HOMELAND ACRES
DRAINAGE LETTER
EL PASO COUNTY, COLORADO

Please include hydrologic calculations per Section 4.5.d of the DCM for the drainage letter type submittal

April 2024

PREPARED FOR:

IBT PIMA LLC
1275 Village Ridge Pt
Monument, CO 80132

PREPARED BY:

Dakota Springs Engineering
31 N. Tejon Street, Suite 518
Colorado Springs, CO 80903
719.227.7388

SF2416

PROJECT NO. 0419-01

CERTIFICATIONS

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.

Charles K. Cothern, P.E. #24997

COLORADO REGISTERED PROFESSIONAL ENGINEER
CHARLES K. COTHERN
24997
7/23/24

Seal

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.

By (signature): _____ Date: 8/9/24

Title: President / CEO Integrity Bank & Trust

Address: 1275 VILLAGE RIDGE PT MONUMENT CO, 80132-8996

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

_____ _____

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

Joshua Palmer

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Appendix

List of Exhibits

Vicinity Map
Soils Data
FIRM Map
Referenced Existing Drainage Maps

1.0 INTRODUCTION

This letter is to serve as the drainage letter for the HomeLand Acres subdivision. The HomeLand Acres subdivision consists of one 10.43 acre lot and one 46.66 acre tract for a total acreage of 57.09 acres. Lot 1, also known as 8180 Kane Rd, Fountain, CO 80817 includes the existing house, well, and septic. The remaining tract (Tract A) will remain undeveloped. The entire 57.09 acres will remain as is and unchanged, only plated into a single lot and tract. Therefore, not affecting the drainage characteristics of the property. platted

Purpose

The purpose of this letter is to present an understanding of existing drainage characteristics and conditions. Highlighting the existing historical discharge location(s) and rate(s).

2.0 General Location and Description

Location

HomeLand Acres is a 57.09 acre property located in a portion of Section 4, Township 17 South, Range 65 West of the 6th Principal Meridian, in El Paso County, Colorado. It is located north of Kane Road and west of Link Road, and south of Eagleside Elementary School. The property is located east of Jimmy Camp Creek and is bordered by Chilcotte Canal #27 irrigation channel on the west. The entire property is located within a portion of the Jimmy Camp Creek drainage basin. Refer to the Vicinity map located in Appendix A.

Description of Property

The proposed site encompasses 57.09 acres. The topography of the site and surrounding area is typical of a high desert; short prairie grass and weeds with slopes generally ranging from 1% to 12%. The area generally drains to the west.

The site is comprised of several different soil types. From the Soil Survey of El Paso County, the site falls into the following soil types:

1. “2” Ascalon sandy loam, 1 to 3 percent slopes; Type B Soil
2. “3” Ascalon sandy loam, 3 to 9 percent slopes; Type B Soil
3. “101” Ustic Torrifluvents, loamy, 0 to 3 percent slopes; Type B Soil
4. “102” Valent Sand, 1 to 12 percent slopes; Type A Soil

Note: “#” indicates Soil Conservation Survey soil classification number. Please refer to the Soils Report, located in Appendix A.

3.0 Drainage Basins and Sub-Basins

Major Basin Description

HomeLand Acres is located within the Jimmy Camp Creek Drainage Basin. This letter complies with the Flood Insurance Study performed by FEMA and the Master Drainage Plans for; Cumberland Green Filing No.2 (prepared by JPS Engineering), Eagleside Ridge (prepared by JPS Engineering), and Aspen Ranch (prepared by Matrix Design Group). All runoff will be unchanged undeveloped flow and therefore will meet El Paso County standards for discharge rates.

Floodplains

Per the referenced Flood Insurance Rate Maps (FIRM No. 08041C0966-G dated 12/7/2018 & FIRM No. 08041C0958-G dated 12/7/2018), the site is not impacted by a SFHA (Special Flood Hazard Zone). The site is located in El Paso County unincorporated area 080059 floodplain "X". Refer to the annotated FIRM Panel located in Appendix A.

4.0 DRAINAGE BASINS

Specifically reference drainage ditch from Aspen Ranch which runs through project site (Easement is shown on plat). Include copy of map

Existing Drainage Analysis

Please refer to the Preliminary and Final Drainage Reports prepared for Cumberland Green Filing No.2, Eagleside Ridge, and Aspen Ranch, for existing drainage analysis. The referenced Existing Drainage Basin Map from these studies is included in Appendix A at the back of the report.

5.0 DRAINAGE FEES

Include the acres here

and % impervious used

This drainage letter serves as a Final Drainage Report/Letter to satisfy El Paso Co[illegible] requirements. The estimated basin fee is calculated using ($24,832 x Impervious Acre) - ($24,832 x Impervious Acre x 0.25). Therefore, the estimated basin fee is $2,607.36.

Please include the bridge fees that are required in the Jimmy Camp Creek Basin

Be aware that a portion of the Jimmy Camp Creek basin is closing and fees could be adjusted based on remaining acres in the basin.

6.0 REFERENCE MATERIALS

1. "City of Colorado Springs/El Paso County Drainage Criteria Manual" [illegible]

2. "Master Development Drainage Plan For Cumberland Green 2", JPS Engineering, February 2007.

3. "Final Drainage Report For Easgleside View", JPS Engineering, November 2013.

4. "Master Development Drainage Plan For Aspen Ranch", JPS Engineering, April 2018.

