Add subheaders

June 15, 2021

Revise:
El Paso County
Planning and Community Development Department
2880 International Circle, Suite 110
Colorado Springs, CO 80910
PCD File No. PPR-21-026

City of Falcon
Public Works Department
3275 Akers Dr
Colorado Springs, CO 80922

RE: Drainage Conformance Letter
Falcon Marketplace, Lot 9
Falcon, CO 80831.

Insert the County standard signature block for drainage reports.

To Whom it May Concern,

The Slim Chicken's – Falcon proposed project is a 67,520 Sq-ft (1.55-acre) lot located in the Falcon Market Place in Falcon, Colorado. The site will include a Slim Chicken's restaurant placed inside of an asphalt parking lot with a drive-thru wrapped around the building. The site als 2 in Falcon Market Place located south of the building/parking l is approximately 4,000 Sq-ft (0.09-acres), 30,162 Sq-ft (0.69-acres) of res) of landscaping/open space. The historic impervious are sed impervious Sq-ft (0.78-acres), therefore, the increase in impervious area due to the development of (0.78-acres). The historic site was designed with the intention of developing the site with

Add a statement identifying which drainage basin the project is in.

update to "...directed to unnamed tributary to black squirrel creek."

The proposed project is part of Falcon Marketplace. The overall lot is being divided into 11 lots. This project is the development of Lot 9. This site flows into the southern pond and adheres to the parameters set in the approved Final Drainage Report for Falcon Marketplace, dated 04 November 2019, prepared by Drexel, Barrell & Co.

The runoff from this site will be directed to Black Squirrel Creek. The overall drainage pattern for the site will follow the Falcon Marketplace Final Drainage Report. An existing 24" storm line runs east to west along the E Woodmen Rd, to which flow from the proposed site will be conveyed.

Identify the hydrologic soil group.

The proposed layout connects to the existing 24" storm line to the south of t Drainage will surface flow to a proposed inlet before entering this existing pipe and discharging into the southern pond, named "Water Quality Pond #2" in the Falcon Marketplace Final Drainage Report. The minor storm is the 5-year storm, and the major storm is the 100-year storm.

Basin A-1, 7,100 Sq-ft (0.16-acres), is in the eastern portion of the site and consists of asphalt and concrete drive/walk. The storm water will sheet flow due west along the drive-thru lane, then due south along the curb and gutter, and finally enter the proposed inlet and exiting pipe at design point A-1. The minor storm coefficient is 0.81 and the major storm coefficient is 0.86; with an imperviousness of 95.7%. Basin A-1's flows are 0.53 cfs and 1.16 cfs for the minor and Major storm, respectively.

Basin A-2, 14,500 Sq-ft (0.33-acres), is in the middle of the site and consists mostly of asphalt pavement and concrete drive/walk with a small portion of landscape. The storm water will sheet flow across the proposed

parking lot to the southwest before entering the proposed inlet at design point A-2. The flows from Basin A-2 will then flow through a proposed storm pipe before entering the existing pipe at design point A-1. The minor storm coefficient is 0.60 and the Major storm coefficient is 0.70; with an imperviousness of 75.1%. Basin A-2's flows are 0.71 cfs and 1.72 cfs for the minor and Major storm, respectively.

Basin A-3, 10,875 Sq-ft (0.25-acres), is in the northeastern corner of the site and consists of mostly asphalt pavement and concrete drive/walk with a small portion of landscape area. Storm water will flow south through the parking lot and drive-thru until it reaches design point A-3 and discharges into the proposed inlet. The minor storm coefficient is 0.75 and the major storm coefficient is 0.81; with an imperviousness of 90.0%. Basin A-3's flows are 0.73 cfs and 1.58 cfs for the minor and major storm, respectively.

Basin R-1, 4,000 Sq-ft (0.09-acres), consists entirely of rooftop. The storm water will collect on the roof and be conveyed to downspouts at design point R-1 and connect with the runoff from Basin A-3 into the proposed inlet at design point A-3. The minor storm coefficient is 0.75 and the major storm coefficient is 0.81; with an imperviousness of 90%. Basin R-1's flows are 0.28 cfs and 0.63 cfs for the minor and major storm, respectively.

Basin B-1, 22,200 Sq-ft (0.51-acres), consists entirely of the landscape located in southern portion of site. This Basin is not to be touched in the development of this site. The storm water will collect in the proposed pond and then discharge to the inlet located at design point B-1. The pond was approved with the design of Falcon Marketplace, and the proposed development lies within the restraints given in the Falcon Marketplace Drainage Report.

Basin B-2, 675 Sq-ft (0.02-acres), consists entirely of landscape that is located on the southeast corner of the lot just above the pond (Basin B-1). Storm water will flow south down the lot boundary [illegible] B-2 and discharges into the pond in tract B. The minor storm coefficient is 0.00 and [illegible] is 0.11; with an imperviousness of 0%. Basin B-2's flows are 0.00 cfs and 0.01 cfs for respectively.

update basins B-2 and B-3. See Table 6-6 of the City DCM runoff coefficient for lawn

Basin B-3, 1,250 Sq-ft (0.03-acres), consists entirely of landscape that is located on the southwest corner of the site. Storm water will flow south down the lot boundary until it reaches design point B-3 and discharges into the pond in tract B. The minor storm coefficient is 0.00 and the major storm coefficient is 0.11; with an imperviousness of 0%. Basin B-3's flows are 0.00 cfs and 0.02 cfs for the minor and major storm, respectively.

Basin C-1, 6,875 Sq-ft (0.16-acres), consists primarily of landsc[illegible] is located on the northern part of the lot. Storm water will flo[illegible] eventually reach the storm inlet located just north of the prop[illegible] the major storm coefficient is 0.28; with an imperviousness of [illegible] for the minor and major storm, respectively.

Basin C-1 is not in conformance with the final drainage report. The inlet at DP C-1 did not account for this runoff. Provide additional analysis and update the narrative verifying there is sufficient capacity in inlet C-1 and the storm sewer system.

As previously stated, the proposed impervious area due to the development is 34,163 Sq-ft (0.78-acres), and the proposed major and minor storm runoff is 2.28 cfs and 5.72 cfs. While the proposed flow is significant, the Falcon Marketplace development has designed the pond and its corresponding storm network to withstand such a demand. The Falcon Marketplace Final Drainage Report places Lot 9 in the eastern half of Basin B18. This basin allows for 7.8 cfs and 15.0 cfs for the major and minor storm events, respectively. As Lot 9 is half of Basin B18, it is allowed to release flows at the rate of 3.9 cfs and 7.5 cfs for the major and minor storm events, respectively. Therefore, the proposed flows of 2.28 cfs and 5.72 cfs for the major and minor storm events, respectively, are in conformance with the Overall Drainage Report.

The drainage improvements proposed with the construction of Falcon Marketplace is in conformance with the City of Falcon Site Drainage requirements for a new development. This project will economically benefit the City of Falcon without negatively impacting the local environment.

