

Forsgren Associates, LLC  
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Englewood, CO 80128  
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December 3, 2018  
El Paso County Development Services  
Attn: Nina Ruiz  
2880 International Circle, Ste 110  
Colorado Springs, CO 80910

**SUBJECT: 1920 E Baptist Rd LLC  
2-Lot Subdivision  
Drainage Letter**

Dear Nina Ruiz,

This letter is being presented to discuss existing and future drainage features of the proposed site at 1920 E Baptist Rd. Monument, CO 80132 and to provide a description of the proposed work. Justification will be provided showing there will be no negative impact to existing drainage features or downstream conditions.

This project is located in the southwest 1/4 of Section 21, Township 11 South, and Range 66 West of the 6th Principal Meridian. The property is located at 1920 E Baptist Rd. Monument, CO 80132. It has a tax ID number of 6100000519 and is zoned RR-5. The streets that border the project area are E Baptist Rd. to the South and Roller Coaster Rd. to the East. Currently, there is a single-family residential home on the northwest portion of the property.

#### **Description of Property**

The property has an area of 36.65 acres and has a single-family residential home located on the northwest portion of the property. Runoff from the site flows, generally, to the southeast to various, existing storm inlets which convey water to the south to Smith Creek and, eventually, to Fountain Creek. The soil type for the property consists of approximately 30% Kettle gravelly loamy sand at slopes of 8-40%, 25% Peyton-Pring complex at 3-8% slopes, 35% Tomah-Crowfoot loamy sands at 3-8% slopes, and 10% Tomah-Crowfoot complex at 8-15% slopes. All soil types on site are of the hydrologic soil group B. See Appendix for the Custom Soils Resource Report for the site obtained from the National Cooperative Soil Survey (<https://websoilsurvey.sc.egov.usda.gov/App/HomePage.htm>).

#### **Major Basin Description**

The site is located within the Smith Creek drainage basin. All flows from the site flow, generally, to the southwest and end up, eventually, in Fountain Creek.

#### **Floodplain Statement**

The proposed improvements are not within a 100-year floodplain, FIRM #08041C0285F; dated March 17, 1997. See Appendix for FEMA FIRM Floodplain maps.

**Subbasin Description**

The site lies in between the Smith Creek and West Cherry Creek drainage basins. Stormwater runoff flowing off site shall generally flow to the southwest to various storm structures.

**Four Step Process to Minimize Adverse Impacts of Urbanization**

El Paso County requires the UDFCD Four Step Process be utilized for receiving waters protection. The goal of the Four Step Process is to reduce runoff volumes, treat the water quality capture volume of runoff, stabilize drainageways, and implement long-term source controls. Since no onsite improvements are to be made at this time, the four step process shall not be addressed.

**Proposed Conditions**

No site improvements are being proposed at this time. The amount of pervious and impervious areas on site shall remain the same. The current property has a single home with an access road located at the northwest corner of the property. No offsite roadway improvements are required for this two-lot subdivision. When builders are selected for the various parcels to be developed, each individual homeowner shall pay all required drainage fees to the County. Each individual owner and builder shall also conduct their own due-diligence when developing each lot.

It is the professional opinion of the engineer that the proposed improvements will not have any negative impacts on the existing site conditions or the storm drainage system's ability to convey flows from the site and will not adversely affect the downstream and surrounding developments.

Please let me know if you have any questions.

Sincerely,  
Forsgren Associates, Inc

Conner Burba, P.E.  
Project Manager

**Design Engineer's Statement:**

The attached drainage plan and report were prepared under my direction and supervision and are correct to the best of my knowledge and belief. Said drainage report has been prepared according to the criteria established by the County for drainage reports and said report is in conformity with the applicable master plan of the drainage basin. I accept responsibility for any liability caused by any negligent acts, errors or omissions on my part in preparing this report.

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Conner Burba, P.E. #51257

---

Date

**Owner/Developer's Statement:**

I, the owner/developer have read and will comply with all of the requirements specified in this drainage report and plan.

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*Barry Curtis*  
*1920 E Baptist Rd*  
*Monument, CO 80132*

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Date

**El Paso County:**

Filed in accordance with the requirements of the Drainage Criteria Manual, Volumes 1 and 2, El Paso County Engineering Criteria Manual and Land Development Code as amended.

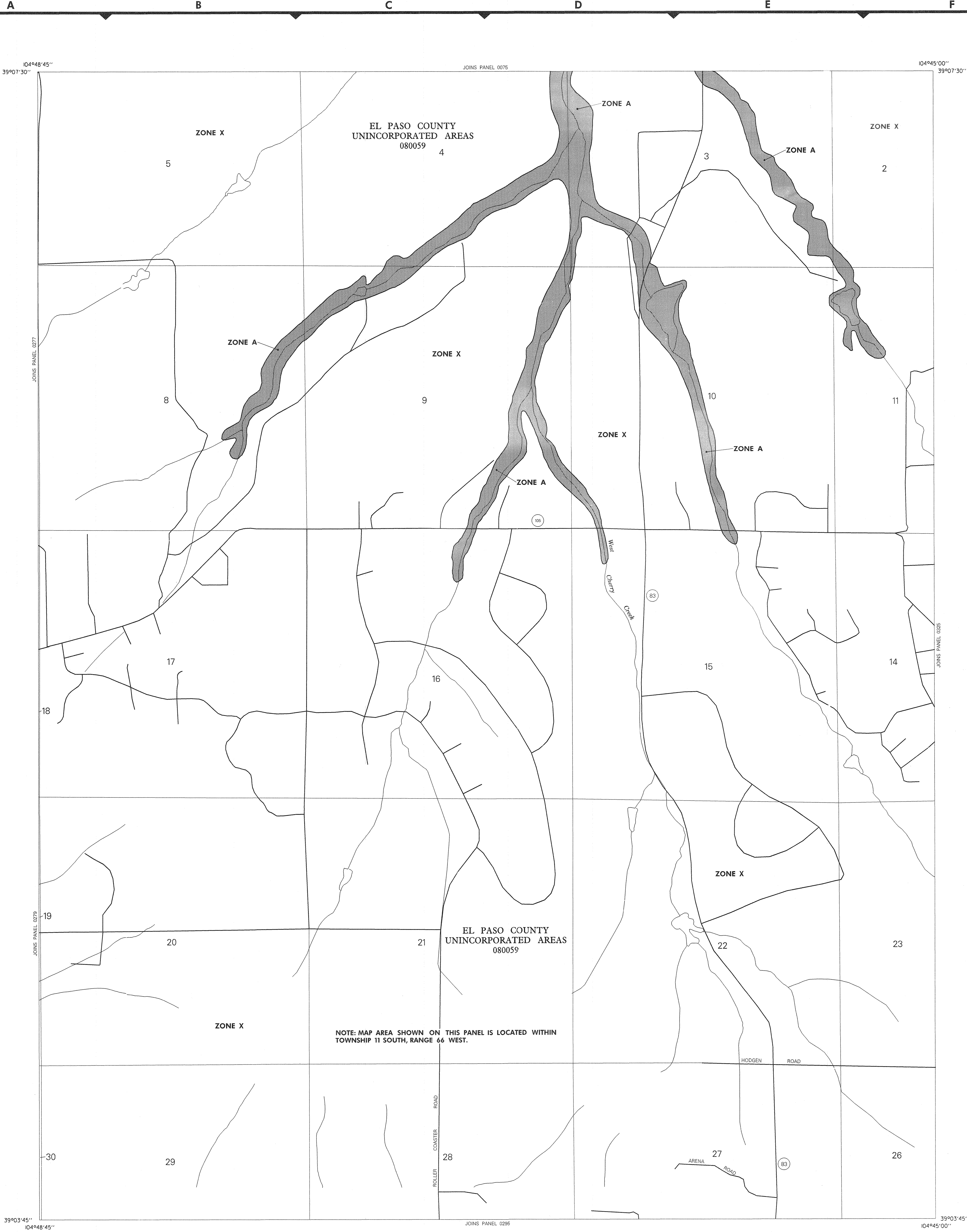
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Jennifer Irvine, P.E.  
County Engineer / ECM Administrator

