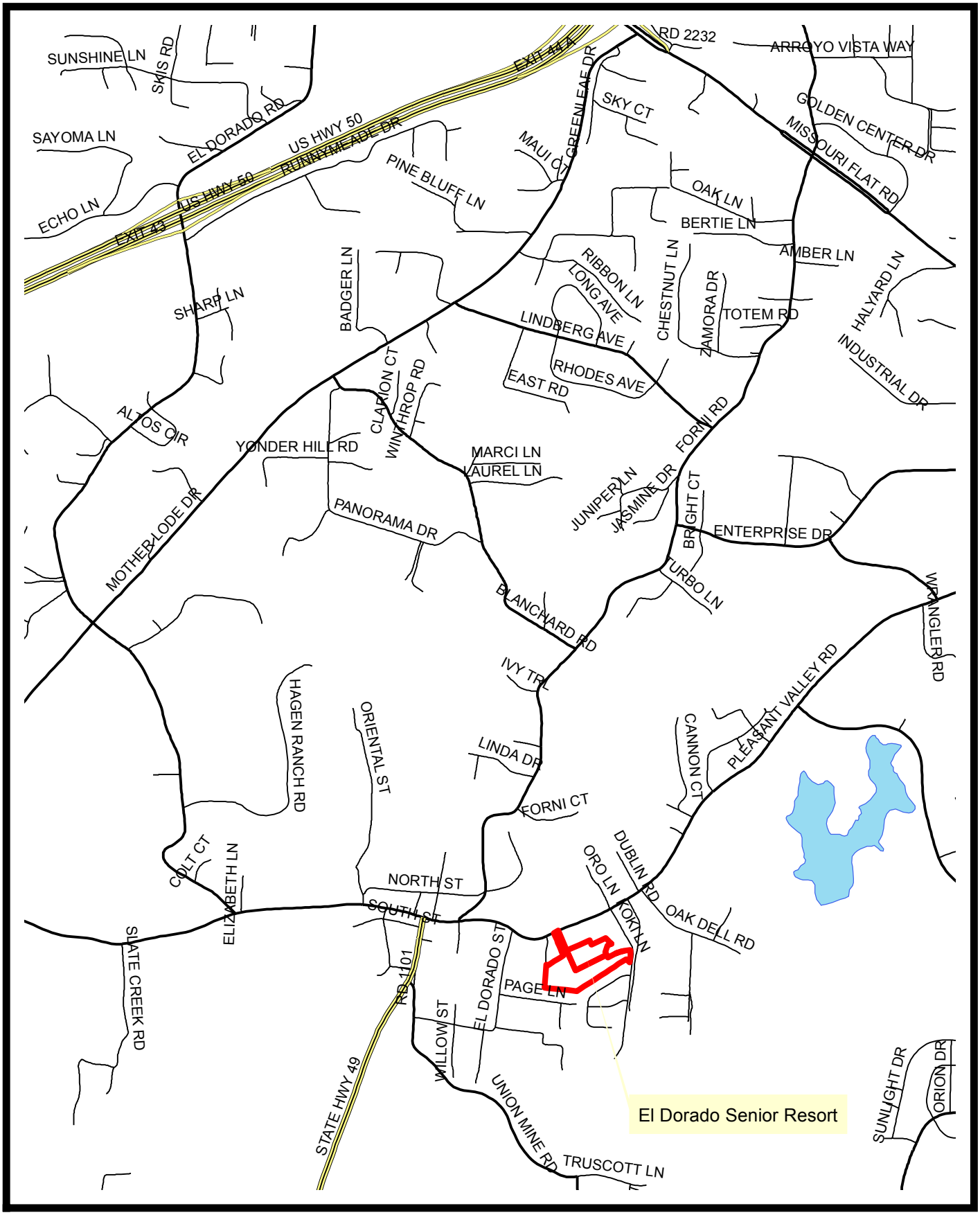


CUP18-0009: El Dorado Senior Resort
Exhibit A: Location Map

N

0 0.175 0.35 0.7 Miles

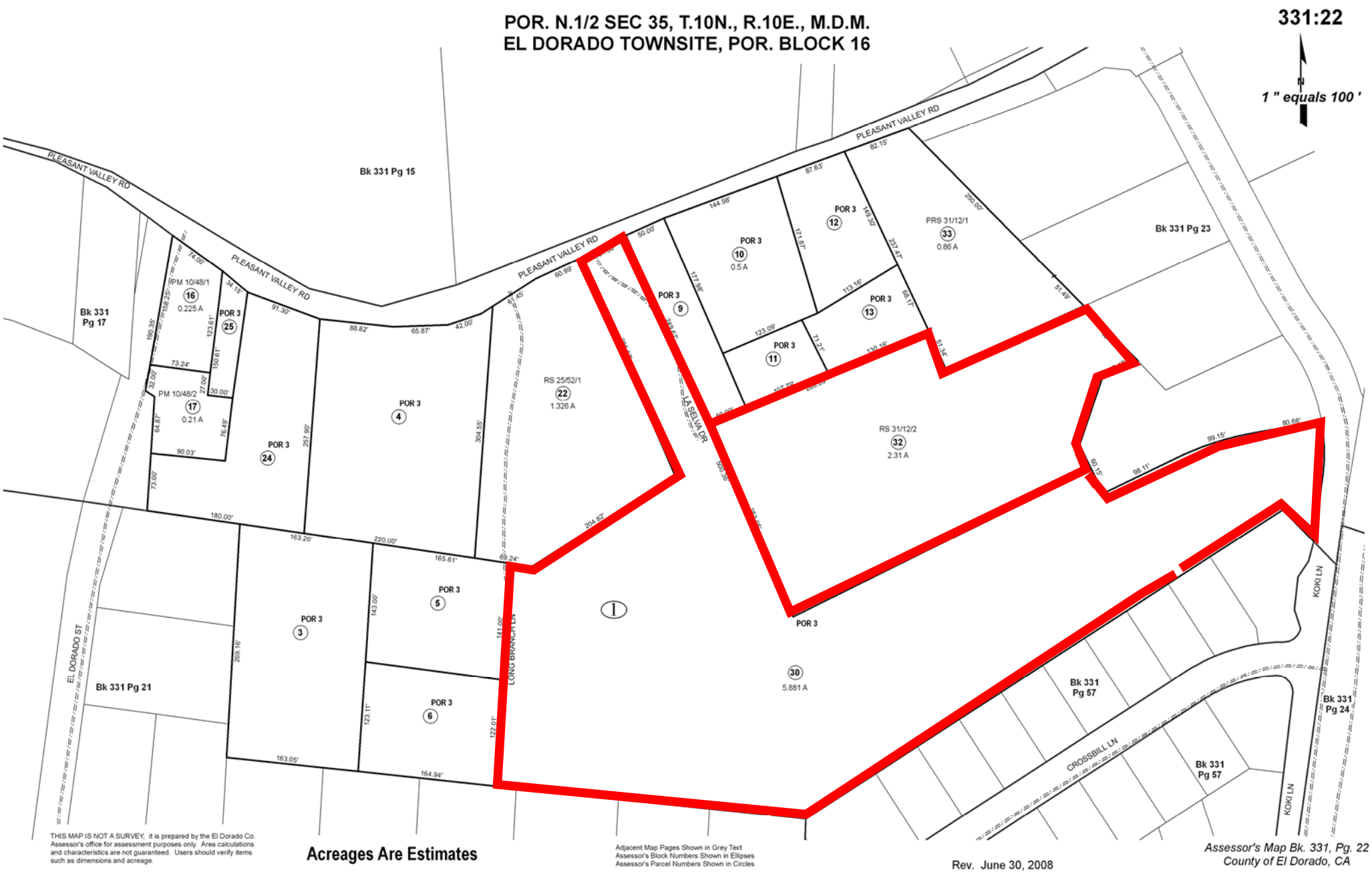
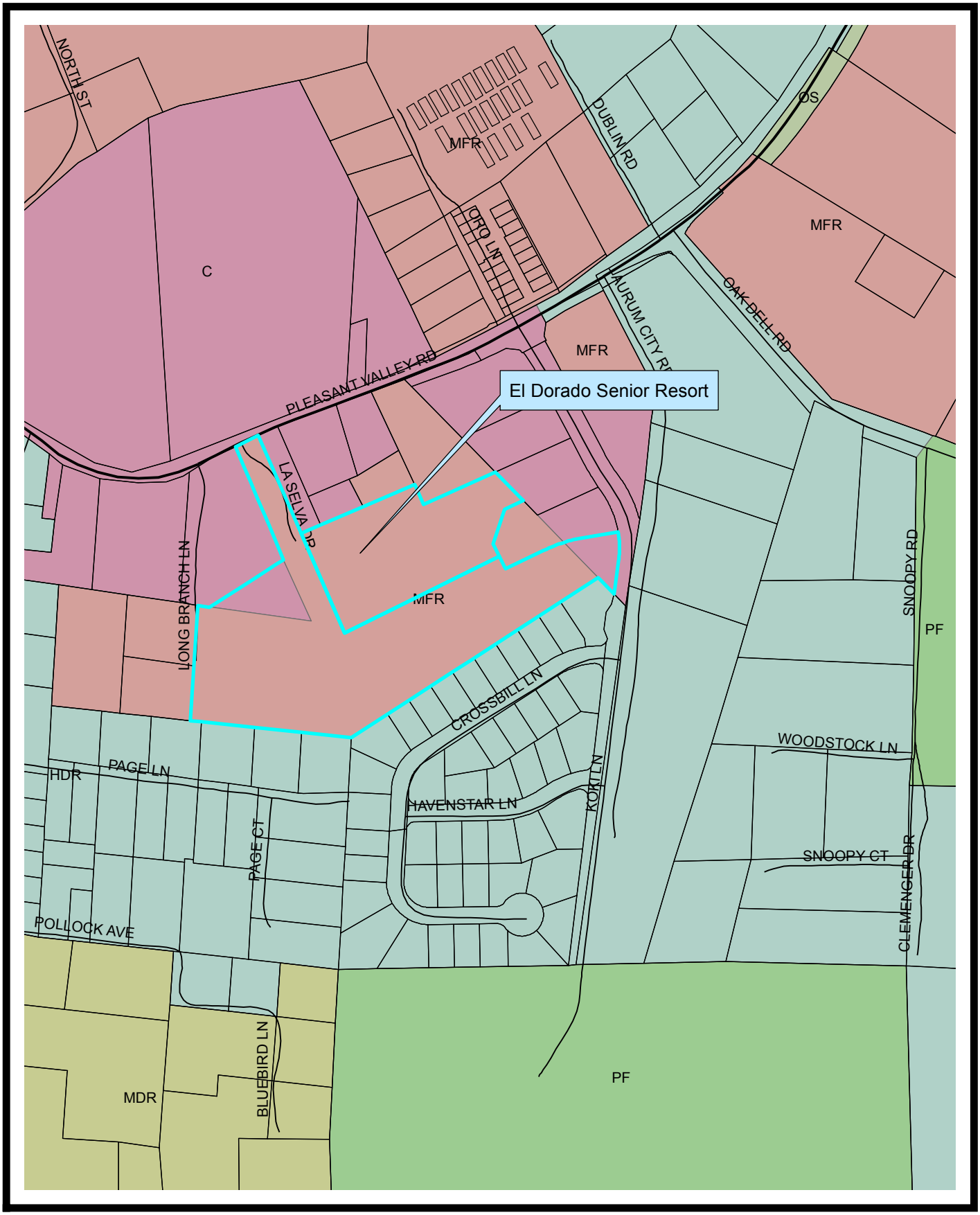

POR. N.1/2 SEC 35, T.10N., R.10E., M.D.M.
EL DORADO TOWNSITE, POR. BLOCK 16
331:22
1 " equals 100 '
PLEASANT VALLEY RD
Bk 331 Pg 15
Bk 331 Pg 17
Bk 331 Pg 23
Bk 331 Pg 21
Bk 331 Pg 57
Bk 331 Pg 24
PM 10/48/1
16
0.225 A
PM 10/48/2
17
0.21 A
POR 3
25
24
4
3
5
6
9
10
0.5 A
12
13
11
PRS 31/12/1
33
0.86 A
RS 25/52/1
22
1.326 A
RS 31/12/2
32
2.31 A
1
30
5.881 A
LA SELVA DR
LONG BRANCH LN
EL DORADO ST
KOKI LN
CROSSBILL LN
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. June 30, 2008
Assessor's Map Bk. 331, Pg. 22
County of El Dorado, CA

Exhibit B

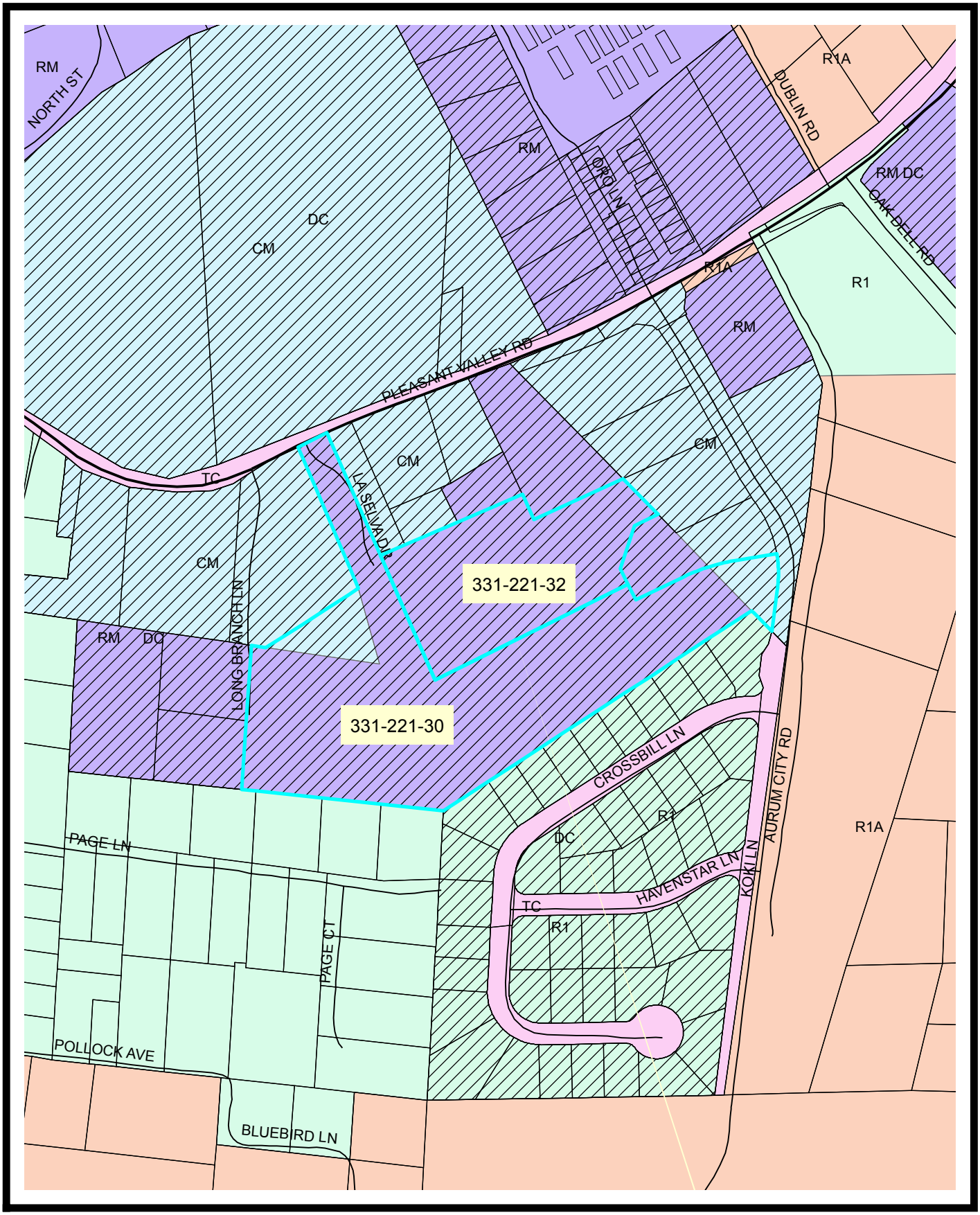


CUP18-0009: El Dorado Senior Resort
Exhibit C: Land Use Map

C
MFR
HDR
OS
MDR
PF

0 0.035 0.07 0.14 Miles

N



CUP18-0009: El Dorado Senior Resort
Exhibit D: Zoning Map

CM RM
R1 TC
R1A DC

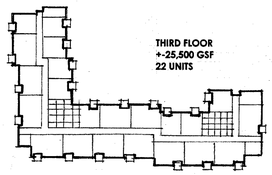
0 0.0275 0.055 0.11 Miles

N

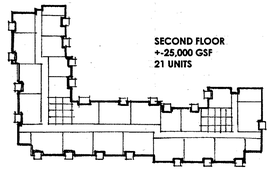
CUP18-0009: El Dorado Senior Resort
Exhibit E: Aerial Map

0 0.035 0.07 0.14 Miles

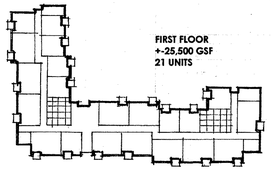
N



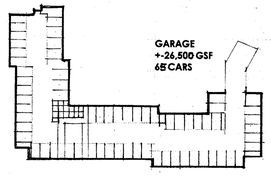
THIRD FLOOR
+-25,500 GSF
22 UNITS



SECOND FLOOR
+-25,000 GSF
21 UNITS



FIRST FLOOR
+-25,500 GSF
21 UNITS



GARAGE
+-26,500 GSF
65 CARS

SENIOR INDEPENDENT APARTMENTS
+-102,500 GSF 64 UNITS 65 PARKING SPACES

FOOTAGE SUMMARY

Assisted Living Facility
Garage: +-29,100 gsf
Residential : +-79,300 gsf
Total + 108,400 gsf

Apartment Facility
Garage: +-26,500 gsf
Residential: +-76,000 gsf
Total = +- 102,500 gsf

Community Center
+-3,250 gsf

Commercial Building 1
+-5,000 gsf

Commercial Building 2
+-2,500 gsf

Single Family
9 Units @ +-1,500 gsf = +-13,500 gsf

TOTAL PROPOSED FOOTAGE = +-235,150 GSF

PARKING SUMMARY

Assisted Living Facility
+-63 Garage Spaces
+- 4 On-Grade Spaces
Total = 67 Spaces

Apartment Facility
+-65 Garage Spaces

Community Center
+-7 On-Grade Spaces

Single Family
+-2 Garage Spaces/Unit = 18 Spaces
+-2 Apron Spaces/Unit = 18 Spaces
Total = 36 Spaces

On-Street
+-53 Spaces

TOTAL PROPOSED PARKING = +-228 SPACES

GENERAL NOTES:
a. Service yards contain propane tanks and trash collection.
b. A 7 foot fence shall be constructed around the perimeter of the project site. See landscape drawings.
c. A small sign shall be erected at the entry way conforming to Zoning Ordinance 130.16.
d. See utility plans for lighting, water, sewer, and fire hydrants.
e. Commercial buildings are open to the public.
f. Site features such as rock outcroppings, lava caps, drainage courses, lakes, canals, reservoirs, rivers, streams, spring areas subject to inundation and wetlands are not present on site.
g. Per FEMA's National Flood Hazard Layer, the project is in an area of minimal flood hazard.
h. There are no known or proposed trails on the project site
i. Refer to landscape drawings for signage requirements.

EL DORADO TOWNSITE
BLOCK 8
A.P.N. 331-151-16
TRACT 3 RS 25-128
CORP. PRES. BISHOP CH. JESUS
4101-530 O.R.

STATE HIGHWAY 49
PLEASANT VALLEY ROAD

(E) 15' WIDE SANITARY SEWER EASEMENT PER 787-615 O.R. (COUNTY)

30' SETBACK

(E) CL 60' WIDE R.O.D. SEWER EASEMENT PER 1387-27 O.R.

20' EVA

PUTTING GREEN

EL DORADO TOWNSITE
PORTION LOT 3 BLOCK 16

A.P.N. 331-221-14
DALE & BEVERLY HARTWICK
DOC. 2007-0065422

A.P.N. 331-221-13
DEREK CURRIE
DOC. 2006-0070187

A.P.N. 331-221-09
DARLENE IRENE KAY
1841-197 O.R.

A.P.N. 331-221-11
JOSE MOSQUEDA
DOC. 2006-0036341

(E) 81' WIDE DRIVEWAY ESMT. PER DOC. 2006-0042020 (FOR APN331-221-09)

LONG BRANCH LANE
EASEMENT PER 2002-0070154-00

EL DORADO TOWNSITE
PORTION BLOCK 16
A.P.N. 331-221-22
TRACT 1 RS 25-52
FRANK PERDICHIZZI
DOC. 2002-0010156

PICKLE BALL COURT

GARAGE ENTRY

SERVICE YARD

40' 20' SETBACK

Garage elevation: +-1673
First floor elevation: +-1684
Second floor elevation: +-1695
Third floor elevation: +-1705

+-300'-0"

+-228'-0"

36'-0"

56'-0"

63'-0"

COMMERCIAL BUILDING #1
2 Story / +-5,000 gsf

4 Spaces

ASSISTED AND MEMORY CARE FACILITY
Garage: +-29,100 gsf, +-63 cars
Residential: +-79,300 gsf 8 Memory Care Units
66 Assisted Care Units

20' EVA

WALKWAYS, TYP.

20'-0" SETBACK

20'-0" R.O.W.

10'-0" SETBACK

COMMERCIAL BUILDING #2
2 Story
+-2,500 gsf

A.P.N. 331-571-01
STANLEY & CHERYL SMITH
DOC. 2002-0033403

A.P.N. 331-571-02
VERNA STRICKENER
DOC. 2006-0076671

A.P.N. 331-571-03
LORI ANN WILLS
DOC. 2002-0075965

A.P.N. 331-571-04
MICHAEL & BROOKE WILKINSON
DOC. 2004-0047308

A.P.N. 331-571-05
DENNA MACMURPHY, TR.
DOC. 2004-0058510

A.P.N. 331-571-06
ROY & JEANNE CARTER
3088-358 O.R.

A.P.N. 331-571-07
WILLIAM & EMMA MCATEE
DOC. 98-0004492

A.P.N. 331-571-08
JOHN & CAROL EDWARDS
DOC. 2002-0076792

A.P.N. 331-571-09
MARCELLE KEESLER
DOC. 2006-0035984

A.P.N. 331-571-10
SANDRA DIAZ
DOC. 2000-0050324

DORADO WOODS
UNIT NO. 1
SUBD. G-128

A.P.N. 331-231-42
PARCEL 3 PM 47-98
SUMMITVIEW CHILD TREATMENT
DOC. 2001-0072073

A.P.N. 331-231-43
PARCEL 4 PM 47-98
SUMMITVIEW CHILD TREATMENT
DOC. 2001-0072073

A.P.N. 331-231-48
TRACT 1 RS 30-66
SUMMITVIEW CHILD TREATMENT
DOC. 2007-0056088

KOKI LANE

EL DORADO TOWNSITE
PORTION BLOCK 16

CH=N72°47'53"E 99.15'
L=99.15'
D=16°47'08"
R=350'

CH=S80°57'04"
L=67.65'
D=17°21'24"
R=223.5'

SINGLE FAMILY RESIDENTIAL
9 Units @ +-1,500 gsf = +-13,500 gsf

SERVICE YARD

24' EVA

50'-0" SETBACK

+-185'-0"

COMMUNITY CENTER
2 Story / +-3,250 gsf

3 Spaces

SENIOR INDEPENDENT APARTMENTS
Garage: +-26,500 gsf +-45 cars
Residential: +-76,000 gsf

Garage elevation: +-1678
First floor elevation: +-1689
Second floor elevation: +-1700
Third floor elevation: +-1710

EMERGENCY ACCESS TO COURTYARD

+-300'-0"

50'-0" SETBACK

GARAGE ENTRY

(E) 20' WIDE NON-EXCLUSIVE ROAD EASEMENT PER 459-99 O.R. (APPROXIMATE LOCATION, ONLY)

(E) 20' WIDE NON-EXCLUSIVE ROAD EASEMENT PER 478-538 O.R. (APPROXIMATE LOCATION, ONLY)

PORTION LOT 3 BLOCK 16

A.P.N. 331-221-05
TONI BARNARD
4986-673 O.R.

A.P.N. 331-221-06
JOHN & SHANNON RODGERS
DOC. 2006-0003579

A.P.N. 331-211-40
PARCEL A PM 21-2
EVAN & SARAH GOODNESS
DOC. 2005-0053748

A.P.N. 331-211-26
PARCEL 3 PM 17-94

A.P.N. 331-211-46

FIRE SAFETY CONSTRUCTION REQUIREMENTS

a. Assisted Living and Memory Care Facility
Occupancy: Garage – Group S2
Residential – GroupR2.1
Construction: Garage – Type 1A
Residential – Type VA
Two-Hour Occupancy Separation between garage and residential.
Two-Hour Area Separations foe residential as needed for area increases.
Fully Sprinklered.

b. Senior Independent Apartments
Occupancy: Garage – Group S2
Residential – GroupR2
Construction: Garage – Type 1A
Residential – Type VA
Two-Hour Occupancy Separation between garage and residential.
Two-Hour Area Separations foe residential as needed for area increases.
Fully Sprinklered.

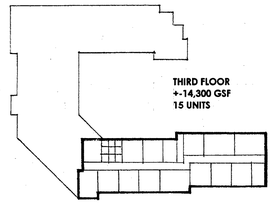
c. Commercial Buildings 1 and 2
Occupancy: Business – Group B
Construction: Type VA
Fully Sprinklered.

d. Single Family
Occupancy: Residential – Group R3
Construction: Type VB
Fully Sprinklered.
The single family homes will be constructed in conformance with the Wildland/Urban Interface (WUI) regulations and requirements CBC Chapter 7A.

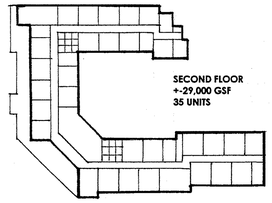
SITE STATISTICS
LOCATION: HIGHWAY 49 AT KOKI LANE
EL DORADO, CALIFORNIA
APN: 331 - 221 - 30, - 32
SITE SIZE: +/- 8.2 ACRES (357,000 GSF)
ZONING: COMMERCIAL AND MULTI-FAMILY RESIDENTIAL WITH DESIGN CONTROL
USE: VACANT

NOTE: ARCHITECTURAL SITE PLAN SHALL TAKE PRECEDENCE OVER ALL OTHER PLANS AS IT RELATES TO BUILDING LAYOUT AND LOCATIONS.

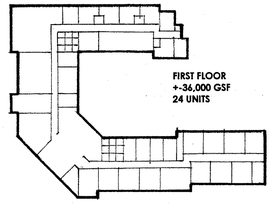
SITE PLAN



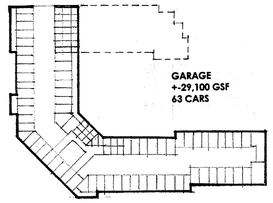
THIRD FLOOR
+-14,300 GSF
15 UNITS



SECOND FLOOR
+-29,000 GSF
35 UNITS

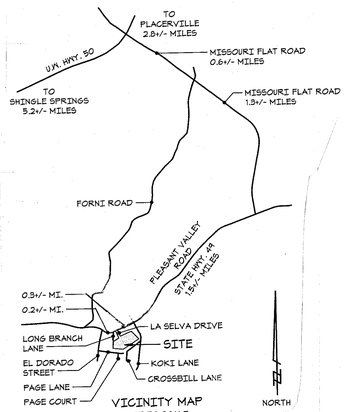


FIRST FLOOR
+-36,000 GSF
24 UNITS



GARAGE
+-29,100 GSF
63 CARS

ASSISTED LIVING AND MEMORY CARE FACILITY
+-108,400 GSF 74 UNITS 67 PARKING SPACES



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Wright Architecture Studio
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San Rafael, CA 94903
(415) 491-4447 / FAX (415) 491-4445
email: bob@wrightarchitecturestudio.com

El Dorado Senior Resort

Highway 49 at Koki Lane
El Dorado, California **Exhibit F**

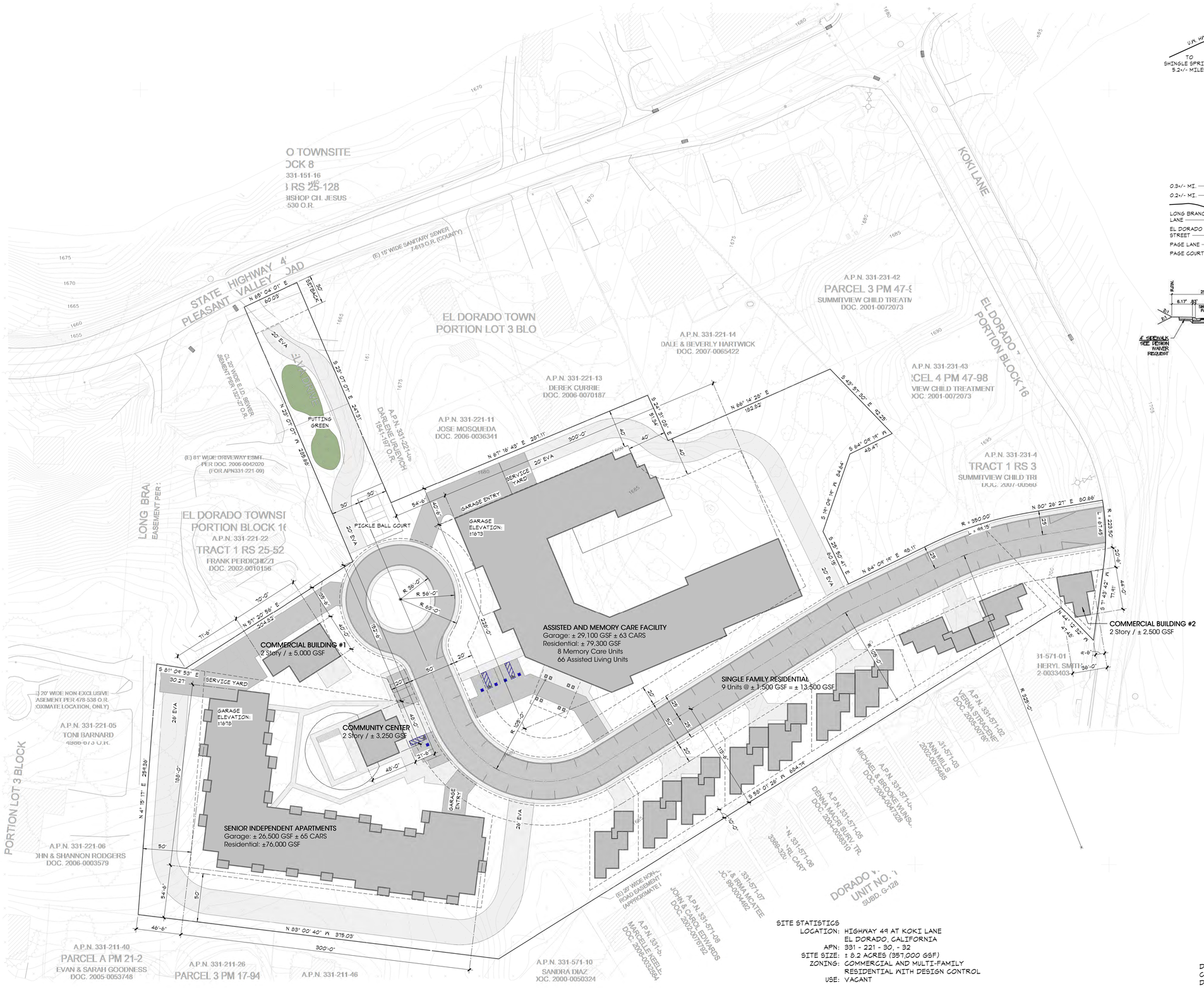
El Dorado Senior Housing LLC
854 Diablo Road
Danville, CA 94526
(281) 772-3772

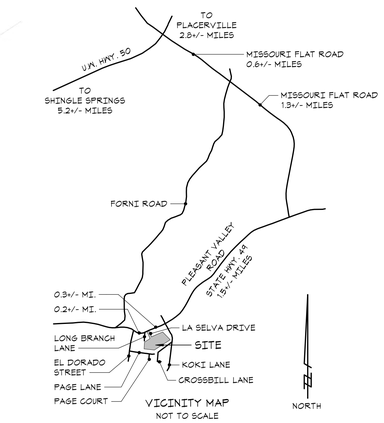
OCTOBER 26, 2018 REVISION 2
AUGUST 15, 2018 REVISION 1
MAY 2018 REVISION 0
MARCH 2018
FEBRUARY 2018
WAS 17112

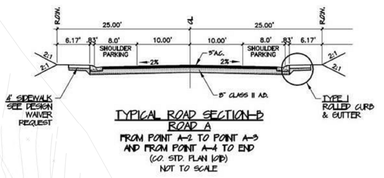
0 20 40 80 160
SCALE: 1"= 40'-0"

A1.0

11/19/2018 5:45:51 PM







TYPICAL ROAD SECTION-D
ROAD A
FROM POINT A-2 TO POINT A-3 AND FROM POINT A-4 TO END
(CO. STD. PLAN V2D)
NOT TO SCALE

SITE STATISTICS

LOCATION:	HIGHWAY 49 AT KOKI LANE EL DORADO, CALIFORNIA
APN:	331 - 221 - 30, - 32
SITE SIZE:	± 8.2 ACRES (357,000 GSF)
ZONING:	COMMERCIAL AND MULTI-FAMILY RESIDENTIAL WITH DESIGN CONTROL
USE:	VACANT

DRAWING IS FOR USE BY CIVIL/MECHANICAL/ELECTRICAL DISCIPLINES. SEE DRAWING A1.0 FOR ARCHITECTURAL INFORMATION.

