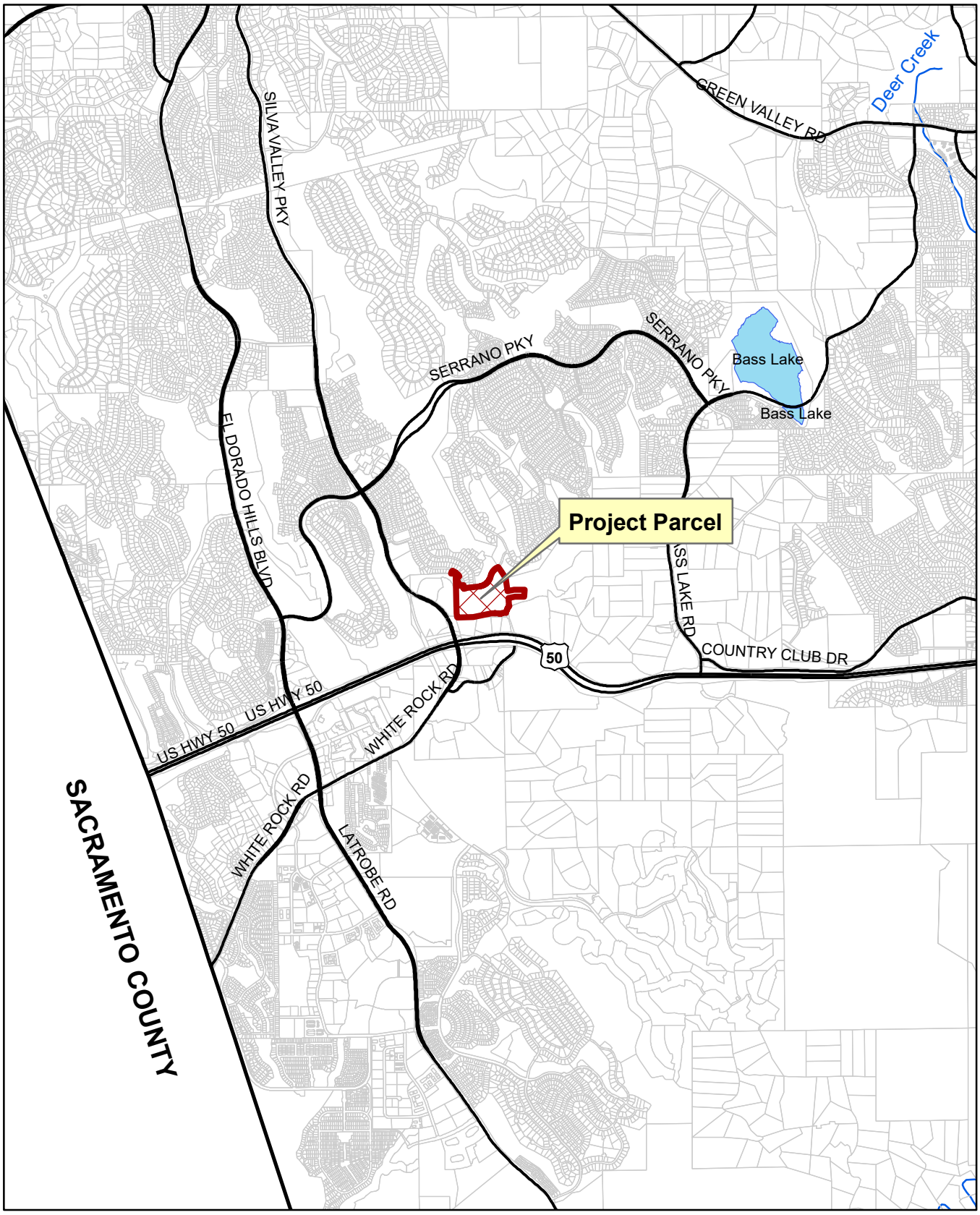
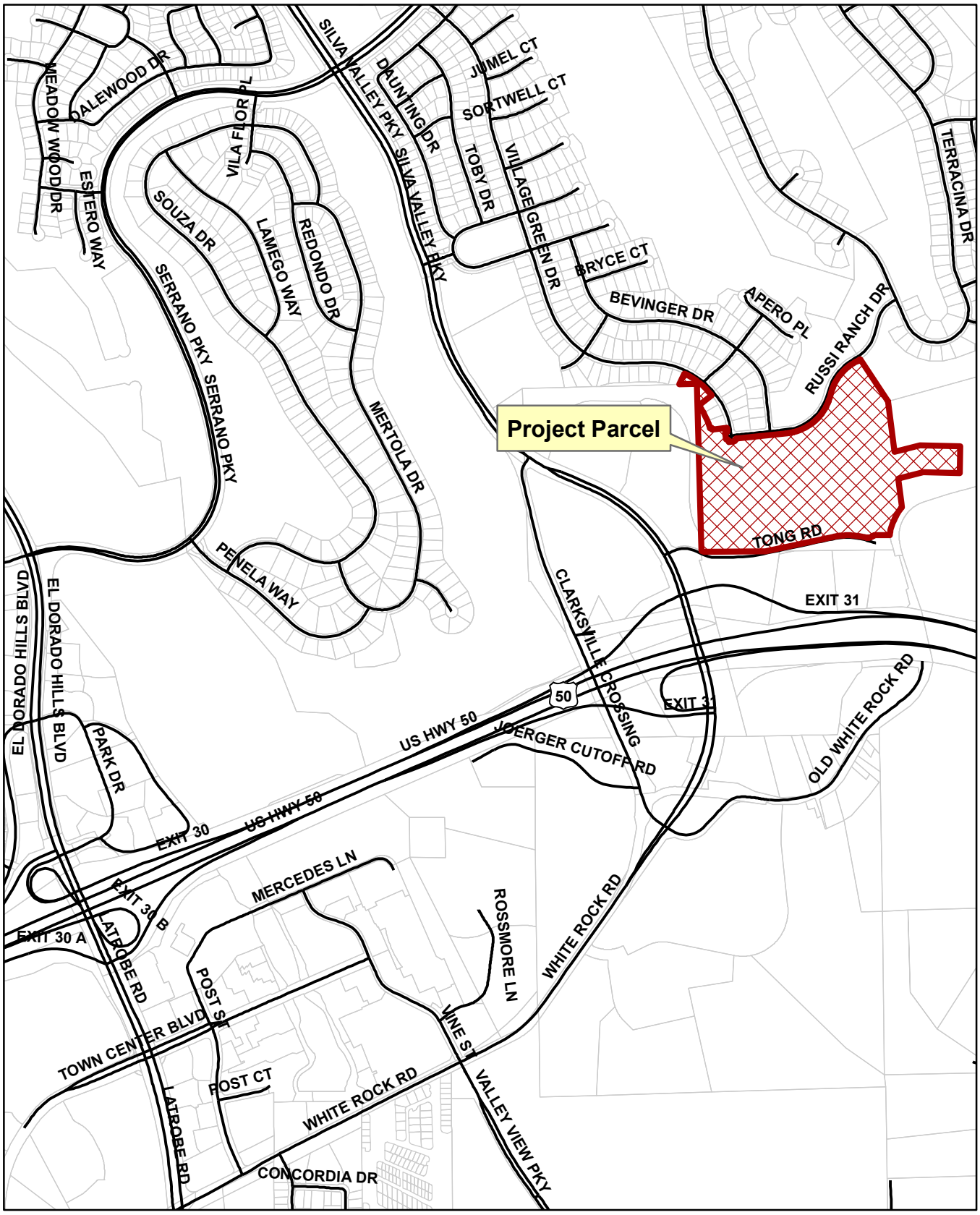
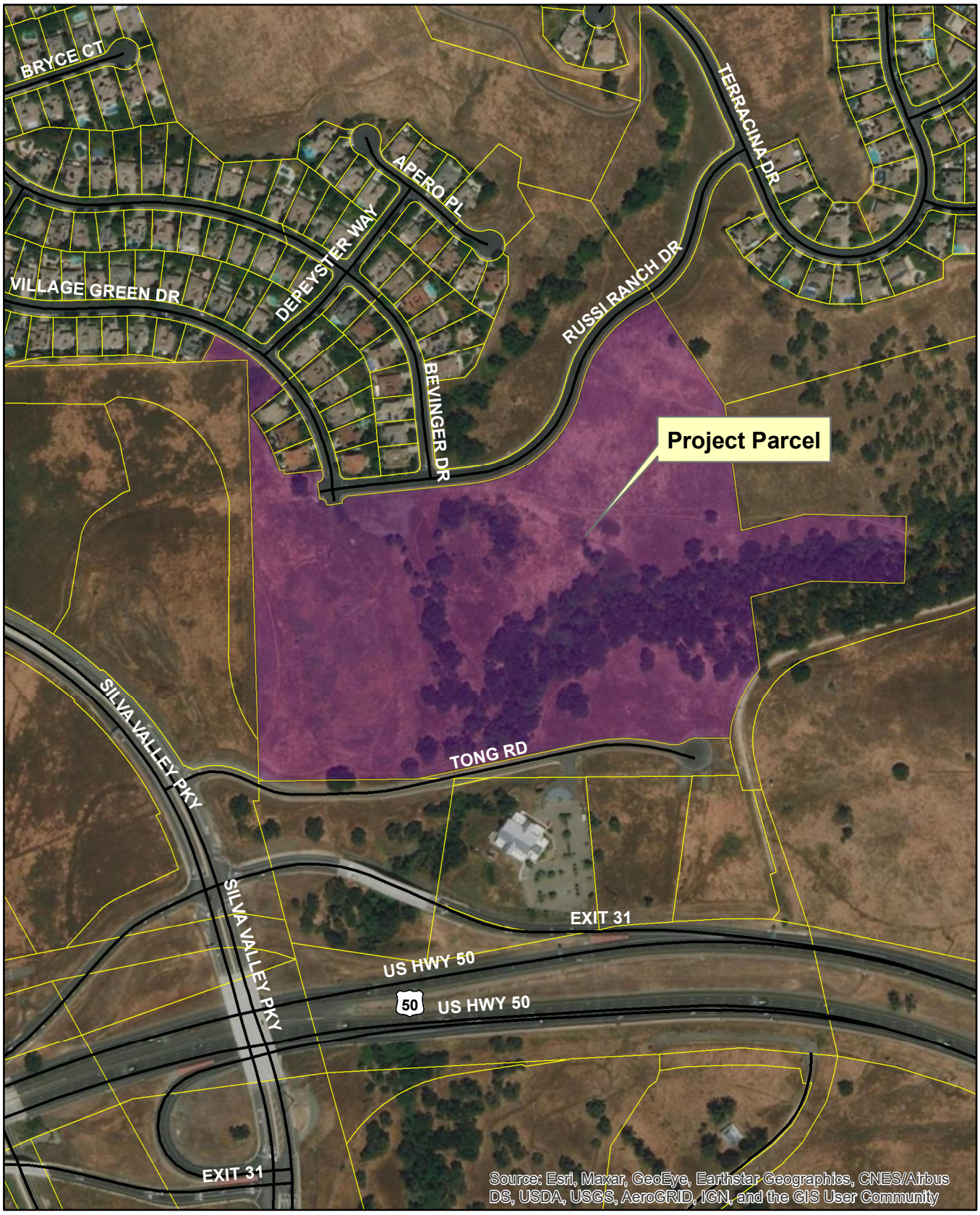
PD08-0004/TM08-1464
EXHIBIT A - LOCATION MAP



PD08-0004/TM08-1464
EXHIBIT B - VICINITY MAP



PD08-0004/TM08-1464
EXHIBIT C - SITE AERIAL PHOTO

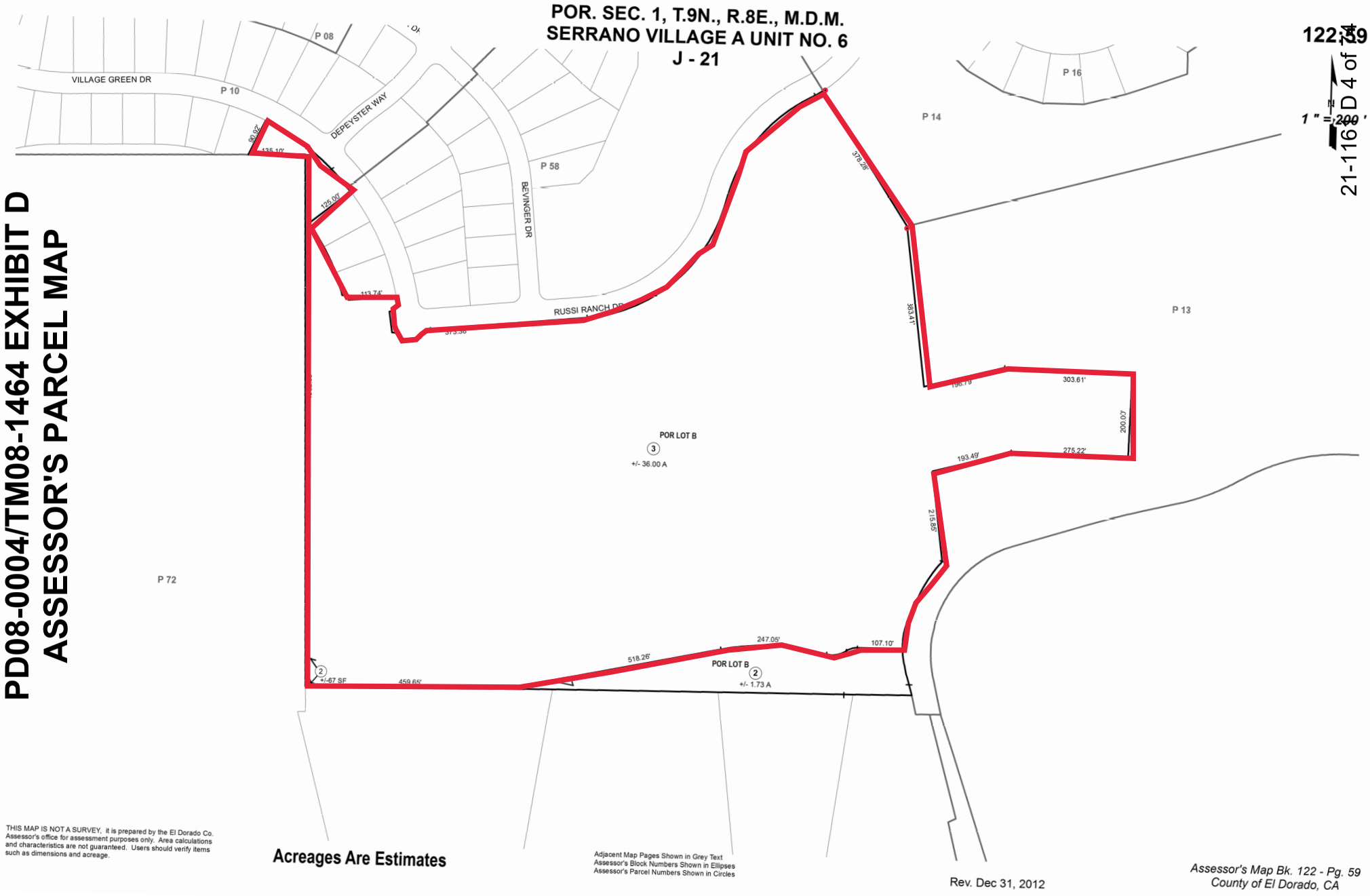


N

Miles

0 0.04 0.08 0.16 0.24 0.32

PD08-0004/TM08-1464 EXHIBIT D
ASSESSOR'S PARCEL MAP



THIS MAP IS NOT A SURVEY, it is prepared by the El Dorado Co. Assessor's office for assessment purposes only. Area calculations and characteristics are not guaranteed. Users should verify items such as dimensions and acreage.

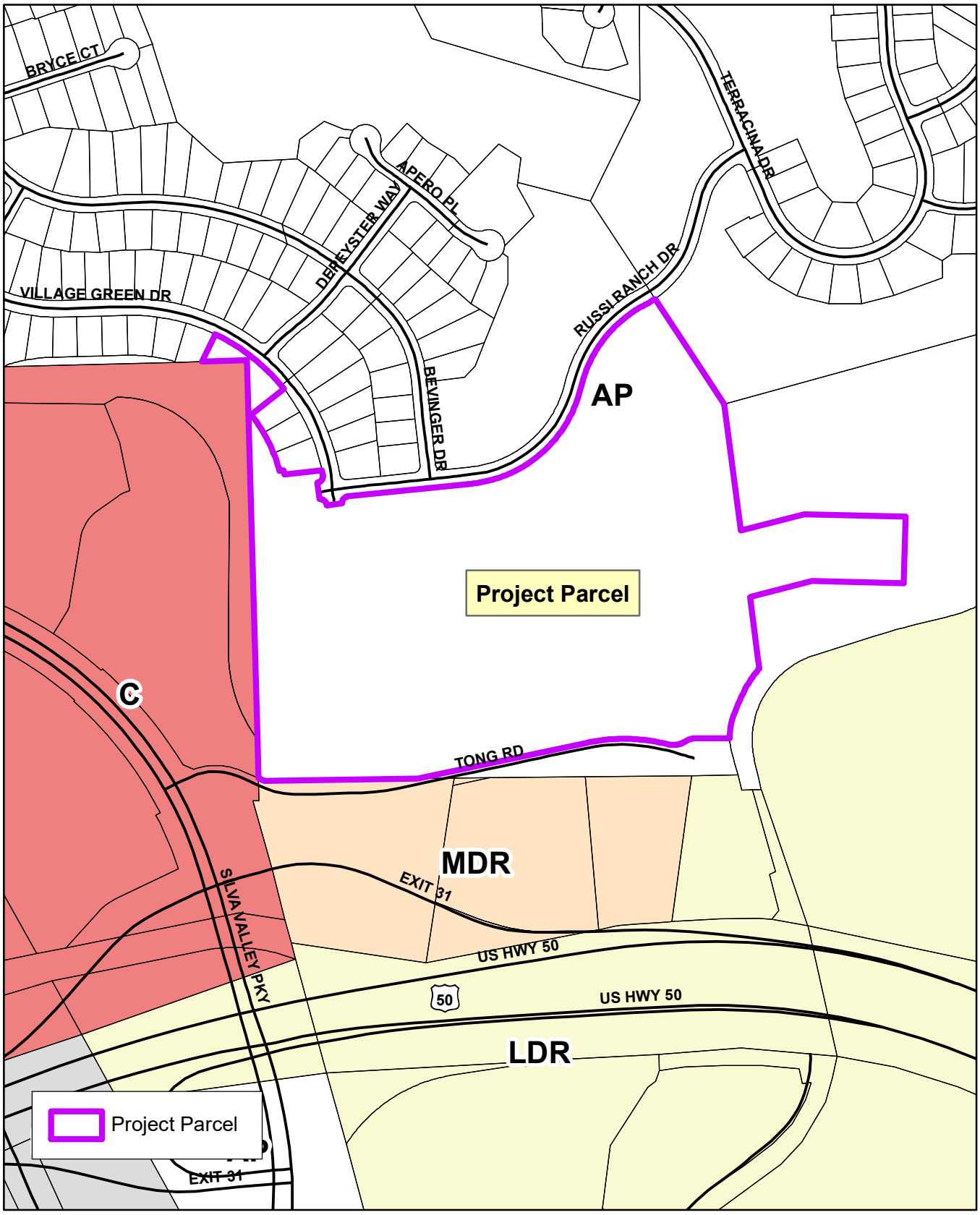
Acreages Are Estimates

Adjacent Map Pages Shown in Grey Text
Assessor's Block Numbers Shown in Ellipses
Assessor's Parcel Numbers Shown in Circles

Rev. Dec 31, 2012

Assessor's Map Bk. 122 - Pg. 59
County of El Dorado, CA

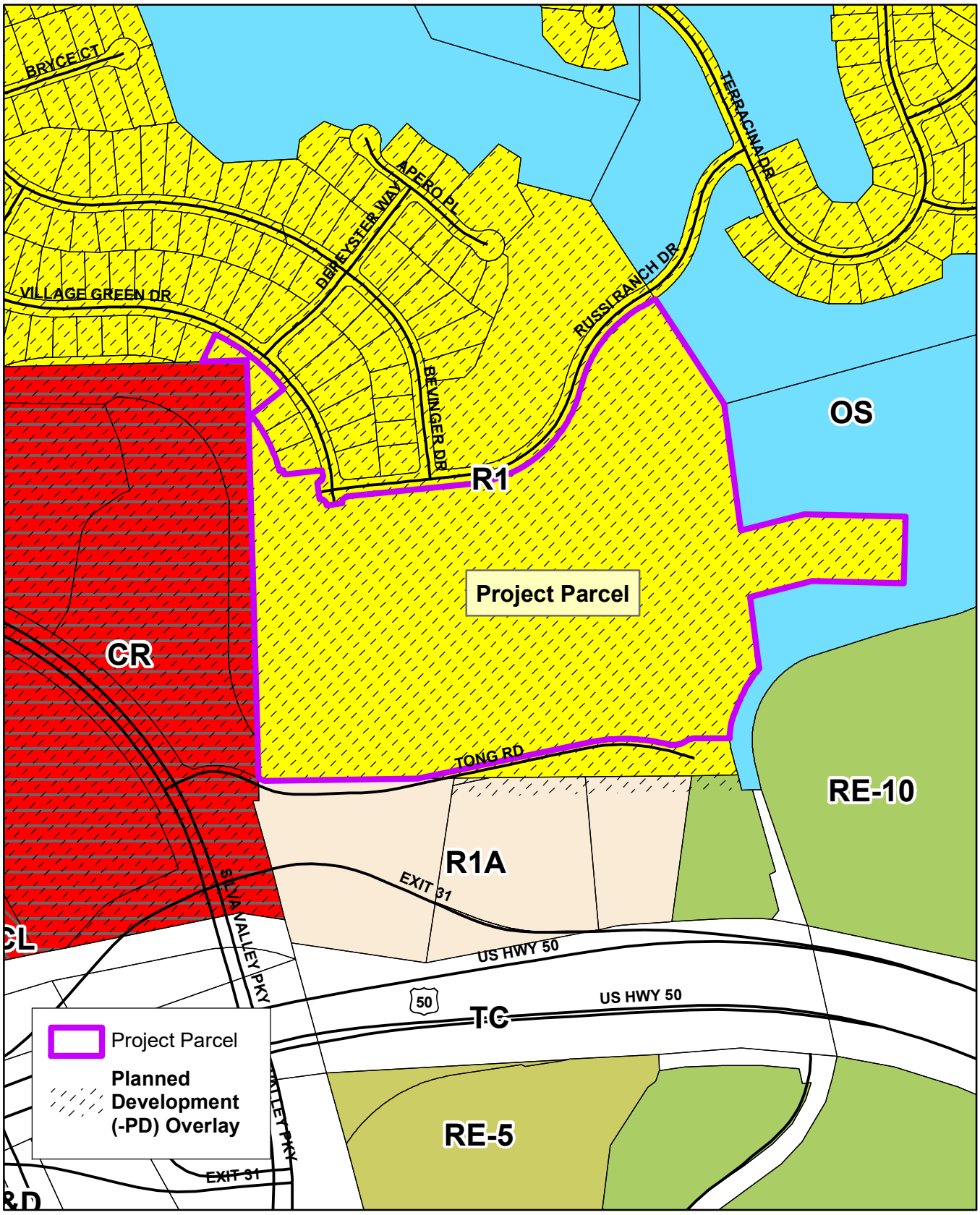
PD08-0004/TM08-1464
EXHIBIT E - GENERAL PLAN LAND USE MAP



N

0 0.04 0.08 0.16 0.24 0.32 Miles

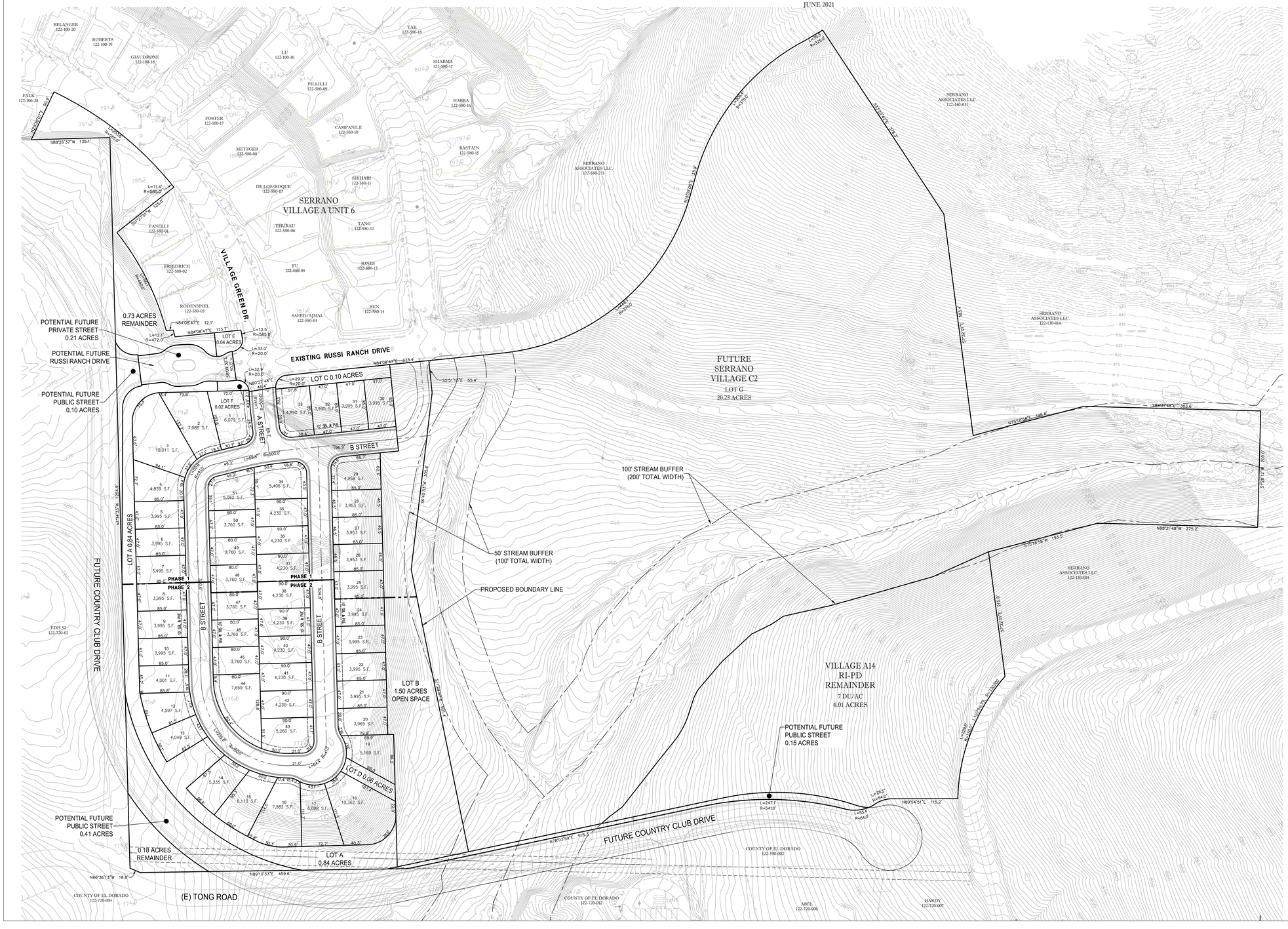
PD08-0004/TM08-1464
EXHIBIT F - ZONING MAP



PD08-0004/TM08-1464 EXHIBIT G
VILLAGE A-14 TENTATIVE MAP

SERRANO VILLAGE A14

TENTATIVE SUBDIVISION MAP
PORTION OF LOT B (SUB J-21)
EL DORADO COUNTY, CALIFORNIA
JUNE 2021





VICINITY MAP
NOT TO SCALE

SCALE IN FEET
MINOR CONTOUR INTERVAL = 1'
MAJOR CONTOUR INTERVAL = 5'

SERRANO

905 Sutter Street, Suite 200 | Folsom, CA 95630
(916) 351-1500 | Fx (916) 351-1510
R.E.Y. ENGINEERS, Inc.
Civil Engineers / Land Surveyors

OWNER/APPLICANT
SERRANO ASSOCIATES, LLC
4525 SERRANO PARKWAY, SUITE 100
EL DORADO HILLS, CA 95762

ENGINEER
R.E.Y. ENGINEERS, INC.
905 SUTTER STREET, SUITE 200
FOLSOM, CA 95630

MAP SCALE
1"=50'

CONTOUR INTERVAL
MINOR CONTOUR INTERVAL = 1'
MAJOR CONTOUR INTERVAL = 5'

SOURCE OF TOPOGRAPHY
AERIAL PHOTOGRAPHY

SECTION TOWNSHIP & RANGE
POR OF SEC. 1, T.9N., R.8E., M.D.M

ASSESSOR'S PARCEL NUMBERS
122-590-003

DATE OF PREPARATION
JUNE 2021

ENGINEERS CERTIFICATE

I HEREBY CERTIFY THAT TO THE BEST OF MY KNOWLEDGE THE LAND DEVELOPMENT KNOWN AS VILLAGE A14 OF THE SERRANO PROJECT WAS DESIGNED AND SURVEYED IN ACCORDANCE WITH THE SPECIFICATIONS AND GUIDELINES ESTABLISHED BY THE COUNTY OF EL DORADO.