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Date

Conditions:



### LEGEND

**SPECIAL FLOOD HAZARD AREAS INUNDATED BY 100-YEAR FLOOD**

- ZONE A** No base flood elevations determined.
- ZONE AE** Base flood elevations determined.
- ZONE AH** Flood depths of 1 to 3 feet usually areas of ponding; base flood elevations determined.
- ZONE AO** Flood depths of 1 to 3 feet (usually sheet flow on sloping terrain; average depths determined; for areas of alluvial fan flooding, velocities also determined).
- ZONE A99** To be protected from 100-year flood by Federal flood protection system under construction; no base elevations determined.
- ZONE V** Coastal flood with velocity hazard (wave action); no base flood elevations determined.
- ZONE VE** Coastal flood with velocity hazard (wave action); base flood elevations determined.

**FLOODWAY AREAS IN ZONE AE**

**OTHER FLOOD AREAS**

- ZONE X** Areas of 500-year flood; areas of 100-year flood with average depths of less than 1 foot or with drainage areas less than 1 square mile; and areas protected by levees from 100-year flood.

**OTHER AREAS**

- ZONE X** Areas determined to be outside 500-year floodplain.
- ZONE D** Areas in which flood hazards are undetermined.

**UNDEVELOPED COASTAL BARRIERS**

- Identified 1983
- Identified 1990
- Otherwise Protected Areas

Coastal barrier areas are normally located within or adjacent to Special Flood Hazard Areas.

**Flood Boundary**

**Floodway Boundary**

**Zone D Boundary**

**Boundary Dividing Special Flood Hazard Zones, and Boundary Dividing Areas of Different Coastal Base Flood Elevations Within Special Flood Hazard Zones.**

**Base Flood Elevation Line; Elevation in Feet. See Map Index for Elevation Datum.**

**Cross Section Line**

**Base Flood Elevation in Feet Where Uniform Within Zone. See Map Index for Elevation Datum.**

**Elevation Reference Mark**

**River Mile**

**Horizontal Coordinates Based on North American Datum of 1927 (NAD 27) Projection.**

**NOTES**

This map is for use in administering the National Flood Insurance Program; it does not necessarily identify all areas subject to flooding, particularly from local drainage sources of small size, or all planimetric features outside Special Flood Hazard Areas.

Coastal base flood elevations apply only landward of 0.0 NGVD, and include the effects of wave action; these elevations may also differ significantly from those developed by the National Weather Service for hurricane evacuation planning.

Areas of Special Flood Hazard (100-year flood) include Zones A, AE, AH, AO, A99, V, and VE.

Certain areas not in Special Flood Hazard Areas may be protected by flood control structures.

Boundaries of the floodways were computed at cross sections and interpolated between cross sections. The floodways were based on hydraulic considerations with regard to requirements of the Federal Emergency Management Agency.

Floodway widths in some areas may be too narrow to show to scale. Floodway widths are provided in the Flood Insurance Study Report.

This map may incorporate approximate boundaries of Coastal Barrier Resource System Units and/or Otherwise Protected Areas established under the Coastal Barrier Improvement Act of 1990 (PL 101-591).

Corporate limits shown are current as of the date of this map. The user should contact appropriate community officials to determine if corporate limits have changed subsequent to the issuance of this map.

For community map revision history prior to countywide mapping, see Section 6.0 of the Flood Insurance Study Report.

For adjoining map panels and base map source see separately printed Map Index.

**MAP REPOSITORY**

Refer to Repository Listing on Map Index

**EFFECTIVE DATE OF COUNTYWIDE FLOOD INSURANCE RATE MAP:**

MARCH 17, 1997

**EFFECTIVE DATE(S) OF REVISION(S) TO THIS PANEL:**

Refer to the FLOOD INSURANCE RATE MAP EFFECTIVE DATE shown on this map to determine when actuarial rates apply to structures in zones where elevations or depths have been established.

To determine if flood insurance is available contact an insurance agent or call the National Flood Insurance Program at (800) 638-6620.

