

SOUTH PARCEL BUILDING "C, D, & E" PRE. DRAINAGE CALCULATIONS:
 Onsite storm water management will be accomplished by sheet draining to onsite detention and retention basins.

Building "C": Drainage will be collected in a retention basin with a leaching system installed in the bottom for maximum percolation. The site is very sandy in this location.

Retention Volume Required:
 $A=1.40 \text{ ac.}, "C"=0.57$
 $\text{Volume} = 2(16,500)(1.40)(0.57)=13,167 \text{ cf Required}$

Infiltrative area in leaching system:
 $100 \text{ LF of } 3' \times 3' \times 3' \text{ trench} = 900 \text{ sf of infiltrative area}$
 Assumed infiltrative rate for sand = 6"/hr
 $Q_{a\text{-inf}}=900 \text{ sf} \times 0.000138 \text{ ft/s} = 0.06 \text{ cfs}$

The basin will de-water in approximately 32 hrs

Retention Basin Volume Supplied

938.0	10377	9136	1.0	22,987	Freeboard
937.0	7894	6744	1.0	13,851	Top of Volume
936.0	5594	4548	1.0	7,107	
935.0	3501	2559	1.0	2,559	
934.0	1616				Bottom of volume

Retention Volume Supplied = 13,851 cf

13,851 CF PROVIDED > 13,167 CF REQUIRED

Building "D & E": Drainage will be collected in a detention basin and outlet to the wetland to the East. 0.22 AC of Building "E" gravel parking is proposed to drain un-detained into the wetland. The flow path through heavy vegetation is approximately 375 ft. before entering the drain to the East.

Retention Volume Required:
 $A=2.23 \text{ ac.}, "C"=0.51$
 Detention Volume : 13,323 cf Required

