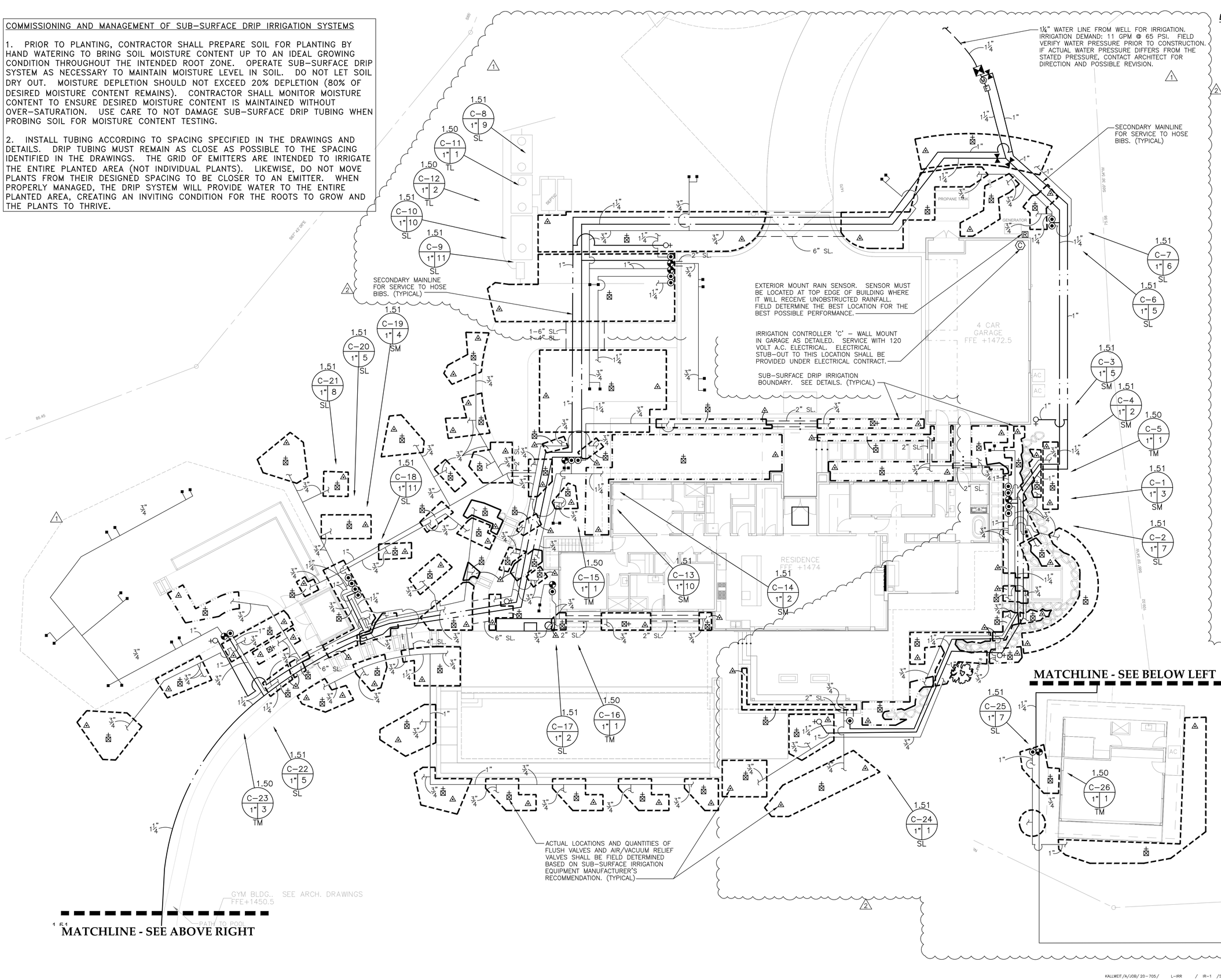
LIGHTING PLAN

L-5

COMMISSIONING AND MANAGEMENT OF SUB–SURFACE DRIP IRRIGATION SYSTEMS

1. PRIOR TO PLANTING, CONTRACTOR SHALL PREPARE SOIL FOR PLANTING BY HAND WATERING TO BRING SOIL MOISTURE CONTENT UP TO AN IDEAL GROWING CONDITION THROUGHOUT THE INTENDED ROOT ZONE. OPERATE SUB–SURFACE DRIP SYSTEM AS NECESSARY TO MAINTAIN MOISTURE LEVEL IN SOIL. DO NOT LET SOIL DRY OUT. MOISTURE DEPLETION SHOULD NOT EXCEED 20% DEPLETION (80% OF DESIRED MOISTURE CONTENT REMAINS). CONTRACTOR SHALL MONITOR MOISTURE CONTENT TO ENSURE DESIRED MOISTURE CONTENT IS MAINTAINED WITHOUT OVER–SATURATION. USE CARE TO NOT DAMAGE SUB–SURFACE DRIP TUBING WHEN PROBING SOIL FOR MOISTURE CONTENT TESTING.

2. INSTALL TUBING ACCORDING TO SPACING SPECIFIED IN THE DRAWINGS AND DETAILS. DRIP TUBING MUST REMAIN AS CLOSE AS POSSIBLE TO THE SPACING IDENTIFIED IN THE DRAWINGS. THE GRID OF EMITTERS ARE INTENDED TO IRRIGATE THE ENTIRE PLANTED AREA (NOT INDIVIDUAL PLANTS). LIKEWISE, DO NOT MOVE PLANTS FROM THEIR DESIGNED SPACING TO BE CLOSER TO AN EMITTER. WHEN PROPERLY MANAGED, THE DRIP SYSTEM WILL PROVIDE WATER TO THE ENTIRE PLANTED AREA, CREATING AN INVITING CONDITION FOR THE ROOTS TO GROW AND THE PLANTS TO THRIVE.



DICKSON & ASSOCIATES, INC.
LANDSCAPE IRRIGATION
(530) 547-5515 www.dicksoninc.net
P.O. BOX 415
PALO CEDRO, CALIFORNIA 96073

THE LAND COLLABORATIVE
TLC
LANDSCAPE ARCHITECTURE & LANDSCAPE CONSTRUCTION
26 HAMILTON DRIVE SUITE A
NOVATO, CA 94949
415-819-5263
info@TheLandCollaborative.com

KALLWEIT RESIDENCE
Oakville Ridge Road
Napa, CA 94558
AP: 027-340-024

DRAWN BY LMD/MDD
SCALE 1" = 10'-0"
DATE ISSUE
1 06/22/2020 VIEWSHED PROTECTION PROGRAM **RESUBMITTAL**
2 11/11/2020 VIEWSHED PROTECTION PROGRAM **RESUBMITTAL**

IRRIGATION PLAN

IR-1

IRRIGATION WATERING SCHEDULES

MP ROTATOR SPRAY IRRIGATION FOR FOR LOW WATER-USE GRASSPAVE AREAS			
SPRINKLER MANUFACTURER	HUNTER	LOCATION:	NAPA, CALIFORNIA
PRECIPITATION RATE (INCHES/HOUR):	0.80	HEAD SPACING:	VARIES
IRRIGATION SYSTEM EFFICIENCY	0.81	HEAD GPM:	VARIES
PLANT FACTOR:	0.30		
YEAR 2 REDUCTION AMOUNT:	-10% OF YEAR 1 (ESTABLISHMENT) RUN TIME MINUTES		

MONTH:		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
ETO PER MONTH (INCHES):		1.30	1.70	2.80	3.90	5.10	6.00	7.10	6.10	4.80	3.10	1.50	0.90	44.30
ETO PER WEEK (INCHES):		0.300	0.393	0.647	0.901	1.178	1.386	1.640	1.409	1.109	0.716	0.346	0.208	
APPLIED ETO PER WEEK (INCHES):		0.111	0.145	0.240	0.334	0.436	0.513	0.607	0.522	0.411	0.265	0.128	0.077	
MINUTES OF WATER PER WEEK:	YEAR 1	8	11	18	25	33	38	46	39	31	20	10	6	
	YEAR 2	8	10	16	23	29	35	41	35	28	18	9	5	
DAYS PER WEEK:	YEAR 1	1	1	1	2	3	3	3	3	3	1	1	1	
	YEAR 2	1	1	1	2	3	3	3	3	3	1	1	1	
MINUTES OF WATER PER DAY:	YEAR 1	8	11	18	13	11	13	15	13	10	20	10	6	
	YEAR 2	8	10	16	11	10	12	14	12	9	18	9	5	
CYCLES PER DAY:	YEAR 1	1	1	1	1	1	1	1	1	1	1	1	1	
	YEAR 2	1	1	1	1	1	1	1	1	1	1	1	1	
MINUTES PER CYCLE:	YEAR 1	8	11	18	13	11	13	15	13	10	20	10	6	
	YEAR 2	8	10	16	11	10	12	14	12	9	18	9	5	