**APPROXIMATE SCALE IN FEET**

0 1000 1000

### NATIONAL FLOOD INSURANCE PROGRAM

## FIRM FLOOD INSURANCE RATE MAP

### EL PASO COUNTY, COLORADO AND INCORPORATED AREAS

**PANEL 285 OF 1300**  
(SEE MAP INDEX FOR PANELS NOT PRINTED)

CONTAINS:	COMMUNITY	NUMBER	PANEL	SUFFIX
EL PASO COUNTY, UNINCORPORATED AREAS	080059	0285	F	

**MAP NUMBER**  
08041C0285 F

**EFFECTIVE DATE:**  
MARCH 17, 1997

**Federal Emergency Management Agency**



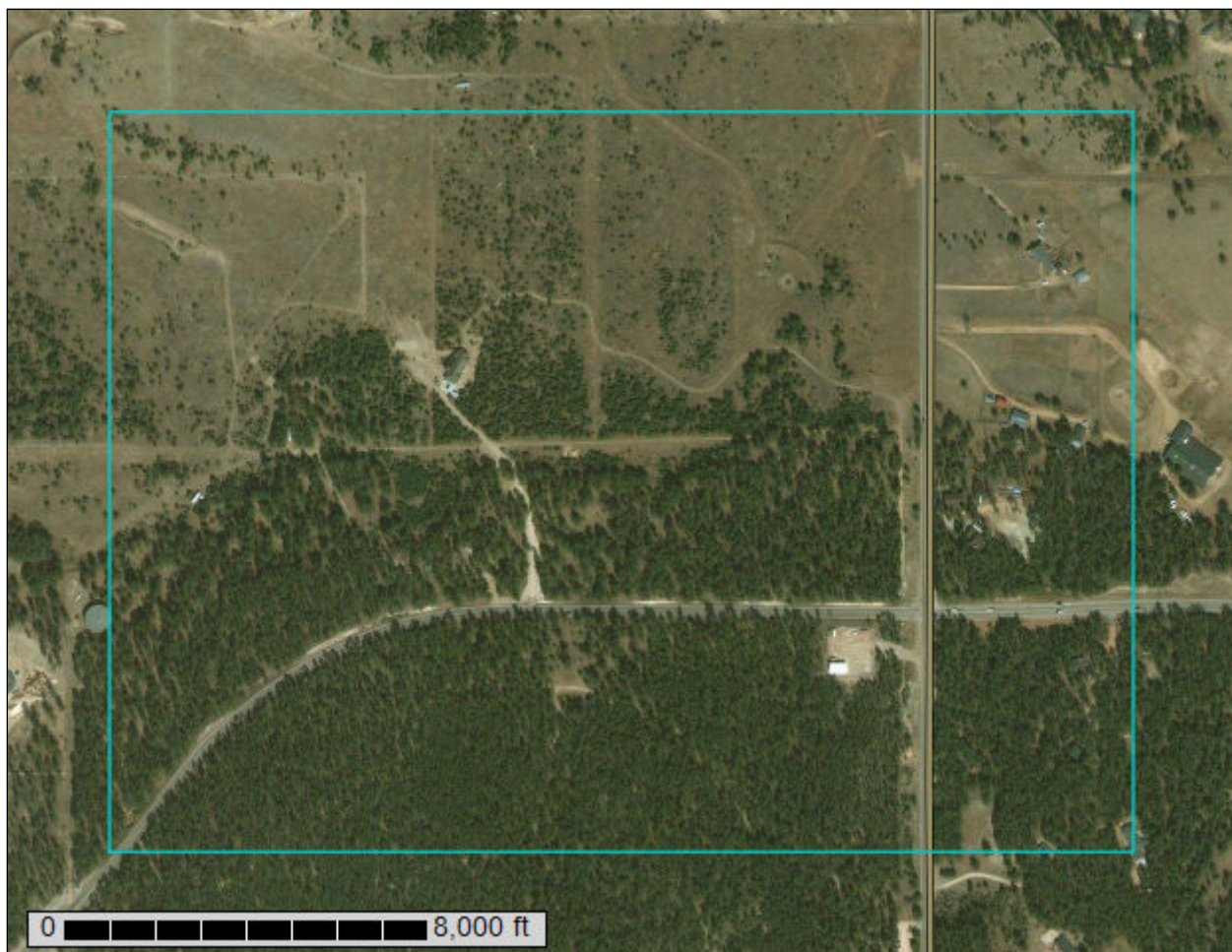
United States  
Department of  
Agriculture

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

# Custom Soil Resource Report for El Paso County Area, Colorado





# Preface

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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.

Although soil survey information can be used for general farm, local, and wider area planning, onsite investigation is needed to supplement this information in some cases. Examples include soil quality assessments (<http://www.nrcs.usda.gov/wps/portal/nrcs/main/soils/health/>) and certain conservation and engineering applications. For more detailed information, contact your local USDA Service Center (<https://offices.sc.egov.usda.gov/locator/app?agency=nrcs>) or your NRCS State Soil Scientist ([http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/contactus/?cid=nrcs142p2\\_053951](http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/contactus/?cid=nrcs142p2_053951)).

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 Web Soil Survey, the site for official soil survey information.

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# Contents

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<b>Preface</b> .....	2
<b>How Soil Surveys Are Made</b> .....	5
<b>Soil Map</b> .....	8
Soil Map (1920 E Baptist Rd).....	9
Legend.....	10
Map Unit Legend (1920 E Baptist Rd).....	11
Map Unit Descriptions (1920 E Baptist Rd).....	11
El Paso County Area, Colorado.....	13
40—Kettle gravelly loamy sand, 3 to 8 percent slopes.....	13
41—Kettle gravelly loamy sand, 8 to 40 percent slopes.....	14
68—Peyton-Pring complex, 3 to 8 percent slopes.....	15
92—Tomah-Crowfoot loamy sands, 3 to 8 percent slopes.....	16
93—Tomah-Crowfoot complex, 8 to 15 percent slopes.....	18
<b>Soil Information for All Uses</b> .....	21
Soil Reports.....	21
Soil Physical Properties.....	21
Engineering Properties (1920 E Baptist Rd).....	21
<b>References</b> .....	28



# How Soil Surveys Are Made

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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.

The objective of soil mapping is not to delineate pure map unit components; the objective is to separate the landscape into landforms or landform segments that have similar use and management requirements. Each map unit is defined by a unique combination of soil components and/or miscellaneous areas in predictable proportions. Some components may be highly contrasting to the other components of the map unit. The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The delineation of such landforms and landform segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, onsite investigation is needed to define and locate the soils and miscellaneous areas.

Soil scientists make many field observations in the process of producing a soil map. The frequency of observation is dependent upon several factors, including scale of mapping, intensity of mapping, design of map units, complexity of the landscape, and experience of the soil scientist. Observations are made to test and refine the soil-landscape model and predictions and to verify the classification of the soils at specific locations. Once the soil-landscape model is refined, a significantly smaller number of measurements of individual soil properties are made and recorded. These measurements may include field measurements, such as those for color, depth to bedrock, and texture, and laboratory measurements, such as those for content of sand, silt, clay, salt, and other components. Properties of each soil typically vary from one point to another across the landscape.

Observations for map unit components are aggregated to develop ranges of characteristics for the components. The aggregated values are presented. Direct measurements do not exist for every property presented for every map unit component. Values for some properties are estimated from combinations of other properties.

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

## Custom Soil Resource Report

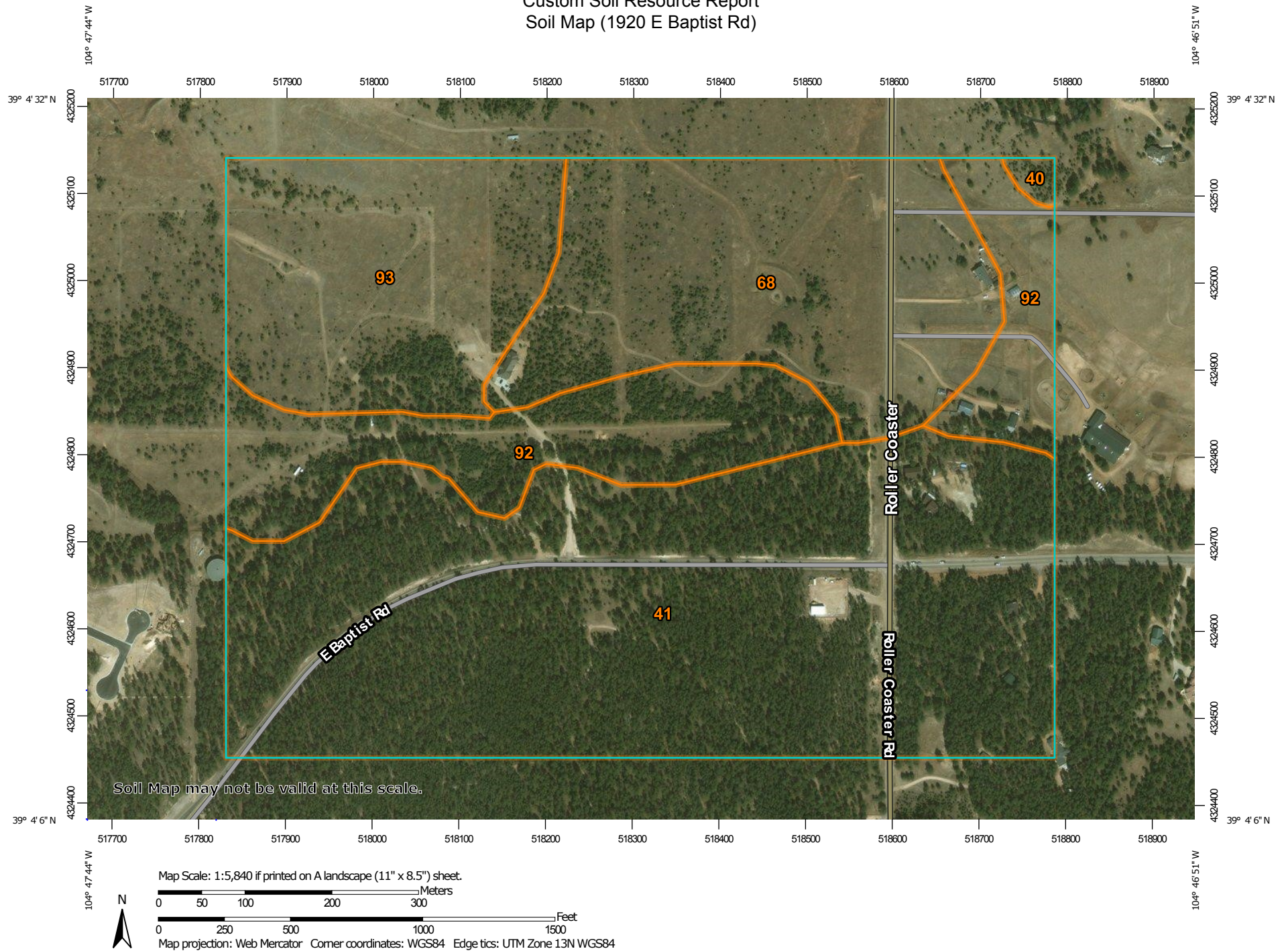
identified each as a specific map unit. Aerial photographs show trees, buildings, fields, roads, and rivers, all of which help in locating boundaries accurately.