Attached to this letter are the following documents:

- Vicinity Map
- FEMA Map
- Soils Report
- Hydrology Calculations
- Excerpt from Final Drainage Report for Falcon Marketplace
- Proposed Drainage Map

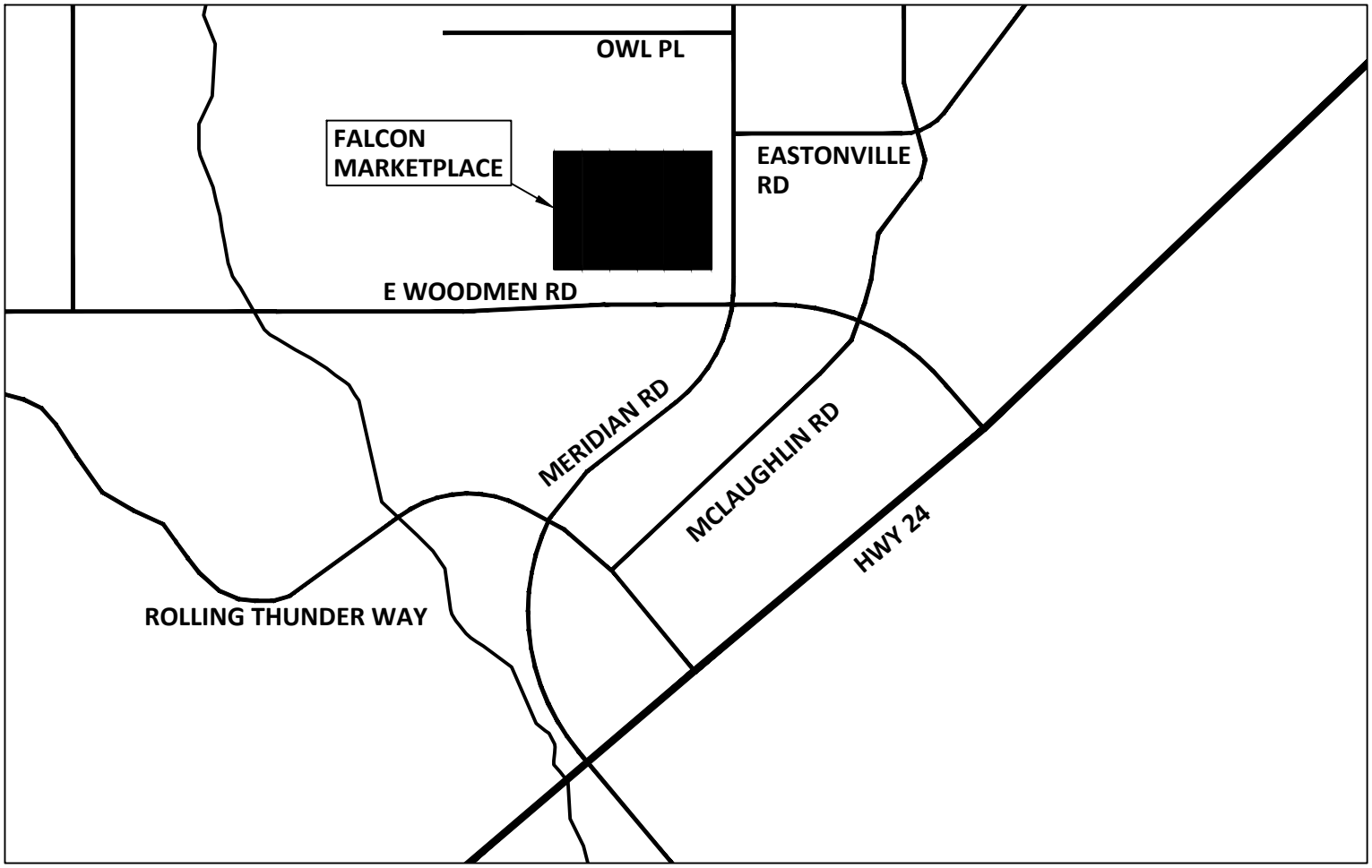
If there are any questions, feel free to reach out to us at 720-258-6836.

Sincerely,

Add a section discussing the 4-step process per ECM Appendix I Section I.7.2

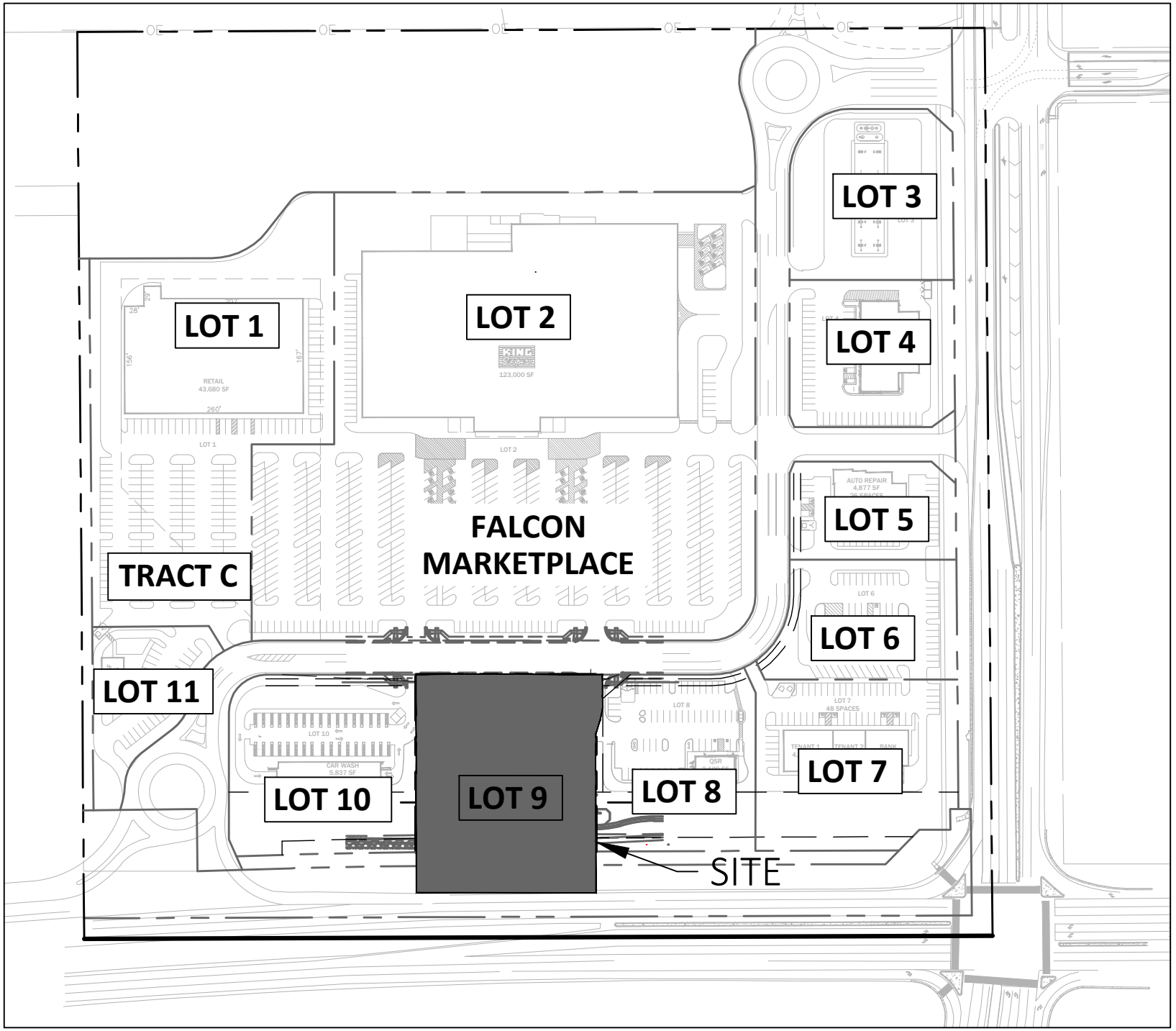
Add a section regarding the drainage fees. Add a statement confirming whether or not fees were paid at final plat recording.

Tiffany D. Watson, PE
Point Consulting, LLC
Registered Professional Engineer
State of Colorado No. 40360



VICINITY MAP

NOT TO SCALE



SITE MAP

1"=200'

possible updated or additional flood hazard information.