SUB-SURFACE DRIP IRRIGATION FOR LOW WATER-USE SHRUB/GROUNDCOVER AREAS			
SPRINKLER MANUFACTURER	RAIN BIRD	LOCATION:	NAPA, CALIFORNIA
PRECIPITATION RATE (INCHES/HOUR):	1.51	EMITTER SPACING:	12" O.C.
IRRIGATION SYSTEM EFFICIENCY	0.81	EMITTER FLOW:	0.92 GPH
PLANT FACTOR:	0.30		
YEAR 2 REDUCTION AMOUNT:	-10% OF YEAR 1 (ESTABLISHMENT) RUN TIME MINUTES		

MONTH:		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
ETO PER MONTH (INCHES):		1.30	1.70	2.80	3.90	5.10	6.00	7.10	6.10	4.80	3.10	1.50	0.90	44.30
ETO PER WEEK (INCHES):		0.300	0.393	0.647	0.901	1.178	1.386	1.640	1.409	1.109	0.716	0.346	0.208	
APPLIED ETO PER WEEK (INCHES):		0.111	0.145	0.240	0.334	0.436	0.513	0.607	0.522	0.411	0.265	0.128	0.077	
MINUTES OF WATER PER WEEK:	YEAR 1	4	6	10	13	17	20	24	21	16	11	5	3	
	YEAR 2	4	5	9	12	16	18	22	19	15	9	5	3	
DAYS PER WEEK:	YEAR 1	1	1	2	3	3	3	3	3	3	2	1	1	
	YEAR 2	1	1	2	3	3	3	3	3	3	2	1	1	
MINUTES OF WATER PER DAY:	YEAR 1	4	6	5	4	6	7	8	7	5	5	5	3	
	YEAR 2	4	5	4	4	5	6	7	6	5	5	5	3	
CYCLES PER DAY:	YEAR 1	1	1	1	1	1	1	1	1	1	1	1	1	
	YEAR 2	1	1	1	1	1	1	1	1	1	1	1	1	
MINUTES PER CYCLE:	YEAR 1	4	6	5	4	6	7	8	7	5	5	5	3	
	YEAR 2	4	5	4	4	5	6	7	6	5	5	5	3	

SUB-SURFACE DRIP IRRIGATION FOR MODERATE WATER-USE SHRUB/GROUNDCOVER AREAS			
SPRINKLER MANUFACTURER	RAIN BIRD	LOCATION:	NAPA, CALIFORNIA
PRECIPITATION RATE (INCHES/HOUR):	1.51	EMITTER SPACING:	12" O.C.
IRRIGATION SYSTEM EFFICIENCY	0.81	EMITTER FLOW:	0.92 GPH
PLANT FACTOR:	0.50		
YEAR 2 REDUCTION AMOUNT:	-10% OF YEAR 1 (ESTABLISHMENT) RUN TIME MINUTES		

MONTH:		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
ETO PER MONTH (INCHES):		1.30	1.70	2.80	3.90	5.10	6.00	7.10	6.10	4.80	3.10	1.50	0.90	44.30
ETO PER WEEK (INCHES):		0.300	0.393	0.647	0.901	1.178	1.386	1.640	1.409	1.109	0.716	0.346	0.208	
APPLIED ETO PER WEEK (INCHES):		0.185	0.242	0.399	0.556	0.727	0.855	1.012	0.870	0.684	0.442	0.214	0.128	
MINUTES OF WATER PER WEEK:	YEAR 1	7	10	16	22	29	34	40	35	27	18	8	5	
	YEAR 2	7	9	14	20	26	31	36	31	24	16	8	5	
DAYS PER WEEK:	YEAR 1	1	1	2	3	4	4	4	4	3	2	1	1	
	YEAR 2	1	1	2	3	4	4	4	4	3	2	1	1	
MINUTES OF WATER PER DAY:	YEAR 1	7	10	8	7	7	8	10	9	9	9	8	5	
	YEAR 2	7	9	7	7	7	8	9	8	8	8	8	5	
CYCLES PER DAY:	YEAR 1	1	1	1	1	1	1	1	1	1	1	1	1	
	YEAR 2	1	1	1	1	1	1	1	1	1	1	1	1	
MINUTES PER CYCLE:	YEAR 1	7	10	8	7	7	8	10	9	9	9	8	5	
	YEAR 2	7	9	7	7	7	8	9	8	8	8	8	5	

BUBBLER IRRIGATION FOR LOW WATER-USE TREES			
SPRINKLER MANUFACTURER	RAIN BIRD	LOCATION:	NAPA, CALIFORNIA
PRECIPITATION RATE (INCHES/HOUR):	1.50	HEAD SPACING:	VARIES
IRRIGATION SYSTEM EFFICIENCY	0.81	HEAD GPM:	2 x 0.25
PLANT FACTOR:	0.30		
YEAR 2 REDUCTION AMOUNT:	-10% OF YEAR 1 (ESTABLISHMENT) RUN TIME MINUTES		

MONTH:		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
ETO PER MONTH (INCHES):		1.30	1.70	2.80	3.90	5.10	6.00	7.10	6.10	4.80	3.10	1.50	0.90	44.30
ETO PER WEEK (INCHES):		0.300	0.393	0.647	0.901	1.178	1.386	1.640	1.409	1.109	0.716	0.346	0.208	
APPLIED ETO PER WEEK (INCHES):		0.111	0.145	0.240	0.334	0.436	0.513	0.607	0.522	0.411	0.265	0.128	0.077	
MINUTES OF WATER PER WEEK:	YEAR 1	4	6	10	13	17	21	24	21	16	11	5	3	
	YEAR 2	4	5	9	12	16	18	22	19	15	10	5	3	
DAYS PER WEEK:	YEAR 1	1	1	1	1	1	1	1	1	1	1	1	1	
	YEAR 2	1	1	1	1	1	1	1	1	1	1	1	1	
MINUTES OF WATER PER DAY:	YEAR 1	4	6	10	13	17	21	24	21	16	11	5	3	
	YEAR 2	4	5	9	12	16	18	22	19	15	10	5	3	
CYCLES PER DAY:	YEAR 1	1	1	1	1	1	1	1	1	1	1	1	1	
	YEAR 2	1	1	1	1	1	1	1	1	1	1	1	1	
MINUTES PER CYCLE:	YEAR 1	4	6	10	13	17	21	24	21	16	11	5	3	
	YEAR 2	4	5	9	12	16	18	22	19	15	10	5	3	

BUBBLER IRRIGATION FOR MODERATE WATER-USE TREES			
SPRINKLER MANUFACTURER	RAIN BIRD	LOCATION:	NAPA, CALIFORNIA
PRECIPITATION RATE (INCHES/HOUR):	1.50	HEAD SPACING:	VARIES
IRRIGATION SYSTEM EFFICIENCY	0.81	HEAD GPM:	2 x 0.25
PLANT FACTOR:	0.50		
YEAR 2 REDUCTION AMOUNT:	-10% OF YEAR 1 (ESTABLISHMENT) RUN TIME MINUTES		

MONTH:		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
ETO PER MONTH (INCHES):		1.30	1.70	2.80	3.90	5.10	6.00	7.10	6.10	4.80	3.10	1.50	0.90	44.30
ETO PER WEEK (INCHES):		0.300	0.393	0.647	0.901	1.178	1.386	1.640	1.409	1.109	0.716	0.346	0.208	
APPLIED ETO PER WEEK (INCHES):		0.185	0.242	0.399	0.556	0.727	0.855	1.012	0.870	0.684	0.442	0.214	0.128	
MINUTES OF WATER PER WEEK:	YEAR 1	7	10	16	22	29	34	40	35	27	18	9	5	
	YEAR 2	7	9	14	20	26	31	36	31	25	16	8	5	
DAYS PER WEEK:	YEAR 1	1	1	1	1	2	2	2	2	2	1	1	1	
	YEAR 2	1	1	1	1	2	2	2	2	2	1	1	1	
MINUTES OF WATER PER DAY:	YEAR 1	7	10	16	22	15	17	20	17	14	18	9	5	
	YEAR 2	7	9	14	20	13	15	18	16	12	16	8	5	
CYCLES PER DAY:	YEAR 1	1	1	1	1	1	1	1	1	1	1	1	1	
	YEAR 2	1	1	1	1	1	1	1	1	1	1	1	1	
MINUTES PER CYCLE:	YEAR 1	7	10	16	22	15	17	20	17	14	18	9	5	
	YEAR 2	7	9	14	20	13	15	18	16	12	16	8	5	