0 20 40 80 160

1" = 40'

WRIGHT ARCHITECTURE Studio
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San Rafael, California 94903
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email: bob@wrightarchitecturestudio.com

El Dorado Senior Resort

Highway 49 at Koki Road
El Dorado, California

Exhibit G

El Dorado Senior Housing LLC
854 Diablo Road
Danville, California
(281) 772-3772

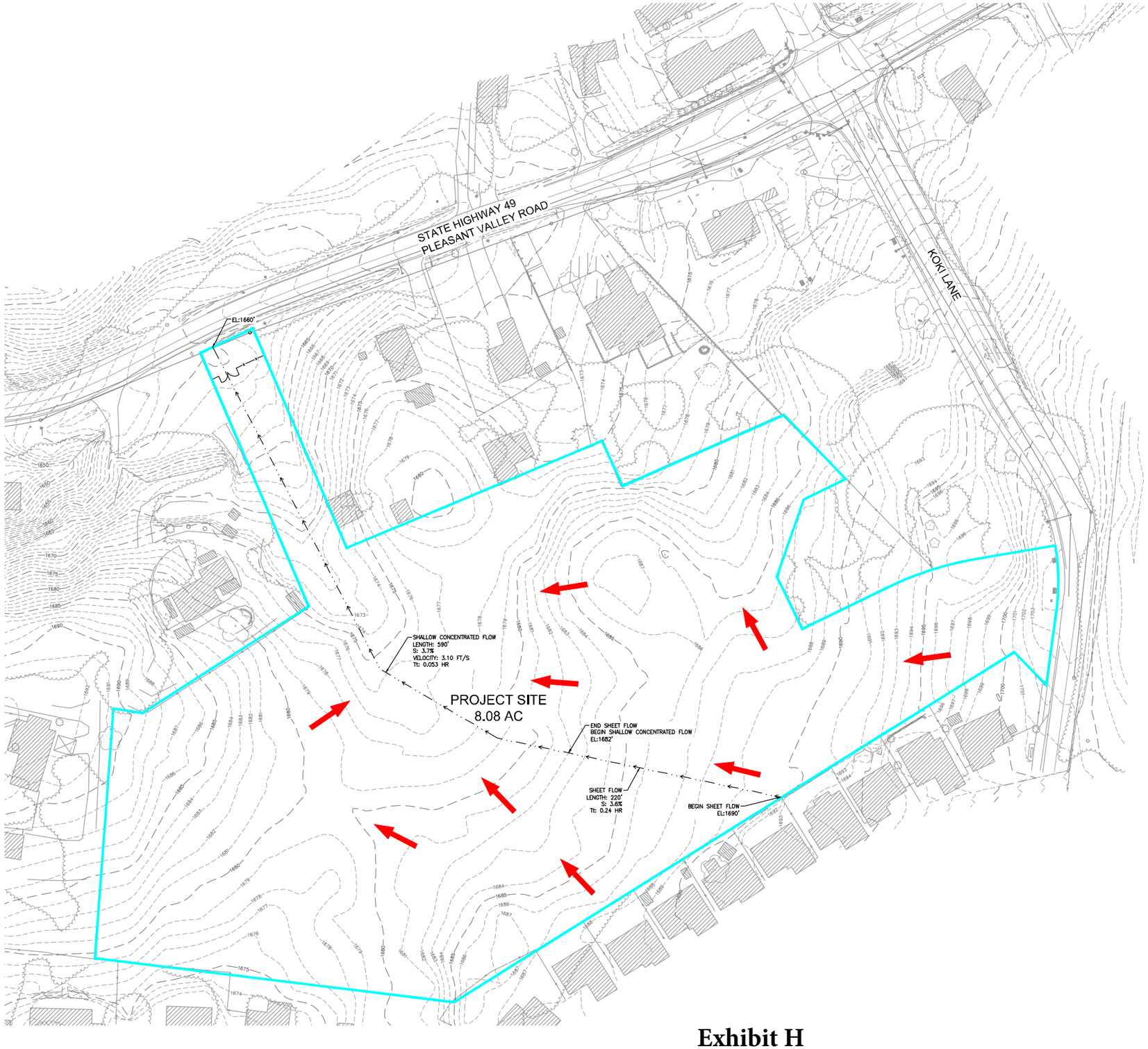
Site Plan

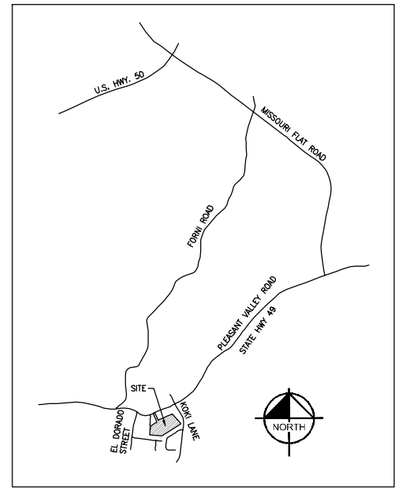
A1.1

August 15, 2018: Revision 1

WAS 17112

8/15/18 4:59:46 PM





VICINITY MAP
NOT TO SCALE

LEGEND

1680	EXISTING MAJOR CONTOUR
1681	EXISTING MINOR CONTOUR
1680	PROPOSED MAJOR CONTOUR
1681	PROPOSED MINOR CONTOUR
	DRAINAGE MANAGEMENT AREA BOUNDARY
	FLOW DIRECTION
	FLOW PATH FOR HYDROLOGY CALCULATIONS
AC	ACRE
CFS	CUBIC FEET PER SECOND
DMA	DRAINAGE MANAGEMENT AREA
HR	HOUR

NOTES

PROJECT SITE = 8.08 AC

TOTAL SITE FLOW (Q) FOR PRE DEVELOPMENT = 3.11 CFS

NORTH

GRAPHIC SCALE IN FEET
0 20 40 80

FIGURE 1: PRE DEVELOPMENT CONDITIONS

NOVEMBER 30, 2018

Kimley»Horn © 2018

Exhibit H

Kimley»Horn

Conceptual Drainage & Water Quality Technical Memorandum

Prepared For: Roger Lewis
El Dorado Senior Housing, LLC

Prepared By: Gregg McMillon
Marvin Marshall, P.E.

Date: August 30, 2018
REV 1 – November 30, 2018

KHA Job # 197140001

---

1 INTRODUCTION

The El Dorado Senior Resort project is a proposed development located in Diamond Springs with access points on Koki Lane and State Route 49. The project includes two new three-story buildings with underground parking (105,500 SF and 108,400 SF), nine single family residential units (1,500 SF/Unit), two commercial buildings (2,500 SF and 5,000 SF), a community center (3,250 SF) and associated parking, landscaping, and outdoor use areas. The residence buildings consist of 138 total living units. One residence building will be senior independent apartments with the second building reserved for assisted living and care. The purpose of this memo is to quantify the rainfall runoff for the existing conditions and proposed conditions; as well as determine the volume of water to be stored and metered out to match pre- development flows. In addition to the hydrologic analysis this report includes a description of stormwater treatment measures to be implemented.

2 EXISTING CONDITIONS

The existing site is an 8.08-acre undeveloped parcel located in Diamond Springs. The ground cover is described as woods with light underbrush. Per a custom soil resource report for El Dorado Area, California provided by the Unite States Department of Agriculture (USDA), the site is underlaid primarily by hydrologic soil group C and is classified as 45.8% Sobrante very rocky silt loam (SwD), and 54.2% Boomer very rocky loam (BkD). The site generally drains from south to north where run off is captured in existing catch basins located within State Route 49 (*Figure 1 – Pre- Development Conditions* as part of the appendix 1).

3 CALCULATION METHODOLOGY

The hydrologic analysis was prepared in accordance with the *El Dorado County Drainage Manual* and *Urban Hydrology for Small Watersheds (TR-55)* to determine Peak Discharge for the existing and post development conditions. Using the two design guidelines, the following initial site variables were found for the existing project site:

Curve Number (CN) = 72 (See Appendix B1)

Mean annual precipitation = 36 inches (See Appendix B2)

Depth of Rainfall for the 10-year, 24-hour storm event (P) = 4.71 inches (10-year, 24 hour storm event) (See Appendix B4)

The first step to determine the peak discharge is calculating the time of concentration from the most hydraulically distant point to the sub-shed discharge point. The methodology and analysis is described below:

Time of Concentration (T_c)

$$T_c = Time\ of\ Concentration = T_{t1} + T_{t2} = 0.293\ hr = 17.6\ Minutes$$

Sheet Flow (T_{t1})

$$T_{t1} = Travel\ Time = \frac{0.007 * (n * L)^{0.8}}{(P_2)^{0.5} * s^{0.4}} = 0.24\ hr$$

Where:

Manning Roughness Coefficient (n) = 0.15 (See Appendix B5, Grass: Short Grass Prairie)

Flow Length (L)= 220 Feet (See Appendix A, Figure 1)

2 Year, 24 Hour Rainfall (P_2) = 3.20 Inches (See Appendix B3)

Slope of sheet flow (s) = 3.6% (See Appendix A, Figure 1)

Shallow Concentrated Flow (T_{t2})

$$T_{t2} = Travel\ Time = \frac{L}{3600 * V} = 0.053\ hr$$

Where:

Flow Length (L) = 590 Feet (See Appendix A, Figure 1)

Average Slope of Shallow Concentrated Flow = 3.7% (See Appendix A, Figure 1)

Average Velocity (V) = 3.10 Ft/Sec (See Appendix B6)

Once Time of Concentration is calculated, site runoff (Q) and Peak Discharge (q_p) must be calculated. The method and analysis can be found below:

$$Runoff = Q = \frac{(P - I_a)^2}{(P - I_a) + S}$$

Where:
P = 4.71 Inches (10-year, 24 hour storm event) (See Appendix B4)
Initial Abstraction $(I_a) = 0.2 * S = 0.78$ *Inches*
Potential maximum retention after runoff begins $(S) = \frac{1000}{CN} - 10 = 3.89$ *Inches*
Curve Number $(CN) = 72$ *(See Appendix B1)*

Thus:

$$Q = \frac{(4.71 - 0.78)^2}{(4.71 - 0.78) + 3.89} = 1.89\ inches$$

Once Runoff for the 10-year storm is determined, the peak discharge can be calculated. The method and analysis can be found below:

$$Peak\ Discharge = q_p = q_u * A_m * Q * F_p$$

Where:
q_u *=Unit Peak Discharge= 125 CSM/Inch (See Appendix B7)*
A_m *= Site area = 0.0126 Square Miles*
Q *= Runoff calculated above = 1.98 Inches*
F_p *= Pond and Swamp adjustment factor = 1*
Thus:
q_p *= 3.11 Cubic Feet per Second (CFS)*

4 POST DEVELOPMENT CONDITIONS

The proposed site will be graded to mimic the existing drainage pattern. The site will utilize pervious pavement along the Emergency Vehicle Access roads, porous pavements for the sidewalks, roads and hardscapes to minimize impervious surfaces see *Figure 3 – Pervious and Impervious Areas*. The Assisted Living, and Senior Independent Apartments will incorporate "Blue Roofs" to capture rain water and use it as irrigation for on-site landscaping and garden areas. The remainder of the surface runoff is directed from South to North. The proposed site improvements will convey water to the on-site road and will be captured in stormwater detention devices. The water will be stored, treated and ultimately discharged into the existing stormdrain network within State Route 49. See *Figure 2 – Post Development Conditions* for locations of the Blue Roofs, and detention devices.

5 POST DEVELOPMENT HYDROLOGIC ANALYSIS

Per the *El Dorado County Drainage Manual* and *Urban Hydrology for Small Watersheds (TR-55)* a post-development flow was calculated. Firstly, the time of concentration from the most hydraulically distant point to the sub-shed discharge point must be calculated and is described below.

Time of Concentration (T_c)

$$T_c = Time\ of\ Concentration = T_{t1} + T_{t2} + T_{t3} = 0.17\ hr = 10.4\ Minutes$$

Sheet Flow (T_t)

$$T_{t1} = Travel\ Time = \frac{0.007 * (n * L)^{0.8}}{(P_2)^{0.5} * s^{0.4}} = 0.09\ hr$$

Where:

Manning n = 0.24 (See Appendix B5, Dense Grass)
Flow Length = 50 Feet (See Appendix A, Figure 2)
2 Year, 24 Hour Rainfall (P_2) = 3.20 Inches (See Appendix B3)
Slope = 6.0% (See Appendix A, Figure 2)

Channel Flow (Gutter, T_{t2})

$$T_{t2} = Travel\ Time = \frac{L}{3600 * V} = 0.08\ hr$$

Where:

Flow Length (L) = 995 Feet (See Appendix A, Figure 2)

$$Average\ Velocity\ (V) = \frac{1.49 * r^{\frac{2}{3}} * s^{1/2}}{n} = 3.53\ ft/s$$

Where:

$$Hydraulic\ Radius\ (r) = \frac{A}{P_w} = 0.06$$

Area (A) = 0.12 ft
Wetted Perimeter (P_w) = 1.97 ft
Slope (s) = 0.029
Manning's Coefficient (n) = 0.011

Channel Flow (Pipe, T_{t3})

$$T_{t2} = Travel\ Time = \frac{L}{3600 * V} = 0.0075\ hr$$

Where:

Flow Length (L) = 300 Feet (See Appendix A, Figure 2)

$$Average\ Velocity\ (V) = \frac{1.49 * r^{\frac{2}{3}} * s^{1/2}}{n} = 11.1\ ft/s$$

Where:

$$Hydraulic\ Radius\ (r) = \frac{A}{P_w} = 0.25$$

Area (A) = 0.79 ft
Wetted Perimeter (P_w) = 3.14 ft
Slope (s) = 0.06
Manning's Coefficient (n) = 0.013

Once Time of Concentration is calculated, site runoff (Q) and Peak Discharge (q_p) must be calculated. The method and analysis can be found below:

$$Runoff = Q = \frac{(P - I_a)^2}{(P - I_a) + S}$$

Where:
P = 4.71 Inches (Per section 3, above)

$$I_a = 0.2 * S = 0.55\ Inch$$

$$S = \frac{1000}{CN} - 10 = 2.75\ Inches$$

$$CN = \left(\frac{Impervious\ area}{Total\ Site\ Area}\right) * CN_{Paved} + \left(\frac{Pervious\ Area}{Total\ Site\ Area}\right) * CN_{Unpaved}$$

$$= \left(\frac{82{,}640}{351{,}893}\right) * 98 + \left(\frac{269{,}254}{351{,}893}\right) * 72 = 78$$

Thus:
Q = 2.50 inches

Once Runoff for the 10-year storm is determined, the peak discharge can be calculated. The method and analysis can be found below:

$$Peak\ Discharge = q_p = q_u * A_m * Q * F_p$$

Where:
q_u =Unit Peak Discharge= 155 CSM/Inch (See Appendix B8)
A_m = Site area = 0.0126 Square Miles
Q = Runoff calculated above = 2.50 Inches
F_p = Pond and Swamp adjustment factor = 1
Thus:
q_p = 4.90 Cubic Feet per Second (CFS)

6 STORAGE ANALYSIS

Due to the increase of impervious area as part of the proposed improvements, the post development flows are greater than the pre- development flows. The difference in flows will be detained on-site and metered out in order to match pre-existing flow conditions leaving the project site during the peak discharge. The project will implement and utilize blue roofs atop the senior care building, and apartment building. The blue roofs will capture and detain the stormwater generated from roof areas and will be used to irrigate landscape and open spaces. The remaining stormwater that will discharge from the project site will flow North until it is diverted and captured in a stormwater detention device that will detain, treat, and ultimately meter the stormwater into the existing storm drain system located within Highway 49.

Condition/Watershed	Area (ac)	Tc (min)	Q10 (cfs)
Pre Development	8.08	17.7	3.11
Post Development	8.08	10.4	4.90

The methodology and analysis for required storage volume based on peak discharge per the *Urban Hydrology for Small Watersheds (TR-55)* is outlined below:

Existing Peak Discharge = q_o = *3.11 CFS*
Peak inflow per Section 5 above = q_i = *4.90 CFS*
q_o/q_i = 0.64

Storage Volume Required (V_s)

$$V_s = V_r * (\frac{V_s}{V_r})$$

Where:
V_s/V_r = *0.145 (A function of q_o/q_i and the rainfall type (Type 1A for this project), refer to Chapter 6, Figure 6-1 of TR-55) (See Appendix B9)*

$V_r = 53.33 * Q * A_m$ = *1.69 Acre-Feet*
Q = *Runoff per Section 5 above = 2.50 Inches*
A_m = *Site area in square miles = 0.0126 Square Miles*

Thus:
V_s = *0.24 Acre-Feet = 10,650 Cubic Feet*

Using a Blue Roof system for the Assisted Living and Senior Apartment buildings, approximately 5,696 Cubic Feet (3,410 CFS, and 2,286 CFS respectively) will be

detained in order to provide irrigation to landscape and open space areas. The remaining 4,954 Cubic Feet of storage will come in the form of a detention structure located as shown in *Figure 2 – Post Development Conditions*. The proposed detention structure will be an open bottom structure per manufacture specifications and will promote both treatment and infiltration into the ground soil.

7 STORMWATER QUALITY

In compliance with the National Pollutant Discharge Elimination System (NPDES) permit, enforced by the California State Water Resource Control Board (SWRCB), El Dorado County is classified as small municipality and subject to the Phase II MS4 requirements. To prevent pollution to the downstream waterways several best management practices (BMPs) are to be utilized during construction and after construction. In addition to construction BMPs the following treatment measures will be evaluated to determine project suitability for treatment and detention: infiltration basins, proprietary devices such as Contech Stormfilter products, ADS StormTech chambers, and pervious/porous pavements.

Appendix A

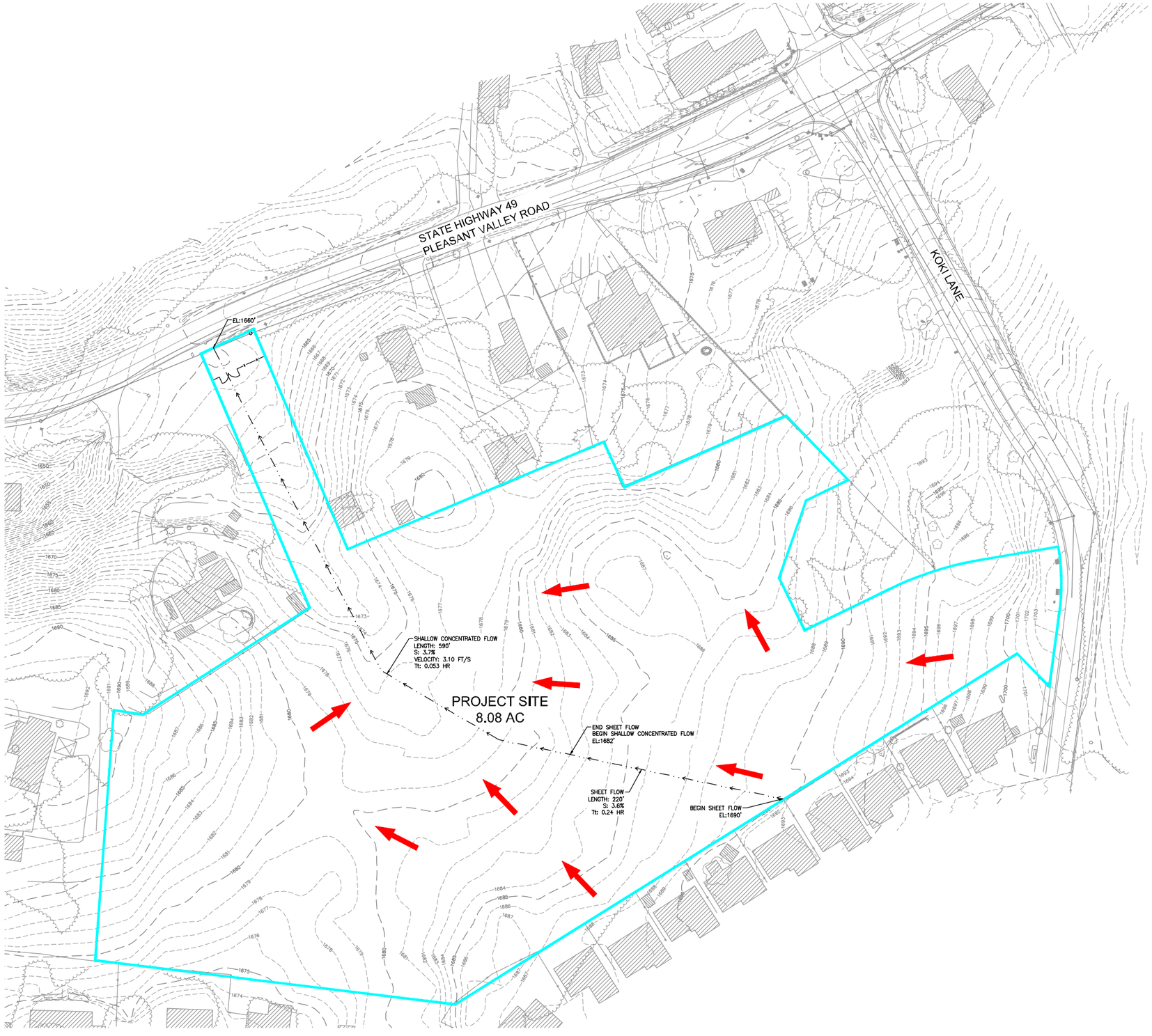
Figure 1: Pre- Development Drainage Areas

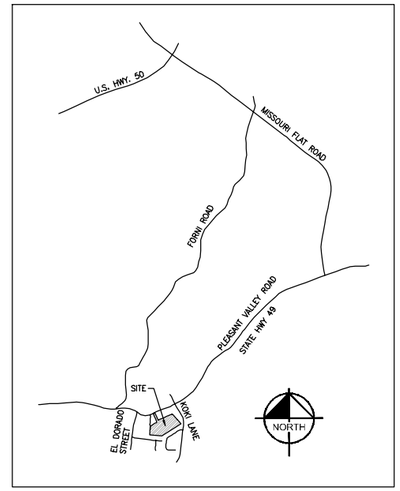
Figure 2: Post Development Drainage Areas

Figure 3: Pervious and Impervious Areas

Figure 4: United States Department of Agriculture (USDA) Custom Soil Resource Report

Figure 5: United States Department of Agriculture (USDA) Unit Description - Sobrante Very Rocky Silt Loam





VICINITY MAP
NOT TO SCALE

LEGEND

1680	EXISTING MAJOR CONTOUR
1681	EXISTING MINOR CONTOUR
1680	PROPOSED MAJOR CONTOUR
1681	PROPOSED MINOR CONTOUR
	DRAINAGE MANAGEMENT AREA BOUNDARY
	FLOW DIRECTION
	FLOW PATH FOR HYDROLOGY CALCULATIONS
AC	ACRE
CFS	CUBIC FEET PER SECOND
DMA	DRAINAGE MANAGEMENT AREA
HR	HOUR

NOTES

PROJECT SITE = 8.08 AC

TOTAL SITE FLOW (Q) FOR PRE DEVELOPMENT = 3.11 CFS

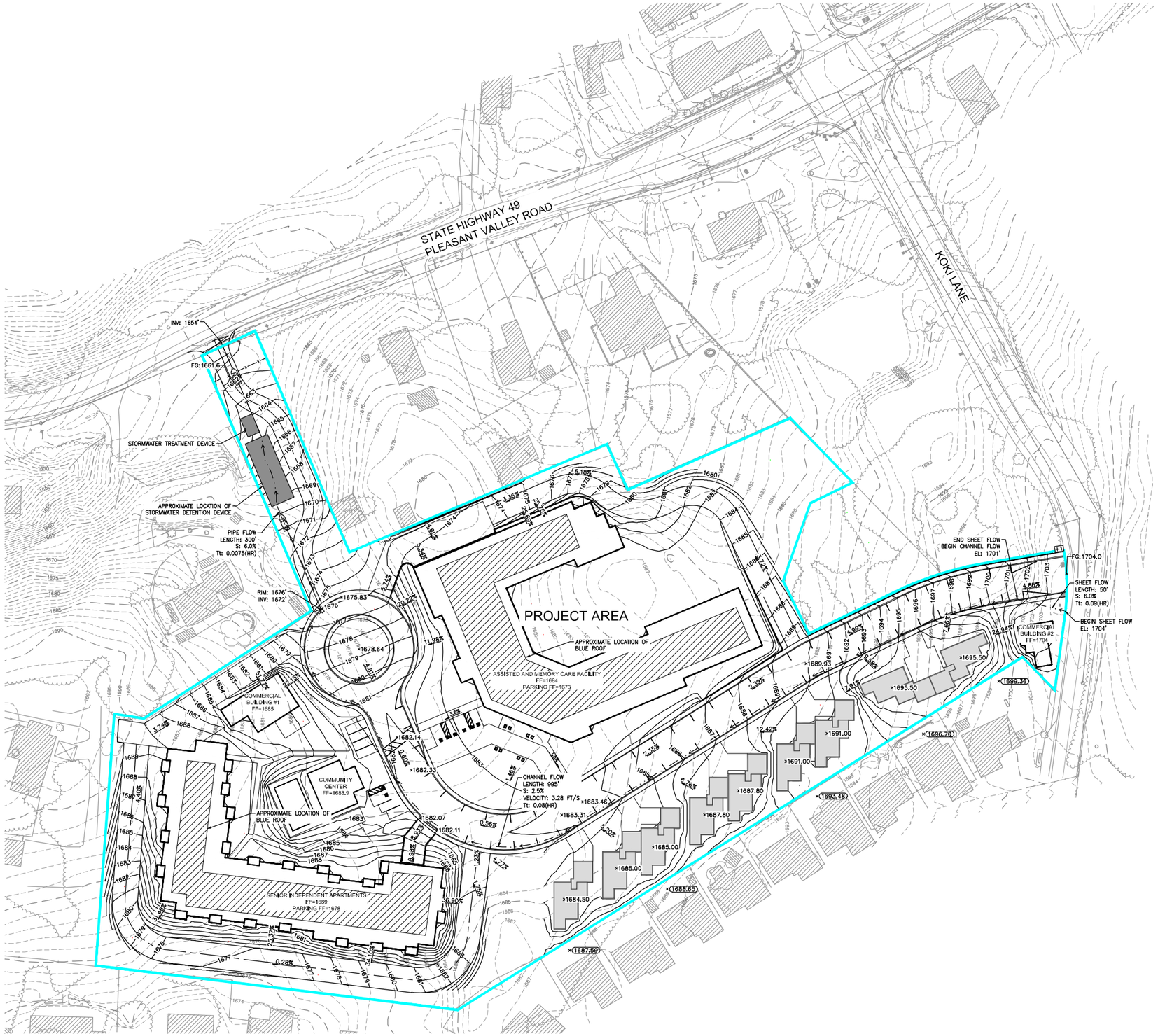
NORTH

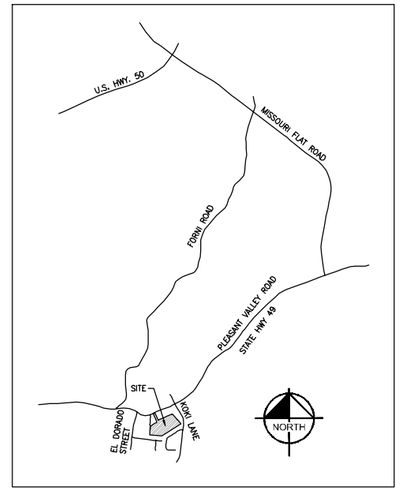
GRAPHIC SCALE IN FEET
0 20 40 80

FIGURE 1: PRE DEVELOPMENT CONDITIONS

NOVEMBER 30, 2018

Kimley»Horn





VICINITY MAP
NOT TO SCALE

LEGEND

1680	EXISTING MAJOR CONTOUR
1681	EXISTING MINOR CONTOUR
1680	PROPOSED MAJOR CONTOUR
1681	PROPOSED MINOR CONTOUR
	PROJECT BOUNDARY
	FLOW PATH FOR HYDROLOGIC CALCULATIONS
	BLUE ROOF
	APPROXIMATE LOCATION OF STORMWATER DETENTION DEVICES
CF	CUBIC FEET
CFS	CUBIC FEET PER SECOND
DMA	DRAINAGE MANAGEMENT AREA
FF	FINISHED FLOOR

NOTES

PROJECT AREA = 8.08 AC

TOTAL SITE FLOW (Q) FOR POST DEVELOPMENT = 4.9 CFS

TOTAL VOLUME OF STORMWATER TO BE DETAINED FOR IRRIGATION (BLUE ROOF) = 5,696 CF

TOTAL VOLUME OF STORMWATER TO BE DETAINED, AND TREATED ONSITE (APPROXIMATE LOCATIONS ON THE NORTHERN PORTION OF PROJECT SITE) = 4,954 CF

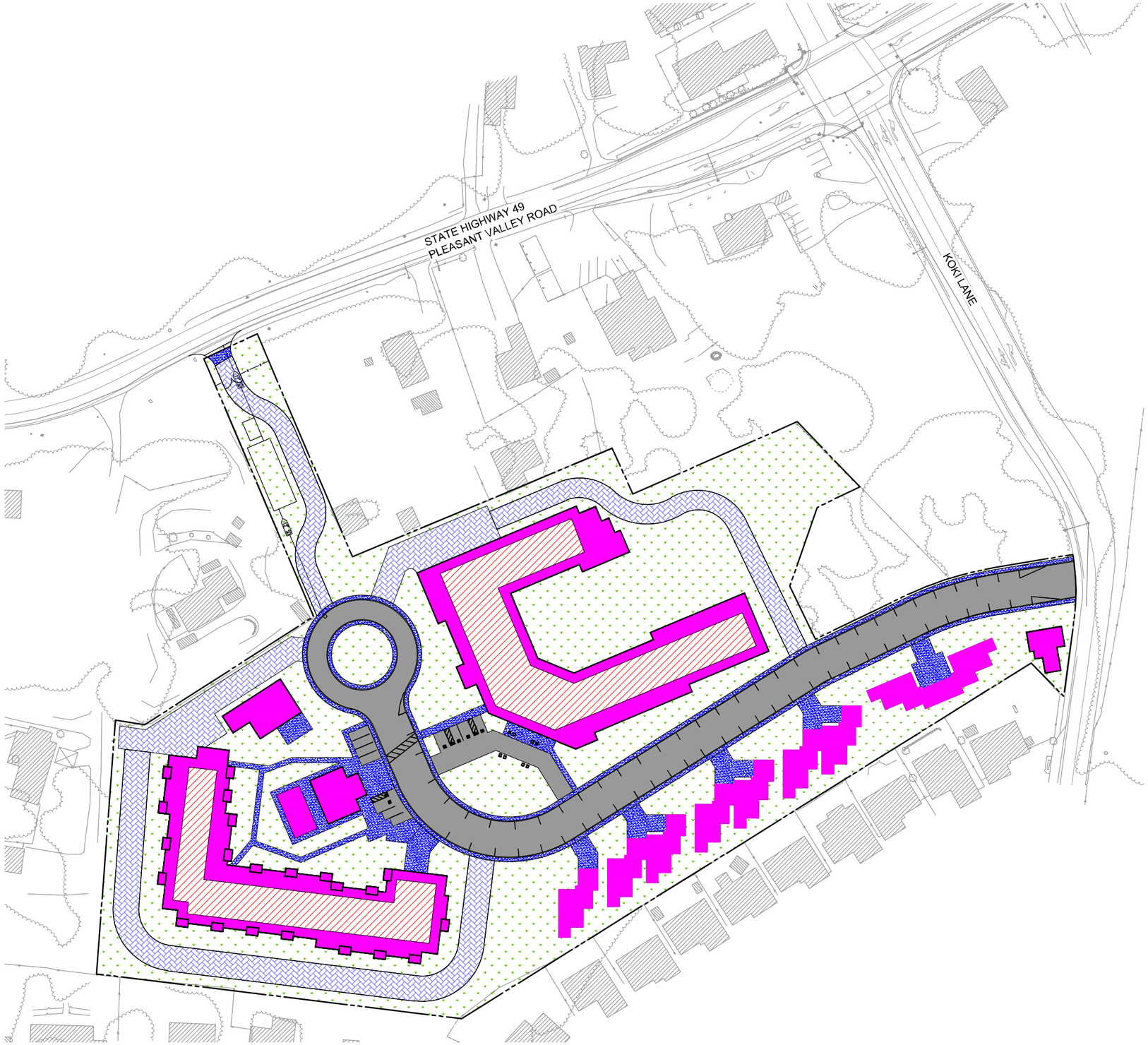
NORTH

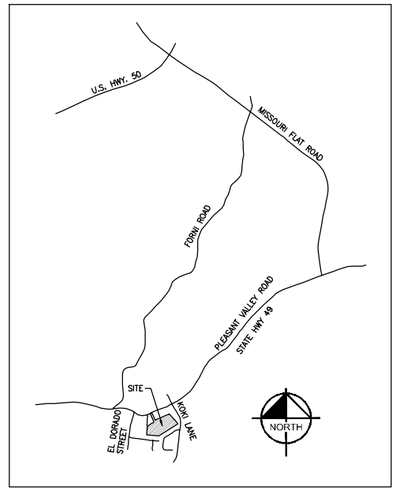
GRAPHIC SCALE IN FEET
0 20 40 80

FIGURE 2: POST DEVELOPMENT CONDITIONS

NOVEMBER 30, 2018

Kimley»Horn © 2018





VICINITY MAP
NOT TO SCALE

LEGEND

IMPERVIOUS SURFACES		SF	%
	BLUE ROOF	34,180	9.7%
	BUILDINGS/POOL	52,925	15.0%
PERVIOUS SURFACES			
	EMERGENCY VEHICLE ACCESS ROAD GRASSCRETE PAVERS	42,481	12.1%
	POROUS CONCRETE	23,485	6.7%
	ROADWAY PERMEABLE PAVERS	43,965	12.5%
	LANDSCAPE & OPEN SPACE	154,710	44.0%
	TOTAL	351,746	100%

NORTH

GRAPHIC SCALE IN FEET
0 20 40 80

FIGURE 3: PERVIOUS AND IMPERVIOUS AREAS

NOVEMBER 30, 2018

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United States Department of Agriculture

NRCS

Natural Resources Conservation Service

A product of the National Cooperative Soil Survey, a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local participants

FIGURE 4

Custom Soil Resource Report for El Dorado Area, California

Piedmont Senior Housing

Preface

Soil surveys contain information that affects land use planning in survey areas. They highlight soil limitations that affect various land uses and provide information about the properties of the soils in the survey areas. Soil surveys are designed for many different users, including farmers, ranchers, foresters, agronomists, urban planners, community officials, engineers, developers, builders, and home buyers. Also, conservationists, teachers, students, and specialists in recreation, waste disposal, and pollution control can use the surveys to help them understand, protect, or enhance the environment.

Various land use regulations of Federal, State, and local governments may impose special restrictions on land use or land treatment. Soil surveys identify soil properties that are used in making various land use or land treatment decisions. The information is intended to help the land users identify and reduce the effects of soil limitations on various land uses. The landowner or user is responsible for identifying and complying with existing laws and regulations.

Great differences in soil properties can occur within short distances. Some soils are seasonally wet or subject to flooding. Some are too unstable to be used as a foundation for buildings or roads. Clayey or wet soils are poorly suited to use as septic tank absorption fields. A high water table makes a soil poorly suited to basements or underground installations.

The National Cooperative Soil Survey is a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local agencies. The Natural Resources Conservation Service (NRCS) has leadership for the Federal part of the National Cooperative Soil Survey.

Information about soils is updated periodically. Updated information is available through the NRCS Soil Data Mart Web site or the NRCS Web Soil Survey. The Soil Data Mart is the data storage site for the official soil survey information.

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How Soil Surveys Are Made

Soil surveys are made to provide information about the soils and miscellaneous areas in a specific area. They include a description of the soils and miscellaneous areas and their location on the landscape and tables that show soil properties and limitations affecting various uses. Soil scientists observed the steepness, length, and shape of the slopes; the general pattern of drainage; the kinds of crops and native plants; and the kinds of bedrock. They observed and described many soil profiles. A soil profile is the sequence of natural layers, or horizons, in a soil. The profile extends from the surface down into the unconsolidated material in which the soil formed or from the surface down to bedrock. The unconsolidated material is devoid of roots and other living organisms and has not been changed by other biological activity.

Currently, soils are mapped according to the boundaries of major land resource areas (MLRAs). MLRAs are geographically associated land resource units that share common characteristics related to physiography, geology, climate, water resources, soils, biological resources, and land uses (USDA, 2006). Soil survey areas typically consist of parts of one or more MLRA.

The soils and miscellaneous areas in a survey area occur in an orderly pattern that is related to the geology, landforms, relief, climate, and natural vegetation of the area. Each kind of soil and miscellaneous area is associated with a particular kind of landform or with a segment of the landform. By observing the soils and miscellaneous areas in the survey area and relating their position to specific segments of the landform, a soil scientist develops a concept, or model, of how they were formed. Thus, during mapping, this model enables the soil scientist to predict with a considerable degree of accuracy the kind of soil or miscellaneous area at a specific location on the landscape.