To obtain more detailed information in areas where **Base Flood Elevations** (BFEs) and/or **floodways** have been determined, users are encouraged to consult the Flood Profiles and Floodway Data and/or Summary of Stillwater Elevations tables contained within the Flood Insurance Study (FIS) report that accompanies this FIRM. Users should be aware that BFEs shown on the FIRM represent rounded whole-foot elevations. These BFEs are intended for flood insurance rating purposes only and should not be used as the sole source of flood elevation information. Accordingly, flood elevation data presented in the FIS report should be utilized in conjunction with the FIRM for purposes of construction and/or floodplain management.

Coastal Base Flood Elevations shown on this map apply only landward of 0.0' North American Vertical Datum of 1988 (NAVD88). Users of this FIRM should be aware that coastal flood elevations are also provided in the Summary of Stillwater Elevations table in the Flood Insurance Study report for this jurisdiction. Elevations shown in the Summary of Stillwater Elevations table should be used for construction and/or floodplain management purposes when they are higher than the elevations shown on this FIRM.

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 National Flood Insurance Program. Floodway widths and other pertinent floodway data are provided in the Flood Insurance Study report for this jurisdiction.

Certain areas not in Special Flood Hazard Areas may be protected by **flood control structures**. Refer to section 2.4 "Flood Protection Measures" of the Flood Insurance Study report for information on flood control structures for this jurisdiction.

The **projection** used in the preparation of this map was Universal Transverse Mercator (UTM) zone 13. The **horizontal datum** was NAD83, GRS80 spheroid. Differences in datum, spheroid, projection or UTM zones zones used in the production of FIRMs for adjacent jurisdictions may result in slight positional differences in map features across jurisdiction boundaries. These differences do not affect the accuracy of this FIRM.

Flood elevations on this map are referenced to the **North American Vertical Datum of 1988 (NAVD88)**. These flood elevations must be compared to structure and ground elevations referenced to the same **vertical datum**. For information regarding conversion between the National Geodetic Vertical Datum of 1929 and the North American Vertical Datum of 1988, visit the National Geodetic Survey website at http://www.ngs.noaa.gov/ or contact the National Geodetic Survey at the following address:

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

To obtain current elevation, description, and/or location information for **bench marks** shown on this map, please contact the Information Services Branch of the National Geodetic Survey at (301) 713-3242 or visit its website at http://www.ngs.noaa.gov/.

Base Map information shown on this FIRM was provided in digital format by El Paso County, Colorado Springs Utilities, City of Fountain, Bureau of Land Management, National Oceanic and Atmospheric Administration, United States Geological Survey, and Anderson Consulting Engineers, Inc. These data are current as of 2006.

This map reflects more detailed and up-to-date **stream channel configurations and floodplain delineations** than those shown on the previous FIRM for this jurisdiction. The floodplains and floodways that were transferred from the previous FIRM may have been adjusted to conform to these new stream channel configurations. As a result, the Flood Profiles and Floodway Data tables in the Flood Insurance Study Report (which contains authoritative hydraulic data) may reflect stream channel distances that differ from what is shown on this map. The profile baselines depicted on this map represent the hydraulic modeling baselines that match the flood profiles and Floodway Data Tables if applicable, in the FIS report. As a result, the profile baselines may deviate significantly from the new base map channel representation and may appear outside of the floodplain.

Corporate limits shown on this map are based on the best data available at the time of publication. Because changes due to annexations or de-annexations may have occurred after this map was published, map users should contact appropriate community officials to verify current corporate limit locations.

Please refer to the separately printed **Map Index** for an overview map of the county showing the layout of map panels; community map repository addresses; and a Listing of Communities table containing National Flood Insurance Program dates for each community as well as a listing of the panels on which each community is located.

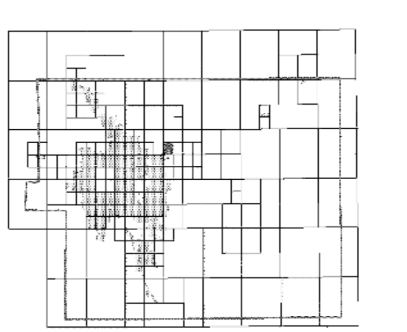
Contact **FEMA Map Service Center** (MSC) via the FEMA Map Information eXchange (FMIX) 1-877-336-2627 for information on available products associated with this FIRM. Available products may include previously issued Letters of Map Change, a Flood Insurance Study Report, and/or digital versions of this map. The MSC may also be reached by Fax at 1-800-358-9620 and its website at http://www.msc.fema.gov/.

If you have **questions about this map** or questions concerning the National Flood Insurance Program in general, please call **1-877-FEMA MAP** (1-877-336-2627) or visit the FEMA website at http://www.fema.gov/business/nfip.

El Paso County Vertical Datum Offset Table

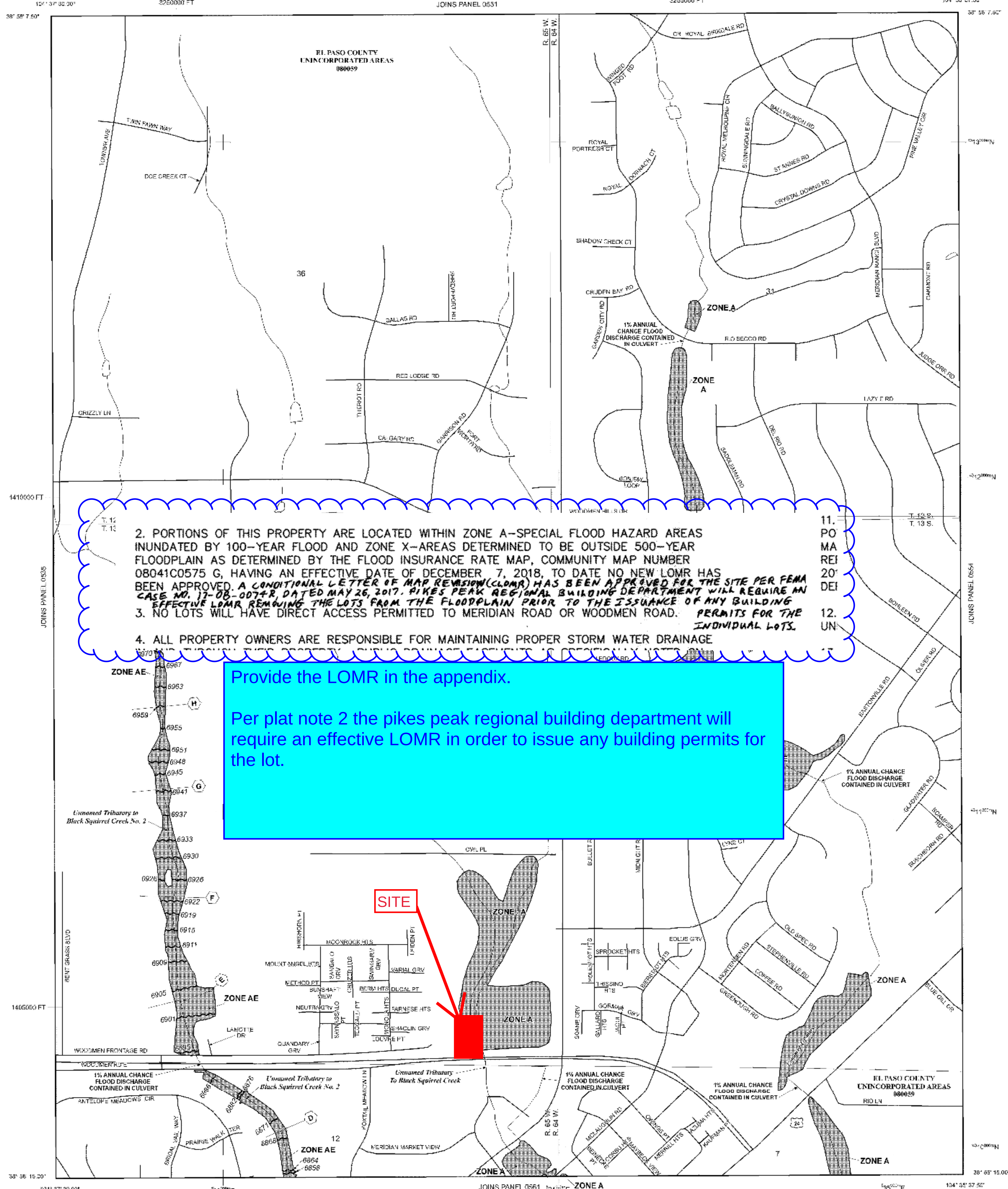
Flooding Source	Vertical Datum Offset (ft)
REFER TO SECTION 3.3 OF THE EL PASO COUNTY FLOOD INSURANCE STUDY FOR STREAM BY STREAM VERTICAL DATUM CONVERSION INFORMATION	

Panel Location Map



This Digital Flood Insurance Rate Map (DFIRM) was produced through a Cooperating Technical Partner (CTP) agreement between the State of Colorado Water Conservation Board (CWCB) and the Federal Emergency Management Agency (FEMA).

