



YARDHOMES RIDGE VIEW CASTLE ROCK LAND SUITABILITY ANALYSIS REPORT

Dated: July 3, 2024

Prepared for:

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INTRODUCTION

This Land Suitability Analysis Report (LSAR) has been prepared for the development known as YardHomes Ridge View. The property consists of approximately 32.3 acres, located northwest of Plum Creek Parkway and North Ridge Road in Castle Rock, Colorado. With the PDP rezoning request, approximately 16.2 acres are proposed for development. The remaining 14.7 acres is proposed as open space and public land dedication. This analysis explores the property's opportunities and constraints for development by identifying drainages, the slope of topography, existing vegetation, and other features found on the site.

VICINITY MAP



METHODOLOGY

This LSAR has been compiled utilizing a number of draft reports and maps, supplemented by on-site review of existing conditions. The process for compiling the LSAR included site investigation to determine physical and environmental opportunities and constraints to development. A Slope Analysis map is included in the Appendix of this document.

The following reports excerpted in this report are submitted separately with the Land Use Application.

- Preliminary Geotechnical Evaluation by Ninyo & Moore, 3/18/2024
- Phase 1 Environmental Site Assessment by Ninyo & Moore, 10/31/23

SITE CONDITIONS

The site is bounded by a private road to the north, North Ridge Road to the east / northeast, Plum Creek to the south / southeast, and single family residences to the west. A concrete retaining wall is present along a portion of Plum Creek Parkway at the south edge of the site.

SLOPES



Generally, the approximate 16.2 acres proposed for development has a gentle slope towards the west. The area proposed as public open space contains the majority of the grade change on the property and will be undisturbed with the exception of trails and park amenities. The southwestern corner of the proposed open space contains the most significant grade change, which is evident by the retaining wall that exists along Plum Creek Parkway, which was constructed as part of the roadway construction project.

GEOLOGY

The Preliminary Geotechnical Evaluation report for this proposed development was conducted by Ninyo Moore. The purpose of the study was to evaluate the subsurface conditions and to provide preliminary design and construction recommendations regarding geotechnical aspects of the proposed development. The report includes descriptions of the general site geology, an analysis of the subsurface conditions and groundwater, identification of geologic hazards, and analysis a study of soils. Preliminary recommendations for proposed site development are provided and include future actions to be performed prior to construction.

SOILS

In February of 2024 Ninyo & Moore conducted preliminary subsurface exploration services at the project site to evaluate the existing subsurface conditions and to collect soil and bedrock samples for visual observation and laboratory testing. The evaluation consisted of the drilling, logging, and sampling of 10 exploratory borings using a track-mounted drill rig equipped with 4-inch diameter, continuous-flight, solid-stem augers. The borings were advanced within the project site to depths ranging from approximately 14.2 to 24.3 feet bgs. Relatively undisturbed and disturbed soil and bedrock samples were collected at selected intervals.

Alluvial deposits were encountered at the surface in each boring. Plant root zones and organic rich soil within the alluvium were generally observed to extend 12 to 24 inches bgs. The alluvial deposits encountered in our borings generally consisted of dry to wet, stiff to hard, lean clay to fat clay with varying amounts of sand. Calcium mineralization was commonly observed throughout the alluvium and in-situ moisture was observed to be relatively dry to moist.

Bedrock mapped as the Castle Rock Conglomerate Formation was encountered within our borings underlying the alluvial deposits at depths of approximately 6 to 14 feet bgs and extended to the borings' termination depths of approximately 14.2 to 24.3 feet bgs. Bedrock depths encountered in our borings correspond to approximate bedrock elevations ranging between approximately 6,607.91 and 6,627.83 feet.

GROUNDWATER

Groundwater was not encountered during drilling. Groundwater levels can fluctuate due to seasonal variations in precipitation, irrigation, groundwater withdrawal or injection, and other factors. The possibility of groundwater level fluctuations and perched groundwater should be considered when developing the design and construction plans for the project. On a preliminary basis, groundwater is not anticipated to be a constraint during construction.

WETLANDS

The EDR Radius Map Report included a search of the US Fish and Wildlife Services Wetlands Mapper results. Wetlands were not depicted on or adjoining to the site.



FEMA FLOODPLAINS

According to the Federal Emergency Management Agency (FEMA) website accessed September 22, 2023, the site lies in the flood zone classified as Zone X. Zone X designates an area that has been determined to be outside of the 0.2% annual chance floodplain.

VEGETATION

The site contains various native arid high-plains species such as yucca (*Yucca baccata*), gambel oak (*Quercus gambelii*), and non-native grasses such as quackgrass (*Elymus repens*) and crested wheatgrass (*Agropyron cristatum*). Some landscaped trees have been planted along these roads including pines (*Pinus sp.*), cottonwoods (*Populus sp.*) and Russian olive trees (*Elaeagnus angustifolia*).

