Preliminary Development Plan - PD
Land Suitability Analysis

YOUR STORAGE CENTER AT CASTLE ROCK
Castle Rock, Colorado

PREPARED FOR:

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A. **Introduction**

This Land Suitability Analysis Report (LSAR) has been prepared for Your Storage Center Castle Rock, LLC. The total area of the property is 2.98 acres. This analysis identifies surrounding land use and environmental context, the site’s flat areas, drainage patterns and topography, existing vegetation, existing man-made improvements, geology, wildlife habitat, soils, wildfire mitigation, and other unique natural features found on the site.

B. **General Location and Description**

**General Location**

The Your Storage at Castle Rock site (the “Project” or “Property”) is proposed on the east side of S. Wilcox St. in Castle Rock, Colorado, comprised of three unplatted parcels, one of which has been annexed in to the Town as part of the Plum Creek West PD (Parcel A), and two of which are in unincorporated Douglas County (Parcels B and C). Parcels B and C are zoned RR (Rural Residential) in Douglas County, and are currently a part of an annexation application being processed with the Town.
The site is located in the southeast quarter of Section 15, Township 8 South, Range 67 West, and is bounded on the north by a vacant, unplatted parcel, on the east by Plum Creek, on the south by vacant land platted as Lot 2 of the Burt at Castle Rock Amendment No. 2 subdivision, and to the west by S. Wilcox Street.

C. Site Context

Existing Land Use

The site is currently vacant.

Proposed Land Use

The proposed land use will be light industrial.

D. Slope Analysis

The site generally slopes from west to east toward Plum Creek, with slopes varying from 1.5% to 15%, with a portion of the site sloping down to Plum Creek at 2:1. Elevations range from 6273 to 6252. The 100-year floodplain for Plum Creek affects a portion of the east side of the Property.
E. **Soil Types / Condition**

The existing soils are comprised of Loamy alluvial land (Lu – 56%), Sandy wet alluvial land (Se – 40%), and a small portion of Bresser sandy loam (BrD – 4%) primarily in the A Hydrologic Soil Group. The NCRS Soil Resource Report included in this report classifies the site.

F. **Geological Hazards**

There are no known Geological Hazards affecting this site.

G. **Vegetation/Cover**

The site is vacant and the existing ground cover is primarily native grasses and weeds with a portion of gravel and dirt drive.

H. **Wildlife Habitat/Migration**

The Property is located outside of the Preble’s Jumping Mouse habitat zone.

I. **Wildfire Mitigation Zones**

The property has little vegetative coverage. The overall qualitative wildfire hazard rating for this property is low. A combination of topography, available fuels, and existing development led to this determination.

J. **Conclusion**

There are limited development constraints with the proposed Your Storage at Castle Rock Project. While the 100-year floodplain for Plum Creek affects the Property, this area will be utilized for water quality and detention and will have no further impact upon the balance of the development. The Project is located outside of the Preble’s Jumping Mouse habitat. In conclusion, the Property is suitable for the proposed development.

K. **List of References**


2. Town of Castle Rock Development Mapping Services

L. Exhibits

1. Development Constraints
2. NRCS Soil Resource Report
EXHIBIT 2

Custom Soil Resource Report for
Castle Rock Area, Colorado

Your Storage at Castle Rock

September 15, 2017
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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
The soil surveys that comprise your AOI were mapped at 1:20,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

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

Soil Survey Area: Castle Rock Area, Colorado
Survey Area Data: Version 9, Sep 22, 2016

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Feb 22, 2014—Mar 9, 2017

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

<table>
<thead>
<tr>
<th>Map Unit Symbol</th>
<th>Map Unit Name</th>
<th>Acres in AOI</th>
<th>Percent of AOI</th>
</tr>
</thead>
<tbody>
<tr>
<td>BrD</td>
<td>Bresser sandy loam, cool, 5 to 9 percent slopes</td>
<td>0.1</td>
<td>4.3%</td>
</tr>
<tr>
<td>Lu</td>
<td>Loamy alluvial land, dark surface</td>
<td>1.9</td>
<td>55.8%</td>
</tr>
<tr>
<td>Se</td>
<td>Sandy wet alluvial land</td>
<td>1.3</td>
<td>39.9%</td>
</tr>
<tr>
<td><strong>Totals for Area of Interest</strong></td>
<td></td>
<td><strong>3.4</strong></td>
<td><strong>100.0%</strong></td>
</tr>
</tbody>
</table>

Map Unit Descriptions

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.
Castle Rock Area, Colorado

BrD—Bresser sandy loam, cool, 5 to 9 percent slopes

Map Unit Setting
- National map unit symbol: 2tlpk
- Elevation: 5,500 to 6,960 feet
- Mean annual precipitation: 15 to 19 inches
- Mean annual air temperature: 48 to 52 degrees F
- Frost-free period: 100 to 130 days
- Farmland classification: Not prime farmland

Map Unit Composition
- Bresser, cool, and similar soils: 85 percent
- Minor components: 15 percent
- Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Bresser, Cool