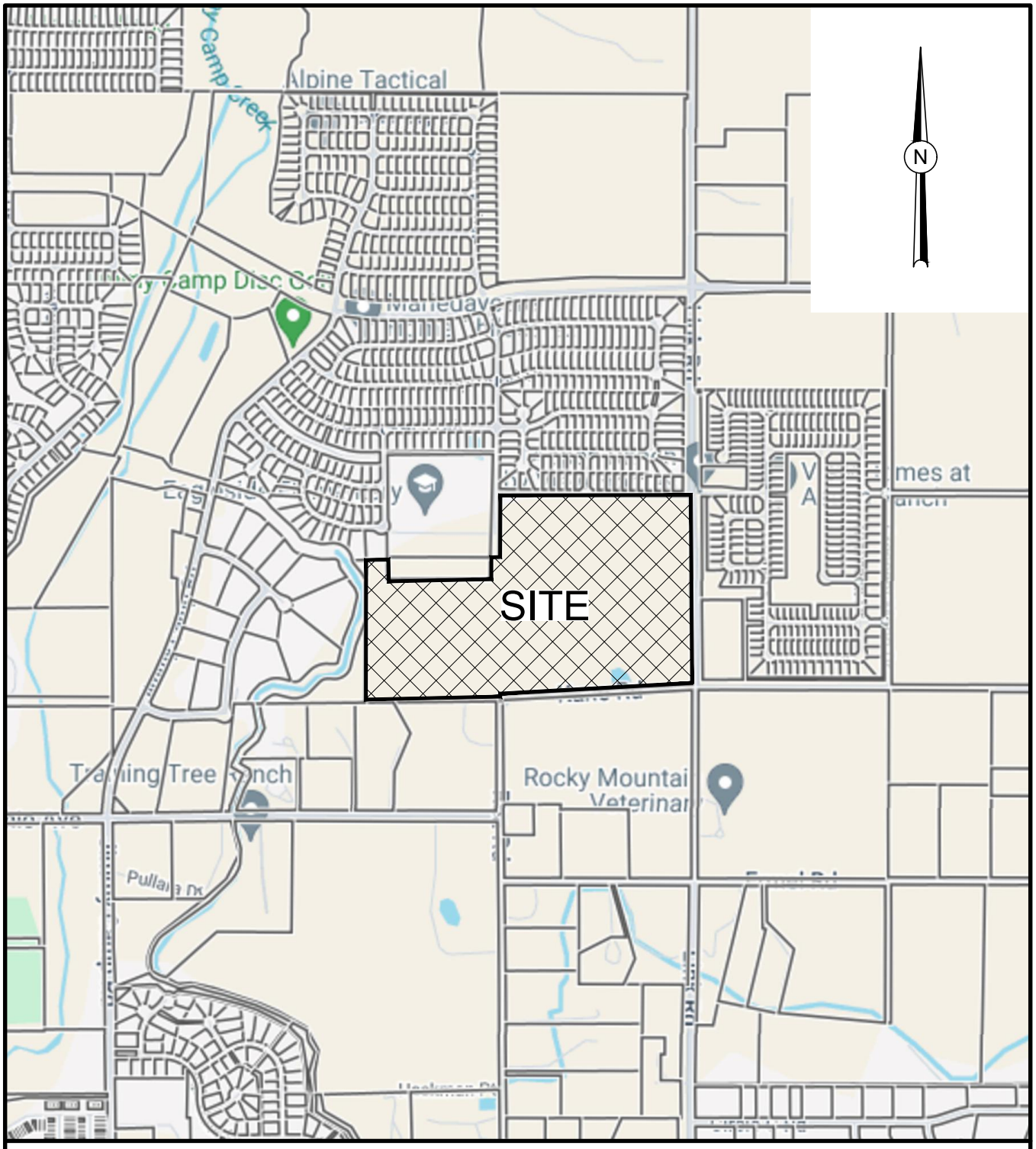
5. Soils Survey of El Paso County Area, Natural Resources Conservation Services of Colorado.

6. Flood Insurance Rate Study for El Paso County, Colorado and Incorporated Areas. Federal Emergency Management Agency, Revised December 7, 2018.

7. "City of Colorado Springs/El Paso County Drainage Criteria Manual, Revised January 2021.

Include statement that there will be no impacts to downstream facilities.

