

Treasure Hill

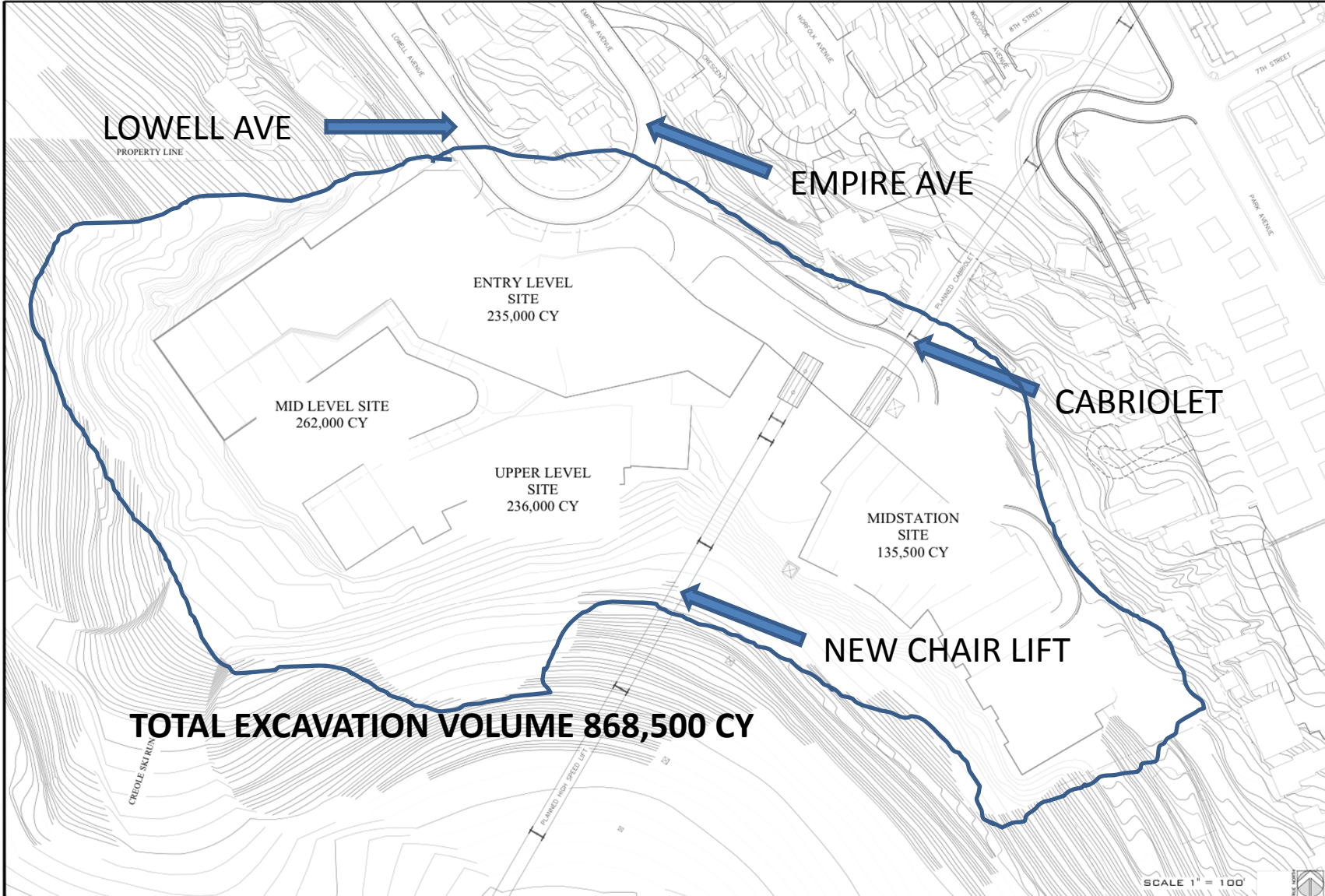
Construction Comments

Arnie Rusten, PE, SE

1058 Lowell Avenue

10/11/2017





LOWELL AVE
PROPERTY LINE

EMPIRE AVE

CABRIOLET

NEW CHAIR LIFT

TOTAL EXCAVATION VOLUME 868,500 CY

ENTRY LEVEL SITE
235,000 CY

MID LEVEL SITE
262,000 CY

UPPER LEVEL SITE
236,000 CY

MIDSTATION SITE
135,500 CY

DATE: JUNE 26, 2017
PROJECT NO.: 04-02-17
FILE: TREASURE
REVISIONS DATE:

NO.	DATE	DESCRIPTION

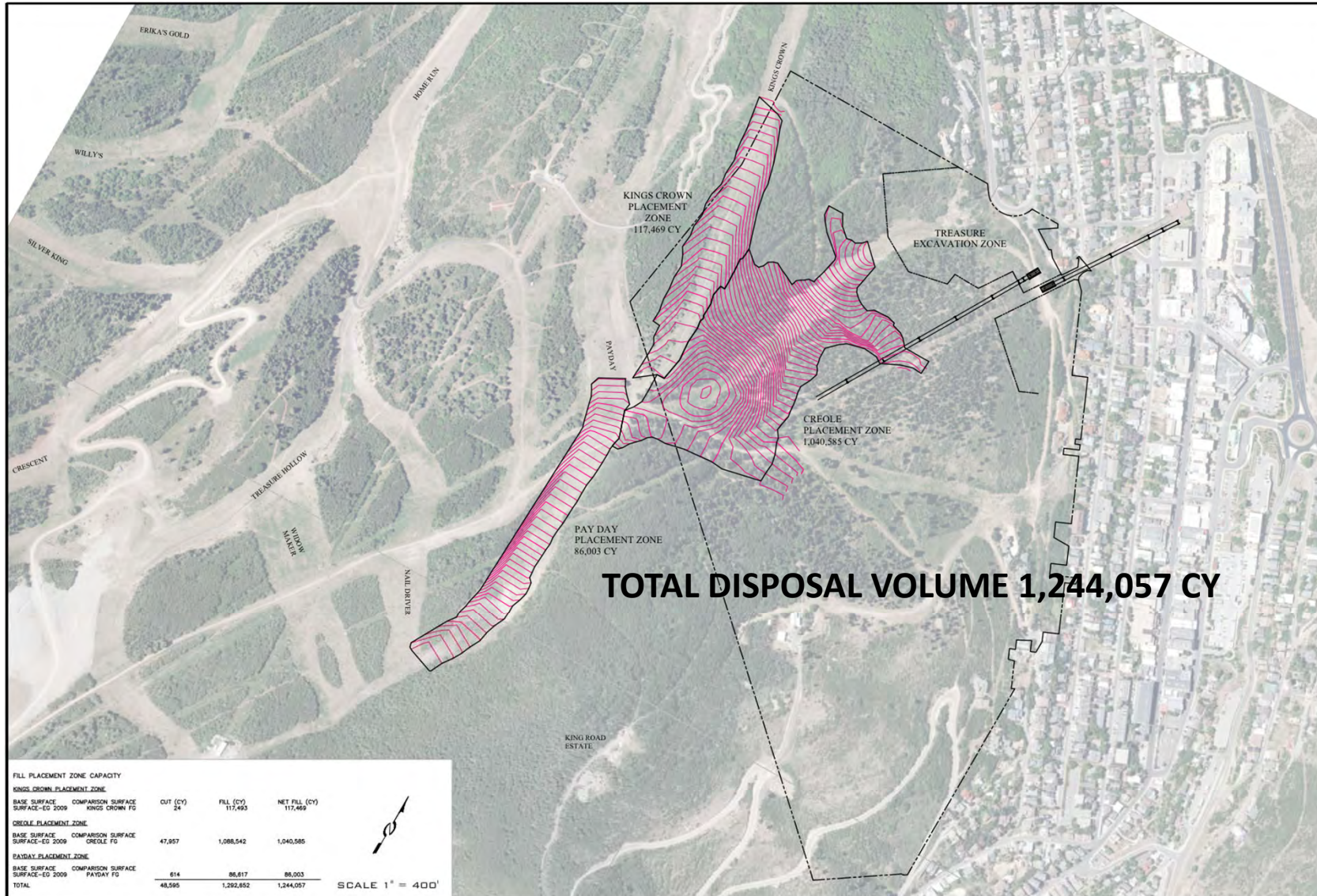


FOR: ME, INC.

TREASURE
REFINEMENT 17.2
EXCAVATION VOLUMES

SCALE 1" = 100'

SHEET NO: E1.1



FILL PLACEMENT ZONE CAPACITY

KINGS CROWN PLACEMENT ZONE		CUT (CY)	FILL (CY)	NET FILL (CY)
BASE SURFACE	COMPARISON SURFACE	24	117,493	117,469
SURFACE-EG 2009	KINGS CROWN FG			
CREOLE PLACEMENT ZONE		47,957	1,088,542	1,040,585
BASE SURFACE	COMPARISON SURFACE			
SURFACE-EG 2009	CREOLE FG			
PAYDAY PLACEMENT ZONE		614	86,617	86,003
BASE SURFACE	COMPARISON SURFACE			
SURFACE-EG 2009	PAYDAY FG			
TOTAL		48,595	1,202,652	1,244,057

SCALE 1" = 400'

DATE: JUNE 14, 2017
 PROJECT NO.: 04-16-02
 FILE: TREASURE

REVISIONS	DATE

ALTA ENGINEERING INC.
 4000 West 13th Street, Suite 100
 Fort Worth, Texas 76102
 (817) 332-1000

FOR: NPE INC.