NOTES:
THE CHARTS ARE INTENDED TO BE USED AS A GUIDELINE ONLY AND INDICATE APPROXIMATE RUN TIMES (IN MINUTES) FOR EACH ZONE BASED ON ESTIMATED WEEKLY WATER REQUIREMENTS FOR ESTABLISHED PLANT MATERIAL. THE FIGURES SHOWN IN THIS SCHEDULE ARE APPROXIMATE AND HAVE BEEN DEVELOPED FROM LOCAL CURRENT AVERAGES FOR EVAPOTRANSPIRATION, AND REFLECT MAXIMUM IRRIGATION REQUIREMENTS OF THE PLANT MATERIAL BASED ON PLANT TYPE AND SPACING. ACTUAL RUN TIMES MAY BE DIFFERENT DEPENDING ON A VARIETY OF FACTORS INCLUDING TOPOGRAPHY, SOIL STRUCTURE, SUN AND WIND EXPOSURE, WEATHER, ACTUAL PLANT WATER REQUIREMENTS, ETC.

IRRIGATION NOTES

1. THESE IRRIGATION DRAWINGS ARE DIAGRAMMATIC AND INDICATIVE OF THE WORK TO BE INSTALLED. ALL PIPING, VALVES, ETC. SHOWN WITHIN PAVED AREAS IS FOR CLARITY ONLY AND ARE TO BE INSTALLED WITHIN PLANTING AREAS WHERE POSSIBLE. DUE TO THE SCALE OF THE DRAWINGS, IT IS NOT POSSIBLE TO INDICATE ALL OFFSETS, FITTINGS, SLEEVES, ETC., WHICH MAY BE REQUIRED. THE CONTRACTOR IS REQUIRED TO INVESTIGATE THE STRUCTURAL AND FINISHED CONDITIONS AFFECTING ALL OF THE CONTRACT WORK INCLUDING OBSTRUCTIONS, GRADE DIFFERENCES OR AREA DIMENSIONAL DIFFERENCES WHICH MAY NOT HAVE BEEN CONSIDERED IN THE ENGINEERING. IN THE EVENT OF FIELD DIFFERENCES, THE CONTRACTOR IS REQUIRED TO PLAN THE INSTALLATION WORK ACCORDINGLY BY NOTIFICATION AND APPROVAL OF THE OWNER'S AUTHORIZED REPRESENTATIVE AND ACCORDING TO THE CONTRACT SPECIFICATION. THE CONTRACTOR IS ALSO REQUIRED TO NOTIFY AND COORDINATE IRRIGATION CONTRACT WORK WITH ALL APPLICABLE CONTRACTORS FOR THE LOCATION AND INSTALLATION OF PIPE, CONDUIT OR SLEEVES THROUGH OR UNDER WALLS, ROADWAYS, PAVING, STRUCTURE, ETC., BEFORE CONSTRUCTION. IN THE EVENT THESE NOTIFICATIONS ARE NOT PERFORMED, THE CONTRACTOR SHALL ASSUME FULL RESPONSIBILITY FOR ALL REQUIRED REVISIONS.

2. THE CONTRACTOR SHALL EXERCISE CARE IN LOCATING PIPING AS TO NOT CONFLICT WITH OTHER UTILITIES. DO NOT INSTALL IRRIGATION PIPING PARALLEL TO AND DIRECTLY OVER OTHER UTILITIES.

3. THE INTENT OF THIS IRRIGATION SYSTEM IS TO PROVIDE THE MINIMUM AMOUNT OF WATER REQUIRED TO SUSTAIN GOOD PLANT HEALTH.

4. IT IS THE RESPONSIBILITY OF THE LANDSCAPE MAINTENANCE CONTRACTOR AND/OR OWNER TO PROGRAM THE IRRIGATION CONTROLLER TO PROVIDE THE MINIMUM AMOUNT OF WATER NEEDED TO SUSTAIN GOOD PLANT HEALTH. THIS INCLUDES MAKING ADJUSTMENTS TO THE PROGRAM FOR SEASONAL WEATHER CHANGES, PLANT MATERIAL WATER REQUIREMENTS, MOUNDS AND SLOPES, SUN, SHADE, AND WIND EXPOSURES.

5. AT THE END OF THE REQUIRED MAINTENANCE PERIOD OF THE CONTRACTOR, THE OWNER SHALL PROVIDE REGULAR MAINTENANCE OF THE IRRIGATION SYSTEM TO ENSURE THE EFFICIENT USE OF WATER. MAINTENANCE SHALL INCLUDE, BUT NOT BE LIMITED TO CHECKING, ADJUSTING, AND REPAIRING IRRIGATION EQUIPMENT AND CONTROL SYSTEM.

6. 120 VOLT A.C. (2.5 AMP DEMAND) ELECTRICAL SERVICE TO IRRIGATION CONTROLLER LOCATION TO BE PROVIDED UNDER ELECTRICAL CONTRACT WORK. IRRIGATION CONTRACTOR TO MAKE FINAL CONNECTION FROM ELECTRICAL STUB-OUT TO CONTROLLER AND PROVIDE PROPER GROUNDING PER CONTROLLER MANUFACTURER'S INSTRUCTIONS.

7. IRRIGATION CONTROLLER TO HAVE ITS OWN INDEPENDENT 24 VOLT COMMON GROUND WIRE.

8. CONTRACTOR SHALL PROGRAM THE IRRIGATION CONTROLLER TO PROVIDE IRRIGATION TO ALL PLANTING WITHIN THE ALLOWED WATERING WINDOW OF TIME AS REQUIRED. THE CONTRACTOR SHALL CREATE CONTROLLER PROGRAMING THAT WILL NOT EXCEED THE MAXIMUM GALLONS PER MINUTE FLOW RATE STATED ON THE DRAWINGS, AND NOT EXCEED THE CAPACITY OF ANY MAINLINE PIPING.

9. IRRIGATION CONTROL WIRES SHALL BE COPPER WITH U.L. APPROVAL FOR DIRECT BURIAL IN GROUND, SIZE #14-1. COMMON GROUND WIRE SHALL HAVE WHITE INSULATING JACKET. CONTROL WIRE SHALL HAVE INSULATING JACKET OF COLOR OTHER THAN WHITE. SPLICE SHALL BE MADE WITH 3M-DBR/Y-6 SEAL PACKS.

10. FLOW SENSOR CABLE SHALL BE A SOLID COPPER SHIELDED PAIR CABLE, SIZE #16. NO SPLICES ALLOWED.

11. INSTALL SPARE CONTROL WIRE OF A DIFFERENT COLOR ALONG THE ENTIRE MAINLINE. LOOP 36" EXCESS WIRE INTO EACH SINGLE VALVE BOX AND INTO ONE VALVE BOX IN EACH GROUP OF VALVES. MINIMUM OF ONE SPARE WIRE PER CONTROLLER.

12. SPLICING OF 24 VOLT WIRES IS NOT PERMITTED EXCEPT IN VALVE BOXES. SEAL WIRE SPLICES WITH 3M-DBR/Y-6 SPLICE SEALING DEVICES OF SIZE COMPATIBLE WITH WIRE SIZE. LEAVE A 36" LONG, 1" DIAMETER COIL OF EXCESS WIRE AT EACH SPLICE AND A 36" LONG EXPANSION LOOP EVERY 100 FEET ALONG WIRE RUN. TAPE WIRES TOGETHER EVERY TEN FEET. TAPING WIRES IS NOT REQUIRED INSIDE SLEEVES.

13. PLASTIC VALVE BOXES ARE TO BE BLACK IN COLOR WITH BOLT DOWN, NON-HINGED COVER MARKED "IRRIGATION". BOX BODY SHALL HAVE KNOCK OUTS. MANUFACTURER SHALL BE RAIN BIRD.