Vicinity Map



DSE Dakota Springs Engineering

31 N. TEJON, SUITE 500
COLORADO SPRINGS, CO 80903
P: (719) 227-7388
F: (719) 227-7392

PROJECT HOMELAND ACRES – FINAL PLAT

SHEET TITLE VICINITY MAP

J-CAD CONSULTING, LLC
719-377-0002

PDF: VICINITY.PDF

Soils Data

United States Department of Agriculture

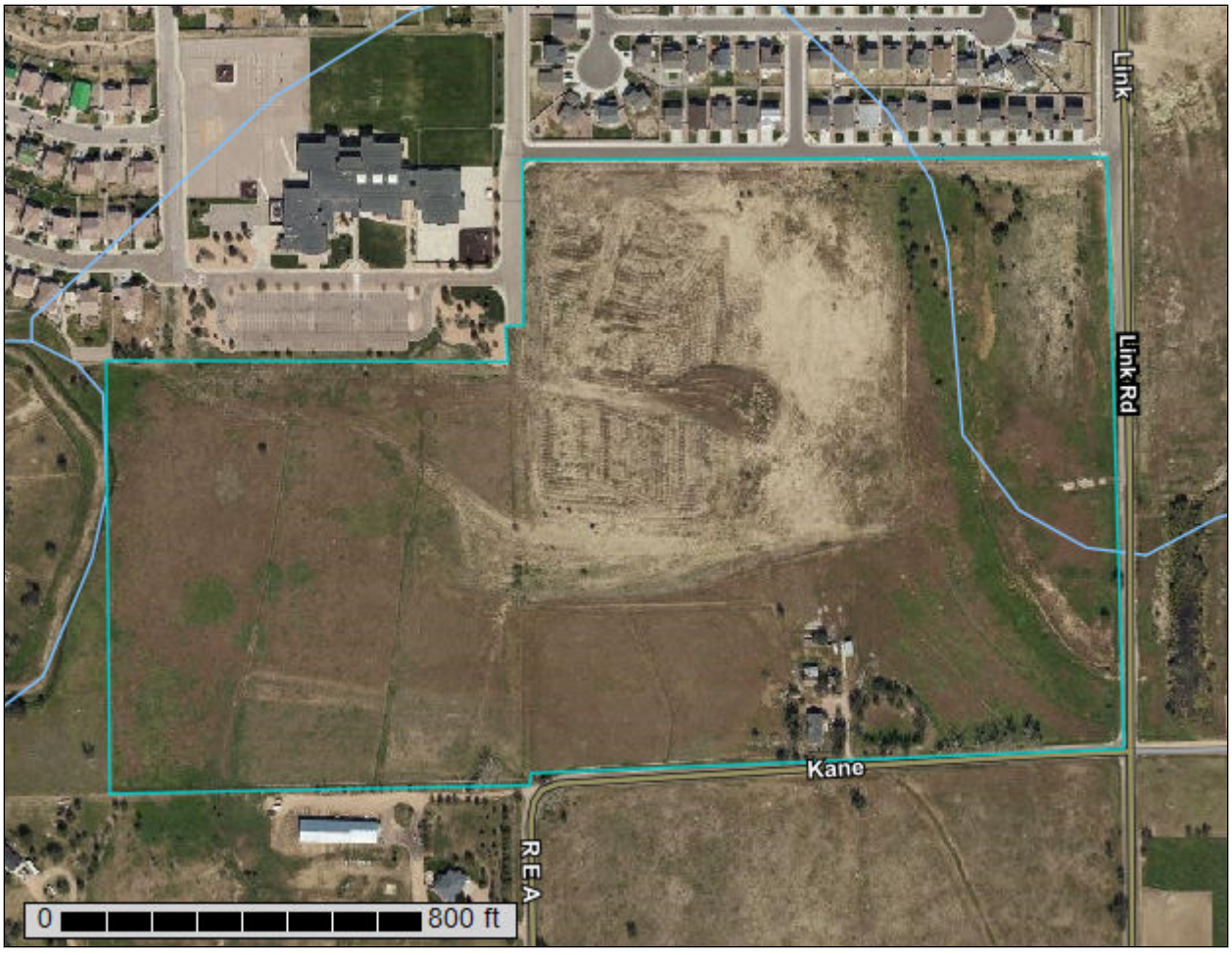
NRCS

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

HomeLand Acres Soil Survey Map



April 10, 2024

Preface

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).

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

How Soil Surveys Are Made

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

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

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.

Map Scale: 1:2,510 if printed on B landscape (17" x 11") sheet.

N

Meters: 0 35 70 140 210

Feet: 0 100 200 400 600

Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 13N WGS84

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 21, Aug 24, 2023

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

Date(s) aerial images were photographed: Aug 14, 2018—Sep 23, 2018

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

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
2	Ascalon sandy loam, 1 to 3 percent slopes	14.3	23.6%
3	Ascalon sandy loam, 3 to 9 percent slopes	4.6	7.5%
101	Ustic Torrifluvents, loamy	7.6	12.6%
102	Valent sand, 1 to 12 percent slopes, dry	34.0	56.2%
Totals for Area of Interest		**60.5**	**100.0%**

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.

El Paso County Area, Colorado

2—Ascalon sandy loam, 1 to 3 percent slopes

Map Unit Setting

National map unit symbol: 367q
Elevation: 5,500 to 6,500 feet
Mean annual precipitation: 14 to 16 inches
Mean annual air temperature: 47 to 50 degrees F
Frost-free period: 130 to 150 days
Farmland classification: Prime farmland if irrigated

Map Unit Composition

Ascalon and similar soils: 98 percent
Minor components: 2 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Ascalon

Setting

Landform: Flats
Landform position (three-dimensional): Talf
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Mixed alluvium and/or eolian deposits

Typical profile

A - 0 to 8 inches: sandy loam
Bt - 8 to 21 inches: sandy clay loam
BC - 21 to 27 inches: sandy loam
Ck1 - 27 to 48 inches: sandy loam
Ck2 - 48 to 60 inches: loamy sand

Properties and qualities

Slope: 1 to 3 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Runoff class: Low
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
Calcium carbonate, maximum content: 10 percent
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Available water supply, 0 to 60 inches: Moderate (about 7.1 inches)

Interpretive groups

Land capability classification (irrigated): 3e
Land capability classification (nonirrigated): 4e
Hydrologic Soil Group: B
Ecological site: R069XY026CO - Sandy Plains
Other vegetative classification: SANDY PLAINS (069BY026CO)
Hydric soil rating: No

Minor Components

Other soils

Percent of map unit: 1 percent
Hydric soil rating: No

Pleasant

Percent of map unit: 1 percent
Landform: Depressions
Hydric soil rating: Yes

3—Ascalon sandy loam, 3 to 9 percent slopes

Map Unit Setting

National map unit symbol: 2tlny
Elevation: 3,870 to 5,960 feet
Mean annual precipitation: 13 to 18 inches
Mean annual air temperature: 46 to 54 degrees F
Frost-free period: 95 to 155 days
Farmland classification: Not prime farmland