DONALD T. McCORMICK R.C.E. #2958 DATE

PHASING PLAN NOTICE

THE FILING OF MULTIPLE FINAL MAPS MAY BE COMPLETED FOR THIS PROJECT. THIS PHASING PLAN IS APPROXIMATE ONLY AND BY PROVIDING THIS NOTICE, THE SUBDIVIDER SHALL NOT BE REQUIRED TO DEFINE THE NUMBER OR CONFIGURATION OF THE PROPOSED MULTIPLE FINAL MAPS. (PER THE SUBDIVISION MAP ACT, 2002 EDITION SECTION 66456.1)

PLANNING COMMISSION:_____
APPROVAL/DENIAL DATE:_____
BOARD OF SUPERVISORS:_____
APPROVAL/DENIAL DATE:_____

EXISTING/PROPOSED ZONING
EL DORADO HILLS SPECIFIC PLAN, R1-PD

PARK AND RECREATION
EL DORADO HILLS COMMUNITY SERVICES DISTRICT

SCHOOL DISTRICT
K THRU 8 - BUCKEYE UNION
9 THRU 12 - EL DORADO UNION

WATER, RECYCLED WATER SUPPLY & SEWAGE DISPOSAL
EL DORADO IRRIGATION DISTRICT

FIRE PROTECTION
EL DORADO HILLS FIRE DEPARTMENT

PROPOSED USE
51 - SINGLE FAMILY RESIDENTIAL

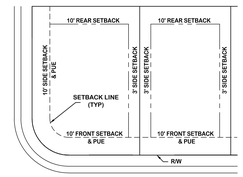
LOT SIZES

MINIMUM LOT SIZE	-	3,760 SF
AVERAGE LOT SIZE	-	4,766 SF
MAXIMUM LOT SIZE	-	10,362 SF

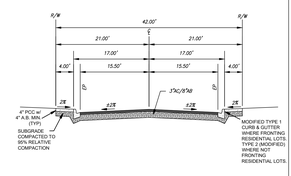
TOTAL AREA

RESIDENTIAL LOTS	5.58 ACRES
RESIDENTIAL STREETS	1.60 ACRES
PUBLIC STREETS	0.66 ACRES
PRIVATE STREETS	0.21 ACRES
LOT A (LANDSCAPE)	0.84 ACRES
LOT B (OPEN SPACE)	1.50 ACRES
LOT C (LANDSCAPE)	0.10 ACRES
LOT D (LANDSCAPE)	0.06 ACRES
LOT E (LANDSCAPE)	0.04 ACRES
LOT F (LANDSCAPE)	0.02 ACRES
LOT G (FUTURE VILLAGE C2)	20.25 ACRES
REMAINDER	4.92 ACRES
TOTAL	35.78 Acres +/-

PROPOSED USE
51 - SINGLE FAMILY RESIDENTIAL
5 - LANDSCAPE LOTS (LOTS A,C,D,E &F)
1 - OPEN SPACE LOT (LOT B)
3 - REMAINDER LOTS
1 - FUTURE VILLAGE C2 (LOT G)

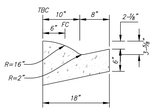


TYPICAL SETBACKS
SCALE: NTS

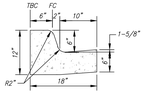


42' RIGHT-OF-WAY
SCALE: N.T.S.

"A" STREET TYP.
"B" STREET TYP.



MODIFIED TYPE 1 CURB & GUTTER
SCALE: 1"=1'



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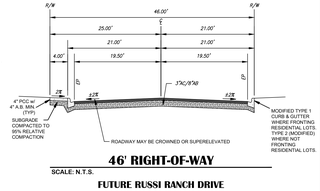

46' RIGHT-OF-WAY
SCALE: N.T.S.

FUTURE RUSSI RANCH DRIVE

PD08-0004/TM08-1464 EXHIBIT G
VILLAGE A-14 TENTATIVE MAP

SERRANO VILLAGE A14

TENTATIVE SUBDIVISION MAP
PORTION OF LOT B (SUB. J-21)
EL DORADO COUNTY, CALIFORNIA
JUNE 2021





VICINITY MAP
NOT TO SCALE

0 25' 50' 100'
SCALE IN FEET
MINOR CONTOUR INTERVAL = 1'
MAJOR CONTOUR INTERVAL = 5'

SERRANO

905 Sutter Street, Suite 200 | folsom, CA 95630
(916) 985-9040 | Fax (916) 985-9131
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ENGINEER
R.E.Y. ENGINEERS, INC.
905 SUTTER STREET, SUITE 200
FOLSOM, CA 95630

MAP SCALE
1"=50'

CONTOUR INTERVAL
MINOR CONTOUR INTERVAL = 1'
MAJOR CONTOUR INTERVAL = 5'

SOURCE OF TOPOGRAPHY
AERIAL PHOTOGRAPHY

SECTION TOWNSHIP & RANGE
POR OF SEC. 1, T.9N., R.8E., M.D.M

ASSESSOR'S PARCEL NUMBERS
122-590-003

DATE OF PREPARATION
JUNE 2021

ENGINEERS CERTIFICATE
I HEREBY CERTIFY THAT TO THE BEST OF MY KNOWLEDGE THE LAND DEVELOPMENT KNOWN AS VILLAGE A14 OF THE SERRANO PROJECT HAS BEEN DESIGNED IN CONFORMANCE IN ACCORDANCE WITH THE SPECIFICATIONS AND GUIDELINES ESTABLISHED BY THE COUNTY OF EL DORADO.

DONALD T. MACDERMOK R.C.E. #2958 DATE

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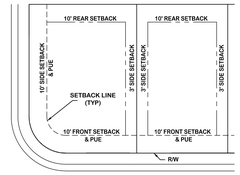
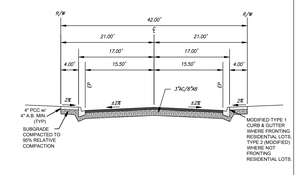
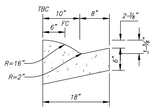


TYPICAL SETBACKS
SCALE: NTS

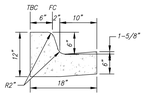


42' RIGHT-OF-WAY
SCALE: N.T.S.

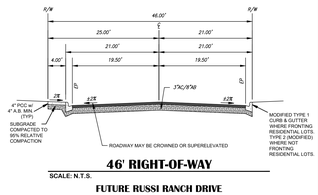
"A" STREET TYP.
"B" STREET TYP.



MODIFIED TYPE 1 CURB & GUTTER
SCALE: 1"=1'



MODIFIED TYPE 2 CURB & GUTTER
SCALE: 1"=1'



46' RIGHT-OF-WAY
SCALE: N.T.S.

FUTURE RUSSI RANCH DRIVE

THIS MAP IS INTENDED AS A GENERAL DESCRIPTION OF LAND USE AND LOT LOCATIONS. FURTHER SUBDIVISION, RE-SUBDIVISION OR LOT LINE ADJUSTMENTS MAY AFFECT LOT SIZES AND OTHER CONFIGURATIONS SHOWN.

PD08-0004/TM08-1464 EXHIBIT H Exhibit Map

-SERRANO-

El Dorado County, California

El Dorado Hills Specific Plan
Project Status
JANUARY 2020

SERRANO ASSOCIATES, LLC
Developer

SCALE: 1"=600'

NORTH

LEGEND:

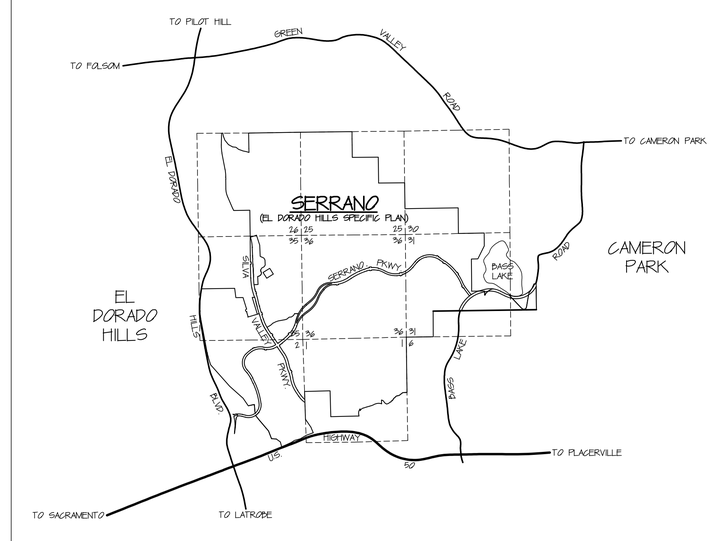
- J3 ... VILLAGE DESIGNATION
- ... EXISTING TRAIL
- ... PROPOSED TRAIL (SUBJECT TO CHANGE)
- ... NATURAL TRAIL
- ... COMPLETED LOTS
- ... EXISTING SCHOOL/FIRE STATION (F.S.)
- ... FUTURE SCHOOL SITES
- ... FUTURE PARKS
- ... COMPLETED PARKS
- ... GOLF COURSE/VILLAGE GREEN
- ... OPEN SPACE
- ... WETLANDS/PONDS
- ... COMPLETED PUBLIC ROADS
- ... COMPLETED PRIVATE VILLAGE ROADS
- ... DEVELOPED COMMERCIAL OR OFFICE
- ... COUNTY LOT
- ... APPROVED TENTATIVE MAP
- ... TENTATIVE MAP IN PROCESS

RESIDENTIAL LOT SUMMARY			
VILLAGE	EXISTING	PLANNED	TOTAL
Village A	322	51	373
Village B	196	0	196
Village C	377	50	427
Village D1	369	135	504
Village D2	283	0	283
Villege E	696	0	696
Village F	257	0	257
Village G/J4	246	0	246
Village H	267	0	267
Village I	218	0	218
Village J3	134	41	175
Village J6/J7	148	65	213
Village K1/K2	194	47	241
Village K3/K4	148	0	148
Village K5/K6	282	0	282
Village L	110	0	110
Village M	118	48	166
TOTAL:	4,365	437	4,802

R.E.Y. ENGINEERS, INC.
Civil Engineers | Land Surveyors | LiDAR
905 Sutter Street, Suite 200 Folsom, CA 95630
Phone: (916) 366-3040 Fax: (916) 366-3303
www.reyengineers.com

IN MEMORY OF:

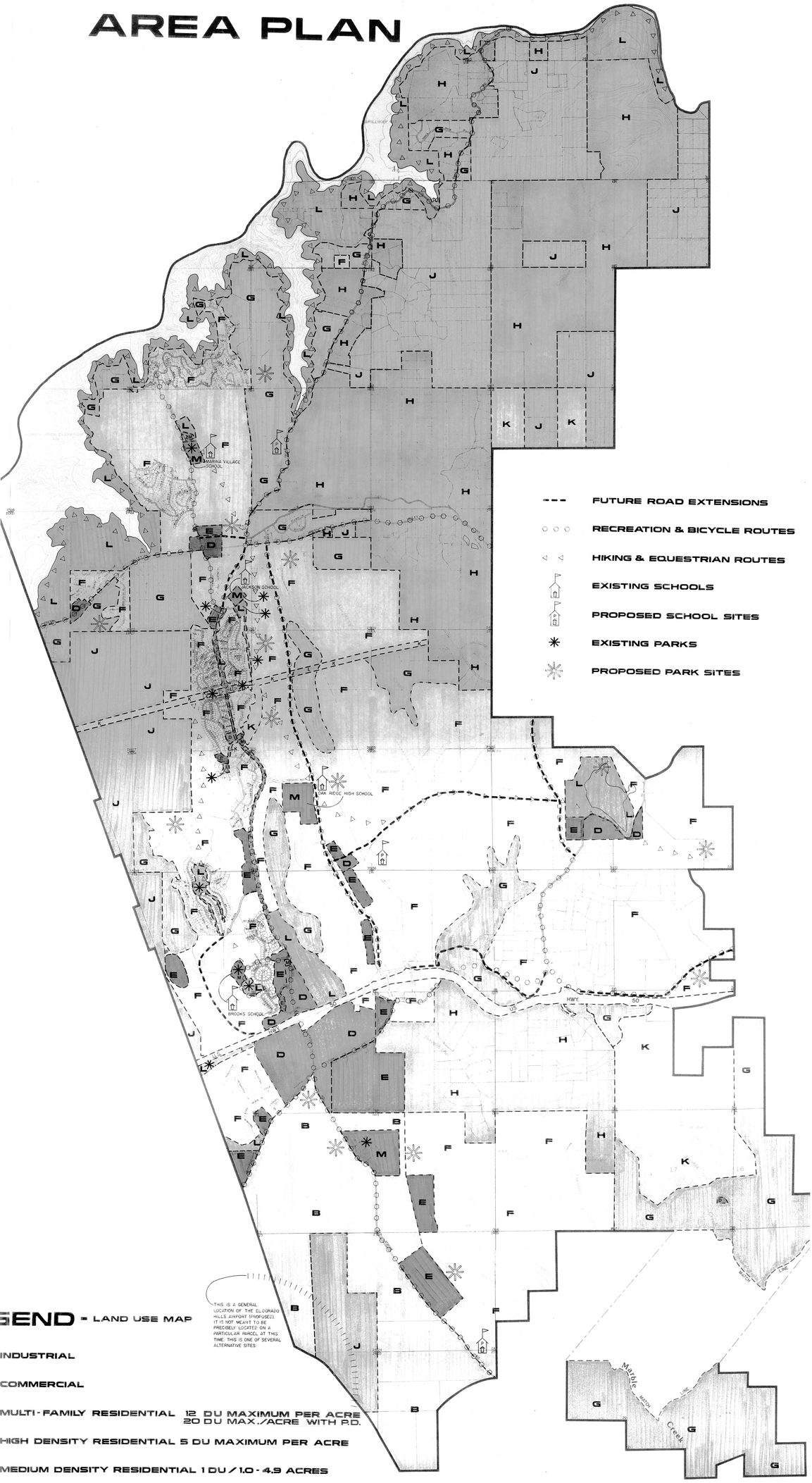
GENE E. THORNE & ASSOCIATES, INC.
ENGINEERS, PLANNERS, SURVEYORS



VICINITY MAP
NOT TO SCALE

PD08-0004/TM08-1464 EXHIBIT I

EL DORADO HILLS SALMON FALLS AREA PLAN



LEGEND - LAND USE MAP

- INDUSTRIAL
- COMMERCIAL
- MULTI-FAMILY RESIDENTIAL 12 DU MAXIMUM PER ACRE, 20 DU MAX./ACRE WITH P.D.
- HIGH DENSITY RESIDENTIAL 5 DU MAXIMUM PER ACRE
- MEDIUM DENSITY RESIDENTIAL 1 DU / 1.0 - 4.9 ACRES
- LOW DENSITY RESIDENTIAL 1 DU / 5.0 - 9.9 ACRES
- RURAL RESIDENTIAL AGRICULTURE 1 DU / 10 - 160 ACRES
- OPEN SPACE / CONSERVATION
- PARKS / RECREATION
- PUBLIC FACILITY

2000 0 2000

SCALE: 1" = 1000'

BASE PREPARED 4-82

ADOPTED DEC. 6, 1983

NORTH

6/1/87

COLOR COPY UPDATES DISCONTINUED 1

EL DORADO COUNTY PLANNING DE
ADVANCE PLANNING DIVI

21-1161 D 19 of 74

THIS MAP IS INTENDED AS A GENERAL DESCRIPTION OF LAND USE AND LOT LOCATIONS. FURTHER SUBDIVISION, RE-SUBDIVISION OR LOT LINE ADJUSTMENTS MAY AFFECT LOT SIZES AND OTHER CONFIGURATIONS SHOWN.

PD08-0004/TM08-1464 EXHIBIT J

Exhibit Map

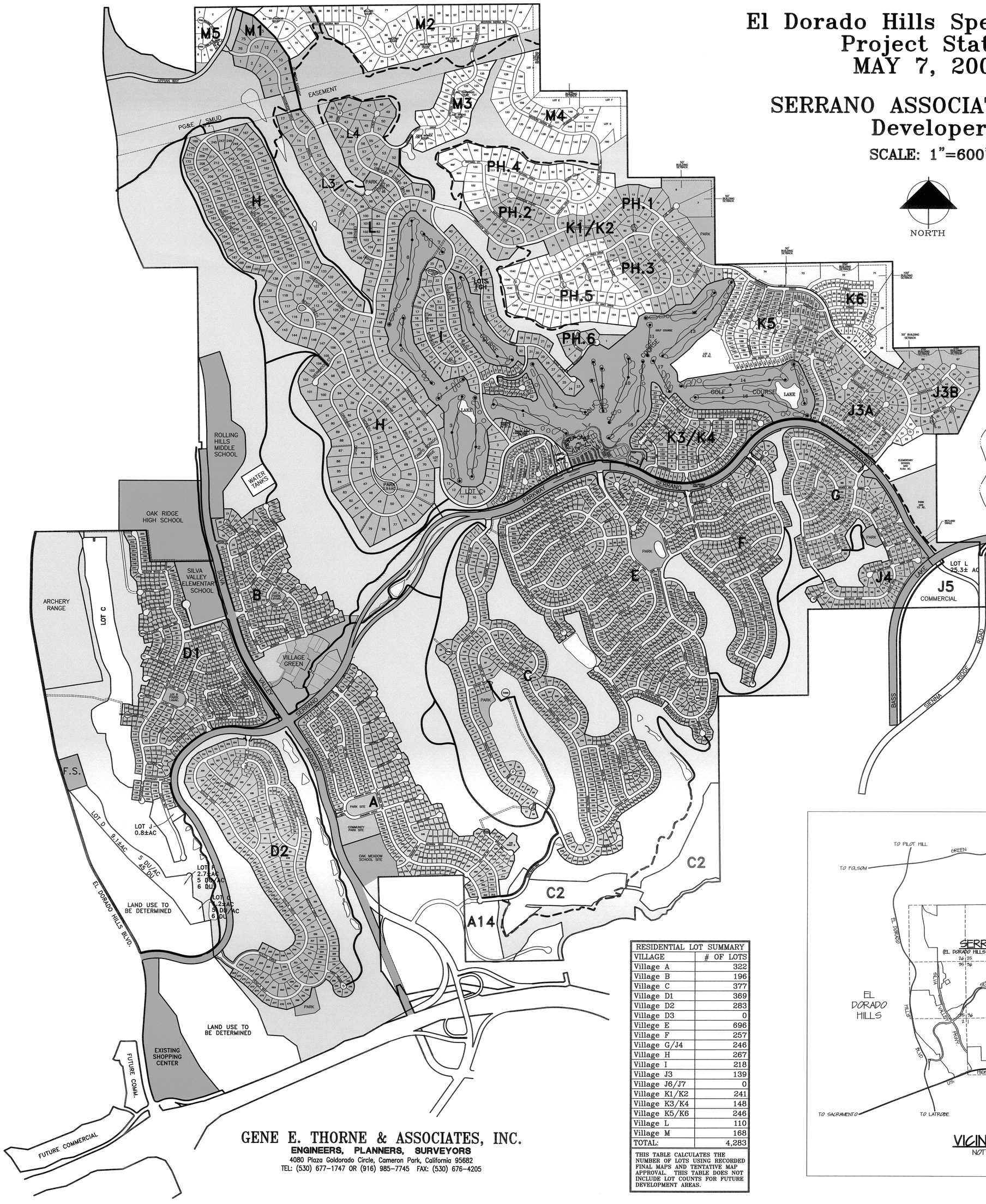
-SERRANO-

El Dorado County, California

El Dorado Hills Specific Plan
Project Status
MAY 7, 2008

SERRANO ASSOCIATES, LLC
Developer

SCALE: 1"=600'

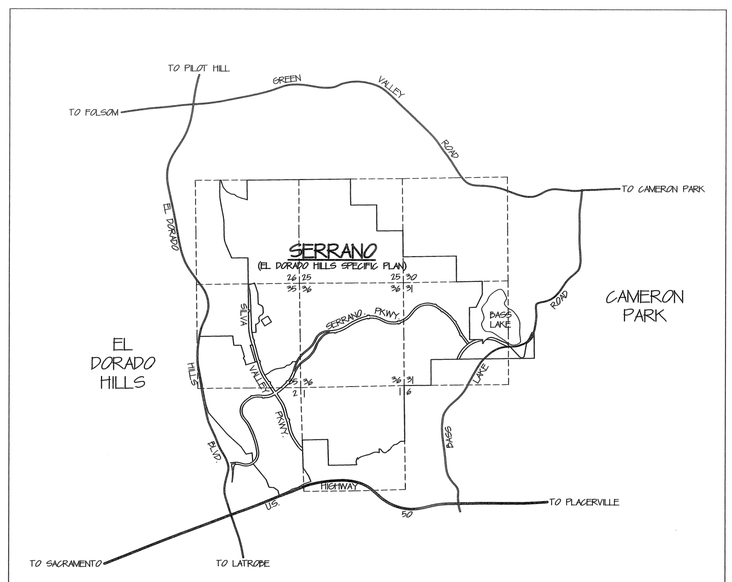


LEGEND:

- J3 ... VILLAGE DESIGNATION
- ... EXISTING PATH
- ... PROPOSED PATH
- ... COMPLETED LOTS
- ... LOTS UNDER CONSTRUCTION
- ... EXISTING SCHOOL/FIRE STATION (F.S.)
- ... FUTURE SCHOOL SITES
- ... FUTURE PARKS
- ... COMPLETED PARKS
- ... GOLF COURSE/VILLAGE GREEN
- ... COMPLETED OPEN SPACE
- ... WETLANDS/PONDS
- ... ARTERIAL ROADS
- ... COMPLETED VILLAGE ROADS
- ... DEVELOPED COMMERCIAL OR OFFICE
- ... COUNTY LOT
- NO COLOR ... PROPOSED DEVELOPMENT AREA

RESIDENTIAL LOT SUMMARY	
VILLAGE	# OF LOTS
Village A	322
Village B	196
Village C	377
Village D1	369
Village D2	283
Village D3	0
Villege E	696
Village F	257
Village G/J4	246
Village H	267
Village I	218
Village J3	139
Village J6/J7	0
Village K1/K2	241
Village K3/K4	148
Village K5/K6	246
Village L	110
Village M	168
TOTAL:	4,283

THIS TABLE CALCULATES THE NUMBER OF LOTS USING RECORDED FINAL MAPS AND TENTATIVE MAP APPROVAL. THIS TABLE DOES NOT INCLUDE LOT COUNTS FOR FUTURE DEVELOPMENT AREAS.



VICINITY MAP
NOT TO SCALE

GENE E. THORNE & ASSOCIATES, INC.
ENGINEERS, PLANNERS, SURVEYORS
4080 Plaza Goldorado Circle, Cameron Park, California 95682
TEL: (530) 677-1747 OR (916) 985-7745 FAX: (530) 676-4205

PD08-0004/TM08-1464 EXHIBIT K
ORIGINAL EL DORADO HILLS SPECIFIC PLAN (EDHSP) ZONING MAP

EL DORADO HILLS

EL DORADO COUNTY,

ZONIN
MA

Green Valley Road

PG&E/SMUD R.O.W.

M
R-20,000-PD

OS

L
R-1/PD

OS

R-1/PD

I
R-1/PD

K
R-1/PD

Silva Valley Parkway

Stonegate Village

W
OS

OS

H
R-1/PD

R-1/PD

Country Club Drive

J
R-1/PD

Harvard Way

S
S-2

R-1/PD

S
S-5

CC
C/PD

R
OS

Bass Lake

Existing High School

Water Tank

F
R-1/PD

G
R-1/PD

B
R-1/PD

S
S-4

E
R-1/PD

S
S-1

J

J

R-1/PD

R-1/PD

OS

D
R-1/PD

VG
C/PD

C
R-1/PD

C/PD

El Dorado Hills Boulevard

Wilson Blvd.