ENVIRONMENTAL SITE ASSESSMENT

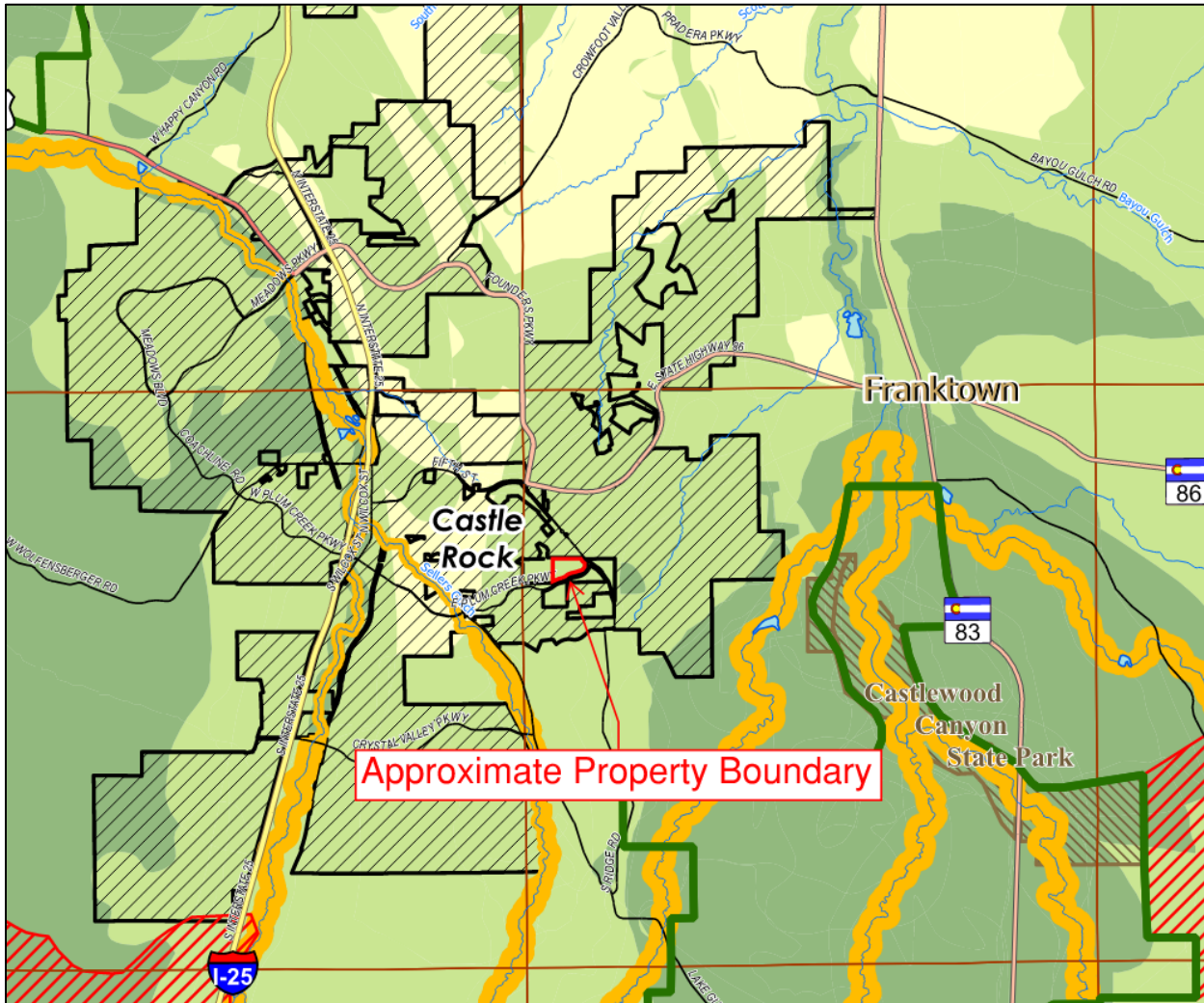
A Phase I Environmental Site Assessment (PIESA) was conducted by Ninyo & Moore and a report issued in October 2023. On site observations revealed that the only notable condition observed on site was Transformers/Potentially PCB-Containing Materials, which was not a significant concern.

Table 5 – On-Site Observations			
Conditions	Not Observed or Noted	Observed or Noted	Significant Concern?
Hazardous Substances/Petroleum Products	X		
Storage Tanks (ASTs and/or USTs)/Vents/Fill Pipes	X		
Building Foundations/Concrete Patches or Pads	X		
Chemical/Petroleum Odors or Staining	X		
Drums/Other Containers	X		
Debris	X		
Pools of Liquid	X		
Transformers/Potentially PCB-Containing Materials		X	No
Pits, Ponds, Lagoons	X		
Solid Waste	X		
Wells/Stand-Pipe	X		
Stressed Vegetation	X		
Floor Drains/Sumps/Sand Traps	X		
Elevator	X		
Waste or Storm Water Discharges/Disposal Systems	X		
Septic Systems/Cesspools	X		

The assessment revealed no evidence of Recognized Environmental Conditions (RECs), no evidence of Controlled Recognized Environmental Conditions (CRECs), and no evidence of Historical Recognized Environmental Conditions (HRECs) in connection with this property or adjoining properties.



WILDLIFE RESOURCES MAP



The above map excerpt is from the Douglas County Wildlife Resources Map, which is within the Douglas County Comprehensive Master Plan 2020. This property and much of the Town of Castle Rock is identified as Moderate Habitat Value.

Appendix