**TREASURE
 REFINEMENT 17, 1
 MATERIAL PLACEMENT ZONES**

SHEET NO: **E2.0**

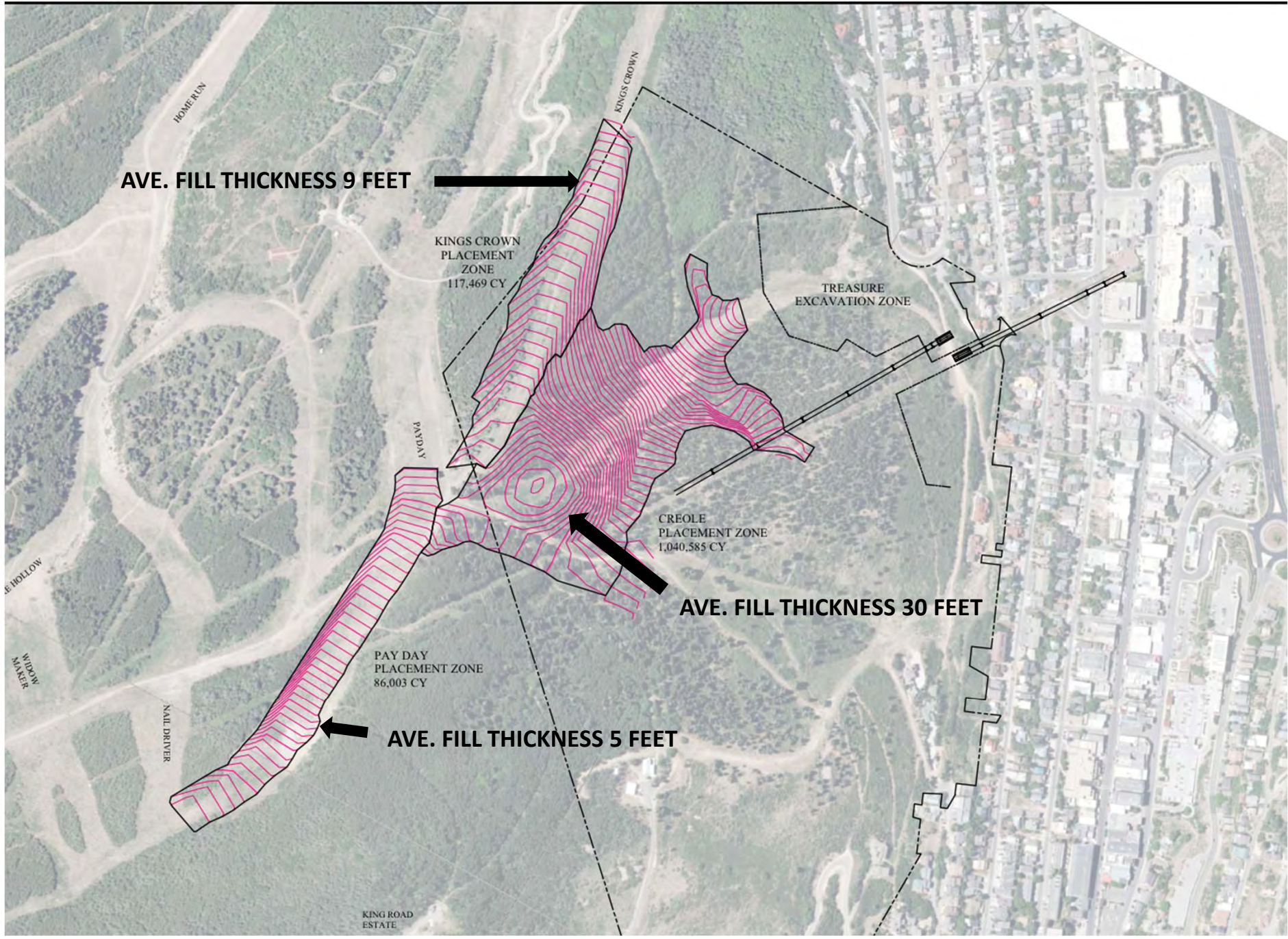


Source: www.EngineeringToolBox.com

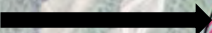
Material	<u>Density</u> at the Borrow 10 ³ (kg/m ³)	Bulking (Swell) Factor (%)
Basalt	2.4 - 3.1	75 - 80
Clay	1.8 - 2.6	20 - 40
Dolomite	2.8	50 - 60
Earth		20 - 30
Gneiss	2.69	75 - 80
Granite	2.6 - 2.8	75 - 80
Gravel, dry	1.80	20 - 30
Gravel, wet	2.00	20 - 30
Gravel, wet w/clay		50 - 60
Limestone	2.7 - 2.8	75 - 80
Loam		15 - 25
Quartz	2.65	75 - 80
Rock		40 - 80
Sand, dry	1.60	20 - 30
Sand, wet	1.95	20 - 30
Sandstone	2.1 - 2.4	75 - 80
Slate	2.6 - 3.3	85 - 90
Soil	1.2 - 1.6	20 - 30

Excerpt from the WSDOT Geotechnical Design Manual, Chapter 10.4, Use of Excavated Materials
 October 2013

Material	In situ wet unit weight (pcf)	Percent Swell	Loose Condition wet unit weight (pcf)	Percent Shrink (-) or Swell (+)	Compacted wet unit weight (pcf)
Sand	114	5	109	-11	129
Sandy Gravel	131	5	124	-7	141
Silt	107	35	79	-17	129
Loess	91	35	67	-25	120
Rock/Earth Mixtures					
75% R/25 % E	153	25	122	+12	136
50% R/50% E	139	29	108	-5	146
25% R/75% E	125	26	99	-8	136
Granite	168	72	98	+28	131
Limestone	162	63	100	+31	124
Sandstone	151	61	94	+29	117
Shale-Siliceous	165	40	118	+25	132
Siltstone	139	45	96	+9	127