D
R-1/PD

A
R-1/PD

OS

OS

C
R-20,000
PD

D
R-1/PD

OS

P

S
S-3

OS

Q

Bass Lake Road

Existing Golf Course

NO ZONING CHANGE

US Highway 50

US Highway 50

Latrobe Road

T
CG/PD

U
CG/PD

White Rock Road

JULY 18, 1988

0 500 1000 1500 2000 2500

LEGEND

AE	Agriculture Preserve
CG/PD	General Commercial District/PD Ov
C/PD	Commercial/Planned Development
OS	Open Space
R-1/PD	One-Family Residential/Plan Developn
R-20,000	One-Half Acre Residential District
RM	Multiple Family Residential

SITE INFORMATION

Village	Land Use	Acres	Zoning
A	RESIDENTIAL	151	R-1/PD
B	RESIDENTIAL	53	R-1/PD
C	RESIDENTIAL	252	R-1/PD/ R-20,000
D	RESIDENTIAL	250	R-1/PD
E	RESIDENTIAL	109	R-1/PD
F	RESIDENTIAL	107	R-1/PD
G	RESIDENTIAL	192	R-1/PD
H	RESIDENTIAL	160	R-1/PD
I	RESIDENTIAL	134	R-1/PD
J	RESIDENTIAL	117	R-1/PD
K	RESIDENTIAL	236	R-1/PD
L	RESIDENTIAL	25	R-1/PD
M	RESIDENTIAL	148	R-20,000
J	COMMERCIAL	45	C/PD

Zoning		Land Use	Acres
R-1/PD	S-1, S-2	JR. HIGH SCHOOL	36
R-1/PD	S-3, S-4, S-5	ELEMENTARY SCHOOL	24
R-1/PD/ R-20,000	T	COMMERCIAL	126
R-1/PD	U	COMMERCIAL	130
R-1/PD	V		7
R-1/PD	GC	GOLF COURSE	
R-1/PD		-NORTH	167
		-SOUTH	203
		CIRCULATION	139
	OS	OPEN SPACE (includes ⅓ church sites)	808
	VG	VILLAGE GREEN	27

Additional Lands Within Specific Plan Area

Zoning			Acres
R-1/PD	P		53
R-1/PD	Q		27
CG/PD	R	OPEN SPACE/ RECREATION	157
CG/PD NO CHANGE	W	OPEN SPACE	13
		TOTALS	3896
R-1/PD			
R-1/PD/C/PD			
OS			
C/PD			

Land Planner

Anthony M. Guzzardo
and Associates, Inc.
836 Montgomery Street
San Francisco California

EL DORADO HILLS COMMUNITIES

An Anthony Mansour/
RDI Development
3864 Park Drive, Suite 204
El Dorado Hills, California

PD08-0004/TM08-1464 EXHIBIT L
ORIGINAL VILLAGE A TENTATIVE MAP, 1992

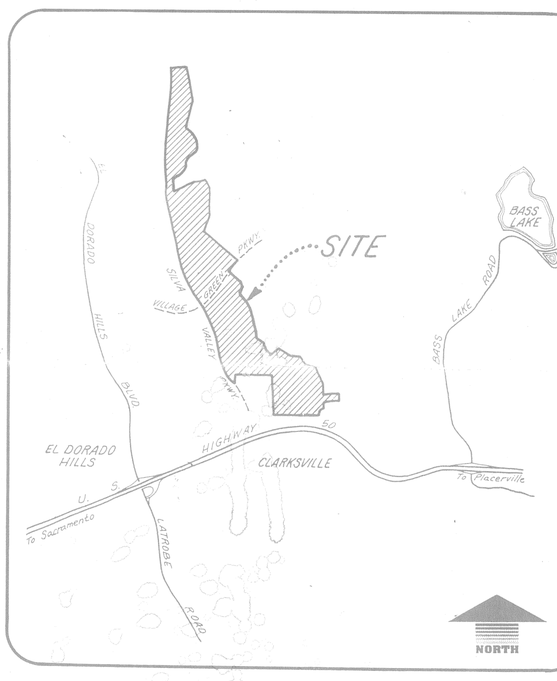
VESTING TENTATIVE MAP

VILLAGE A, VILLAGE B AND VILLAGE GREEN

EL DORADO HILLS SPECIFIC PLAN

EL DORADO COUNTY, CA

JUNE 1992



LOCATION MAP
NO SCALE

OWNER OF RECORD:
EL DORADO HILLS DEVELOPMENT CO., INC.
991 GOVERNOR DRIVE, SUITE 101
EL DORADO HILLS, CA 95630

NAME OF APPLICANT:
SAME AS OWNER

MAP PREPARED BY:
GENE E. THORNE & ASSOCIATES, INC.
3031 ALHAMBRA DRIVE, SUITE 101
CAMERON PARK, CA 95682

LAND PLANNER:
ANTHONY M. GUZZARDO & ASSOCIATES
836 MONTGOMERY STREET
SAN FRANCISCO, CA 94133

SCALE:
1" = 200'

CONTOUR INTERVAL:
2'

SOURCE OF TOPOGRAPHY:
AERIAL PHOTOGRAPHY

SECTION, TOWNSHIP, AND RANGE:
PORTIONS OF SECTIONS 1 & 2, T. 9 N, R. 8 E., M.D.M.
PORTIONS OF SECTIONS 26, 35 & 36, T.10 N, R. 8 E., M.D.M.

ASSESSOR'S PARCEL NUMBERS:
107:010:5, 6, & 27; 111:020:16, 30, 31, & 48

PRESENT ZONING:
R1-PD & C-PD

PROPOSED ZONING:
R1-PD & C-PD

TOTAL AREA:
274.4 ACRES (EXCLUDING VILLAGE GREEN PARKWAY [3.7 ACRES] & LOTS

TOTAL NUMBER OF LOTS:
440 SINGLE FAMILY DETACHED LOTS, 70 MANOR HOME LOTS, LOTS A THROUGH J, AND LOTS A-A THROUGH F-F

MINIMUM LOT SIZE (RESIDENTIAL):
SINGLE FAMILY DETACHED LOTS = 9,375 SQUARE FOOT (S.F.) MINIMUM
MANOR HOME LOTS = APPROX. 2,200 S.F. MINIMUM (TOTAL PAD AREA

PROPOSED WATER SUPPLY:
EL DORADO IRRIGATION DISTRICT

PROPOSED SEWAGE DISPOSAL:
EL DORADO IRRIGATION DISTRICT

FIRE PROTECTION DISTRICT:
EL DORADO HILLS FIRE DEPARTMENT

DATE OF PREPARATION:
JUNE 1992 *REVISED OCT. 1992*

PHASE BREAKDOWN

PHASE	ACRES	LOTS
I	33.7 ±	1-103 + LOT A
II	24.3 ±	104-176 + LOTS A-A, B-B & C-C
III	24.9 ±	177-248 + LOTS D-D & E-E
IV	34.7 ±	249-332 + LOT B
V	20.7 ±	333-378
VI	35.8 ±	379-478 + LOT C
VII	73.6 ±	479-510 + LOTS D, E, F, G & H
IIX	26.7 ±	LOT I (VILLAGE GREEN)

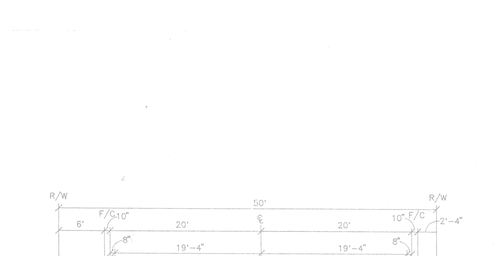
274.4 ± ACRES TOTAL*

*Lots J & F-F not included [24.7 ± Ac.]



COLLECTOR STREETS
NOT TO SCALE

RESIDENTIAL STREET
NOT TO SCALE



RESIDENTIAL STREETS & CUL-DE-SACS
NOT TO SCALE

NOTES
THE SETBACKS FOR ALL SINGLE FAMILY DETACHED LOTS SHALL BE AS PER EL DORADO COUNTY ZONING ORDINANCE FOR R1 ZONING (EXCEPT THOSE LOTS WHICH ABUT OPEN SPACE). THOSE LOTS WHICH ABUT OPEN SPACE SHALL HAVE 20' ADDED TO THE REAR SETBACKS. SETBACKS FOR MANOR HOME LOTS SHALL BE AS PER EL DORADO COUNTY ZONING ORDINANCE FOR RM ZONING.

PRIVATE OPEN SPACE LINE (20' MINIMUM DISTANCE FROM PROPERTY LINE) DESIGNATES THAT PORTION OF LOTS ABUTTING PUBLIC NATURAL OPEN SPACE WHICH WILL PROVIDE BUFFER OF PUBLIC OPEN SPACE FROM DEVELOPMENT. APPLICABLE BUILDING SETBACKS (YARD AREA) SHALL BE MEASURED FROM THE PRIVATE OPEN SPACE LINE.

NORTH

200 400 600 800
SCALE IN FEET

SHEET INDEX

SHEET NO.	DESCRIPTION
1 OF 9	VESTING TENTATIVE MAP
2 OF 9	DEVELOPMENT PLAN
3 OF 9	SLOPE STUDY
4 OF 9	GRADING PLAN (VILLAGE A)
5 OF 9	GRADING PLAN (VILLAGE B)
6 OF 9	DRAINAGE PLAN (VILLAGE A)
7 OF 9	DRAINAGE PLAN (VILLAGE B)
8 OF 9	WATER AND SEWER PLAN (VILLAGE A)
9 OF 9	WATER AND SEWER PLAN (VILLAGE B)

ENGINEER'S CERTIFICATE
I HEREBY CERTIFY THAT TO THE BEST OF MY KNOWLEDGE THE LAND DEVELOPMENT KNOWN AS **VILLAGE A, VILLAGE B AND VILLAGE GREEN** HAS BEEN ESTABLISHED IN ACCORDANCE WITH THE SPECIFICATIONS AND GUIDELINES ESTABLISHED BY THE COUNTY OF EL DORA

Warren R Pesses
WARREN R. PESSES RCE 27237

6-15-92
DATE

SHEET [

PREPARED BY:
GENE E. THORNE & ASSOCI
3031 ALHAMBRA DRIVE SUITE 101, CAMERON PARK, CA 956
(916) 622-8524 ● 677-1747 ● 985-7745

FILE COPY

TM 91-1242

TENTATIVE MAP
SERRANO — VILLAGE "A"
COUNTY OF EL DORADO , CALIFORNIA

SCALE: 1" = 100'

100 50 0 100 200
SCALE IN FEET

R.E.Y. ENGINEERS, INC.
OCTOBER 1998



OWNER OF RECORD
SERRANO ASSOCIATES
4525 SERRANO PARKWAY
EL DORADO HILLS, CA. 95762

APPLICANT
SERRANO ASSOCIATES
4525 SERRANO PARKWAY
EL DORADO HILLS, CA. 95762

ENGINEER
R.E.Y. ENGINEERS, INC.
3222 RAMOS CIRCLE
SACRAMENTO, CA. 95827

SCALE
1" = 100'

CONTOUR INTERVAL
TWO FEET

SOURCE OF TOPOGRAPHY
RADMAN AERIAL SURVEYS

SECTION, TOWNSHIP & RANGE
PORTION OF SECTIONS 1 & 2, T9N, R8E, M.D.M.
PORTION OF SECTIONS 35 & 36, T10N, R8E, M.D.M.

ASSESSOR'S PARCEL NUMBERS
111-650-02

PRESENT ZONING
R-1 PD
OPEN SPACE

PROPOSED ZONING
R-1 PD
OPEN SPACE

TOTAL AREA
182 +/- ACRES

TOTAL NUMBER OF LOTS

S.F. RESIDENTIAL	299
LANDSCAPE LOTS (LOTS A-G)	7
NEIGHBORHOOD PARK	1
SCHOOL / FUTURE SUBDIVISION (PH. 13 & 14)	2
OPEN SPACE	1

WATER SUPPLY
EL DORADO IRRIGATION DISTRICT

SEWAGE DISPOSAL
EL DORADO IRRIGATION DISTRICT

FIRE PROTECTION
EL DORADO HILLS FIRE DISTRICT

DATE OF PREPARATION
OCTOBER 1, 1998

ENGINEER'S CERTIFICATE
I HEREBY CERTIFY THAT TO THE BEST OF MY KNOWLEDGE THE LAND DEVELOPMENT KNOWN AS SERRANO - VILLAGE "A" HAS BEEN ESTABLISHED IN ACCORDANCE WITH THE SPECIFICATIONS AND GUIDELINES ESTABLISHED BY THE COUNTY OF EL DORADO.

DONALD T. MCCORMICK RCE 42556

PHASING PLAN NOTICE
THE FILING OF MULTIPLE FINAL MAPS WILL BE COMPLETED FOR THIS PROJECT. THIS PHASING PLAN IS APPROXIMATE ONLY AND BY PROVIDING THIS NOTICE, THE SUBDIVIDER SHALL NOT BE REQUIRED TO DEFINE THE NUMBER OR CONFIGURATION OF THE PROPOSED MULTIPLE FINAL MAPS, (PER THE SUBDIVISION MAP ACT, 1996 EDITION, SECTION 66446(J)

LOT SIZES

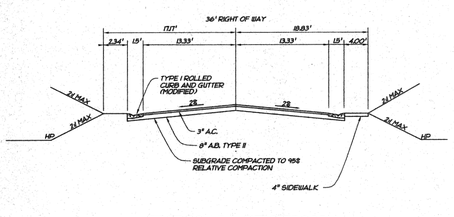
PHASE	MIN PAD SIZE	NUMBER OF LOTS	LOT NO.'S
1	60' X 105'	59	17-58 , 81-96
	65' X 120'	19	97-115
2	65' X 120'	10	116-125
3	65' X 120'	9	126-134
4	65' X 120'	8	135-142
5	65' X 120'	11	143-153
6	65' X 120'	13	154-166
7	65' X 120'	14	167-180
8	65' X 120'	16	181-193 , 250-252
9	65' X 120'	29	194-211 239-245 , 247-250
10	60' X 105'	38	1-15 , 59-80
11	60' X 120'	24	254-277
	65' X 120'	1	246
12	60' X 120'	38	218-233 , 278-299
	65' X 120'	11	212-217 , 234-238
		299	

LOT SUMMARY

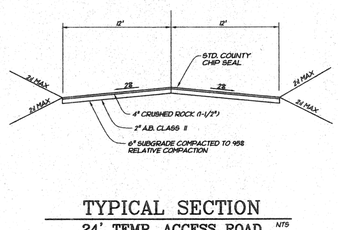
MIN PAD SIZE	NUMBER OF LOTS
60' X 120'	62
65' X 120'	141
60' X 105'	96
	299

FUTURE PHASES

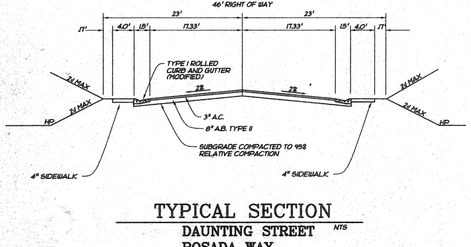
PHASE	MIN PAD SIZE	NUMBER OF LOTS
13	60' X 120'	19
14	65' X 120'	57
		76



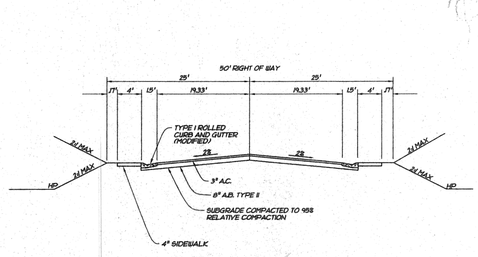
TYPICAL SECTION
GAGE COURT
GUNSTON COURT
JUMEL COURT
SORTWELL COURT
MEYBEES COURT
CLIFFORD COURT
ANNA COURT
BRYCE COURT
APERO COURT



TYPICAL SECTION
24' TEMP. ACCESS ROAD



TYPICAL SECTION
DAUNTING STREET
POSADA WAY
RANTZ WAY
TOBY WAY
DRAGA STREET
DYMAXION STREET
BEVINGER STREET
ANNA WAY



TYPICAL SECTION
GILES TOLL ROAD
ARMSMERE CIRCLE
ENTRADA STREET

PD08-0004/TM08-1464 EXHIBIT M
REVISED VILLAGE A TENTATIVE MAP, 1999

TM 98 1242
REVISED

PD08-0004/TM08-1464 EXHIBIT N
PROJECT PARCEL RECORDED MAP



BASIS OF BEARINGS:

THE BASIS OF BEARINGS FOR THIS SURVEY IS IDENTICAL TO THAT OF SUB. H-78 AND IS GRID NORTH. ROTATE BEARINGS CLOCKWISE 00°35'17" TO OBTAIN TRUE NORTH BEARINGS. ALL DISTANCES ARE GROUND DISTANCES.

REFERENCES:

(1) R.O.S. 16-147
(2) R.O.S. 26-35
(3) R.O.S. 18-97
(4) SUB. H-78
(5) SUB. H-81
(6) SUB. I-46
(7) SUB. I-72
(8) SUB. I-101

LEGEND:

- ○ DIMENSION POINT
- ⌀ SET 5/8" REBAR WITH ALUMINUM CAP STAMPED "L.S. 6866"
- ◎ SET 3/4" IRON PIPE WITH PLASTIC CAP STAMPED "L.S. 6866"
- (R) RADIAL LINE
- ● FOUND MONUMENT AS SHOWN HEREON
- ✖ FOUND 1-1/2" CAPPED IRON PIPE STAMPED "L.S. 6866-1999" UNLESS YEAR OTHERWISE SHOWN
- ◕ FOUND 1-1/2" CAPPED IRON PIPE STAMPED "R.C.E. 20462-1992"
- ◉ FOUND MONUMENT AS SHOWN HEREON
- —x— EXISTING FENCE
- //// NO VEHICULAR ACCESS

NOTES:

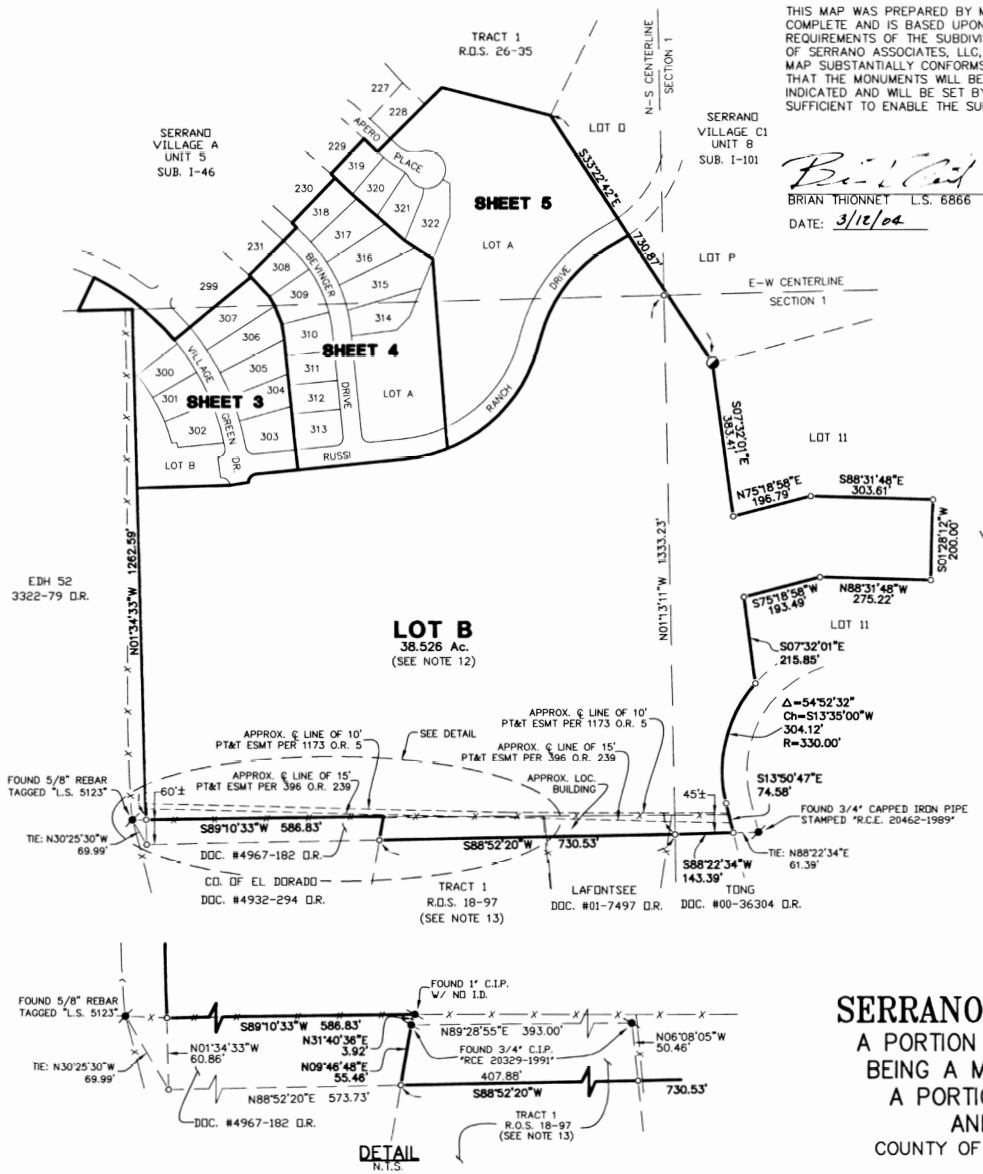
1. THE TOTAL AREA WITHIN THIS SUBDIVISION IS 53.76 ACRES GROSS, CONSISTING OF 23 BUILDING LOTS AND 2 MISCELLANEOUS LOTS.
2. ALL DISTANCES ALONG CURVED LINES ARE CHORD MEASUREMENTS.
3. SIDE LOT LINES ARE MARKED BY CHISELED GASHES ON THE TOP BACK OF CURB OR SIDEWALK ON THE LOT LINE PROJECTION.
4. REAR LOT CORNERS ARE MARKED BY A 5/8" REBAR WITH ALUMINUM CAP STAMPED "L.S. 6866".
5. ALL LOTS SHOWN HEREON ARE SUBJECT TO THE REQUIREMENTS OF THE EL DORADO HILLS SPECIFIC PLAN AND THE PROVISIONS OF THE DEVELOPMENT AGREEMENT ENTERED INTO BETWEEN EL DORADO HILLS INVESTORS, LTD., AND THE COUNTY OF EL DORADO ON JANUARY 3, 1989, RECORDED IN BOOK 3108 AT PAGE 105 O.R.
6. A PRELIMINARY SOILS REPORT WAS PREPARED BY WALLACE-KUHL & ASSOCIATES, REPORT No. 4068.72, DATED NOVEMBER 26, 2003.
7. UNIT 6 IS CONSISTENT WITH TENTATIVE MAP 00-1370 (SERRANO VILLAGE A PHASE 13).
8. LOT A SHOWN HEREON IS NATURAL OPEN SPACE AND SHALL BE OWNED, MAINTAINED AND ADMINISTERED AS CONTEMPLATED IN THE CC&R'S.
9. LOCATION OF EASEMENTS PER 84 O.R. 400 AND 133 O.R. 58 ARE NOT DISCLOSED OF RECORD.
10. THE LAND SHOWN HEREON IS HEREBY MERGED AND RESUBDIVIDED. THE FOLLOWING PUBLIC STREETS AND/OR EASEMENTS ARE HEREBY ABANDONED PURSUANT TO SECTION 66499.20-1/2 OF THE GOVERNMENT CODE:
    A. THAT PORTION OF LOT R INCLUDING THE ROAD EASEMENT AND PUBLIC UTILITY EASEMENT PER SUB. I-46 AS SHOWN HEREON (SEE SHEET 3).
11. DOC. #01-74587 O.R. IS AN EASEMENT GRANTED TO THE SERRANO EL DORADO OWNER'S ASSOCIATION AND IS LOCATED WITHIN LOT R SHOWN HEREON.
12. LOT B SHOWN HEREON IS FOR FINANCING PURPOSES ONLY.
13. ROTATE BEARINGS SHOWN HEREON COUNTERCLOCKWISE 00°03'04" TO MATCH THOSE SHOWN ON R.O.S. 18-97.

SURVEYOR'S STATEMENT:

THIS MAP WAS PREPARED BY ME OR UNDER MY DIRECTION, THE SURVEY IS TRUE AND COMPLETE AND IS BASED UPON A FIELD SURVEY IN CONFORMANCE WITH THE REQUIREMENTS OF THE SUBDIVISION MAP ACT AND LOCAL ORDINANCE AT THE REQUEST OF SERRANO ASSOCIATES, LLC, IN NOVEMBER, 2003. I HEREBY STATE THAT THIS FINAL MAP SUBSTANTIALLY CONFORMS TO THE CONDITIONALLY APPROVED TENTATIVE MAP AND THAT THE MONUMENTS WILL BE OF THE CHARACTER AND WILL OCCUPY THE POSITIONS INDICATED AND WILL BE SET BY MARCH, 2005 AND THAT SAID MONUMENTS WILL BE SUFFICIENT TO ENABLE THE SURVEY TO BE RETRACED.

BRIAN THIONNET L.S. 6866
DATE: 3/12/04

PROFESSIONAL LAND SURVEYOR
BRIAN THIONNET
Exp. 9-30-04
No. 6866
STATE OF CALIFORNIA



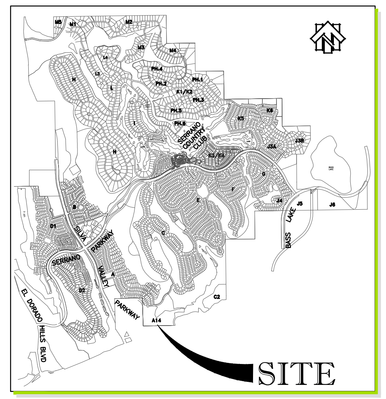
PLAT OF
SERRANO VILLAGE A - UNIT 6
A PORTION OF SEC. 1, T.9N., R.8E., M.D.M.
BEING A MERGER AND RESUBDIVISION OF
A PORTION OF LOT 7 OF SUB. H-78
AND LOT R OF SUB. I-46
COUNTY OF EL DORADO, STATE OF CALIFORNIA
MARCH 2004
R. E. Y. ENGINEERS, Inc.