Map Unit Composition

Ascalon and similar soils: 85 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Ascalon

Setting

Landform: Interfluves
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Side slope
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Wind-reworked alluvium and/or calcareous sandy eolian deposits

Typical profile

Ap - 0 to 6 inches: sandy loam
Bt1 - 6 to 12 inches: sandy clay loam
Bt2 - 12 to 19 inches: sandy clay loam
Bk1 - 19 to 35 inches: fine sandy loam
Bk2 - 35 to 80 inches: fine sandy loam

Properties and qualities

Slope: 3 to 9 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Runoff class: Medium
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.60 to 5.98 in/hr)

Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 10 percent
Maximum salinity: Nonsaline (0.1 to 1.9 mmhos/cm)
Sodium adsorption ratio, maximum: 1.0
Available water supply, 0 to 60 inches: Moderate (about 7.1 inches)

Interpretive groups

Land capability classification (irrigated): 6e
Land capability classification (nonirrigated): 6e
Hydrologic Soil Group: B
Ecological site: R067BY024CO - Sandy Plains
Hydric soil rating: No

Minor Components

Olnest

Percent of map unit: 10 percent
Landform: Interfluves
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Side slope
Down-slope shape: Linear
Across-slope shape: Linear
Ecological site: R067BY024CO - Sandy Plains
Hydric soil rating: No

Vona

Percent of map unit: 5 percent
Landform: Interfluves
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Side slope
Down-slope shape: Linear
Across-slope shape: Linear
Ecological site: R067BY024CO - Sandy Plains
Hydric soil rating: No

101—Ustic Torrifluvents, loamy

Map Unit Setting

National map unit symbol: 3673
Elevation: 5,500 to 7,000 feet
Mean annual precipitation: 13 to 16 inches
Mean annual air temperature: 47 to 52 degrees F
Frost-free period: 125 to 155 days
Farmland classification: Not prime farmland

Map Unit Composition

Ustic torrifluvents and similar soils: 95 percent
Minor components: 5 percent

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

Description of Ustic Torrifluvents

Setting

Landform: Flood plains, stream terraces
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Sandy, clayey, stratified loamy

Typical profile

A - 0 to 6 inches: variable
C - 6 to 60 inches: stratified loamy sand to clay loam

Properties and qualities

Slope: 0 to 3 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Runoff class: Low
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.20 to 2.00 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 10 percent
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Available water supply, 0 to 60 inches: Moderate (about 8.6 inches)

Interpretive groups

Land capability classification (irrigated): 2e
Land capability classification (nonirrigated): 3e
Hydrologic Soil Group: B
Ecological site: R069XY037CO - Saline Overflow
Other vegetative classification: OVERFLOW (069BY036CO)
Hydric soil rating: No

Minor Components

Other soils

Percent of map unit: 4 percent
Hydric soil rating: No

Pleasant

Percent of map unit: 1 percent
Landform: Depressions
Hydric soil rating: Yes

102—Valent sand, 1 to 12 percent slopes, dry

Map Unit Setting

National map unit symbol: 2rgs5
Elevation: 4,000 to 6,200 feet

Mean annual precipitation: 10 to 14 inches
Mean annual air temperature: 50 to 54 degrees F
Frost-free period: 130 to 170 days
Farmland classification: Not prime farmland

Map Unit Composition

Valent, dry, and similar soils: 85 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Valent, Dry

Setting

Landform: Dunes
Parent material: Eolian sands

Typical profile

A - 0 to 6 inches: sand
AC - 6 to 21 inches: sand
C1 - 21 to 36 inches: sand
C2 - 36 to 79 inches: sand

Properties and qualities

Slope: 1 to 12 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Excessively drained
Capacity of the most limiting layer to transmit water (Ksat): Very high (19.99 to 42.51 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Maximum salinity: Nonsaline (0.1 to 0.2 mmhos/cm)
Sodium adsorption ratio, maximum: 0.1
Available water supply, 0 to 60 inches: Very low (about 2.4 inches)

Interpretive groups

Land capability classification (irrigated): 6e
Land capability classification (nonirrigated): 6e
Hydrologic Soil Group: A
Ecological site: R069XY019CO - Deep Sand
Forage suitability group: Not Suited (G069XW000CO)
Other vegetative classification: Not Suited (G069XW000CO)
Hydric soil rating: No

Minor Components

Vonid

Percent of map unit: 10 percent
Landform: Sand sheets
Ecological site: R069XY026CO - Sandy Plains
Other vegetative classification: Not Suited (G069XW000CO), Sandy Plains (069XY026CO_1)
Hydric soil rating: No

Olney

Percent of map unit: 5 percent
Landform: Sand sheets

Ecological site: R069XY026CO - Sandy Plains
Other vegetative classification: Not Suited (G069XW000CO), Sandy Plains (069XY026CO_1)
Hydric soil rating: No

References

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FIRM Panel

NOTES TO USERS

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NGS Information Services
NOAA, N/NGS12
National Geodetic Survey
SSMC-3, #9202
1315 East-West Highway
Silver Spring, MD 20910-3282

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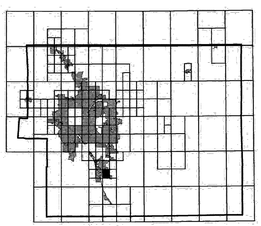
El Paso County Vertical Datum Offset Table

Flooding Source	Vertical Datum Offset (ft)