Commonly, individual soils on the landscape merge into one another as their characteristics gradually change. To construct an accurate soil map, however, soil scientists must determine the boundaries between the soils. They can observe only a limited number of soil profiles. Nevertheless, these observations, supplemented by an understanding of the soil-vegetation-landscape relationship, are sufficient to verify predictions of the kinds of soil in an area and to determine the boundaries.

Soil scientists recorded the characteristics of the soil profiles that they studied. They noted soil color, texture, size and shape of soil aggregates, kind and amount of rock fragments, distribution of plant roots, reaction, and other features that enable them to identify soils. After describing the soils in the survey area and determining their properties, the soil scientists assigned the soils to taxonomic classes (units). Taxonomic classes are concepts. Each taxonomic class has a set of soil characteristics with precisely defined limits. The classes are used as a basis for comparison to classify soils systematically. Soil taxonomy, the system of taxonomic classification used in the United States, is based mainly on the kind and character of soil properties and the arrangement of horizons within the profile. After the soil scientists classified and named the soils in the survey area, they compared the

individual soils with similar soils in the same taxonomic class in other areas so that they could confirm data and assemble additional data based on experience and research.

While a soil survey is in progress, samples of some of the soils in the area generally are collected for laboratory analyses and for engineering tests. Soil scientists interpret the data from these analyses and tests as well as the field-observed characteristics and the soil properties to determine the expected behavior of the soils under different uses. Interpretations for all of the soils are field tested through observation of the soils in different uses and under different levels of management. Some interpretations are modified to fit local conditions, and some new interpretations are developed to meet local needs. Data are assembled from other sources, such as research information, production records, and field experience of specialists. For example, data on crop yields under defined levels of management are assembled from farm records and from field or plot experiments on the same kinds of soil.

Predictions about soil behavior are based not only on soil properties but also on such variables as climate and biological activity. Soil conditions are predictable over long periods of time, but they are not predictable from year to year. For example, soil scientists can predict with a fairly high degree of accuracy that a given soil will have a high water table within certain depths in most years, but they cannot predict that a high water table will always be at a specific level in the soil on a specific date.

After soil scientists located and identified the significant natural bodies of soil in the survey area, they drew the boundaries of these bodies on aerial photographs and identified each as a specific map unit. Aerial photographs show trees, buildings, fields, roads, and rivers, all of which help in locating boundaries accurately.

Soil Map

The soil map section includes the soil map for the defined area of interest, a list of soil map units on the map and extent of each map unit, and cartographic symbols displayed on the map. Also presented are various metadata about data used to produce the map, and a description of each soil map unit.

Custom Soil Resource Report
Soil Map (**Estimation of Parcel area**)

MAP LEGEND

Area of Interest (AOI)
- Area of Interest (AOI)

Soils
- Soil Map Units

Special Point Features
- Blowout
- Borrow Pit
- Clay Spot
- Closed Depression
- Gravel Pit
- Gravelly Spot
- Landfill
- Lava Flow
- Marsh
- Mine or Quarry
- Miscellaneous Water
- Perennial Water
- Rock Outcrop
- Saline Spot
- Sandy Spot
- Severely Eroded Spot
- Sinkhole
- Slide or Slip
- Sodic Spot
- Spoil Area
- Stony Spot
- Very Stony Spot
- Wet Spot
- Other

Special Line Features
- Gully
- Short Steep Slope
- Other

Political Features

Municipalities
- Cities
- Urban Areas

Water Features
- Oceans
- Streams and Canals

Transportation
- Rails

Roads
- Interstate Highways
- US Routes
- State Highways
- Local Roads
- Other Roads

MAP INFORMATION

Original soil survey map sheets were prepared at publication scale. Viewing scale and printing scale, however, may vary from the original. Please rely on the bar scale on each map sheet for proper map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL: http://websoilsurvey.nrcs.usda.gov
Coordinate System: UTM Zone 10N

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: El Dorado Area, California
Survey Area Data: Version 4, Dec 14, 2007

Date(s) aerial images were photographed: 5/9/1993

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Map Unit Legend (**Estimation of Parcel area**)

El Dorado Area, California (CA624)			
Map Unit Symbol	**Map Unit Name**	**Acres in AOI**	**Percent of AOI**
BkD	Boomer very rocky loam, 3 to 30 percent slopes	5.2	54.2%
SwD	Sobrante very rocky silt loam, 3 to 30 percent slopes	4.4	45.8%
Totals for Area of Interest (AOI)		9.6	100.0%

Map Unit Descriptions (**Estimation of Parcel area**)

The map units delineated on the detailed soil maps in a soil survey represent the soils or miscellaneous areas in the survey area. The map unit descriptions, along with the maps, can be used to determine the composition and properties of a unit.

A map unit delineation on a soil map represents an area dominated by one or more major kinds of soil or miscellaneous areas. A map unit is identified and named according to the taxonomic classification of the dominant soils. Within a taxonomic class there are precisely defined limits for the properties of the soils. On the landscape, however, the soils are natural phenomena, and they have the characteristic variability of all natural phenomena. Thus, the range of some observed properties may extend beyond the limits defined for a taxonomic class. Areas of soils of a single taxonomic class rarely, if ever, can be mapped without including areas of other taxonomic classes. Consequently, every map unit is made up of the soils or miscellaneous areas for which it is named and some minor components that belong to taxonomic classes other than those of the major soils.

Most minor soils have properties similar to those of the dominant soil or soils in the map unit, and thus they do not affect use and management. These are called noncontrasting, or similar, components. They may or may not be mentioned in a particular map unit description. Other minor components, however, have properties and behavioral characteristics divergent enough to affect use or to require different management. These are called contrasting, or dissimilar, components. They generally are in small areas and could not be mapped separately because of the scale used. Some small areas of strongly contrasting soils or miscellaneous areas are identified by a special symbol on the maps. If included in the database for a given area, the contrasting minor components are identified in the map unit descriptions along with some characteristics of each. A few areas of minor components may not have been observed, and consequently they are not mentioned in the descriptions, especially where the pattern was so complex that it was impractical to make enough observations to identify all the soils and miscellaneous areas on the landscape.

The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The objective of mapping is not to delineate pure taxonomic

classes but rather to separate the landscape into landforms or landform segments that have similar use and management requirements. The delineation of such segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, however, onsite investigation is needed to define and locate the soils and miscellaneous areas.

An identifying symbol precedes the map unit name in the map unit descriptions. Each description includes general facts about the unit and gives important soil properties and qualities.

Soils that have profiles that are almost alike make up a *soil series*. Except for differences in texture of the surface layer, all the soils of a series have major horizons that are similar in composition, thickness, and arrangement.

Soils of one series can differ in texture of the surface layer, slope, stoniness, salinity, degree of erosion, and other characteristics that affect their use. On the basis of such differences, a soil series is divided into *soil phases*. Most of the areas shown on the detailed soil maps are phases of soil series. The name of a soil phase commonly indicates a feature that affects use or management. For example, Alpha silt loam, 0 to 2 percent slopes, is a phase of the Alpha series.

Some map units are made up of two or more major soils or miscellaneous areas. These map units are complexes, associations, or undifferentiated groups.

A *complex* consists of two or more soils or miscellaneous areas in such an intricate pattern or in such small areas that they cannot be shown separately on the maps. The pattern and proportion of the soils or miscellaneous areas are somewhat similar in all areas. Alpha-Beta complex, 0 to 6 percent slopes, is an example.

An *association* is made up of two or more geographically associated soils or miscellaneous areas that are shown as one unit on the maps. Because of present or anticipated uses of the map units in the survey area, it was not considered practical or necessary to map the soils or miscellaneous areas separately. The pattern and relative proportion of the soils or miscellaneous areas are somewhat similar. Alpha-Beta association, 0 to 2 percent slopes, is an example.

An *undifferentiated group* is made up of two or more soils or miscellaneous areas that could be mapped individually but are mapped as one unit because similar interpretations can be made for use and management. The pattern and proportion of the soils or miscellaneous areas in a mapped area are not uniform. An area can be made up of only one of the major soils or miscellaneous areas, or it can be made up of all of them. Alpha and Beta soils, 0 to 2 percent slopes, is an example.

Some surveys include *miscellaneous areas*. Such areas have little or no soil material and support little or no vegetation. Rock outcrop is an example.

El Dorado Area, California Version date:12/14/2007 3:18:36 PM

BkD—Boomer very rocky loam, 3 to 30 percent slopes

Map Unit Setting

Elevation: 600 to 5,500 feet
Mean annual precipitation: 30 to 60 inches
Mean annual air temperature: 54 to 59 degrees F
Frost-free period: 120 to 260 days

Map Unit Composition

Boomer and similar soils: 75 percent
Rock outcrop: 15 percent
Minor components: 10 percent

Description of Boomer

Setting

Landform: Mountains
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Mountainflank
Down-slope shape: Convex
Across-slope shape: Linear
Parent material: Residuum weathered from greenstone and/or residuum weathered from schist

Properties and qualities

Slope: 3 to 30 percent
Depth to restrictive feature: 52 to 56 inches to paralithic bedrock
Drainage class: Well drained
Capacity of the most limiting layer to transmit water (Ksat): Low to moderately high (0.01 to 0.57 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Available water capacity: Moderate (about 7.1 inches)

Interpretive groups

Land capability classification (irrigated): 6s
Land capability (nonirrigated): 6s
Ecological site: LOAMY (R022XC013CA)

Typical profile

0 to 13 inches: Gravelly loam
13 to 52 inches: Gravelly sandy clay loam
52 to 56 inches: Weathered bedrock

Minor Components

Auburn

Percent of map unit: 3 percent
Landform: Hills
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Side slope

Down-slope shape: Concave
Across-slope shape: Convex

Argonaut
Percent of map unit: 3 percent
Landform: Ridges
Landform position (two-dimensional): Shoulder
Landform position (three-dimensional): Interfluve
Down-slope shape: Linear
Across-slope shape: Linear

Sites
Percent of map unit: 2 percent
Landform: Mountain slopes
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Mountainflank
Down-slope shape: Convex
Across-slope shape: Convex

Sobrante
Percent of map unit: 2 percent
Landform: Hillslopes
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Side slope
Down-slope shape: Concave
Across-slope shape: Convex

SwD—Sobrante very rocky silt loam, 3 to 30 percent slopes

Map Unit Setting
Elevation: 120 to 3,500 feet
Mean annual precipitation: 15 to 50 inches
Mean annual air temperature: 55 to 63 degrees F
Frost-free period: 200 to 270 days

Map Unit Composition
Sobrante and similar soils: 75 percent
Rock outcrop: 15 percent
Minor components: 10 percent

Description of Sobrante

Setting
Landform: Hillslopes
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Side slope
Down-slope shape: Concave
Across-slope shape: Convex
Parent material: Residuum weathered from metamorphic rock

Properties and qualities
Slope: 3 to 30 percent
Depth to restrictive feature: 24 to 30 inches to paralithic bedrock; 30 to 34 inches to lithic bedrock
Drainage class: Well drained

Capacity of the most limiting layer to transmit water (Ksat): Very low to moderately low (0.00 to 0.06 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Available water capacity: Low (about 3.9 inches)

Interpretive groups

Land capability classification (irrigated): 6s
Land capability (nonirrigated): 6s
Ecological site: LOAMY (R018XD075CA)

Typical profile

0 to 11 inches: Silt loam
11 to 24 inches: Clay loam
24 to 30 inches: Weathered bedrock
30 to 34 inches: Unweathered bedrock

Minor Components

Auburn

Percent of map unit: 4 percent
Landform: Hills
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Side slope
Down-slope shape: Concave
Across-slope shape: Convex

Argonaut

Percent of map unit: 3 percent
Landform: Ridges
Landform position (two-dimensional): Shoulder
Landform position (three-dimensional): Interfluve
Down-slope shape: Linear
Across-slope shape: Linear

Boomer

Percent of map unit: 3 percent
Landform: Hillslopes, mountain slopes
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Mountainflank, side slope
Down-slope shape: Concave
Across-slope shape: Convex

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FIGURE 5

El Dorado Area, California

SwD—Sobrante very rocky silt loam, 3 to 30 percent slopes

Map Unit Setting

National map unit symbol: hj1w
Elevation: 120 to 3,500 feet
Mean annual precipitation: 15 to 50 inches
Mean annual air temperature: 55 to 63 degrees F
Frost-free period: 200 to 270 days
Farmland classification: Not prime farmland

Map Unit Composition

Sobrante and similar soils: 75 percent
Rock outcrop: 15 percent
Minor components: 10 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Sobrante

Setting

Landform: Hillslopes
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Side slope
Down-slope shape: Concave
Across-slope shape: Convex
Parent material: Residuum weathered from metamorphic rock

Typical profile

H1 - 0 to 11 inches: silt loam
H2 - 11 to 24 inches: clay loam
H3 - 24 to 30 inches: weathered bedrock
H4 - 30 to 34 inches: unweathered bedrock

Properties and qualities

Slope: 3 to 30 percent
Depth to restrictive feature: 24 to 30 inches to paralithic bedrock; 30 to 34 inches to lithic bedrock
Natural drainage class: Well drained
Runoff class: Medium
Capacity of the most limiting layer to transmit water (Ksat): Very low to moderately low (0.00 to 0.06 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Available water storage in profile: Low (about 3.9 inches)

Interpretive groups

Land capability classification (irrigated): 6e
Land capability classification (nonirrigated): 6e
Hydrologic Soil Group: C

Ecological site: Thermic Foothills 22-31 PZ (F018XI201CA)
Hydric soil rating: No

Description of Rock Outcrop

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 8
Hydric soil rating: No

Minor Components

Auburn

Percent of map unit: 4 percent
Landform: Hills
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Side slope
Down-slope shape: Concave
Across-slope shape: Convex
Hydric soil rating: No

Argonaut

Percent of map unit: 3 percent
Landform: Ridges
Landform position (two-dimensional): Shoulder
Landform position (three-dimensional): Interfluve
Down-slope shape: Linear
Across-slope shape: Linear
Hydric soil rating: No

Boomer

Percent of map unit: 3 percent
Landform: Mountain slopes, hillslopes
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Mountainflank, side slope
Down-slope shape: Concave
Across-slope shape: Convex
Hydric soil rating: No

Data Source Information

Soil Survey Area: El Dorado Area, California
Survey Area Data: Version 9, Sep 13, 2017

Appendix B

B1: Table 2-2c (TR-55) Runoff Curve Numbers for Other Agricultural Lands

B2: Mean Annual Rainfall for El Dorado County

B3: Appendix 2.2, Page 2-36 – Rain Fall Depth for return period = 2.33 years (El Dorado County Drainage Manual)

B4: Appendix 2.2, Page 2-37 – Rain Fall Depth for return period = 10 years (El Dorado County Drainage Manual)

B5: Table 3-1 – Roughness Coefficients (Manning's N) for Sheet Flow (TR-55)

B6: Figure 3-1 – Average Velocities for Estimating Travel Time for Shallow Concentrated Flow

B7: Chapter 4, Exhibit 4-1A (TR-55) – Pre Development Condition (TR-55)

B8: Chapter 4, Exhibit 4-1A (TR-55) – Post Development Condition (TR-55)

B9: Chapter 6, Exhibit 6-1 (TR-55) – Post Development Condition (TR-55)

B10: Sample Calculations Generated in Microsoft Excel

B1 - PRE DEVELOPMENT CONDITION CURVE NUMBER

Table 2-2c Runoff curve numbers for other agricultural lands [1/]

Cover description		Curve numbers for hydrologic soil group			
Cover type	Hydrologic condition	A	B	C	D
Pasture, grassland, or range—continuous forage for grazing. [2/]	Poor	68	79	86	89
	Fair	49	69	79	84
	Good	39	61	74	80
Meadow—continuous grass, protected from grazing and generally mowed for hay.	—	30	58	71	78
Brush—brush-weed-grass mixture with brush the major element. [3/]	Poor	48	67	77	83
	Fair	35	56	70	77
	Good	30 [4/]	48	65	73
Woods—grass combination (orchard or tree farm). [5/]	Poor	57	73	82	86
	Fair	43	65	76	82
	Good	32	58	72	79
Woods. [6/]	Poor	45	66	77	83
	Fair	36	60	73	79
	Good	30 [4/]	55	70	77
Farmsteads—buildings, lanes, driveways, and surrounding lots.	—	59	74	82	86

1 Average runoff condition, and $I_a = 0.2S$.

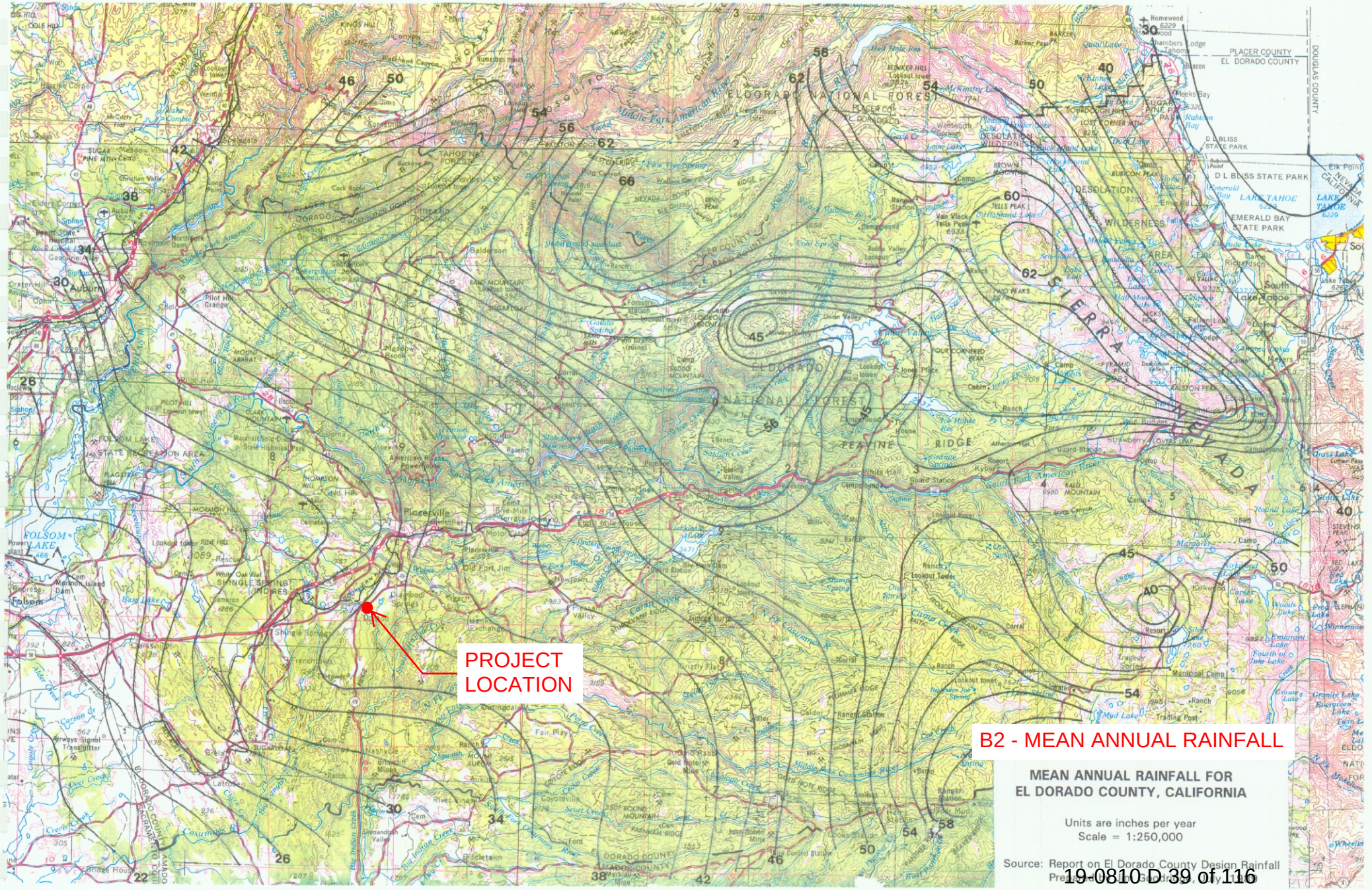
2 *Poor:* <50%) ground cover or heavily grazed with no mulch.
Fair: 50 to 75% ground cover and not heavily grazed.
Good: > 75% ground cover and lightly or only occasionally grazed.

3 *Poor:* <50% ground cover.
Fair: 50 to 75% ground cover.
Good: >75% ground cover.

4 Actual curve number is less than 30; use CN = 30 for runoff computations.

5 CN's shown were computed for areas with 50% woods and 50% grass (pasture) cover. Other combinations of conditions may be computed from the CN's for woods and pasture.

6 *Poor:* Forest litter, small trees, and brush are destroyed by heavy grazing or regular burning.
Fair: Woods are grazed but not burned, and some forest litter covers the soil.
Good: Woods are protected from grazing, and litter and brush adequately cover the soil.


PROJECT LOCATION
B2 - MEAN ANNUAL RAINFALL
MEAN ANNUAL RAINFALL FOR
EL DORADO COUNTY, CALIFORNIA
Units are inches per year
Scale = 1:250,000
Source: Report on El Dorado County Design Rainfall

El Dorado Design Rainfall

Rainfall Depth in Inches for Return Period = 2.33 years

Mean Annual Precipitation	5 Min	10 Min	15 Min	30 Min	1 Hr	2 Hrs	3 Hrs	6 Hrs	12 Hrs	24 Hrs
20	0.113	0.162	0.200	0.286	0.410	0.587	0.723	1.035	1.481	2.120
22	0.120	0.172	0.212	0.304	0.435	0.623	0.768	1.099	1.572	2.249
24	0.128	0.183	0.225	0.322	0.461	0.660	0.814	1.165	1.667	2.385
26	0.135	0.193	0.238	0.341	0.488	0.698	0.860	1.231	1.762	2.521
28	0.142	0.203	0.251	0.359	0.514	0.735	0.907	1.298	1.857	2.657
30	0.149	0.214	0.264	0.377	0.540	0.773	0.953	1.364	1.952	2.793
32	0.157	0.224	0.277	0.396	0.566	0.810	1.000	1.430	2.047	2.929
34	0.164	0.235	0.289	0.414	0.593	0.848	1.046	1.497	2.142	3.065
36	0.171	0.245	0.302	0.433	0.619	0.886	1.092	1.563	2.237	3.200
38	0.179	0.256	0.315	0.451	0.645	0.923	1.139	1.629	2.332	3.336
40	0.186	0.266	0.328	0.469	0.671	0.961	1.185	1.696	2.426	3.472
42	0.193	0.276	0.341	0.488	0.698	0.998	1.231	1.762	2.521	3.608
44	0.200	0.287	0.354	0.506	0.724	1.036	1.278	1.828	2.616	3.744
46	0.208	0.297	0.366	0.524	0.750	1.074	1.324	1.895	2.711	3.880
48	0.215	0.308	0.379	0.543	0.777	1.111	1.370	1.961	2.806	4.016
50	0.222	0.318	0.392	0.561	0.803	1.149	1.417	2.027	2.901	4.152
52	0.229	0.328	0.405	0.579	0.829	1.186	1.463	2.094	2.996	4.287
54	0.237	0.339	0.418	0.598	0.855	1.224	1.510	2.160	3.091	4.423
56	0.244	0.349	0.431	0.616	0.882	1.262	1.556	2.226	3.186	4.559
58	0.251	0.360	0.443	0.634	0.908	1.299	1.602	2.293	3.281	4.695
60	0.259	0.370	0.456	0.653	0.934	1.337	1.649	2.359	3.376	4.831
62	0.266	0.380	0.469	0.671	0.960	1.374	1.695	2.425	3.471	4.967
64	0.273	0.391	0.482	0.690	0.987	1.412	1.741	2.492	3.566	5.103
66	0.280	0.401	0.495	0.708	1.013	1.450	1.788	2.558	3.661	5.238
68	0.288	0.412	0.508	0.726	1.039	1.487	1.834	2.625	3.756	5.374
70	0.295	0.422	0.520	0.745	1.066	1.525	1.880	2.691	3.851	5.510
72	0.302	0.432	0.533	0.763	1.092	1.562	1.927	2.757	3.946	5.646
74	0.309	0.443	0.546	0.781	1.118	1.600	1.973	2.824	4.040	5.782
76	0.317	0.453	0.559	0.800	1.144	1.638	2.020	2.890	4.135	5.918
78	0.324	0.464	0.572	0.818	1.171	1.675	2.066	2.956	4.230	6.054
80	0.331	0.474	0.585	0.836	1.197	1.713	2.112	3.023	4.325	6.189
82	0.339	0.484	0.597	0.855	1.223	1.750	2.159	3.089	4.420	6.325
84	0.346	0.495	0.610	0.873	1.250	1.788	2.205	3.155	4.515	6.461
86	0.353	0.505	0.623	0.892	1.276	1.826	2.251	3.222	4.610	6.597
88	0.360	0.516	0.636	0.910	1.302	1.863	2.298	3.288	4.705	6.733
90	0.368	0.526	0.649	0.928	1.328	1.901	2.344	3.354	4.800	6.869

Source: Design Rainfall Tables for El Dorado County, prepared by Jim Goodridge, July 29, 1989

El Dorado Design Rainfall

Rainfall Depth in Inches for Return Period = 10 years

Mean Annual Precipitation	5 Min	10 Min	15 Min	30 Min	1 Hr	2 Hrs	3 Hrs	6 Hrs	12 Hrs	24 Hrs
20	0.167	0.239	0.295	0.422	0.603	0.863	1.065	1.524	2.180	3.120
22	0.177	0.254	0.313	0.448	0.640	0.916	1.130	1.617	2.314	3.311
24	0.188	0.269	0.332	0.475	0.679	0.972	1.198	1.715	2.454	3.511
26	0.199	0.284	0.350	0.502	0.718	1.027	1.267	1.812	2.594	3.711
28	0.209	0.300	0.369	0.529	0.756	1.082	1.335	1.910	2.733	3.911
30	0.220	0.315	0.388	0.556	0.795	1.138	1.403	2.008	2.873	4.111
32	0.231	0.330	0.407	0.583	0.834	1.193	1.471	2.105	3.013	4.311
34	0.241	0.345	0.426	0.610	0.872	1.248	1.540	2.203	3.153	4.511
36	0.252	0.361	0.445	0.637	0.911	1.304	1.608	2.301	3.292	4.711
38	0.263	0.376	0.464	0.664	0.950	1.359	1.676	2.398	3.432	4.911
40	0.274	0.391	0.483	0.691	0.988	1.414	1.744	2.496	3.572	5.111
42	0.284	0.407	0.502	0.718	1.027	1.470	1.813	2.594	3.712	5.311
44	0.295	0.422	0.520	0.745	1.066	1.525	1.881	2.691	3.851	5.511
46	0.306	0.437	0.539	0.772	1.104	1.580	1.949	2.789	3.991	5.711
48	0.316	0.453	0.558	0.799	1.143	1.636	2.017	2.887	4.131	5.911
50	0.327	0.468	0.577	0.826	1.182	1.691	2.086	2.984	4.271	6.111
52	0.338	0.483	0.596	0.853	1.221	1.747	2.154	3.082	4.410	6.311
54	0.348	0.499	0.615	0.880	1.259	1.802	2.222	3.180	4.550	6.511
56	0.359	0.514	0.634	0.907	1.298	1.857	2.290	3.277	4.690	6.711
58	0.370	0.529	0.653	0.934	1.337	1.913	2.359	3.375	4.830	6.911
60	0.381	0.545	0.672	0.961	1.375	1.968	2.427	3.473	4.969	7.111
62	0.391	0.560	0.690	0.988	1.414	2.023	2.495	3.570	5.109	7.311
64	0.402	0.575	0.709	1.015	1.453	2.079	2.563	3.668	5.249	7.511
66	0.413	0.591	0.728	1.042	1.491	2.134	2.632	3.766	5.389	7.711
68	0.423	0.606	0.747	1.069	1.530	2.189	2.700	3.863	5.528	7.911
70	0.434	0.621	0.766	1.096	1.569	2.245	2.768	3.961	5.668	8.111
72	0.445	0.636	0.785	1.123	1.607	2.300	2.836	4.059	5.808	8.311
74	0.455	0.652	0.804	1.150	1.646	2.355	2.905	4.156	5.948	8.511
76	0.466	0.667	0.823	1.177	1.685	2.411	2.973	4.254	6.087	8.711
78	0.477	0.682	0.842	1.204	1.723	2.466	3.041	4.352	6.227	8.911
80	0.488	0.698	0.860	1.231	1.762	2.521	3.109	4.449	6.367	9.111
82	0.498	0.713	0.879	1.258	1.801	2.577	3.178	4.547	6.507	9.311
84	0.509	0.728	0.898	1.285	1.839	2.632	3.246	4.645	6.646	9.511
86	0.520	0.744	0.917	1.312	1.878	2.687	3.314	4.742	6.786	9.711
88	0.530	0.759	0.936	1.339	1.917	2.743	3.382	4.840	6.926	9.911
90	0.541	0.774	0.955	1.366	1.955	2.798	3.451	4.938	7.066	10.111

Source: Design Rainfall Tables for El Dorado County, prepared by Jim Goodridge, July 29, 1989

B5 - ROUGHNESS COEFFICIENTS (MANNINGS N)

Sheet flow

Sheet flow is flow over plane surfaces. It usually occurs in the headwater of streams. With sheet flow, the friction value (Manning's n) is an effective roughness coefficient that includes the effect of raindrop impact; drag over the plane surface; obstacles such as litter, crop ridges, and rocks; and erosion and transportation of sediment. These n values are for very shallow flow depths of about 0.1 foot or so. Table 3-1 gives Manning's n values for sheet flow for various surface conditions.

Table 3-1 Roughness coefficients (Manning's n) for sheet flow

Surface description	n [1/]
Smooth surfaces (concrete, asphalt, gravel, or bare soil)	0.011
Fallow (no residue)	0.05
Cultivated soils:	
Residue cover ≤20%	0.06
Residue cover >20%	0.17
Grass:	
Short grass prairie	0.15
Dense grasses [2/]	0.24
Bermudagrass	0.41
Range (natural)	0.13
Woods:[3/]	
Light underbrush	0.40
Dense underbrush	0.80

1 The n values are a composite of information compiled by Engman (1986).
2 Includes species such as weeping lovegrass, bluegrass, buffalo grass, blue grama grass, and native grass mixtures.
3 When selecting n , consider cover to a height of about 0.1 ft. This is the only part of the plant cover that will obstruct sheet flow.

For sheet flow of less than 300 feet, use Manning's kinematic solution (Overtop and Meadows 1976) to compute T_t:

$$T_t = \frac{0.007(nL)^{0.8}}{(P_2)^{0.5} s^{0.4}} \qquad \text{[eq. 3-3]}$$

where:

T_t = travel time (hr),
n = Manning's roughness coefficient (table 3-1)
L = flow length (ft)
P_2 = 2-year, 24-hour rainfall (in)
s = slope of hydraulic grade line (land slope, ft/ft)

This simplified form of the Manning's kinematic solution is based on the following: (1) shallow steady uniform flow, (2) constant intensity of rainfall excess (that part of a rain available for runoff), (3) rainfall duration of 24 hours, and (4) minor effect of infiltration on travel time. Rainfall depth can be obtained from appendix B.

Shallow concentrated flow

After a maximum of 300 feet, sheet flow usually becomes shallow concentrated flow. The average velocity for this flow can be determined from figure 3-1, in which average velocity is a function of watercourse slope and type of channel. For slopes less than 0.005 ft/ft, use equations given in appendix F for figure 3-1. Tillage can affect the direction of shallow concentrated flow. Flow may not always be directly down the watershed slope if tillage runs across the slope.

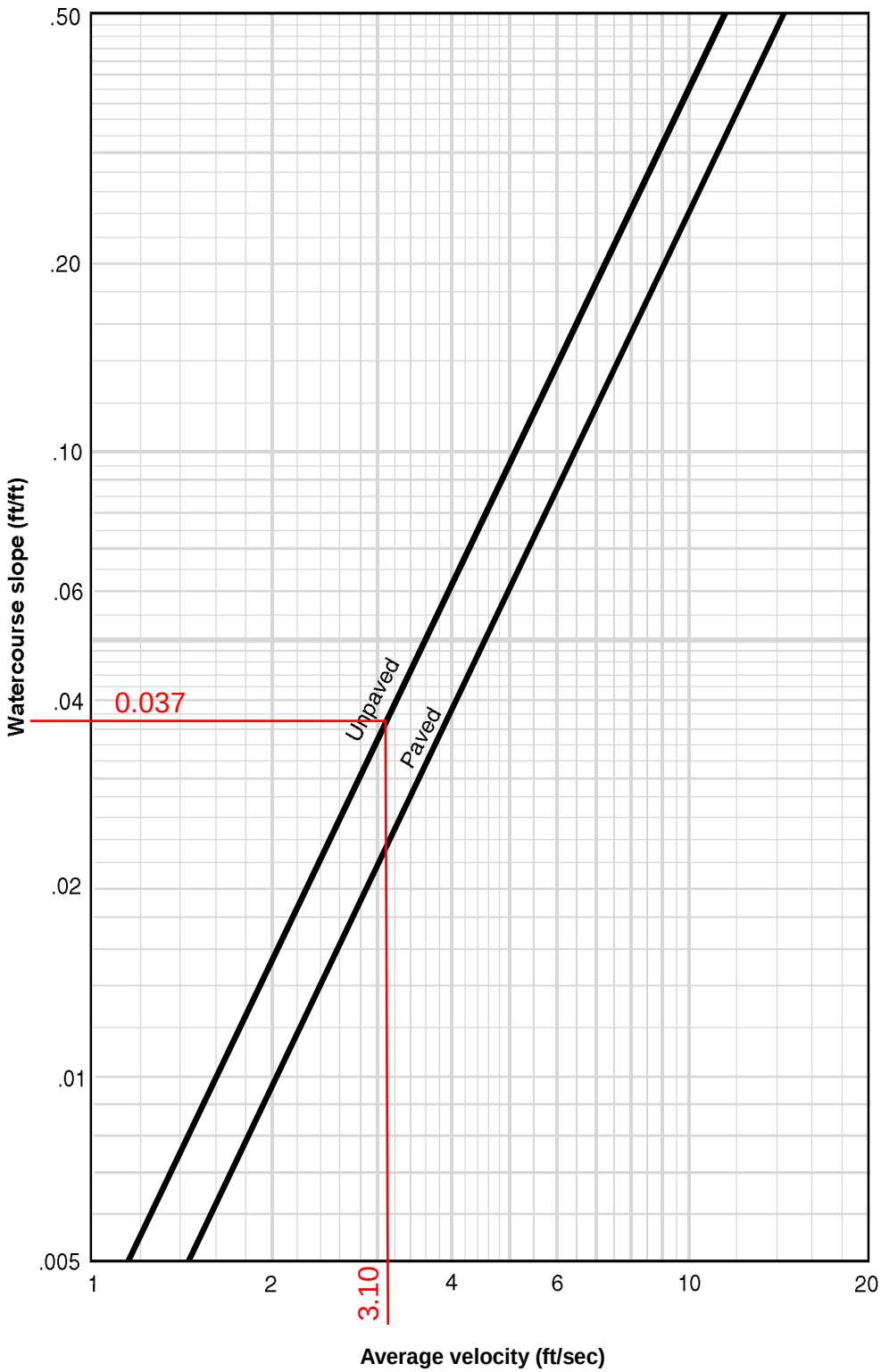
After determining average velocity in figure 3-1, use equation 3-1 to estimate travel time for the shallow concentrated flow segment.