Additional Flood Hazard information and resources are available from local communities and the Colorado Water Conservation Board.



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.
ZONE D	Areas in which flood hazards are undetermined, but possible.

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.
~~ 513 ~~~	Base Flood Elevation line and value; elevation in feet*
(EL 987)	Base Flood Elevation value where uniform within zone; elevation in feet*

* Referenced to the North American Vertical Datum of 1988 (NAVD 88)

A—A	Cross section line
23 - - - 23	Transect line
97° 07' 30.00" 32° 22' 30.00"	Geographic coordinates referenced to the North American Datum of 1983 (NAD 83)
4275000mN	1000-meter Universal Transverse Mercator grid ticks, zone 13
6000000 FT	5000-foot grid ticks: Colorado State Plane coordinate system, central zone (FIPSZONE 0502), Lambert Conformal Conic Projection
DX5510 ×	Bench mark (see explanation in Notes to Users section of this FIRM panel)
• M1.5	River Mile

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.

For community map revision history prior to countywide mapping, refer to the Community Map History Table located in the Flood Insurance Study report for this jurisdiction.

To determine if flood insurance is available in this community, contact your insurance agent or call the National Flood Insurance Program at 1-800-638-6620.

MAP SCALE 1" = 500'

250 0 500 1000 FEET
150 0 150 300 METERS

NFIP — NATIONAL FLOOD INSURANCE PROGRAM

PANEL 0553G

FIRM
FLOOD INSURANCE RATE MAP
EL PASO COUNTY, COLORADO AND INCORPORATED AREAS

PANEL 553 OF 1300

(SEE MAP INDEX FOR FIRM PANEL LAYOUT)

CONTAINS:

COMMUNITY	NUMBER	PANEL	SUFFIX
EL PASO COUNTY	080059	0553	G

Notice: This map was reissued on 05/15/2020 to make a correction. This version replaces any previous versions. See the Notice-to-User Letter that accompanied this correction for details.

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
08041C0553G

MAP REVISED

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

June 2, 2021

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.

The U.S. Department of Agriculture (USDA) prohibits discrimination in all its programs and activities on the basis of race, color, national origin, age, disability, and where applicable, sex, marital status, familial status, parental status, religion, sexual orientation, genetic information, political beliefs, reprisal, or because all or a part of an individual's income is derived from any public assistance program. (Not all prohibited bases apply to all programs.) Persons with disabilities who require

alternative means for communication of program information (Braille, large print, audiotape, etc.) should contact USDA's TARGET Center at (202) 720-2600 (voice and TDD). To file a complaint of discrimination, write to USDA, Director, Office of Civil Rights, 1400 Independence Avenue, S.W., Washington, D.C. 20250-9410 or call (800) 795-3272 (voice) or (202) 720-6382 (TDD). USDA is an equal opportunity provider and employer.

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.

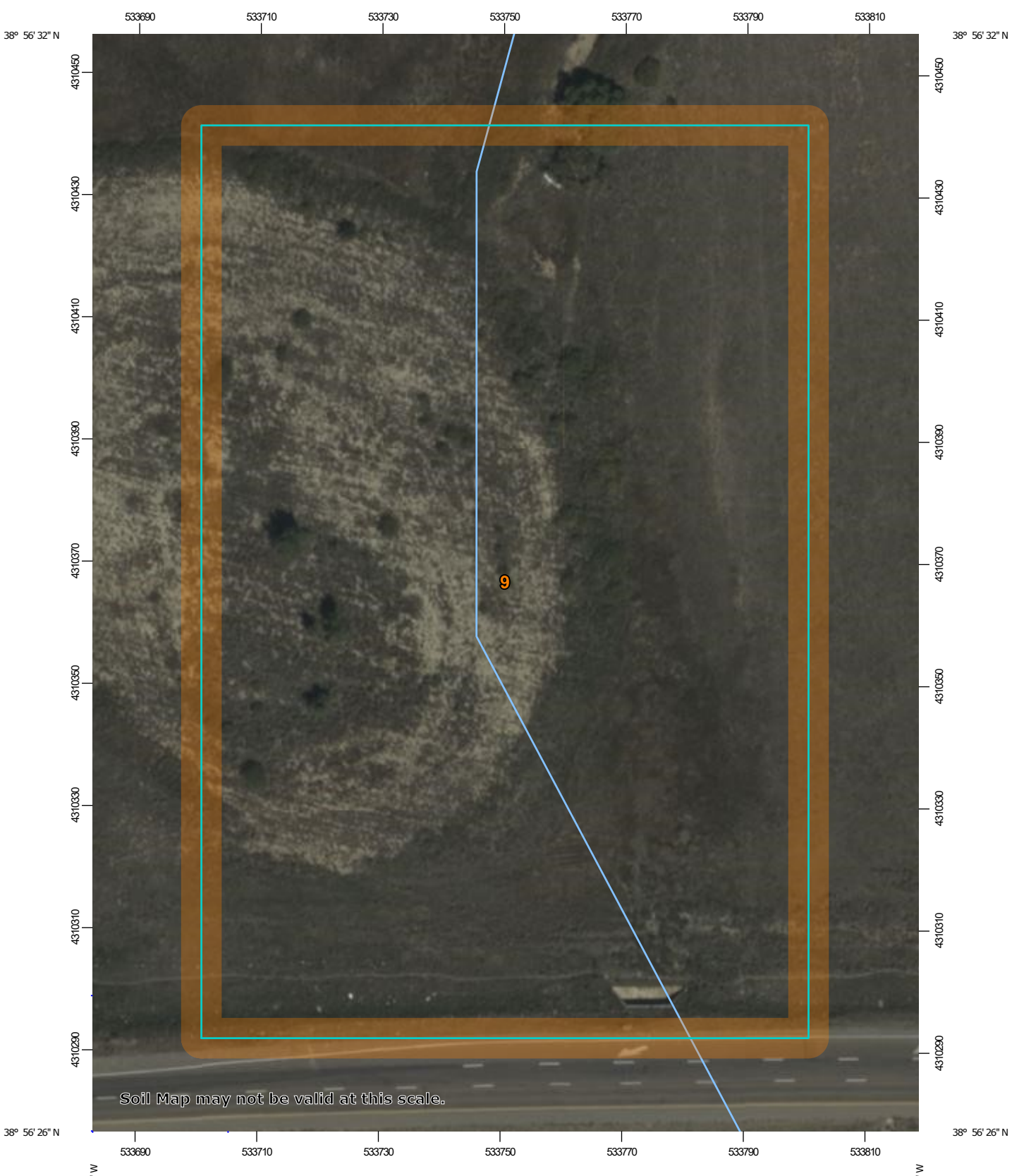
After soil scientists located and identified the significant natural bodies of soil in the survey area, they drew the boundaries of these bodies on aerial photographs and

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.