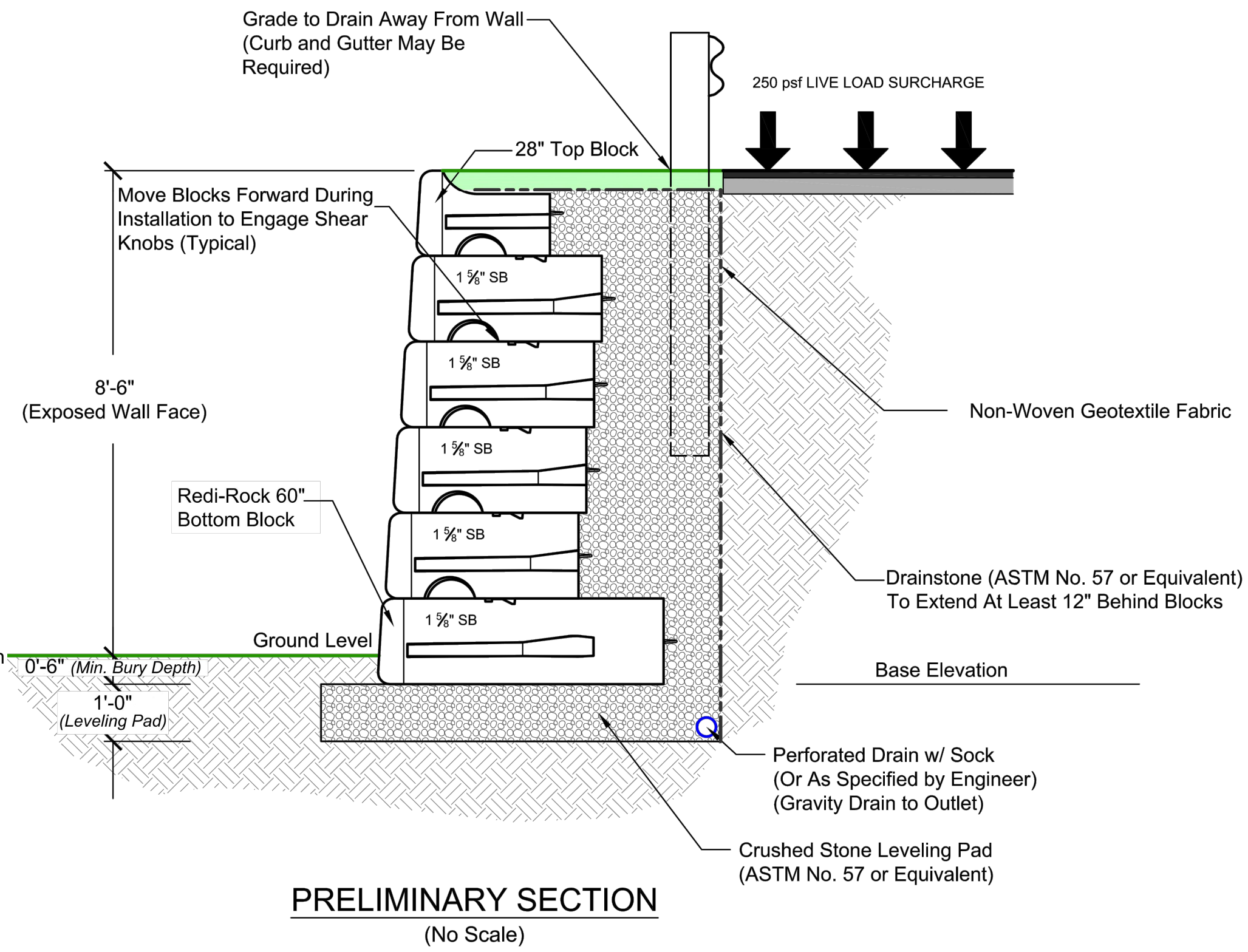
Detention Basin Volume Supplied

918.0	10377	8108	1.0	23,479	Freeboard
917.0	7255	6527	1.0	15,371	Top of Volume
916.0	5799	5101	1.0	8,844	
915.0	4402	3743	1.0	3,743	
914.0	3084				Bottom of volume