Open channels

Open channels are assumed to begin where surveyed cross section information has been obtained, where channels are visible on aerial photographs, or where blue lines (indicating streams) appear on United States Geological Survey (USGS) quadrangle sheets. Manning's equation or water surface profile information can be used to estimate average flow velocity. Average flow velocity is usually determined for bankfull elevation.

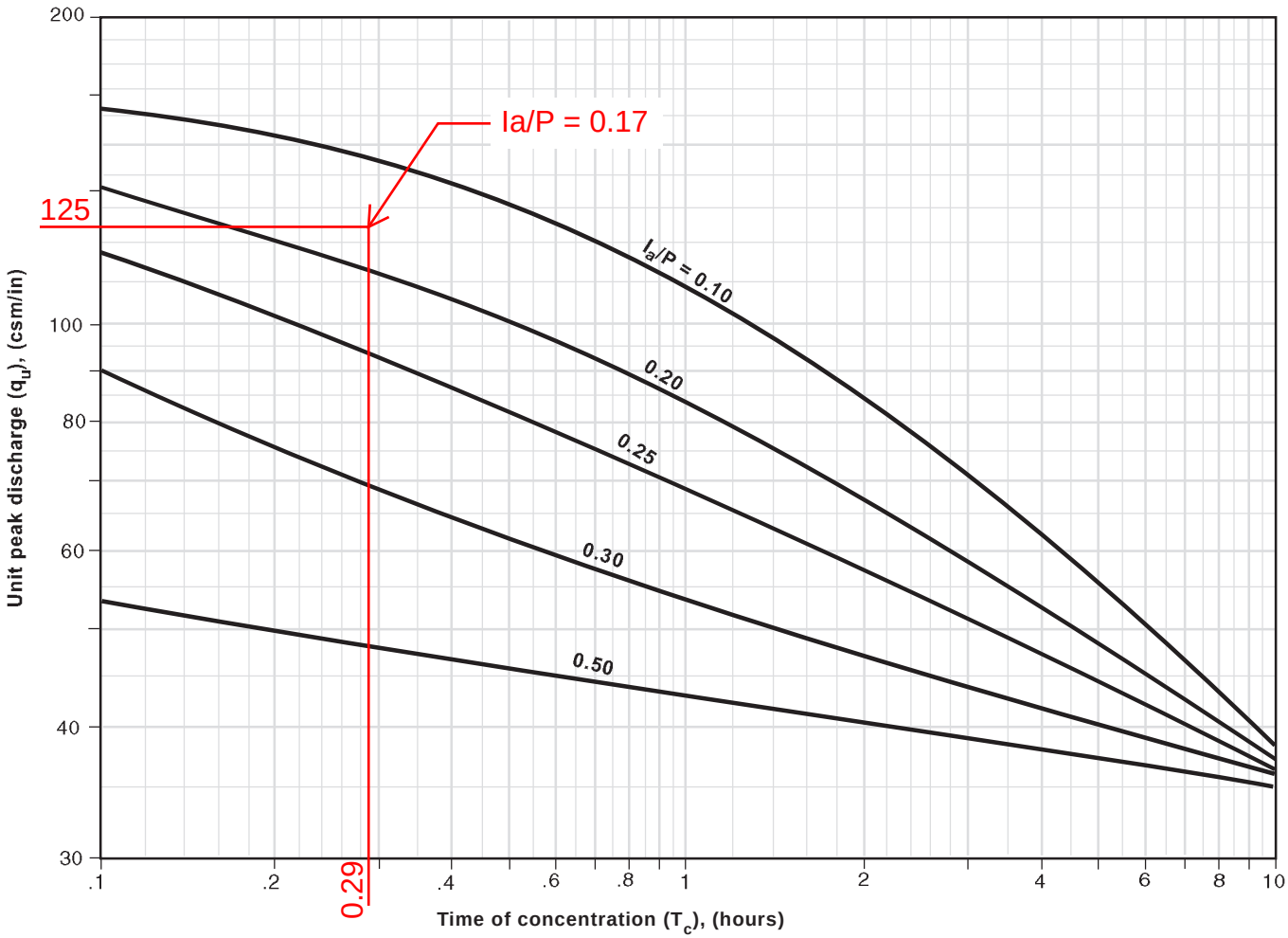
B6 - SHALLOW CONCENTRATED AVERAGE VELOCITY

Figure 3-1 Average velocities for estimating travel time for shallow concentrated flow



B7 - PRE DEVELOPMENT CONDITION

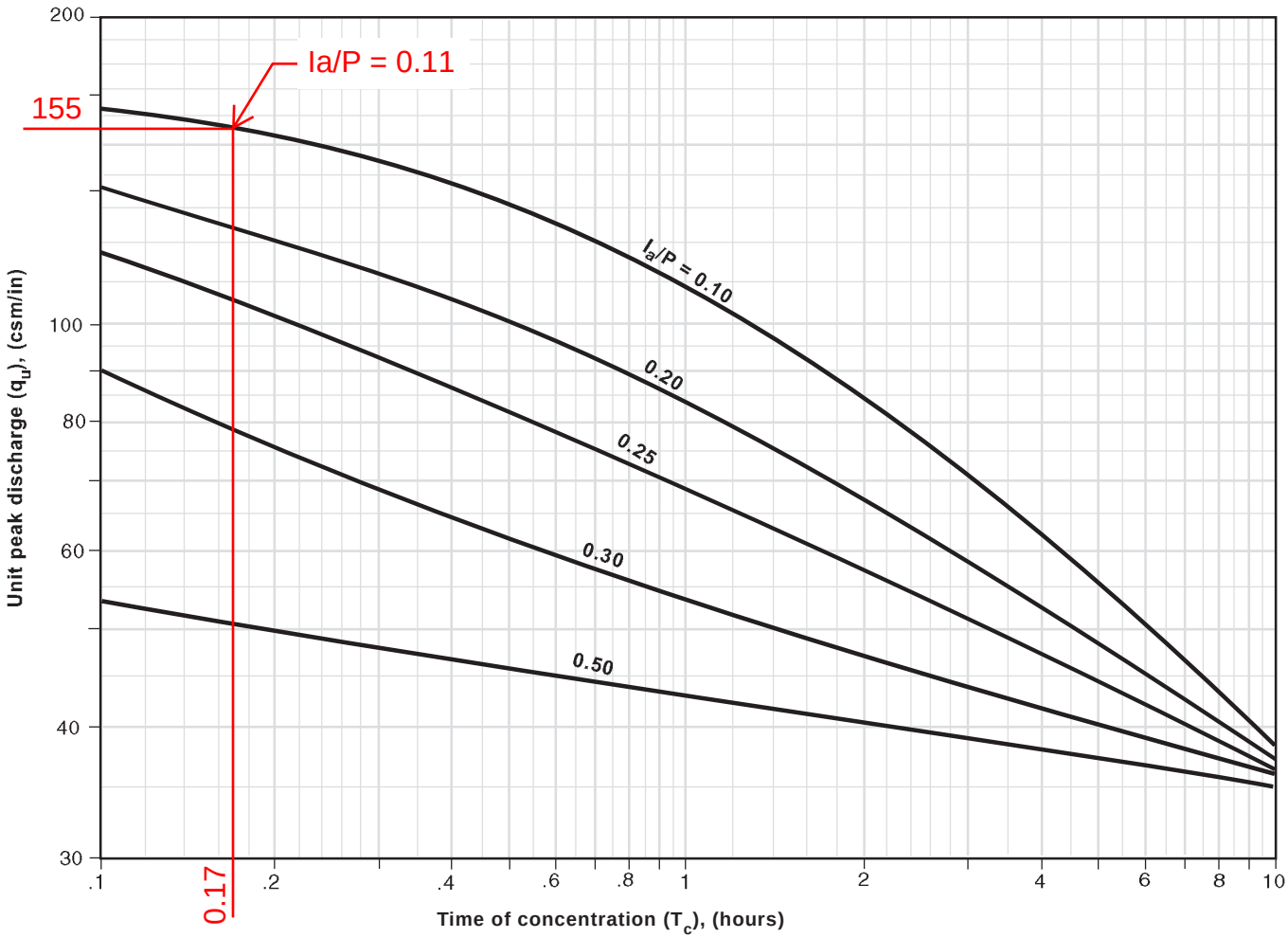
Exhibit 4-IA Unit peak discharge (q_u) for NRCS (SCS) type IA rainfall distribution



Pre-Development Variables:
Ia = 0.78 in
P = 4.71 in
Tc = 0.29 hr

B8 - POST DEVELOPMENT CONDITION

Exhibit 4-IA Unit peak discharge (q_u) for NRCS (SCS) type IA rainfall distribution



Post - Development Variables:
Ia = 0.56 in
P = 4.71 in
Tc = 0.17 hr

B9 - POST DEVELOPMENT CONDITION

Input requirements and procedures

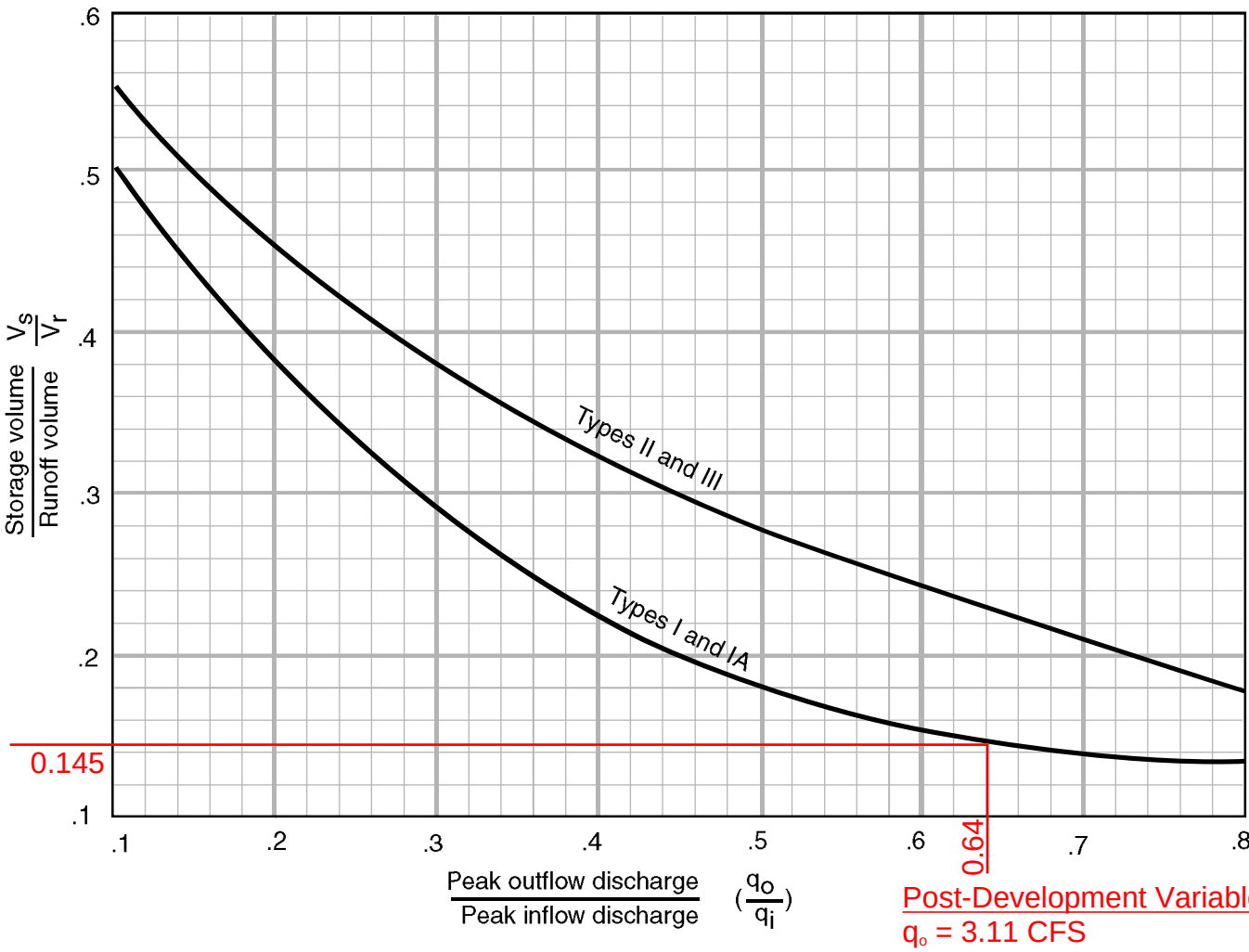
Use figure 6-1 estimate storage volume (V_s) required or peak outflow discharge (q_o). The most frequent application is to estimate V_s, for which the required inputs are runoff volume (V_r), q_o, and peak inflow discharge (q_i). To estimate q_o, the required inputs are V_r, V_s, and q_i.

Estimating V_s

Use worksheet 6a to estimate V_s, storage volume required, by the following procedure.

1. Determine q_o. Many factors may dictate the selection of peak outflow discharge. The most common is to limit downstream discharges to a desired level, such as predevelopment discharge. Another factor may be that the outflow device has already been selected.
2. Estimate q_i by procedures in chapters 4 or 5. Do not use peak discharges developed by other procedure. When using the Tabular Hydrograph method to estimate q_i for a subarea, only use peak discharge associated with $T_t = 0$.

Figure 6-1 Approximate detention basin routing for rainfall types I, IA, II, and III



Post-Development Variables:
q_o = 3.11 CFS
q_i = 4.90 CFS
q_o/q_i = 0.64

B10-1

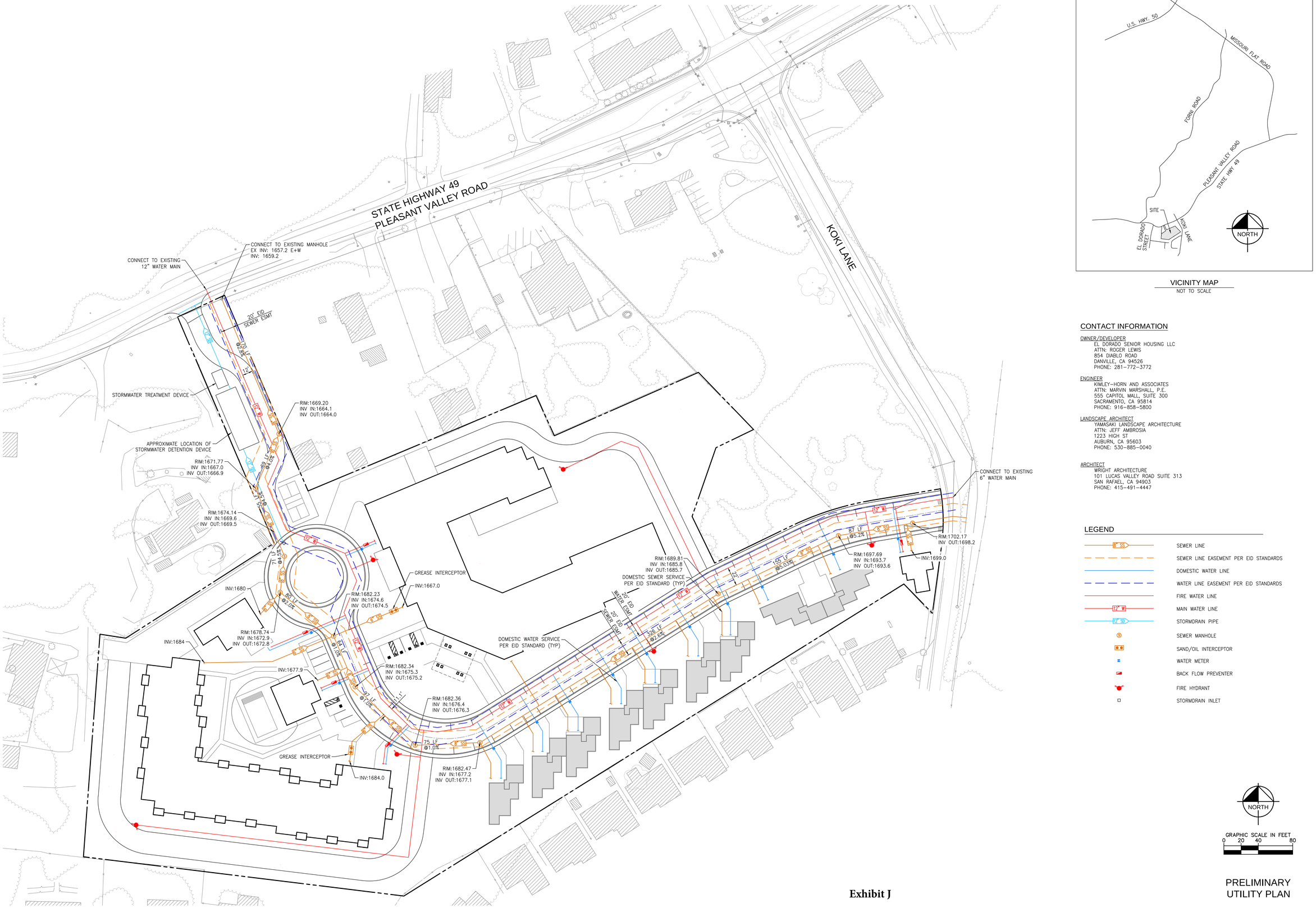
Existing Conditions		
Sheet Flow		
Surface	Grass, Short Prairie	
Mannings n	0.15	
Flow Length, L (ft)	220	
2yr 24hr, P2 (in)	3.2	
Slope, S (ft/ft)	0.036	
Tt (hr)	0.24	
Shallow Concentrated Flow		
Surface	Unpaved	
Flow Length	590	
Slope	0.037	
Average Velocity	3.10	from TR55 figure 3-1
Tt (hr)	0.053	
Channel Flow		
Surface		
Flow Type		
Velocity	Mannings Eq	
Length		
Tt		
Subarea Travel Time	**hours**	**0.30**
	minutes	17.72

Proposed Conditions - A		
Sheet Flow		
Surface	Dense Grass	
Mannings n	0.24	
Flow Length	50	
2yr 24hr P2	3.2	
Slope	0.06	
Tt	0.088	(hr)
Channel Flow (Gutter)		
Surface	Concrete Gutter	
Flow Length	995	
Slope	0.025	
Average Velocity	3.53	Mannings Eq (ft/s)
Tt	0.078	(hr)
Channel Flow (Pipe)		
Surface	Concrete Pipe	
Flow Length	300	
Slope	0.06	
Average Velocity	11.10	Mannings Eq (ft/s)
Tt	0.008	(hr)
Subarea Travel Time	**hours**	**0.174**
	minutes	10.43

PRE EXISTING CONDITION			
Rainfall distribution	Type 1A		
Area	0.0126	mi^2	Site area in Square miles
Curve Number (CN)	72		Based on Soil type and Table 2-2c (TR55)
Soil Class	C		USDA Web Soil Survey
Mean annual precipitation	36		Appendix 2.2 of EL Dorado County Drainage Manual, Page 2-37
Depth of Rainfall 10 YR (P_{10})	4.71	in	Appendix 2.2 of EL Dorado County Drainage Manual, Page 2-37
Depth of Rainfall 100 YR (P_{100})	6.67	in	Appendix 2.2 of EL Dorado County Drainage Manual, Page 2-37
Initial Abstraction (I_a)	0.78	in	$I_a = 0.2 * S$ (Equation 2-2)
I_a/P (10 yr)	0.17		
Potential max retention (S)	3.89	in	$S = \frac{1000}{CN} - 10$ (Equation 2-4)
Pond and Swamp adj Factor (F_p)	1		
Unit Peak Discharge (q_u)	125	csm/in	$Q = \frac{(P - I_a)^2}{(P - I_a) + S}$ (Equation 2-3)
Runoff (Q)	1.98	in	
Peak Discharge (q_p)	3.11	CFS	$q_p = q_u * A_m * Q * F_p$

POST DEVELOPMENT CONDITIONS			
Site Area	8.0784	Acre	351893.6 SF
Site Area (A_m)	0.0126	mi^2	
Impervious Area Total	87,105	SF	
Pervious Area	264,789	SF	
Curve Number (CN)	78.44		
Pond and Swamp adj Factor (F_p)	1		
Unit Peak Discharge (q_u)	155	csm/in	Table 4-1A (TR55)
Initial Abstraction (I_a)	0.55	inch	
Potential max retention (S)	2.75	inch	$Q = \frac{(P - I_a)^2}{(P - I_a) + S}$
Runoff (Q)	2.50	inch	
Peak Discharge (q_p)	4.90	CFS	$q_p = q_u * A_m * Q * F_p$
Runoff Volume (V_r)	1.69	ac-ft	Eq 6-1 TR55 $V_r = 53.33 * Q * A_m$

STORAGE			
Peak outflow, q_o	3.11	CFS	Existing flow to match in the post development condition
Peak inflow, q_i	4.90	CFS	Post development condition
q_o/q_i	0.64		
v_s/v_r	0.145		Figure 6.1 TR-55
Storage Volume (V_s)	0.24	AC-FT	
	10,649.97	CF	



VICINITY MAP
NOT TO SCALE

CONTACT INFORMATION

OWNER/DEVELOPER
EL DORADO SENIOR HOUSING LLC
ATTN: ROGER LEWIS
854 DIABLO ROAD
DANVILLE, CA 94526
PHONE: 281-772-3772

ENGINEER
KIMLEY-HORN AND ASSOCIATES
ATTN: MARVIN MARSHALL, P.E.
555 CAPITOL MALL, SUITE 300
SACRAMENTO, CA 95814
PHONE: 916-858-5800

LANDSCAPE ARCHITECT
YAMASAKI LANDSCAPE ARCHITECTURE
ATTN: JEFF AMBROSIA
1223 HIGH ST
AUBURN, CA 95603
PHONE: 530-885-0040

ARCHITECT
WRIGHT ARCHITECTURE
101 LUCAS VALLEY ROAD SUITE 313
SAN RAFAEL, CA 94903
PHONE: 415-491-4447

LEGEND

- 8" SS — SEWER LINE
- SEWER LINE EASEMENT PER EID STANDARDS
- DOMESTIC WATER LINE
- WATER LINE EASEMENT PER EID STANDARDS
- FIRE WATER LINE
- 12" W — MAIN WATER LINE
- 12" SD — STORMDRAIN PIPE
- S — SEWER MANHOLE
- SAND/OIL INTERCEPTOR
- WATER METER
- BACK FLOW PREVENTER
- FIRE HYDRANT
- STORMDRAIN INLET

NORTH

GRAPHIC SCALE IN FEET
0 20 40 80

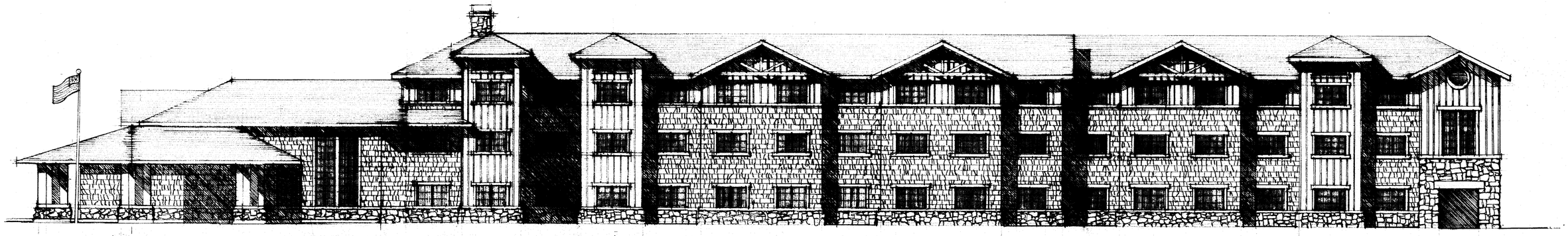
PRELIMINARY
UTILITY PLAN

AUGUST 31, 2018

Kimley»Horn © 2018

Exhibit J

K:\SAC_LDEV\137140001 El Dorado Senior Resort\UB CAD\Exhibits\PRELIMINARY UTILITY PLAN.dwg



ASSISTED AND MEMORY CARE FACILITY

SOUTH ELEVATION

WRIGHT ARCHITECTURE Studio

Robert Wright . NCARB
Wright Architecture Studio
101 Lucas Valley Road, Suite 313
San Rafael, CA 94903
(415) 491-4447 / FAX (415) 491-4445
email: bob@wrightarchitecturestudio.com

El Dorado Senior Resort

Highway 49 at Koki Lane
El Dorado, California

El Dorado Senior Housing LLC
854 Diablo Road
Danville, CA 94526
(281) 772-3772

AUGUST 15, 2018 REVISION 1

0 4 8 16 32

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

A2.0

Exhibit K

ASSISTED AND MEMORY CARE FACILITY

TRIM:
KELLY-MOORE PAINTS
"FRANK LLOYD WHITE"
HLS4202-1

WINDOW AND DOOR FRAMES:
MILGARD WINDOWS & DOORS
"CRANBERRY"
FIBERGLASS

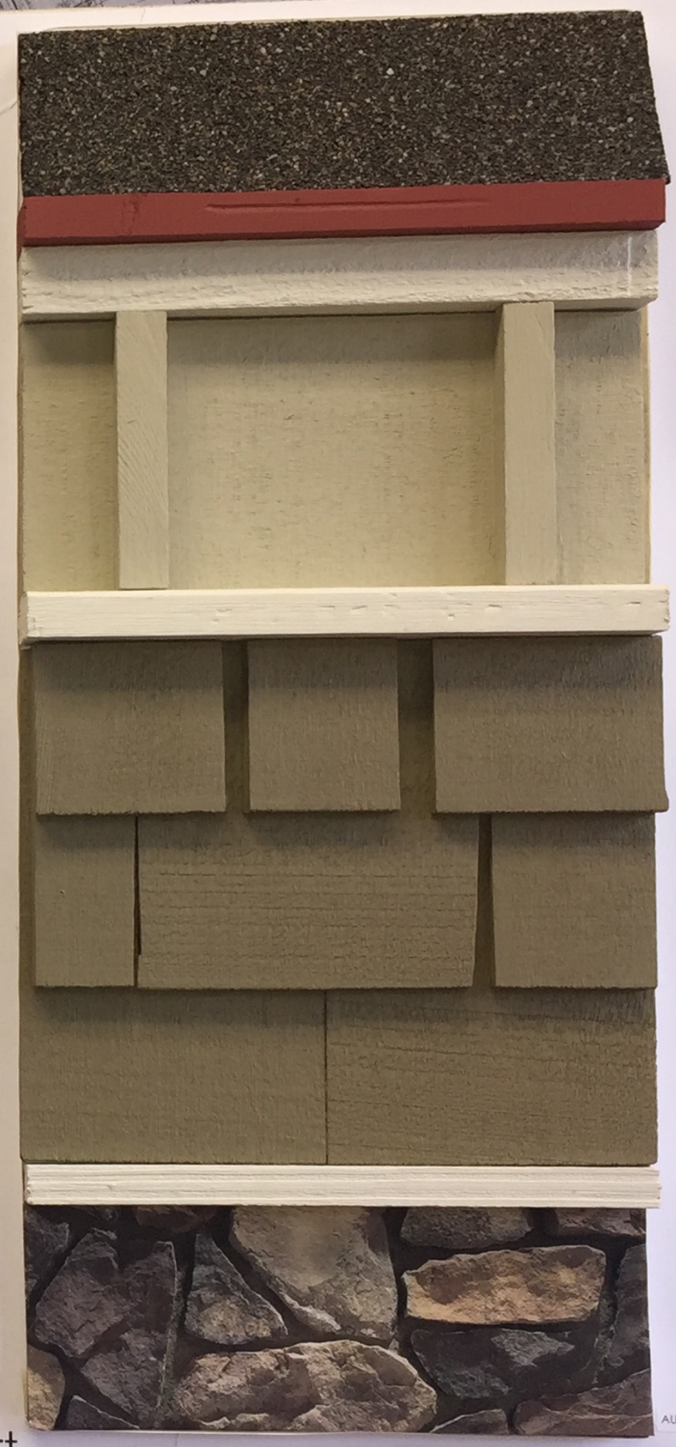
ROOFING:
PABCO PREMIER PROFESSIONAL
"WEATHERED WOOD"

SHINGLE SIDING:
KELLY-MOORE PAINTS
"STRATFORD SAGE"
HLS 4219-3

ACCENT TRIM:
KELLY-MOORE PAINTS
"INDIAN RED"
HLS 4293-5

STONE:
EL DORADO STONE
"COGNAC"
COUNTRY RUBBLE

BOARD & BATTEN SIDING:
KELLY-MOORE PAINTS
"BALLIE SCOTT SAGE"
HLS4224-2



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email: bob@wrightarchitecturestudio.com

El Dorado Senior Resort

Highway 49 at Koki Lane
El Dorado, California
APN: 331-221-30, -32

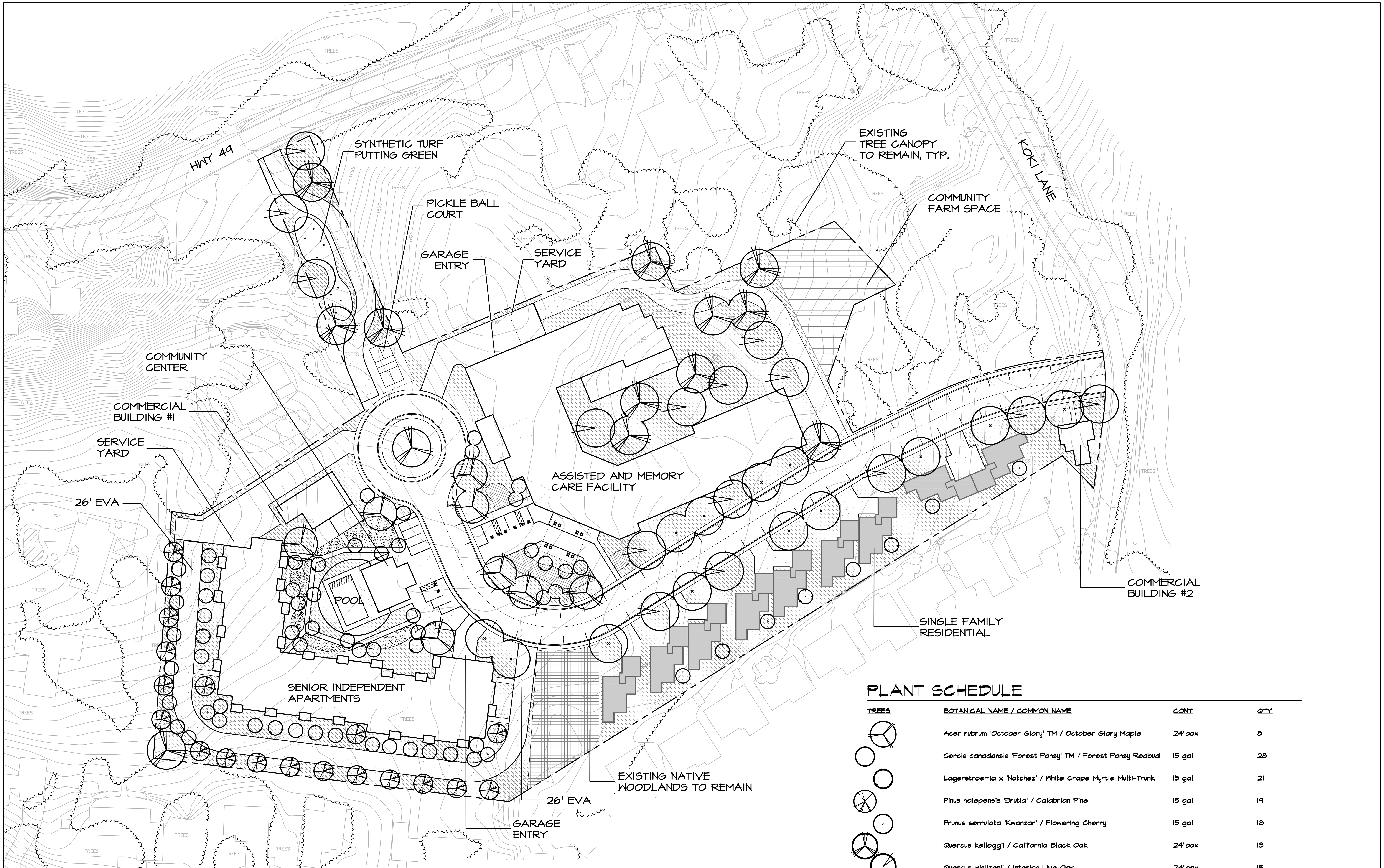
El Dorado Senior Housing LLC
854 Diablo Road
Danville, CA 94526
(281) 772-3772
Email: re.lewis@comcast.net

Color and Material Board

AUGUST 15, 2018 REVISION 1

JOB NO: WAS 17112

Exhibit L



PLANT SCHEDULE

TREES	BOTANICAL NAME / COMMON NAME	CONT	QTY
	Acer rubrum 'October Glory' TM / October Glory Maple	24"box	8
	Cercis canadensis 'Forest Pansy' TM / Forest Pansy Redbud	15 gal	28
	Lagerstroemia x 'Natchez' / White Crape Myrtle Multi-Trunk	15 gal	21
	Pinus halepensis 'Brutia' / Calabrian Pine	15 gal	19
	Prunus serrulata 'Kwanzan' / Flowering Cherry	15 gal	18
	Quercus kelloggii / California Black Oak	24"box	13
	Quercus wislizenii / Interior Live Oak	24"box	15
	Zelkova serrata 'Village Green' / Sawleaf Zelkova	24"box	13

GROUND COVERS	BOTANICAL NAME / COMMON NAME
	Mow Free Fescue
	Irrigated Shrubs and Groundcover
	Sod Lawn
	Community Farm Space
	Existing Native Woodlands to Remain

0' 80' 40' 160'

NORTH

PERIMETER FENCE:

7' solid wood fence shall be installed along entire perimeter of project site, except at entry drive intersection with Koki Lane, and where emergency vehicle access lane meets Highway 49. Lockable double gate at emergency vehicle access lane shall be installed.

SIGNAGE:

Signage shall comply with the requirements of the code of ordinances, chapter 130.16 - signs,

Sgns shall be located as follows:
One (1) - 12 sf monument sign at or near the entry at koki lane
One (1) - 12 sf monument sign at or near the assisted living facility
One (1) - 12 sf monument sign at or near the senior apartments
One (1) - 50 sf wall sign on commercial bldg. #1
One (1) - 50 sf wall sign on commercial bldg. #2

IRRIGATION NARRATIVE:

A new irrigation water point of connection will be established at the proposed 6" water main aligned along the new access road (see Utility Plan) to provide water from the El Dorado Irrigation District's existing mainline in the public right of way. A new dedicated irrigation water meter, backflow prevention device, master valve, and flow sensor will be provided downstream of that point of connection.

All landscaped areas will be serviced with a fully automatic irrigation system to include mainline and lateral piping, remote control valves and wiring, quick couplers, hose bibs, and shut-off valves. Inline drip irrigation will be provided to all shrub and groundcover plantings, bubbler irrigation to all new trees, and rotary spray irrigation to lawn and mow-free fescue areas.