AVE. FILL THICKNESS 9 FEET



KINGS CROWN
PLACEMENT
ZONE
117,469 CY

TREASURE
EXCAVATION ZONE

CREOLE
PLACEMENT ZONE
1,040,585 CY

AVE. FILL THICKNESS 30 FEET

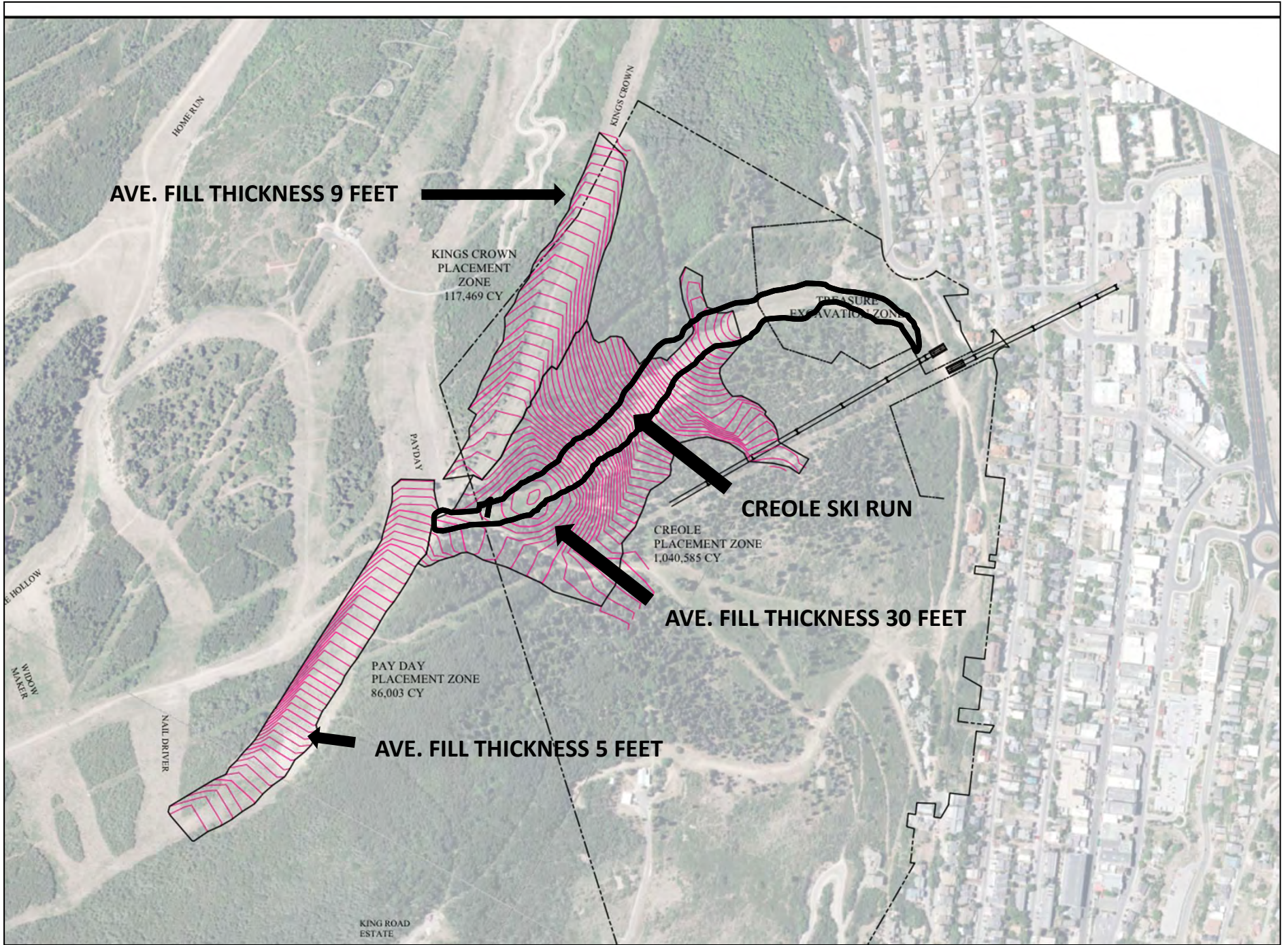


PAY DAY
PLACEMENT ZONE
86,003 CY

AVE. FILL THICKNESS 5 FEET



KING ROAD
ESTATE





CREOLE SKI RUN LOOKING DOWN



CREOLE SKI RUN HALF WAY DOWN



CREOLE SKI RUN LOOKING UP