# Soil Map

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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 (1920 E Baptist Rd)



# Custom Soil Resource Report


## MAP LEGEND


### Area of Interest (AOI)

 Area of Interest (AOI)


### Soils


 Soil Map Unit Polygons


 Soil Map Unit Lines


 Soil Map Unit Points

### Special Point Features

 Blowout

 Borrow Pit


 Clay Spot


 Closed Depression

 Gravel Pit

 Gravelly Spot

 Landfill

 Lava Flow

 Marsh or swamp

 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

### Water Features

 Streams and Canals


### Transportation

 Rails


 Interstate Highways

 US Routes

 Major Roads

 Local Roads

### Background

 Aerial Photography

## MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:24,000.

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: El Paso County Area, Colorado  
Survey Area Data: Version 15, Oct 10, 2017

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 (1920 E Baptist Rd)

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
40	Kettle gravelly loamy sand, 3 to 8 percent slopes	0.6	0.4%
41	Kettle gravelly loamy sand, 8 to 40 percent slopes	77.4	47.4%
68	Peyton-Pring complex, 3 to 8 percent slopes	34.1	20.9%
92	Tomah-Crowfoot loamy sands, 3 to 8 percent slopes	25.7	15.7%
93	Tomah-Crowfoot complex, 8 to 15 percent slopes	25.6	15.7%
<b>Totals for Area of Interest</b>		<b>163.4</b>	<b>100.0%</b>

## Map Unit Descriptions (1920 E Baptist Rd)

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.

## Custom Soil Resource Report

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 Paso County Area, Colorado

### 40—Kettle gravelly loamy sand, 3 to 8 percent slopes

#### Map Unit Setting

*National map unit symbol:* 368g

*Elevation:* 7,000 to 7,700 feet

*Farmland classification:* Not prime farmland

#### Map Unit Composition

*Kettle and similar soils:* 85 percent

*Estimates are based on observations, descriptions, and transects of the mapunit.*

#### Description of Kettle

##### Setting

*Landform:* Hills

*Landform position (three-dimensional):* Side slope

*Down-slope shape:* Linear

*Across-slope shape:* Linear

*Parent material:* Sandy alluvium derived from arkose

##### Typical profile

*E - 0 to 16 inches:* gravelly loamy sand

*Bt - 16 to 40 inches:* gravelly sandy loam

*C - 40 to 60 inches:* extremely gravelly loamy sand

##### Properties and qualities

*Slope:* 3 to 8 percent

*Depth to restrictive feature:* More than 80 inches

*Natural drainage class:* Somewhat excessively drained

*Runoff class:* Low

*Capacity of the most limiting layer to transmit water (Ksat):* High (2.00 to 6.00 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 3.4 inches)

##### Interpretive groups

*Land capability classification (irrigated):* None specified

*Land capability classification (nonirrigated):* 4e

*Hydrologic Soil Group:* B

*Hydric soil rating:* No

#### Minor Components

##### Other soils

*Percent of map unit:*

*Hydric soil rating:* No

##### Pleasant

*Percent of map unit:*

*Landform:* Depressions

*Hydric soil rating:* Yes

## **41—Kettle gravelly loamy sand, 8 to 40 percent slopes**

### **Map Unit Setting**

*National map unit symbol:* 368h  
*Elevation:* 7,000 to 7,700 feet  
*Farmland classification:* Not prime farmland

### **Map Unit Composition**

*Kettle and similar soils:* 85 percent  
*Estimates are based on observations, descriptions, and transects of the mapunit.*

### **Description of Kettle**

#### **Setting**

*Landform:* Hills  
*Landform position (three-dimensional):* Side slope  
*Down-slope shape:* Linear  
*Across-slope shape:* Linear  
*Parent material:* Sandy alluvium derived from arkose

#### **Typical profile**

*E - 0 to 16 inches:* gravelly loamy sand  
*Bt - 16 to 40 inches:* gravelly sandy loam  
*C - 40 to 60 inches:* extremely gravelly loamy sand

#### **Properties and qualities**

*Slope:* 8 to 40 percent  
*Depth to restrictive feature:* More than 80 inches  
*Natural drainage class:* Somewhat excessively drained  
*Runoff class:* Medium  
*Capacity of the most limiting layer to transmit water (Ksat):* High (2.00 to 6.00 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 3.4 inches)

#### **Interpretive groups**

*Land capability classification (irrigated):* None specified  
*Land capability classification (nonirrigated):* 7e  
*Hydrologic Soil Group:* B  
*Hydric soil rating:* No

### **Minor Components**

#### **Other soils**

*Percent of map unit:*  
*Hydric soil rating:* No

#### **Pleasant**

*Percent of map unit:*

## Custom Soil Resource Report

*Landform:* Depressions  
*Hydric soil rating:* Yes

### 68—Peyton-Pring complex, 3 to 8 percent slopes

#### Map Unit Setting

*National map unit symbol:* 369f  
*Elevation:* 6,800 to 7,600 feet  
*Farmland classification:* Not prime farmland

#### Map Unit Composition

*Peyton and similar soils:* 40 percent  
*Pring and similar soils:* 30 percent  
*Estimates are based on observations, descriptions, and transects of the mapunit.*

#### Description of Peyton

##### Setting

*Landform:* Hills  
*Landform position (three-dimensional):* Side slope  
*Down-slope shape:* Linear  
*Across-slope shape:* Linear  
*Parent material:* Arkosic alluvium derived from sedimentary rock and/or arkosic residuum weathered from sedimentary rock

##### Typical profile

*A - 0 to 12 inches:* sandy loam  
*Bt - 12 to 25 inches:* sandy clay loam  
*BC - 25 to 35 inches:* sandy loam  
*C - 35 to 60 inches:* sandy loam

