

FINAL DRAINAGE LETTER FOR CALM BREEZE FILING NO. 1 EL PASO COUNTY, COLORADO

MAY 2026

Prepared for:

**Kramer and Callie Ammons
12650 Calm Breeze Point
Colorado Springs, CO 80908
719-985-1593**

Please include:
PCD File No. SF2614

Engineering would consider this as a Final Drainage Report per the ECM as this report is not referencing an existing drainage report. Please revise title.

Prepared by:



212 Wahsatch Ave., Ste. 305
Colorado Springs, CO 80903
(719) 955-5485

Project #08-101

FINAL DRAINAGE LETTER FOR
CALM BREEZE FILING NO. 1
EL PASO COUNTY, COLORADO

DRAINAGE PLAN STATEMENTS

ENGINEERS STATEMENT

The attached drainage plan and report was 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 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.

Virgil A. Sanchez, P.E. #37160
For and on Behalf of M&S Civil Consultants, Inc

DEVELOPER'S STATEMENT

I, the developer(s) have read and will comply with all the requirements specified in this drainage report and plan.

BY: _____

TITLE: Owner _____

DATE: _____

ADDRESS: Kramer and Callie Ammons
12650 Calm Breeze Point
Colorado Springs, CO 80908

Please include 2
owner signature
lines

EL PASO COUNTY'S STATEMENT

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

BY: _____

DATE: _____

Joshua Palmer, P.E.
County Engineer / ECM Administrator

CONDITIONS:

Joshua J. Palmer

Please update all future instances of report name.

FINAL DRAINAGE LETTER FOR CALM BREEZE FILING NO. 1 EL PASO COUNTY, COLORADO

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FINAL DRAINAGE LETTER FOR CALM BREEZE FILING NO. 1 EL PASO COUNTY, COLORADO

Purpose

This Final Drainage Letter for Calm Breeze Filing No. 1 is in support of the proposed Calm Breeze Filing No. 1 subdivision plat covering a 42.219-acre parcel. Owners intend to subdivide the property into four ~ 10-acre residential lots. This letter functions to identify the existing and proposed runoff patterns and recommend proposed drainage improvements which are intended to safely convey runoff through the proposed subdivision, while minimizing impacts to downstream facilities and adjacent properties. The analysis has been prepared in accordance with the requirements set forth by El Paso County.

General Location and Description

Calm Breeze Filing No. 1 Lots 1 through 4 are located in the Southeast Quarter (SE 1/4) of Section 11 and the Northeast Quarter (NE 1/4) of Section 14, both in Township 12 South, Range 65 West of the 6th P.M., El Paso County, Colorado. The site is bordered to the East by Porcupine Subdivision and to the Southeast by Black Squirrel Creek Park. See Vicinity Map in Appendix for details.

The current lot is approximately 42.22 acres and is proposed to be subdivided into 4 lots. Proposed along with the subdivision of the vacant property, the construction of an asphalt turnaround is proposed in the southeast corner of the property. Existing ditches on the north and south of Shoup Road shall be extended to subvert stormwater runoff around the proposed impervious area. The current parcel is zoned RR-5 and the proposed principal use for this site will be rural residential.

Soils

The Natural Resources Conservation Service, United States Department of Agriculture, Web Soil Survey, indicates that the soils for this project are: Elbeth sandy loam (26) and Kettle gravelly loamy sand (41). These soils have been characterized as having Hydrologic Soil Type "B". The soils classification used for this study is "B". Refer to the Soils Map located in the Appendix of this report

Drainage Criteria

As required by El Paso County, Colorado, this report has been prepared in accordance to the criteria set forth in the El Paso County Drainage Criteria Manual Volume 1 & 2 (DCM) and the El Paso County Engineering Criteria Manual (ECM).

Design Event Frequency

The 100-year storm event was used as the major storm for the project, and the 5-year storm event was used as the minor storm.

Method of Analysis

The rational method was used to calculate peak flows as the tributary areas are less than 100 acres.

Where: $Q = C \cdot i \cdot A$

Q = Maximum runoff rate in cubic feet per second (cfs)

C = Runoff coefficient

i = Average rainfall intensity (inches per hour)

A = Area of drainage sub-basin (acres)

Runoff Coefficient

Rational Method coefficients from Table 6-6 of the Drainage Criteria Manual for developed land were utilized in the Rational Method calculations. Composite percent impervious and C values were calculated using gravel streets, paved drives, and landscaped areas found within the aforementioned table.