Stations/hydrozones shall be delineated based on similar water demands, sun exposure, and microclimates. New trees shall be on separate station(s) to allow watering adjustments independent of understory plantings.

A new commercial-quality weather-based 'smart' controller with rain/freeze sensor will be installed in a locking cabinet. Controller shall have the ability to be controlled remotely via wi-fi and shall automatically adjust to varying evapotranspiration rates.

YAMASAKI
LANDSCAPE ARCHITECTURE
JEFF AMBROSIA, ASLA C4057
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AUBURN, CALIFORNIA 95603
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www.yamasaki-la.com

EL DORADO SENIOR RESORT
PRELIMINARY LANDSCAPE PLAN
HIGHWAY 49 AT KOKI LANE
EL DORADO COUNTY, CALIFORNIA

Sheet Title
PRELIMINARY LANDSCAPE PLAN

Seal
LICENSED LANDSCAPE ARCHITECT
JEFFREY M. AMBROSIA 4057
Signature
12/18
Renewal Date
Date
STATE OF CALIFORNIA

No.	Date	Revision
1	10/30/18	Signage notes

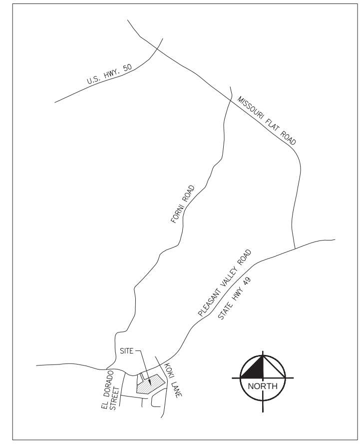
Project Mgr.: JMA
Drawn By: BCR
Scale: 1"= 40'
Date: 30 OCT 18
File Name: EDSR-LP
Sheet No.: L-1
of 1 sheets

S:\dwg\El Dorado Senior Resort\DWG's\DD\EDSR-LP.dwg\L-1\30 Oct 2018 12:10 PM by: Theresa Zaro

Exhibit M

LIGHT FIXTURE SCHEDULE

SYMBOL	DESCRIPTION	LAMP(S)	MFR. & NO.	QUANTITY
⊸¤	EXTERIOR POLE MOUNT LED AREA LIGHTING TYPE FIXTURE	53W LED 6,594 LUMENS	KAD LED 30C 530 40K R3 MVOLT PUMBAK04 DBLXD MOUNTING HEIGHT = 20'	28
¤	EXTERIOR POLE MOUNT LED PEDESTRIAN LIGHTING TYPE FIXTURE	34W LED 1,944 LUMENS	CREE EDGE PWY-EDG-3M-P8-02-UL-BK-525 MOUNTING HEIGHT = 96"	6



VICINITY MAP
NOT TO SCALE

NORTH

GRAPHIC SCALE IN FEET
0 20 40 80

PRELIMINARY PHOTOMETRIC & LIGHTING PLAN

JULY, 2018

Kimley»Horn

Exhibit N

APPENDIX A

EL DORADO COUNTY
Lighting Inventory

Section A Project Information:

Project Name & File No: _____

Site Address or Location: _____

_____

APN: _____ **Building Permit #**_____

Section B.1 Lighting Allowance

As a reference source, please review the Outdoor Lighting Ordinance, Chapter 17.34.

60,000 lu Maximum lumens (CR, RC, or RR)

x 8.08 Total project area (Acres or net acres)

= 484,800 **Maximum Lumen Output Allowed**

Section B.2 Preliminary Lighting Use

(A) Lamp Type	(B) Watts per lamp	(C) Lighting Plan Key (ID#)	(D) Number of lamps/ Length in feet (Neon only)	(E) Initial Lumen Output	(D x E) Total Unit Lumen Output
KAD-LED-30C-530-40K-R3-MVOLT	53W	28 total		6,594 lumens	184,632
Cree Edge PWY-BEDG-34-P8-OZ-UL	34W	6 total		1,944 lumens	11,664
				Total Lumen Output	196,296

Cree Edge™ Series

LED Pathway Luminaire

Product Description

Durable die-cast aluminum luminaire housing mounts directly to 4" (102mm) diameter pole (included) without visible mounting hardware for clean appearance. Pole mounts to rugged die cast aluminum internal flange secured by three 3/8" - 16x6" anchor bolts with 1-1/4" hook (provided). **Note:** T45 Torx 3/8" socket required for head installation. Top mounted LEDs for superior optical performance and light control.

Applications: Landscape, walk-ways and general site lighting

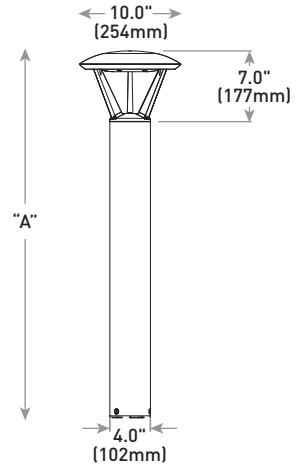
Performance Summary

- Patented NanoOptic® Product Technology
- Made in the U.S.A. of U.S. and imported parts
- **CRI:** Minimum 70 CRI
- **CCT:** 4000K (+/- 300K), 5700K (+/- 500K) standard
- **Limited Warranty†:** 10 years on luminaire/10 years on Colorfast DeltaGuard® finish

† See http://lighting.cree.com/warranty for warranty terms

Accessories

Field-Installed	
Upgrade Kit	
- Used for replacement of existing bollards with a bolt hole circle of 5.75" (146mm)	
XA-XBP8RSV	XA-XBP8RWH
XA-XBP8RBK	XA-XBP8RBZ



Model	Dim. "A"	Weight*
Landscape (P0)	13" (330mm)	12.7 lbs. (5.8kg)
Landscape (P1)	18" (457mm)	13.3 lbs. (6.0kg)
Pathway (P3)	36" (914mm)	17.9 lbs. (8.1kg)
Pathway (P4)	42" (1068mm)	18.6 lbs. (8.4kg)
Pedestrian (P8)	96" (2438mm)	28.4 lbs (12.9kg)

* Add 4.5 lbs. (2.0kg) for 347-480V

Ordering Information

Example: PWY-EDG-2M-P0-02-E-UL-SV-350

PWY-EDG			02	E				
Product	**Optic**	**Mounting**	**LED Count (x9)**	**Series**	**Voltage**	**Color Options**	**Drive Current**	**Options**
PWY-EDG	**2M** Type II Medium **3M** Type III Medium **5M** Type V Medium **5S** Type V Short	**P0** 13" (330mm) landscape **P1** 18" (457mm) landscape **P3** 36" (914mm) pathway **P4** 42" (1067mm) pathway **P8** 96" (2438mm) pedestrian	**02**	**E**	**UL** Universal 120-277V **UH*** Universal 347-480V - Available with P3, P4, and P8 mounts only **12** 120V **27** 277V	**BK** Black **BZ** Bronze **SV** Silver **WH** White	**350** 350mA **525** 525mA - Available with P1, P3, P4, and P8 mounts only	**F Fuse** - When code dictates fusing, use time delay fuse - Refer to ML spec sheet for availability with ML options **HL Hi/Low (Dual Circuit Input)** - Available with UL voltage and 525mA driver current only - Refer to HL spec sheet for details - Sensor not included **TL Two-Level (175/525 w/integrated sensor control)** - Available with 12 or 27 voltages only - Refer to TL spec sheet for details **TL2 Two-Level (0/350 w/integrated sensor control)** - Available with 12 or 27 voltages only - Refer to TL spec sheet for details **TL3 Two-Level (0/525 w/integrated sensor control)** - Available with 12 or 27 voltages only - Refer to TL spec sheet for details **WB Welded Base Plate** - Standard on P8 mount option, available with P3 and P4 mount - Includes welded base cover **40K 4000K Color Temperature** - Minimum 70 CRI - Color temperature per luminaire

* 347-480V utilizes magnetic step-down transformer. For input power for 347-480V, refer to the Electrical Data table

Product Specifications

CONSTRUCTION & MATERIALS

- Durable die-cast aluminum luminaire housing mounts directly to 4" (102mm) diameter pole (included) without visible mounting hardware for clean appearance
- Pole mounts to rugged die cast aluminum internal flange secured by three 3/8"-16x6" anchor bolts with 1-1/4" hook(provided).
  Note: T45 Torx 3/8" socket required for head installation
- Top mounted LEDs for superior optical performance and light control
- Exclusive Colorfast DeltaGuard® finish features an E-Coat epoxy primer with an ultradurable powder topcoat, providing excellent resistance to corrosion, ultraviolet degradation and abrasion. Black, bronze, silver and white are available
- **Weight:** See Dimension and Weight Chart on pages 1 and 4

ELECTRICAL SYSTEM

- **Input Voltage:** 120-277V or 347-480V, 50/60Hz, Class 1 drivers
- **Power Factor:** > 0.9 at full load at 120V
- **Total Harmonic Distortion:** < 20% at full load at 120V
- Integral 10kV surge suppression protection standard
- When code dictates fusing, a slow blow fuse or type C/D breaker should be used to address inrush current

REGULATORY & VOLUNTARY QUALIFICATIONS

- cULus Listed
- Suitable for wet locations
- 10kV surge suppression protection tested in accordance with IEEE/ANSI C62.41.2
- Luminaire and finish endurance tested to withstand 5,000 hours of elevated ambient salt fog conditions as defined in ASTM Standard B 117
- Meets Buy American requirements within ARRA
- RoHS compliant. Consult factory for additional details

Electrical Data* (A)

LED Count (x9)	System Watts 120-277V	System Watts 347-480V	Total Current					
			120V	208V	240V	277V	347V	480V
350mA								
02	22	28	0.18	0.12	0.10	0.10	0.09	0.13
525mA								
02	34	40	0.29	0.19	0.17	0.15	0.12	0.13

* Electrical data at 25°C (77°F). Actual wattage may differ by +/- 10% when operating between 120-480V +/- 10%

Recommended Cree Edge™ Series Lumen Maintenance Factors (LMF)[1]

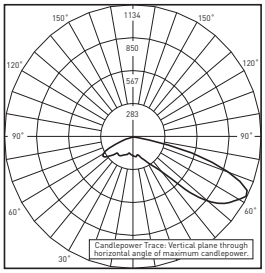
Ambient	Initial LMF	25K hr Projected[2] LMF	50K hr Projected[2] LMF	75K hr Calculated[3] LMF	100K hr Calculated[3] LMF
5°C (41°F)	1.04	0.99	0.97	0.95	0.93
10°C (50°F)	1.03	0.98	0.96	0.94	0.92
15°C (59°F)	1.02	0.97	0.95	0.93	0.91
20°C (68°F)	1.01	0.96	0.94	0.92	0.90
25°C (77°F)	1.00	0.95	0.93	0.91	0.89

[1] Lumen maintenance values at 25°C are calculated per TM-21 based on LM-80 data and in-situ luminaire testing
[2] In accordance with IESNA TM-21-11, Projected Values represent interpolated value based on time durations that are within six times (6X) the IESNA LM-80-08 total test duration (in hours) for the device under testing ([DUT] i.e. the packaged LED chip)
[3] In accordance with IESNA TM-21-11, Calculated Values represent time durations that exceed six times (6X) the IESNA LM-80-08 total test duration (in hours) for the device under testing ([DUT] i.e. the packaged LED chip)

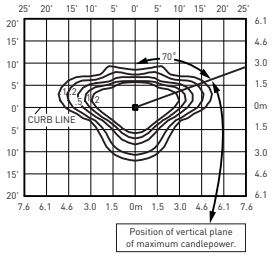
Photometry

All published luminaire photometric testing performed to IESNA LM-79-08 standards by a NVLAP accredited laboratory. To obtain an IES file specific to your project consult: http://lighting.cree.com/products/outdoor/bollards-and-pathway/cree-edge-pathway

2M



RESTL Test Report #: PL5758-001
PWY-EDG-2M-**-02-E-UL-350-40K
Initial Delivered Lumens: 1,549

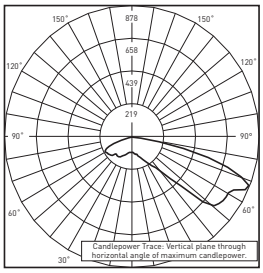


PWY-EDG-2M-**-02-E-UL-350-40K
Mounting Height: 3' (0.9m) A.F.G.
Initial Delivered Lumens: 1,565
Initial FC at grade

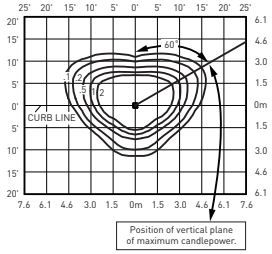
Type II Medium Distribution				
LED Count (x9)	4000K		5700K	
	Initial Delivered Lumens*	BUG Ratings** Per TM-15-11	Initial Delivered Lumens*	BUG Ratings** Per TM-15-11
350mA				
02	1,565	B1 U0 G1	1,625	B1 U0 G1
525mA				
02	2,191	B1 U0 G1	2,276	B1 U0 G1

* Initial delivered lumens at 25˚C (77˚F). Actual production yield may vary between -10 and +10% of initial delivered lumens
** For more information on the IES BUG (Backlight-Uplight-Glare) Rating visit: www.ies.org/PDF/Erratas/TM-15-11BugRatingsAddendum.pdf

3M



RESTL Test Report #: PL5698-001
PWY-EDG-3M-**-02-E-UL-350-40K
Initial Delivered Lumens: 1,470

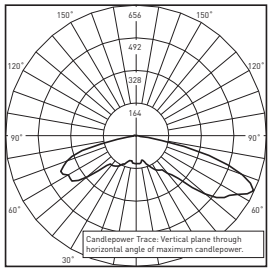


PWY-EDG-3M-**-02-E-UL-350-40K
Mounting Height: 3' (0.9m) A.F.G.
Initial Delivered Lumens: 1,389
Initial FC at grade

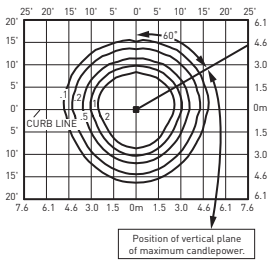
Type III Medium Distribution				
LED Count (x9)	4000K		5700K	
	Initial Delivered Lumens*	BUG Ratings** Per TM-15-11	Initial Delivered Lumens*	BUG Ratings** Per TM-15-11
350mA				
02	1,389	B1 U0 G1	1,442	B1 U0 G1
525mA				
02	1,944	B1 U0 G1	2,019	B1 U0 G1

* Initial delivered lumens at 25˚C (77˚F). Actual production yield may vary between -10 and +10% of initial delivered lumens
** For more information on the IES BUG (Backlight-Uplight-Glare) Rating visit: www.ies.org/PDF/Erratas/TM-15-11BugRatingsAddendum.pdf

5M



RESTL Test Report #: PL5798-001
PWY-EDG-5M-**-02-E-UL-350-40K
Initial Delivered Lumens: 1,780



PWY-EDG-5M-**-02-E-UL-350-40K
Mounting Height: 3' (0.9m) A.F.G.
Initial Delivered Lumens: 1,666
Initial FC at grade

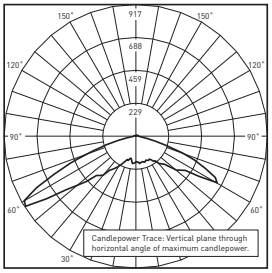
Type V Medium Distribution				
LED Count (x9)	4000K		5700K	
	Initial Delivered Lumens*	BUG Ratings** Per TM-15-11	Initial Delivered Lumens*	BUG Ratings** Per TM-15-11
350mA				
02	1,666	B1 U2 G1	1,730	B1 U2 G1
525mA				
02	2,333	B2 U2 G2	2,422	B2 U2 G2

* Initial delivered lumens at 25˚C (77˚F). Actual production yield may vary between -10 and +10% of initial delivered lumens
** For more information on the IES BUG (Backlight-Uplight-Glare) Rating visit: www.ies.org/PDF/Erratas/TM-15-11BugRatingsAddendum.pdf

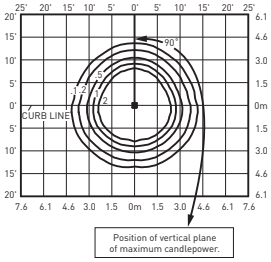
Photometry

All published luminaire photometric testing performed to IESNA LM-79-08 standards by a NVLAP accredited laboratory. To obtain an IES file specific to your project consult: http://lighting.cree.com/products/outdoor/bollards-and-pathway/cree-edge-pathway

5S



RESTL Test Report #: PL5759-001
PWY-EDG-5S-**-02-E-UL-350-40K
Initial Delivered Lumens: 1,897

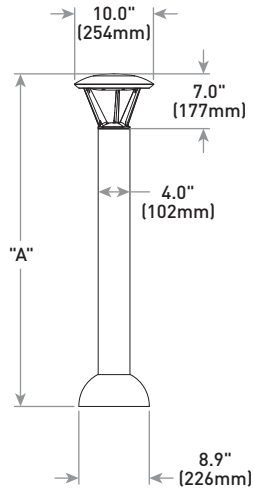


PWY-EDG-5S-**-02-E-UL-350-40K
Mounting Height: 3' (0.9m) A.F.G.
Initial Delivered Lumens: 1,868
Initial FC at grade

Type V Short Distribution				
LED Count (x9)	4000K		5700K	
	Initial Delivered Lumens*	BUG Ratings** Per TM-15-11	Initial Delivered Lumens*	BUG Ratings** Per TM-15-11
350mA				
02	1,868	B1 U2 G1	1,940	B1 U2 G1
525mA				
02	2,615	B1 U2 G1	2,716	B1 U2 G1

* Initial delivered lumens at 25˚C (77˚F). Actual production yield may vary between -10 and +10% of initial delivered lumens
** For more information on the IES BUG (Backlight-Uplight-Glare) Rating visit: www.ies.org/PDF/Erratas/TM-15-11BugRatingsAddendum.pdf

with Welded Base



Model	Dim. "A"	Weight*
Pathway (P3)	36" (914mm)	17.9 lbs. (8.1kg)
Pathway (P4)	42" (1068mm)	18.6 lbs. (8.4kg)
Pedestrian (P8)	96" (2438mm)	28.4 lbs (12.9kg)

* Add 4.5 lbs. (2.0kg) for 347-480V

lighting levels. Consensus opinion is currently to delete such a differential on the basis that adequate research to justify the lower levels has not been conducted.

High mast lighting typically consists of clusters of three to six or more luminaires mounted on rings, which can be mechanically lowered to near ground levels for servicing.

Designs for high mast lighting can utilize the illuminance method. Unique high mast luminaires and both symmetrical and asymmetrical distributions have been used. Cutoff luminaires are desirable to avoid excessive glare. Large lamps consuming up to 1000 watts are sometimes employed.

Because high mast lighting is a tool for illuminating areas rather than specific sections of roadway, the poles are customarily placed well back from adjacent roadways. Installation cost comparisons between high mast and conventional lighting systems vary widely, depending on the application. High mast lighting for interchanges is frequently less expensive to install than conventional lighting, due to the reduced complexity of conduit and conductor and the smaller number of luminaires and poles required. Other than at interchange locations, conventional lighting usually requires a smaller initial cost.

Maintenance costs for the two types of systems differ greatly. Conventional lighting requires the use of a bucket truck and frequently requires extensive traffic control, such as signs, cones, and lane closures. When poles are mounted on concrete traffic barriers (CTB's), the adjacent traffic lane usually has to be closed, resulting in significant traffic disruptions. One or two persons, without special lift equipment, can usually perform maintenance on a high mast lighting system equipped with a lowering device. High mast lighting may also eliminate the risks involved with having personnel working near high speed traffic.

3.5 Pedestrian and Bikeway Design Criteria

The lighting of streets with pedestrian sidewalks and/or bikeways included as part of the right of way, particularly in urban and suburban areas, differs from that of limited access high speed roadways. The driver's tasks include seeing objects in the roadway as well as pedestrians, parked cars, and other elements. The purpose

Table 2: Illuminance Method - Recommended Values

Road and Pedestrian Conflict Area		Pavement Classification (Minimum Manintained Average Values)			Uniformity Ratio	Veiling Luminance Ratio
Road	Pedestrian Conflict Area	R1 lux/fc	R2 & R3 lux/fc	R4 lux/fc	E_{avg}/E_{min}	L_{vmax}/L_{avg}
Freeway Class A		6.0/0.6	9.0/0.9	8.0/0.8	3.0	0.3
Freeway Class B		4.0/0.4	6.0/0.6	5.0/0.5	3.0	0.3
Expressway	High	10.0/1.0	14.0/1.4	13.0/1.3	3.0	0.3
	Medium	8.0/0.8	12.0/1.2	10.0/1.0	3.0	0.3
	Low	6.0/0.6	9.0/0.9	8.0/0.8	3.0	0.3
Major	High	12.0/1.2	17.0/1.7	15.0/1.5	3.0	0.3
	Medium	9.0/0.9	13.0/1.3	11.0/1.1	3.0	0.3
	Low	6.0/0.6	9.0/0.9	8.0/0.8	3.0	0.3
Collector	High	8.0/0.8	12.0/1.2	10.0/1.0	4.0	0.4
	Medium	6.0/0.6	9.0/0.9	8.0/0.8	4.0	0.4
	Low	4.0/0.4	6.0/0.6	5.0/0.5	4.0	0.4
Local	High	6.0/0.6	9.0/0.9	8.0/0.8	6.0	0.4
	Medium	5.0/0.5	7.0/0.7	6.0/0.6	6.0	0.4
	Low	3.0/0.3	4.0/0.4	4.0/0.4	6.0	0.4

(*Refer to* ***Section 3.6*** *for Intersection Lighting*)

KAD LED
LED Area Luminaire

Catalog Number

Notes

Type

Hit the Tab key or mouse over the page to see all interactive elements.

Specifications

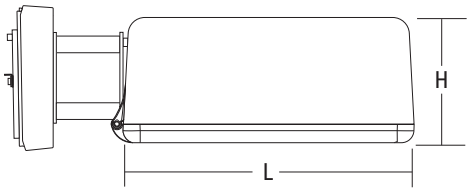
EPA: 1.2 ft² *(0.11 m²)*

Length: 17-1/2" *(44.5 cm)*

Width: 17-1/2" *(44.5 cm)*

Height: 7-1/8" *(18.1 cm)*

Weight (max): 36 lbs. *(16.4 kg)*



A+ Capable Luminaire

This item is an A+ capable luminaire, which has been designed and tested to provide consistent color appearance and system-level interoperability.

- All configurations of this luminaire meet the Acuity Brands' specification for chromatic consistency
- This luminaire is A+ Certified when ordered with DTL® controls marked by a shaded background. DTL DLL equipped luminaires meet the A+ specification for luminaire to photocontrol interoperability1
- This luminaire is part of an A+ Certified solution for ROAM®2 or XPoint™ Wireless control networks, providing out-of-the-box control compatibility with simple commissioning, when ordered with drivers and control options marked by a shaded background[1]

To learn more about A+, visit www.acuitybrands.com/aplus.

1. See ordering tree for details.
2. A+ Certified Solutions for ROAM require the order of one ROAM node per luminaire. Sold Separately: Link to Roam; Link to DTL DLL

A+ Capable options indicated by this color background.

Ordering Information

EXAMPLE: KAD LED 40C 1000 40K R5 MVOLT SPD04 DDBXD

KAD LED

Series	LEDs	Drive current	CCT	Distribution	Voltage	Mounting[3]
KAD LED	20C[1] 20 LEDs 30C[1] 30 LEDs 40C 40 LEDs 60C 60 LEDs	530 530 mA[1] 700 700 mA 1000 1000 mA	30K 3000 K 40K 4000 K 50K 5000 K	R2 Type II R3 Type III R4 Type IV R5 Type V	MVOLT[2] 277[3] 120[3] 347[1,2] 208[2,3] 480[1,2] 240[2,3]	**Shipped included** SPUMBAK___ Square pole universal mounting adaptor[5] RPUMBAK___ Round pole universal mounting adaptor[5] SPD___ Square pole RPD___ Round pole WBD___ Wall bracket WWD___ Wood pole or wall 04 4" arm 06 6" arm 09 9" arm[4] 12 12" arm[5] **Shipped separately** DAD12P Degree arm (pole) DAD12WB Degree arm (wall) KMA Mast arm external fitter

Options

Shipped installed

PER5	NEMA twist-lock five-wire receptacle only (no controls)[6,7,8]
PER7	Seven-wire receptacle only (no controls)[6,7,8]
SF	Single fuse (120, 277, 347V)[3]
DF	Double fuse (208, 240, 480V)[3]
PIR	Bi-level, motion/ambient sensor, 8-15' mounting height, ambient sensor enabled at 5fc[2,9,10,11,12]
PIRH	Bi-level, motion/ambient sensor, 15-30' mounting height, ambient sensor enabled at 5fc[2,9,10,11,12]
PIR1FC3V	Bi-level, motion/ambient sensor, 8-15' mounting height, ambient sensor enabled at 1fc[2,9,10,11,12]
PIRH1FC3V	Bi-level, motion/ambient sensor, 15-30' mounting height, ambient sensor enabled at 1fc[2,9,10,11,12]
BL30	Bi-level switched dimming, 30%[2,8,9,10]
BL50	Bi-level switched dimming, 50%[2,8,9,10]
PNMTDD3	Part night, dim till dawn[2,10,15]
PNMT5D3	Part night, dim 5 hrs[2,10,15]
PNMT6D3	Part night, dim 6 hrs[2,10,15]
PNMT7D3	Part night, dim 7 hrs[2,10,15]
HS	Houseside shield[16]

Shipped separately[16]

WG	Wire guard

Finish *(required)*

DDBXD	Dark bronze	DDBTXD	Textured dark bronze
DBLXD	Black	DBLBXD	Textured black
DNAXD	Natural aluminum	DNATXD	Textured natural aluminum
DWHXD	White	DWHGXD	Textured white

Ordering Information

Stock configurations are offered for shorter lead times:

Standard Part Number	Stock Part Number
KAD LED 30C 1000 40K R3 MVOLT PUMBAK09 DDBXD*	**KADL 30C 40K R3**
KAD LED 30C 1000 40K R5 MVOLT PUMBAK09 DDBXD*	**KADL 30C 40K R5**
KAD LED 40C 1000 40K R3 MVOLT PUMBAK09 DDBXD*	**KADL 40C 40K R3**
KAD LED 40C 1000 40K R5 MVOLT PUMBAK09 DDBXD*	**KADL 40C 40K R5**
KAD LED 30C 1000 40K R3 MVOLT PUMBAK09 PIRH DDBXD*	**KADL 30C 40K R3 PIRH**
KAD LED 30C 1000 40K R5 MVOLT PUMBAK09 PIRH DDBXD *	**KADL 30C 40K R5 PIRH**
KAD LED 40C 1000 40K R3 MVOLT PUMBAK09 PIRH DDBXD*	**KADL 40C 40K R3 PIRH**
KAD LED 40C 1000 40K R5 MVOLT PUMBAK09 PIRH DDBXD*	**KADL 40C 40K R5 PIRH**

*PUMBAK is not standard nomenclature.

Accessories

Ordered and shipped separately.

DLL127F 1.5 JU	Photocell - SSL twist-lock (120-277V) [17]
DLL347F 1.5 CUL JU	Photocell - SSL twist-lock (347V) [17]
DLL480F 1.5 CUL JU	Photocell - SSL twist-lock (480V) [17]
DSHORT SBK U	Shorting cap [17]
KADLEDHS 20C U	Houseside shield for 20 LED unit
KADLEDHS 30C U	Houseside shield for 30 LED unit
KADLEDHS 40C U	Houseside shield for 40 LED unit
KADLEDHS 60C U	Houseside shield for 60 LED unit
KMA DDBXD U	Mast arm adapter (specify finish)
KADWG U	Wire guard accessory
PUMBAK DDBXD U*	Square and round pole universal mounting bracket adaptor (specify finish)

For more control options, visit DTL and ROAM online.

*Round pole top must be 3.25" O.D. minimum.

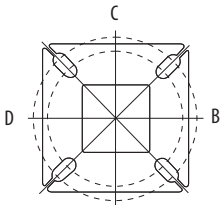
NOTES

1. 20C or 30C LED are not available with 530 Drive Current and 347V or 480V
2. Any PIRx with BL30, BL50 or PNMT, is not available with 208V,240V, 347V, 480V or MVOLT. It is only available in 120V or 277V specified
3. MVOLT driver operates on any line voltage from 120-277V (50/60 Hz). Single fuse (SF) requires 120, 277 or 347 voltage option. Double fuse (DF) requires 208, 240 or 480 voltage option.
4. 9" or 12" arm is required when two or more luminaires are oriented on a 90° drilling pattern.
5. Available as a separate combination accessory: PUMBAK (finish) U.
6. Mounting must be restricted to ±45° from horizontal aim per ANSI C136.10-2010. Not available with motion sensor.
7. Photocell ordered and shipped as a separate line item from Acuity Brands Controls. See accessories. Not available with DS option. Shorting cap included.
8. If ROAM® node required, it must be ordered and shipped as a separate line item from Acuity Brands Controls. Not available with DCR. Node with integral dimming. Shorting cap included.
9. PIR and PIR1FC3V specify the SensorSwitch SBGR-10-ODP control; PIRH and PIRH1FC3V specify the SensorSwitch SBGR-6-ODP control; see Outdoor Control Technical Guide for details. Dimming driver standard. Not available with PER5 or PER7.
10. Maximum ambient temperature with 347V or 480V is 30°C.
11. Reference Motion Sensor table.
12. Reference PER table on page 3 to see functionality.
13. Requires an additional switched circuit with same phase as main luminaire power. Supply circuit and control circuit are required to be in the same phase.
14. Dimming driver standard. MVOLT only. Not available with 347V, 480V, PER5, PER7 or PNMT options.
15. Dimming driver standard. MVOLT only. Not available with 347V, 480V, PER5, PER7, BL30 or BL50.
16. Also available as a separate accessory; see Accessories information.
17. Requires luminaire to be specified with PER option. Ordered and shipped as a separate line item from Acuity Brands Controls.

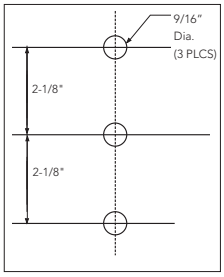
Drilling

Template #5

HANDHOLE ORIENTATION



Top of Pole



Tenon Mounting Slipfitter**

Tenon O.D.	Single Unit	2 at 180°	2 at 90° †	3 at 120°	3 at 90° †	4 at 90° †
2-3/8"	T20-190	T20-280	T20-290	T20-320 †	T20-390	T20-490
2-7/8"	T25-190	T25-280	T25-290	T25-320	T25-390	T25-490
4"	T35-190	T35-280	T35-290	T35-320	T35-390	T35-490

*** For round pole mounting (RPDXX) only.* *† Requires 9" or 12" arm.*

Pole drilling nomenclature: # of heads at degree from handhole (default side A)				
DM19	DM28	DM29	DM39	DM49
1 @ 90°	2 @ 280°	2 @ 90°	3 @ 90°	4 @ 90°
Side B	Side B & D	Side B & C	Side B, C, & D	Sides A, B, C, D
Note: Review luminaire spec sheet for specific nomenclature				

Performance Data

Lumen Output

Lumen values are from photometric tests performed in accordance with IESNA LM-79-08. Data is considered to be representative of the configurations shown, within the tolerances allowed by Lighting Facts. Contact factory for performance data on any configurations not shown here.

LEDs	Drive Current (mA)	System Watts	Dist. Type	30K (3000 K, 70 CRI)					40K (4000 K, 70 CRI)					50K (5000 K, 70 CRI)				
				Lumens	B	U	G	LPW	Lumens	B	U	G	LPW	Lumens	B	U	G	LPW
20C	530 mA	35W	R2	4,140	1	0	1	118	4,446	1	0	1	127	4,473	1	0	1	128
			R3	4,123	1	0	1	118	4,427	1	0	1	126	4,455	1	0	1	127
			R4	4,128	1	0	1	118	4,433	1	0	1	127	4,460	1	0	1	127
			R5	4,381	2	0	1	125	4,704	3	0	1	134	4,734	3	0	1	135
	700 mA	45W	R2	5,271	1	0	1	117	5,660	1	0	1	126	5,696	1	0	2	127
			R3	5,250	1	0	2	117	5,637	1	0	2	125	5,672	1	0	2	126
			R4	5,256	1	0	2	117	5,644	1	0	2	125	5,679	1	0	2	126
			R5	5,578	3	0	1	124	5,990	3	0	1	133	6,027	3	0	1	134
	1000 mA	73W	R2	7,344	1	0	2	101	7,886	2	0	2	108	7,935	2	0	2	109
			R3	7,314	1	0	2	100	7,854	1	0	2	108	7,903	1	0	2	108
			R4	7,322	1	0	2	100	7,863	1	0	2	108	7,912	1	0	2	108
			R5	7,771	3	0	1	106	8,345	3	0	1	114	8,397	3	0	1	115
30C	530 mA	53W	R2	6,166	1	0	2	116	6,621	1	0	2	125	6,663	1	0	2	126
			R3	6,141	1	0	2	116	6,594	1	0	2	124	6,635	1	0	2	125
			R4	6,148	1	0	2	116	6,602	1	0	2	125	6,643	1	0	2	125
			R5	6,525	3	0	1	123	7,006	3	0	1	132	7,050	3	0	1	133
	700 mA	69W	R2	7,817	2	0	2	113	8,395	2	0	2	122	8,447	2	0	2	122
			R3	7,785	1	0	2	113	8,360	2	0	2	121	8,412	2	0	2	122
			R4	7,794	1	0	2	113	8,370	1	0	2	121	8,422	1	0	2	122
			R5	8,272	3	0	2	120	8,883	3	0	2	129	8,938	3	0	2	130
	1000 mA	108W	R2	10,755	2	0	2	100	11,549	2	0	2	107	11,621	2	0	2	108
			R3	10,711	2	0	2	99	11,502	2	0	2	106	11,574	2	0	2	107
			R4	10,724	2	0	2	99	11,515	2	0	2	107	11,587	2	0	2	107
			R5	11,381	3	0	2	105	12,221	4	0	2	113	12,297	4	0	2	114
40C	530 mA	71W	R2	8,156	2	0	2	115	8,758	2	0	2	123	8,812	2	0	2	124
			R3	8,122	2	0	2	114	8,722	2	0	2	123	8,776	2	0	2	124
			R4	8,132	1	0	2	115	8,732	1	0	2	123	8,786	1	0	2	124
			R5	8,630	3	0	2	122	9,267	3	0	2	131	9,325	3	0	2	131
	700 mA	94W	R2	10,286	2	0	2	109	11,045	2	0	2	118	11,114	2	0	2	118
			R3	10,244	2	0	2	109	11,000	2	0	2	117	11,069	2	0	2	118
			R4	10,256	2	0	2	109	11,013	2	0	2	117	11,081	2	0	2	118
			R5	10,884	3	0	2	116	11,688	4	0	2	124	11,761	4	0	2	125
	1000 mA	141W	R2	13,923	2	0	2	99	14,951	2	0	2	106	15,045	2	0	2	107
			R3	13,866	2	0	3	98	14,890	2	0	3	106	14,983	2	0	3	106
			R4	13,882	2	0	3	98	14,907	2	0	3	106	15,000	2	0	3	106
			R5	14,733	4	0	2	104	15,821	4	0	2	112	15,920	4	0	2	113
60C	530 mA	103W	R2	11,996	2	0	2	116	12,882	2	0	2	125	12,963	2	0	2	126
			R3	11,947	2	0	2	116	12,829	2	0	2	125	12,909	2	0	2	125
			R4	11,961	2	0	2	116	12,844	2	0	2	125	12,925	2	0	2	125
			R5	12,694	4	0	2	123	13,632	4	0	2	132	13,717	4	0	2	133
	700 mA	137W	R2	14,927	2	0	2	109	16,029	3	0	3	117	16,130	3	0	3	118
			R3	14,866	2	0	3	109	15,964	2	0	3	117	16,063	2	0	3	117
			R4	14,884	2	0	2	109	15,982	2	0	3	117	16,082	2	0	3	117
			R5	15,796	4	0	2	115	16,962	4	0	2	124	17,068	4	0	2	125
	1000 mA	216W	R2	19,328	3	0	3	89	20,754	3	0	3	96	20,884	3	0	3	97
			R3	19,248	3	0	3	89	20,669	3	0	4	96	20,799	3	0	4	96
			R4	19,271	3	0	3	89	20,693	3	0	4	96	20,823	3	0	4	96
			R5	20,452	4	0	2	95	21,962	4	0	2	102	22,099	4	0	2	102

Performance Data

Lumen Ambient Temperature (LAT) Multipliers

Use these factors to determine relative lumen output for average ambient temperatures from 0-40°C (32-104°F).