SERRANO VILLAGE A14

TENTATIVE WATER, RECLAIMED WATER & SEWER PLAN

EL DORADO COUNTY, CALIFORNIA

JUNE 2021



VICINITY MAP
NOT TO SCALE

0' 25' 50' 100'
SCALE IN FEET
MINOR CONTOUR INTERVAL = 1'
MAJOR CONTOUR INTERVAL = 5'

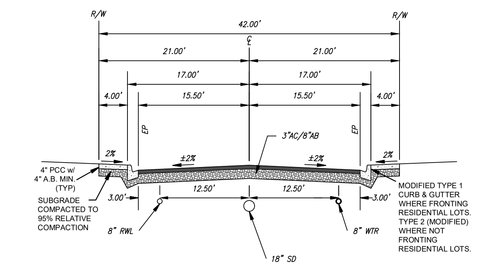
SERRANO

905 Sutter Street, Suite 200, Folsom, CA 95630
P (916) 366-3040 Fax (916) 366-3303
R.E.Y. ENGINEERS, Inc.
Civil Engineers / Land Surveyors

LEGEND

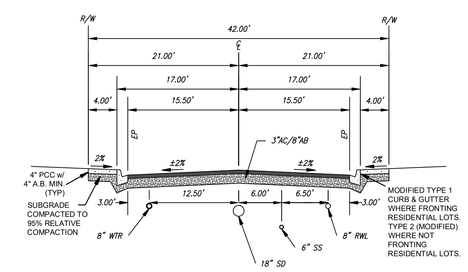
NOT TO SCALE FOR CLARITY

- SS — SEWER LINE
- (S) — SEWER MANHOLE
- STORM DRAIN LINE
- STORM DRAIN INLET
- (D) — STORM DRAIN MANHOLE
- STORM DRAIN OCPI
- STORM DRAIN FLARED END
- W — WATER LINE
- FIRE HYDRANT
- R — RECYCLED WATER LINE



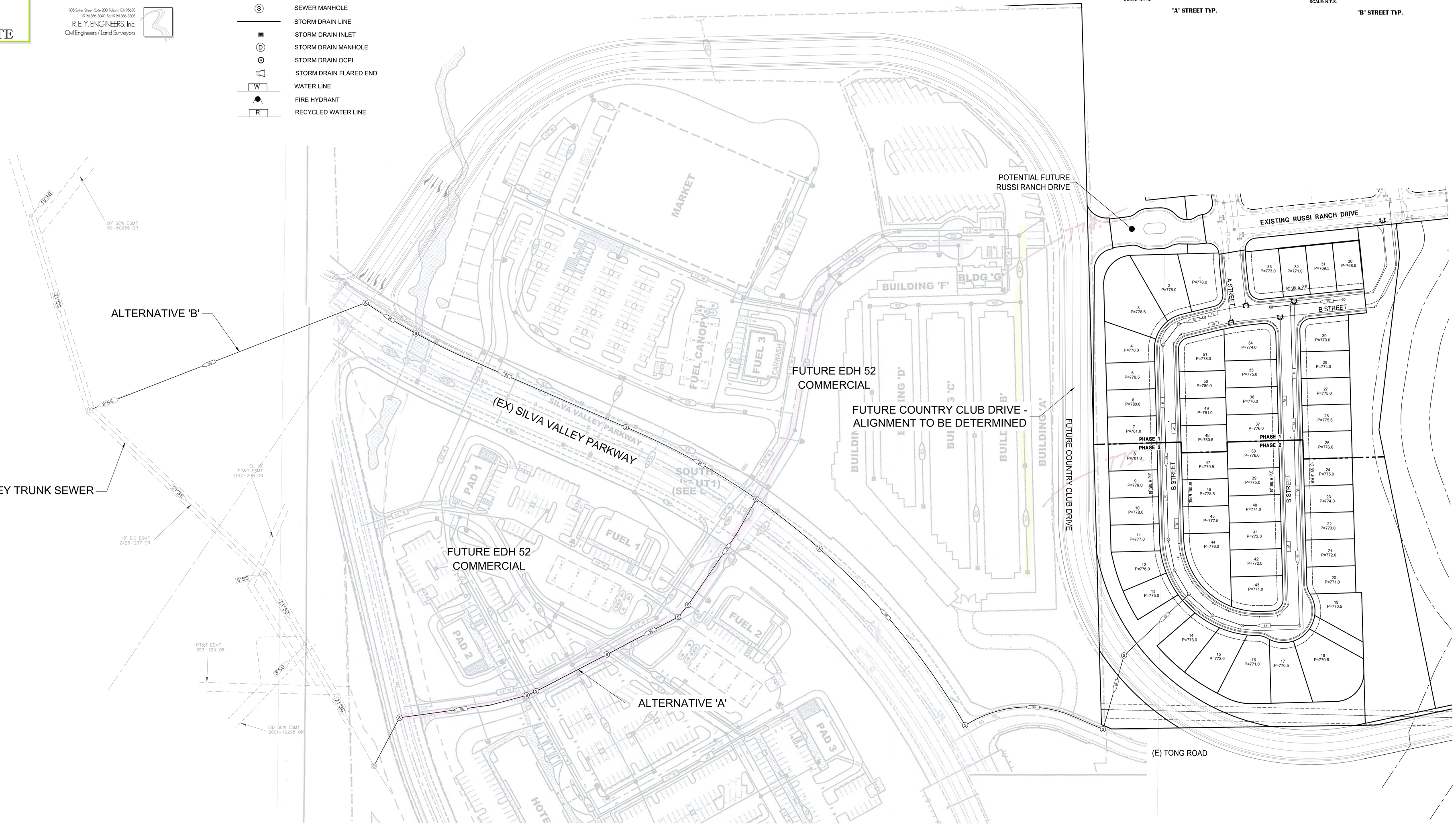
TYPICAL SECTION 42' RIGHT-OF-WAY
SCALE: N.T.S.

"A" STREET TYP.



TYPICAL SECTION 42' RIGHT-OF-WAY
SCALE: N.T.S.

"B" STREET TYP.



PD08-0004/TM08-1464 EXHIBIT O
PRELIMINARY UTILITY PLAN

SERRANO VILLAGE A14

PD08-0004/TM08-1464
EXHIBIT P

TENTATIVE GRADING & DRAINAGE PLAN
EL DORADO COUNTY, CALIFORNIA
JUNE 2021

POTENTIAL FUTURE
RUSSI RANCH DRIVE

EXISTING RUSSI RANCH DRIVE

A STREET

B STREET

FUTURE COUNTRY CLUB DRIVE

(E) TONG ROAD

PHASE 1
PHASE 2

10' SBL & PUE

3.0' MAX RET. WALL

8.0' MAX RET. WALL

DIRT PILES

SD

1 P=778.0
2 P=778.0
3 P=778.5
4 P=778.0
5 P=779.5
6 P=780.0
7 P=781.0
8 P=781.0
9 P=779.0
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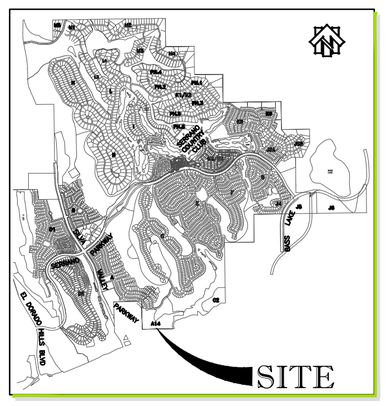
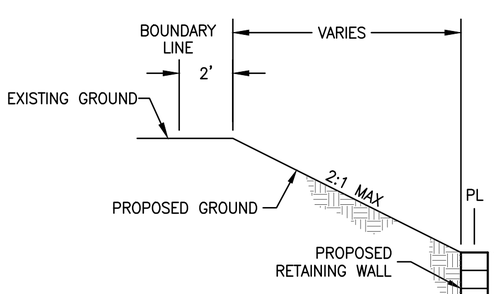


VICINITY MAP
NOT TO SCALE

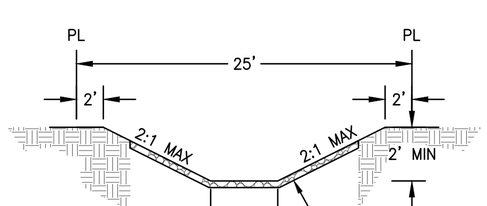
0' 20' 40' 80'
SCALE IN FEET
MINOR CONTOUR INTERVAL = 1'
MAJOR CONTOUR INTERVAL = 5'

SERRANO

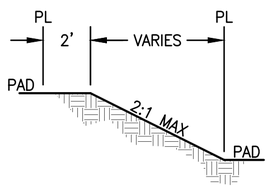
905 Sutter Street, Suite 200 Folsom, CA 95630
(916) 366-3040 Fax (916) 366-3303
R. E. Y. ENGINEERS, Inc.
Civil Engineers / Land Surveyors



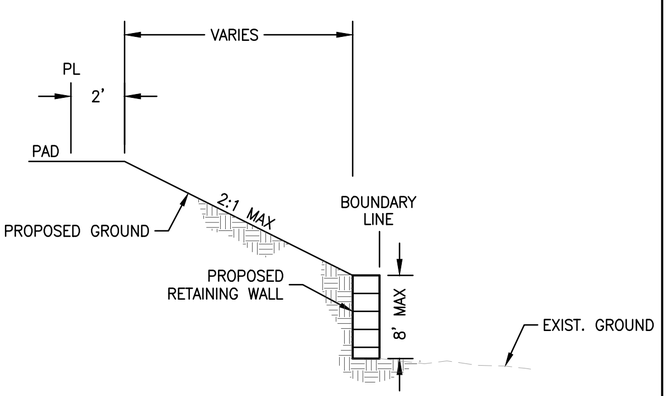
SECTION A-A
NOT TO SCALE



SECTION C-C
OVERLAND RELEASE
NOT TO SCALE



SECTION E-E
TYPICAL SIDE & REAR YARD PAD
GRADING WITH SLOPE
NOT TO SCALE



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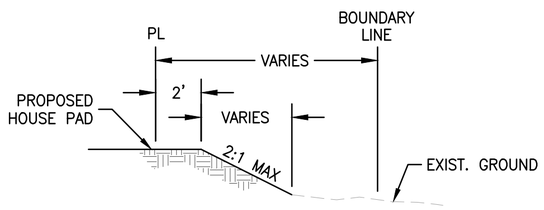

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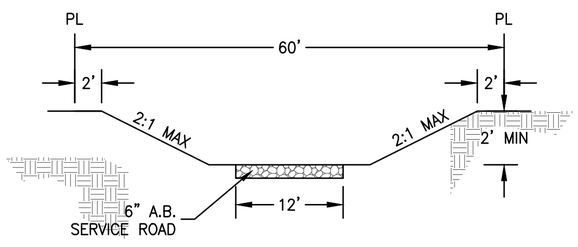

SECTION D-D
SEWER SERVICE ROAD
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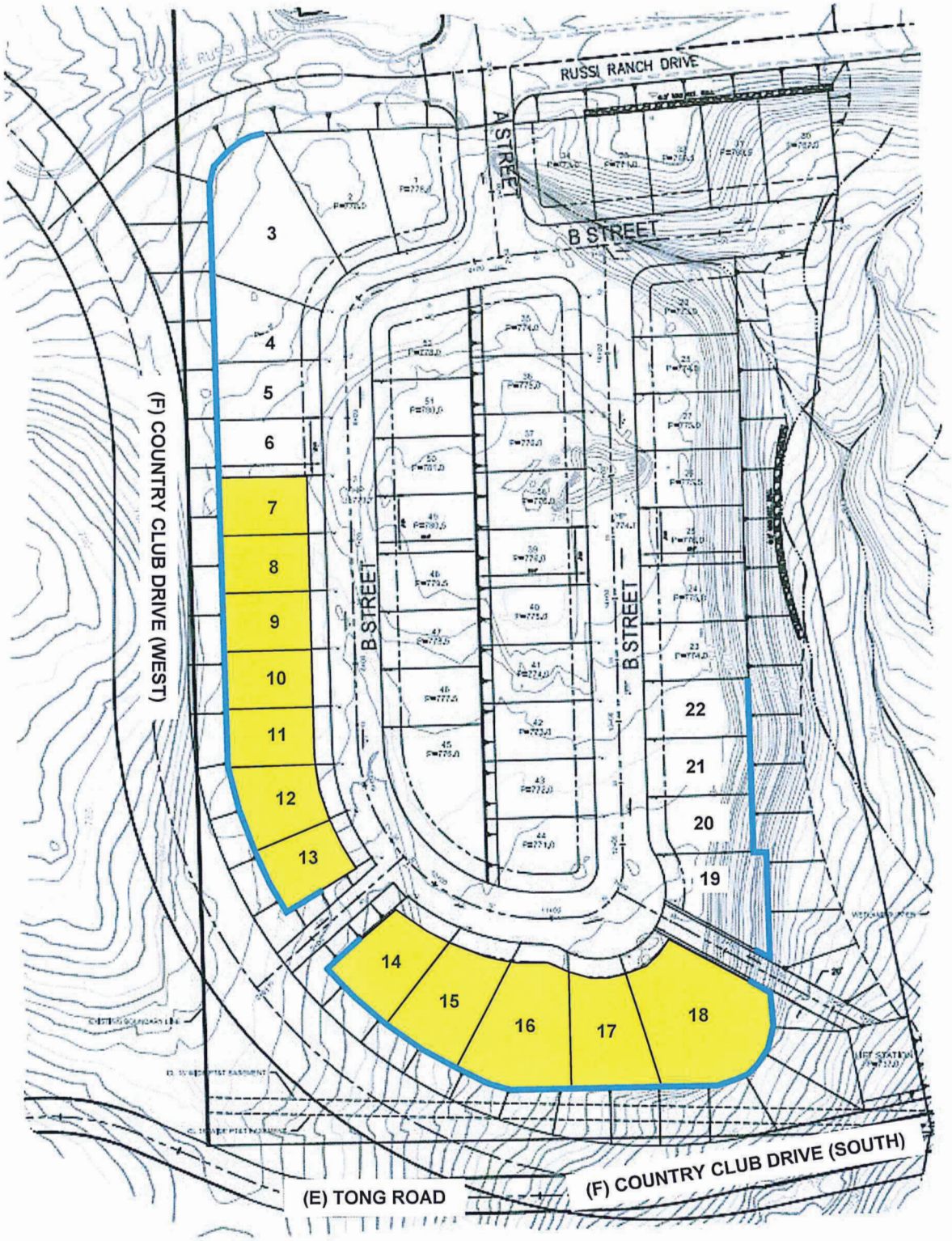
PD08-0004/TM08-1461
EXHIBIT Q - NOISE ASSESSMENT SOUND WALL EXHIBIT



Legend

- Noise Barrier Locations
- STC 32 | Upper-Floors

N

Scale (Feet)

0 40 80

Serrano Village A14 Residential Development
El Dorado County, California

Project Site Plan

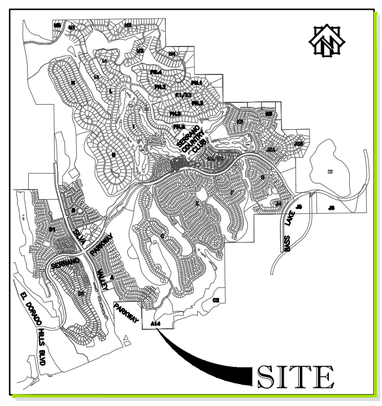
Figure 2

BOLLARD Acoustical Consultants

SERRANO VILLAGE A14

SLOPES MAP
EL DORADO COUNTY, CALIFORNIA
JUNE 2021

PD08-0004/TM08-1464 EXHIBIT R



VICINITY MAP
NOT TO SCALE

POTENTIAL FUTURE
RUSSI RANCH DRIVE

EXISTING RUSSI RANCH DRIVE

FUTURE COUNTRY CLUB DRIVE

(E) TONG ROAD

A STREET

B STREET

B STREET

B STREET

10' SBL & PUE

10' SBL & PUE

10' SBL & PUE

10' SBL & PUE

10' SBL & PUE

3.0' MAX RET. WALL

8.0' MAX RET. WALL

PHASE 1
PHASE 2

PHASE 1
PHASE 2

1 P=778.0
2 P=778.0
3 P=778.5
4 P=778.0
5 P=779.5
6 P=780.0
7 P=781.0
8 P=781.0
9 P=779.0
10 P=778.0
11 P=777.0
12 P=776.0
13 P=775.0
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37 P=776.0
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40 P=774.0
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42 P=772.0
43 P=771.0
44 P=776.0
45 P=777.5
46 P=778.5
47 P=779.5
48 P=780.5
49 P=781.0
50 P=780.0
51 P=778.0

0' 20' 40' 80'
SCALE IN FEET
MINOR CONTOUR INTERVAL = 1'
MAJOR CONTOUR INTERVAL = 5'

SERRANO

905 Sutter Street, Suite 200, Folsom, CA 95630
(916) 366-3040 Fax (916) 366-3303
R. E. Y. ENGINEERS, Inc.
Civil Engineers / Land Surveyors

Slopes Table				
Number	Minimum Slope	Maximum Slope	Area	Color
1	0.00%	10.00%	7.06	
2	10.00%	20.00%	1.31	
3	20.00%	30.00%	0.83	
4	30.00%	Vertical	1.13	

Environmental Noise Assessment

Serrano Village A14 Residential Development

El Dorado County, California

BAC Job # 2018-066

Prepared For:

Parker Development Company

Ms. Andrea Howard
4525 Serrano Parkway
El Dorado Hills, CA 95762

2018 DEC 20 PM 2:40
RECEIVED
PLANNING DEPARTMENT

Prepared By:

Bollard Acoustical Consultants, Inc.

Paul Bollard, President

August 10, 2018

BOLLARD
Acoustical Consultants

Z 08-0002/PD 08-0004
TM 08-1464

Introduction

The Serrano Village A14 Residential Development (project) is located north of U.S. Highway 50 and east of Silva Valley Parkway in El Dorado County, California. The project proposes the construction of 52 single-family residential lots on approximately 9 acres of undeveloped land. The project area and site plan are shown on Figures 1 and 2, respectively.

Due to the proximity of the project site to U.S. Highway 50, Silva Valley Parkway, and the future extension of Country Club Drive, Bollard Acoustical Consultants, Inc. (BAC) was retained by the project applicant to prepare this noise assessment. Specifically, the purposes of this assessment are to quantify noise levels associated with traffic on these roadways, and to compare those noise levels against the applicable El Dorado County standards applicable to new residential uses.

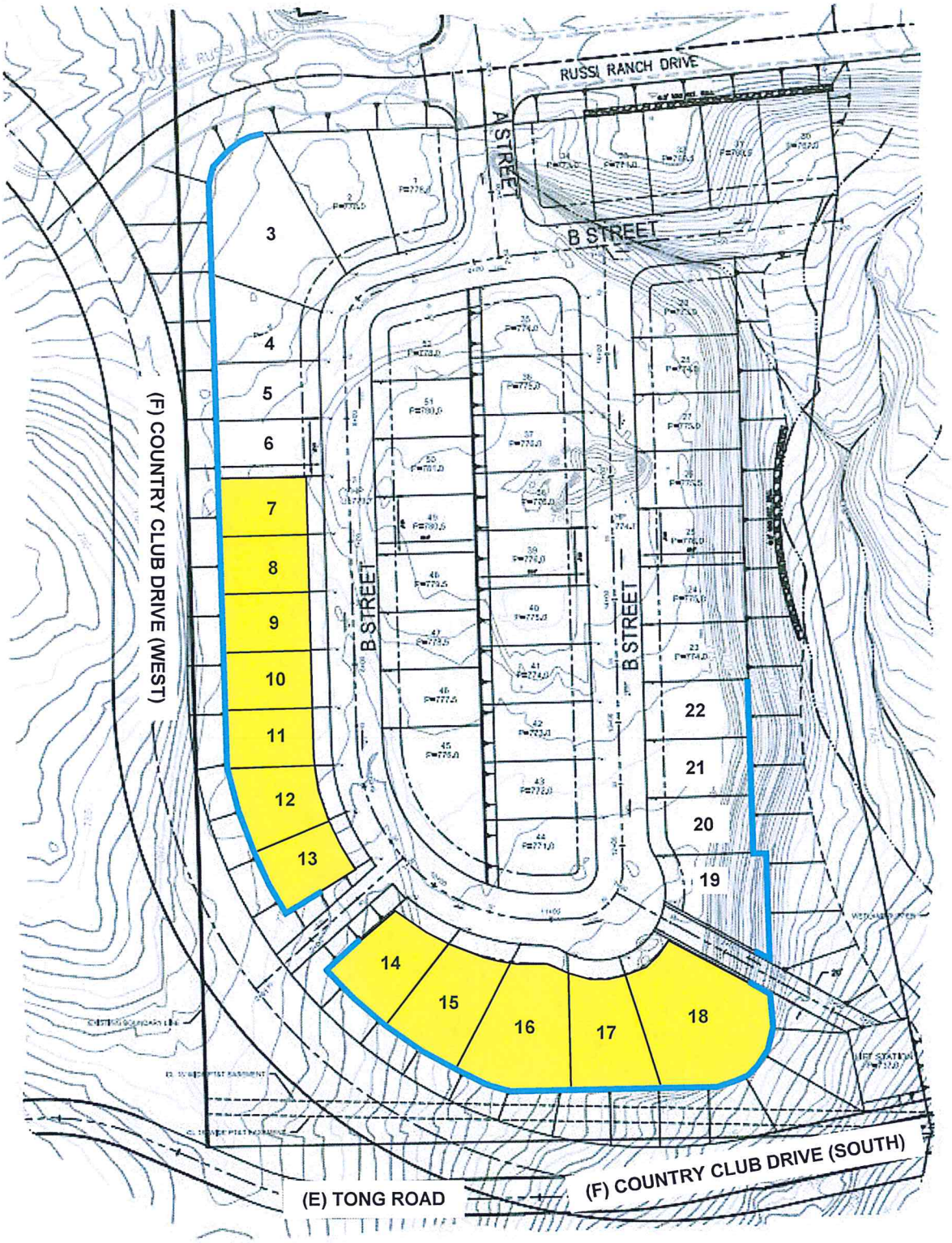
Noise Fundamentals and Terminology

Noise is often described as unwanted sound. Sound is defined as any pressure variation in air that the human ear can detect. If the pressure variations occur frequently enough (at least 20 times per second), they can be heard, and thus are called sound. Measuring sound directly in terms of pressure would require a very large and awkward range of numbers. To avoid this, the decibel scale was devised. The decibel scale allows a million-fold increase in pressure to be expressed as 120 dB. Another useful aspect of the decibel scale is that changes in levels (dB) correspond closely to human perception of relative loudness. Appendix A contains definitions of Acoustical Terminology. Figure 3 shows common noise levels associated with various sources.

The perceived loudness of sounds is dependent upon many factors, including sound pressure level and frequency content. However, within the usual range of environmental noise levels, perception of loudness is relatively predictable, and can be approximated by weighing the frequency response of a sound level meter by means of the standardized A-weighing network. There is a strong correlation between A-weighted sound levels (expressed as dBA) and community response to noise. For this reason, the A-weighted sound level has become the standard tool of environmental noise assessment. All noise levels reported in this section are in terms of A-weighted levels in decibels.

Community noise is commonly described in terms of the "ambient" noise level, which is defined as the all-encompassing noise level associated with a given noise environment. A common statistical tool to measure the ambient noise level is the average, or equivalent, sound level (L_{eq}) over a given time period (usually one hour). The L_{eq} is the foundation of the Day-Night Average Level noise descriptor, L_{dn}, and shows very good correlation with community response to noise.


RUSSI RANCH ROAD
BEVINGER DRIVE
VILLAGE GREEN DRIVE
TONG ROAD
SILVA VALLEY PARKWAY
US 50 OFF-RAMP
US HIGHWAY 50
1
N
Scale (Feet)
0
250
500
Legend
Project Border (Approximate)
Future Extension of Country Club Drive (Approximate)
Long-Term Noise Measurement Location
Serrano Village A14 Residential Development
El Dorado County, California
Project Area
Figure 1
BOLLARD
Acoustical Consultants



Legend

- Noise Barrier Locations
- STC 32 | Upper-Floors

N

Scale (Feet)

0 40 80

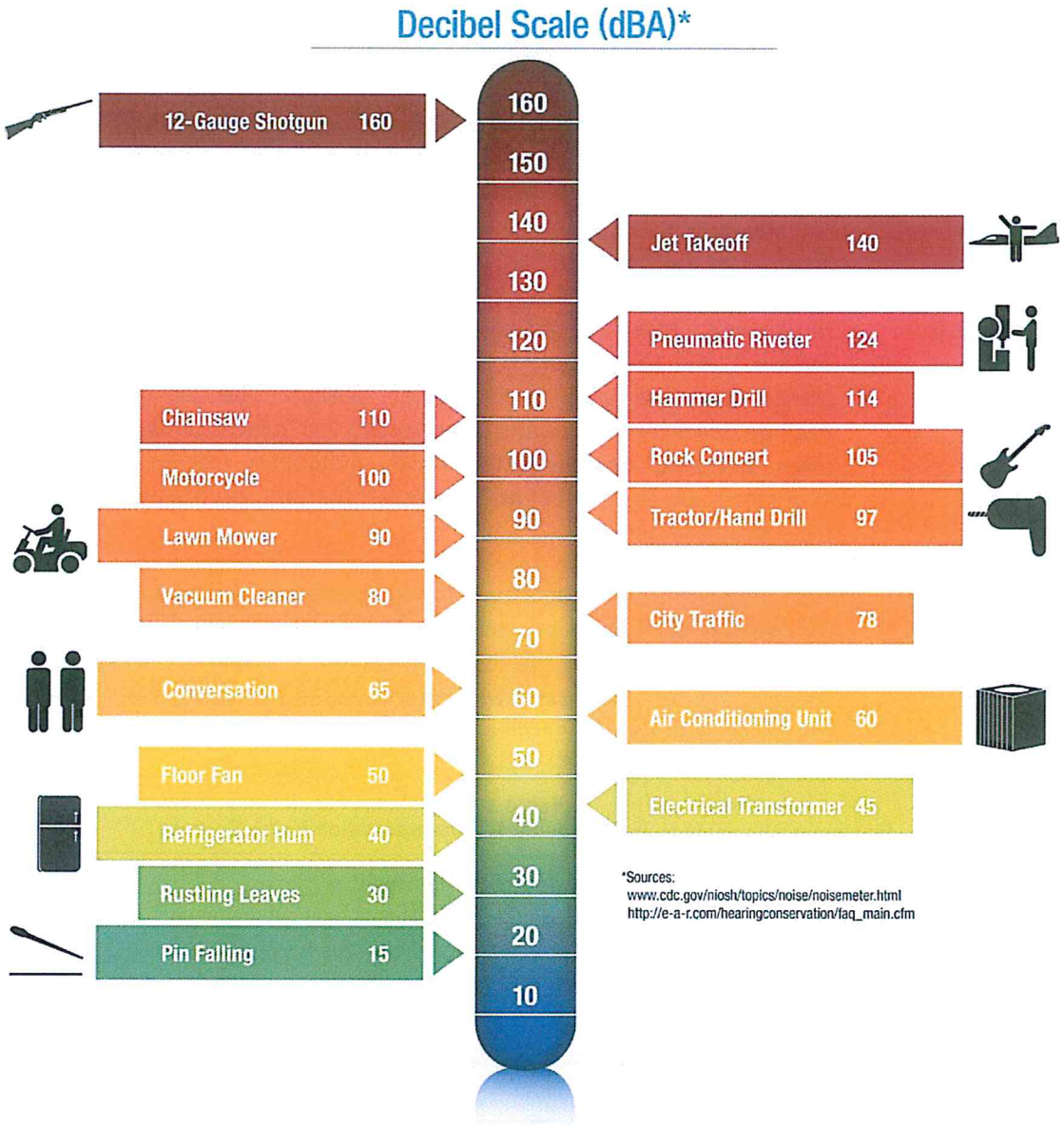
Serrano Village A14 Residential Development
El Dorado County, California

Project Site Plan

Figure 2

BOLLARD Acoustical Consultants

Figure 3
Typical A-Weighted Sound Levels of Common Noise Sources



The Day-Night Average Level (L_{dn}) is based upon the average noise level over a 24-hour day, with a +10 decibel weighing applied to noise occurring during nighttime (10:00 p.m. to 7:00 a.m.) hours. The nighttime penalty is based upon the assumption that people react to nighttime noise exposures as though they were twice as loud as daytime exposures. Because L_{dn} represents a 24-hour average, it tends to disguise short-term variations in the noise environment. L_{dn}-based noise standards are commonly used to assess noise impacts associated with traffic, railroad and aircraft noise sources.