CREOLE SKI RUN

25 SEPTEMBER 2017

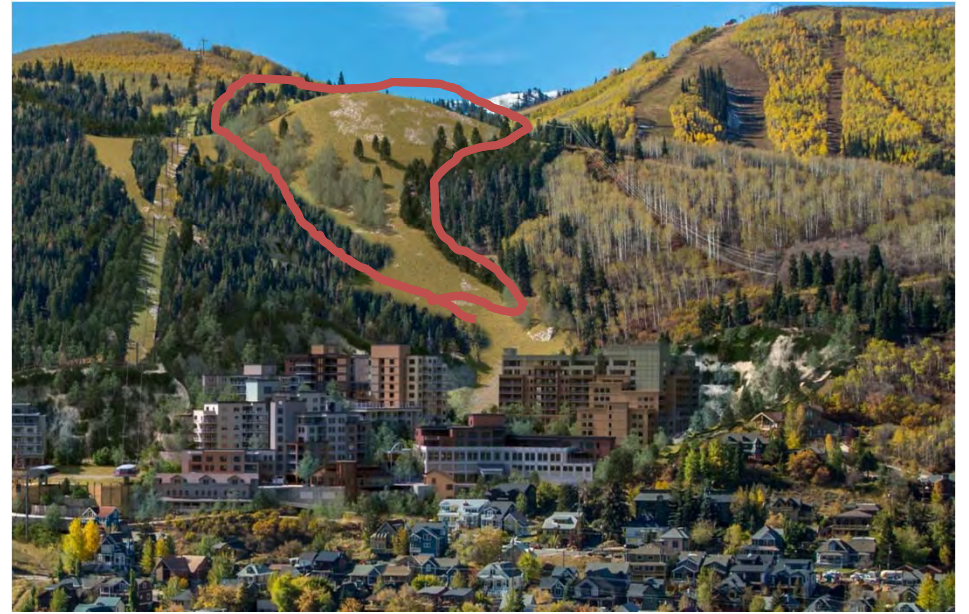




PROPOSED CREOLE PLACEMENT ZONE



EXISTING LANDSCAPE



FUTURE LANDSCAPE









8 AUGUST 2017



LOWELL AVENUE
2 AUGUST 2017



LOWELL AVENUE

26 SEPTEMBER 2017



LOWELL AVENUE

26 SEPTEMBER 2017



LOWELL AVENUE

26 SEPTEMBER 2017



LOWELL AVENUE

9 SEPTEMBER 2017



LOWELL AVENUE

7 AUGUST 2017

Thank You