14. INSTALL REMOTE CONTROL VALVE BOXES 12" FROM WALK, CURB, LAWN, HEADER BOARD, BUILDING, OR LANDSCAPE FEATURE. AT MULTIPLE VALVE BOX GROUPS, EACH BOX SHALL BE AN EQUAL DISTANCE FROM THE WALK, CURB. LAWN, ETC. AND EACH BOX SHALL BE 12" APART. SHORT SIDE OF RECTANGULAR VALVE BOXES SHALL BE PARALLEL TO WALK, CURB, ETC.

15. VALVE LOCATIONS SHOWN ARE DIAGRAMMATIC. INSTALL IN GROUND COVER/SHRUB AREAS WHERE POSSIBLE (NOT IN LAWN AREA).

16. THE IRRIGATION CONTRACTOR SHALL FLUSH AND ADJUST ALL SPRINKLER HEADS FOR OPTIMUM PERFORMANCE AND TO PREVENT OVER SPRAY ONTO WALKS, ROADWAYS, AND/OR BUILDINGS AS MUCH AS POSSIBLE. THIS SHALL INCLUDE SELECTING THE BEST DEGREE OF ARC TO FIT THE EXISTING SITE CONDITIONS AND TO THROTTLE THE FLOW CONTROL AT EACH VALVE TO OBTAIN THE OPTIMUM OPERATING PRESSURE FOR EACH SYSTEM.

17. ALL SPRINKLER HEADS SHALL BE SET PERPENDICULAR TO FINISH GRADE OF THE AREA TO BE IRRIGATED UNLESS OTHERWISE NOTED ON THE DRAWINGS.

18. ALL IRRIGATION PIPING THAT IS NOT A DIRECT LINE TO TREES SHALL BE A MINIMUM FIVE (5) FEET FROM CENTER OF TREE.

19. LOCATE BUBBLERS ON UP-HILL SIDE OF TREE.

20. INSTALL A FLO CONTROL (NDS) 1002 SERIES SPRING LOADED CHECK VALVE BELOW THOSE BUBBLERS WHERE LOW HEAD DRAINAGE WILL CAUSE EROSION AND/OR EXCESS WATER.

21. WHERE IT IS NECESSARY TO EXCAVATE ADJACENT TO EXISTING TREES, THE CONTRACTOR SHALL USE ALL POSSIBLE CARE TO AVOID INJURY TO TREES AND TREE ROOTS. EXCAVATION IN AREAS WHERE TWO (2) INCH AND LARGER ROOTS OCCUR SHALL BE DONE BY HAND. TRENCHES ADJACENT TO TREE SHOULD BE CLOSED WITHIN TWENTY-FOUR (24) HOURS; AND WHERE THIS IS NOT POSSIBLE, THE SIDE OF THE TRENCH ADJACENT TO THE TREE SHALL BE KEPT SHADED WITH BURLAP OR CANVAS.

22. IRRIGATION CONTRACTOR TO NOTIFY ALL LOCAL JURISDICTIONS FOR INSPECTION AND TESTING OF INSTALLED BACKFLOW PREVENTION DEVICE.

23. PRESSURE TEST PROCEDURE. THE CONTRACTOR SHALL:
   A. NOTIFY ARCHITECT AT LEAST THREE (3) DAY IN ADVANCE OF TESTING.
   B. PERFORM TESTING AT HIS OWN EXPENSE.
   C. CENTER LOAD PIPING WITH SMALL AMOUNT OF BACKFILL TO PREVENT ARCHING OR SLIPPING UNDER PRESSURE. NO FITTING SHALL BE COVERED.
   D. APPLY THE FOLLOWING TESTS AFTER WELD PLASTIC PIPE JOINTS HAVE CURED AT LEAST 24 HOURS.
      1. TEST LIVE (CONSTANT PRESSURE) AND QUICK COUPLER LINE HYDROSTATICALLY AT 125 PSI MINIMUM. LINES WILL BE APPROVED IF TEST PRESSURE IS MAINTAINED FOR SIX (6) HOURS. THE LINE WILL BE APPROVED OR NOT APPROVED AS SUCH RESULTS MAY INDICATE. THE CONTRACTOR SHALL MAKE TESTS AND REPAIRS AS NECESSARY UNTIL TEST CONDITIONS ARE MET.
      2. TEST RCV CONTROLLED LATERAL LINES WITH WATER AT LINE PRESSURE AND VISUALLY INSPECT FOR LEAKS. RETEST AFTER CORRECTING DEFECTS.

24. THE SPRINKLER SYSTEM DESIGN IS BASED ON THE MINIMUM OPERATING PRESSURE SHOWN ON THE IRRIGATION DRAWINGS. THE IRRIGATION CONTRACTOR SHALL VERIFY WATER PRESSURE PRIOR TO CONSTRUCTION. REPORT ANY DIFFERENCE BETWEEN THE WATER PRESSURE INDICATED ON THE DRAWINGS AND THE ACTUAL PRESSURE READING AT THE IRRIGATION POINT OF CONNECTION TO THE OWNER'S AUTHORIZED REPRESENTATIVE.

25. IRRIGATION DEMAND: 13 GPM AT 65 PSI STATIC PRESSURE AT IRRIGATION POINT OF CONNECTION. FIELD VERIFY WATER PRESSURE PRIOR TO CONSTRUCTION. IF ACTUAL WATER PRESSURE DIFFERS FROM THE STATED PRESSURE CONTACT ARCHITECT FOR DIRECTION AND POSSIBLE REVISION.

26. PIPE THREAD SEALANT COMPOUND SHALL BE RECTOR SEAL T+2, CHRISTY'S ULTRA SEAL, OR APPROVED EQUAL.

27. SUB-SURFACE DRIP IRRIGATION AREAS MUST BE HAND WATERED TO INCREASE SOIL MOISTURE PRIOR TO PLANTING. AFTER PLANTING, THE SUB-SURFACE DRIP SYSTEMS MUST BE OPERATED ON A FREQUENT BASIS TO MAINTAIN SOIL MOISTURE CONTENT. DO NOT ALLOW SOIL TO DRY OUT. MAINTENANCE ROUTINE SHALL INCLUDE PROBING SOIL TO MONITOR MOISTURE CONTENT. USE CAUTION WHEN PROBING SOIL. DO NOT DAMAGE SUB-SURFACE DRIP TUBING.

28. RECORD DRAWINGS:
   A. THE CONTRACTOR SHALL MAINTAIN IN GOOD ORDER IN THE FIELD OFFICE ONE COMPLETE SET OF BLACK LINE PRINTS OF ALL SPRINKLER DRAWINGS WHICH FORM A PART OF THE CONTRACT, SHOWING ALL WATER LINES, SPRINKLERS, VALVES, CONTROLLERS AND STUB-OUTS. IN THE EVENT ANY WORK IS NOT INSTALLED AS INDICATED ON THE DRAWINGS, SUCH WORK SHALL BE CORRECTED AND DIMENSIONED ACCURATELY FROM THE BUILDING WALLS.
   B. ALL UNDERGROUND STUB-OUTS FOR FUTURE CONNECTIONS AND VALVES SHALL BE LOCATED AND DIMENSIONED ACCURATELY FROM BUILDING WALLS ON ALL RECORD DRAWINGS.
   C. UPON COMPLETION OF THE WORK, OBTAIN REPRODUCIBLE PRINTS FROM ARCHITECT AND NEATLY CORRECT THE PRINTS TO SHOW THE AS-BUILT CONDITIONS.

29. FINE TUNE IRRIGATION SYSTEM TO PROVIDE COMPLETE AND UNIFORM COVERAGE OF THE LANDSCAPE WHILE AVOIDING RUNOFF OF WATER ONTO NON-IRRIGATED AREAS, PAVED AND OTHERWISE. THIS INCLUDES PROGRAMMING THE CONTROLLER RUN TIMES FOR OPTIMIZING SOIL INFILTRATION WITH OUT PUDDLING OR RUNOFF.

30. WARRANTY:
   A. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO FILL AND REPAIR ALL NECESSARY PLANTING DUE TO THE SETTLEMENT OF IRRIGATION TRENCHES FOR ONE YEAR FOLLOWING COMPLETION AND ACCEPTANCE OF THE JOB.
   B. THE CONTRACTOR SHALL ALSO WARRANTY ALL MATERIALS, EQUIPMENT AND WORKMANSHIP FURNISHED BY HIM TO BE FREE OF ALL DEFECTS OF WORKMANSHIP AND MATERIALS, AND SHALL AGREE TO REPLACE AT HIS EXPENSE, AT ANY TIME WITHIN ONE YEAR AFTER INSTALLATION IS ACCEPTED, ANY AND ALL DEFECTIVE PARTS THAT MAY BE FOUND.