Criteria for Acceptable Noise Exposure

The Noise Element of the El Dorado County General Plan contains policies to ensure that County residents are not subjected to noise beyond acceptable levels. The specific policies which are generally applicable to this project are reproduced below.

Policy 6.5.1.1 Where noise-sensitive land uses are proposed in areas exposed to existing or projected exterior noise levels exceeding the levels specified in Table 1 (GP Table 6-1) or the performance standards of (GP) Table 6-2, an acoustical analysis shall be required as part of the environmental review process so that noise mitigation may be included in the project design.

Policy 6.5.1.3 Where noise mitigation measures are required to achieve the standards of Tables 1 and (GP) Table 6-2, the emphasis of such measures shall be placed upon site planning and project design. The use of noise barriers shall be considered a means of achieving the noise standards only after all other practical design-related noise mitigation measures have been integrated into the project and the noise barriers are not incompatible with the surroundings.

Policy 6.5.1.8 New development of noise sensitive land uses will not be permitted in areas exposed to existing or projected levels of noise from transportation noise sources which exceed the levels specified in Table 1 unless the project design includes effective mitigation measures to reduce exterior noise and noise levels in interior spaces to the levels specified in Table 1.

Table 1
Maximum Allowable Noise Exposure for Transportation Noise Sources

Land Use	Outdoor Activity Areas[1] Ldn/CNEL, dB	Interior Spaces	
		Ldn/CNEL, dB	Leq, dB[2]
Residential	60[3]	45	--
Transient Lodging	60[3]	45	--
Hospitals, Nursing Homes	60[3]	45	--
Theaters, Auditoriums, Music Halls	--	--	35
Churches, Meeting Halls, Schools	60[3]	--	40
Office Buildings	--	--	45
Libraries, Museums	--	--	45
Playgrounds, Neighborhood Parks	70	--	--

Notes:

1 In Communities and Rural Centers, where the location of outdoor activity areas is not clearly defined, the exterior noise level standard shall be applied to the property line of the receiving land use. For residential uses with front yards facing the identified noise source, an exterior noise level criterion of 65 dB L_{dn} shall be applied at the building facade, in addition to a 60 dB L_{dn} criterion at the outdoor activity area. In Rural Regions, an exterior noise level criterion of 60 dB L_{dn} shall be applied at a 100 foot radius from the residence unless it is within Platted Lands where the underlying land use designation is consistent with Community Region densities in which case the 65 dB L_{dn} may apply. The 100-foot radius applies to properties which are five acres and larger; the balance will fall under the property line requirement.

2 As determined for a typical worst-case hour during periods of use.

3 Where it is not possible to reduce noise in outdoor activity areas to 60 dB L_{dn}/CNEL or less using a practical application of the best-available noise reduction measures, an exterior noise level of up to 65 dB L_{dn}/CNEL may be allowed provided that available exterior noise level reduction measures have been implemented and interior noise levels are in compliance with this table.

Existing Ambient Noise Environment at the Project Site

The existing ambient noise level environment at the project site is primarily defined by traffic on U.S. Highway 50, and to a lesser extent by traffic on Silva Valley Parkway and Tong Road. To quantify the existing ambient noise environment at the project site, BAC conducted long-term (48-hour) noise level measurements on the project site from April 21-22, 2018. The noise measurement site is shown on Figure 1. The purpose of the continuous noise level survey was to determine existing traffic noise exposure on the project site in terms of the day/night average level (L_{dn}), and to determine the typical changes in noise environment which occur at the project site over a 24-hour period.

A Larson Davis Laboratories (LDL) Model 820 precision integrating sound level meter was used for the noise level survey. The meter was calibrated before and after use with an LDL Model CAL200 acoustical calibrator to ensure the accuracy of the measurements. The equipment used meets all pertinent specifications of the American National Standards Institute for Type 1 sound level meters (ANSI S1.4). The results of the measurements are shown numerically and graphically in Appendices B and C, and are summarized in Table 2. Photographs of the measurement site are provided in Appendix D.

Table 2
Summary of Long-Term Ambient Noise Monitoring Results
Serrano Village A14 Residential Development – El Dorado Hills, California
April 21-22, 2018

Site[1]	Date	L_{dn}, dB	Average Measured Hourly Noise Levels (dB)					
			Daytime (7 a.m. to 10 p.m.)			Nighttime (10 p.m. to 7 a.m.)		
			L_{eq}	L_{50}	L_{max}	L_{eq}	L_{50}	L_{max}
1	April 21, 2018	59	54	52	68	53	50	66
	April 22, 2018	57	53	51	68	50	47	65
	April 20/23, 2018	60	55	54	68	53	50	65

Notes:
[1] Long-term ambient noise monitoring site is identified on Figure 1.
Source: Bollard Acoustical Consultants, Inc. (2018)

The Table 2 data indicate that existing ambient noise levels at the project site comply with the El Dorado County 60 dB L_{dn} exterior noise level standard. It should be noted that the entire noise monitoring period included the afternoon of Friday, April 19 to the morning of Monday, April, 23. Although measurement data from Friday and Monday were not complete days, the calculated day-night average noise level from Friday evening and Monday morning was 60 dB L_{dn}. A detailed analysis of future traffic noise levels was conducted and that analysis is presented in the following section.

Evaluation of Future Traffic Noise Levels at the Project Site

Traffic Noise Prediction Methodology

The Federal Highway Administration Highway Traffic Noise Prediction Model (FHWA-RD-77-108) was used to predict traffic noise levels at the project site. The model is based upon the CALVENO noise emission factors for automobiles, medium trucks and heavy trucks, with consideration given to vehicle volume, speed, roadway configuration, distance to the receiver, and the acoustical characteristics of the site. The FHWA Model was developed to predict hourly L_{eq} values for free flowing traffic conditions, and is considered to be accurate within 1.5 dB in most situations.

Traffic Noise Prediction Model Calibration

According to data obtained from published Caltrans traffic counts (2016), the segment of U.S. Highway 50 adjacent to the project site currently experiences an average daily traffic (ADT) of approximately 74,200 vehicles. Assuming vehicle speeds of 70 MPH, medium- and heavy-truck mix of 3%/4%, and an existing volume of 74,200, the FHWA Model predicts a roadway noise level of 65 dB L_{dn} at a distance of 790 feet from the centerline of U.S. Highway 50. The existing traffic noise level predicted by the FHWA Model is 5 dB higher than the calculated weekday ambient noise level (60 dB L_{dn}) at Site 1, which maintained a 790 foot setback from the centerline of U.S. Highway 50.

The discrepancy in predicted versus measured traffic noise levels is believed to have been caused by intervening topography which provided partial shielding of U.S. Highway 50 traffic noise levels at the measurement location. As a result, a -5 dB offset was applied to the future U.S. Highway 50 traffic noise levels at the project site to account for partially obscured views of the roadway by intervening topography.

Predicted Future Exterior Traffic Noise Levels at Nearest Residential Lots

The calibrated FHWA Model was used with traffic data obtained from published Caltrans traffic counts (2016), the El Dorado County Traffic Model (2025), and information obtained from Fehr & Peers to predict to predict future U.S. Highway 50, Silva Valley Parkway, and Country Club Drive traffic noise levels at the project site. Specifically, future U.S. Highway 50 traffic volumes were conservatively estimated by increasing the existing traffic volume by a factor of 1.5 to account for regional growth in the future, resulting in a 2 dB increase in traffic noise levels relative to measured existing conditions. Future Silva Valley Parkway traffic volumes were obtained from the El Dorado Traffic Model. Country Club Drive (future extension) traffic volumes were obtained from Fehr & Peers and the El Dorado County Traffic Model. The FHWA Model Inputs and predicted future traffic noise levels at the project site are shown in Appendix E. The predicted future traffic noise levels are summarized in Table 3.

The results presented in Table 3 include predicted traffic noise levels at the project site resulting from the future extension of Country Club Drive along the south and west sides of the proposed development, as indicated in the project site plans (Figure 2). Because vertical design information for the future extension of Country Club Drive not available at the time of writing this report, future roadway elevations were estimated based on existing grade.

Table 3
Predicted Future Exterior Traffic Noise Levels – Combined Roadway Noise Exposure[1]
Serrano Village A14 Residential Development – El Dorado County, California

Lot #	Predicted L_{dn}, dB[2]	Lot #	Predicted L_{dn}, dB[2]
3	62	14	67
5	63	16	67
7	64	18	66
9	64	20	62
10	65	22	61
11	65	24	60
12	66	26	60
13	66	--	--

Notes:
[1] A complete listing of FHWA Model inputs and results are provided in Appendix E.
[2] Predicted L_{dn} at proposed outdoor activity areas, dB
Source: Bollard Acoustical Consultants, Inc. (2018)

Traffic Noise Compliance Evaluation for Outdoor Activity Areas

As indicated in Table 3, a portion of the lots nearest to existing and future roadways will be exposed to future traffic noise levels in excess of the El Dorado County 60 dB L_{dn} normally acceptable and 65 dB L_{dn} conditionally acceptable exterior noise level standards. As a result, further consideration of additional traffic noise mitigation measures would be warranted for the proposed backyard areas of these lots.

Traffic Noise Mitigation for Outdoor Activity Areas

Noise mitigation measures for outdoor activity areas of residential developments can take several forms, including setbacks, lot orientation and noise barriers. An analysis of noise barrier effectiveness was conducted for this project and is summarized in Table 4. The noise barrier effectiveness prediction worksheets are provided as Appendix F.

Table 4
Traffic Noise Barrier Analysis Results[1]
Serrano Village A14 Residential Development – El Dorado County, California

Lot #	Predicted L_{dn}[2,3]			Lot #	Predicted L_{dn}[2,3]		
	No Barrier	6' Barrier	7' Barrier		No Barrier	6' Barrier	7' Barrier
3	62	55	54	13	66	60	58
5	63	57	56	14	67	61	60
7	64	58	56	16	67	60	58
9	64	58	57	18	66	58	57
10	65	60	58	20	62	56	54
11	65	60	58	22	61	55	54
12	66	60	58	--	--	--	--

Notes:
[1] A complete listing of noise barrier effectiveness inputs and results are provided in Appendix F.
[2] Predicted L_{dn} at proposed outdoor activity areas, dB
[3] Barrier heights relative to backyard lot elevation.
Source: Bollard Acoustical Consultants, Inc. (2018)

As shown in Table 4, the results of the noise barrier analysis indicate that noise barriers measuring 6 to 7-feet in height relative to backyard lot elevation would reduce future traffic noise levels to 60 dB L_{dn} or less, satisfying the County's 60 dB L_{dn} normally acceptable and 65 dB L_{dn} conditionally acceptable exterior noise level standards. The locations of the noise barriers are shown on Figure 2.

Traffic Noise Mitigation for Residential Interiors

After construction of the recommended noise barriers, future traffic noise levels are predicted to be approximately 61 dB L_{dn} or less at the first-floor facades of buildings constructed nearest to the adjacent roadways. To achieve compliance with the El Dorado County 45 dB L_{dn} interior noise level standard within first-floor rooms, a building facade noise reduction of at least 16 dB would be required of the first-floor exterior wall construction.

Due to reduced ground absorption at elevated positions, upper-floor traffic noise levels are predicted to be approximately 3 dB higher than first-floor levels. In addition, upper-floor facades would not be shielded by the recommended noise barriers. As a result, upper-floor exposure of the residences proposed nearest to the adjacent roadways would be approximately 70 dB L_{dn}. Therefore, a building facade noise reduction of at least 25 dB would be required of the upper-floor exterior wall construction.

Standard residential construction typically results in an exterior to interior noise reduction of about 25 dB with windows closed, and approximately 15 dB with windows open. Therefore, standard construction practices would be adequate for both first and upper-floor facades of all residences constructed within this development. However, in order to satisfy the El Dorado County 45 dB L_{dn} interior noise level standard with a margin of safety, it is recommended that all upper-floor

bedroom windows of residences constructed on Lots 7-18 from which Country Club Drive, Silva Valley Parkway, or U.S. Highway 50 is visible be upgraded to a minimum STC rating of 32. In addition, mechanical ventilation (air conditioning) should be provided for all residences within this development to allow the occupants to close doors and windows as desired for additional acoustical isolation.

Conclusions

Portions of the Serrano Village A14 Residential Development will be exposed to future traffic noise exposure in excess of El Dorado County General Plan exterior noise level criteria. In order to comply with the El Dorado County General Plan exterior noise level criteria, and to satisfy the County's interior noise level criteria with a margin of safety, the following noise mitigation measures are recommended for this project:

1) Traffic noise barriers should be constructed at the locations indicated on Figure 2. Noise barriers measuring 6 to 7-feet in height relative to backyard elevation would result in the satisfaction of El Dorado County's 60 dB L_{dn} normally acceptable and 65 dB L_{dn} conditionally acceptable exterior noise level standards.

   Suitable materials for the traffic noise barrier include masonry and precast concrete panels. Other materials may be acceptable but should be reviewed by an acoustical consultant prior to use.

2) All upper-floor bedroom windows of residences constructed on Lots 7-18 from which Country Club Drive, Silva Valley Parkway or U.S. Highway 50 would be visible (i.e., south, west, and east-facing bedroom windows) should be upgraded to a minimum STC rating of 32 in order to comply with the El Dorado County 45 dB L_{dn} interior noise level standard with a margin of safety. Figure 2 shows the locations where such window upgrades are recommended.

3) Mechanical ventilation (air conditioning) should be provided for all residences in this development to allow occupants to close doors and windows as desired to achieve compliance with the applicable interior noise level criteria.

These conclusions are based on the traffic assumptions cited in Appendix E, the preliminary layout and site grading plan provided by the client (dated December 2017), and on noise reduction data for standard residential dwellings. Deviations from the Appendix E data, or the project site plan shown in Figure 2, could cause future traffic noise levels to differ from those predicted in this analysis. In addition, Bollard Acoustical Consultants, Inc. is not responsible for degradation in acoustic performance of the residential construction due to poor construction practices, failure to comply with applicable building code requirements, or for failure to adhere to the minimum building practices cited in this report.

This concludes BAC's noise assessment for the proposed Serrano Village A14 Residential Development project. Please contact BAC at (916) 663-0500 or paulb@bacnoise.com with any questions regarding this assessment.

Appendix A

Acoustical Terminology

Acoustics	The science of sound.
Ambient Noise	The distinctive acoustical characteristics of a given space consisting of all noise sources audible at that location. In many cases, the term ambient is used to describe an existing or pre-project condition such as the setting in an environmental noise study.
Attenuation	The reduction of an acoustic signal.
A-Weighting	A frequency-response adjustment of a sound level meter that conditions the output signal to approximate human response.
Decibel or dB	Fundamental unit of sound, A Bell is defined as the logarithm of the ratio of the sound pressure squared over the reference pressure squared. A Decibel is one-tenth of a Bell.
CNEL	Community Noise Equivalent Level. Defined as the 24-hour average noise level with noise occurring during evening hours (7 - 10 p.m.) weighted by a factor of three and nighttime hours weighted by a factor of 10 prior to averaging.
Frequency	The measure of the rapidity of alterations of a periodic signal, expressed in cycles per second or hertz.
Ldn	Day/Night Average Sound Level. Similar to CNEL but with no evening weighting.
Leq	Equivalent or energy-averaged sound level.
Lmax	The highest root-mean-square (RMS) sound level measured over a given period of time.
Loudness	A subjective term for the sensation of the magnitude of sound.
Masking	The amount (or the process) by which the threshold of audibility is for one sound is raised by the presence of another (masking) sound.
Noise	Unwanted sound.
Peak Noise	The level corresponding to the highest (not RMS) sound pressure measured over a given period of time. This term is often confused with the Maximum level, which is the highest RMS level.
RT_{60}	The time it takes reverberant sound to decay by 60 dB once the source has been removed.
Sabin	The unit of sound absorption. One square foot of material absorbing 100% of incident sound has an absorption of 1 sabin.
SEL	A rating, in decibels, of a discrete event, such as an aircraft flyover or train passby, that compresses the total sound energy of the event into a 1-s time period.
Threshold of Hearing	The lowest sound that can be perceived by the human auditory system, generally considered to be 0 dB for persons with perfect hearing.
Threshold of Pain	Approximately 120 dB above the threshold of hearing.



Appendix B-1
Serrano Village A14 Residential Development
Ambient Noise Monitoring Results - Site 1
Saturday, April 21, 2018

Hour	Leq	Lmax	L50	L90
0:00	51	65	50	46
1:00	50	69	49	44
2:00	48	61	47	41
3:00	47	61	45	39
4:00	50	63	48	42
5:00	52	66	50	46
6:00	55	65	54	51
7:00	56	76	55	51
8:00	55	71	54	51
9:00	54	69	53	49
10:00	50	62	49	47
11:00	51	68	49	46
12:00	51	63	50	47
13:00	51	64	50	47
14:00	50	72	49	46
15:00	51	71	50	47
16:00	51	64	50	47
17:00	52	64	51	48
18:00	54	68	53	50
19:00	56	68	55	52
20:00	59	70	58	56
21:00	58	74	57	55
22:00	57	74	56	53
23:00	54	69	53	50

	Statistical Summary					
	Daytime (7 a.m. - 10 p.m.)			Nighttime (10 p.m. - 7 a.m.)		
	High	Low	Average	High	Low	Average
Leq (Average)	59	50	54	57	47	53
Lmax (Maximum)	76	62	68	74	61	66
L50 (Median)	58	49	52	56	45	50
L90 (Background)	56	46	49	53	39	46

Computed Ldn, dB	59
% Daytime Energy	71%
% Nighttime Energy	29%

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Acoustical Consultants

Appendix B-2
Serrano Village A14 Residential Development
Ambient Noise Monitoring Results - Site 1
Sunday, April 22, 2018

Hour	Leq	Lmax	L50	L90
0:00	53	77	50	45
1:00	48	64	47	42
2:00	47	57	46	39
3:00	47	59	45	39
4:00	46	54	44	39
5:00	48	66	47	42
6:00	51	65	50	46
7:00	52	62	52	48
8:00	50	63	49	45
9:00	50	63	49	45
10:00	52	70	51	47
11:00	52	65	51	47
12:00	55	79	53	49
13:00	51	68	49	47
14:00	50	65	49	47
15:00	50	66	49	46
16:00	50	65	49	46
17:00	50	63	49	47
18:00	51	70	50	47
19:00	56	78	53	49
20:00	57	78	56	53
21:00	55	71	54	50
22:00	52	71	50	46
23:00	50	70	48	43

	Statistical Summary					
	Daytime (7 a.m. - 10 p.m.)			Nighttime (10 p.m. - 7 a.m.)		
	High	Low	Average	High	Low	Average
Leq (Average)	57	50	53	53	46	50
Lmax (Maximum)	79	62	68	77	54	65
L50 (Median)	56	49	51	50	44	47
L90 (Background)	53	45	48	46	39	42

Computed Ldn, dB	57
% Daytime Energy	77%
% Nighttime Energy	23%

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Appendix B-3
Serrano Village A14 Residential Development
Ambient Noise Monitoring Results - Site 1
Friday/Monday Combination

Hour	Leq	Lmax	L50	L90
0:00	48	59	46	40
1:00	46	57	44	38
2:00	48	66	44	38
3:00	49	73	46	39
4:00	51	65	50	44
5:00	55	63	55	51
6:00	58	68	58	55
7:00	59	67	58	57
8:00	55	62	55	52
9:00	56	82	54	51
10:00	55	72	54	51
11:00	54	64	53	50
12:00	56	70	55	52
13:00	54	65	53	50
14:00	52	63	51	48
15:00	52	62	51	48
16:00	52	70	50	48
17:00	51	62	50	48
18:00	51	63	50	48
19:00	56	76	55	51
20:00	58	72	57	55
21:00	58	70	57	55
22:00	55	68	54	51
23:00	54	70	53	50

	Statistical Summary					
	Daytime (7 a.m. - 10 p.m.)			Nighttime (10 p.m. - 7 a.m.)		
	High	Low	Average	High	Low	Average
Leq (Average)	59	51	55	58	46	53
Lmax (Maximum)	82	62	68	73	57	65
L50 (Median)	58	50	54	58	44	50
L90 (Background)	57	48	51	55	38	45

Computed Ldn, dB	60
% Daytime Energy	72%
% Nighttime Energy	28%

Friday PM
Monday AM

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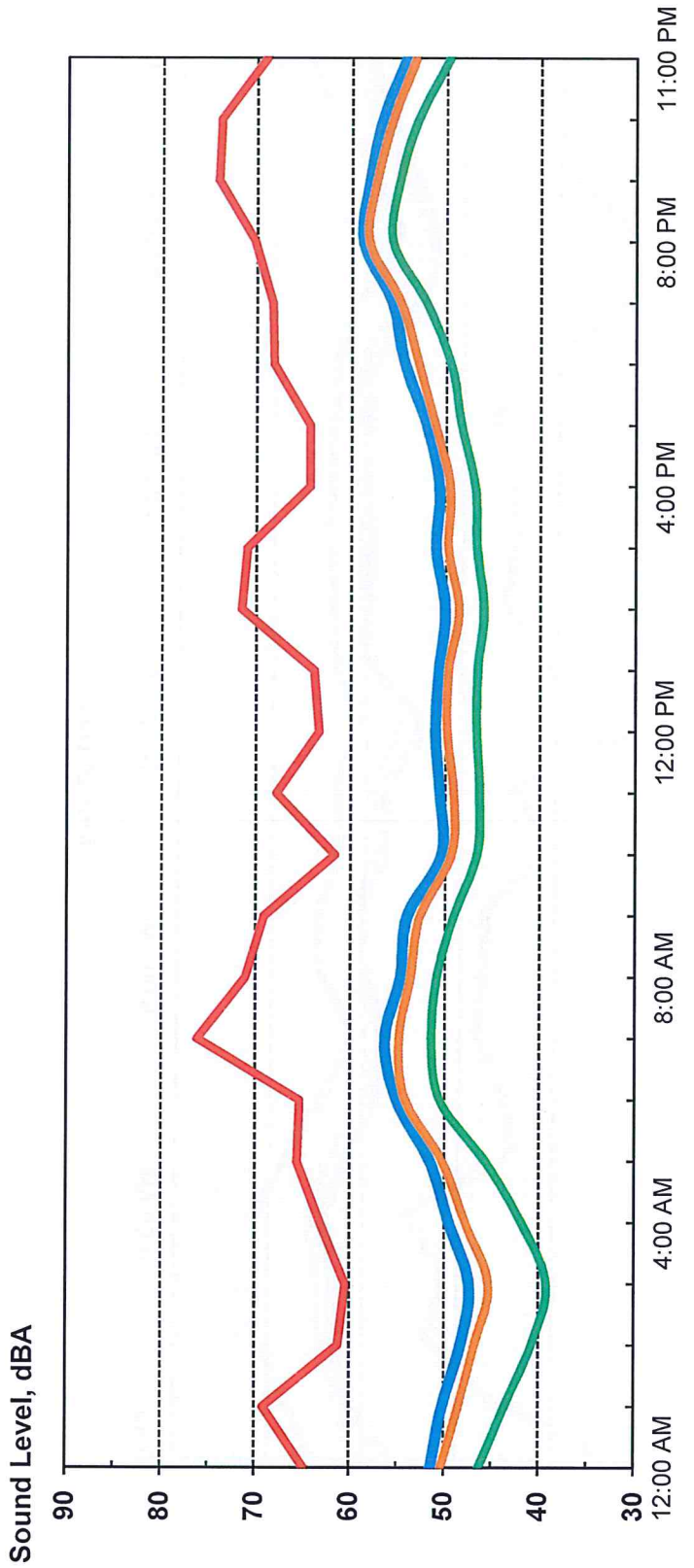
Appendix C-1
Serrano Village A14 Residential Development
Ambient Noise Monitoring Results - Site 1
Saturday, April 21, 2018