Ambient		Lumen Multiplier
0°C	32°F	1.02
10°C	50°F	1.01
20°C	68°F	1.00
25°C	**77°F**	**1.00**
30°C	86°F	1.00
40°C	104°F	0.99

Projected LED Lumen Maintenance

Data references the extrapolated performance projections for the **KAD LED** platform in a **25°C ambient**, based on 10,000 hours of LED testing (tested per IESNA LM-80-08 and projected per IESNA TM-21-11).

To calculate LLF, use the lumen maintenance factor that corresponds to the desired number of operating hours below. For other lumen maintenance values, contact factory.

Operating Hours	0	25,000	50,000	100,000
Lumen Maintenance Factor	KAD LED 60C 1000			
	1.0	0.91	0.86	0.76
	KAD LED 40C 1000			
	1.0	0.93	0.88	0.79
	KAD LED 60C 700			
	1.0	0.98	0.97	0.94

Electrical Load

Number of LEDs	Drive Current (mA)	System Watts	Current (A) 120	208	240	277	347	480
20	530	35	0.30	0.18	0.16	0.15	-	-
	700	45	0.39	0.23	0.20	0.18	0.15	0.12
	1000	73	0.61	0.35	0.31	0.27	0.22	0.17
30	530	53	0.44	0.26	0.23	0.20	-	-
	700	69	0.58	0.34	0.29	0.26	0.21	0.16
	1000	108	0.90	0.52	0.46	0.40	0.32	0.24
40	530	71	0.60	0.35	0.32	0.29	0.21	0.16
	700	94	0.79	0.46	0.41	0.36	0.27	0.20
	1000	141	1.18	0.68	0.59	0.52	0.42	0.30
60	530	103	0.87	0.50	0.44	0.39	0.29	0.22
	700	137	1.15	0.66	0.58	0.51	0.40	0.29
	1000	216	1.81	1.04	0.92	0.81	0.63	0.47

NOTE: All ratings in this table are for a nominal system operated at 25°C ambient temperature. Current and power specifications in this table do not include branch circuit derating specified in the National Electrical Code. Please observe all applicable electrical codes and ratings.

Motion Sensor Default Settings						
Option	Dimmed State	High Level (when triggered)	Photocell Operation	Dwell Time	Ramp-up Time	Ramp-down Time
PIR or PIRH	3V (37%) Output	10V (100%) Output	Enabled @ 5FC	5 min	3 sec	5 min
*PIR1FC3V or PIRH1FC3V	3V (37%) Output	10V (100%) Output	Enabled @ 1FC	5 min	3 sec	5 min
*for use with Inline Dusk to Dawn or timer.						

PER Table						
Control	PER (3 wire)	PER5 (5 wire)		PER7 (7 wire)		
			Wire 4/Wire5		Wire 4/Wire5	Wire 6/Wire7
Photocontrol Only (On/Off)	✔	⚠	Wired to dimming leads on driver	⚠	Wired to dimming leads on driver	Wires Capped inside fixture
ROAM	⊘	✔	Wired to dimming leads on driver	⚠	Wired to dimming leads on driver	Wires Capped inside fixture
ROAM with Motion (ROAM on/off only)	⊘	⚠	Wires Capped inside fixture	⚠	Wires Capped inside fixture	Wires Capped inside fixture
Future-proof*	⊘	⚠	Wired to dimming leads on driver	✔	Wired to dimming leads on driver	Wires Capped inside fixture
Future-proof* with Motion	⊘	⚠	Wires Capped inside fixture	✔	Wires Capped inside fixture	Wires Capped inside fixture

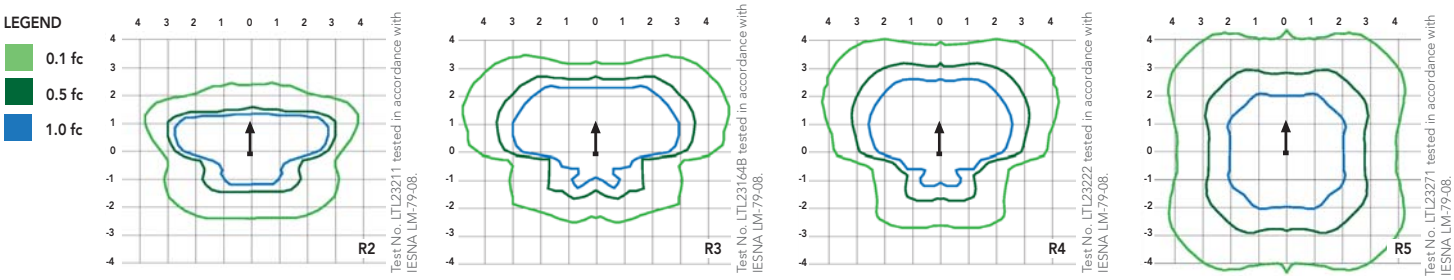
✔ Recommended
⊘ Will not work
⚠ Alternate

*Future-proof means: Ability to change controls in the future.

Photometric Diagrams

To see complete photometric reports or download .ies files for this product, visit Lithonia Lighting's KAD LED homepage.

Isofootcandle plots for the KAD LED 60C 1000 40K. Distances are in units of mounting height (20').



FEATURES & SPECIFICATIONS

INTENDED USE
The energy savings and long life of the KAD LED area luminaire make it a reliable choice for illuminating streets, walkways, parking lots, and surrounding areas.

CONSTRUCTION
Single-piece die-cast, aluminum housing with contoured edges has a 0.12" nominal wall thickness. Die-cast door frame has an impact-resistant, tempered glass lens that is fully gasketed with one piece tubular silicone.

FINISH
Exterior parts are protected by a zinc-infused Super Durable TGIC thermoset powder coat finish that provides superior resistance to corrosion and weathering. A tightly controlled multi-stage process ensures a minimum 3 mils thickness for a finish that can withstand extreme climate changes without cracking or peeling.

OPTICS
Precision-molded refractive acrylic lenses are available in four distributions. Light engines are available in standard 4000K, 3000K or 5000K (70 CRI) configurations.

ELECTRICAL
Light engine consists of high-efficacy LEDs mounted to a metal-core circuit board and aluminum heat sink, ensuring optimal thermal management and long life. Class 1 electronic driver has a power factor >90%, THD <20%, and has an expected life of 100,000 hours with <1% failure rate. Easily-serviceable surge protection device meets a minimum Category C Low (per ANSI/IEEE C62.41.2).

INSTALLATION
Included universal mounting block and extruded aluminum arm facilitate quick and easy installation using nearly any existing drilling pattern. Stainless steel bolts fasten the luminaire to the mounting block securing it to poles or walls. The KAD LED can withstand up to a 1.5 G vibration load rating per ANSI C136.31. The KAD LED also utilizes the standard K-Series (Template #5) for pole drilling.

LISTINGS
CSA certified to U.S. and Canadian standards. Luminaire is IP65 rated. Rated for -40°C minimum ambient.
DesignLights Consortium® (DLC) qualified product. Not all versions of this product may be DLC qualified. Please check the DLC Qualified Products List at www.designlights.org/QPL to confirm which versions are qualified.

WARRANTY
5-year limited warranty. Complete warranty terms located at:
www.acuitybrands.com/CustomerResources/Terms_and_conditions.aspx.

Note: Actual performance may differ as a result of end-user environment and application. All values are design or typical values, measured under laboratory conditions at 25 °C. Specifications subject to change without notice.

El Dorado Irrigation District

Letter No.: DS0818-170

August 8, 2018

VIA E-MAIL

El Dorado Senior Housing, LLC
Attn: Jim Davies
Via Email: j854davies@att.net

Subject: Facility Improvement Letter (FIL), 2938FIL El Dorado Senior Resort-**Annexation**
Assessor's Parcel No.(s) 331-221-30 & 32 (Outside)

Dear Mr. Davies:

This letter is in response to your request dated July 20, 2018 and is valid for a period of three years. If facility improvement plans for your project are not submitted to El Dorado Irrigation District (EID or District) within three years of the date of this letter, a new FIL will be required.

Design drawings for your project must be in conformance with the District's *Water, Sewer and Recycled Water Design and Construction Standards*.

This proposed project is a new Senior Housing complex on 8.2 acres. Water and sewer service, private fire service and fire hydrants are requested. The property is **not** within the District boundary and will require annexation before service can be obtained.

This letter is not a commitment to serve, but does address the location and approximate capacity of existing facilities that may be available to serve your project.

Water Supply
As of January 1, 2017, there were 12,630 equivalent dwelling units (EDUs) of water supply available in the Western/Eastern Water Supply Region. Your project as proposed on this date would require 126.5 EDUs of water supply.

Water Facilities
A 12-inch water line exists in Pleasant Valley Road and a 6-inch water line is located in Koki Lane (see enclosed System Map). The Diamond Springs/El Dorado Fire Protection District has determined that the minimum fire flow for this project is 1,750 GPM for a 2-hour duration while maintaining a 20-psi residual pressure. According to the District's hydraulic model, the existing system can deliver the required fire flow. In order to receive service and provide the required fire flow this project has two options depending on site design.

Exhibit O

The 12-inch main previously identified currently operates at a lower hydraulic grade line than the 6-inch water main in Koki Lane. The hydraulic grade line for the 12-inch water line is 1,805 feet above mean sea level at static conditions and 1,750 feet above mean sea level during fire flow and maximum day demands. If the site elevations will not allow for a water system with adequate pressure to be designed connecting only to the 12-inch main then you may be required to construct a looped water system that would provide water from a higher pressure zone.

In order to provide water service from a higher pressure zone you would be required to construct a looped water line extension connecting to both the 12-inch and 6-inch water lines previously identified. The connection in Pleasant Valley Road would need to be achieved by cutting in a new tee with isolation valves in order to correctly configure the water system in this area. The hydraulic grade line for this pressure zone would be 2,075 feet above mean sea level at static conditions and 1,950 feet above mean sea level during fire flow and maximum day demands. Prior to submitting plans the District will need to review these options with your civil engineer in order to determine which option will be required.

The flow predicted above was developed using a computer model and is not an actual field flow test.

Sewer Facilities

There is a 24-inch sewer line abutting the northern property line in Pleasant Valley Road. This sewer line has adequate capacity at this time. In order to receive service from this line, an extension of facilities of adequate size must be constructed. Your project as proposed on this date would require 124.5 EDUs of sewer service.

Easement Requirements

Proposed water lines, sewer lines and related facilities must be located within an easement accessible by conventional maintenance vehicles. When the water lines or waste water lines are within streets, they shall be located within the paved section of the roadway. No structures will be permitted within the easements of any existing or proposed facilities. The District must have unobstructed access to these easements at all times, and does not generally allow water or waste water facilities along lot lines.

Easements for any new District facilities constructed by this project must be granted to the District prior to District approval of water and/or waste water improvement plans, whether on-site or off-site. In addition, due to either nonexistent or prescriptive easements for some older facilities, any existing on-site District facilities that will remain in place after the development of this property must also have an easement granted to the District.

Environmental

The County is the lead agency for environmental review of this project per Section 15051 of the California Environmental Quality Act Guidelines (CEQA). The County's environmental document should include a review of both off-site and on-site water and sewer facilities that may be constructed by this project. You may be requested to submit a copy of the County's environmental document to the District if your project involves significant off-site facilities. If the County's environmental document does not address all water and waste water facilities and they are not exempt from environmental review, a supplemental environmental document will be required. This document would be prepared by a consultant. It could require several months to prepare and you would be responsible for its cost.

Annexation

The applicant is charged for all costs associated with the annexation proposal. A preliminary cost benefit analysis has been completed. This project as currently defined will not have a negative financial impact on the District. Please contact Development Services regarding the annexation process.

Summary

Service to this proposed development is contingent upon the following:

- Annexation approval from the District's Board of Directors and El Dorado County Local Agency Formation Commission;
- Payment of District Annexation Impact Fee (Contact Development Services for fee calculation);
- The availability of uncommitted water supplies at the time service is requested;
- Approval of the County's environmental document by the District (if requested);
- Approval of an extension of facilities application by the District;
- Approval of facility improvement plans by the District;
- Construction by the developer of all on-site and off-site proposed water and sewer facilities;
- Acceptance of these facilities by the District; and
- Payment of all District connection costs.

Services shall be provided in accordance with El Dorado Irrigation District Board Policies and Administrative Regulations, as amended from time-to-time. As they relate to conditions of and fees for extension of service, District Administrative Regulations will apply as of the date of a fully executed Extension of Facilities Agreement.

If you have any questions, please contact Marc Mackay at (530) 642-4135.

Sincerely,

Mike Brink, P.E.
Supervising Civil Engineer

MB/MM:gp

Enclosures: System Map

cc w/ System Map:

José C. Henriquez, Executive Officer
El Dorado County LAFCO
Via email - jhenriquez@edlafco.us

Marshall Cox – Fire Marshal
El Dorado Hills Fire Department
Via email - mcox@edhfire.com

Roger Trout, Director
El Dorado County Development Services Department
Via email - roger.trout@edcgov.us
Camino, CA 95709'

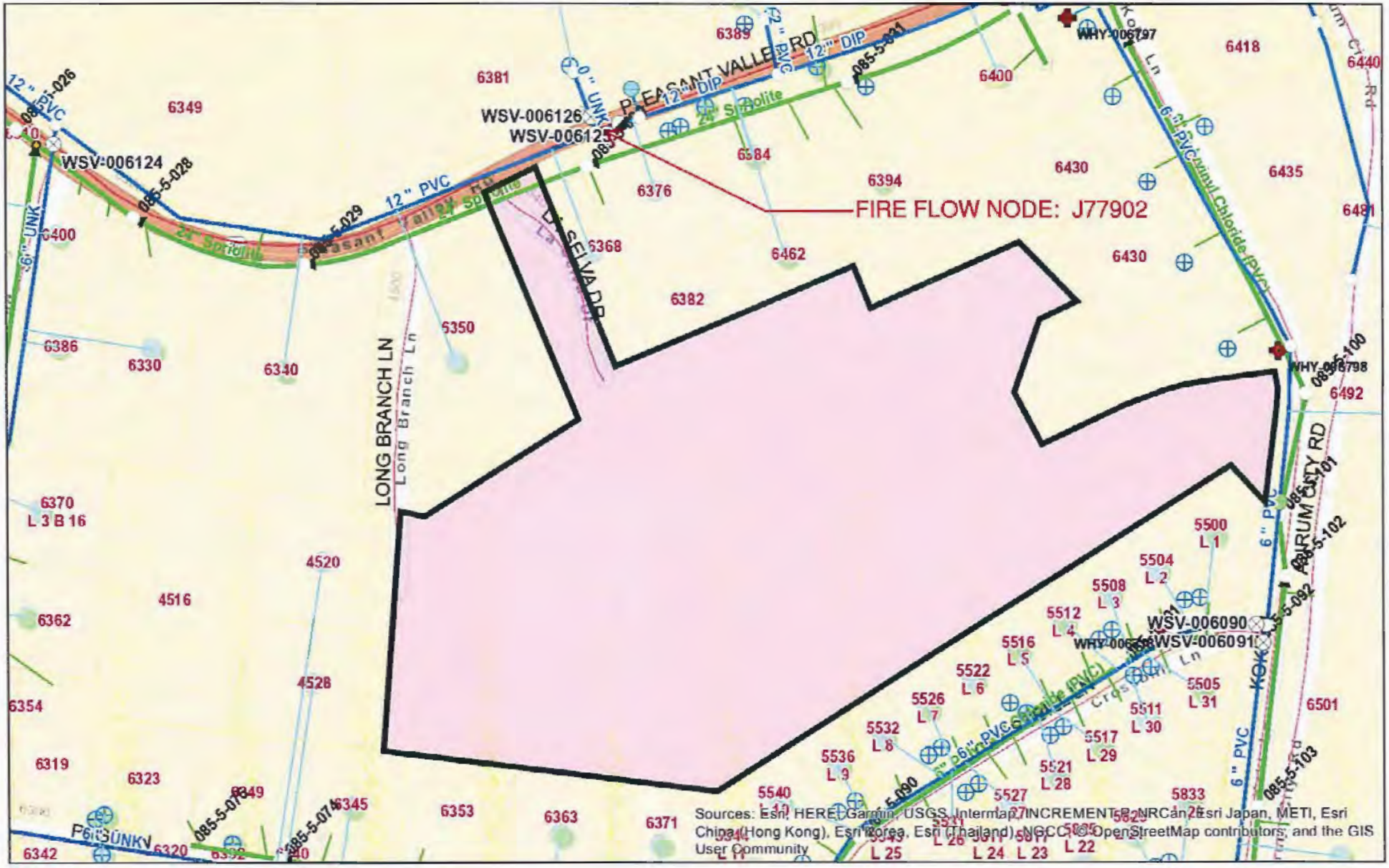
Rommel Pabalinas – Principal Planner
El Dorado County Development Services Department
Via email - rommel.pabalinas@edcgov.us

Mike Nihan – Principal Planner
El Dorado County Development Services Department
Via email – michael.nihan@edcgov.us

Kenneth Earle – Deputy Chief / Fire Marshal
Diamond Springs / El Dorado Fire Department
Via email - kearle@diamondfire.org

Roger Lewis
Via email- re.lewis@comcast.net

ArcGIS Web Map



Date: August 8, 2018

Project: El Dorado Senior Resort
Annexation

Scale: NTS

APN: 331-221-30.32

SYCAMORE ENVIRONMENTAL CONSULTANTS, INC.
6355 Riverside Blvd., Suite C, Sacramento, CA 95831
916/ 427-0703 Fax 916/ 427-2175

18 September 2018

El Dorado Senior Housing, LLC
854 Diablo Road
Danville, CA 94526
Contact: Mr. Jim Davies

Email: j854davies@att.net

Subject: Air Quality Analysis for the El Dorado Senior Resort Project, El Dorado County, CA.

Dear Mr. Davies:

Sycamore Environmental evaluated potential air quality impacts resulting from the proposed mixed senior residential-commercial development on Assessor's Parcel Numbers (APN) 331-221-30 and -32 in El Dorado County, CA. The air quality evaluation documented in this letter will provide the County with the information needed to process your application pursuant to the California Environmental Quality Act (CEQA). A summary of the evaluation is provided below.

Attachment A includes a Greenhouse Gas Emissions Evaluation.

Executive Summary

The quantitative analysis included an evaluation of reactive organic gases (ROG), nitrogen oxides (NO_x), carbon monoxide (CO), particulate matter 10 microns and smaller (PM10), and other pollutants including toxic air contaminants (TAC) such as naturally occurring asbestos (NOA) for the construction and operation of a mixed senior residential-commercial development. Air quality impacts resulting from the project independently and cumulatively were evaluated as less than significant. See Attachment A for the Project Greenhouse Gas Emissions Evaluation results.

The Project is required to implement and comply with the following:

- The Contractor will adhere to all applicable El Dorado County AQMD rules, including but not necessarily limited to Rules 202, 205, 207, 215, 223, 223-1, 223-2, 224, and 233. Copies of these rules are available from the El Dorado County AQMD website (https://www.arb.ca.gov/drdb/ed/cur.htm). The Contractor shall prepare a Fugitive Dust Control Plan for review and approval by the El Dorado County Air Pollution Control Officer pursuant to Rule 223-1 Fugitive Dust – Construction.
- Architectural paint and coatings will comply with the VOC limits per 2013 California Green Building Standards Code (CalGreen) requirements and California ARB Suggested Control Measure for Architectural Coatings.

- During construction, all self-propelled diesel-fueled engines greater than 25 horsepower will be in compliance with the California Air Resources Board (CARB) Regulation for In-Use Off-Road Diesel Fueled Fleets (§ 2449 et al, title 13, article 4.8, chapter 9,California Code of Regulations (CCR)). The full text of the regulation can be found at CARB's website here: http://www.arb.ca.gov/msprog/ordiesel/ordiesel.htm. An applicability flow chart can be found here: http://www.arb.ca.gov/msprog/ordiesel/faq/applicability_flow_chart.pdf. Questions on applicability should be directed to CARB at 1-866-634-3735. CARB is responsible for enforcement of this regulation.
- All portable combustion engine equipment with a rating of 50 horsepower or greater will be under permit from the California Air Resources Board (CARB). A copy of the current portable equipment permit will be with said equipment. Prior to initiation of construction activities the applicant will provide a complete list of heavy-duty diesel-fueled equipment to be used on this project, which includes the make, model, year of equipment, and daily hours of operations of each piece of equipment.

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Page 13…… Cumulative Impacts Analysis
Page 15…… Conclusions

Attachment A Greenhouse Gas Emissions Evaluation
Attachment B Site Plan, Revised: 15 August 2018
Attachment C CalEEMod Version 2016.3.2 Results (AQ)

Introduction

The Project involves the construction of a new mixed use senior residential and commercial facility. The approximate size and land use type are listed in Table 1. The exact square footage of each building will be identified during the design phase of the project. The El Dorado Senior Resort Project, Site Plan Sheet A1.0, revised 15 August 2018 (Attachment B) shows the general project layout. Note: The parking portion of the residential use is not included below because CalEEMod calculates parking impacts as part of the residential land use. The parking portion of the commercial use is included in the table below because CalEEMod does not include parking in its commercial land use calculations.

Table 1. Proposed building use and area.

Building Type	**Proposed Use**	**Gross Square Feet**
Three story residential	Assisted Living/Memory Care Facility 74 Units, Three-story building includes 5 2-bed memory care studios, 3 1-bed memory care studios, 10 assisted living studios, and 51 1-bdrm units, and 5 2-bdrm units	79,300 SF
Three story residential	Senior Apartments: 64 Units, 76,000 SF living area, w/ 26,500 SF underground garage. Three-story building includes 25 1-bdrm units and 39 2-bdrm units	76,000 SF
Single Family Residential	9 - 1,500 SF, single story, detached homes w/ double garages	13,500 SF
Two-story commercial	Upper floor general commercial, lower level is restaurant.	5,000 SF
Two-story commercial	General commercial	2,500 SF
Recreation	Club house	3,250 SF
Commercial Parking	Parking (36 spaces)	14,400 SF

Regulatory Setting: California Environmental Quality Act (CEQA)

CEQA requires that all state and local government agencies consider the environmental consequences of projects over which they have discretionary authority before acting on those projects. If the lead agency finds substantial evidence that any aspect of the project, either individually or cumulatively, may have a significant effect on the environment, CEQA mandates that the project implement feasible mitigation measures or alternatives to avoid or reduce significant adverse effects on the environment.

Significance Criteria

The El Dorado County Air Quality Management District (AQMD) has established significance criteria for projects in El Dorado County that are subject to CEQA. These significance criteria are presented in the AQMD's Guide to Air Quality Assessment (CEQA Guide, First Edition, February 2002). The AQMD has established two general categories of significance criteria: qualitative and quantitative. The AQMD recommends supporting air quality impact conclusions with substantial evidence, preferably with explicit, quantitative analyses wherever possible.

Qualitative Significance Criteria

1. CEQA Guidelines Appendix G environmental checklist criteria;
2. Land use conflicts and exposure of sensitive receptors;
3. Compliance with AQMD rules and regulations;
4. Compliance with U.S. EPA conformity regulations; and
5. Odors

Quantitative Significance Criteria

1. Reactive organic gases (ROG) and nitrogen oxides (NO_x), ozone precursors;
2. Other state and national criteria pollutants, including CO, PM10, SO_2, NO_2, sulfates, lead, and hydrogen sulfide;
3. Visibility;
4. Toxic Air Contaminants; and
5. Cumulative impacts, including impacts resulting from emissions of greenhouse gases.

This report addresses each of the above qualitative and quantitative significance criteria for the construction and operational phases of the project, in accordance with the procedures described in the AQMD's CEQA Guide. Greenhouse Gases (GHGs) are addressed in Attachment A.

Environmental Setting

The Project is in the community of Diamond Springs in the foothills of the Sierra Nevada Mountains. The elevation ranges from approximately 1,660 to 1,710 feet. Most of the site is characterized by oak woodland, with a small patch of California annual grassland. The area surrounding the site consists of areas developed to residential and commercial uses, and undeveloped land with similar vegetation. The Project occurs within the

Mountain Counties Air Basin, which covers an area of roughly 11,000 square miles along the Sierra Nevada mountain range. The Project site is immediately south of Pleasant Valley Road (State Highway 49).

The Project is located in the El Dorado/ Diamond Springs Community Region. Community Regions "define those areas which are appropriate for the highest intensity of self-sustaining compact urban-type development or suburban-type development within the County" (El Dorado County General Plan 2004). The existing El Dorado General Plan land use designation and zoning of the parcel are shown in Table 2.

Table 2. General Plan land use designations and zoning of the project parcel.

APN	GP Land Use Designations	Zoning
331-221-32	Multi-Family Residential (MFR)	Multi-Unit Residential (RM) Design Control (DC)
331-221-30	Multi-Family Residential (MFR)/ Commercial	Multi-Unit Residential (RM), Commercial, Main Street (CM) (RM) Design Control (DC)

Methods

The El Dorado County AQMD's CEQA Guide was used to evaluate the proposed project. Other resources used in the analysis include the AQMD's rules for fugitive dust (Rules 223, 223-1); El Dorado County ordinances for projects in areas that may have naturally occurring asbestos (NOA); California Department of Mines and Geology NOA data; and U.S. Environmental Protection Agency (EPA) and California Air Resources Board (CARB) toxic air contaminants data. California Emissions Estimator Model CalEEMod (Version 2016.3.2) was used to model air pollution emissions resulting from the project.

The various construction and operational emissions default values provided by CalEEMod were used unless stated otherwise. Construction emissions were computed for an approximate 300 work day construction period occurring in 2019-2020. The construction phase duration (schedule) was derived by the model. Construction phases in CalEEMod include demolition, site preparation, grading, building construction, paving, and architectural coating. Construction of the proposed Project will not require demolition, and this phase was removed. Based on a review of the safety data sheets (SDS)/ technical data sheets (TDS) for multiple interior and exterior architectural coatings from Kelley Moore and Sherwin-Williams, the interior architectural coating VOC value was changed to 5 g/L and exterior coating VOC value was changed to 50 g/L. Project grading will require approximately 1,900 CY of soil export and no import. The Project does not include the use of hearth features (wood or gas stoves or fireplaces). Operational emissions were assumed to start in 2021.

Qualitative Analysis

The AQMD's CEQA Guide identifies that the CEQA Guidelines Appendix G environmental checklist items, land use conflicts and exposure of sensitive receptors; compliance with AQMD rules and regulations; compliance with U.S. EPA conformity regulations; and odors as topics to be addressed qualitatively. For some of these categories, additional quantitative analyses refine the significance conclusions.

Land Use Conflicts and Exposure of Sensitive Receptors

Locating a project with air pollutant emissions near existing sensitive receptors or locating a new sensitive receptor near an existing source of air pollutants could result in adverse air quality impacts to sensitive receptors. The AQMD's CEQA Guide lists the following land use conflicts that should be avoided (p. 3-2):

- A sensitive receptor in close proximity to a congested intersection or roadway with high levels of emissions from motor vehicles. High concentrations of carbon monoxide or toxic air contaminants are the most common concerns.
- A sensitive receptor close to a source of toxic air contaminants or to a potential source of accidental releases of hazardous materials.
- A sensitive receptor close to a source of odorous emissions. Although odors generally do not pose a health risk, they can be quite unpleasant and often lead to citizen complaints to the District and to local governments.
- A sensitive receptor close to a source of high levels of nuisance dust emissions.

The CEQA Guide defines sensitive receptors as facilities that house or attract children, the elderly, people with illnesses, or others who are especially sensitive to the effects of air pollutants. Hospitals, schools, and convalescent facilities are examples of sensitive receptors (CEQA Guide page 3-2). The following schools, preschools, and health facilities are located within 2 mi of the project site:

Health Facilities

Sierra Orthopedic & Athletic (1.84 mi northeast)

Gold Country Retirement Center (1.84 mi northeast)

El Dorado Community Health Centers (1.84 mi northeast)

Ziese Family Dentistry (immediately north of the Project site)

Schools (including preschools and daycares)

Cedar Springs Waldorf School (1.4 mi northwest)

Herbert C. Green Middle School (1.9 miles northeast)

Independence Continuation High School (1.22 mi northeast)

Union Mine High School (0.25 mi south)

The Project is not located in close proximity to a congested intersection or roadway with high levels of emissions from motor vehicles. Diesel PM emissions from vehicle traffic on Pleasant Valley Road (Hwy 49) north of the project site are discussed in more detail below in the Toxic Air Contaminants section.

The Project would not generate appreciable amounts of toxic air contaminants or appreciable hazardous materials.

The Project would not result in significant odorous emissions.

The Project could result in dust emissions during construction. The El Dorado AQMD rules and regulations do not allow dust to leave the project site during construction. AQMD Rule 223-1 requires the applicant to complete a Fugitive Dust Control Plan and submit the plan for approval prior to any ground-disturbing activities. Implementation of AQMD rules and regulations will protect sensitive receptors from construction-related dust emissions.

The property is located in the El Dorado/ Diamond Springs Community Region, which is designated for high-density urban and suburban build-out. Project compliance to the El Dorado County AQMD rules and regulations and implementation of the recommendations in this report, will ensure the project does not have a significant impact on any sensitive receptors.

Compliance with El Dorado County AQMD Rules and Regulations

The CEQA Guide states that "the District considers any proposed project that does not demonstrate compliance with all applicable District rules and regulations, and its permitting requirements in particular, as one that has a significant impact on air quality" (p. 3-3).

Figure 1.1 of the CEQA Guide identifies types of facilities that require permits from the El Dorado County AQMD. The proposed residential and commercial uses do not appear to require an Authority to Construct permit or a Permit to Operate.

The following El Dorado County AQMD rules apply during the construction of the Project:

- **Rule 202 (Visible Emissions):** Prohibits discharge into the atmosphere from any single source of emission whatsoever any air contaminant for a period or periods aggregating more than three (3) minutes in any one (1) hour which is a) As dark or darker in shade as that designated as No. 1 on the Ringlemann chart, as published by the United States Bureau of Mines, or b) Of such opacity as to obscure an observer's view to a degree equal to or greater than does smoke described in subsection (A) of this section.
- **Rule 205 (Nuisance):** Prohibits the discharge of air containments which cause injury, detriment, nuisance, or annoyance.
- **Rule 207 (Particulate Matter):** A person shall not release or discharge into the atmosphere from any source or single processing unit, exclusive of sources emitting combustion contaminants only, particulate matter emissions in excess of 0.1 grains per cubic foot of dry exhaust gas at standard conditions.
- **Rule 215 (Architectural Coatings):** Defines the quantities of reactive organic compounds permitted for use in new construction.
- **Rule 223 (Fugitive Dust):** The purpose of this rule is to reduce the amount of particulate matter entrained in the ambient air as a result of anthropogenic (man-made) fugitive dust sources by requiring actions to prevent, reduce or mitigate fugitive dust emissions.
- **Rule 223-1 (Fugitive Dust – Construction):** Requires a Fugitive Dust Control Plan be prepared and submitted to the El Dorado County AQMD prior to ground disturbing activities. Pursuant to Rule 610, the El Dorado County AQMD charges a fee to review the Fugitive Dust Control Plan required by Rule 223-1.
- **Rule 223-2 (Fugitive Dust – Asbestos Hazard Mitigation):** The purpose of this Rule is to reduce the amount of asbestos particulate matter entrained in the ambient air as a result of any construction or construction related activities, that disturbs or potentially disturbs naturally occurring asbestos by requiring actions to prevent, reduce or mitigate asbestos emissions.

- **Rule 224 (Cutback and Emulsified Asphalt Paving Materials):** Limits emissions of ROGs from the use of cutback and emulsified asphalt paving materials, paving, and maintenance operations.
- **Rule 233 (Stationary Internal Combustion Engines):** Limits emissions of NOx and CO from stationary internal combustion engines. (This rule applies to any stationary internal combustion engine rated at more than 50 brake horsepower, operated on any gaseous fuel or liquid fuel, including liquid petroleum gas (LPG), gasoline, or diesel fuel.)

Compliance with U.S. EPA Conformity Regulations

In November 1993, EPA promulgated two sets of regulations to implement Section 176(c) of the Clean Air Act:

- On November 24, 1993, EPA promulgated the Transportation Conformity regulations, which apply to highways and mass transit. These regulations establish the criteria and procedures for determining whether transportation plans, programs, and projects funded under title 23 U.S.C. or the Federal Transit Act conform with the State Implementation Plan (SIP) (58 FR 62188).

- On November 30, 1993 EPA promulgated a second set of regulations, known as the General Conformity regulations, which apply to all other federal actions. These regulations ensured that other federal actions also conformed to the SIPs (58 FR 63214).

General Conformity ensures that the actions taken by federal agencies do not interfere with a state's plans to attain and maintain national standards for air quality. Established under the Clean Air Act (section 176(c)(4)), the General Conformity rule plays an important role in helping states and tribes improve air quality in those areas that do not meet the National Ambient Air Quality Standards (NAAQS). Under the General Conformity rule, federal agencies must work with state, tribal and local governments in a nonattainment or maintenance area to ensure that federal actions conform to the air quality plans established in the applicable state or tribal implementation plan.

Federally funded projects or projects with federal discretionary permits must demonstrate conformity with the State Implementation Plan for achieving and maintaining the federal ambient air quality standards. The Corps has already evaluated the Nationwide program for conformity pursuant to regulations implementing Section 176(c) of the Clean Air Act and determined that the activities authorized by Nationwide permits will not exceed *de minimis* levels of direct emissions of a criteria pollutant or its precursors and are exempted by 40 CFR 93.153. Any later indirect emissions resulting from Corps-permitted actions are generally not within the Corps' continuing program responsibility and generally cannot be practicably controlled by the Corps. For these reasons, a conformity determination for future indirect emissions is not required for the Nationwide permit program.

Odors

The CEQA Guide describes the standard for determining whether a project would have potentially significant impacts resulting from odors that

> *cause detriment, nuisance, or annoyance to any considerable number of persons or to the public, or which may endanger the comfort, repose, health, or safety of any such person or the public, or*

which may cause, or have a natural tendency to cause, injury or damage to business or property (page 3-3).