REFER TO SECTION 3.3 OF THE EL PASO COUNTY FLOOD INSURANCE STUDY FOR STREAM BY STREAM VERTICAL DATUM CONVERSION INFORMATION

Panel Location Map



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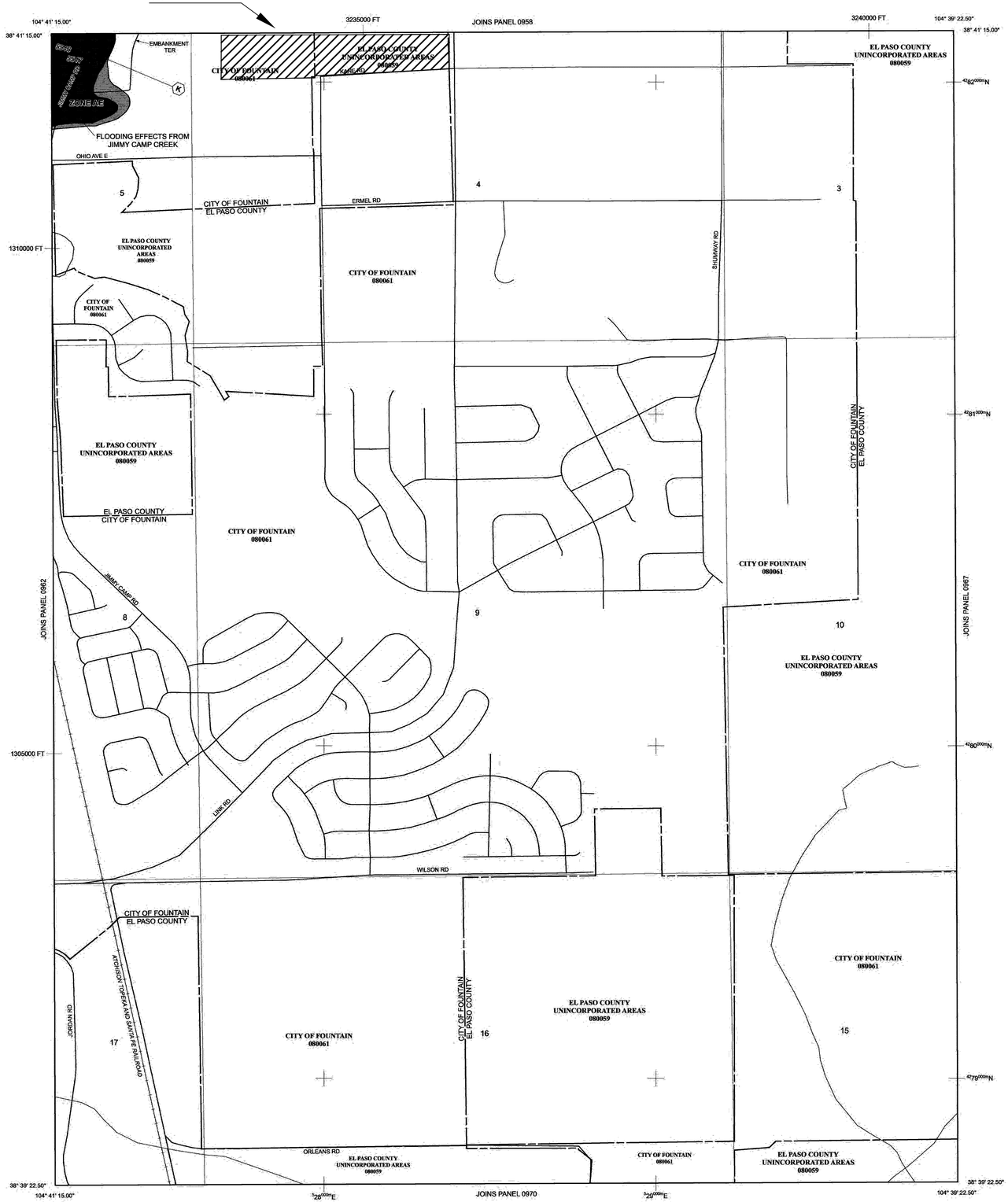
SITE



NOTE: MAP AREA SHOWN ON THIS PANEL IS LOCATED WITHIN TOWNSHIP 16 SOUTH, RANGE 65 WEST.

LEGEND

SPECIAL FLOOD HAZARD AREAS (SFHAs) SUBJECT TO INUNDATION BY THE 1% ANNUAL CHANCE FLOOD

The 1% annual chance flood (100-year flood), also known as the base flood, is the flood that has a 1% chance of being equaled or exceeded in any given year. The Special Flood Hazard Area is the area subject to flooding by the 1% annual chance flood. Areas of Special Flood Hazard include Zones A, AE, AH, AO, AR, A99, V, and VE. The Base Flood Elevation is the water-surface elevation of the 1% annual chance 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 AR** Special Flood Hazard Area Formerly protected from the 1% annual chance flood by a flood control system that was subsequently decertified. Zone AR indicates that the former flood control system is being restored to provide protection from the 1% annual chance or greater flood.
- **ZONE A99** Area to be protected from 1% annual chance flood by a Federal flood protection system under construction; no Base Flood Elevations determined.
- **ZONE V** Coastal flood zone with velocity hazard (wave action); no Base Flood Elevations determined.
- **ZONE VE** Coastal flood zone with velocity hazard (wave action); Base Flood Elevations determined.

FLOODWAY AREAS IN ZONE AE

The floodway is the channel of a stream plus any adjacent floodplain areas that must be kept free of encroachment so that the 1% annual chance flood can be carried without substantial increases in flood heights.