Ldn: 59 dB

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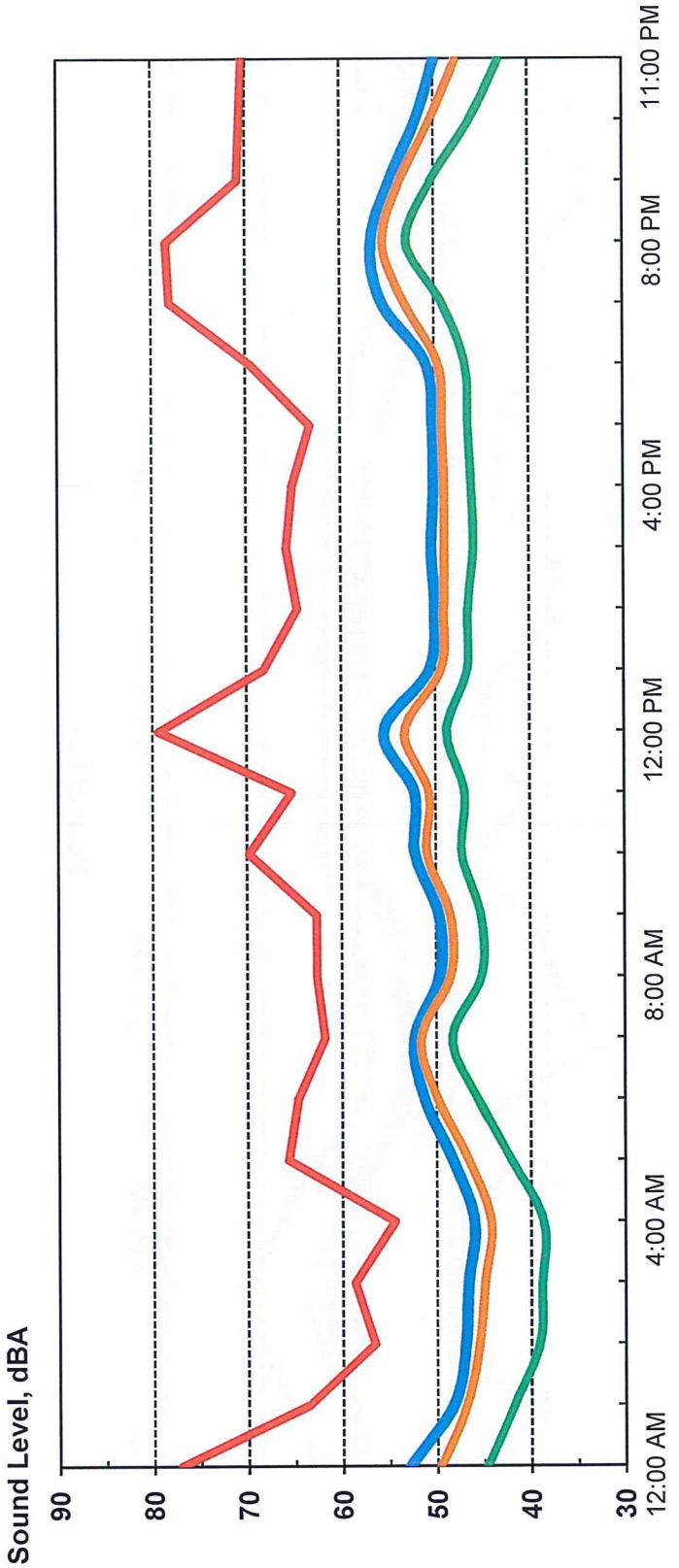
Appendix C-2
Serrano Village A14 Residential Development
Ambient Noise Monitoring Results - Site 1
Sunday, April 22, 2018



Ldn: 57 dB

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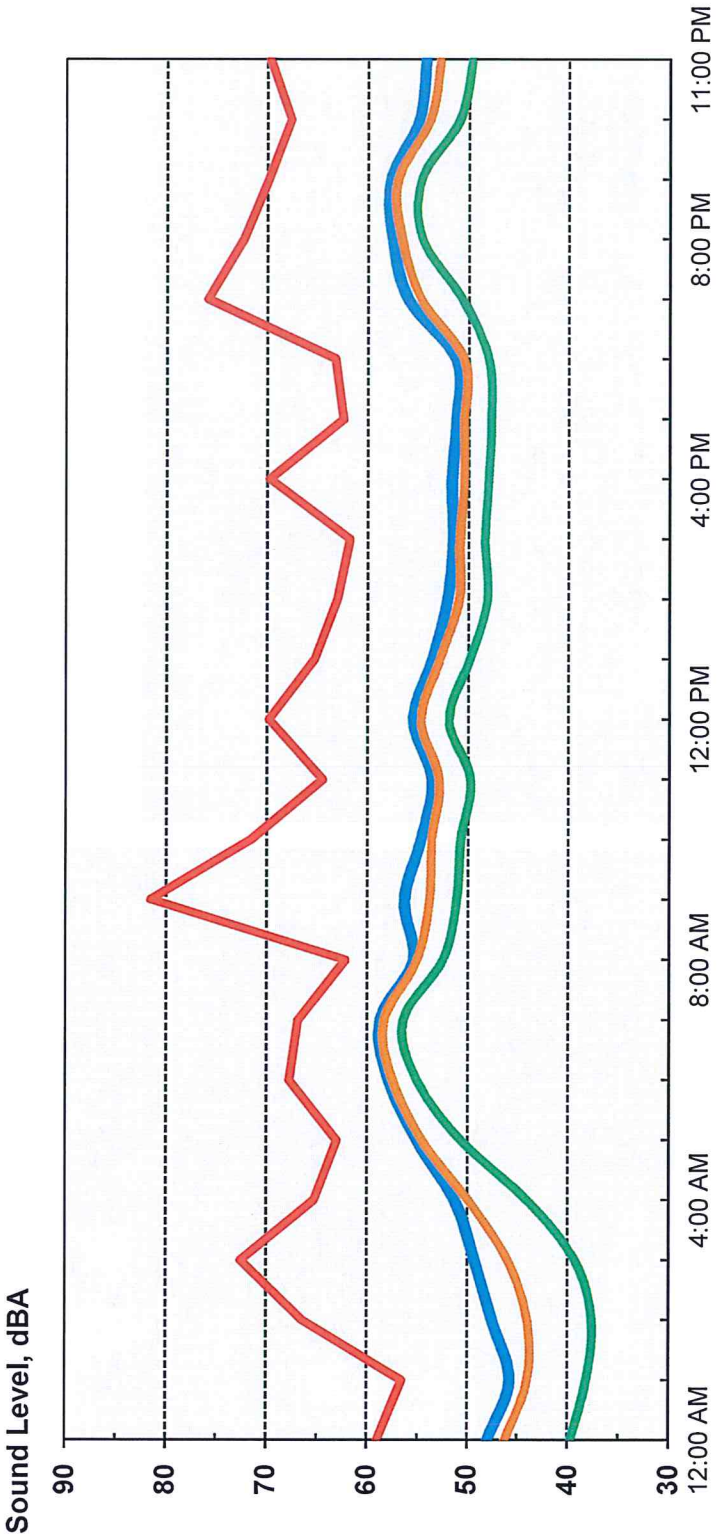
Appendix C-3
Serrano Village A14 Residential Development
Ambient Noise Monitoring Results - Site 1
Friday/Monday Combination



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Notes:

Left: Long-term noise measurement site, facing south towards US Highway 50 and Tong Road
Right: Long-term noise measurement site, facing west towards Silva Valley Parkway

Serrano Village A14 Residential Development
El Dorado County, California

Long-Term Noise Measurement Site

Appendix D

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Appendix E-1

FHWA Traffic Noise Prediction Model (FHWA-RD-77-108)
Noise Prediction Worksheet

Project Information:

Job Number: 2018-066
Project Name: Serrano Village A14 Residential Development
Roadway Name: U.S. Highway 50

Traffic Data:

Year:	Future
Average Daily Traffic Volume[1]:	111,300
Percent Daytime Traffic:	75
Percent Nighttime Traffic:	25
Percent Medium Trucks (2 axle):	3
Percent Heavy Trucks (3+ axle):	4
Assumed Vehicle Speed (mph):	70
Intervening Ground Type (hard/soft):	**Soft**

Traffic Noise Levels:

				----------L_{dn}, dB----------			
Location	Nearest Backyards	Distance	Offset (dB)[2]	Autos	Medium Trucks	Heavy Trucks	Total
1	Lot 10	1110	-5	58	48	53	60
2	Lot 11	1060	-5	58	49	53	60
3	Lot 12	970	-5	59	49	54	60
4	Lot 13	915	-5	59	50	54	61
5	Lot 14	800	-5	60	50	55	62
6	Lot 16	745	-5	61	51	55	62
7	Lot 18	730	-5	61	51	55	62
8	Lot 20	920	-5	59	50	54	61
9	Lot 22	1010	-5	59	49	53	60
10	Lot 24	1110	-5	58	48	53	60
11	Lot 26	1190	-5	58	48	52	59

Traffic Noise Contours (No Calibration Offset):

L_{dn} Contour, dB	Distance from Centerline, (ft)
75	222
70	479
65	1032
60	2223

Notes: [1] Future ADT volumes for U.S. Highway 50 were calculated utilizing published Caltrans ADT volumes (Existing - 2016), and were conservatively increased one and half times (1.5).

[2] A -5 dB offset was applied at all locations to account for overprediction of the FHWA Model.

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Appendix E-2

FHWA Traffic Noise Prediction Model (FHWA-RD-77-108)
Noise Prediction Worksheet

Project Information:

Job Number: 2018-066
Project Name: Serrano Village A14 Residential Development
Roadway Name: Silva Valley Parkway

Traffic Data:

Year:	Future
Average Daily Traffic Volume[1]:	36,900
Percent Daytime Traffic:	75
Percent Nighttime Traffic:	25
Percent Medium Trucks (2 axle):	2
Percent Heavy Trucks (3+ axle):	1
Assumed Vehicle Speed (mph):	45
Intervening Ground Type (hard/soft):	**Soft**

Traffic Noise Levels:

				----------L_{dn}, dB----------			
Location	Nearest Backyards	Distance	Offset (dB)	Autos	Medium Trucks	Heavy Trucks	Total
1	Lot 3	680		56	47	49	57
2	Lot 5	600		57	48	50	58
3	Lot 7	540		58	49	50	59
4	Lot 9	480		58	50	51	60
5	Lot 10	450		59	50	52	60
6	Lot 11	435		59	50	52	60
7	Lot 12	410		59	51	52	61
8	Lot 13	400		60	51	52	61

Traffic Noise Contours (No Calibration Offset):

L_{dn} Contour, dB	Distance from Centerline, (ft)
75	45
70	97
65	209
60	450

Notes: [1] Future ADT volume for Silva Valley Parkway was obtained from the El Dorado County Traffic Model (2025).

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Appendix E-3

FHWA Traffic Noise Prediction Model (FHWA-RD-77-108)
Noise Prediction Worksheet

Project Information:

Job Number: 2018-066
Project Name: Serrano Village A14 Residential Development
Roadway Name: Country Club Drive (future extension, south segment)

Traffic Data:

Year:	Future
Average Daily Traffic Volume[1]:	8,280
Percent Daytime Traffic:	75
Percent Nighttime Traffic:	25
Percent Medium Trucks (2 axle):	2
Percent Heavy Trucks (3+ axle):	1
Assumed Vehicle Speed (mph):	45
Intervening Ground Type (hard/soft):	**Soft**

Traffic Noise Levels:

				----------L_{dn}, dB----------			
Location	Nearest Backyards	Distance	Offset (dB)	Autos	Medium Trucks	Heavy Trucks	Total
1	Lot 14	65		65	56	58	66
2	Lot 16	75		64	55	57	65
3	Lot 18	90		63	54	56	64
4	Lot 20	270		56	47	48	57
5	Lot 22	360		54	45	47	55
6	Lot 24	460		52	44	45	53
7	Lot 26	550		51	42	44	52

Traffic Noise Contours (No Calibration Offset):

L_{dn} Contour, dB	Distance from Centerline, (ft)
75	17
70	36
65	77
60	166

Notes: [1] Future ADT volume for Country Club Drive (south of site) was obtained from the El Dorado County Traffic Model (2025).

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Appendix E-4

FHWA Traffic Noise Prediction Model (FHWA-RD-77-108)
Noise Prediction Worksheet

Project Information:

Job Number: 2018-066
Project Name: Serrano Village A14 Residential Development
Roadway Name: Country Club Drive (future extension, west segment)

Traffic Data:

Year:	Future
Average Daily Traffic Volume[1]:	3,000
Percent Daytime Traffic:	75
Percent Nighttime Traffic:	25
Percent Medium Trucks (2 axle):	2
Percent Heavy Trucks (3+ axle):	1
Assumed Vehicle Speed (mph):	45
Intervening Ground Type (hard/soft):	**Soft**

Traffic Noise Levels:

				----------L_{dn}, dB----------			
Location	Nearest Backyards	Distance	Offset (dB)	Autos	Medium Trucks	Heavy Trucks	Total
1	Lot 3	90		58	50	51	60
2	Lots 5-13	65		60	52	53	62

Traffic Noise Contours (No Calibration Offset):

L_{dn} Contour, dB	Distance from Centerline, (ft)
75	8
70	18
65	39
60	85

Notes: [1] Future ADT volume for Country Club Drive (west of site) was obtained from Fehr & Peers via project client.

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Appendix F-1

FHWA Traffic Noise Prediction Model (FHWA-RD-77-108)
Noise Barrier Effectiveness Prediction Worksheet

Project Information:

Job Number: 2018-066
Project Name: Serrano Village A14 Residential Development
Roadway Name: U.S. Highway 50
Location(s): Lot 10

Noise Level Data:

Year: Future
Auto L_{dn}, dB: 58
Medium Truck L_{dn}, dB: 48
Heavy Truck L_{dn}, dB: 53

Site Geometry:

Receiver Description: Lot 10 - Outdoor Activity Area
Centerline to Barrier Distance (C_1): 1100
Barrier to Receiver Distance (C_2): 10
Automobile Elevation: 732
Medium Truck Elevation: 734
Heavy Truck Elevation: 740
Pad/Ground Elevation at Receiver: 778
Receiver Elevation[1]: 783
Base of Barrier Elevation: 778
Starting Barrier Height 6

Barrier Effectiveness:

Top of Barrier Elevation (ft)	Barrier Height[2] (ft)	L_{dn}, dB				Barrier Breaks Line of Sight to...		
		Autos	Medium Trucks	Heavy Trucks	Total	Autos?	Medium Trucks?	Heavy Trucks?
784	6	52	42	47	**54**	Yes	Yes	Yes
785	7	51	41	45	**52**	Yes	Yes	Yes
786	8	49	40	44	**51**	Yes	Yes	Yes
787	9	48	38	43	**49**	Yes	Yes	Yes
788	10	47	37	42	**48**	Yes	Yes	Yes
789	11	46	36	41	**47**	Yes	Yes	Yes
790	12	45	35	40	**47**	Yes	Yes	Yes
791	13	44	35	39	**46**	Yes	Yes	Yes
792	14	44	34	38	**45**	Yes	Yes	Yes

Notes: 1.Standard receiver elevation is five feet above grade/pad elevations at the receiver location(s)

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Appendix F-2

FHWA Traffic Noise Prediction Model (FHWA-RD-77-108)
Noise Barrier Effectiveness Prediction Worksheet

Project Information:

Job Number: 2018-066
Project Name: Serrano Village A14 Residential Development
Roadway Name: U.S. Highway 50
Location(s): Lot 11

Noise Level Data:

Year: Future
Auto L_{dn}, dB: 58
Medium Truck L_{dn}, dB: 49
Heavy Truck L_{dn}, dB: 53

Site Geometry:

Receiver Description: Lot 11 - Outdoor Activity Area
Centerline to Barrier Distance (C_1): 1050
Barrier to Receiver Distance (C_2): 10
Automobile Elevation: 732
Medium Truck Elevation: 734
Heavy Truck Elevation: 740
Pad/Ground Elevation at Receiver: 777
Receiver Elevation[1]: 782
Base of Barrier Elevation: 777
Starting Barrier Height 6

Barrier Effectiveness:

Top of Barrier Elevation (ft)	Barrier Height[2] (ft)	L_{dn}, dB				Barrier Breaks Line of Sight to...		
		Autos	Medium Trucks	Heavy Trucks	Total	Autos?	Medium Trucks?	Heavy Trucks?
783	6	52	43	47	**54**	Yes	Yes	Yes
784	7	51	41	46	**52**	Yes	Yes	Yes
785	8	49	40	44	**51**	Yes	Yes	Yes
786	9	48	39	43	**50**	Yes	Yes	Yes
787	10	47	38	42	**49**	Yes	Yes	Yes
788	11	46	37	41	**48**	Yes	Yes	Yes
789	12	45	36	40	**47**	Yes	Yes	Yes
790	13	45	35	39	**46**	Yes	Yes	Yes
791	14	44	34	39	**45**	Yes	Yes	Yes

Notes: 1.Standard receiver elevation is five feet above grade/pad elevations at the receiver location(s)

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Appendix F-3

FHWA Traffic Noise Prediction Model (FHWA-RD-77-108)
Noise Barrier Effectiveness Prediction Worksheet

Project Information:

Job Number: 2018-066
Project Name: Serrano Village A14 Residential Development
Roadway Name: U.S. Highway 50
Location(s): Lot 12

Noise Level Data:

Year: Future
Auto L_{dn}, dB: 59
Medium Truck L_{dn}, dB: 49
Heavy Truck L_{dn}, dB: 54

Site Geometry:

Receiver Description: Lot 12 - Outdoor Activity Area
Centerline to Barrier Distance (C_1): 960
Barrier to Receiver Distance (C_2): 10
Automobile Elevation: 733
Medium Truck Elevation: 735
Heavy Truck Elevation: 741
Pad/Ground Elevation at Receiver: 776
Receiver Elevation[1]: 781
Base of Barrier Elevation: 776
Starting Barrier Height 6

Barrier Effectiveness:

Top of Barrier Elevation (ft)	Barrier Height[2] (ft)	L_{dn}, dB Autos	Medium Trucks	Heavy Trucks	Total	Barrier Breaks Line of Sight to... Autos?	Medium Trucks?	Heavy Trucks?
782	6	53	43	48	**54**	Yes	Yes	Yes
783	7	51	42	46	**53**	Yes	Yes	Yes
784	8	50	40	45	**52**	Yes	Yes	Yes
785	9	49	39	44	**50**	Yes	Yes	Yes
786	10	48	38	43	**49**	Yes	Yes	Yes
787	11	47	37	42	**48**	Yes	Yes	Yes
788	12	46	36	41	**47**	Yes	Yes	Yes
789	13	45	36	40	**47**	Yes	Yes	Yes
790	14	45	35	39	**46**	Yes	Yes	Yes

Notes: 1.Standard receiver elevation is five feet above grade/pad elevations at the receiver location(s)

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Appendix F-4

FHWA Traffic Noise Prediction Model (FHWA-RD-77-108)
Noise Barrier Effectiveness Prediction Worksheet

Project Information:

Job Number: 2018-066
Project Name: Serrano Village A14 Residential Development
Roadway Name: U.S. Highway 50
Location(s): Lot 13

Noise Level Data:

Year: Future
Auto L_{dn}, dB: 59
Medium Truck L_{dn}, dB: 50
Heavy Truck L_{dn}, dB: 54

Site Geometry:

Receiver Description: Lot 13 - Outdoor Activity Area
Centerline to Barrier Distance (C_1): 905
Barrier to Receiver Distance (C_2): 10
Automobile Elevation: 732
Medium Truck Elevation: 734
Heavy Truck Elevation: 740
Pad/Ground Elevation at Receiver: 775
Receiver Elevation[1]: 780
Base of Barrier Elevation: 775
Starting Barrier Height 6

Barrier Effectiveness:

Top of Barrier Elevation (ft)	Barrier Height[2] (ft)	L_{dn}, dB				Barrier Breaks Line of Sight to...		
		Autos	Medium Trucks	Heavy Trucks	Total	Autos?	Medium Trucks?	Heavy Trucks?
781	6	53	44	48	**55**	Yes	Yes	Yes
782	7	52	42	47	**53**	Yes	Yes	Yes
783	8	50	41	45	**52**	Yes	Yes	Yes
784	9	49	39	44	**51**	Yes	Yes	Yes
785	10	48	39	43	**50**	Yes	Yes	Yes
786	11	47	38	42	**49**	Yes	Yes	Yes
787	12	46	37	41	**48**	Yes	Yes	Yes
788	13	46	36	40	**47**	Yes	Yes	Yes
789	14	45	35	40	**46**	Yes	Yes	Yes

Notes: 1.Standard receiver elevation is five feet above grade/pad elevations at the receiver location(s)

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Appendix F-5

FHWA Traffic Noise Prediction Model (FHWA-RD-77-108)
Noise Barrier Effectiveness Prediction Worksheet

Project Information:

Job Number: 2018-066
Project Name: Serrano Village A14 Residential Development
Roadway Name: U.S. Highway 50
Location(s): Lot 14

Noise Level Data:

Year: Future
Auto L_{dn}, dB: 60
Medium Truck L_{dn}, dB: 50
Heavy Truck L_{dn}, dB: 55

Site Geometry:

Receiver Description: Lot 14 - Outdoor Activity Area
Centerline to Barrier Distance (C_1): 790
Barrier to Receiver Distance (C_2): 10
Automobile Elevation: 733
Medium Truck Elevation: 735
Heavy Truck Elevation: 741
Pad/Ground Elevation at Receiver: 773
Receiver Elevation[1]: 778
Base of Barrier Elevation: 773
Starting Barrier Height 6

Barrier Effectiveness:

Top of Barrier Elevation (ft)	Barrier Height[2] (ft)	L_{dn}, dB Autos	Medium Trucks	Heavy Trucks	Total	Barrier Breaks Line of Sight to... Autos?	Medium Trucks?	Heavy Trucks?
779	6	54	44	49	**56**	Yes	Yes	Yes
780	7	53	43	47	**54**	Yes	Yes	Yes
781	8	51	41	46	**53**	Yes	Yes	Yes
782	9	50	40	45	**51**	Yes	Yes	Yes
783	10	49	39	44	**51**	Yes	Yes	Yes
784	11	48	38	43	**50**	Yes	Yes	Yes
785	12	47	37	42	**49**	Yes	Yes	Yes
786	13	46	37	41	**48**	Yes	Yes	Yes
787	14	46	36	40	**47**	Yes	Yes	Yes

Notes: 1.Standard receiver elevation is five feet above grade/pad elevations at the receiver location(s)

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Appendix F-6

FHWA Traffic Noise Prediction Model (FHWA-RD-77-108)
Noise Barrier Effectiveness Prediction Worksheet

Project Information:

Job Number: 2018-066
Project Name: Serrano Village A14 Residential Development
Roadway Name: U.S. Highway 50
Location(s): Lot 16

Noise Level Data:

Year: Future
Auto L_{dn}, dB: 61
Medium Truck L_{dn}, dB: 51
Heavy Truck L_{dn}, dB: 55

Site Geometry:

Receiver Description: Lot 16 - Outdoor Activity Area
Centerline to Barrier Distance (C_1): 730
Barrier to Receiver Distance (C_2): 15
Automobile Elevation: 734
Medium Truck Elevation: 736
Heavy Truck Elevation: 742
Pad/Ground Elevation at Receiver: 771
Receiver Elevation[1]: 776
Base of Barrier Elevation: 771
Starting Barrier Height 6

Barrier Effectiveness:

Top of Barrier Elevation (ft)	Barrier Height[2] (ft)	L_{dn}, dB				Barrier Breaks Line of Sight to...		
		Autos	Medium Trucks	Heavy Trucks	Total	Autos?	Medium Trucks?	Heavy Trucks?
777	6	55	45	49	**56**	Yes	Yes	Yes
778	7	53	44	48	**55**	Yes	Yes	Yes
779	8	52	43	47	**54**	Yes	Yes	Yes
780	9	51	41	46	**53**	Yes	Yes	Yes
781	10	50	41	45	**52**	Yes	Yes	Yes
782	11	49	40	44	**51**	Yes	Yes	Yes
783	12	49	39	43	**50**	Yes	Yes	Yes
784	13	48	38	43	**49**	Yes	Yes	Yes
785	14	47	37	42	**49**	Yes	Yes	Yes

Notes: 1.Standard receiver elevation is five feet above grade/pad elevations at the receiver location(s)

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Appendix F-7

FHWA Traffic Noise Prediction Model (FHWA-RD-77-108)
Noise Barrier Effectiveness Prediction Worksheet

Project Information:

Job Number: 2018-066
Project Name: Serrano Village A14 Residential Development
Roadway Name: U.S. Highway 50
Location(s): Lot 18

Noise Level Data:

Year: Future
Auto L_{dn}, dB: 61
Medium Truck L_{dn}, dB: 51
Heavy Truck L_{dn}, dB: 55

Site Geometry:

Receiver Description: Lot 18 - Outdoor Activity Area
Centerline to Barrier Distance (C_1): 715
Barrier to Receiver Distance (C_2): 15
Automobile Elevation: 734
Medium Truck Elevation: 736
Heavy Truck Elevation: 742
Pad/Ground Elevation at Receiver: 771
Receiver Elevation[1]: 776
Base of Barrier Elevation: 771
Starting Barrier Height 6

Barrier Effectiveness:

Top of Barrier Elevation (ft)	Barrier Height[2] (ft)	L_{dn}, dB				Barrier Breaks Line of Sight to...		
		Autos	Medium Trucks	Heavy Trucks	Total	Autos?	Medium Trucks?	Heavy Trucks?
777	6	55	45	50	**56**	Yes	Yes	Yes
778	7	53	44	48	**55**	Yes	Yes	Yes
779	8	52	43	47	**54**	Yes	Yes	Yes
780	9	51	42	46	**53**	Yes	Yes	Yes
781	10	50	41	45	**52**	Yes	Yes	Yes
782	11	49	40	44	**51**	Yes	Yes	Yes
783	12	49	39	44	**50**	Yes	Yes	Yes
784	13	48	38	43	**49**	Yes	Yes	Yes
785	14	47	37	42	**49**	Yes	Yes	Yes

Notes: 1.Standard receiver elevation is five feet above grade/pad elevations at the receiver location(s)

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Appendix F-8

FHWA Traffic Noise Prediction Model (FHWA-RD-77-108)
Noise Barrier Effectiveness Prediction Worksheet

Project Information:

Job Number: 2018-066
Project Name: Serrano Village A14 Residential Development
Roadway Name: U.S. Highway 50
Location(s): Lot 20

Noise Level Data:

Year: Future
Auto L_{dn}, dB: 59
Medium Truck L_{dn}, dB: 50
Heavy Truck L_{dn}, dB: 54

Site Geometry:

Receiver Description: Lot 20 - Outdoor Activity Area
Centerline to Barrier Distance (C_1): 910
Barrier to Receiver Distance (C_2): 10
Automobile Elevation: 740
Medium Truck Elevation: 742
Heavy Truck Elevation: 748
Pad/Ground Elevation at Receiver: 771
Receiver Elevation[1]: 776
Base of Barrier Elevation: 771
Starting Barrier Height 6