Table 3.1 of the CEQA Guide lists common types of facilities that are known to produce odors that potentially cause detriment, nuisance, or annoyance to the public. Proposed project uses are not listed as odor generating facilities. The proposed development would not result in significant impacts resulting from odors.

Quantitative Analysis

Project Construction

Common construction activities include site preparation, earthmoving and general construction. Site preparation includes activities such as general land clearing and grubbing. Earthmoving activities include cut and fill operations, trenching, soil compaction, and grading. General construction includes adding improvements such as roadway surfaces, utilities, structures, and facilities.

Emissions generated from these common construction activities include

- combustion emissions (ROG, NO_x, CO, SO_x, PM10) from mobile heavy-duty diesel- and gasoline-powered equipment, portable auxiliary equipment, and worker commute trips;
- combustion emissions from heavy-duty diesel-fueled equipment containing diesel particulate matter (Diesel PM), which has been identified as a potential health risk;
- fugitive dust (PM10) from soil disturbance or demolition; and
- evaporative emissions (ROG) from asphalt paving and architectural coating applications.

Demolition and earth disturbance may also result in airborne entrainment of asbestos, a toxic air contaminant, in areas where there are naturally occurring surface deposits of ultramafic rock. Potential impacts resulting from soil disturbance of NOA are discussed under the Evaluation of Toxic Air Contaminants section below. The pollutants CO, PM10, SO_2, and NO_2 are evaluated under the project operations section below.

CalEEMod v2016.3.2 was used to model ROG and NO_x emissions for the construction phase of the project (Table 3). Projects that have individual ROG and NO_x construction emissions of 82 lbs per day or a combined ROG and NO_x emissions below 164 lbs/ day are considered not significant per section 4.2.1 of the CEQA Guide. The construction emissions of ROG and NO_x are less than the individual and combined thresholds. Impacts from ROG and NO_x emissions for the construction of the proposed Project are less than significant.

Table 3. Daily ROG and NO_x emissions during project construction.

	Winter[1]			Summer[1]		
Source	**ROG**	**NO_x**	**ROG + NO_x**	**ROG**	**NO_x**	**ROG + NO_x**
2019	4.57	50.13	**54.70**	4.57	49.96	**54.53**
2020	18.44	22.10	**40.54**	18.44	21.97	**40.41**

[1]Units for all values are pounds per day.

The El Dorado County AQMD determined that if ROG and NOx emissions are less than significant then exhaust emissions of CO and PM10 from construction equipment, and exhaust emissions of all constituents from worker commute vehicles, is also less than significant. With adherence to Rule 223, implementation of the Fugitive Dust Control Plan required by Rule 223-1, and Rule 223.2 PM10 emissions would have a less than significant impact on air quality during construction.

Project Operation

State and National Criteria Pollutant Emissions

Under the mandate of the Clean Air Act, the federal EPA establishes National Ambient Air Quality Standards (NAAQS) for air pollutants considered harmful to public health and the environment. Currently, the EPA has set standards for seven air pollutants. These "criteria" pollutants and their associated NAAQS are listed in Table 5. Areas exceeding an individual NAAQS are labeled by EPA as nonattainment for that pollutant. The attainment status of the Mountain Counties Air Basin portion of El Dorado County is listed in Table 4.

The California Air Resources Board (CARB), under the mandate of the California Clean Air Act, has adopted California Ambient Air Quality Standards (CAAQS), which address the national criteria pollutants discussed above as well as other pollutants not covered by the federal standards. The CAAQS are generally more stringent than the corresponding NAAQS. The CAAQS are listed alongside the NAAQS in Table 5 below. As with the NAAQS, areas exceeding an individual CAAQS are labeled by CARB as nonattainment for that pollutant.

Table 4. Attainment Status for Mountain Counties Air Basin portion of El Dorado County

Pollutant	National Designation	State Designation
Ozone	Nonattainment (8 hr.)	Nonattainment
PM_{10}	Unclassified	Nonattainment
$PM_{2.5}$	Nonattainment	Unclassified
CO	Unclassified/ Attainment	Unclassified
NO_2	Unclassified/ Attainment	Attainment
SO_2	Unclassified	Attainment
Sulfates	NA	Attainment
Lead	Unclassified/ Attainment	Attainment
Hydrogen Sulfide	NA	Unclassified
Visibility Reducing Particles	NA	Unclassified

Because ozone is not usually emitted directly, but rather through ozone precursors such as ROG and NO_x, compliance with the AAQS for ozone is completed indirectly through a mass emissions analysis of ROG and NO_x. For all other criteria pollutants, project emission concentrations are evaluated by comparison against the applicable national and state ambient air quality standards (AAQS, Table 5).

ROG and NO_x Emissions

The AQMD's significance threshold for ROG and NOx is 82 pounds per day for each ROG and NOx. The Mountain Counties Air Basin was selected as the default CalEEMod file to be used as the base for the project. CEQA requires analysis of impacts from all reasonably foreseeable elements of a proposed project. The air pollutant emissions model must include a hypothetical build-out scenario on these parcels. Generally, a maximum build-out scenario is used so as not to underestimate the total potential emissions resulting from the project. Data assumptions used to model potential air quality impacts were based on the following:

- El Dorado Senior Resort Project, Site Plan Sheet A1.0, revised 15 August 2018
- Various emails with Applicant

Table 5. California and National Ambient Air Quality Standards (AAQS)

Pollutant	Averaging Time	California AAQS	National AAQS (Primary)	National AAQS (Secondary)
Ozone	1 Hour	0.09 ppm (180 µg/m^3)	--	--
	8 Hour	0.07 ppm (137 µg/ m^3)	0.070 ppm (137 µg/ m^3)	Same as Primary
Respirable Particulate Matter (PM10)	24 Hour	50 µg/ m^3	150 µg/ m^3	Same as Primary
	Ann. Arith. Mean	20 µg/ m^3	--	--
Fine Particulate Matter (PM2.5)	24 Hour	--	35 µg/ m^3	Same as Primary
	Ann. Arith. Mean	12 µg/ m^3	12.0 µg/ m^3	15.0 µg/ m^3
Carbon Monoxide (CO)	1 Hour	20 ppm (23 mg/ m^3)	35 ppm (40 mg/ m^3)	--
	8 Hour	9 ppm (10 mg/ m^3)	9 ppm (10 mg/ m^3)	--
	8 Hour (Lake Tahoe)	6 ppm (7 mg/ m^3)	--	--
Nitrogen Dioxide (NO_2)	1 Hour	0.18 ppm (339 µg/ m^3)	100 ppb (188 µg/m^3)	--
	Ann. Arith. Mean	0.03 ppm (57 µg/ m^3)	53 ppb (100 µg/ m^3)	Same as Primary
Sulfur Dioxide (SO_2)	1 Hour	0.25 ppm (655 µg/ m^3)	75 ppb (196 µg/m^3)	--
	3 Hour	--	--	0.5 ppm (1300 µg/m^3)
	24 Hour	0.04 ppm (105 µg/ m^3)	0.14 ppm for (certain areas)	--
	Ann. Arith. Mean	--	0.030 ppm (certain areas)	--
Lead	30-Day Avg.	1.5 µg/ m^3	--	
	Calendar Quarter	--	1.5 µg/ m^3 (certain areas)	Same as Primary
	Rolling 3-Month Avg.	--	0.15 µg/ m^3	Same as Primary
Visibility Reducing Particles	8 Hour	Ten miles visibility	No National Standards	
Sulfates	24 Hour	25 µg/ m^3		
Hydrogen Sulfide	1 Hour	0.03 ppm (42 µg/ m^3)		
Vinyl Chloride	24 Hour	0.01 ppm (26 µg/ m^3)		

The results of the air quality modeling compared with the AQMD's thresholds of significance are in Table 6. Based on the CalEEMod modeling, operation of the proposed development would not have significant impacts resulting from ROG and NO_x emissions. The CalEEMod reports (abbreviated to include only relevant report pages) for this model are included in Attachment C.

Table 6. Daily ROG and NO_x emissions during project operation, including emissions from future build-out.

	Winter[1]		Summer[1]	
Source	**ROG**	**NO_x**	**ROG**	**NO_x**
Operational emissions	8.12	8.63	8.64	7.99
Significance threshold	82	82	82	82
Significant emissions	**NA**	**NA**	**NA**	**NA**

[1]Units for all values are pounds per day.

Other Criteria Pollutant Emissions

The significance of CO, NO_2, PM $_{2.5}$, PM_{10}, and SO_2 concentrations are evaluated by comparison against the applicable national and state ambient air quality standards (AAQS). The El Dorado County AQMD considers emissions of CO, PM10, and other criteria pollutants from project operation, which are subject to the AAQS significance criteria, significant if:

1. the project's contribution by itself would cause a violation of the AAQS; or
2. the project's contribution plus the background level would result in a violation of the AAQS, and either
    a. a sensitive receptor is located within a quarter-mile of the project, or
    b. the project's contribution exceeds five percent of the AAQS.

In accordance with Section 6.3.1 (Project Screening) of the AQMD's CEQA Guide, Development projects of the type and size that fall below the significance thresholds in Table 5.2 in Chapter 5 for ROG and NOx are also considered to be insignificant for CO, NO2, PM10, and SO2. The Project (operational) is below the 82 lb per day threshold values for ROG and NOx (Table 6). The Project also falls below the CEQA Guide significance cut-points presented in Table 5.2, Chapter 5, for ROG and NOx and is therefore also considered to be insignificant for CO emissions. Therefore, operational emissions of CO, NO, SO2, and PM10 are not considered significant. The proposed development does not result in any significant emissions concentrations and no mitigation is required.

The PM2.5 AAQS were not in effect when the AQMD's CEQA Guide was published. Therefore, the CEQA Guide gives no guidance on analysis of PM2.5. PM2.5 is primarily generated by vehicle trips on unpaved roads. Thus, emissions of PM2.5 are likely to be associated with the construction-phase of a project. The Project will be required to prepare a dust control plan. The proposed Project includes paving all roads constructed. Emissions of PM2.5 during the operational phase will be less than significant.

The El Dorado County AQMD considers lead, sulfates, and H_2S less than significant except for industrial sources such as foundries, acid plants, and paper mills (CEQA Guide, page 6-2). The proposed Project is a mixed residential-commercial development. Therefore, no impact will occur from lead, sulfates, and H_2S.

The El Dorado County AQMD assumes that visibility impacts from development projects in the Mountain Counties Air Basin portion of the county are not significant (CEQA Guide, page 6-3). Visibility impacts are controlled through state and national regulatory programs governing vehicle emissions, and through mitigation required for ozone precursors and particulate matter for other development projects throughout the County. Therefore, the development will not result in any significant visibility impacts.

Toxic Air Contaminants

Toxic air contaminants (TAC) are pollutants that pose a present or potential hazard to human health. TACs are classified as either carcinogenic or noncarcinogenic. The state and federal governments regulate TACs through statutes and regulations that require maximum or best available technologies be incorporated in the source of the pollutants in order to limit emissions. For example, dry cleaning businesses are regulated in their handling and use of perchloroethylene. The California Air Resources Board (CARB) identified asbestos, including naturally occurring asbestiforms, as a carcinogenic TAC in 1986.

The property is not located in an area known to have naturally occurring asbestos (NOA), within a quarter mile of a known location of NOA, in an area more likely to contain NOA, or within a quarter mile of an area more likely to contain NOA (El Dorado County Asbestos Review Areas, Western Slope, County of El Dorado, State of California, July 2005). Therefore, an Asbestos Hazard Dust Mitigation Plan is not required. *Note: If NOA is discovered on-site during the course of construction, the El Dorado County AQMD must be notified and an Asbestos Hazard Dust Mitigation Plan must be prepared and implemented. The Plan would include Best Management Practices identified in El Dorado County AQMD District Rule 223-2.* Construction of the project will have no air quality impacts resulting from NOA.

In 1998, the CARB identified Diesel PM as a TAC. In the Air Quality and Land Use Handbook: A Community Health Perspective (CARB April 2005), CARB identified land uses that have the potential to generate significant amounts of Diesel PM. These land uses include freeways, urban roads with 100,000 vehicles/day, rural roads with 50,000 vehicles/day, and distribution centers. CARB recommends avoiding siting new sensitive land uses within 500 feet of these transportation corridors or within 1,000 ft of distribution centers. No distribution centers occur within 1,000 ft of the Project site. Pleasant Valley Road (Hwy 49), located immediately north of and adjacent to the Project site, is a classified as a minor arterial road and in 2017 had an ADT of 18,022, well under the 100,000 and 50,000 vehicles/day cutoff identified by CARB. The Project will not result in the exposure of residents to significant health hazards from Diesel PM.

Cumulative Impacts Analysis

El Dorado County AQMD's primary criterion for determining whether a project has significant cumulative impacts is based on the project's consistency with an approved plan or mitigation program of District-wide or regional application for pollutants emitted by the project (CEQA Guide, page 8-1).

ROG and NO_x

The Project's ROG and NOx emission estimates are below the quantitative significance thresholds and therefore Project impacts from ROG and NOx emission are considered less than significant. The El Dorado County AQMD considers projects to be consistent with the adopted Air Quality Attainment Plan (AQAPs) if the following conditions are met (CEQA Guide page 8-2):

1. The project does not require a change in the existing land use designation (e.g., a general plan amendment or rezone) and projected emissions of ROG and NO_x from the proposed project are equal to or less than the emissions anticipated for the site if developed under the existing land use designation;
2. The project does not exceed the "project alone" significance criteria;
3. The Applicant agrees to include applicable emission reduction measures; and
4. The bid specifications and contract will stipulate that the contractor shall comply with all applicable district rules and regulations during construction of the project.

The Project does not propose to change the current land use or zoning designations. The Project's operational ROG and NOx emission estimates are below the quantitative significance threshold of 82 lbs per day. The bid specifications and construction contract will stipulate compliance with applicable El Dorado County AQMD Rules, including the preparation and implementation of a Fugitive Dust Control Plan. The proposed Project is consistent with the adopted AQAP and therefore potential air quality impacts from ROG and NOx emission are less than cumulatively considerable.

Other Pollutants

No applicable air quality plan exists in El Dorado County for pollutants other than ROG and NO_x. Therefore, the AQMD applies pollutant-specific criteria for determining whether a project has cumulatively considerable emissions of these pollutants.

CO is an attainment pollutant in El Dorado County, and local CO concentrations are expected to decline even further in the future as more stringent CO standards for motor vehicles take effect (CEQA Guide, page 8-2). The El Dorado County AQMD does not consider CO to be an area-wide or regional pollutant that is likely to have cumulative effects (*ibid*). Emissions from the proposed Project are less than significant. The El Dorado County AQMD considers cumulative contributions of CO from projects with less than significant operational emissions of CO to be less than considerable.

The Mountain Counties Air Basin portion of El Dorado County is nonattainment for the state 24-hour PM10 standard, which dictates the use of a relatively sensitive criterion for identifying cumulative effects on PM10 ambient concentrations. PM10 directly emitted from a project can have area-wide impacts and can be cumulatively significant even if not significant on a project-alone basis (CEQA Guide, page 8-3). The County is in attainment for the SO_2 and NO_2 ambient air quality standards, but SO_2 and NO_2 can also contribute to area-wide PM10 impacts through their transformation into sulfate and nitrate particulate aerosols (CEQA Guide, page 8-3). Project contribution of PM10, SO_2, and NO_2 are not evaluated as considerable for the following reasons (CEQA Guide, page 8-3):

1. the proposed development would not exceed the "project alone" significance criteria for these pollutants;
2. the bid specifications and contract will stipulate that the contractor shall comply with all applicable district rules and regulations during construction of the project; and
3. the Project ROG and NOx emission are less than cumulatively considerable.

TACs are typically localized and do not occur region-wide. Therefore, the El Dorado County AQMD considers project contribution of TAC emissions cumulatively significant if a large development project occurs on

contiguous parcels and each one is emitting TAC (CEQA Guide, 8-4) concurrently. The proposed Project is not contiguous with another large, concurrent development project and TAC emissions would be negligible. Therefore, the Project would not have a cumulatively significant impact resulting from emissions of TACs.

Conclusions

The quantitative analysis included an evaluation of ROG, NO_x, CO, PM10, and other pollutants including TACs. The emissions were evaluated for the construction and operation of a commercial development on Project parcels. Air quality impacts resulting from the Project independently and cumulatively were evaluated as less than significant.

The Project is required to implement and comply with the following:

- The Contractor will adhere to all applicable El Dorado County AQMD rules, including but not necessarily limited to Rules 202, 205, 207, 215, 223, 223-1, 223-2, 224, and 233. Copies of these rules are available from the El Dorado County AQMD website (https://www.arb.ca.gov/drdb/ed/cur.htm). The Contractor shall prepare a Fugitive Dust Control Plan for review and approval by the El Dorado County Air Pollution Control Officer pursuant to Rule 223-1 Fugitive Dust – Construction.
- Architectural paint and coatings will comply with the VOC limits per 2013 California Green Building Standards Code (CalGreen) requirements and California ARB Suggested Control Measure for Architectural Coatings.
- During construction, all self-propelled diesel-fueled engines greater than 25 horsepower will be in compliance with the California Air Resources Board (CARB) Regulation for In-Use Off-Road Diesel Fueled Fleets (§ 2449 et al, title 13, article 4.8, chapter 9,California Code of Regulations (CCR)). The full text of the regulation can be found at CARB's website here: http://www.arb.ca.gov/msprog/ordiesel/ordiesel.htm. An applicability flow chart can be found here: http://www.arb.ca.gov/msprog/ordiesel/faq/applicability_flow_chart.pdf. Questions on applicability should be directed to ARB at 1-866-634-3735. CARB is responsible for enforcement of this regulation.
- All portable combustion engine equipment with a rating of 50 horsepower or greater will be under permit from the California Air Resources Board (CARB). A copy of the current portable equipment permit will be with said equipment. Prior to initiation of construction activities the applicant will provide a complete list of heavy-duty diesel-fueled equipment to be used on this project, which includes the make, model, year of equipment, and daily hours of operations of each piece of equipment.

Cordially,

Jeff Little
Vice President

Enclosures: Attachment A, Greenhouse Gas Emissions Evaluation
Attachment B, Site Plan, Revised: 15 August 2018
Attachment C, CalEEMod Version 2016.3.2 Results (AQ)

ATTACHMENT A

Greenhouse Gas Emissions Evaluation

El Dorado Senior Resort Project

Introduction

Sycamore Environmental has evaluated potential greenhouse gas (GHG) emissions and potential impacts resulting from the proposed mixed senior residential-commercial development on APNs 331-221-30 and -32 in El Dorado County. The GHG evaluation documented in this letter will provide the County with the information needed to prepare the Air Quality section of a California Environmental Quality Act (CEQA) document for the proposed Project.

The Project involves the construction of a new mixed used residential and commercial retirement facility. The approximate size and land use type are listed in Table 1. The exact square footage of each building will be identified during the design phase of the project. The El Dorado Senior Resort Project, Site Plan Sheet A1.0, revised 15 August 2018 (Attachment B) shows the general project layout. *Note:* The parking portion of the residential use is not included below because CalEEMod calculates parking impacts as part of the residential land use. The parking portion of the commercial use is included in the table below because CalEEMod does not include parking in its commercial land use calculations.

Table 1. Proposed building use and area.

Building Type	**Proposed Use**	**Gross Square Feet**
Three story residential	Assisted Living/Memory Care Facility 74 Units, Three-story building includes 5 2-bed memory care studios, 3 1-bed memory care studios, 10 assisted living studios, and 51 1-bdrm units, and 5 2-bdrm units	79,300 SF
Three story residential	Senior Apartments: 64 Units, 76,000 SF living area, w/ 26,500 SF underground garage. Three-story building includes 25 1-bdrm units and 39 2-bdrm units	76,000 SF
Single Family Residential	9 - 1,500 SF, single story, detached homes w/ double garages	13,500 SF
Two-story commercial	Upper floor general commercial, lower level is restaurant.	5,000 SF
Two-story commercial	General commercial	2,500 SF
Recreation	Club house	3,250 SF
Commercial Parking	Parking (36 spaces)	14,400 SF

The Project site is immediately south of Pleasant Valley Road (State Highway 49) in western El Dorado County in the foothills of the Sierra Nevada. The Project site is bordered by commercial and residential development to the north, residential development to the east, south, and west. The elevation ranges from approximately 1,660 to 1,710 feet. The Project occurs within the

Mountain Counties Air Basin, which covers an area of roughly 11,000 square miles along the Sierra Nevada mountain range.

Assembly Bill (AB) 32 Scoping Plan

In 2006, the Legislature passed the California Global Warming Solutions Act of 2006 [Assembly Bill 32 (AB 32)], which created a comprehensive, multi-year program to reduce greenhouse gas (GHG) emissions in California. AB 32 required the California Air Resources Board (ARB or Board) to develop a Scoping Plan that describes the approach California will take to reduce GHGs to achieve the goal of reducing emissions to 1990 levels by 2020. The Scoping Plan was first approved by the Board in 2008 and must be updated every five years. The First Update to the Climate Change Scoping Plan was approved by the Board on May 22, 2014. In 2016, the Legislature passed SB 32, which codifies a 2030 GHG emissions reduction target of 40 percent below 1990 levels. With SB 32, the Legislature passed companion legislation AB 197, which provides additional direction for developing the Scoping Plan.

The initial Scoping Plan was developed in 2008 and, per AB 32, must be updated at least once every five years. The 2014 First Update to the Climate Change Scoping Plan (2014 Update) defined ARB's climate change priorities for the subsequent five years and laid the groundwork to start the transition to the post-2020 goals set forth in Executive Orders S-3-05 and B-16-2012. The 2014 Update recommended establishing a 2030 mid-term GHG reduction target to ensure the State stays on course and expands upon the successes achieved to date to meet the long-term 2050 goal.

Executive Order B-30-15 directed ARB to update the Scoping Plan to chart the path to achieving the 2030 target. The mid-term target of 40 percent below 1990 levels, set by Executive Order B-30-15 and codified by SB 32, is critical to help frame the additional suite of policy measures, regulations, planning efforts, and investments in clean technologies and infrastructure needed to continue reducing GHG emissions in California.

The Proposed Scoping Plan builds upon the successful framework established by the initial Scoping Plan and the 2014 Update by outlining priorities and recommendations for the State to achieve its long-term climate objectives. The Proposed Scoping Plan describes actions for California to undertake to ensure it continues on a path toward a cleaner, more sustainable and prosperous future. This approach is designed to ensure the State is able to meet its long-term climate objectives that will achieve continual emissions reductions, while simultaneously supporting a range of economic, environmental, water supply, energy security, environmental justice, and public health priorities.

On January 20, 2017, ARB released its proposed 2017 Climate Change Scoping Plan Update, which lays out the framework for achieving the 2030 reductions as established in more recent legislation. The proposed 2017 Scoping Plan Update identifies the GHG reductions needed by each emissions sector to achieve a statewide emissions level that is 40 percent below 1990 levels before 2030 consistent with Senate Bill 32.

The update also identifies how GHGs associated with projects could be evaluated under CEQA. Specifically, it states that achieving "no net increase" in GHG emissions is the correct overall objective of projects evaluated under CEQA if conformity with an applicable local GHG reduction plan cannot be demonstrated. ARB recognizes that it may not be appropriate or feasible for every development project to mitigate its GHG emissions to no net increase and that this may not necessarily imply a substantial contribution to the cumulatively significant environmental impact of climate change. The ARB approved the 2017 Climate Change Scoping Plan Update on 14 December 2017.

CEQA Significance Thresholds

CEQA does not provide explicit directions on addressing climate change. It requires lead agencies identify project GHG emissions impacts and their "significance," but does not define what constitutes a "significant" impact. Not all projects emitting GHG contribute significantly to climate change. CEQA authorizes reliance on previously approved plans (i.e., a Climate Action Plan (CAP), etc.) and mitigation programs adequately analyzing and mitigating GHG emissions to a less than significant level. El Dorado County does not have an adopted CAP or similar program-level document; therefore, the project's GHG emissions must be addressed at the project-level.

The El Dorado County Air Quality Management District's (EDCAQMD) has not adopted GHG emissions significance thresholds for land use development projects. On October 13, 2016, the Placer County Air Pollution Control District (Placer APCD) Board of Directors adopted the Review of Land Use Projects under CEQA Policy (Policy). The Policy establishes the thresholds of significance for criteria pollutants as well as greenhouse gases and the review principles which serve as guidelines for the Placer APCD staff when the Placer APCD acts as a commenting agency to review and comment on the environmental documents prepared by the lead agencies. In developing the thresholds, the Placer APCD took into account health-based air quality standards and the strategies to attain air quality standards, historical CEQA project review data in Placer County, statewide regulations to achieve emission reduction targets for GHG, and the special geographic and land use features in Placer County.

The Placer APCD approach to developing significance thresholds for GHG emissions is to identify the emissions level for which a project would be expected to substantially contribute a mass amount of emissions and would conflict with existing statewide GHG emission reduction goal adopted by California legislation. The Placer APCD has developed a 3-step process for determining significance which includes 1) a bright-line threshold, 2) a De Minimis level, and 3) an efficiency matrix for projects that fall between the Bright-line and the De Minimis level. For projects with GHG emissions between 10,000 and 1,100 MT CO2e/yr the efficiency matrix contains a set of efficiency conditions based on the Placer County's special condition (urban and rural area) as well as the type of land use development (residential and non-residential).

The State of California set the goal to reduce GHG emissions without limiting population and economic growth. The Placer APCD concept is to look for a reasonable threshold which would capture larger–scale projects with significant GHG emission contributions which should implement mitigation.

Given the lack of locally adopted GHG emissions significance thresholds the Placer APCD thresholds are being used here. Placer APCD GHG Emissions Significance Thresholds are listed in Table 2.

Table 2. Placer APCD 2016 Approved GHG Emissions Significance Thresholds.

Greenhouse Gas Thresholds			
Bright line threshold 10,000 Metric Tons (MT) CO2e/yr			
Efficiency Matrix			
Residential		**Non-Residential**	
Urban	**Rural**	**Urban**	**Rural**
(MT CO2e/capita)		(MT/CO2e/1,000 sf)	
4.5	**5.5**	**26.5**	**27.3**
De Minimis Level 1,110 (MT) CO2e/yr			

Methods

As requested by the EDCAQMD, the California Emissions Estimator Model (CalEEMod Version 2016.3.2) was used for the estimation and quantification of project-related GHG emissions. The CalEEMod report (abbreviated to include only relevant report pages) is included in Appendix A.

CalEEMod is a statewide land use emissions model designed to provide a uniform platform to quantify potential criteria pollutant and greenhouse gas (GHG) emissions associated with both construction and operations from a variety of land use projects. CalEEMod quantifies direct emissions from construction and operations (including vehicle use), as well as indirect emissions, such as GHG emissions from energy use, solid waste disposal, vegetation planting and/or removal, and water use. The mobile source emission factors used in the model (EMFAC2011) includes the Pavley standards and Low Carbon Fuel standards into the mobile source emission factors. The model identifies mitigation measures as applicable to reduce criteria pollutant and GHG emissions along with calculating the benefits achieved from measures chosen by the user. The GHG mitigation measures incorporated into CalEEMod Version 2016.3.2 were developed and adopted by the California Air Pollution Control Officers Association.

This mixed-use Project's dominant land use is residential with a smaller commercial component. The Project occurs in an urban area. Based on these facts the appropriate threshold from the efficiency matrix is 4.5 MT CO2e/capita for an urban residential area. To verify that the residential and or commercial component alone would not exceed the thresholds three model runs of CalEEMod were conducted:

- Mixed Use: Analyzed both uses together
- Residential: Only residential uses were modeled
- Non-Residential: Only commercial uses were modeled

The various construction and operational emissions default values provided by CalEEMod were used for all model runs unless stated otherwise. The construction phase duration (schedule) was derived by the model. Construction phases in CalEEMod include demolition, site preparation, grading, building construction, paving, and architectural coating. Construction of the proposed Project will not require demolition, and this phase was removed. Based on a review of the safety data sheets (SDS)/ technical data sheets (TDS) for multiple interior and exterior architectural coatings from Kelley Moore and Sherwin-Williams, the interior architectural coating VOC value was changed to 5 g/L and exterior coating VOC value was changed to 50 g/L. Project grading will require approximately 1,900 CY of soil export and no import. The Project does not include the use of hearth features (wood or gas stoves or fireplaces). Operational emissions were assumed to start in 2021.

Results

Construction Emissions

Table 3 summarizes the results of the analysis of the construction phase for the three land use scenarios. CO2e emissions associated with construction are a one-time emission event only during the construction phase.

Table 3. CalEEMod Results for Construction Phase

Land Use Type	Modeled Construction Emissions MT CO2e/ Yr.
Mixed Use	340.01
Residential Only	325.57
Non-Residential Only	61.57

Operational Emissions

Table 4 summarizes the results of the analysis of the operational phase for the three land use scenarios.

Table 4. CalEEMod Results for Operational Phase

Land Use Type	Modeled Operational Emissions MT CO2e/ Yr.
Mixed Use	1,411.10
Residential Only	1,200.60
Non-Residential Only	307.56

Project Emissions Analysis

The Placer APCD District proposes using the bright-line threshold of 10,000 MT CO2e/yr for determining the level of significance for the land use construction phase of a Project. The three Project land use scenarios analyzed are all well below the 10,000 MT CO2e/yr (Table 3) significance threshold.

The estimated project operational emissions for the three land use scenarios analyzed are presented below. The population totals used to derive the estimated MT CO2e/ per capita were generated by CalEEMod. Floor surface area used to calculate MT/CO2e/1,000 sf was based on Project design and the CalEEMod model.

- Mixed Use: 1,411.10 MT CO2e/ Yr. / 421 population = **3.35 MT CO2e/ capita.**
- Residential Only: 1,200.60 MT CO2e/ Yr. / 421 population = **2.85 MT CO2e/ capita.**
- Non-Residential Only (Commercial): (307.56 MT CO2e/ Yr. / 25,150 sf)*1000 = **12.23 MT CO2e/1,000 sf**

Summary

CalEEMod Version 2016.3.2 was used to estimate the construction and operational GHG emissions resulting for the proposed Project (Appendix 1). Modeled construction GHG emissions for the proposed Project are below the Placer APCD significance threshold.

The CalEEMod model was run for three different land use scenarios to ensure the Project does not exceed the Placer APCD significant thresholds for residential or non-residential uses. None of the three land use scenarios analyzed exceed the Placer APCD 2016 Approved GHG Emissions Significance Thresholds for Project operations presented in Table 2 above.

Appendix 1

CalEEMod Version 2016.3.2 Results (GHG Emissions)

El Dorado Senior Resort Project

Included is the abbreviated annual CalEEMod Version 2016.3.2 Report (only the relevant result sheets are included) for residential, non-residential and mixed use:

El Dorado Senior Resort Project (Mixed Use)

El Dorado-Mountain County County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Office Building	2.50	1000sqft	0.06	2,500.00	0
General Office Building	2.50	1000sqft	0.06	2,500.00	0
Day-Care Center	3.25	1000sqft	0.07	3,250.00	0
Parking Lot	36.00	Space	0.32	14,400.00	0
Quality Restaurant	2.50	1000sqft	0.06	2,500.00	0
Apartments Mid Rise	64.00	Dwelling Unit	1.68	76,000.00	183
Congregate Care (Assisted Living)	74.00	Dwelling Unit	4.63	79,300.00	212
Single Family Housing	9.00	Dwelling Unit	2.92	13,500.00	26

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.7	**Precipitation Freq (Days)**	70
Climate Zone	1			**Operational Year**	2021
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	641.35	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

El Dorado Senior Resort Project (Mixed Use) - El Dorado-Mountain County County, Annual

Project Characteristics -

Land Use - Square Feet per Project Description dated 10 July 2018. Day Care Center is being used for the 3,250 ft2 club house land use.

Construction Phase - Demolition Phase removed, vacant land.

Grading -

Architectural Coating - Based on a review of the safety data sheets (SDS)/ technical data sheets (TDS) the interior architectural coating VOC value was changed to 5g/L and exterior coating VOC value was changed to 50 g/L.

Road Dust -

Woodstoves - No Hearth or Woodstoves

Area Coating - Based on a review of the safety data sheets (SDS)/ technical data sheets (TDS) the interior architectural coating VOC value was changed to 5g/L and exterior coating VOC value was changed to 50 g/L.

Land Use Change -

Sequestration -

Mobile Land Use Mitigation -

Area Mitigation -

Energy Mitigation -

Water Mitigation -

Stationary Sources - Emergency Generators and Fire Pumps -

Stationary Sources - Process Boilers -

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	EF_Nonresidential_Exterior	250.00	50.00
tblArchitecturalCoating	EF_Nonresidential_Interior	250.00	5.00
tblArchitecturalCoating	EF_Parking	250.00	50.00
tblArchitecturalCoating	EF_Residential_Exterior	250.00	50.00
tblArchitecturalCoating	EF_Residential_Interior	250.00	5.00
tblFireplaces	FireplaceDayYear	82.00	0.00
tblFireplaces	FireplaceDayYear	82.00	0.00
tblFireplaces	FireplaceDayYear	82.00	0.00

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2019	0.1377	1.2490	0.9306	1.7800e-003	0.1889	0.0639	0.2528	0.0922	0.0595	0.1517	0.0000	159.7957	159.7957	0.0316	0.0000	160.5844
2020	0.4385	2.0680	2.0310	3.8400e-003	0.0912	0.1072	0.1983	0.0245	0.1007	0.1252	0.0000	338.5447	338.5447	0.0587	0.0000	340.0132
Maximum	**0.4385**	**2.0680**	**2.0310**	**3.8400e-003**	**0.1889**	**0.1072**	**0.2528**	**0.0922**	**0.1007**	**0.1517**	**0.0000**	**338.5447**	**338.5447**	**0.0587**	**0.0000**	**340.0132**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2019	0.1377	1.2490	0.9306	1.7800e-003	0.1889	0.0639	0.2528	0.0922	0.0595	0.1517	0.0000	159.7956	159.7956	0.0316	0.0000	160.5842
2020	0.4385	2.0680	2.0310	3.8400e-003	0.0912	0.1072	0.1983	0.0245	0.1007	0.1252	0.0000	338.5445	338.5445	0.0587	0.0000	340.0129
Maximum	**0.4385**	**2.0680**	**2.0310**	**3.8400e-003**	**0.1889**	**0.1072**	**0.2528**	**0.0922**	**0.1007**	**0.1517**	**0.0000**	**338.5445**	**338.5445**	**0.0587**	**0.0000**	**340.0129**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.01**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	9-2-2019	12-1-2019	1.0672	1.0672
2	12-2-2019	3-1-2020	0.8374	0.8374
3	3-2-2020	6-1-2020	0.8161	0.8161
4	6-2-2020	9-1-2020	0.8014	0.8014
5	9-2-2020	9-30-2020	0.1696	0.1696
		Highest	1.0672	1.0672

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	1.0124	0.0126	1.0943	6.0000e-005		6.0300e-003	6.0300e-003		6.0300e-003	6.0300e-003	0.0000	1.7838	1.7838	1.7300e-003	0.0000	1.8270
Energy	5.8300e-003	0.0511	0.0306	3.2000e-004		4.0300e-003	4.0300e-003		4.0300e-003	4.0300e-003	0.0000	307.9476	307.9476	0.0124	3.4000e-003	309.2710
Mobile	0.3732	1.2561	4.1601	0.0110	0.9466	0.0116	0.9582	0.2539	0.0108	0.2647	0.0000	1,000.6469	1,000.6469	0.0356	0.0000	1,001.5372
Stationary	4.9000e-004	1.6100e-003	1.7900e-003	0.0000		7.0000e-005	7.0000e-005		7.0000e-005	7.0000e-005	0.0000	0.2285	0.2285	3.0000e-005	0.0000	0.2293
Waste						0.0000	0.0000		0.0000	0.0000	23.2668	0.0000	23.2668	1.3750	0.0000	57.6426
Water						0.0000	0.0000		0.0000	0.0000	3.6054	25.0059	28.6114	0.3714	8.9800e-003	40.5729
Total	**1.3919**	**1.3214**	**5.2867**	**0.0114**	**0.9466**	**0.0217**	**0.9683**	**0.2539**	**0.0210**	**0.2749**	**26.8723**	**1,335.6127**	**1,362.4850**	**1.7963**	**0.0124**	**1,411.0799**

El Dorado Senior Resort (Residential Only)

El Dorado-Mountain County County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Apartments Mid Rise	64.00	Dwelling Unit	1.68	7,600.00	183
Congregate Care (Assisted Living)	74.00	Dwelling Unit	4.63	79,300.00	212
Single Family Housing	9.00	Dwelling Unit	2.92	13,500.00	26
Day-Care Center	3.25	1000sqft	0.07	3,250.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.7	**Precipitation Freq (Days)**	70
Climate Zone	1			**Operational Year**	2021
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	641.35	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

El Dorado Senior Resort (Residential Only) - El Dorado-Mountain County County, Annual

Project Characteristics -

Land Use - Day Care Center is being used for the 3,250 ft2 club house land use

Construction Phase - New constrcution, demolition not needed, phase removed

Grading -

Architectural Coating - Based on a review of the safety data sheets (SDS)/ technical data sheets (TDS) the interior architectural coating VOC value was changed to 5g/L and exterior coating VOC value was changed to 50 g/L.