##### Properties and qualities

*Slope:* 3 to 5 percent  
*Depth to restrictive feature:* More than 80 inches  
*Natural drainage class:* Well drained  
*Runoff class:* Low  
*Capacity of the most limiting layer to transmit water (Ksat):* Moderately high (0.20 to 0.60 in/hr)  
*Depth to water table:* More than 80 inches  
*Frequency of flooding:* None  
*Frequency of ponding:* None  
*Available water storage in profile:* Moderate (about 7.3 inches)

##### Interpretive groups

*Land capability classification (irrigated):* None specified  
*Land capability classification (nonirrigated):* 4c  
*Hydrologic Soil Group:* B  
*Ecological site:* Sandy Divide (R049BY216CO)  
*Hydric soil rating:* No

## **Description of Pring**

### **Setting**

*Landform:* Hills

*Landform position (three-dimensional):* Side slope

*Down-slope shape:* Linear

*Across-slope shape:* Linear

*Parent material:* Arkosic alluvium derived from sedimentary rock

### **Typical profile**

*A - 0 to 14 inches:* coarse sandy loam

*C - 14 to 60 inches:* gravelly sandy loam

### **Properties and qualities**

*Slope:* 3 to 8 percent

*Depth to restrictive feature:* More than 80 inches

*Natural drainage class:* Well drained

*Runoff class:* Low

*Capacity of the most limiting layer to transmit water (Ksat):* High (2.00 to 6.00 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 6.0 inches)

### **Interpretive groups**

*Land capability classification (irrigated):* None specified

*Land capability classification (nonirrigated):* 3e

*Hydrologic Soil Group:* B

*Ecological site:* Loamy Park (R048AY222CO)

*Hydric soil rating:* No

## **Minor Components**

### **Other soils**

*Percent of map unit:*

*Hydric soil rating:* No

### **Pleasant**

*Percent of map unit:*

*Landform:* Depressions

*Hydric soil rating:* Yes

## **92—Tomah-Crowfoot loamy sands, 3 to 8 percent slopes**

### **Map Unit Setting**

*National map unit symbol:* 36b9

*Elevation:* 7,300 to 7,600 feet

*Farmland classification:* Not prime farmland



**Map Unit Composition**

*Tomah and similar soils: 50 percent*

*Crowfoot and similar soils: 30 percent*

*Estimates are based on observations, descriptions, and transects of the mapunit.*

**Description of Tomah**

**Setting**

*Landform: Alluvial fans, hills*

*Landform position (three-dimensional): Side slope, crest*

*Down-slope shape: Linear*

*Across-slope shape: Linear*

*Parent material: Alluvium derived from arkose and/or residuum weathered from arkose*

**Typical profile**

*A - 0 to 10 inches: loamy sand*

*E - 10 to 22 inches: coarse sand*

*C - 48 to 60 inches: coarse sand*

**Properties and qualities**

*Slope: 3 to 8 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 2.00 in/hr)*

*Depth to water table: More than 80 inches*

*Frequency of flooding: None*

*Frequency of ponding: None*

*Available water storage in profile: Very low (about 2.0 inches)*

**Interpretive groups**

*Land capability classification (irrigated): None specified*

*Land capability classification (nonirrigated): 4e*

*Hydrologic Soil Group: B*

*Ecological site: Sandy Divide (R049BY216CO)*

*Hydric soil rating: No*

**Description of Crowfoot**

**Setting**

*Landform: Alluvial fans, hills*

*Landform position (three-dimensional): Side slope, crest*

*Down-slope shape: Linear*

*Across-slope shape: Linear*

*Parent material: Alluvium*

**Typical profile**

*A - 0 to 12 inches: loamy sand*

*E - 12 to 23 inches: sand*

*Bt - 23 to 36 inches: sandy clay loam*

*C - 36 to 60 inches: coarse sand*

**Properties and qualities**

*Slope: 3 to 8 percent*

*Depth to restrictive feature: More than 80 inches*

## Custom Soil Resource Report

*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 2.00 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 4.7 inches)

### **Interpretive groups**

*Land capability classification (irrigated):* None specified

*Land capability classification (nonirrigated):* 4e

*Hydrologic Soil Group:* B

*Ecological site:* Sandy Divide (R049BY216CO)

*Hydric soil rating:* No

### **Minor Components**

#### **Other soils**

*Percent of map unit:*

*Hydric soil rating:* No

#### **Pleasant**

*Percent of map unit:*

*Landform:* Depressions

*Hydric soil rating:* Yes

## **93—Tomah-Crowfoot complex, 8 to 15 percent slopes**

### **Map Unit Setting**

*National map unit symbol:* 36bb

*Elevation:* 7,300 to 7,600 feet

*Farmland classification:* Not prime farmland

### **Map Unit Composition**

*Tomah and similar soils:* 50 percent

*Crowfoot and similar soils:* 30 percent

*Estimates are based on observations, descriptions, and transects of the mapunit.*

### **Description of Tomah**

#### **Setting**

*Landform:* Alluvial fans, hills

*Landform position (three-dimensional):* Side slope, crest

*Down-slope shape:* Linear

*Across-slope shape:* Linear

*Parent material:* Alluvium derived from arkose and/or residuum weathered from arkose

## Custom Soil Resource Report

### Typical profile

*A - 0 to 10 inches:* loamy sand  
*E - 10 to 22 inches:* coarse sand  
*C - 48 to 60 inches:* coarse sand

### Properties and qualities

*Slope:* 8 to 15 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 2.00 in/hr)  
*Depth to water table:* More than 80 inches  
*Frequency of flooding:* None  
*Frequency of ponding:* None  
*Available water storage in profile:* Very low (about 2.0 inches)

### Interpretive groups

*Land capability classification (irrigated):* None specified  
*Land capability classification (nonirrigated):* 6e  
*Hydrologic Soil Group:* B  
*Ecological site:* Sandy Divide (R049BY216CO)  
*Hydric soil rating:* No

## Description of Crowfoot

### Setting

*Landform:* Hills, alluvial fans  
*Landform position (three-dimensional):* Side slope, crest  
*Down-slope shape:* Linear  
*Across-slope shape:* Linear  
*Parent material:* Alluvium

### Typical profile

*A - 0 to 12 inches:* loamy sand  
*E - 12 to 23 inches:* sand  
*Bt - 23 to 36 inches:* sandy clay loam  
*C - 36 to 60 inches:* coarse sand

### Properties and qualities

*Slope:* 8 to 15 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 2.00 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 4.7 inches)

### Interpretive groups

*Land capability classification (irrigated):* None specified  
*Land capability classification (nonirrigated):* 6e  
*Hydrologic Soil Group:* B  
*Ecological site:* Sandy Divide (R049BY216CO)  
*Hydric soil rating:* No

**Minor Components**

**Other soils**

*Percent of map unit:*

*Hydric soil rating:* No

**Pleasant**

*Percent of map unit:*

*Landform:* Depressions

*Hydric soil rating:* Yes

# Soil Information for All Uses

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## Soil Reports

The Soil Reports section includes various formatted tabular and narrative reports (tables) containing data for each selected soil map unit and each component of each unit. No aggregation of data has occurred as is done in reports in the Soil Properties and Qualities and Suitabilities and Limitations sections.