1

WATER EFFICIENT LANDSCAPE WORKSHEET

WATER EFFICIENT LANDSCAPE WORKSHEET

This worksheet is filled out by the project applicant and it is a required element of the Landscape Documentation Package.

Reference Evapotranspiration (ETo) 44.3

Hydrozone # /Planting Description[a]	Plant Factor (PF)	Irrigation Method[b]	Irrigation Efficiency (IE)[c]	ETAF (PF/IE)	Landscape Area (sq. ft.)	ETAF x Area	Estimated Total Water Use (ETWU)[e]
Regular Landscape Areas							
Low Water-Use Plants	0.30	Drip	0.81	0.37	5,907	2,186	60,029
Moderate Water- Use Plants	0.50	Drip	0.81	0.62	1,413	876	24,062
High Water-Use Trees	0.80	Drip	0.81	0.99	32	32	870
Pool/Spa	0.80	N/A	1.00	0.80	1006	805	22,105
					(A)	(B)	
				Totals	8,358	3,898	107,066
Special Landscape Areas							
Fruit Trees	[redacted]			1	160	160	4,395
				1			
					(C)	(D)	
				Totals	160	160	4,395
						ETWU Total	111,461
			Maximum Allowed Water Allowance (MAWA)[e]				130,653

a Hydrozone #/Planting Description
E.g
1.) front lawn
2.) low water use plantings
3.) medium water use planting

b Irrigation Method
overhead spray
or drip

c Irrigation Efficiency
0.75 for spray head
0.81 for drip

d **ETWU (Annual Gallons Required) = Eto x 0.62 x ETAF x Area**
where 0.62 is a conversion factor that converts acre-inches per acre per year to gallons per square foot per year.

e **MAWA (Annual Gallons Allowed) = (**Eto) (0.62) [(ETAF x LA) + ((1-ETAF) x SLA)]
where 0.62 is a conversion factor that converts acre-inches per acre per year to gallons per square foot per year, LA is the total landscape area in square feet, SLA is the total special landscape area in square feet, and ETAF is .55 for residential areas and 0.45 for non-residential areas.

ETAF Calculations

Average ETAF for Regular Landscape Areas must be 0.55 or below for residential areas, and 0.45 or below for non-residential areas.

Regular Landscape Areas

Total ETAF x Area (B)	3,898
Total Area (A)	8,358
Average ETAF	**0.47**

All Landscape Areas

Total ETAF x Area (B+D)	4,058
Total Area (A+C)	8,518
Sitewide ETAF (B+D) ÷ (A+C)	**0.47**

IRRIGATION LEGEND

SYMBOL	MODEL NUMBER	DESCRIPTION
	PROS-12-PRS40-CV-F-MP3000360	HUNTER 12" POP-UP SPRAY SPRINKLER WITH FloGuard AND MP ROTATOR NOZZLE (360°) (NO-MOW)
	PROS-12-PRS40-CV-F-MP300090 ADJUSTABLE	HUNTER 12" POP-UP SPRAY SPRINKLER WITH FloGuard AND MP ROTATOR NOZZLE(120°-210°) (NO-MOW)
	PROS-12-PRS40-CV-F-MP300090 ADJUSTABLE	HUNTER 12" POP-UP SPRAY SPRINKLER WITH FloGuard AND MP ROTATOR NOZZLE(90°-120°) (NO-MOW)
	PROS-12-PRS40-CV-F-MP2000360	HUNTER 12" POP-UP SPRAY SPRINKLER WITH FloGuard AND MP ROTATOR NOZZLE (360°) (NO-MOW)
	PROS-12-PRS40-CV-F-MP200090 ADJUSTABLE	HUNTER 12" POP-UP SPRAY SPRINKLER WITH FloGuard AND MP ROTATOR NOZZLE (120°-210°) (NO-MOW)
	PROS-12-PRS40-CV-F-MP200090 ADJUSTABLE	HUNTER 12" POP-UP SPRAY SPRINKLER WITH FloGuard AND MP ROTATOR NOZZLE (90°-120°) (NO-MOW)
	PROS-12-PRS40-CV-F-MP100090 ADJUSTABLE	HUNTER 12" POP-UP SPRAY SPRINKLER WITH FloGuard AND MP ROTATOR NOZZLE (120°-210°) (NO-MOW)
	PROS-12-PRS40-CV-F-MP100090 ADJUSTABLE	HUNTER 12" POP-UP SPRAY SPRINKLER WITH FloGuard AND MP ROTATOR NOZZLE (90°-120°) (NO-MOW)
	1401	RAIN BIRD BUBBLER (TREE)
M	IBV-101G-FS-1"	HUNTER NORMALLY CLOSED MASTER CONTROL VALVE
F	HC-100-FLOW-1"/P7162D-A	HUNTER SUB-METER/FLOW METER WITH PAIGE SHIELDED COMMUNICATION CABLE FOR FLOW DATA COMMUNICATION WITH IRRIGATION CONTROLLER
	PESB-SERIES	RAIN BIRD REMOTE CONTROL VALVE
	XCZ-100-PRB-COM	RAIN BIRD CONTROL ZONE KIT - PVC BALL VALVE, 1" PESB VALVE AND 1" PRESSURE REGULATING (40 PSI) QUICK CHECK BASKET FILTER (200 MESH)
	T-595-Y-LF	NIBCO FULL PORT BRASS BALL VALVE - LEAD FREE (LINE SIZE)
	980LF-1"/BFP	CHAMPION HOSE BIB WITH VACUUM BREAKER (LEAD FREE)
	LT-S	FLUSH VALVE (SEE DETAIL) - KBI SCHEDULE 80 PVC FULL PORT BALL VALVE (SLIP X SLIP) (LINE SIZE)
	ARV050	RAIN BIRD AIR RELEASE & VACUUM RELIEF VALVE
	OPERIND - (SEE SUB-SURFACE DRIP LAYOUT DETAILS)	RAIN BIRD DRIP SYSTEM OPERATION INDICATOR
	975XL2-1"	WILKINS REDUCED PRESSURE BACKFLOW ASSEMBLY (LEAD FREE)
C	HCC-3600-PL/HC-PLAN-HOME	HUNTER HCC CONTROLLER IN A WALL MOUNT PLASTIC CABINET. WI-FI SERVICE REQUIRED FOR HYDRAWISE SOFTWARE FUNCTION.
R	WR-CLIK	HUNTER WIRELESS RAIN SENSOR

PRECIPITATION RATE & OPERATING PRESSURE
CONTROLLER & STATION NUMBER
APPROXIMATE FLOW (GPM)
REMOTE CONTROL VALVE SIZE
PLANT TYPE/WATER REQUIREMENT/HYDROZONE
LH - LAWN/HIGH WATER
LM - LAWN/MODERATE WATER
LL - LAWN/LOW WATER
SH - SHRUB & GROUNDCOVER/HIGH WATER
SM - SHRUB & GROUNDCOVER/MODERATE WATER
SL - SHRUB & GROUNDCOVER/LOW WATER
TH - TREE/HIGH WATER
TM - TREE/MODERATE WATER
TL - TREE/LOW WATER

MAINLINE: 1120-SCHEDULE 40 PVC PLASTIC PIPE WITH SCHEDULE 40 PVC SOLVENT-WELD FITTINGS. 18" COVER. 24" COVER UNDER VEHICULAR PAVING.

LATERAL LINE: 1120-SCHEDULE 40 PVC PLASTIC PIPE WITH SCHEDULE 40 PVC SOLVENT-WELD FITTINGS. 12" COVER. 24" COVER UNDER VEHICULAR PAVING.

LOW WATER-USE ZONE

MODERATE WATER-USE ZONE

SUB-SURFACE DRIP BOUNDARY: RAIN BIRD XFS-CV SUB-SURFACE DRIPLINE (XFS-CV-04-12) WITH COPPER SHIELD TECHNOLOGY AND HEAVY DUTY CHECK VALVE. INSTALL AS DETAILED 12" O.C. SEE DRIP IRRIGATION DETAILS FOR TUBING LAYOUT AND INSTALLATION METHODS. BOUNDARIES DEFINE AREAS FOR DRIPLINE TO BE CONNECTED TO ASSOCIATED REMOTE CONTROL VALVES AS DEPICTED IN THE DRAWING. SCRATCH INTO SOIL.