OTHER FLOOD AREAS

- **ZONE X** Areas of 0.2% annual chance flood; areas of 1% annual chance flood with average depths of less than 1 foot or with drainage areas less than 1 square mile; and areas protected by levees from 1% annual chance flood.

OTHER AREAS

- **ZONE X** Areas determined to be outside the 0.2% annual chance floodplain.
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COASTAL BARRIER RESOURCES SYSTEM (CBRS) AREAS

OTHERWISE PROTECTED AREAS (OPAs)

CBRS areas and OPAs are normally located within or adjacent to Special Flood Hazard Areas.

- Floodplain boundary
- Floodway boundary
- Zone D Boundary
- CBRS and OPA boundary
- Boundary dividing Special Flood Hazard Areas of different Base Flood Elevations, flood depths or flood velocities.
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* Referenced to the North American Vertical Datum of 1988 (NAVD 88)

- A — A — Cross section line
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MAP REPOSITORIES
Refer to Map Repositories list on Map Index.

EFFECTIVE DATE OF COUNTYWIDE FLOOD INSURANCE RATE MAP
MARCH 17, 1997

EFFECTIVE DATE(S) OF REVISION(S) TO THIS PANEL
DECEMBER 7, 2018 - to update corporate limits, to change Base Flood Elevations and Special Flood Hazard Areas, to update map format, to add roads and road names, and to incorporate previously issued Letters of Map Revision.

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MAP SCALE 1" = 500'

250 0 500 1000 FEET
150 0 150 300 METERS

NFIP

PANEL 0966G

NATIONAL FLOOD INSURANCE PROGRAM

FIRM

FLOOD INSURANCE RATE MAP

EL PASO COUNTY, COLORADO AND INCORPORATED AREAS

PANEL 966 OF 1300

(SEE MAP INDEX FOR FIRM PANEL LAYOUT)

CONTAINS:

COMMUNITY	NUMBER	PANEL	SUFFIX
EL PASO COUNTY	080059	0966	G
FOUNTAIN, CITY OF	080061	0966	G

Notice to User: The **Map Number** shown below should be used when placing map orders; the **Community Number** shown above should be used on insurance applications for the subject community.

MAP NUMBER
08041C0966G

MAP REVISED
DECMEBER 7, 2018

Federal Emergency Management Agency

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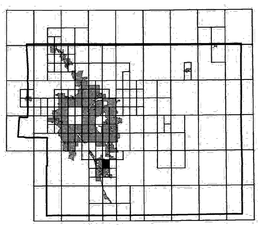

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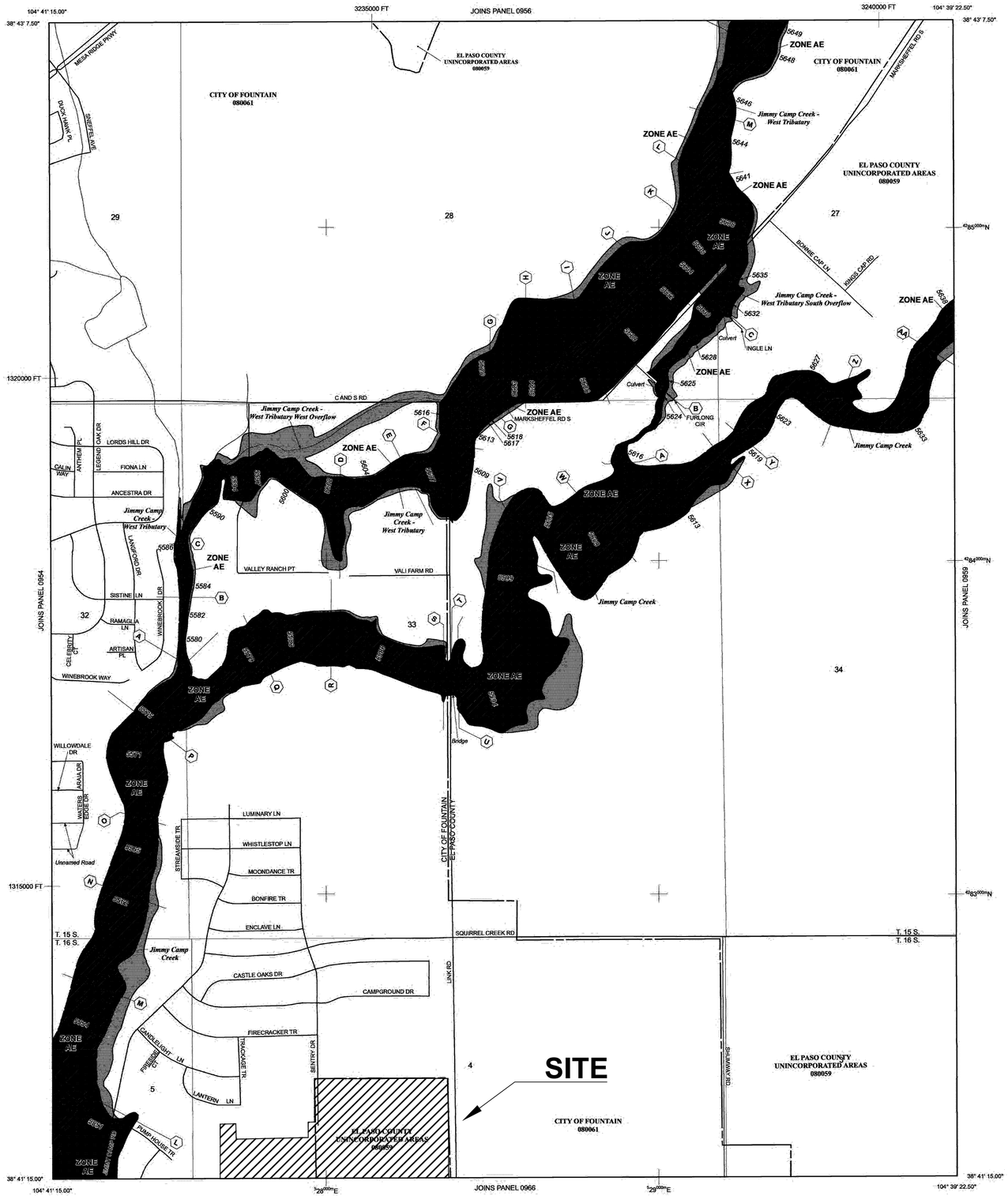