The reports contain soil interpretive information as well as basic soil properties and qualities. A description of each report (table) is included.

## Soil Physical Properties

This folder contains a collection of tabular reports that present soil physical properties. The reports (tables) include all selected map units and components for each map unit. Soil physical properties are measured or inferred from direct observations in the field or laboratory. Examples of soil physical properties include percent clay, organic matter, saturated hydraulic conductivity, available water capacity, and bulk density.

## Engineering Properties (1920 E Baptist Rd)

This table gives the engineering classifications and the range of engineering properties for the layers of each soil in the survey area.

*Hydrologic soil group* is a group of soils having similar runoff potential under similar storm and cover conditions. The criteria for determining Hydrologic soil group is found in the National Engineering Handbook, Chapter 7 issued May 2007(<http://directives.sc.egov.usda.gov/OpenNonWebContent.aspx?content=17757.wba>). Listing HSGs by soil map unit component and not by soil series is a new concept for the engineers. Past engineering references contained lists of HSGs by soil series. Soil series are continually being defined and redefined, and the list of soil series names changes so frequently as to make the task of maintaining a single national list virtually impossible. Therefore, the criteria is now used to calculate the HSG using the component soil properties and no such national series lists will be maintained. All such references are obsolete and their use should be discontinued. Soil properties that influence runoff potential are those that influence the minimum rate of infiltration for a bare soil after prolonged wetting and when not frozen. These properties are depth to a seasonal high water table, saturated hydraulic conductivity after prolonged wetting, and depth to a layer with a very slow water transmission

rate. Changes in soil properties caused by land management or climate changes also cause the hydrologic soil group to change. The influence of ground cover is treated independently. There are four hydrologic soil groups, A, B, C, and D, and three dual groups, A/D, B/D, and C/D. In the dual groups, the first letter is for drained areas and the second letter is for undrained areas.

The four hydrologic soil groups are described in the following paragraphs:

*Group A.* Soils having a high infiltration rate (low runoff potential) when thoroughly wet. These consist mainly of deep, well drained to excessively drained sands or gravelly sands. These soils have a high rate of water transmission.

*Group B.* Soils having a moderate infiltration rate when thoroughly wet. These consist chiefly of moderately deep or deep, moderately well drained or well drained soils that have moderately fine texture to moderately coarse texture. These soils have a moderate rate of water transmission.

*Group C.* Soils having a slow infiltration rate when thoroughly wet. These consist chiefly of soils having a layer that impedes the downward movement of water or soils of moderately fine texture or fine texture. These soils have a slow rate of water transmission.

*Group D.* Soils having a very slow infiltration rate (high runoff potential) when thoroughly wet. These consist chiefly of clays that have a high shrink-swell potential, soils that have a high water table, soils that have a claypan or clay layer at or near the surface, and soils that are shallow over nearly impervious material. These soils have a very slow rate of water transmission.

*Depth* to the upper and lower boundaries of each layer is indicated.

*Texture* is given in the standard terms used by the U.S. Department of Agriculture. These terms are defined according to percentages of sand, silt, and clay in the fraction of the soil that is less than 2 millimeters in diameter. "Loam," for example, is soil that is 7 to 27 percent clay, 28 to 50 percent silt, and less than 52 percent sand. If the content of particles coarser than sand is 15 percent or more, an appropriate modifier is added, for example, "gravelly."

*Classification* of the soils is determined according to the Unified soil classification system (ASTM, 2005) and the system adopted by the American Association of State Highway and Transportation Officials (AASHTO, 2004).

The Unified system classifies soils according to properties that affect their use as construction material. Soils are classified according to particle-size distribution of the fraction less than 3 inches in diameter and according to plasticity index, liquid limit, and organic matter content. Sandy and gravelly soils are identified as GW, GP, GM, GC, SW, SP, SM, and SC; silty and clayey soils as ML, CL, OL, MH, CH, and OH; and highly organic soils as PT. Soils exhibiting engineering properties of two groups can have a dual classification, for example, CL-ML.

The AASHTO system classifies soils according to those properties that affect roadway construction and maintenance. In this system, the fraction of a mineral soil that is less than 3 inches in diameter is classified in one of seven groups from A-1 through A-7 on the basis of particle-size distribution, liquid limit, and plasticity index. Soils in group A-1 are coarse grained and low in content of fines (silt and clay). At the other extreme, soils in group A-7 are fine grained. Highly organic soils are classified in group A-8 on the basis of visual inspection.

If laboratory data are available, the A-1, A-2, and A-7 groups are further classified as A-1-a, A-1-b, A-2-4, A-2-5, A-2-6, A-2-7, A-7-5, or A-7-6. As an additional refinement, the suitability of a soil as subgrade material can be indicated by a group



index number. Group index numbers range from 0 for the best subgrade material to 20 or higher for the poorest.

*Percentage of rock fragments* larger than 10 inches in diameter and 3 to 10 inches in diameter are indicated as a percentage of the total soil on a dry-weight basis. The percentages are estimates determined mainly by converting volume percentage in the field to weight percentage. Three values are provided to identify the expected Low (L), Representative Value (R), and High (H).

*Percentage (of soil particles) passing designated sieves* is the percentage of the soil fraction less than 3 inches in diameter based on an oven-dry weight. The sieves, numbers 4, 10, 40, and 200 (USA Standard Series), have openings of 4.76, 2.00, 0.420, and 0.074 millimeters, respectively. Estimates are based on laboratory tests of soils sampled in the survey area and in nearby areas and on estimates made in the field. Three values are provided to identify the expected Low (L), Representative Value (R), and High (H).

*Liquid limit and plasticity index* (Atterberg limits) indicate the plasticity characteristics of a soil. The estimates are based on test data from the survey area or from nearby areas and on field examination. Three values are provided to identify the expected Low (L), Representative Value (R), and High (H).

References:

American Association of State Highway and Transportation Officials (AASHTO). 2004. Standard specifications for transportation materials and methods of sampling and testing. 24th edition.

American Society for Testing and Materials (ASTM). 2005. Standard classification of soils for engineering purposes. ASTM Standard D2487-00.

# Custom Soil Resource Report

Absence of an entry indicates that the data were not estimated. The asterisk '\*' denotes the representative texture; other possible textures follow the dash. The criteria for determining the hydrologic soil group for individual soil components is found in the National Engineering Handbook, Chapter 7 issued May 2007(<http://directives.sc.egov.usda.gov/OpenNonWebContent.aspx?content=17757.wba>). Three values are provided to identify the expected Low (L), Representative Value (R), and High (H).