Setting
- Landform: Interfluvies
- Landform position (two-dimensional): Shoulder, backslope
- Landform position (three-dimensional): Interfluve
- Down-slope shape: Linear
- Across-slope shape: Linear
- Parent material: Tertiary aged alluvium derived from arkose

Typical profile
- Ap - 0 to 5 inches: sandy loam
- Bt1 - 5 to 8 inches: sandy loam
- Bt2 - 8 to 27 inches: sandy clay loam
- Bt3 - 27 to 36 inches: sandy loam
- C - 36 to 80 inches: loamy coarse sand

Properties and qualities
- Slope: 5 to 9 percent
- Depth to restrictive feature: More than 80 inches
- Natural drainage class: Well drained
- Runoff class: Medium
- Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.60 to 6.00 in/hr)
- Depth to water table: More than 80 inches
- Frequency of flooding: None
- Frequency of ponding: None
- Calcium carbonate, maximum in profile: 5 percent
- Salinity, maximum in profile: Nonsaline to very slightly saline (0.1 to 2.0 mmhos/cm)
- Available water storage in profile: Low (about 5.4 inches)

Interpretive groups
- Land capability classification (irrigated): 4e
- Land capability classification (nonirrigated): 4e
- Hydrologic Soil Group: B
- Ecological site: Sandy Foothill (R049BY210CO)
- Hydric soil rating: No
Minor Components

Ascalon
Percent of map unit: 10 percent
Landform: Interfluves
Landform position (two-dimensional): Shoulder
Landform position (three-dimensional): Interfluve
Down-slope shape: Linear
Across-slope shape: Linear
Ecological site: Sandy Foothill (R049BY210CO)
Hydric soil rating: No

Truckton
Percent of map unit: 5 percent
Landform: Interfluves
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Interfluve
Down-slope shape: Linear
Across-slope shape: Linear
Ecological site: Sandy Foothill (R049BY210CO)
Hydric soil rating: No

Lu—Loamy alluvial land, dark surface

Map Unit Setting
National map unit symbol: jqzc
Elevation: 7,000 to 8,000 feet
Mean annual precipitation: 17 to 19 inches
Mean annual air temperature: 44 to 46 degrees F
Frost-free period: 115 to 120 days
Farmland classification: Not prime farmland

Map Unit Composition
Loamy alluvial land, dark surface: 85 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Loamy Alluvial Land, Dark Surface

Setting
Landform: Flood plains, swales
Down-slope shape: Linear
Across-slope shape: Linear

Typical profile
H1 - 0 to 20 inches: sandy loam
H2 - 20 to 40 inches: stratified loamy sand to clay loam
H3 - 40 to 60 inches: sand and gravel
Properties and qualities
  Slope: 0 to 4 percent
  Natural drainage class: Well drained
  Runoff class: Very low
  Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.20 to 6.00 in/hr)
  Depth to water table: About 48 to 72 inches
  Frequency of flooding: Frequent
  Calcium carbonate, maximum in profile: 5 percent
  Salinity, maximum in profile: Nonsaline to slightly saline (0.0 to 4.0 mmhos/cm)
  Available water storage in profile: Moderate (about 6.0 inches)

Interpretive groups
  Land capability classification (irrigated): None specified
  Land capability classification (nonirrigated): 4w
  Hydrologic Soil Group: C
  Ecological site: Loamy Foothill 14-19 P.Z. (R049XC202CO)
  Hydric soil rating: No

Minor Components
  Sandy alluvial land
    Percent of map unit: 14 percent
    Hydric soil rating: No

  Fluvaquentic haplustolls
    Percent of map unit: 1 percent
    Landform: Terraces
    Hydric soil rating: Yes

Se—Sandy wet alluvial land

Map Unit Setting
  National map unit symbol: jr04
  Elevation: 5,500 to 6,600 feet
  Mean annual precipitation: 15 to 19 inches
  Mean annual air temperature: 48 to 50 degrees F
  Frost-free period: 120 to 135 days
  Farmland classification: Not prime farmland

Map Unit Composition
  Sandy wet alluvial land: 80 percent
  Minor components: 20 percent
  Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Sandy Wet Alluvial Land

Setting
  Landform: Flood plains, drainageways
  Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Weathered alluvium derived from arkose

Typical profile
H1 - 0 to 6 inches: coarse sand
H2 - 6 to 60 inches: stratified coarse sand to sandy loam

Properties and qualities
Slope: 1 to 4 percent
Runoff class: High
Capacity of the most limiting layer to transmit water (Ksat): High to very high (6.00 to 20.00 in/hr)
Depth to water table: About 0 to 24 inches
Frequency of flooding: Frequent
Available water storage in profile: Very low (about 2.9 inches)

Interpretive groups
Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 8w
Hydrologic Soil Group: D
Hydric soil rating: No

Minor Components
Sandy alluvial land
Percent of map unit: 9 percent
Hydric soil rating: No

Loamy wet alluvial land
Percent of map unit: 9 percent
Hydric soil rating: No

Fluventic haplaquolls
Percent of map unit: 2 percent
Landform: Terraces
Hydric soil rating: Yes
References


Custom Soil Resource Report