Woodstoves - No hearth

Area Coating - Based on a review of the safety data sheets (SDS)/ technical data sheets (TDS) the interior architectural coating VOC value was changed to 5g/L and exterior coating VOC value was changed to 50 g/L.

Land Use Change -

Sequestration -

Stationary Sources - Emergency Generators and Fire Pumps -

Stationary Sources - Process Boilers -

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	EF_Nonresidential_Exterior	250.00	50.00
tblArchitecturalCoating	EF_Nonresidential_Interior	250.00	5.00
tblArchitecturalCoating	EF_Parking	250.00	50.00
tblArchitecturalCoating	EF_Residential_Exterior	250.00	50.00
tblArchitecturalCoating	EF_Residential_Interior	250.00	5.00
tblAreaCoating	Area_EF_Nonresidential_Exterior	250	50
tblAreaCoating	Area_EF_Nonresidential_Interior	250	5
tblAreaCoating	Area_EF_Parking	250	50
tblAreaCoating	Area_EF_Residential_Exterior	250	50
tblAreaCoating	Area_EF_Residential_Interior	250	5
tblFireplaces	FireplaceDayYear	82.00	0.00
tblFireplaces	FireplaceDayYear	82.00	0.00
tblFireplaces	FireplaceDayYear	82.00	0.00

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2019	0.1357	1.2321	0.9156	1.7300e-003	0.1862	0.0637	0.2499	0.0915	0.0594	0.1508	0.0000	155.0140	155.0140	0.0314	0.0000	155.7993
2020	0.3564	2.0216	1.9899	3.6900e-003	0.0827	0.1069	0.1895	0.0222	0.1004	0.1226	0.0000	324.1076	324.1076	0.0584	0.0000	325.5671
Maximum	**0.3564**	**2.0216**	**1.9899**	**3.6900e-003**	**0.1862**	**0.1069**	**0.2499**	**0.0915**	**0.1004**	**0.1508**	**0.0000**	**324.1076**	**324.1076**	**0.0584**	**0.0000**	**325.5671**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2019	0.1357	1.2321	0.9156	1.7300e-003	0.1862	0.0637	0.2499	0.0915	0.0594	0.1508	0.0000	155.0139	155.0139	0.0314	0.0000	155.7991
2020	0.3564	2.0216	1.9899	3.6900e-003	0.0827	0.1069	0.1895	0.0222	0.1004	0.1226	0.0000	324.1074	324.1074	0.0584	0.0000	325.5668
Maximum	**0.3564**	**2.0216**	**1.9899**	**3.6900e-003**	**0.1862**	**0.1069**	**0.2499**	**0.0915**	**0.1004**	**0.1508**	**0.0000**	**324.1074**	**324.1074**	**0.0584**	**0.0000**	**325.5668**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	9-2-2019	12-1-2019	1.0549	1.0549
2	12-2-2019	3-1-2020	0.8170	0.8170
3	3-2-2020	6-1-2020	0.7966	0.7966
4	6-2-2020	9-1-2020	0.7829	0.7829
5	9-2-2020	9-30-2020	0.1556	0.1556
		Highest	1.0549	1.0549

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.4484	0.0126	1.0939	6.0000e-005		6.0300e-003	6.0300e-003		6.0300e-003	6.0300e-003	0.0000	1.7830	1.7830	1.7300e-003	0.0000	1.8262
Energy	3.7300e-003	0.0320	0.0146	2.0000e-004		2.5800e-003	2.5800e-003		2.5800e-003	2.5800e-003	0.0000	251.8090	251.8090	0.0104	2.6900e-003	252.8704
Mobile	0.2978	1.0458	3.4621	9.4000e-003	0.8131	9.8200e-003	0.8229	0.2181	9.2000e-003	0.2273	0.0000	855.6430	855.6430	0.0299	0.0000	856.3905
Stationary	4.9000e-004	1.6100e-003	1.7900e-003	0.0000		7.0000e-005	7.0000e-005		7.0000e-005	7.0000e-005	0.0000	0.2285	0.2285	3.0000e-005	0.0000	0.2293
Waste						0.0000	0.0000		0.0000	0.0000	21.8601	0.0000	21.8601	1.2919	0.0000	54.1575
Water						0.0000	0.0000		0.0000	0.0000	3.0828	21.8087	24.8914	0.3176	7.6800e-003	35.1206
Total	**0.7504**	**1.0921**	**4.5724**	**9.6600e-003**	**0.8131**	**0.0185**	**0.8316**	**0.2181**	**0.0179**	**0.2360**	**24.9429**	**1,131.2721**	**1,156.2150**	**1.6516**	**0.0104**	**1,200.5944**

El Dorado Senior Resort (Commercial Only)

El Dorado-Mountain County County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Office Building	2.50	1000sqft	0.06	2,500.00	0
General Office Building	2.50	1000sqft	0.06	2,500.00	0
Quality Restaurant	2.50	1000sqft	0.06	2,500.00	0
Day-Care Center	3.25	1000sqft	0.07	3,250.00	0
Parking Lot	36.00	Space	0.32	14,400.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.7	**Precipitation Freq (Days)**	70
Climate Zone	1			**Operational Year**	2021
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	641.35	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

El Dorado Senior Resort (Commercial Only) - El Dorado-Mountain County County, Annual

Project Characteristics -

Land Use - Day Care Center is being used for the 3,250 ft2 club house land use

Construction Phase - New constrcution, demolition not needed, phase removed

Grading -

Architectural Coating - Based on a review of the safety data sheets (SDS)/ technical data sheets (TDS) the interior architectural coating VOC value was changed to 5g/L and exterior coating VOC value was changed to 50 g/L.

Area Coating - Based on a review of the safety data sheets (SDS)/ technical data sheets (TDS) the interior architectural coating VOC value was changed to 5g/L and exterior coating VOC value was changed to 50 g/L.

Land Use Change -

Sequestration -

Stationary Sources - Emergency Generators and Fire Pumps -

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2019	0.0461	0.4954	0.3635	6.7000e-004	7.6300e-003	0.0266	0.0343	2.2300e-003	0.0245	0.0268	0.0000	61.2114	61.2114	0.0143	0.0000	61.5687
2020	0.0197	0.0976	0.0871	1.5000e-004	1.2300e-003	5.4800e-003	6.7100e-003	3.3000e-004	5.0700e-003	5.4000e-003	0.0000	12.7224	12.7224	3.3700e-003	0.0000	12.8066
Maximum	**0.0461**	**0.4954**	**0.3635**	**6.7000e-004**	**7.6300e-003**	**0.0266**	**0.0343**	**2.2300e-003**	**0.0245**	**0.0268**	**0.0000**	**61.2114**	**61.2114**	**0.0143**	**0.0000**	**61.5687**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2019	0.0461	0.4954	0.3635	6.7000e-004	7.6300e-003	0.0266	0.0343	2.2300e-003	0.0245	0.0268	0.0000	61.2114	61.2114	0.0143	0.0000	61.5686
2020	0.0197	0.0976	0.0871	1.5000e-004	1.2300e-003	5.4800e-003	6.7100e-003	3.3000e-004	5.0700e-003	5.4000e-003	0.0000	12.7224	12.7224	3.3700e-003	0.0000	12.8066
Maximum	**0.0461**	**0.4954**	**0.3635**	**6.7000e-004**	**7.6300e-003**	**0.0266**	**0.0343**	**2.2300e-003**	**0.0245**	**0.0268**	**0.0000**	**61.2114**	**61.2114**	**0.0143**	**0.0000**	**61.5686**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	9-2-2019	12-1-2019	0.4022	0.4022
2	12-2-2019	3-1-2020	0.2387	0.2387
		Highest	0.4022	0.4022

2.2 Overall Operational

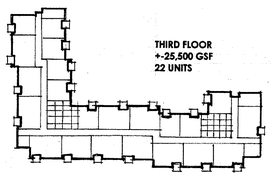
Unmitigated Operational

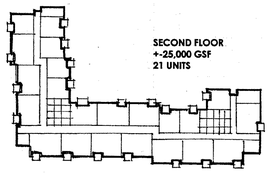
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.0439	0.0000	4.3000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	8.4000e-004	8.4000e-004	0.0000	0.0000	8.9000e-004
Energy	2.3400e-003	0.0213	0.0179	1.3000e-004		1.6200e-003	1.6200e-003		1.6200e-003	1.6200e-003	0.0000	65.0488	65.0488	2.3400e-003	8.2000e-004	65.3507
Mobile	0.1248	0.3403	1.1301	2.5300e-003	0.2108	2.7900e-003	0.2136	0.0565	2.6100e-003	0.0592	0.0000	229.9062	229.9062	9.1800e-003	0.0000	230.1358
Stationary	4.9000e-004	1.6100e-003	1.7900e-003	0.0000		7.0000e-005	7.0000e-005		7.0000e-005	7.0000e-005	0.0000	0.2285	0.2285	3.0000e-005	0.0000	0.2293
Waste						0.0000	0.0000		0.0000	0.0000	2.2654	0.0000	2.2654	0.1339	0.0000	5.6124
Water						0.0000	0.0000		0.0000	0.0000	0.5669	3.7816	4.3485	0.0584	1.4100e-003	6.2287
Total	**0.1715**	**0.3632**	**1.1502**	**2.6600e-003**	**0.2108**	**4.4800e-003**	**0.2153**	**0.0565**	**4.3000e-003**	**0.0608**	**2.8323**	**298.9660**	**301.7983**	**0.2038**	**2.2300e-003**	**307.5578**

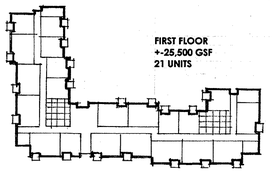
ATTACHMENT B

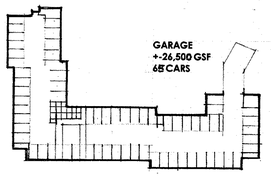
Site Plan, Last Revised: 15 August 2018

El Dorado Senior Resort Project









SENIOR INDEPENDENT APARTMENTS
+-102,500 GSF 64 UNITS 65 PARKING SPACES

FOOTAGE SUMMARY

Assisted Living Facility
Garage: +-29,100 gsf
Residential : +-79,300 gsf
Total + 108,400 gsf

Apartment Facility
Garage: +-26,500 gsf
Residential: +-76,000 gsf
Total = +- 102,500 gsf

Community Center
+-3,250 gsf

Commercial Building 1
+-5,000 gsf

Commercial Building 2
+-2,500 gsf

Single Family
9 Units @ +-1,500 gsf = +-13,500 gsf

TOTAL PROPOSED FOOTAGE = +-235,150 GSF

PARKING SUMMARY

Assisted Living Facility
+-63 Garage Spaces
+- 4 On-Grade Spaces
Total = 67 Spaces

Apartment Facility
+-65 Garage Spaces

Community Center
+-7 On-Grade Spaces

Single Family
+-2 Garage Spaces/Unit = 18 Spaces
+-2 Apron Spaces/Unit = 18 Spaces
Total = 36 Spaces

On-Street
+-53 Spaces

TOTAL PROPOSED PARKING = +-228 SPACES

GENERAL NOTES:
a. Service yards contain propane tanks and trash collection.
b. A 7 foot fence shall be constructed around the perimeter of the project site. See landscape drawings.
c. A small sign shall be erected at the entry way conforming to Zoning Ordinance 130.16.
d. See utility plans for lighting, water, sewer, and fire hydrants.
e. Commercial buildings are open to the public.
f. Site features such as rock outcroppings, lava caps, drainage courses, lakes, canals, reservoirs, rivers, streams, spring areas subject to inundation and wetlands are not present on site.
g. Per FEMA's National Flood Hazard Layer, the project is in an area of minimal flood hazard.
h. There are no known or proposed trails on the project site

EL DORADO TOWNSITE
BLOCK 8
A.P.N. 331-151-16
TRACT 3 RS 25-128
CORP. PRES. BISHOP CH. JESUS
4101-530 O.R.

STATE HIGHWAY 49
PLEASANT VALLEY ROAD

(E) 15' WIDE SANITARY SEWER EASEMENT PER 787-513 O.R. (COUNTY)

30' SETBACK

(E) CL 20' WIDE E.V.D. SEWER EASEMENT PER 732-257 O.R.

20' EVA

PUTTING GREEN

EL DORADO TOWNSITE
PORTION LOT 3 BLOCK 16

A.P.N. 331-221-13
DEREK CURRIE
DOC. 2006-0070187

A.P.N. 331-221-09
DARLENE URUENICH
184-197 O.R.

A.P.N. 331-221-11
JOSE MOSQUEDA
DOC. 2006-0036341

(E) 81' WIDE DRIVEWAY ESMT. PER DOC. 2006-0042020 (FOR APN331-221-09)

LONG BRANCH LANE
EASEMENT PER 2002-0070154-00

EL DORADO TOWNSITE
PORTION BLOCK 16
A.P.N. 331-221-22
TRACT 1 RS 25-52
FRANK PERDICHIZZI
DOC. 2002-0010156

PICKLE BALL COURT

SERVICE YARD

GARAGE ENTRY

40'-0" SETBACK

20' EVA

Garage elevation: +-1673
First floor elevation: +-1684
Second floor elevation: +-1695
Third floor elevation: +-1705

+-300'-0"

+-228'-0"

36'-0"

56'-0"

65'-0"

ASSISTED AND MEMORY CARE FACILITY
Garage: +-29,100 gsf +-63 cars
Residential: +-79,300 gsf 8 Memory Care Units
66 Assisted Care Units

COMMERCIAL BUILDING #1
2 Story / +-5,000 gsf

4 Spaces

3 Spaces

COMMUNITY CENTER
2 Story / +-3,250 gsf

SENIOR INDEPENDENT APARTMENTS
Garage: +-26,500 gsf +-65 cars
Residential: +-76,000 gsf

Garage elevation: +-1678
First floor elevation: +-1689
Second floor elevation: +-1700
Third floor elevation: +-1710

EMERGENCY ACCESS TO COURTYARD

+-300'-0"

50'-0" SETBACK

+-185'-0"

26' EVA

GARAGE ENTRY

(E) 20' WIDE NON-EXCLUSIVE ROAD EASEMENT PER 478-938 O.R. (APPROXIMATE LOCATION, ONLY)

PORTION LOT 3 BLOCK 16

A.P.N. 331-221-05
TONI BARNARD
4986-673 O.R.

A.P.N. 331-221-06
JOHN & SHANNON RODGERS
DOC. 2006-0003579

A.P.N. 331-211-40
PARCEL A PM 21-2
EVAN & SARAH GOODNESS
DOC. 2005-0053748

A.P.N. 331-211-26
PARCEL 3 PM 17-94

A.P.N. 331-211-46

A.P.N. 331-571-10
SANDRA DIAZ
DOC. 2000-0050324

A.P.N. 331-231-42
PARCEL 3 PM 47-98
SUMMITVIEW CHILD TREATMENT
DOC. 2001-0072073

A.P.N. 331-231-14
DALE & BEVERLY HARTWICK
DOC. 2007-0065422

A.P.N. 331-231-43
PARCEL 4 PM 47-98
SUMMITVIEW CHILD TREATMENT
DOC. 2001-0072073

A.P.N. 331-231-48
TRACT 1 RS 30-66
SUMMITVIEW CHILD TREATMENT
DOC. 2007-0056088

KOKI LANE

EL DORADO TOWNSITE
PORTION BLOCK 16

WALKWAYS, TYP.

20' EVA

20'-0" SETBACK

50'-0" R.O.W.

10'-0" SETBACK

COMMERCIAL BUILDING #2
2 Story
+-2,500 gsf

A.P.N. 331-571-01
STANLEY & CHERYL SMITH
DOC. 2002-0033403

SINGLE FAMILY RESIDENTIAL
9 Units @ +-1,500 gsf = +-13,500 gsf

A.P.N. 331-571-02
HELENA SPRAGENER
DOC. 2005-0076814

A.P.N. 331-571-03
LOCHLANN MILLS
DOC. 2002-0075366

A.P.N. 331-571-04
MICHAEL & BROOKE WUNSCHEL
DOC. 2002-0047328

A.P.N. 331-571-05
DENNIS MARPLE, SURV. TR.
DOC. 2004-0088510

A.P.N. 331-571-06
ROY & PEARL CARTER
3869-320 O.R.

A.P.N. 331-571-07
WILLIAM & IRMA MCATEE
DOC. 98-0004482

A.P.N. 331-571-08
JOHN & CAROL EDWARDS
DOC. 2002-0076752

A.P.N. 331-571-09
MARCELLE KEELER
DOC. 2006-0032584

(E) 20' WIDE NON-EXCLUSIVE ROAD EASEMENT PER 458-380 O.R. (APPROXIMATE LOCATION, ONLY)

DORADO WOODS
UNIT NO. 1
SUBD. G-128

FIRE SAFETY CONSTRUCTION REQUIREMENTS

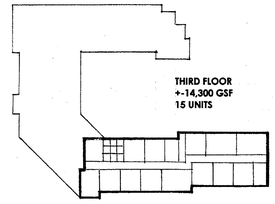
a. Assisted Living and Memory Care Facility
Occupancy: Garage – Group S2
Residential – GroupR2.1
Construction: Garage – Type 1A
Residential – Type VA
Two-Hour Occupancy Separation between garage and residential.
Two-Hour Area Separations foe residential as needed for area increases.
Fully Sprinklered.

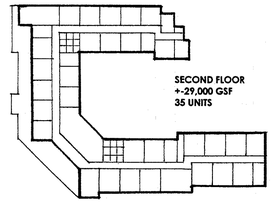
b. Senior Independent Apartments
Occupancy: Garage – Group S2
Residential – GroupR2
Construction: Garage – Type 1A
Residential – Type VA
Two-Hour Occupancy Separation between garage and residential.
Two-Hour Area Separations foe residential as needed for area increases.
Fully Sprinklered.

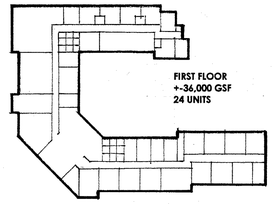
c. Commercial Buildings 1 and 2
Occupancy: Business – Group B
Construction: Type VA
Fully Sprinklered.

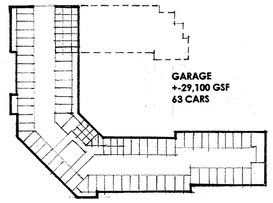
d. Single Family
Occupancy: Residential – Group R3
Construction: Type VB
Fully Sprinklered.
The single family homes will be constructed in conformance with the Wildland/Urban Interface (WUI) regulations and requirements CBC Chapter 7A.

SITE STATISTICS
LOCATION: HIGHWAY 49 AT KOKI LANE
EL DORADO, CALIFORNIA
APN: 331 - 221 - 30, - 32
SITE SIZE: +/- 8.2 ACRES (357,000 GSF)
ZONING: COMMERCIAL AND MULTI-FAMILY RESIDENTIAL WITH DESIGN CONTROL
USE: VACANT

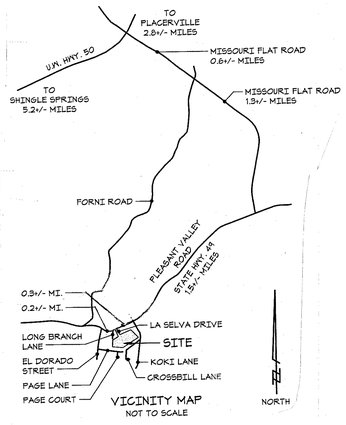








ASSISTED LIVING AND MEMORY CARE FACILITY
+-108,400 GSF 74 UNITS 67 PARKING SPACES



SITE PLAN

Robert Wright NCARB
Wright Architecture Studio
101 Lucas Valley Road, Suite 313
San Rafael, CA 94903
(415) 491-4447 / FAX (415) 491-4445
email: bob@wrightarchitecturestudio.com

El Dorado Senior Resort

Highway 49 at Koki Lane
El Dorado, California

El Dorado Senior Housing LLC
854 Diablo Road
Danville, CA 94526
(281) 772-3772

AUGUST 15, 2018 REVISION 1
MAY 2018 REVISION 0
MARCH 2018
FEBRUARY 2018
WAS 17112

0 20 40 80 160
SCALE: 1"= 40'-0"

A1.0

ATTACHMENT C

CalEEMod Version 2016.3.2 Results (AQ)

Montano De El Dorado Phase II Master Plan Project

Included are the following two abbreviated CalEEMod Version 2016.3.2 Reports (only the relevant result sheets are included):

1. Summer
2. Winter

El Dorado Senior Resort Project (Mixed Use)

El Dorado-Mountain County County, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Office Building	2.50	1000sqft	0.06	2,500.00	0
General Office Building	2.50	1000sqft	0.06	2,500.00	0
Day-Care Center	3.25	1000sqft	0.07	3,250.00	0
Parking Lot	36.00	Space	0.32	14,400.00	0
Quality Restaurant	2.50	1000sqft	0.06	2,500.00	0
Apartments Mid Rise	64.00	Dwelling Unit	1.68	76,000.00	183
Congregate Care (Assisted Living)	74.00	Dwelling Unit	4.63	79,300.00	212
Single Family Housing	9.00	Dwelling Unit	2.92	13,500.00	26

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.7	**Precipitation Freq (Days)**	70
Climate Zone	1			**Operational Year**	2021
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	641.35	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

El Dorado Senior Resort Project (Mixed Use) - El Dorado-Mountain County County, Summer

Project Characteristics -

Land Use - Square Feet per Project Description dated 10 July 2018. Day Care Center is being used for the 3,250 ft2 club house land use.

Construction Phase - Demolition Phase removed, vacant land.

Grading -

Architectural Coating - Based on a review of the safety data sheets (SDS)/ technical data sheets (TDS) the interior architectural coating VOC value was changed to 5g/L and exterior coating VOC value was changed to 50 g/L.

Road Dust -

Woodstoves - No Hearth or Woodstoves

Area Coating - Based on a review of the safety data sheets (SDS)/ technical data sheets (TDS) the interior architectural coating VOC value was changed to 5g/L and exterior coating VOC value was changed to 50 g/L.

Land Use Change -

Sequestration -

Mobile Land Use Mitigation -

Area Mitigation -

Energy Mitigation -

Water Mitigation -

Stationary Sources - Emergency Generators and Fire Pumps -

Stationary Sources - Process Boilers -

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	EF_Nonresidential_Exterior	250.00	50.00
tblArchitecturalCoating	EF_Nonresidential_Interior	250.00	5.00
tblArchitecturalCoating	EF_Parking	250.00	50.00
tblArchitecturalCoating	EF_Residential_Exterior	250.00	50.00
tblArchitecturalCoating	EF_Residential_Interior	250.00	5.00
tblFireplaces	FireplaceDayYear	82.00	0.00
tblFireplaces	FireplaceDayYear	82.00	0.00
tblFireplaces	FireplaceDayYear	82.00	0.00

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2019	4.5661	49.9605	24.0378	0.0494	18.4333	2.4177	20.8511	10.0280	2.2253	12.2533	0.0000	4,953.9493	4,953.9493	1.2122	0.0000	4,984.2535
2020	18.4403	21.9733	21.6892	0.0419	1.0628	1.1385	2.2013	0.2849	1.0706	1.3555	0.0000	4,069.8225	4,069.8225	0.7180	0.0000	4,086.4191
Maximum	**18.4403**	**49.9605**	**24.0378**	**0.0494**	**18.4333**	**2.4177**	**20.8511**	**10.0280**	**2.2253**	**12.2533**	**0.0000**	**4,953.9493**	**4,953.9493**	**1.2122**	**0.0000**	**4,984.2535**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2019	4.5661	49.9605	24.0378	0.0494	18.4333	2.4177	20.8511	10.0280	2.2253	12.2533	0.0000	4,953.9493	4,953.9493	1.2122	0.0000	4,984.2535
2020	18.4403	21.9733	21.6892	0.0419	1.0628	1.1385	2.2013	0.2849	1.0706	1.3555	0.0000	4,069.8225	4,069.8225	0.7180	0.0000	4,086.4191
Maximum	**18.4403**	**49.9605**	**24.0378**	**0.0494**	**18.4333**	**2.4177**	**20.8511**	**10.0280**	**2.2253**	**12.2533**	**0.0000**	**4,953.9493**	**4,953.9493**	**1.2122**	**0.0000**	**4,984.2535**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	5.7341	0.1403	12.1588	6.4000e-004		0.0670	0.0670		0.0670	0.0670	0.0000	21.8474	21.8474	0.0212	0.0000	22.3772
Energy	0.0319	0.2798	0.1675	1.7400e-003		0.0221	0.0221		0.0221	0.0221		348.3013	348.3013	6.6800e-003	6.3900e-003	350.3710
Mobile	2.7138	7.0441	25.5139	0.0694	5.8260	0.0684	5.8945	1.5572	0.0641	1.6213		6,958.9842	6,958.9842	0.2368		6,964.9042
Stationary	0.1641	0.5351	0.5955	7.9000e-004		0.0241	0.0241		0.0241	0.0241		83.9514	83.9514	0.0118		84.2457
Total	**8.6438**	**7.9994**	**38.4357**	**0.0726**	**5.8260**	**0.1816**	**6.0077**	**1.5572**	**0.1773**	**1.7345**	**0.0000**	**7,413.0843**	**7,413.0843**	**0.2764**	**6.3900e-003**	**7,421.8981**

El Dorado Senior Resort Project (Mixed Use)

El Dorado-Mountain County County, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Office Building	2.50	1000sqft	0.06	2,500.00	0
General Office Building	2.50	1000sqft	0.06	2,500.00	0
Day-Care Center	3.25	1000sqft	0.07	3,250.00	0
Parking Lot	36.00	Space	0.32	14,400.00	0
Quality Restaurant	2.50	1000sqft	0.06	2,500.00	0
Apartments Mid Rise	64.00	Dwelling Unit	1.68	76,000.00	183
Congregate Care (Assisted Living)	74.00	Dwelling Unit	4.63	79,300.00	212
Single Family Housing	9.00	Dwelling Unit	2.92	13,500.00	26

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.7	**Precipitation Freq (Days)**	70
Climate Zone	1			**Operational Year**	2021
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	641.35	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

El Dorado Senior Resort Project (Mixed Use) - El Dorado-Mountain County County, Winter

Project Characteristics -

Land Use - Square Feet per Project Description dated 10 July 2018. Day Care Center is being used for the 3,250 ft2 club house land use.

Construction Phase - Demolition Phase removed, vacant land.

Grading -

Architectural Coating - Based on a review of the safety data sheets (SDS)/ technical data sheets (TDS) the interior architectural coating VOC value was changed to 5g/L and exterior coating VOC value was changed to 50 g/L.

Road Dust -

Woodstoves - No Hearth or Woodstoves

Area Coating - Based on a review of the safety data sheets (SDS)/ technical data sheets (TDS) the interior architectural coating VOC value was changed to 5g/L and exterior coating VOC value was changed to 50 g/L.

Land Use Change -

Sequestration -

Mobile Land Use Mitigation -

Area Mitigation -

Energy Mitigation -

Water Mitigation -

Stationary Sources - Emergency Generators and Fire Pumps -

Stationary Sources - Process Boilers -

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	EF_Nonresidential_Exterior	250.00	50.00
tblArchitecturalCoating	EF_Nonresidential_Interior	250.00	5.00
tblArchitecturalCoating	EF_Parking	250.00	50.00
tblArchitecturalCoating	EF_Residential_Exterior	250.00	50.00
tblArchitecturalCoating	EF_Residential_Interior	250.00	5.00
tblFireplaces	FireplaceDayYear	82.00	0.00
tblFireplaces	FireplaceDayYear	82.00	0.00
tblFireplaces	FireplaceDayYear	82.00	0.00

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2019	4.5710	50.1271	24.0539	0.0492	18.4333	2.4182	20.8515	10.0280	2.2257	12.2538	0.0000	4,927.9144	4,927.9144	1.2126	0.0000	4,958.2298
2020	18.4426	22.1008	21.5280	0.0409	1.0628	1.1388	2.2016	0.2849	1.0709	1.3558	0.0000	3,968.2575	3,968.2575	0.7177	0.0000	3,984.8254
Maximum	**18.4426**	**50.1271**	**24.0539**	**0.0492**	**18.4333**	**2.4182**	**20.8515**	**10.0280**	**2.2257**	**12.2538**	**0.0000**	**4,927.9144**	**4,927.9144**	**1.2126**	**0.0000**	**4,958.2298**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2019	4.5710	50.1271	24.0539	0.0492	18.4333	2.4182	20.8515	10.0280	2.2257	12.2538	0.0000	4,927.9144	4,927.9144	1.2126	0.0000	4,958.2298
2020	18.4426	22.1008	21.5280	0.0409	1.0628	1.1388	2.2016	0.2849	1.0709	1.3558	0.0000	3,968.2575	3,968.2575	0.7177	0.0000	3,984.8254
Maximum	**18.4426**	**50.1271**	**24.0539**	**0.0492**	**18.4333**	**2.4182**	**20.8515**	**10.0280**	**2.2257**	**12.2538**	**0.0000**	**4,927.9144**	**4,927.9144**	**1.2126**	**0.0000**	**4,958.2298**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	5.7341	0.1403	12.1588	6.4000e-004		0.0670	0.0670		0.0670	0.0670	0.0000	21.8474	21.8474	0.0212	0.0000	22.3772
Energy	0.0319	0.2798	0.1675	1.7400e-003		0.0221	0.0221		0.0221	0.0221		348.3013	348.3013	6.6800e-003	6.3900e-003	350.3710
Mobile	2.1926	7.6707	25.6599	0.0639	5.8260	0.0687	5.8948	1.5572	0.0644	1.6216		6,409.8908	6,409.8908	0.2364		6,415.8012
Stationary	0.1641	0.5351	0.5955	7.9000e-004		0.0241	0.0241		0.0241	0.0241		83.9514	83.9514	0.0118		84.2457
Total	**8.1227**	**8.6260**	**38.5817**	**0.0671**	**5.8260**	**0.1819**	**6.0080**	**1.5572**	**0.1776**	**1.7348**	**0.0000**	**6,863.9909**	**6,863.9909**	**0.2761**	**6.3900e-003**	**6,872.7950**

COUNTY OF EL DORADO
COMMUNITY DEVELOPMENT SERVICES
PLANNING AND BUILDING DEPARTMENT

INTEROFFICE MEMORANDUM

Date: October 30, 2018

To: Efren Sanchez, Project Planner

From: C.J. Freeland, Department Analyst II
Housing, Community and Economic Development (HCED) Programs

Subject: El Dorado Senior Resort – Application Number CUP18-0009
Assessor's Parcel Numbers: 331-221-30 and 32

The location of the proposed project (APN 331-221-32) has been identified by its General Plan Land Use Designation as a prime area for affordable multi-family and high-density residential housing due to the proposed project site proximity to amenities such as transportation, medical, and retail services. Therefore, it is recommended that the project's final conditions of approval require at least 10% of the units to be developed as affordable to moderate and/or low income households.

This can be accomplished in a number of ways through designation of the affordable units to an affordable housing developer and/or management group who would provide rental housing and/or as single-family homes providing for "For Sale" units to households meeting the 50% to 120% of area median income levels.

General Plan Policies HO-1.6, HO-1.7, HO-1.16, and HO-1.18 require the County to encourage applicants to offer a portion of their developments as affordable. Should the project be approved with a portion of the units to be set aside as affordable, staff would work with the applicant to identify any potential funding opportunities to assist in the development of the affordable units. For example, should the applicant wish to set aside 20% of the units as affordable, the project may be eligible for the County's TIM Fee Offset Program, reducing the cost of TIM fees on the affordable units. A complete list of funding opportunities along with incentives for including affordable units is obtainable by contacting the HCED Program at (530) 621-5159.

An affordable housing plan and agreement is required should affordable units become a condition of the project. Staff, upon request, can provide a draft agreement to the applicant. Proposed language for the condition to include affordable units is as follows:

Exhibit Q

AFFORDABLE HOUSING PROJECT SPECIFIC CONDITIONS

At least 10% of the total units shall be designated as affordable housing for families of moderate to low income. Income levels are defined as those households earning between 50% to 120% of the median family income as established for El Dorado County. Deed restrictions for these specific units shall be recorded prior to approval of the final map.

An affordable housing plan, to include but not be limited to financing arrangements, monitoring program, and 20-year deed restrictions, shall be established by the applicant through a Developer's Agreement with the County of El Dorado. A copy of the affordable housing plan shall be submitted to the Planning and Building Department prior to final occupancy of the first single-family unit.

In accordance with General Plan Policy HO-3.9, the property owner(s) shall provide notice to the California Department of Housing and Community Development, the County Department of Human Services, and the existing tenants at least two years prior to the conversion of the affordable rental housing units to market rate. For sale units are subject to a Buyers Agreement as part of the housing plan Developer's Agreement.

In addition, under the new streamlining requirements in California, if a residential project includes at least 50% of the units affordable to low income residents, special considerations may apply.

Chapter 366, Statutes of 2017 (SB 35, Weiner) requires the availability of a streamlined, ministerial approval process for developments in localities that have not yet made sufficient progress towards their allocation of the regional housing need. In a locality that the Department has determined is subject to the Streamline Provisions pursuant to Section 200, subparagraph (c) (applies to El Dorado County), the development shall dedicate a minimum of 50% of the total number of units to housing affordable to households making below 80% of the AMI. The draft Guidelines for the Streamlining Process are available at: http://www.hcd.ca.gov/policy-research/docs/SB_35_DraftGuidelines_09282018.pdf

If you or the applicant would like additional information, please do not hesitate to contact me by calling (530) 621-5159, or send email to cynthia.freeland@edcgov.us.

Thank you for the opportunity to respond.