Engineering Properties—El Paso County Area, Colorado														
Map unit symbol and soil name	Pct. of map unit	Hydrologic group	Depth	USDA texture	Classification		Pct Fragments		Percentage passing sieve number—				Liquid limit	Plasticity index
					Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
			<i>In</i>				<i>L-R-H</i>	<i>L-R-H</i>	<i>L-R-H</i>	<i>L-R-H</i>	<i>L-R-H</i>	<i>L-R-H</i>	<i>L-R-H</i>	<i>L-R-H</i>
40—Kettle gravelly loamy sand, 3 to 8 percent slopes														
Kettle	85	B	0-16	Gravelly loamy sand	SC-SM, SM, SW-SM	A-1-b, A-2	0- 0- 0	0- 8- 15	60-73-85	55-65-75	30-43-55	10-15-20	20-23-25	NP-3 -5
			16-40	Gravelly sandy loam	GM, SC-SM, SM	A-1-b, A-2	0- 0- 0	0- 8- 15	60-70-80	50-63-75	35-43-50	20-25-30	20-23-25	NP-3 -5
			40-60	Extremely gravelly loamy sand, extremely gravelly loamy coarse sand	GP, GW	A-1	0- 5- 10	0-10- 20	15-23-30	10-18-25	5-13- 20	0- 3- 5	—	NP
41—Kettle gravelly loamy sand, 8 to 40 percent slopes														
Kettle	85	B	0-16	Gravelly loamy sand	SC-SM, SM, SW-SM	A-1-b, A-2	0- 0- 0	0- 8- 15	60-73-85	55-65-75	30-43-55	10-15-20	20-23-25	NP-3 -5
			16-40	Gravelly sandy loam	GM, SC-SM, SM	A-1-b, A-2	0- 0- 0	0- 8- 15	60-70-80	50-63-75	35-43-50	20-25-30	20-23-25	NP-3 -5
			40-60	Extremely gravelly loamy sand, extremely gravelly loamy coarse sand	GP, GW	A-1	0- 5- 10	0-10- 20	15-23-30	10-18-25	5-13- 20	0- 3- 5	—	NP

# Custom Soil Resource Report

Engineering Properties—El Paso County Area, Colorado														
Map unit symbol and soil name	Pct. of map unit	Hydrologic group	Depth	USDA texture	Classification		Pct Fragments		Percentage passing sieve number—				Liquid limit	Plasticity index
					Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
			<i>In</i>				<i>L-R-H</i>	<i>L-R-H</i>	<i>L-R-H</i>	<i>L-R-H</i>	<i>L-R-H</i>	<i>L-R-H</i>	<i>L-R-H</i>	<i>L-R-H</i>
68—Peyton-Pring complex, 3 to 8 percent slopes														
Peyton	40	B	0-12	Sandy loam	SC, SC-SM	A-2-4, A-4	0- 0- 0	0- 0- 0	85-93-100	80-90-100	50-60-70	25-33-40	25-28-30	5-8 -10
			12-25	Sandy clay loam	CL, CL-ML, SC, SC-SM	A-2, A-4, A-6	0- 0- 0	0- 0- 0	85-93-100	80-90-100	65-78-90	30-43-55	25-30-35	5-10-15
			25-35	Sandy clay loam, sandy loam	CL-ML, SC, SC-SM	A-2, A-4	0- 0- 0	0- 0- 0	85-93-100	80-90-100	50-70-90	25-40-55	25-28-30	5-8 -10
			35-60	Sandy loam	SM	A-2-4, A-4	0- 0- 0	0- 0- 0	85-93-100	80-90-100	50-60-70	25-33-40	20-23-25	NP-3 -5
Pring	30	B	0-14	Coarse sandy loam	SC, SC-SM	A-2-4, A-1	0- 0- 0	0- 5- 10	85-93-100	80-90-100	45-55-65	20-25-30	25-28-30	5-8 -10
			14-60	Gravelly sandy loam	GC-GM, SC-SM, SM	A-1-b, A-2	0- 0- 0	0- 5- 10	60-80-100	55-78-100	35-43-50	20-25-30	20-23-25	NP-3 -5

# Custom Soil Resource Report

Engineering Properties—El Paso County Area, Colorado														
Map unit symbol and soil name	Pct. of map unit	Hydrologic group	Depth	USDA texture	Classification		Pct Fragments		Percentage passing sieve number—				Liquid limit	Plasticity index
					Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
			<i>In</i>				<i>L-R-H</i>	<i>L-R-H</i>	<i>L-R-H</i>	<i>L-R-H</i>	<i>L-R-H</i>	<i>L-R-H</i>	<i>L-R-H</i>	<i>L-R-H</i>
92—Tomah-Crowfoot loamy sands, 3 to 8 percent slopes														
Tomah	50	B	0-10	Loamy sand	SM	A-2-4	0- 0- 0	0- 0- 0	100-100-100	100-100-100	50-60-70	15-23-30	20-23-25	NP-3 -5
			10-22	Coarse sand	SP-SM, SW-SM	A-1, A-2, A-3	0- 0- 0	0- 0- 0	100-100-100	100-100-100	45-55-65	5- 8- 10	—	NP
			22-48	Stratified coarse sand to sandy clay loam	SC, SM, SP-SM, SC-SM	A-2-4, A-1, A-4	0- 0- 0	0- 0- 0	85-93-100	80-90-100	35-63-90	5-28- 50	20-25-30	NP-5 -10
			48-60	Coarse sand, loamy coarse sand	SC-SM, SM, SP-SM	A-2-4, A-1, A-3	0- 0- 0	0- 0- 0	85-93-100	80-90-100	35-53-70	5-15- 25	20-23-25	NP-3 -5
Crowfoot	30	B	0-12	Loamy sand	SM	A-2-4, A-1	0- 0- 0	0- 5- 10	85-93-100	80-90-100	40-58-75	15-23-30	20-23-25	NP-3 -5
			12-23	Sand	SM, SP-SM	A-1, A-2, A-3	0- 0- 0	0- 5- 10	85-93-100	80-90-100	40-55-70	5-10- 15	—	NP
			23-36	Sandy clay loam	CL-ML, SC, SC-SM	A-2-4, A-4, A-6	0- 0- 0	0- 5- 10	85-93-100	80-90-100	65-78-90	30-43-55	25-30-35	5-10-15
			36-60	Coarse sand, loamy coarse sand	SM, SP-SM	A-1, A-2	0- 0- 0	0- 5- 10	85-93-100	80-90-100	35-53-70	5-15- 25	—	NP

# Custom Soil Resource Report

Engineering Properties—El Paso County Area, Colorado														
Map unit symbol and soil name	Pct. of map unit	Hydrologic group	Depth	USDA texture	Classification		Pct Fragments		Percentage passing sieve number—				Liquid limit	Plasticity index
					Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
			<i>In</i>				<i>L-R-H</i>	<i>L-R-H</i>	<i>L-R-H</i>	<i>L-R-H</i>	<i>L-R-H</i>	<i>L-R-H</i>	<i>L-R-H</i>	<i>L-R-H</i>
93—Tomah-Crowfoot complex, 8 to 15 percent slopes														
Tomah	50	B	0-10	Loamy sand	SM	A-2-4	0- 0- 0	0- 0- 0	100-100-100	100-100-100	50-60-70	15-23-30	20-23-25	NP-3 -5
			10-22	Coarse sand	SP-SM, SW-SM	A-1, A-2, A-3	0- 0- 0	0- 0- 0	100-100-100	100-100-100	45-55-65	5- 8- 10	—	NP
			22-48	Stratified coarse sand to sandy clay loam	SC, SM, SP-SM, SC-SM	A-1, A-4, A-2-4	0- 0- 0	0- 0- 0	85-93-100	80-90-100	35-63-90	5-28- 50	20-25-30	NP-5 -10
			48-60	Coarse sand, loamy coarse sand	SC-SM, SM, SP-SM	A-1, A-3, A-2-4	0- 0- 0	0- 0- 0	85-93-100	80-90-100	35-53-70	5-15- 25	20-23-25	NP-3 -5
Crowfoot	30	B	0-12	Loamy sand	SM	A-1, A-2-4	0- 0- 0	0- 5- 10	85-93-100	80-90-100	40-58-75	15-23-30	20-23-25	NP-3 -5
			12-23	Sand	SM, SP-SM	A-1, A-2, A-3	0- 0- 0	0- 5- 10	85-93-100	80-90-100	40-55-70	5-10- 15	—	NP
			23-36	Sandy clay loam	CL-ML, SC, SC-SM	A-4, A-6, A-2-4	0- 0- 0	0- 5- 10	85-93-100	80-90-100	65-78-90	30-43-55	25-30-35	5-10-15
			36-60	Coarse sand, loamy coarse sand	SM, SP-SM	A-1, A-2	0- 0- 0	0- 5- 10	85-93-100	80-90-100	35-53-70	5-15- 25	—	NP