SLEEVING: 1120-SCHEDULE 40 PVC PLASTIC PIPE. 18" COVER. 24" COVER UNDER VEHICULAR PAVING.

VALVE BOXES SHALL BE BLACK IN COLOR.

DICKSON & ASSOCIATES, INC.
LANDSCAPE IRRIGATION
(530) 547-5515 www.dicksoninc.net
P.O. BOX 415
PALO CEDRO, CALIFORNIA 96073

THE LAND COLLABORATIVE
TLC
LANDSCAPE ARCHITECTURE & LANDSCAPE CONSTRUCTION
26 HAMILTON DRIVE SUITE A
NOVATO, CA 94949
415-819-5263
info@TheLandCollaborative.com

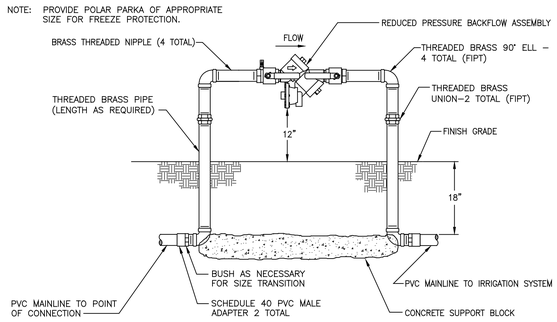
KALLWEIT RESIDENCE
Oakville Ridge Road
Napa, CA 94558
AP: 027-340-024

DRAWN BY LMD/MDD
SCALE 1/8" = 1'-0"

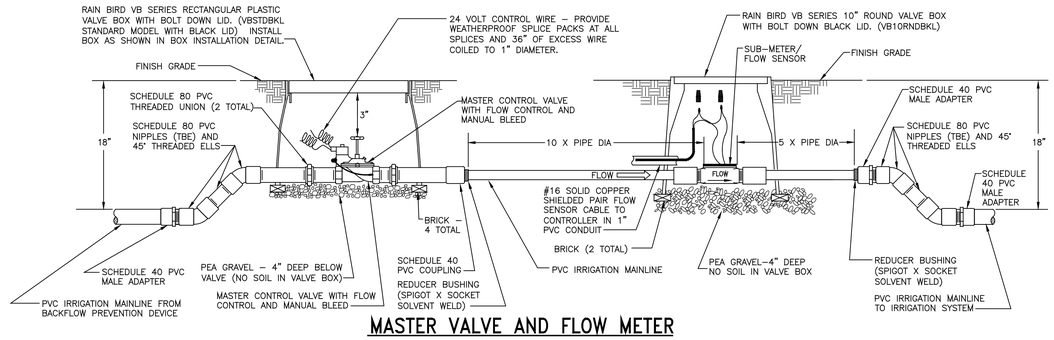
DATE	ISSUE
06/22/2020	VIEWSHED PROTECTION PROGRAM **RESUBMITTAL**
1 11/11/2020	VIEWSHED PROTECTION PROGRAM **RESUBMITTAL**

IRRIGATION LEGEND & NOTES

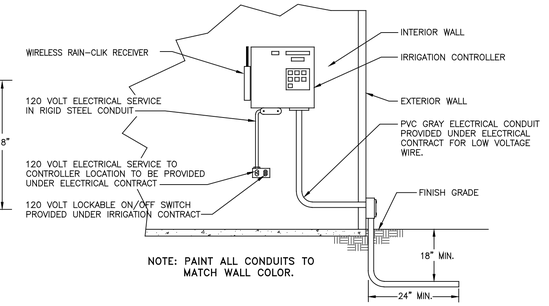
IR-2



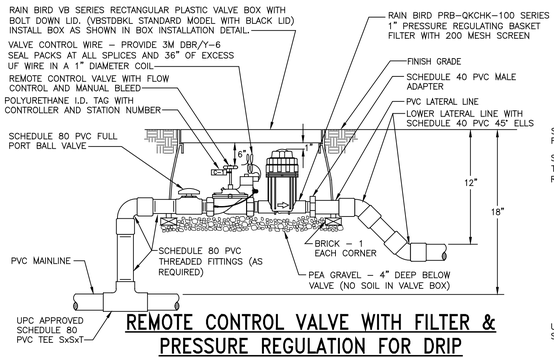
REDUCED PRESSURE BACKFLOW ASSEMBLY
NOT TO SCALE



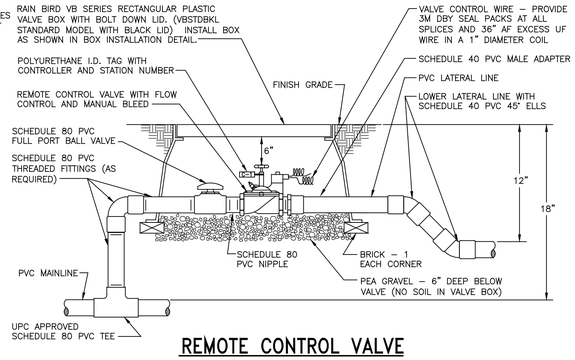
MASTER VALVE AND FLOW METER
NOT TO SCALE



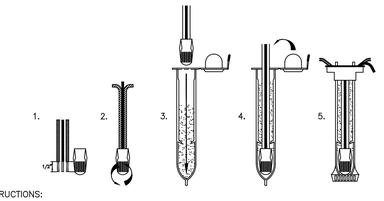
INTERIOR WALL MOUNT CONTROLLER
NOT TO SCALE



REMOTE CONTROL VALVE WITH FILTER & PRESSURE REGULATION FOR DRIP
NOT TO SCALE



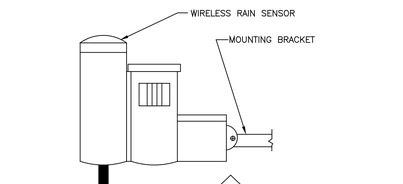
REMOTE CONTROL VALVE
NOT TO SCALE



INSTRUCTIONS:

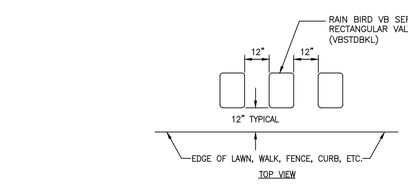
1. USE 3M–DBR/Y–6 WEATHER PROOF SPLICE.
2. STRIP WIRES APPROXIMATELY 1/2" (12.7 MM) TO EXPOSE WIRE.
3. TWIST CONNECTOR AROUND WIRES CLOCKWISE UNTIL HAND TIGHT, DO NOT OVERTIGHTEN.
4. INSERT WIRE ASSEMBLY INTO PLASTIC TUBE UNTIL WIRE CONNECTOR SNAPS PAST LIP IN BOTTOM OF TUBE.
5. PLACE WIRES WHICH EXIT TUBE IN WIRE EXIT HOLES AND CLOSE CAP UNTIL IT SNAPS.
6. INSPECT FINAL SPLICE ASSEMBLY TO BE SECURE AND FINISHED.

WEATHERPROOF SPLICE ASSEMBLY
NOT TO SCALE



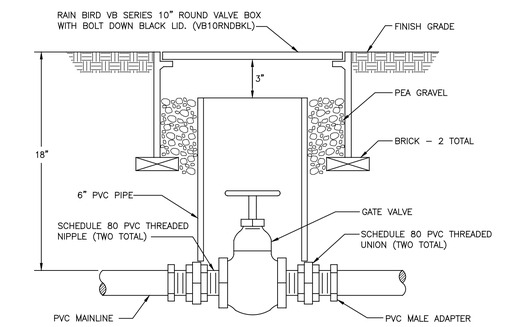
WIRELESS RAIN–CLIK SENSOR
NOT TO SCALE

NOTES:
1. SLEEVE UNDER VEHICULAR PAVING SHALL BE BURIED TO A DEPTH OF 24" COVER.
2. SLEEVE IS TO EXTEND 12" BEYOND EDGE OF PAVING.