Barrier Effectiveness:

Top of Barrier Elevation (ft)	Barrier Height[2] (ft)	L_{dn}, dB Autos	Medium Trucks	Heavy Trucks	Total	Barrier Breaks Line of Sight to... Autos?	Medium Trucks?	Heavy Trucks?
777	6	53	44	48	**55**	Yes	Yes	Yes
778	7	52	42	47	**53**	Yes	Yes	Yes
779	8	51	41	45	**52**	Yes	Yes	Yes
780	9	49	40	44	**51**	Yes	Yes	Yes
781	10	48	39	43	**50**	Yes	Yes	Yes
782	11	47	38	42	**49**	Yes	Yes	Yes
783	12	46	37	41	**48**	Yes	Yes	Yes
784	13	46	36	40	**47**	Yes	Yes	Yes
785	14	45	35	40	**46**	Yes	Yes	Yes

Notes: 1.Standard receiver elevation is five feet above grade/pad elevations at the receiver location(s)

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Appendix F-9

FHWA Traffic Noise Prediction Model (FHWA-RD-77-108)
Noise Barrier Effectiveness Prediction Worksheet

Project Information:

Job Number: 2018-066
Project Name: Serrano Village A14 Residential Development
Roadway Name: U.S. Highway 50
Location(s): Lot 22

Noise Level Data:

Year: Future
Auto L_{dn}, dB: 59
Medium Truck L_{dn}, dB: 49
Heavy Truck L_{dn}, dB: 53

Site Geometry:

Receiver Description: Lot 22 - Outdoor Activity Area
Centerline to Barrier Distance (C_1): 1000
Barrier to Receiver Distance (C_2): 10
Automobile Elevation: 740
Medium Truck Elevation: 742
Heavy Truck Elevation: 748
Pad/Ground Elevation at Receiver: 773
Receiver Elevation[1]: 778
Base of Barrier Elevation: 773
Starting Barrier Height 6

Barrier Effectiveness:

Top of Barrier Elevation (ft)	Barrier Height[2] (ft)	L_{dn}, dB Autos	Medium Trucks	Heavy Trucks	Total	Barrier Breaks Line of Sight to... Autos?	Medium Trucks?	Heavy Trucks?
779	6	53	43	48	**54**	Yes	Yes	Yes
780	7	51	42	46	**53**	Yes	Yes	Yes
781	8	50	40	45	**51**	Yes	Yes	Yes
782	9	49	39	43	**50**	Yes	Yes	Yes
783	10	48	38	42	**49**	Yes	Yes	Yes
784	11	47	37	41	**48**	Yes	Yes	Yes
785	12	46	36	41	**47**	Yes	Yes	Yes
786	13	45	35	40	**47**	Yes	Yes	Yes
787	14	44	35	39	**46**	Yes	Yes	Yes

Notes: 1.Standard receiver elevation is five feet above grade/pad elevations at the receiver location(s)

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Appendix F-10

FHWA Traffic Noise Prediction Model (FHWA-RD-77-108)
Noise Barrier Effectiveness Prediction Worksheet

Project Information:

Job Number: 2018-066
Project Name: Serrano Village A14 Residential Development
Roadway Name: Silva Valley Parkway
Location(s): Lot 3

Noise Level Data:

Year: Future
Auto L_{dn}, dB: 56
Medium Truck L_{dn}, dB: 47
Heavy Truck L_{dn}, dB: 49

Site Geometry:

Receiver Description: Lot 3 - Outdoor Activity Area
Centerline to Barrier Distance (C_1): 665
Barrier to Receiver Distance (C_2): 15
Automobile Elevation: 755
Medium Truck Elevation: 757
Heavy Truck Elevation: 763
Pad/Ground Elevation at Receiver: 779
Receiver Elevation[1]: 784
Base of Barrier Elevation: 779
Starting Barrier Height 6

Barrier Effectiveness:

Top of Barrier Elevation (ft)	Barrier Height[2] (ft)	L_{dn}, dB				Barrier Breaks Line of Sight to...		
		Autos	Medium Trucks	Heavy Trucks	Total	Autos?	Medium Trucks?	Heavy Trucks?
785	6	50	42	43	**52**	Yes	Yes	Yes
786	7	49	41	42	**50**	Yes	Yes	Yes
787	8	48	39	41	**49**	Yes	Yes	Yes
788	9	47	38	40	**48**	Yes	Yes	Yes
789	10	46	37	39	**47**	Yes	Yes	Yes
790	11	45	36	38	**46**	Yes	Yes	Yes
791	12	44	36	37	**45**	Yes	Yes	Yes
792	13	43	35	36	**45**	Yes	Yes	Yes
793	14	43	34	36	**44**	Yes	Yes	Yes

Notes: 1.Standard receiver elevation is five feet above grade/pad elevations at the receiver location(s)

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Appendix F-11

FHWA Traffic Noise Prediction Model (FHWA-RD-77-108)
Noise Barrier Effectiveness Prediction Worksheet

Project Information:

Job Number: 2018-066
Project Name: Serrano Village A14 Residential Development
Roadway Name: Silva Valley Parkway
Location(s): Lot 5

Noise Level Data:

Year: Future
Auto L_{dn}, dB: 57
Medium Truck L_{dn}, dB: 48
Heavy Truck L_{dn}, dB: 50

Site Geometry:

Receiver Description: Lot 5 - Outdoor Activity Area
Centerline to Barrier Distance (C_1): 590
Barrier to Receiver Distance (C_2): 10
Automobile Elevation: 757
Medium Truck Elevation: 759
Heavy Truck Elevation: 765
Pad/Ground Elevation at Receiver: 780
Receiver Elevation[1]: 785
Base of Barrier Elevation: 780
Starting Barrier Height 6

Barrier Effectiveness:

Top of Barrier Elevation (ft)	Barrier Height[2] (ft)	L_{dn}, dB Autos	Medium Trucks	Heavy Trucks	Total	Barrier Breaks Line of Sight to... Autos?	Medium Trucks?	Heavy Trucks?
786	6	51	42	44	**52**	Yes	Yes	Yes
787	7	49	41	42	**51**	Yes	Yes	Yes
788	8	48	39	41	**49**	Yes	Yes	Yes
789	9	47	38	40	**48**	Yes	Yes	Yes
790	10	46	37	39	**47**	Yes	Yes	Yes
791	11	45	36	38	**46**	Yes	Yes	Yes
792	12	44	35	37	**45**	Yes	Yes	Yes
793	13	43	35	36	**44**	Yes	Yes	Yes
794	14	42	34	35	**44**	Yes	Yes	Yes

Notes: 1.Standard receiver elevation is five feet above grade/pad elevations at the receiver location(s)

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Appendix F-12

FHWA Traffic Noise Prediction Model (FHWA-RD-77-108)
Noise Barrier Effectiveness Prediction Worksheet

Project Information:

Job Number: 2018-066
Project Name: Serrano Village A14 Residential Development
Roadway Name: Silva Valley Parkway
Location(s): Lot 7

Noise Level Data:

Year: Future
Auto L_{dn}, dB: 58
Medium Truck L_{dn}, dB: 49
Heavy Truck L_{dn}, dB: 50

Site Geometry:

Receiver Description: Lot 7 - Outdoor Activity Area
Centerline to Barrier Distance (C_1): 530
Barrier to Receiver Distance (C_2): 10
Automobile Elevation: 762
Medium Truck Elevation: 764
Heavy Truck Elevation: 770
Pad/Ground Elevation at Receiver: 781
Receiver Elevation[1]: 786
Base of Barrier Elevation: 781
Starting Barrier Height 6

Barrier Effectiveness:

Top of Barrier Elevation (ft)	Barrier Height[2] (ft)	L_{dn}, dB Autos	Medium Trucks	Heavy Trucks	Total	Barrier Breaks Line of Sight to... Autos?	Medium Trucks?	Heavy Trucks?
787	6	52	43	45	**53**	Yes	Yes	Yes
788	7	50	42	43	**51**	Yes	Yes	Yes
789	8	49	40	42	**50**	Yes	Yes	Yes
790	9	47	39	41	**49**	Yes	Yes	Yes
791	10	46	38	40	**48**	Yes	Yes	Yes
792	11	45	37	39	**47**	Yes	Yes	Yes
793	12	45	36	38	**46**	Yes	Yes	Yes
794	13	44	35	37	**45**	Yes	Yes	Yes
795	14	43	35	36	**44**	Yes	Yes	Yes

Notes: 1.Standard receiver elevation is five feet above grade/pad elevations at the receiver location(s)

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Appendix F-13

FHWA Traffic Noise Prediction Model (FHWA-RD-77-108)
Noise Barrier Effectiveness Prediction Worksheet

Project Information:

Job Number: 2018-066
Project Name: Serrano Village A14 Residential Development
Roadway Name: Silva Valley Parkway
Location(s): Lot 9

Noise Level Data:

Year: Future
Auto L_{dn}, dB: 58
Medium Truck L_{dn}, dB: 50
Heavy Truck L_{dn}, dB: 51

Site Geometry:

Receiver Description: Lot 9 - Outdoor Activity Area
Centerline to Barrier Distance (C_1): 470
Barrier to Receiver Distance (C_2): 10
Automobile Elevation: 761
Medium Truck Elevation: 763
Heavy Truck Elevation: 769
Pad/Ground Elevation at Receiver: 779
Receiver Elevation[1]: 784
Base of Barrier Elevation: 779
Starting Barrier Height 6

Barrier Effectiveness:

Top of Barrier Elevation (ft)	Barrier Height[2] (ft)	L_{dn}, dB Autos	Medium Trucks	Heavy Trucks	Total	Barrier Breaks Line of Sight to... Autos?	Medium Trucks?	Heavy Trucks?
785	6	52	44	45	**54**	Yes	Yes	Yes
786	7	51	42	44	**52**	Yes	Yes	Yes
787	8	49	41	43	**51**	Yes	Yes	Yes
788	9	48	40	41	**49**	Yes	Yes	Yes
789	10	47	39	40	**49**	Yes	Yes	Yes
790	11	46	38	39	**48**	Yes	Yes	Yes
791	12	45	37	38	**47**	Yes	Yes	Yes
792	13	45	36	38	**46**	Yes	Yes	Yes
793	14	44	35	37	**45**	Yes	Yes	Yes

Notes: 1.Standard receiver elevation is five feet above grade/pad elevations at the receiver location(s)

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Appendix F-14

FHWA Traffic Noise Prediction Model (FHWA-RD-77-108)
Noise Barrier Effectiveness Prediction Worksheet

Project Information:

Job Number: 2018-066
Project Name: Serrano Village A14 Residential Development
Roadway Name: Silva Valley Parkway
Location(s): Lot 10

Noise Level Data:

Year: Future
Auto L_{dn}, dB: 59
Medium Truck L_{dn}, dB: 50
Heavy Truck L_{dn}, dB: 52

Site Geometry:

Receiver Description: Lot 10 - Outdoor Activity Area
Centerline to Barrier Distance (C_1): 440
Barrier to Receiver Distance (C_2): 10
Automobile Elevation: 761
Medium Truck Elevation: 763
Heavy Truck Elevation: 769
Pad/Ground Elevation at Receiver: 778
Receiver Elevation[1]: 783
Base of Barrier Elevation: 778
Starting Barrier Height 6

Barrier Effectiveness:

Top of Barrier Elevation (ft)	Barrier Height[2] (ft)	L_{dn}, dB				Barrier Breaks Line of Sight to...		
		Autos	Medium Trucks	Heavy Trucks	Total	Autos?	Medium Trucks?	Heavy Trucks?
784	6	53	44	46	**54**	Yes	Yes	Yes
785	7	51	43	44	**53**	Yes	Yes	Yes
786	8	50	41	43	**51**	Yes	Yes	Yes
787	9	49	40	42	**50**	Yes	Yes	Yes
788	10	48	39	41	**49**	Yes	Yes	Yes
789	11	47	38	40	**48**	Yes	Yes	Yes
790	12	46	37	39	**47**	Yes	Yes	Yes
791	13	45	36	38	**46**	Yes	Yes	Yes
792	14	44	36	37	**46**	Yes	Yes	Yes

Notes: 1.Standard receiver elevation is five feet above grade/pad elevations at the receiver location(s)

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Appendix F-15

FHWA Traffic Noise Prediction Model (FHWA-RD-77-108)
Noise Barrier Effectiveness Prediction Worksheet

Project Information:

Job Number: 2018-066
Project Name: Serrano Village A14 Residential Development
Roadway Name: Silva Valley Parkway
Location(s): Lot 11

Noise Level Data:

Year: Future
Auto L_{dn}, dB: 59
Medium Truck L_{dn}, dB: 50
Heavy Truck L_{dn}, dB: 52

Site Geometry:

Receiver Description: Lot 11 - Outdoor Activity Area
Centerline to Barrier Distance (C_1): 425
Barrier to Receiver Distance (C_2): 10
Automobile Elevation: 761
Medium Truck Elevation: 763
Heavy Truck Elevation: 769
Pad/Ground Elevation at Receiver: 777
Receiver Elevation[1]: 782
Base of Barrier Elevation: 777
Starting Barrier Height 6

Barrier Effectiveness:

Top of Barrier Elevation (ft)	Barrier Height[2] (ft)	L_{dn}, dB				Barrier Breaks Line of Sight to...		
		Autos	Medium Trucks	Heavy Trucks	Total	Autos?	Medium Trucks?	Heavy Trucks?
783	6	53	44	46	**54**	Yes	Yes	Yes
784	7	51	43	45	**53**	Yes	Yes	Yes
785	8	50	41	43	**51**	Yes	Yes	Yes
786	9	49	40	42	**50**	Yes	Yes	Yes
787	10	48	39	41	**49**	Yes	Yes	Yes
788	11	47	38	40	**48**	Yes	Yes	Yes
789	12	46	37	39	**47**	Yes	Yes	Yes
790	13	45	37	38	**46**	Yes	Yes	Yes
791	14	44	36	38	**46**	Yes	Yes	Yes

Notes: 1.Standard receiver elevation is five feet above grade/pad elevations at the receiver location(s)

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Appendix F-16

FHWA Traffic Noise Prediction Model (FHWA-RD-77-108)
Noise Barrier Effectiveness Prediction Worksheet

Project Information:

Job Number: 2018-066
Project Name: Serrano Village A14 Residential Development
Roadway Name: Silva Valley Parkway
Location(s): Lot 12

Noise Level Data:

Year: Future
Auto L_{dn}, dB: 59
Medium Truck L_{dn}, dB: 51
Heavy Truck L_{dn}, dB: 52

Site Geometry:

Receiver Description: Lot 12 - Outdoor Activity Area
Centerline to Barrier Distance (C_1): 400
Barrier to Receiver Distance (C_2): 10
Automobile Elevation: 761
Medium Truck Elevation: 763
Heavy Truck Elevation: 769
Pad/Ground Elevation at Receiver: 776
Receiver Elevation[1]: 781
Base of Barrier Elevation: 776
Starting Barrier Height 6

Barrier Effectiveness:

Top of Barrier Elevation (ft)	Barrier Height[2] (ft)	L_{dn}, dB Autos	Medium Trucks	Heavy Trucks	Total	Barrier Breaks Line of Sight to... Autos?	Medium Trucks?	Heavy Trucks?
782	6	53	45	46	**55**	Yes	Yes	Yes
783	7	52	43	45	**53**	Yes	Yes	Yes
784	8	50	42	44	**52**	Yes	Yes	Yes
785	9	49	41	42	**50**	Yes	Yes	Yes
786	10	48	40	41	**50**	Yes	Yes	Yes
787	11	47	39	40	**49**	Yes	Yes	Yes
788	12	46	38	39	**48**	Yes	Yes	Yes
789	13	46	37	39	**47**	Yes	Yes	Yes
790	14	45	36	38	**46**	Yes	Yes	Yes

Notes: 1.Standard receiver elevation is five feet above grade/pad elevations at the receiver location(s)

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Appendix F-17

FHWA Traffic Noise Prediction Model (FHWA-RD-77-108)
Noise Barrier Effectiveness Prediction Worksheet

Project Information:

Job Number: 2018-066
Project Name: Serrano Village A14 Residential Development
Roadway Name: Silva Valley Parkway
Location(s): Lot 13

Noise Level Data:

Year: Future
Auto L_{dn}, dB: 60
Medium Truck L_{dn}, dB: 51
Heavy Truck L_{dn}, dB: 52

Site Geometry:

Receiver Description: Lot 13 - Outdoor Activity Area
Centerline to Barrier Distance (C_1): 390
Barrier to Receiver Distance (C_2): 10
Automobile Elevation: 760
Medium Truck Elevation: 762
Heavy Truck Elevation: 768
Pad/Ground Elevation at Receiver: 775
Receiver Elevation[1]: 780
Base of Barrier Elevation: 775
Starting Barrier Height 6

Barrier Effectiveness:

Top of Barrier Elevation (ft)	Barrier Height[2] (ft)	L_{dn}, dB Autos	Medium Trucks	Heavy Trucks	Total	Barrier Breaks Line of Sight to... Autos?	Medium Trucks?	Heavy Trucks?
781	6	54	45	47	**55**	Yes	Yes	Yes
782	7	52	44	45	**53**	Yes	Yes	Yes
783	8	51	42	44	**52**	Yes	Yes	Yes
784	9	49	41	43	**51**	Yes	Yes	Yes
785	10	48	40	42	**50**	Yes	Yes	Yes
786	11	47	39	41	**49**	Yes	Yes	Yes
787	12	47	38	40	**48**	Yes	Yes	Yes
788	13	46	37	39	**47**	Yes	Yes	Yes
789	14	45	37	38	**46**	Yes	Yes	Yes

Notes: 1.Standard receiver elevation is five feet above grade/pad elevations at the receiver location(s)

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Appendix F-18

FHWA Traffic Noise Prediction Model (FHWA-RD-77-108)
Noise Barrier Effectiveness Prediction Worksheet

Project Information:

Job Number: 2018-066
Project Name: Serrano Village A14 Residential Development
Roadway Name: Country Club Drive (future extension, south segment)
Location(s): Lot 14

Noise Level Data:

Year: Future
Auto L_{dn}, dB: 65
Medium Truck L_{dn}, dB: 56
Heavy Truck L_{dn}, dB: 58

Site Geometry:

Receiver Description: Lot 14 - Outdoor Activity Area
Centerline to Barrier Distance (C_1): 55
Barrier to Receiver Distance (C_2): 10
Automobile Elevation: 772
Medium Truck Elevation: 774
Heavy Truck Elevation: 780
Pad/Ground Elevation at Receiver: 773
Receiver Elevation[1]: 778
Base of Barrier Elevation: 773
Starting Barrier Height 6

Barrier Effectiveness:

Top of Barrier Elevation (ft)	Barrier Height[2] (ft)	L_{dn}, dB				Barrier Breaks Line of Sight to...		
		Autos	Medium Trucks	Heavy Trucks	Total	Autos?	Medium Trucks?	Heavy Trucks?
779	6	58	50	53	**60**	Yes	Yes	Yes
780	7	56	48	51	**58**	Yes	Yes	Yes
781	8	55	47	50	**57**	Yes	Yes	Yes
782	9	54	46	48	**55**	Yes	Yes	Yes
783	10	53	45	47	**54**	Yes	Yes	Yes
784	11	52	43	46	**53**	Yes	Yes	Yes
785	12	51	43	45	**52**	Yes	Yes	Yes
786	13	50	42	44	**52**	Yes	Yes	Yes
787	14	50	42	43	**51**	Yes	Yes	Yes

Notes: 1.Standard receiver elevation is five feet above grade/pad elevations at the receiver location(s)

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Appendix F-19

FHWA Traffic Noise Prediction Model (FHWA-RD-77-108)
Noise Barrier Effectiveness Prediction Worksheet

Project Information:

Job Number: 2018-066
Project Name: Serrano Village A14 Residential Development
Roadway Name: Country Club Drive (future extension, south segment)
Location(s): Lot 16

Noise Level Data:

Year: Future
Auto L_{dn}, dB: 64
Medium Truck L_{dn}, dB: 55
Heavy Truck L_{dn}, dB: 57

Site Geometry:

Receiver Description: Lot 16 - Outdoor Activity Area
Centerline to Barrier Distance (C_1): 60
Barrier to Receiver Distance (C_2): 15
Automobile Elevation: 762
Medium Truck Elevation: 764
Heavy Truck Elevation: 770
Pad/Ground Elevation at Receiver: 771
Receiver Elevation[1]: 776
Base of Barrier Elevation: 771
Starting Barrier Height 6

Barrier Effectiveness:

Top of Barrier Elevation (ft)	Barrier Height[2] (ft)	L_{dn}, dB Autos	Medium Trucks	Heavy Trucks	Total	Barrier Breaks Line of Sight to... Autos?	Medium Trucks?	Heavy Trucks?
777	6	55	47	50	**57**	Yes	Yes	Yes
778	7	54	46	49	**56**	Yes	Yes	Yes
779	8	53	45	48	**55**	Yes	Yes	Yes
780	9	52	44	47	**54**	Yes	Yes	Yes
781	10	51	43	46	**53**	Yes	Yes	Yes
782	11	50	42	45	**52**	Yes	Yes	Yes
783	12	50	41	44	**51**	Yes	Yes	Yes
784	13	49	41	43	**51**	Yes	Yes	Yes
785	14	49	41	42	**50**	Yes	Yes	Yes

Notes: 1.Standard receiver elevation is five feet above grade/pad elevations at the receiver location(s)

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Appendix F-20

FHWA Traffic Noise Prediction Model (FHWA-RD-77-108)
Noise Barrier Effectiveness Prediction Worksheet

Project Information:

Job Number: 2018-066
Project Name: Serrano Village A14 Residential Development
Roadway Name: Country Club Drive (future extension, south segment)
Location(s): Lot 18

Noise Level Data:

Year: Future
Auto L_{dn}, dB: 63
Medium Truck L_{dn}, dB: 54
Heavy Truck L_{dn}, dB: 56

Site Geometry:

Receiver Description: Lot 18 - Outdoor Activity Area
Centerline to Barrier Distance (C_1): 75
Barrier to Receiver Distance (C_2): 15
Automobile Elevation: 740
Medium Truck Elevation: 742
Heavy Truck Elevation: 748
Pad/Ground Elevation at Receiver: 771
Receiver Elevation[1]: 776
Base of Barrier Elevation: 771
Starting Barrier Height 6

Barrier Effectiveness:

Top of Barrier Elevation (ft)	Barrier Height[2] (ft)	L_{dn}, dB				Barrier Breaks Line of Sight to...		
		Autos	Medium Trucks	Heavy Trucks	Total	Autos?	Medium Trucks?	Heavy Trucks?
777	6	51	43	45	**53**	Yes	Yes	Yes
778	7	50	42	44	**52**	Yes	Yes	Yes
779	8	49	41	43	**51**	Yes	Yes	Yes
780	9	49	40	42	**50**	Yes	Yes	Yes
781	10	48	40	42	**49**	Yes	Yes	Yes
782	11	47	40	41	**49**	Yes	Yes	Yes
783	12	47	39	41	**49**	Yes	Yes	Yes
784	13	47	38	40	**48**	Yes	Yes	Yes
785	14	46	38	40	**48**	Yes	Yes	Yes

Notes: 1.Standard receiver elevation is five feet above grade/pad elevations at the receiver location(s)

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Appendix F-21

FHWA Traffic Noise Prediction Model (FHWA-RD-77-108)
Noise Barrier Effectiveness Prediction Worksheet

Project Information:

Job Number: 2018-066
Project Name: Serrano Village A14 Residential Development
Roadway Name: Country Club Drive (future extension, south segment)
Location(s): Lot 20

Noise Level Data:

Year: Future
Auto L_{dn}, dB: 56
Medium Truck L_{dn}, dB: 47
Heavy Truck L_{dn}, dB: 48

Site Geometry:

Receiver Description: Lot 20 - Outdoor Activity Area
Centerline to Barrier Distance (C_1): 260
Barrier to Receiver Distance (C_2): 10
Automobile Elevation: 736
Medium Truck Elevation: 738
Heavy Truck Elevation: 744
Pad/Ground Elevation at Receiver: 771
Receiver Elevation[1]: 776
Base of Barrier Elevation: 771
Starting Barrier Height 6

Barrier Effectiveness:

Top of Barrier Elevation (ft)	Barrier Height[2] (ft)	L_{dn}, dB: Autos	Medium Trucks	Heavy Trucks	Total	Barrier Breaks Line of Sight to... Autos?	Medium Trucks?	Heavy Trucks?
777	6	48	40	41	**49**	Yes	Yes	Yes
778	7	47	38	40	**48**	Yes	Yes	Yes
779	8	45	37	39	**47**	Yes	Yes	Yes
780	9	44	36	38	**46**	Yes	Yes	Yes
781	10	43	35	37	**45**	Yes	Yes	Yes
782	11	42	34	36	**44**	Yes	Yes	Yes
783	12	42	33	35	**43**	Yes	Yes	Yes
784	13	41	32	34	**42**	Yes	Yes	Yes
785	14	41	32	34	**42**	Yes	Yes	Yes

Notes: 1.Standard receiver elevation is five feet above grade/pad elevations at the receiver location(s)

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Appendix F-22

FHWA Traffic Noise Prediction Model (FHWA-RD-77-108)
Noise Barrier Effectiveness Prediction Worksheet

Project Information:

Job Number: 2018-066
Project Name: Serrano Village A14 Residential Development
Roadway Name: Country Club Drive (future extension, south segment)
Location(s): Lot 22

Noise Level Data:

Year: Future
Auto L_{dn}, dB: 54
Medium Truck L_{dn}, dB: 45
Heavy Truck L_{dn}, dB: 47

Site Geometry:

Receiver Description: Lot 22 - Outdoor Activity Area
Centerline to Barrier Distance (C_1): 350
Barrier to Receiver Distance (C_2): 10
Automobile Elevation: 735
Medium Truck Elevation: 737
Heavy Truck Elevation: 743
Pad/Ground Elevation at Receiver: 773
Receiver Elevation[1]: 778
Base of Barrier Elevation: 773
Starting Barrier Height 6

Barrier Effectiveness:

Top of Barrier Elevation (ft)	Barrier Height[2] (ft)	L_{dn}, dB: Autos	Medium Trucks	Heavy Trucks	Total	Barrier Breaks Line of Sight to... Autos?	Medium Trucks?	Heavy Trucks?
779	6	47	38	40	**48**	Yes	Yes	Yes
780	7	45	37	38	**47**	Yes	Yes	Yes
781	8	44	35	37	**45**	Yes	Yes	Yes
782	9	43	34	36	**44**	Yes	Yes	Yes
783	10	42	33	35	**43**	Yes	Yes	Yes
784	11	41	32	34	**42**	Yes	Yes	Yes
785	12	40	32	33	**41**	Yes	Yes	Yes
786	13	39	31	32	**41**	Yes	Yes	Yes
787	14	39	31	32	**40**	Yes	Yes	Yes