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## Custom Soil Resource Report

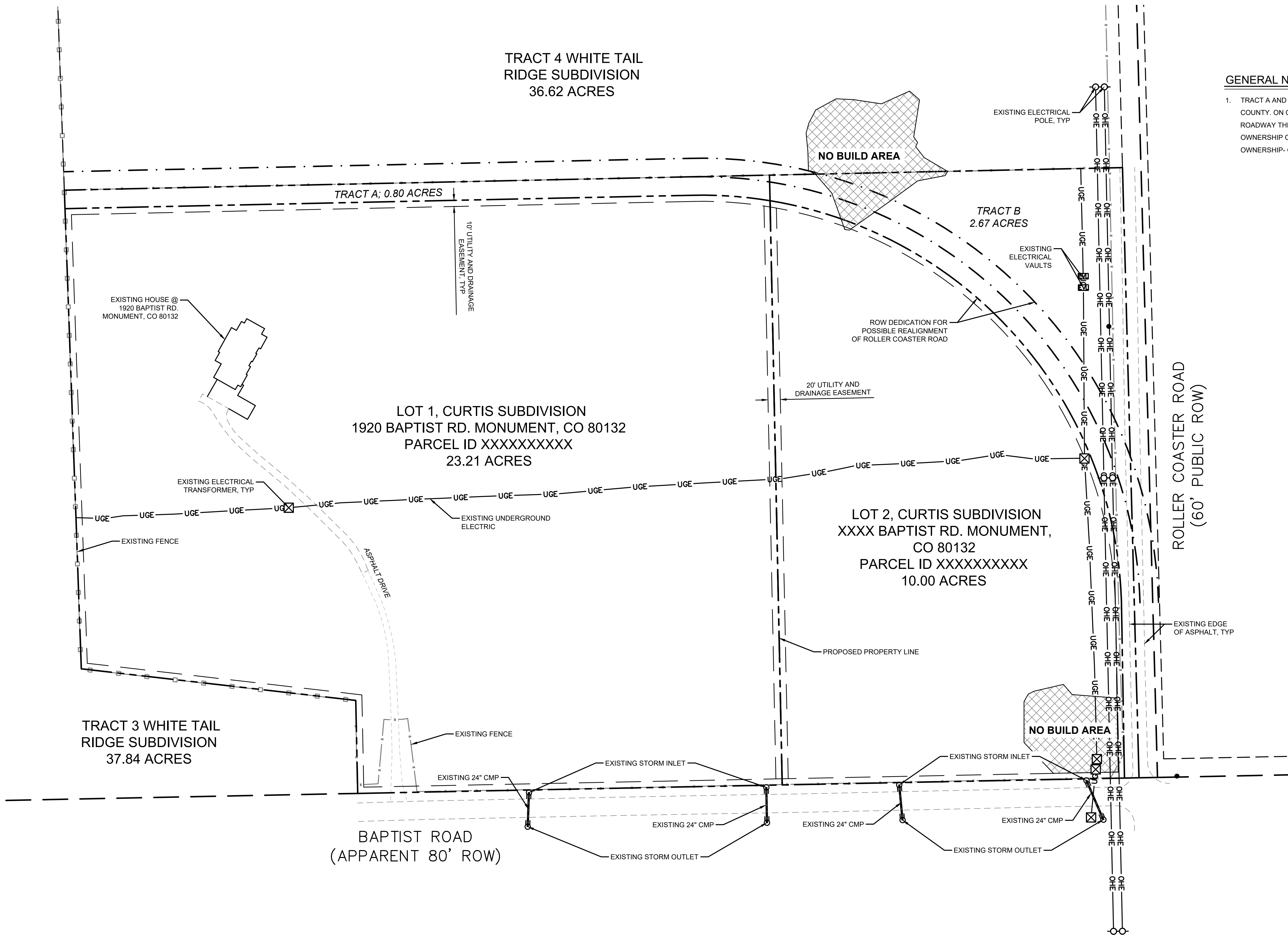
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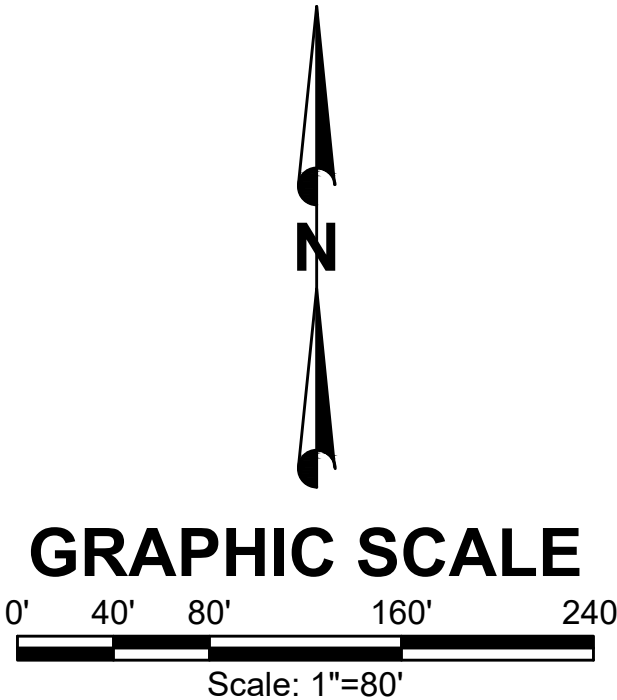
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CURTIS 2-LOT SUBDIVISION

SITE DEVELOPMENT PLANS  
1920 E BAPTIST RD. MONUMENT, CO 80132



- GENERAL NOTES:
- TRACT A AND TRACT B SHALL BE OWNED AND MAINTAINED BY EL PASO COUNTY. ON CONDITION THAT EL PASO COUNTY COMES TO DECISION THAT A ROADWAY THROUGH TRACT A AND TRACT B WILL NOT BE CONSTRUCTED, OWNERSHIP OF TRACT A SHALL BE GIVEN TO OWNER OF LOT 1 AND OWNERSHIP OF TRACT B SHALL BE GIVEN TO OWNER OF LOT 2.



2-LOT MINOR SUBDIVISION		DEVELOPMENT PLAN	
OWNER TANJA AND BARRY CURTIS MONUMENT, CO		SHEET NO: <b>C-01</b>	
PROJECT NO: 04-18-0026		DATE: 11/09/18	
DRAWN: C. BURRA		PAGE NO: 1 OF 1	
DESIGNED: C. BURRA			
APPROVED: C. BURRA			
J. MOORE			
QA/QC			
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