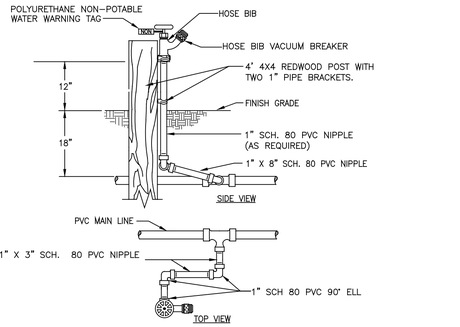


1. CENTER VALVE BOX OVER REMOTE CONTROL VALVE TO FACILITATE SERVICING VALVE.
2. SET BOXES 1" ABOVE FINISH GRADE OR MULCH COVER IN GROUND COVER/SHRUB AREA AND FINISH GRADE IN TURF AREA.
3. SET RCV AND VALVE BOX ASSEMBLY IN GROUND COVER/SHRUB AREA WHERE POSSIBLE. INSTALL IN LAWN ONLY IF GROUND COVER DOES NOT EXIST ADJACENT TO LAWN.
4. SET BOXES PARALLEL TO EACH OTHER AND PERPENDICULAR TO EDGE OF LAWN, WALK, FENCE, CURB, ETC.
5. AVOID HEAVILY COMPACTING SOIL AROUND VALVE BOXES TO PREVENT COLLAPSE AND DEFORMATION OF VALVE BOX SIDES.
6. INSTALL EXTENSION BY VALVE BOX MANUFACTURER AS REQUIRED TO COMPLETELY ENCLOSE ASSEMBLY FOR EASY ACCESS.

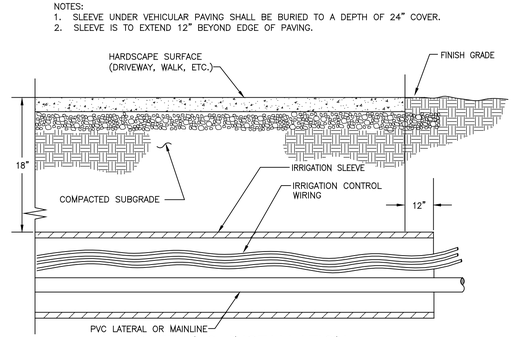
VALVE BOX INSTALLATION
NOT TO SCALE



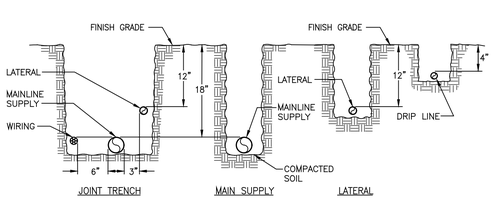
GATE VALVE
NOT TO SCALE



HOSE BIB
NOT TO SCALE

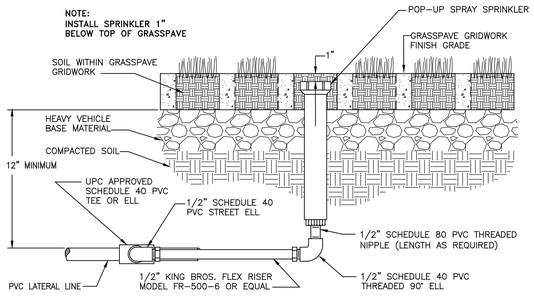


SLEEVING INSTALLATION
NOT TO SCALE

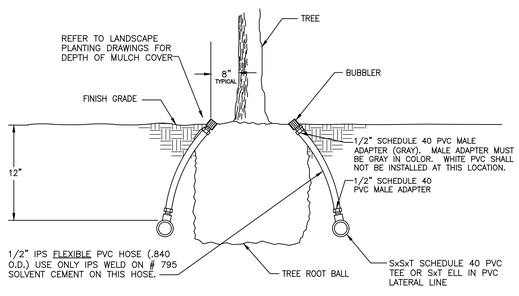


NOTES:
1. ALL PLASTIC PIPING SHALL BE INSTALLED IN THE TRENCH IN A SERPENTINE MANNER AS PER THE MANUFACTURER'S SPECIFICATIONS.
2. ALL SUPPLY LINES TO BE INSTALLED AS PER MANUFACTURER'S SPECIFICATIONS.
3. TAPE AND BUNDLE TUBING OR WIRING AT 10 FEET INTERVALS.
4. ALL 120 VOLT WIRING IN CONDUIT TO BE INSTALLED IN ACCORDANCE WITH ALL APPLICABLE CODES.
5. BACKFILL MATERIAL SHALL BE THE EARTH EXCAVATED FROM THE TRENCHES, FREE FROM ROCKS, CONCRETE CHUNKS, AND OTHER FOREIGN OR COARSE MATERIALS. CAREFULLY SELECT BACKFILL THAT IS TO BE PLACED NEXT TO PLASTIC PIPE TO AVOID ANY SHARP OBJECTS WHICH MAY DAMAGE THE PIPE.

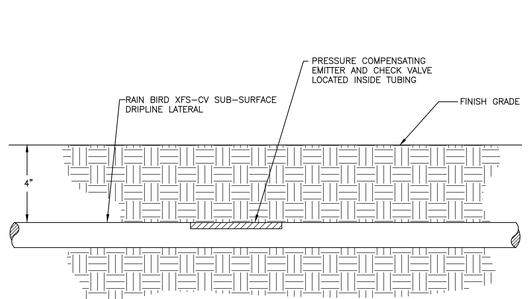
TRENCHING DETAIL
NOT TO SCALE



POP–UP SPRAY SPRINKLER RISER IN GRASSPAVE
NOT TO SCALE



TREE BUBBLER
NOT TO SCALE



DRIPLINE DETAIL
NOT TO SCALE

DICKSON & ASSOCIATES, INC.
LANDSCAPE IRRIGATION
(530) 547-5515 www.dicksoninc.net
P.O. BOX 416
PALO CEDRO, CALIFORNIA 96073

THE LAND COLLABORATIVE
TLC
LANDSCAPE ARCHITECTURE & LANDSCAPE CONSTRUCTION
26 HAMILTON DRIVE SUITE A
NOVATO, CA 94949
415-819-5263
info@TheLandCollaborative.com

KALLWEIT RESIDENCE
Oakville Ridge Road
Napa, CA 94558
AP: 027-340-024

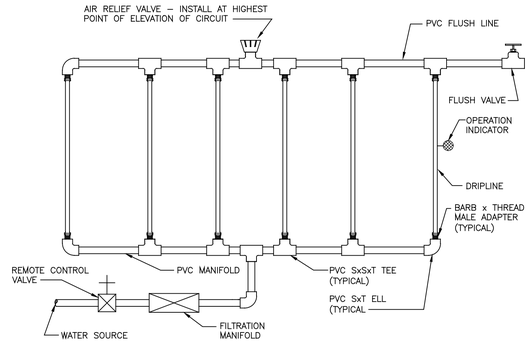
DRAWN BY LMD/MDD
SCALE 1/8" = 1'-0"