Notes: 1.Standard receiver elevation is five feet above grade/pad elevations at the receiver location(s)

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Appendix F-23

FHWA Traffic Noise Prediction Model (FHWA-RD-77-108)
Noise Barrier Effectiveness Prediction Worksheet

Project Information:

Job Number: 2018-066
Project Name: Serrano Village A14 Residential Development
Roadway Name: Country Club Drive (future extension, west segment)
Location(s): Lot 3

Noise Level Data:

Year: Future
Auto L_{dn}, dB: 58
Medium Truck L_{dn}, dB: 50
Heavy Truck L_{dn}, dB: 51

Site Geometry:

Receiver Description: Lot 3 - Outdoor Activity Area
Centerline to Barrier Distance (C_1): 75
Barrier to Receiver Distance (C_2): 15
Automobile Elevation: 776
Medium Truck Elevation: 778
Heavy Truck Elevation: 784
Pad/Ground Elevation at Receiver: 779
Receiver Elevation[1]: 784
Base of Barrier Elevation: 779
Starting Barrier Height 6

Barrier Effectiveness:

Top of Barrier Elevation (ft)	Barrier Height[2] (ft)	L_{dn}, dB: Autos	Medium Trucks	Heavy Trucks	Total	Barrier Breaks Line of Sight to... Autos?	Medium Trucks?	Heavy Trucks?
785	6	52	43	46	**53**	Yes	Yes	Yes
786	7	50	42	45	**52**	Yes	Yes	Yes
787	8	49	41	44	**51**	Yes	Yes	Yes
788	9	48	40	42	**50**	Yes	Yes	Yes
789	10	47	39	41	**49**	Yes	Yes	Yes
790	11	46	38	40	**48**	Yes	Yes	Yes
791	12	45	37	39	**47**	Yes	Yes	Yes
792	13	45	36	38	**46**	Yes	Yes	Yes
793	14	44	36	38	**45**	Yes	Yes	Yes

Notes: 1.Standard receiver elevation is five feet above grade/pad elevations at the receiver location(s)

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Appendix F-24

FHWA Traffic Noise Prediction Model (FHWA-RD-77-108)
Noise Barrier Effectiveness Prediction Worksheet

Project Information:

Job Number: 2018-066
Project Name: Serrano Village A14 Residential Development
Roadway Name: Country Club Drive (future extension, west segment)
Location(s): Lot 5

Noise Level Data:

Year: Future
Auto L_{dn}, dB: 60
Medium Truck L_{dn}, dB: 52
Heavy Truck L_{dn}, dB: 53

Site Geometry:

Receiver Description: Lot 5 - Outdoor Activity Area
Centerline to Barrier Distance (C_1): 55
Barrier to Receiver Distance (C_2): 10
Automobile Elevation: 780
Medium Truck Elevation: 782
Heavy Truck Elevation: 788
Pad/Ground Elevation at Receiver: 780
Receiver Elevation[1]: 785
Base of Barrier Elevation: 780
Starting Barrier Height 6

Barrier Effectiveness:

Top of Barrier Elevation (ft)	Barrier Height[2] (ft)	L_{dn}, dB Autos	Medium Trucks	Heavy Trucks	Total	Barrier Breaks Line of Sight to... Autos?	Medium Trucks?	Heavy Trucks?
786	6	54	46	48	**55**	Yes	Yes	Yes
787	7	52	44	47	**54**	Yes	Yes	Yes
788	8	51	43	46	**52**	Yes	Yes	Yes
789	9	50	41	44	**51**	Yes	Yes	Yes
790	10	49	40	43	**50**	Yes	Yes	Yes
791	11	47	39	42	**49**	Yes	Yes	Yes
792	12	47	38	41	**48**	Yes	Yes	Yes
793	13	46	38	40	**47**	Yes	Yes	Yes
794	14	46	37	39	**47**	Yes	Yes	Yes

Notes: 1.Standard receiver elevation is five feet above grade/pad elevations at the receiver location(s)

BOLLARD
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Appendix F-25

FHWA Traffic Noise Prediction Model (FHWA-RD-77-108)
Noise Barrier Effectiveness Prediction Worksheet

Project Information:

Job Number: 2018-066
Project Name: Serrano Village A14 Residential Development
Roadway Name: Country Club Drive (future extension, west segment)
Location(s): Lot 7

Noise Level Data:

Year: Future
Auto L_{dn}, dB: 60
Medium Truck L_{dn}, dB: 52
Heavy Truck L_{dn}, dB: 53

Site Geometry:

Receiver Description: Lot 7 - Outdoor Activity Area
Centerline to Barrier Distance (C_1): 55
Barrier to Receiver Distance (C_2): 10
Automobile Elevation: 783
Medium Truck Elevation: 785
Heavy Truck Elevation: 791
Pad/Ground Elevation at Receiver: 781
Receiver Elevation[1]: 786
Base of Barrier Elevation: 781
Starting Barrier Height 6

Barrier Effectiveness:

Top of Barrier Elevation (ft)	Barrier Height[2] (ft)	L_{dn}, dB: Autos	Medium Trucks	Heavy Trucks	Total	Barrier Breaks Line of Sight to... Autos?	Medium Trucks?	Heavy Trucks?
787	6	54	46	48	**56**	Yes	Yes	Yes
788	7	53	45	48	**54**	Yes	Yes	Yes
789	8	51	43	46	**53**	Yes	Yes	Yes
790	9	50	42	45	**52**	Yes	Yes	Yes
791	10	49	41	43	**50**	Yes	Yes	Yes
792	11	48	40	42	**49**	Yes	Yes	Yes
793	12	47	39	41	**48**	Yes	Yes	Yes
794	13	46	38	40	**48**	Yes	Yes	Yes
795	14	46	37	39	**47**	Yes	Yes	Yes

Notes: 1.Standard receiver elevation is five feet above grade/pad elevations at the receiver location(s)

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Appendix F-26

FHWA Traffic Noise Prediction Model (FHWA-RD-77-108)
Noise Barrier Effectiveness Prediction Worksheet

Project Information:

Job Number: 2018-066
Project Name: Serrano Village A14 Residential Development
Roadway Name: Country Club Drive (future extension, west segment)
Location(s): Lot 9

Noise Level Data:

Year: Future
Auto L_{dn}, dB: 60
Medium Truck L_{dn}, dB: 52
Heavy Truck L_{dn}, dB: 53

Site Geometry:

Receiver Description: Lot 9 - Outdoor Activity Area
Centerline to Barrier Distance (C_1): 55
Barrier to Receiver Distance (C_2): 10
Automobile Elevation: 785
Medium Truck Elevation: 787
Heavy Truck Elevation: 793
Pad/Ground Elevation at Receiver: 779
Receiver Elevation[1]: 784
Base of Barrier Elevation: 779
Starting Barrier Height 6

Barrier Effectiveness:

Top of Barrier Elevation (ft)	Barrier Height[2] (ft)	L_{dn}, dB Autos	Medium Trucks	Heavy Trucks	Total	Barrier Breaks Line of Sight to... Autos?	Medium Trucks?	Heavy Trucks?
785	6	55	47	48	**56**	Yes	Yes	No
786	7	54	46	48	**55**	Yes	Yes	Yes
787	8	52	44	47	**54**	Yes	Yes	Yes
788	9	51	43	46	**52**	Yes	Yes	Yes
789	10	50	41	44	**51**	Yes	Yes	Yes
790	11	49	40	43	**50**	Yes	Yes	Yes
791	12	48	39	42	**49**	Yes	Yes	Yes
792	13	47	38	41	**48**	Yes	Yes	Yes
793	14	46	38	40	**47**	Yes	Yes	Yes

Notes: 1.Standard receiver elevation is five feet above grade/pad elevations at the receiver location(s)

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Appendix F-27

FHWA Traffic Noise Prediction Model (FHWA-RD-77-108)
Noise Barrier Effectiveness Prediction Worksheet

Project Information:

Job Number: 2018-066
Project Name: Serrano Village A14 Residential Development
Roadway Name: Country Club Drive (future extension, west segment)
Location(s): Lot 10

Noise Level Data:

Year: Future
Auto L_{dn}, dB: 60
Medium Truck L_{dn}, dB: 52
Heavy Truck L_{dn}, dB: 53

Site Geometry:

Receiver Description: Lot 10 - Outdoor Activity Area
Centerline to Barrier Distance (C_1): 55
Barrier to Receiver Distance (C_2): 10
Automobile Elevation: 784
Medium Truck Elevation: 786
Heavy Truck Elevation: 792
Pad/Ground Elevation at Receiver: 778
Receiver Elevation[1]: 783
Base of Barrier Elevation: 778
Starting Barrier Height 6

Barrier Effectiveness:

Top of Barrier Elevation (ft)	Barrier Height[2] (ft)	L_{dn}, dB				Barrier Breaks Line of Sight to...		
		Autos	Medium Trucks	Heavy Trucks	Total	Autos?	Medium Trucks?	Heavy Trucks?
784	6	55	47	48	**56**	Yes	Yes	No
785	7	54	46	48	**55**	Yes	Yes	Yes
786	8	52	44	47	**54**	Yes	Yes	Yes
787	9	51	43	46	**52**	Yes	Yes	Yes
788	10	50	41	44	**51**	Yes	Yes	Yes
789	11	49	40	43	**50**	Yes	Yes	Yes
790	12	48	39	42	**49**	Yes	Yes	Yes
791	13	47	38	41	**48**	Yes	Yes	Yes
792	14	46	38	40	**47**	Yes	Yes	Yes

Notes: 1.Standard receiver elevation is five feet above grade/pad elevations at the receiver location(s)

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Appendix F-28

FHWA Traffic Noise Prediction Model (FHWA-RD-77-108)
Noise Barrier Effectiveness Prediction Worksheet

Project Information:

Job Number: 2018-066
Project Name: Serrano Village A14 Residential Development
Roadway Name: Country Club Drive (future extension, west segment)
Location(s): Lot 11

Noise Level Data:

Year: Future
Auto L_{dn}, dB: 60
Medium Truck L_{dn}, dB: 52
Heavy Truck L_{dn}, dB: 53

Site Geometry:

Receiver Description: Lot 11 - Outdoor Activity Area
Centerline to Barrier Distance (C_1): 55
Barrier to Receiver Distance (C_2): 10
Automobile Elevation: 780
Medium Truck Elevation: 782
Heavy Truck Elevation: 788
Pad/Ground Elevation at Receiver: 777
Receiver Elevation[1]: 782
Base of Barrier Elevation: 777
Starting Barrier Height 6

Barrier Effectiveness:

Top of Barrier Elevation (ft)	Barrier Height[2] (ft)	L_{dn}, dB Autos	Medium Trucks	Heavy Trucks	Total	Barrier Breaks Line of Sight to... Autos?	Medium Trucks?	Heavy Trucks?
783	6	55	46	48	**56**	Yes	Yes	Yes
784	7	53	45	48	**55**	Yes	Yes	Yes
785	8	51	43	46	**53**	Yes	Yes	Yes
786	9	50	42	45	**52**	Yes	Yes	Yes
787	10	49	41	43	**51**	Yes	Yes	Yes
788	11	48	40	42	**50**	Yes	Yes	Yes
789	12	47	39	41	**49**	Yes	Yes	Yes
790	13	46	38	40	**48**	Yes	Yes	Yes
791	14	46	37	40	**47**	Yes	Yes	Yes

Notes: 1.Standard receiver elevation is five feet above grade/pad elevations at the receiver location(s)

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Appendix F-29

FHWA Traffic Noise Prediction Model (FHWA-RD-77-108)
Noise Barrier Effectiveness Prediction Worksheet

Project Information:

Job Number: 2018-066
Project Name: Serrano Village A14 Residential Development
Roadway Name: Country Club Drive (future extension, west segment)
Location(s): Lot 12

Noise Level Data:

Year: Future
Auto L_{dn}, dB: 60
Medium Truck L_{dn}, dB: 52
Heavy Truck L_{dn}, dB: 53

Site Geometry:

Receiver Description: Lot 12 - Outdoor Activity Area
Centerline to Barrier Distance (C_1): 55
Barrier to Receiver Distance (C_2): 10
Automobile Elevation: 779
Medium Truck Elevation: 781
Heavy Truck Elevation: 787
Pad/Ground Elevation at Receiver: 776
Receiver Elevation[1]: 781
Base of Barrier Elevation: 776
Starting Barrier Height 6

Barrier Effectiveness:

Top of Barrier Elevation (ft)	Barrier Height[2] (ft)	L_{dn}, dB: Autos	Medium Trucks	Heavy Trucks	Total	Barrier Breaks Line of Sight to... Autos?	Medium Trucks?	Heavy Trucks?
782	6	55	46	48	**56**	Yes	Yes	Yes
783	7	53	45	48	**55**	Yes	Yes	Yes
784	8	51	43	46	**53**	Yes	Yes	Yes
785	9	50	42	45	**52**	Yes	Yes	Yes
786	10	49	41	43	**51**	Yes	Yes	Yes
787	11	48	40	42	**50**	Yes	Yes	Yes
788	12	47	39	41	**49**	Yes	Yes	Yes
789	13	46	38	40	**48**	Yes	Yes	Yes
790	14	46	37	40	**47**	Yes	Yes	Yes

Notes: 1.Standard receiver elevation is five feet above grade/pad elevations at the receiver location(s)

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Appendix F-30

FHWA Traffic Noise Prediction Model (FHWA-RD-77-108)
Noise Barrier Effectiveness Prediction Worksheet

Project Information:

Job Number: 2018-066
Project Name: Serrano Village A14 Residential Development
Roadway Name: Country Club Drive (future extension, west segment)
Location(s): Lot 13

Noise Level Data:

Year: Future
Auto L_{dn}, dB: 60
Medium Truck L_{dn}, dB: 52
Heavy Truck L_{dn}, dB: 53

Site Geometry:

Receiver Description: Lot 13 - Outdoor Activity Area
Centerline to Barrier Distance (C_1): 55
Barrier to Receiver Distance (C_2): 10
Automobile Elevation: 777
Medium Truck Elevation: 779
Heavy Truck Elevation: 785
Pad/Ground Elevation at Receiver: 775
Receiver Elevation[1]: 780
Base of Barrier Elevation: 775
Starting Barrier Height 6

Barrier Effectiveness:

Top of Barrier Elevation (ft)	Barrier Height[2] (ft)	L_{dn}, dB: Autos	Medium Trucks	Heavy Trucks	Total	Barrier Breaks Line of Sight to... Autos?	Medium Trucks?	Heavy Trucks?
781	6	54	46	48	**56**	Yes	Yes	Yes
782	7	53	45	48	**54**	Yes	Yes	Yes
783	8	51	43	46	**53**	Yes	Yes	Yes
784	9	50	42	45	**52**	Yes	Yes	Yes
785	10	49	41	43	**50**	Yes	Yes	Yes
786	11	48	40	42	**49**	Yes	Yes	Yes
787	12	47	39	41	**48**	Yes	Yes	Yes
788	13	46	38	40	**48**	Yes	Yes	Yes
789	14	46	37	39	**47**	Yes	Yes	Yes

Notes: 1.Standard receiver elevation is five feet above grade/pad elevations at the receiver location(s)

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PD08-0004/TM08-1464 EXHIBIT T

SERRANO VILLAGE C2

TENTATIVE SUBDIVISION MAP

EL DORADO COUNTY CALIFORNIA

JANUARY, 2008

905 Sutter Street Suite 200 Folsom CA 95630
(916) 366-3040 Fax (916) 366-3308
R.E.Y. ENGINEERS, Inc.
Civil Engineers / Land Surveyors

SERRANO

OWNER/APPLICANT
SERRANO ASSOCIATES, LLC
4525 SERRANO PARKWAY
EL DORADO HILLS, CA 95762

ENGINEER
R.E.Y. ENGINEERS, INC.
905 SUTTER STREET, SUITE 200
FOLSOM, CA 95630

MAP SCALE
1"=100'

CONTOUR INTERVAL
MINOR CONTOUR INTERVAL = 1'
MAJOR CONTOUR INTERVAL = 5'

SOURCE OF TOPOGRAPHY
RADMAN AERIAL SURVEYS

SECTION TOWNSHIP & RANGE
SEC. 1, T.9.N., R.8E., M.D.M

ASSESSOR'S PARCEL NUMBER
PORTION OF 122-580-27 R1-PD,
122-590-01 R1-PD, 122-130-14 OS,
122-140-03 OS, 120-030-05 R20K

EXISTING/PROPOSED ZONING
R1-PD, R20K, OS

TOTAL AREA

RESIDENTIAL LOTS	36.28 Acres
RESIDENTIAL STREETS	5.02 Acres
OPEN SPACE	62.70 Acres
PROPOSED VILLAGE A14	11.40 Acres
REMAINDER	6.40 Acres
TOTAL	121.80 Acres

PROPOSED USE
50 - SINGLE FAMILY RESIDENTIAL
4 - OPEN SPACE LOTS (LOT A,B,C & D)
1 - PROPOSED VILLAGE A14
1 - REMAINDER LOT

LOT SIZES
MINIMUM LOT SIZE - 20,037 SF
AVERAGE LOT SIZE - 31,630 SF
MAXIMUM LOT SIZE - 41,480 SF

WATER, RECYCLED WATER SUPPLY & SEWAGE DISPOSAL
EL DORADO IRRIGATION DISTRICT

FIRE PROTECTION
EL DORADO HILLS WATER/
FIRE DISTRICT

DATE OF PREPARATION
JANUARY, 2008

PARK AND RECREATION
EL DORADO HILLS COMMUNITY
SERVICES DISTRICT

SCHOOL DISTRICT
K THRU 8 - BUCKEYE UNION
9 THRU 12 - EL DORADO UNION

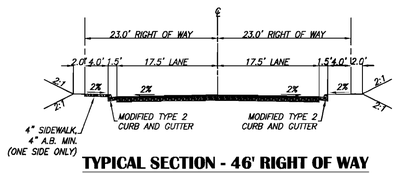
PHASING PLAN NOTICE
THE FILING OF MULTIPLE FINAL MAPS WILL BE COMPLETED FOR THIS PROJECT. THIS PHASING PLAN IS APPROXIMATE ONLY AND BY PROVIDING THIS NOTICE, THE SUBDIVIDER SHALL NOT BE REQUIRED TO DEFINE THE NUMBER OR CONFIGURATION OF THE PROPOSED MULTIPLE FINAL MAPS. (PER THE SUBDIVISION MAP ACT, 2002 EDITION SECTION 66456.1)

ENGINEERS CERTIFICATE
I HEREBY CERTIFY THAT TO THE BEST OF MY KNOWLEDGE THE LAND DEVELOPMENT KNOWN AS VILLAGE C2 OF THE "EL DORADO HILLS" SPECIFIC PLAN HAS BEEN DESIGNED IN ACCORDANCEWITH THE SPECIFICATIONS AND GUIDELINES ESTABLISHED BY THE COUNTY OF EL DORADO.

DONALD T. McCORMICK R.C.E. 42556 DATE

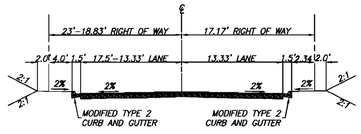
PLANNING COMMISSION:_____

APPROVAL/DENIAL DATE:_____



TYPICAL SECTION - 46' RIGHT OF WAY
N.T.S.

A STREET
B STREET



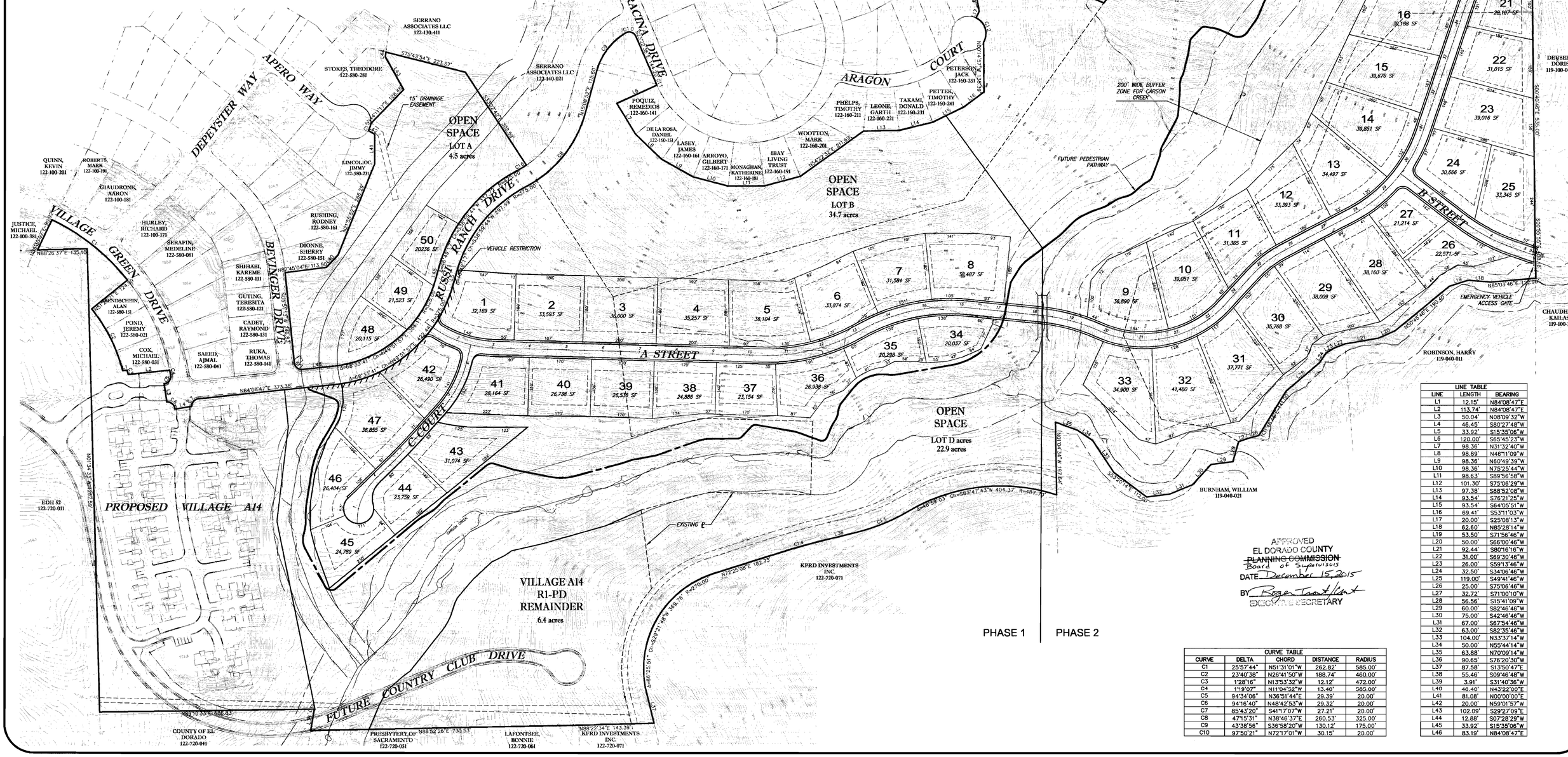
TYPICAL SECTION - 36' RIGHT OF WAY
N.T.S.

C COURT



VICINITY MAP

0 50' 100' 200'
SCALE IN FEET



APPROVED
EL DORADO COUNTY
~~PLANNING COMMISSION~~
Board of Supervisors
DATE December 15, 2015
BY Roger Trout
EXECUTIVE SECRETARY

CURVE TABLE

CURVE	DELTA	CHORD	DISTANCE	RADIUS
C1	25°57'44"	N51°31'01"W	262.82'	585.00'
C2	23°40'38"	N26°41'50"W	188.74'	460.00'
C3	1°28'16"	N13°53'32"W	12.12'	472.00'
C4	1°19'07"	N11°04'02"W	13.40'	585.00'
C5	94°34'06"	N36°51'44"E	29.39'	20.00'
C6	94°16'40"	N48°42'53"W	29.32'	20.00'
C7	85°43'20"	S41°17'07"W	27.21'	20.00'
C8	47°15'31"	N38°46'37"E	260.53'	325.00'
C9	43°38'56"	S36°58'20"W	130.12'	175.00'
C10	97°50'21"	N72°17'01"W	30.15'	20.00'

LINE TABLE

LINE	LENGTH	BEARING
L1	12.15'	N84°08'47"E
L2	113.74'	N84°08'47"E
L3	50.04'	N08°09'32"W
L4	46.45'	S80°27'48"W
L5	33.92'	S15°35'06"W
L6	120.00'	S65°45'23"W
L7	98.36'	N31°32'40"W
L8	98.89'	N46°11'09"W
L9	98.36'	N80°49'39"W
L10	98.36'	N75°25'44"W
L11	98.63'	S89°56'58"W
L12	101.30'	S75°06'29"W
L13	97.38'	S88°52'08"W
L14	93.54'	S76°21'25"W
L15	93.54'	S64°05'51"W
L16	69.41'	S53°11'03"W
L17	20.00'	S25°08'13"W
L18	62.60'	N85°28'14"W
L19	53.50'	S71°56'46"W
L20	50.00'	S66°00'46"W
L21	92.44'	S80°16'16"W
L22	31.00'	S69°30'46"W
L23	26.00'	S59°13'46"W
L24	32.50'	S34°06'46"W
L25	119.00'	S49°41'46"W
L26	25.00'	S75°06'46"W
L27	32.72'	S71°00'10"W
L28	56.56'	S15°41'09"W
L29	60.00'	S82°46'46"W
L30	75.00'	S42°46'46"W
L31	67.00'	S67°54'46"W
L32	63.00'	S82°35'46"W
L33	104.00'	N33°37'14"W
L34	50.00'	N55°44'14"W
L35	63.88'	N70°09'14"W
L36	90.65'	S76°20'30"W
L37	87.58'	S13°50'47"E
L38	55.46'	S09°46'48"W
L39	3.91'	S31°40'36"W
L40	46.40'	N43°22'00"E
L41	81.08'	N00°00'00"E
L42	20.00'	N59°01'57"W
L43	102.09'	S29°27'08"E
L44	12.88'	S07°28'29"W
L45	33.92'	S15°35'06"W
L46	83.19'	N84°08'47"E