Time of Concentration

The time of concentration consists of the initial time of overland flow and the travel time (street or channel, etc) to a downstream structure or point of interest. A minimum time of concentrations of 5 minutes is utilized for urban areas.

Rainfall Intensity

The hypothetical rainfall depths for the 1-hour storm duration were taken from Table 6-2 of the Drainage Criteria Manual.

Project 1-Hour Rainfall Depth Storm Recurrence Interval Rainfall Depth (inches)
5-year 1.50" 100-year 2.52"

Please update per
Keith Curtis's comment
in EDARP.

The rainfall intensity equation for the Rational Method was taken from Drainage Criteria Manual Volume 1 Figure 6-5.

Floodplain Statement

According to the Federal Emergency Management Agency (FEMA) Flood Insurance Rate Map (FIRM) Panel No. 08041C0320G, revised December 7, 2018 has been examined as it relates to the property being platted. Most of the site is located within Zone X, which includes areas determined to be outside the 0.2% annual chance floodplain.

A portion of the southern end of the site lies within a section of the Black Squirrel Creek, which flows eastward. This area has been designated as Zone A, indicating a 1% annual chance of flooding; however, no base flood elevation is determined. The Zone AE floodplain limits and base flood elevations, as shown on the Calm Breeze Filing No. 1 plat, are per the interpolated BFE extents provided by Keith Curtis (Pikes Peak Regional Building Department, Floodplain Division). The FIRM is included in the appendix of this report.

Informational Note: Plastic pipe is not recommended in EPC as they may melt in wildfires and delay EMS response.

Existing Drainage Conditions

Please label pipes / box culvert on drainage maps.

As the site is primarily undeveloped, vegetation throughout largely resembles historic conditions; however, a private drive traverses the property from the southwest corner to the northeast. The private drive shall be considered a gravel surface for the purpose of this analysis. Existing site terrain generally slopes from northwest to southeast at grade rates that vary from 8% to 40% slopes. Existing infrastructure exists to convey stormwater runoff under the existing private drive, including three (3) 18" corrugated plastic stormwater pipes, one (1) 24" CMP, and one (1) 14' x 6' RCBC.

Existing Conditions Detailed Drainage Discussion

Design Point 1 (Q5 = 196.2 cfs, Q100 = 455.5 cfs) consists of runoff from undeveloped **Basin A** and **Basin OS1**. **Basin A** is 23.10 acres of undeveloped land located within the subject site. **Basin OS1** is 777.05 acres of low density residential and undeveloped land located to the northeast of the subject site. Runoff from the two basins is conveyed to an existing 14'x6' Box Culvert located under Calm Breeze Point on the southwest side of the site. The existing box culvert will outfall the captured flows into **Basin F**, ultimately out falling into the existing Black Squirrel Creek, running along the south side of the site.

Design Point 2 (Q5 = 1.3 cfs, Q100 = 3.0 cfs) consists of runoff from undeveloped **Basin D**. **Basin D** is 1.30 acres of existing undeveloped land within the subject site. Runoff from this basin flows into an existing 18" corrugated plastic storm drain under the existing Calm Breeze Point. Runoff will be routed via overland flow into the existing Black Squirrel Creek, running along the south side of the site.

Design Point 3 (Q5 = 2.5 cfs, Q100 = 5.8 cfs) consists of runoff from undeveloped **Basin C**. **Basin C** is 2.78 acres of undeveloped land located within the subject site. Runoff from the basin is conveyed to an existing 18" corrugated plastic storm drain under the existing Calm Breeze Point. Runoff will be routed via overland flow into the existing Black Squirrel Creek, running along the south side of the site.

Design Point 4 (Q5 = 3.0 cfs, Q100 = 7.2 cfs) consists of runoff from undeveloped **Basin B** and **Basin OS2**. **Basin B** is 1.54 acres of undeveloped land located within the subject site. **Basin OS2** is 1.84 acres of undeveloped land located to the north of the subject site. Runoff from the two basins is conveyed to an existing 24" CMP located under Calm Breeze Point on the site. Runoff will join **Basin E** to be conveyed off-site, ultimately joining Black Squirrel Creek to the East of the subject site.