NOTE: MAP AREA SHOWN ON THIS PANEL IS LOCATED WITHIN TOWNSHIP 15 SOUTH, RANGE 65 WEST, AND TOWNSHIP 16 SOUTH, RANGE 65 WEST.

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M1.5 ●	River Mile

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EFFECTIVE DATE OF COUNTYWIDE FLOOD INSURANCE RATE MAP
MARCH 17, 1997

EFFECTIVE DATE(S) OF REVISION(S) TO THIS PANEL
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150 0 150 300 METERS

NFIP

PANEL 0958G

NATIONAL FLOOD INSURANCE PROGRAM

FIRM

FLOOD INSURANCE RATE MAP

EL PASO COUNTY, COLORADO AND INCORPORATED AREAS

PANEL 958 OF 1300

(SEE MAP INDEX FOR FIRM PANEL LAYOUT)

CONTAINS:

COMMUNITY	NUMBER	PANEL	SUFFIX
EL PASO COUNTY	080059	0958	G
FOUNTAIN, CITY OF	080061	0958	G

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MAP NUMBER 08041C0958G

MAP REVISED DECEMBER 7, 2018

Federal Emergency Management Agency

Referenced Existing Drainage Maps

Highlight the subject parcel

CUMBERLAND GREEN 2

DEVELOPED DRAINAGE PLAN

JPS ENGINEERING

19 E. Willamette Ave.
Colorado Springs, CO
80903

PH: 719-477-9429
FAX: 719-471-0766

No.	REVISION	BY	DATE
A	ANNEXATION SUBMITTAL	JPS	2/6/07

LINK ROAD

PARCEL A

PARCEL B NORTH

PARCEL B SOUTH

DISTRICT PARCEL

UNPLATTED

PROPOSED STORM SEWER OB1.2

PROPOSED CHANNEL

R.B.A. ROAD

CHANNEL OA1

RESIDENTIAL 3-4 DU/ACRE

STORM SEWER B1

STORM SEWER A1

EXISTING STORM SEWER OB1 (48"-60")

ELEMENTARY SITE SCHOOL

OPEN SPACE

PROPOSED CHANNEL OC1

PROPOSED DETENTION POND C

PROPOSED CULVERT OC1

EXISTING CHANNEL

OHIO AVE

EXISTING MAIN CHANNEL ℄

EXISTING PONDS TO BE PRESERVED

PROPOSED RIPRAP BANK STABILIZATION

PROPOSED GREENWAY & FLOODPLAIN PRESERVATION AREA

EXISTING DETENTION POND B (VOL.=29.5 AC-FT.)

100-YEAR FLOODPLAIN

FEMA 100-YEAR FLOODWAY LIMITS

STORM DRAIN C2

REVISED 100-YEAR FLOODPLAIN LIMIT PER APPROVED LOMR

PROPOSED CULVERT C1

JIMMY CAMP CREEK

OA1.1 6.7 AC.
OA1.2 37.8 AC.
OA2.1 5.9 AC.
OA2.2 2.4 AC.
OA2 61.8 126.3
OA1 58.8 117.0
B1C 3.2 AC.
B1B 8.08 AC.
B1A 4.25 AC.
B2A 4.22 AC.
B2B 2.36 AC.
OB1.3 2.32 AC.
OB1.1 513.9 AC.
OB1.2 95.1 AC.
OB1 49.8 273.9
B2C 0.79 AC.
B2D 0.58 AC.
B1D 0.21 AC.
B5A 5.21 AC.
B6A 13.07 AC.
B6B 2.77 AC.
OC1 42.5 AC.
OC1 36.3 113.8
A1 8.45 AC.
A2 5.31 AC.
A3 5.85 AC.
A4 5.54 AC.
A5 5.07 AC.
B3B 2.72 AC.
B4 6.82 AC.
B5B 4.88 AC.
B7A 4.02 AC.
B8B 1.24 AC.
B8A 2.3 AC.
B9A 3.68 AC.
B1E 3.2 AC.
A6 4.70 AC.
A7 3.37 AC.
A8B 1.34 AC.
A9 5.82 AC.
B3C 1.0 AC.
B10A 0.6 AC.
B5C 0.17 AC.
B10D 11.4 AC.
B10B 0.25 AC.
B7B 2.92 AC.
B9B 6.52 AC.
A8A 3.07 AC.
1 0.4 3.6
C1A 16.62 AC.
OC2 33.2 AC.
C2B 7.14 AC.
C2A 1.58 AC.
C1B 5.85 AC.
C1D 11.20 AC.
C1C 3.97 AC.
B10C 0.25 AC.
C2C 0.4 AC.
C1E 1.3 AC.
2 91.4 384.8
3 40.1 149.3