Custom Soil Resource Report
Soil Map



Map Scale: 1:876 if printed on A portrait (8.5" x 11") sheet.

N

Meters
0 10 20 40 60

Feet
0 40 80 160 240

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 18, Jun 5, 2020

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

Date(s) aerial images were photographed: Sep 11, 2018—Oct 20, 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
9	Blakeland-Fluvaquentic Haplaquolls	3.7	100.0%
Totals for Area of Interest		**3.7**	**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

9—Blakeland-Fluvaquentic Haplaquolls

Map Unit Setting

National map unit symbol: 36b6
Elevation: 3,500 to 5,800 feet
Mean annual precipitation: 13 to 17 inches
Mean annual air temperature: 46 to 55 degrees F
Frost-free period: 110 to 165 days
Farmland classification: Not prime farmland

Map Unit Composition

Blakeland and similar soils: 60 percent
Fluvaquentic haplaquolls and similar soils: 38 percent
Minor components: 2 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Blakeland

Setting

Landform: Hills, flats
Landform position (three-dimensional): Side slope, talf
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Sandy alluvium derived from arkose and/or eolian deposits derived from arkose

Typical profile

A - 0 to 11 inches: loamy sand
AC - 11 to 27 inches: loamy sand
C - 27 to 60 inches: sand

Properties and qualities

Slope: 1 to 9 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Somewhat excessively drained
Runoff class: Low
Capacity of the most limiting layer to transmit water (Ksat): High to very high (5.95 to 19.98 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 5 percent
Available water capacity: Low (about 4.5 inches)

Interpretive groups

Land capability classification (irrigated): 3e
Land capability classification (nonirrigated): 6e
Hydrologic Soil Group: A
Ecological site: R049XB210CO - Sandy Foothill
Hydric soil rating: No

Description of Fluvaquentic Haplaquolls

Setting

Landform: Swales
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Alluvium

Typical profile

H1 - 0 to 12 inches: variable

Properties and qualities

Slope: 1 to 2 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Poorly drained
Runoff class: Very high
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.20 to 6.00 in/hr)
Depth to water table: About 0 to 24 inches
Frequency of flooding: Occasional
Frequency of ponding: None
Maximum salinity: Nonsaline to slightly saline (0.0 to 4.0 mmhos/cm)

Interpretive groups

Land capability classification (irrigated): 6w
Land capability classification (nonirrigated): 6w
Hydrologic Soil Group: D
Hydric soil rating: Yes

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

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PROJECT: Slim Chicken's - Falcon
PROJECT NO. 21-030
DESIGN BY: GJB
DATE: 6/10/2021

Proposed/Existing	Land Use	%Imp
	Roof	90
	Drive/Walk	100
	Landscape	0

Soil Types: Blakeland-Fluvaquentic Haplaquolls

Hydrologic Grouping: Type A

Runoff Coefficients: C_A(2year) = 0.84i^1.302
C_A(5year) = 0.86i^1.276
C_A(10year) = 0.87i^1.232
C_A(100year) = 0.78i^0.110

Remove and replace with values from the 2014 City DCM Table 6-6 which is the current criteria used by the County.

Update the calculation and narrative accordingly.

Proposed Basins (proposed conditions) — **Land Use (Acres)** — **Weighted Runoff Coefficient**

Basin	Total Area	Roof	Drive/Walk	Landscape	C2	C5	C10	C100	%Imp
A-1	0.16	0.00	0.156	0.007	0.79	0.81	0.82	0.78	95.7
A-2	0.33	0.00	0.25	0.08	0.58	0.60	0.61	0.76	75.1
A-3	0.25	0.00	0.23	0.03	0.73	0.75	0.76	0.77	90.0
R-1	0.09	0.09	0.00	0.00	0.73	0.75	0.76	0.77	90.0
B-1*	0.51	0.00	0.00	0.51	0.00	0.00	0.00	0.00	0.0
B-2	0.02	0.00	0.00	0.02	0.00	0.00	0.00	0.00	0.0
B-3	0.03	0.00	0.00	0.03	0.00	0.00	0.00	0.00	0.0
C-1	0.16	0.00	0.04	0.12	0.12	0.13	0.14	0.66	22.2

*Basin B-1 remains untouched throughout this entire project. The existing basin is the same as the proposed basin.

	WITH BASIN B-1	WITHOUT BASIN B-1
TOTAL AREA (ACRES):	1.55	1.04
TOTAL IMPERVIOUSNESS (%):	71.93	71.93

Historic Basins (existing conditions) — **Land Use (Acres)** — **Weighted Runoff Coefficient**

Basin	Total Area	Roof	Drive/Walk	Landscape	C2	C5	C10	C100	%Imp
H-1	1.42	0.00	0.00	1.42	0.00	0.00	0.00	0.00	0.0
H-2	0.13	0.00	0.00	0.13	0.00	0.00	0.00	0.00	0.0

TOTAL AREA (ACRES):	1.55
TOTAL IMPERVIOUSNESS (%):	0.00

currently not using NOAA Atlas 14

Calculation of Peak Runoff using Rational Method

Designer: GJB
Company: POINT CONSULTING, LLC
Date: 6/8/2021
Project: SLIM CHICKEN'S FALCON
Location: FALCON PARKETPLACE

Version 2.00 released May 2017

Cells of this color are for required user-input
Cells of this color are for optional override values
Cells of this color are for calculated results based on overrides

$$t_i = \frac{0.395(1.1 - C_5)\sqrt{L_i}}{S^{0.33}}$$

$$t_t = \frac{L_t}{60K\sqrt{S_t}} = \frac{L_t}{60V_t}$$

Computed $t_c = t_i + t_t$

Regional $t_c = (26 - 17i) + \frac{L_t}{60(14i + 9)\sqrt{S_t}}$

$t_{minimum}$ = 5 (urban)
$t_{minimum}$ = 10 (non-urban)

Selected $t_c = \max\{t_{minimum}, \min(\text{Computed } t_c, \text{Regional } t_c)\}$

Select UDFCD location for NOAA Atlas 14 Rainfall Depths from the pulldown list OR enter your own depths obtained from the NOAA website (click this link)

	2-yr	5-yr	10-yr	25-yr	50-yr	100-yr	500-yr
1-hour rainfall depth, P_1 (in) =	0.79	1.22	1.48	1.86	2.19	2.54	3.46
Rainfall Intensity Equation Coefficients =	a: 28.50	b: 10.00	c: 0.786				