DATE	ISSUE
06/22/2020	VIEWSHED PROTECTION PROGRAM **RESUBMITTAL**
7/31/2020	VIEWSHED PROTECTION PROGRAM **RESUBMITTAL**

IRRIGATION DETAILS

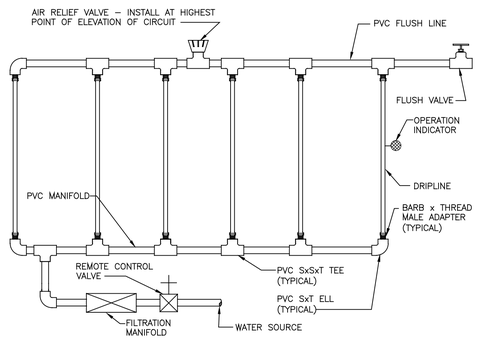
IR-3

KALLWEIT/A/JOB/20-705/ L-IRR / IR-3 /SYMBOL SIZE: NTS /03-23-2020 LMD



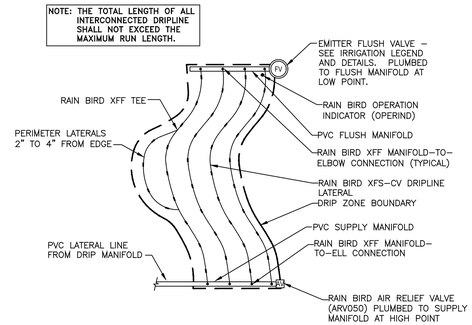
SUB–SURFACE INSTALLATION LAYOUT

NOT TO SCALE



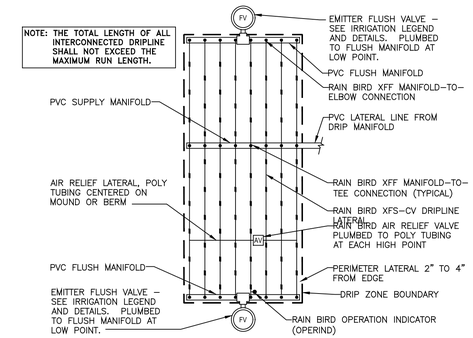
SUB–SURFACE INSTALLATION LAYOUT–ENDFEED

NOT TO SCALE



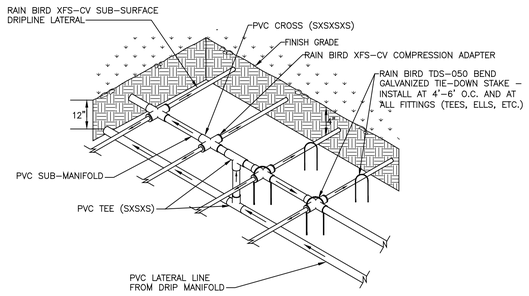
ODD CURVES LAYOUT FOR SUB–SURFACE DRIP

NOT TO SCALE



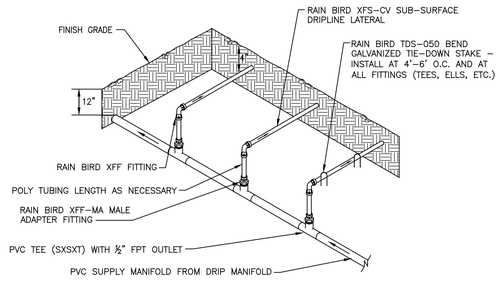
CENTER FEED LAYOUT FOR SUB–SURFACE DRIP

NOT TO SCALE



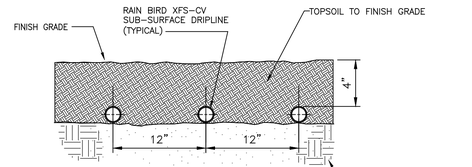
SUB–MANIFOLD CENTER FEED

NOT TO SCALE



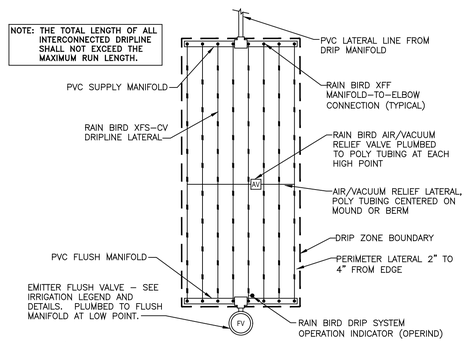
MANIFOLD END FEED

NOT TO SCALE



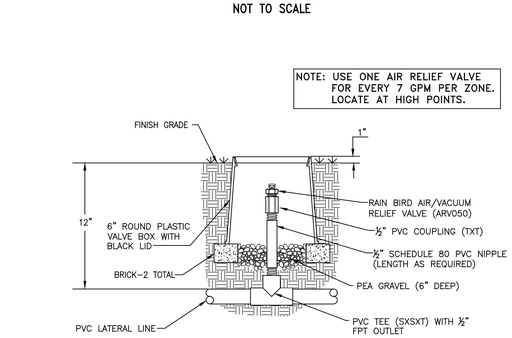
DRIPLINE SUB–SURFACE INSTALLATION 12" O.C.

NOT TO SCALE



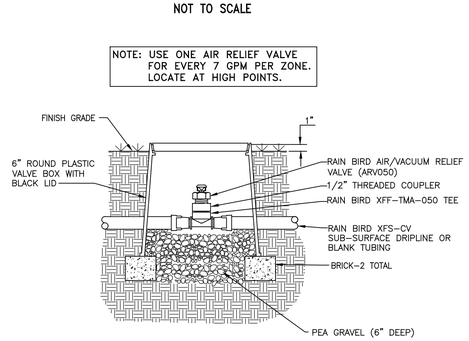
END FEED LAYOUT FOR SUB–SURFACE DRIP

NOT TO SCALE



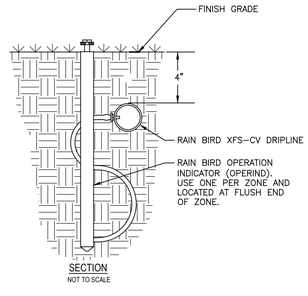
AIR/VACUUM RELIEF VALVE AT PVC LATERAL

NOT TO SCALE



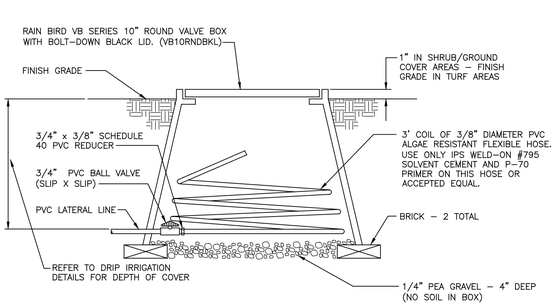
AIR/VACUUM RELIEF VALVE AT DRIPLINE PIPE

NOT TO SCALE



POP–UP OPERATION INDICATOR

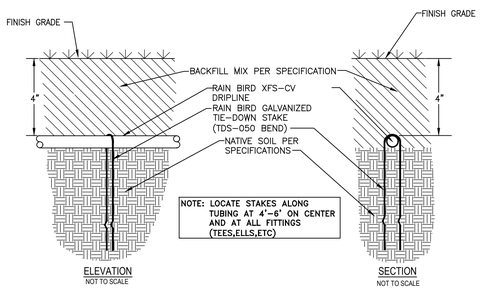
NOT TO SCALE



NOTE: SEE IRRIGATION DRAWINGS AND DETAILS FOR LOCATIONS.

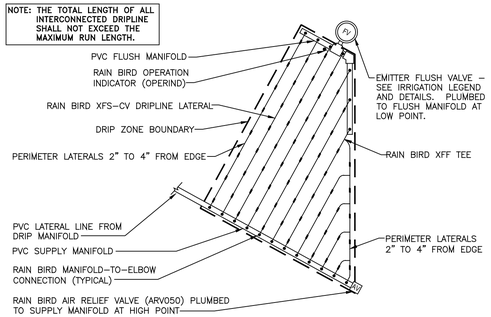
DRIP LINE FLUSH VALVE

NOT TO SCALE



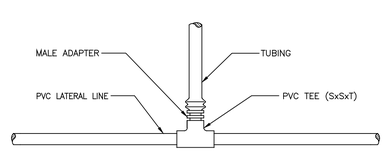
GALVANIZED TIE–DOWN STAKE

NOT TO SCALE



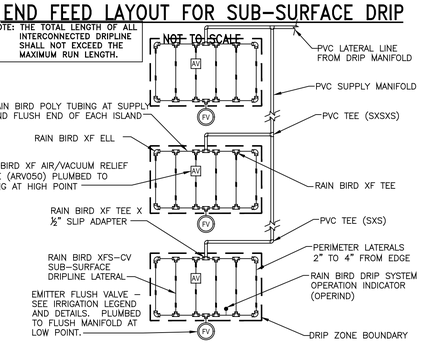
TRIANGULAR LAYOUT FOR SUB–SURFACE DRIP

NOT TO SCALE



TUBING TO PVC CONNECTION

NOT TO SCALE



ISLAND LAYOUT FOR SUB–SURFACE DRIP

NOT TO SCALE

DICKSON & ASSOCIATES, INC.
LANDSCAPE IRRIGATION
(530) 547-5515 www.dicksoninc.net
P.O. BOX 415
PALO CEDRO, CALIFORNIA 96073

THE LAND COLLABORATIVE
TLC
LANDSCAPE ARCHITECTURE & LANDSCAPE CONSTRUCTION
26 HAMILTON DRIVE SUITE A
NOVATO, CA 94949
415-819-5263
info@TheLandCollaborative.com

KALLWEIT RESIDENCE

Oakville Ridge Road
Napa, CA 94558
AP: 027-340-024

DRAWN BY LMD/MDD

SCALE 1/8" = 1'-0"

DATE	ISSUE
06/22/2020	VIEWSHED PROTECTION PROGRAM **RESUBMITTAL**
7/31/2020	VIEWSHED PROTECTION PROGRAM **RESUBMITTAL**

IRRIGATION DETAILS

IR-4