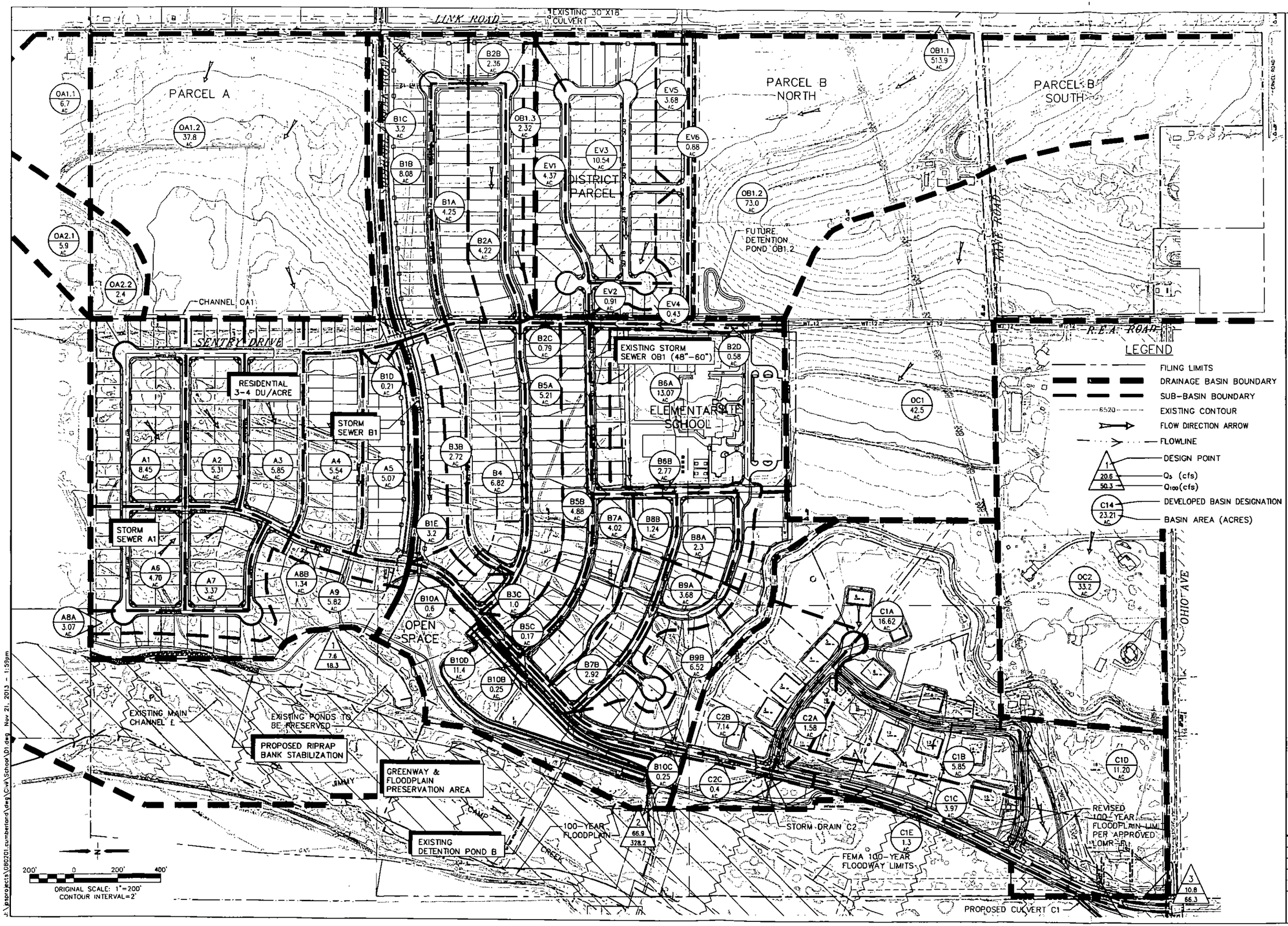
LEGEND

- FILING LIMITS
- DRAINAGE BASIN BOUNDARY
- SUB-BASIN BOUNDARY
- 6520 EXISTING CONTOUR
- FLOW DIRECTION ARROW
- FLOWLINE
- DESIGN POINT
- 1 / 20.6 / 50.3 — Q_5 (cfs), Q_{100} (cfs)
- C14 23.21 AC. — DEVELOPED BASIN DESIGNATION
- BASIN AREA (ACRES)

200' 0 200' 400'
ORIGINAL SCALE: 1"=200'
CONTOUR INTERVAL=2'

HORZ. SCALE: 1"=200'	DRAWN: RMD
VERT. SCALE: N/A	DESIGNED: JPS
SURVEYED: RMLS	CHECKED: JPS
CREATED: 8/20/02	LAST MODIFIED: 2/6/07
PROJECT NO: 080201	MODIFIED BY: RMD
SHEET: D1	

J:\projects\080201.cumberland\dwg\Civil\ANNEX\D1-ANNEX.dwg Feb 07, 2007 - 8:28am



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No.	REVISION	BY	DATE

CUMBERLAND GREEN

MASTER DEVELOPMENT DRAINAGE PLAN

HORZ. SCALE: 1"=200'	DRAWN: BJJ
VERT. SCALE: N/A	DESIGNED: JPS
SURVEYED: RMLS	CHECKED: JPS
CREATED: 10/30/13	LAST MODIFIED: 11/20/13
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SHEET:	D1