$$I(in/hr) = \frac{a * P_1}{(b + t_c)^c}$$

$Q(cfs) = CIA$

Subcatchment Name	Area (ac)	NRCS Hydrologic Soil Group	Percent Imperviousness	Runoff Coefficient, C							Overland (Initial) Flow Time					Channelized (Travel) Flow Time							Time of Concentration			Rainfall Intensity, I (in/hr)							Peak Flow, Q (cfs)						
				2-yr	5-yr	10-yr	25-yr	50-yr	100-yr	500-yr	Overland Flow Length L_i (ft)	U/S Elevation (ft) (Optional)	D/S Elevation (ft) (Optional)	Overland Flow Slope S_i (ft/ft)	Overland Flow Time t_i (min)	Channelized Flow Length L_t (ft)	U/S Elevation (ft) (Optional)	D/S Elevation (ft) (Optional)	Channelized Flow Slope S_t (ft/ft)	NRCS Conveyance Factor K	Channelized Flow Velocity V_t (ft/sec)	Channelized Flow Time t_t (min)	Computed t_c (min)	Regional t_c (min)	Selected t_c (min)	2-yr	5-yr	10-yr	25-yr	50-yr	100-yr	500-yr	2-yr	5-yr	10-yr	25-yr	50-yr	100-yr	500-yr
A-1	0.16	A	95.7	0.79	0.81	0.83	0.84	0.84	0.86	0.87	69.00			0.010	4.30	160.00			0.015	20	2.45	1.09	5.39	10.70	5.39	2.63	4.05	4.92	6.18	7.28	8.44	11.50	0.33	0.53	0.65	0.83	0.98	1.16	1.60
A-2	0.33	A	75.1	0.58	0.60	0.61	0.64	0.67	0.70	0.74	101.20			0.019	7.39	60.30			0.011	20	2.10	0.48	7.86	13.72	7.86	2.34	3.61	4.38	5.50	6.47	7.51	10.23	0.65	0.71	0.89	1.16	1.42	1.72	2.49
A-3	0.25	A	90.0	0.73	0.75	0.77	0.79	0.79	0.81	0.83	139.00			0.017	6.21	103.00			0.010	20	1.95	0.88	7.09	11.52	7.09	2.42	3.74	4.53	5.70	6.71	7.78	10.59	0.64	0.70	0.87	1.12	1.33	1.58	2.21
R-1	0.09	A	90.0	0.73	0.75	0.77	0.79	0.79	0.81	0.83	35.00			0.005	4.66	5.00			0.005	20	1.41	0.06	4.72	10.75	5.00	2.68	4.14	5.02	6.31	7.43	8.62	11.74	0.28	0.28	0.35	0.45	0.53	0.63	0.88
B-1*	0.51	A	0.0	0.00	0.00	0.00	0.00	0.03	0.11	0.25	20.00			0.030	6.18	250.00			0.010	5	0.50	8.33	14.51	30.63	14.51	1.82	2.81	3.41	4.29	5.05	5.86	7.98	0.00	0.00	0.00	0.00	0.06	0.33	1.03
B-2	0.02	A	0.0	0.00	0.00	0.00	0.00	0.03	0.11	0.25	64.00			0.010	15.89	5.00			0.010	7	0.70	0.12	16.01	26.09	16.01	1.74	2.68	3.26	4.09	4.82	5.59	7.61	0.00	0.00	0.00	0.00	0.00	0.01	0.04
B-3	0.03	A	0.0	0.00	0.00	0.00	0.00	0.03	0.11	0.25	80.20			0.030	12.38	5.00			0.030	7	1.21	0.07	12.45	26.05	12.45	1.95	3.01	3.66	4.60	5.41	6.28	8.55	0.00	0.00	0.00	0.00	0.00	0.02	0.07
C-1	0.16	A	22.2	0.12	0.13	0.14	0.16	0.21	0.28	0.40	40.00			0.005	13.98	13.00			0.020	7	0.99	0.22	14.20	22.35	14.20	1.84	2.84	3.45	4.33	5.10	5.92	8.06	0.03	0.06	0.08	0.11	0.18	0.27	0.51
H-1	1.42	A	0.0	0.00	0.00	0.00	0.00	0.03	0.11	0.25	152.00			0.015	21.42	142.00			0.062	7	1.74	1.36	22.78	27.06	22.78	1.45	2.24	2.72	3.41	4.02	4.66	6.35	0.00	0.00	0.00	0.00	0.14	0.73	2.29
H-2	0.13	A	0.0	0.00	0.00	0.00	0.00	0.03	0.11	0.25	21.00			0.017	7.64	13.00			0.019	7	0.96	0.22	7.86	26.17	10.00	2.14	3.30	4.00	5.03	5.92	6.87	9.36	0.00	0.00	0.00	0.00	0.02	0.10	0.31

Revise. Per the DCM Chapter 6 section 3.2.1 maximum lenght of overland flow is 100 ft for urban land uses

Update 1-hr rainfall per Table 6-2

Update intensity per Figure 6-5

3.2.1 Overland (Initial) Flow Time

The overland flow time, t_i, may be calculated using Equation 6-8.

$$t_i = \frac{0.395(1.1 - C_5)\sqrt{L}}{S^{0.33}} \qquad \text{(Eq. 6-8)}$$

Where:

t_i = overland (initial) flow time (min)
C_5 = runoff coefficient for 5-year frequency (see Table 6-6)
L = length of overland flow (300 ft maximum for non-urban land uses, 100 ft maximum for urban land uses)
S = average basin slope (ft/ft)

Note that in some urban watersheds, the overland flow time may be very small because flows quickly concentrate and channelize.

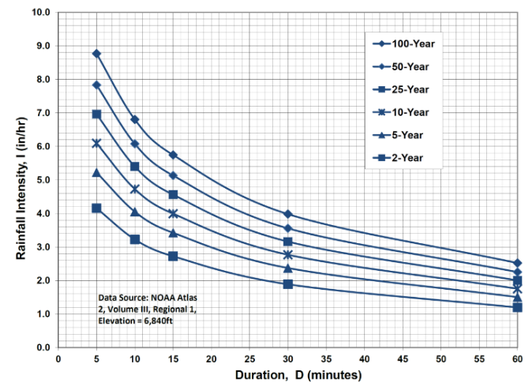
3.2.2 Travel Time

Table 6-2. Rainfall Depths for Colorado Springs

Return Period	1-Hour Depth	6-Hour Depth	24-Hour Depth
2	1.19	1.70	2.10
5	1.50	2.10	2.70
10	1.75	2.40	3.20
25	2.00	2.90	3.60
50	2.25	3.20	4.20
100	2.52	3.50	4.60