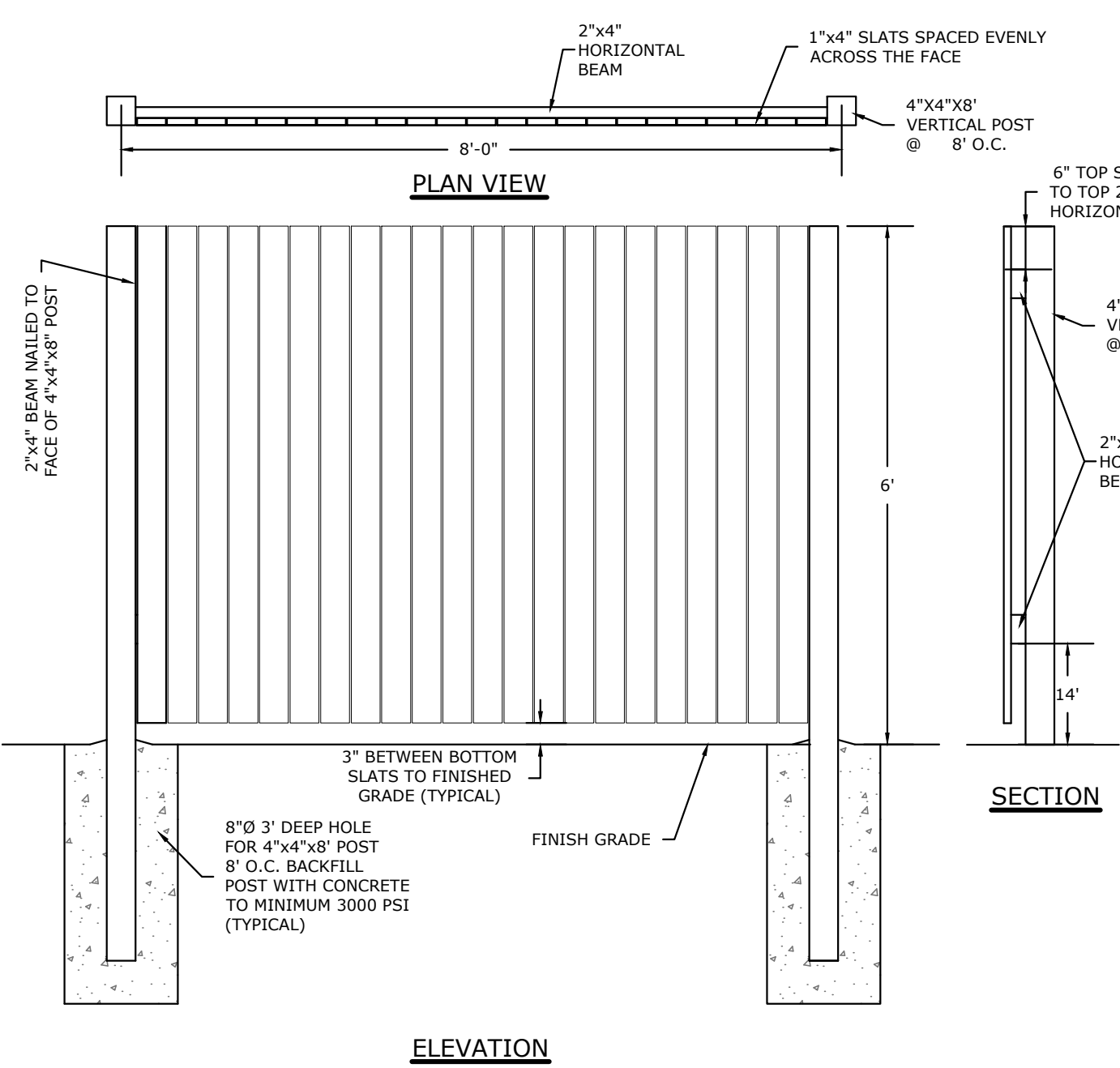
Retention Volume Supplied = 15,371 cf

15,371 CF PROVIDED > 13,323 CF REQUIRED

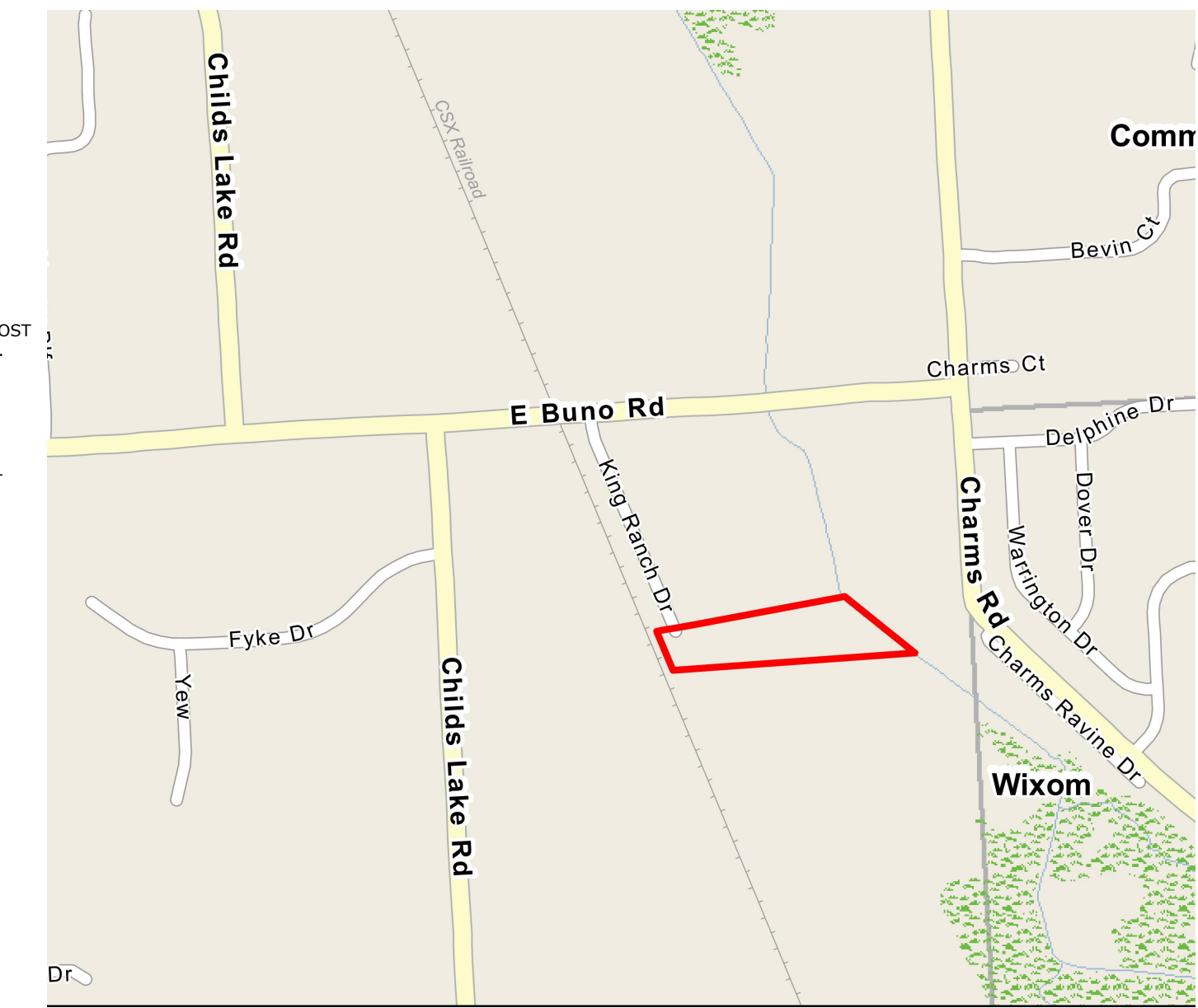
REDI-ROCK RETAINING WALL



PRELIMINARY SECTION
(No Scale)



WOOD SCREENING FENCE DETAIL (ACROSS FRONTAGE)