Where Z= 6,840 ft/100

Figure 6-5. Colorado Springs Rainfall Intensity Duration Frequency



IDF Equations

$I_{100} = -2.52 \ln(D) + 12.735$

$I_{50} = -2.25 \ln(D) + 11.375$

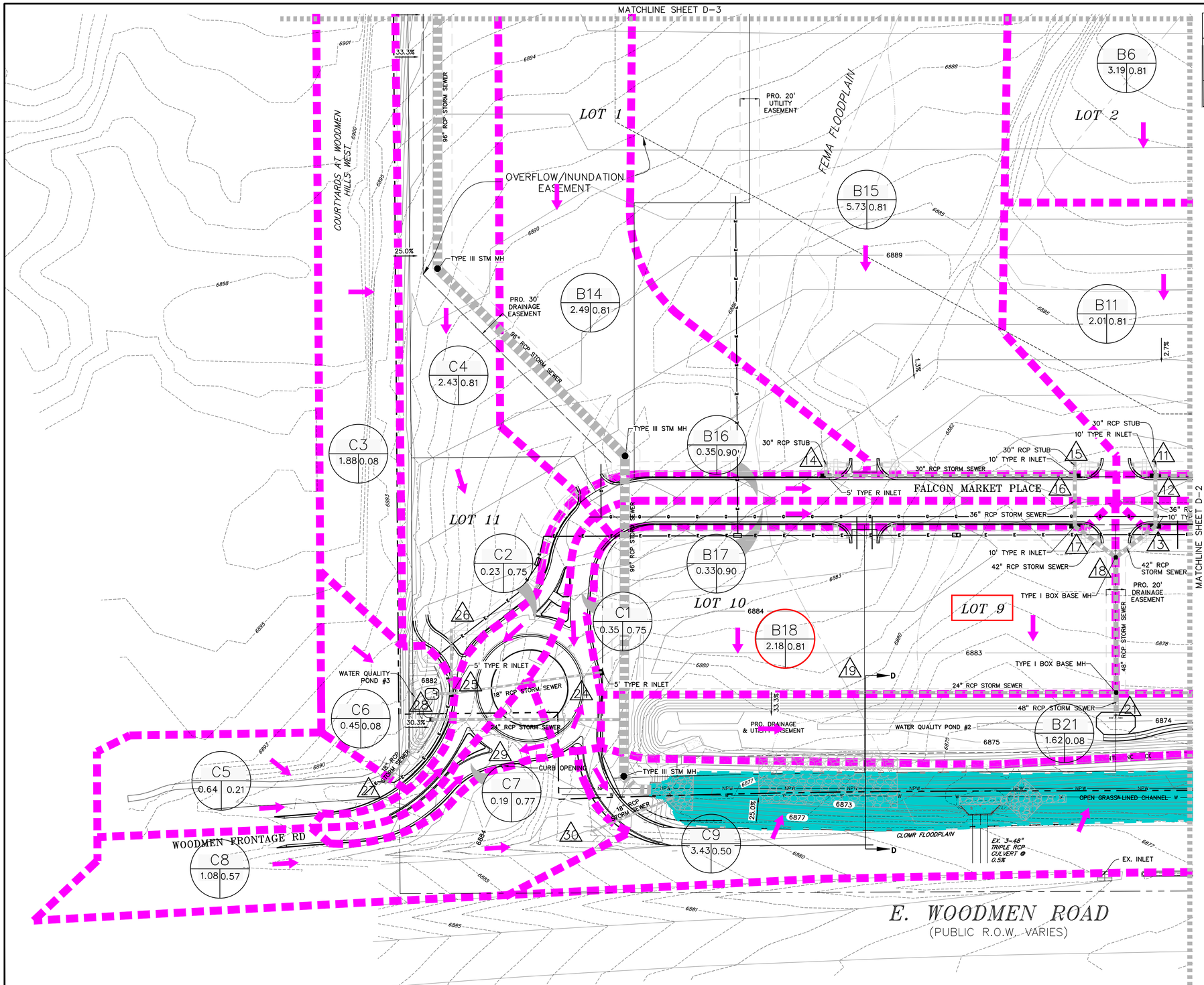
$I_{25} = -2.00 \ln(D) + 10.111$

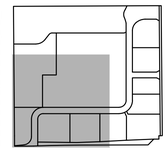
$I_{10} = -1.75 \ln(D) + 8.847$

$I_5 = -1.50 \ln(D) + 7.583$

$I_2 = -1.19 \ln(D) + 6.035$

Note: Values calculated by equations may not precisely duplicate values read from figure.





KEY MAP
NTS

N

50 0 50 100
SCALE: 1"=50'

RUNOFF SUMMARY

BASIN	DP	Area (Ac.)	Q_5 (CFS)	Q_{100} (CFS)
A1	DP1	1.81	3.4	7.7
	DP2	1.81	3.4	7.7
A2		4.82	1.4	10.2
	DP3	6.63	4.6	17.3
B4	DP4	2.35	7.5	14.6
B5		0.63	2.8	5.1
	DP5	2.99	10.0	19.3
B6	DP6	3.19	12.8	23.6
B7		0.46	2.0	3.7
	DP7	6.63	23.8	28.0
B8	DP8	1.04	3.5	6.9
B9		0.30	1.4	2.5
	DP9	1.35	4.9	9.3
B10		0.18	0.8	1.4
	DP10	8.16	29.2	38.1
B11	DP11	2.01	7.8	14.6
B12		0.18	0.8	1.5
	DP12	10.35	36.4	51.9
B13		0.20	0.9	1.6
	DP13	10.55	37.1	53.2
B14	DP14	2.49	9.1	17.0
B15	DP15	5.73	20.3	38.0
B16		0.35	1.6	2.9
	DP16	8.56	30.6	57.1
B17		0.33	1.5	2.7

BASIN	DP	Area (Ac.)	Q_5 (CFS)	Q_{100} (CFS)
	DP17	8.89	31.9	59.3
	DP18	19.44	52.1	88.2
B18	DP19	2.18	7.8	15.0
B19	DP20	2.57	10.1	18.8
	DP21	24.19	67.6	117.5
B20	DP22	2.03	5.6	11.4
B21		1.62	0.5	4.0
	DP23	27.85	67.4	121.8
C1	DP24	0.35	1.3	2.6
C2		0.23	0.8	1.5
	DP25	0.59	2.0	3.8
C3		1.88	0.6	4.2
C4		2.19	6.9	13.8
	DP26	4.08	5.4	13.7
C5	DP27	0.64	0.5	1.9
C6		0.45	0.2	1.2
	DP28	5.31	7.4	18.3
C7	DP29	0.19	0.7	1.3
C8		1.14	2.5	5.5
	DP30	1.33	3.1	6.6
C9		3.43	7.3	16.2
D1		2.62	4.1	8.8
D2		0.07	0.3	0.6
D3		0.07	0.3	0.6
	DP01	32.50	10.3	30.2

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DRAINAGE PLAN FOR FALCON MARKETPLACE

FALCON, COLORADO

ISSUE	DATE
INITIAL ISSUE	6-28-19
REVISED	7-19-19

DESIGNED BY:	TDM
DRAWN BY:	KGV
CHECKED BY:	TDM
FILE NAME:	

COLORADO REGISTERED T.D. McCONNELL 23707 12-18-19 PROFESSIONAL ENGINEER

PREPARED UNDER MY DIRECT SUPERVISION FOR AND ON BEHALF OF DREXEL, BARRELL & CO.

DRAWING SCALE:
HORIZONTAL: 1"=50'
VERTICAL: N/A

PROPOSED DRAINAGE CONDITIONS

PROJECT NO. 20988-00CSCV

DRAWING NO.

D-1

SHEET: 1 OF 5

Q_{100} =17.0 cfs are intended to culminate at **Design Point 14** where a proposed private 30" RCP storm sewer stub is provided to allow for storm sewer connection as needed by the future lot developer. Design of the internal storm sewer/drainage configuration for lot 1 will be determined by the individual lot developer at a later date.

A private 24" RCP stub has been provided into proposed manhole MA1 on the 96" outfall from pond SR4, at the northwest corner of lot 2. However, in accordance with El Paso County water quality guidelines, any flow entering this 24" stub, will need to be treated for water quality prior to entering the storm system. Alternatively all flow from this basin may travel via internal storm system to the south, as designed by this drainage report.

Basin B15 covers the western side of lot 2 and a portion of lot 1. Flows generated by this basin Q_5 =20.3 cfs, Q_{100} =38.0 cfs are intended to culminate at **Design Point 15** where a proposed private 30" RCP storm sewer stub is provided to allow for storm sewer connection as needed by the future lot developer. Design of the internal storm sewer/drainage configuration for lots 1 and 2 will be determined by the individual lot developer(s) at a later date.

Basin B16 covers a portion of the north side of Falcon Market Place adjacent lot 1. Flows of Q_5 =1.6 cfs, Q_{100} =2.9 cfs are generated by this basin and will travel to the east towards a proposed public 10' Type R at-grade inlet IB7 and further on to low point and public 10' Type R sump inlet IB8 (**Design Point 16**). Flows exiting this inlet will travel to the south via proposed public 36" RCP storm sewer.

Basin B17 covers a portion of the south side of Falcon Market Place adjacent lots 9 and 10. Flows of Q_5 =1.5 cfs, Q_{100} =2.7 cfs are generated by this basin and will travel to the east towards a proposed low point and public 10' Type R sump inlet IB9 (**Design Point 17**). Flows exiting this inlet will travel to the southeast via proposed public 36" RCP storm sewer.

Design Point 18 represents the combining of flows from Design Points 13 and 17 at proposed manhole MB1. Flows at this point (Q_5 =52.1 cfs, Q_{100} =88.2 cfs) will travel to the south via proposed public 48" RCP storm sewer.

Basin B18/Design Point 19 covers lots 9 and 10. Flows generated by this basin Q_5 =7.8 cfs, Q_{100} =15.0 cfs are intended to enter a proposed private 24" RCP storm sewer stub that has been extended through lot 9 into lot 10. This stub is provided to allow for storm sewer connection as needed by the future lot developer(s). Design of the internal storm sewer/drainage configuration for lots 9 and 10 will be determined by the individual lot developer(s) at a later date.