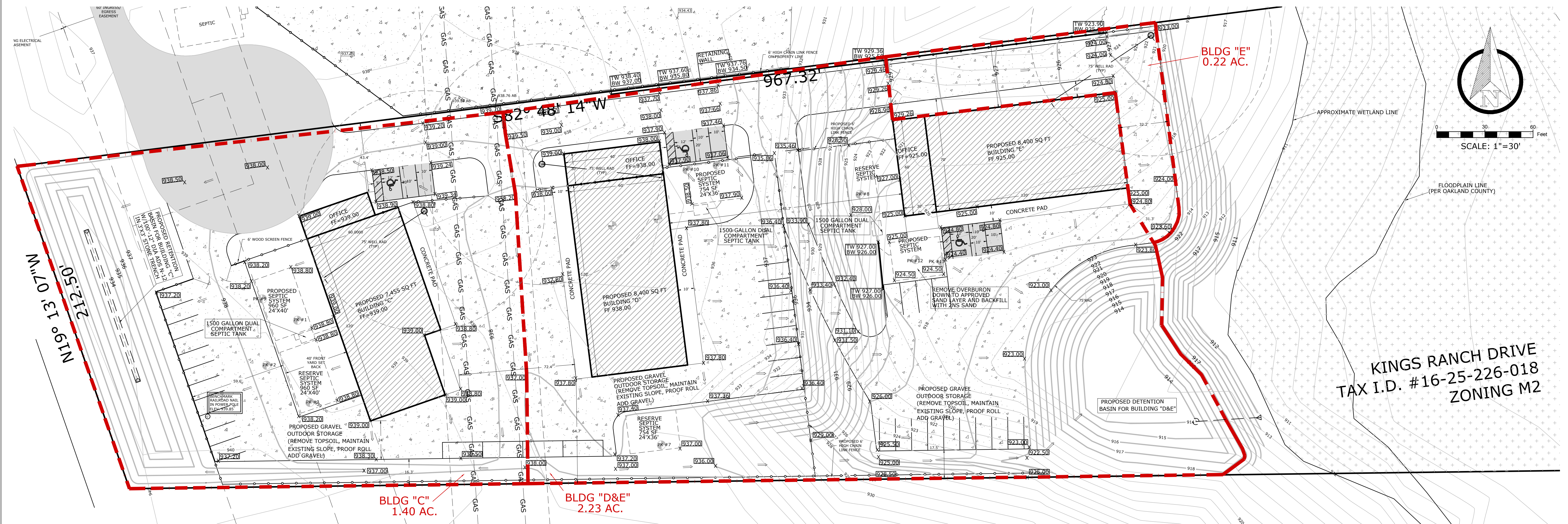


LOCATION MAP
NO SCALE

Consulting Civil Engineers
 "Engineering A Better Michigan"
Powell Engineering & Associates, LLC
 4700 Cornerstone Drive, White Lake, Michigan 48393
 P: 248.714.9895 info@powelleng.com

NOTE: AS AN AID TO THE CONTRACTOR, UTILITIES AND UNDERGROUND STRUCTURES ARE SHOWN ON THESE PLANS AND PROFILES. ALL INFORMATION CONCERNING ALL UTILITIES SHOWN ON THIS PLAN AND PROFILES IS TAKEN FROM FILES FROM AVAILABLE PUBLIC RECORDS. THE OWNER AND ENGINEER DOES NOT GUARANTEE THE ACCURACY OF THE LOCATION, DEPTH OR ADDITIONAL UNDERGROUND UTILITIES OR STRUCTURES NOT BE ENCOUNTERED BY THE CONTRACTOR. THE CONTRACTOR SHALL BE RESPONSIBLE FOR DETERMINING THE LOCATION AND DEPTH OF ALL UTILITIES AND STRUCTURES. THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE OWNER AND ENGINEER FOR CORRECTION ON HOW TO PROCEED. THE CONTRACTOR WILL BE RESPONSIBLE FOR ALL DAMAGES TO EXISTING UTILITIES, NOTING "MISS DIG" AT IMMEDIATELY TO THE OWNER PRIOR TO THE START OF ANY CONSTRUCTION.

BEFORE YOU DIG
CALL MISS DIG
 1-800-482-7171



SOUTH PARCEL
SCALE: 1"=30'

MAHER LOT SPLITS
SOUTH PARCEL SITE PLAN
 MAHER LOT SPLITS
 KING RANCH DRIVE

ISSUE DATES

DRAWN MCS
DESIGNED MCS
APPROVED MCP
 P.E. JOB No. 17-454
 SCALE 1"=50'
S2
 SITE PLAN