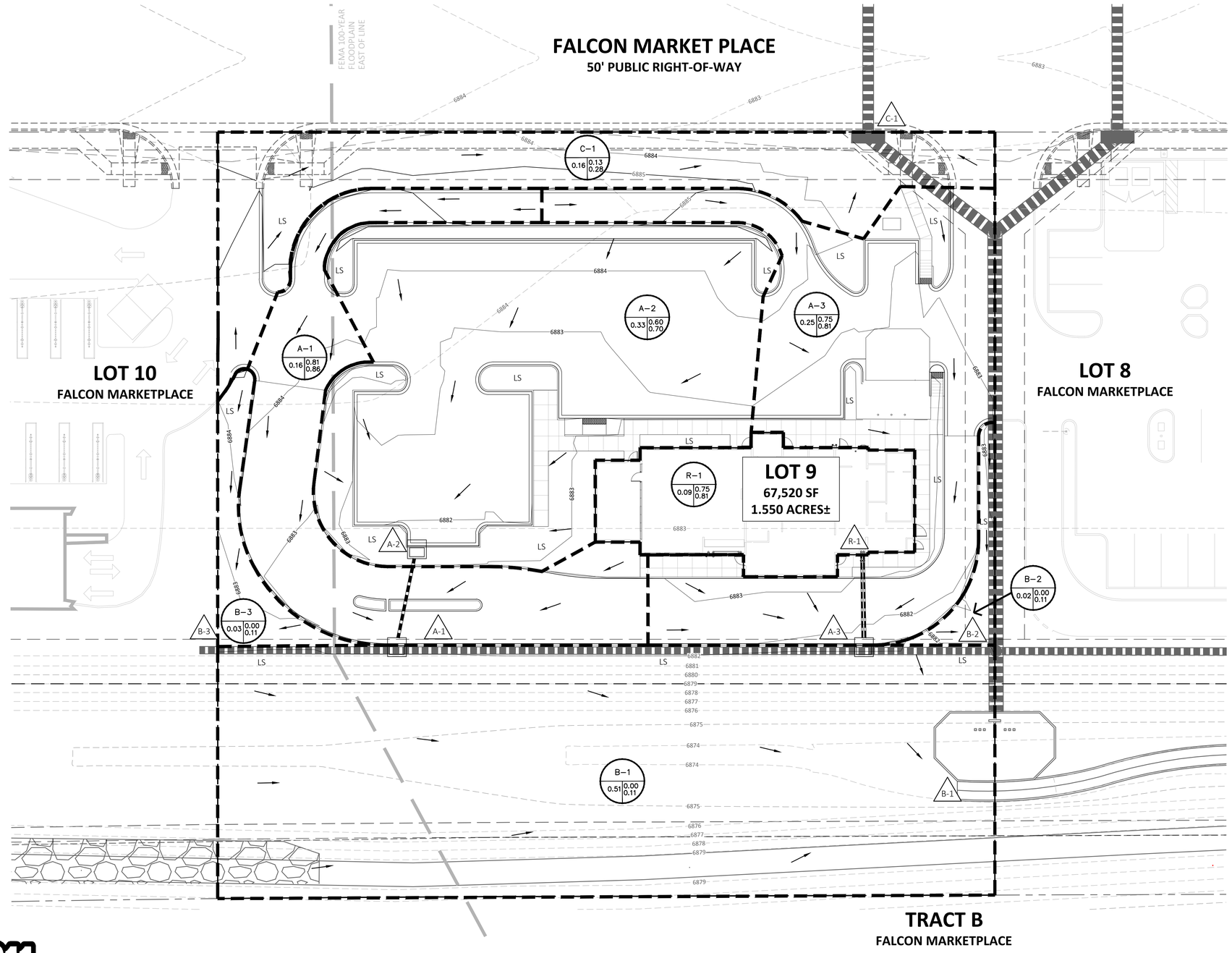
Basin B19/Design Point 20 covers lots 7 and 8. Flows generated by this basin Q_5 =10.1 cfs, Q_{100} =18.8 cfs are intended to enter a proposed private 24" RCP storm sewer stub that has been extended through lot 8 into lot 7. This stub is provided to allow for storm sewer connection as needed by the future lot developer(s). Design of the internal storm sewer/drainage configuration for lots 7 and 8 will be determined by the individual lot developer(s) at a later date.

Design Point 21 represents the combining of flows from Design Points 18, 19 and 20 at proposed manhole MB2. Flows at this point (Q_5 =67.6 cfs, Q_{100} =117.5 cfs) will travel to the

SLIM CHICKEN'S - FALCON

DRAINAGE LETTER

A PARCEL OF LAND LOCATED IN THE SE QUARTER OF SECTION 1, TOWNSHIP 13 SOUTH, RANGE 65 WEST OF THE SIXTH PRINCIPAL MERIDIAN, CITY OF FALCON, COUNTY OF EL PASO, STATE OF COLORADO



LEGEND

- PROPERTY LINE
- EXISTING CURB AND GUTTER
- PROPOSED CURB AND GUTTER
- PROPOSED STORM SEWER PIPE
- PROPOSED STORM SEWER INLET
- 5280 — PROPOSED CONTOUR
- 5280 — EXISTING CONTOUR
- LS — LANDSCAPE AREA
- BASIN BOUNDARY
- DRAINAGE ARROW
- A-1 — PROPOSED DESIGN POINT

A-0 (0.00 / 0.00 / 0.00)
- AREA IN ACRES
- BASIN
- 5-YEAR RUNOFF COEFFICIENT
- 100-YEAR RUNOFF COEFFICIENT

SUMMARY RUNOFF TABLE

BASIN	AREA (ACRES)	Q 5-YR (CFS)	Q 100-YR (CFS)
A-1	0.16	0.53	1.16
A-2	0.33	0.71	1.72
A-3	0.25	0.70	1.58
R-1	0.09	0.28	0.63
*B-1	0.51	0.00	0.33
B-2	0.02	0.00	0.01
B-3	0.03	0.00	0.02
C-1	0.16	0.06	0.27

BASIS OF BEARING:

THE BEARINGS AS SHOWN HEREON AND IN THE RECOREDED PLAT ARE BASED UPON THE THE CONSIDERATION THAT THE NORTH LINE OF THE SE 1/4 OF THE SE 1/4 OF SECTION 1, TOWNSHIP 13 SOUTH, RANGE 65 WEST OF THE SIXTH P.M. IS ASSUMED TO BEAR SOUTH 89°44'22" WEST. SAID LINE IS DOCUMENTED IN THE RECORDED PLAT, DATED 12-19-19.

BENCHMARK:

ELEVATIONS ARE BASED UPON THE COLORADO SPRINGS UTILITIES FACILITIES INFORMATION MANAGEMENT SYSTEM (FIMS) MONUMENT BLT167 (ELEVATION = 6873.18 NVGD29)

GENERAL NOTES

1. *BASIN B-1 IS NOT USED IN ANY CALCULATIONS AND IS TO REMAIN UNTOUCHED.
2. THE HYDROLOGICAL SOIL GROUP PRESENT IN THIS PROJECT SITE IS BLAKELAND-FLUVAQUENTIC HAPLAQUOLLS. SEE ATTACHED SOILS REPORT FOR FULL SOIL ANALYSIS.

811 Know what's below. Call before you dig.

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20 10 0 20
SCALE 1"=20'

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DRAINAGE LETTER
SLIM CHICKEN'S - FALCON
FALCON, COLORADO
JOB NO. 21.030

DESCRIPTION
1ST DRAINAGE LETTER SUBMITTAL

DATE
06.14.2021

PROPOSED DRAINAGE MAP

SHEET 2/2