Design Point 5 (Q5 = 15.0 cfs, Q100 = 34.1 cfs) consists of runoff from **Basin OS3**. **Basin OS3** is 16.77 acres of low density residential and undeveloped land located to the north the subject site. Runoff from the basin is conveyed to an existing 18" corrugate plastic storm drain located under Calm Breeze Point. The pipe inlet is located to the North of the subject site, while the outlet is located on the subject site. Current Infrastructure at **DP5** is currently undersized, as the maximum flow through an 18" corrugated plastic pipe at 0.7% slope is approximately 8.5 cfs. The overflow runoff from **DP5** will be conveyed over Calm Breeze Point. Runoff from the 18" pipe and the overflow will join **Basin E** to be conveyed off-site, ultimately joining Black Squirrel Creek to the East of the subject site.

Please check this assumption. Based on the contours and assuming the road elevation is higher, it seems like the water might pond or flow down to the culvert at DP 4 before overtopping Calm Breeze Point. If it will pond, please depict ponding limits on drainage map.

Recommend pulling a ditch from DP5 to DP4 to help protect Calm Breeze Point from overtopping/damage and convey more of the flows in culverts as opposed to the existing condition.

Design Point 6 (Q5 = 18.9 cfs, Q100 = 43.0 cfs) consists of runoff from undeveloped **Basin E, DP4** and **DP5**. **Basin E** is 3.94 acres of undeveloped land and existing gravel road (Calm Breeze Point) located within the subject site. Runoff from the basins will be conveyed off-site, ultimately joining Black Squirrel Creek to the East of the subject site.

Design Point 7 (Q5 = 197.4 cfs, Q100 = 458.2 cfs) consists of runoff from **Basin F, DP1, DP2** and **DP3**. **Basin F** is 9.56 acres of undeveloped land and existing gravel road (Calm Breeze Point) located within the subject site. Runoff from the basins will be conveyed into Black Squirrel Creek.

Proposed Drainage Characteristics

General Concept Drainage Discussion

The only proposed construction associated with Calm Breeze Filing No. 1 includes a public, paved traffic turnaround on the southwest corner of the site. Along with the construction of the turnaround, a swale will be constructed to subvert flows around the added impervious area and safely convey the flows into the existing natural channels on-site. The proposed increase in impervious area covers such a small percentage of the effected drainage basins that the increase in C values is negligible to the nearest hundredth; therefore, the proposed drainage patterns show negligible difference when compared to the existing drainage conditions.

A proposed conditions drainage map is included in the Appendix of this report to accompany the following discussion.

As this drainage report serves only the construction of the public turnaround, additional analysis may be required at the time of future construction within Lots 1-4.

Proposed Conditions Detailed Drainage Discussion

Design Point 1 (Q5 = 196.2 cfs, Q100 = 455.6 cfs) consists of runoff from undeveloped **Basin A** and **Basin OS1**. **Basin A** is 23.10 acres of undeveloped land and a portion of the proposed, impervious surface located within the subject site. **Basin OS1** is 777.05 acres of low density residential and undeveloped land located to the northeast of the subject site. Runoff from the two basins is conveyed to an existing 14'x6' Box Culvert located under Calm Breeze Point on the southwest side of the site. The existing box culvert will outfall the captured flows into **Basin F**, ultimately out falling into the existing Black Squirrel Creek, running along the south side of the site.

The proposed lots and driveways shall be included in the proposed condition analysis.

Design Point 2 (Q5 = 1.3 cfs, Q100 = 3.0 cfs) consists of runoff from undeveloped **Basin D**. **Basin D** is 1.30 acres of existing undeveloped land within the subject site. Runoff from this basin flows into an existing 18" corrugated plastic storm drain under the existing Calm Breeze Point. Runoff will be routed via overland flow into the existing Black Squirrel Creek, running along the south side of the site.

For the proposed condition, assume and show driveways and single family home sites for each of the lots.

Proposed conditions do not address the flows coming down Shoup road and ditches onto the proposed cul-de-sac and ditches. Please include in analysis and narrative. See comment in CDs.

This drainage report is for the subdivision as well as the public improvements. Please revise or remove. Drainage reports are not required with single family home site plans.

Design Point 3 (Q5 = 2.5 cfs, Q100 = 5.8 cfs) consists of runoff from undeveloped **Basin C**. **Basin C** is 2.78 acres of undeveloped land located within the subject site. Runoff from the basin is conveyed to an existing 18" corrugated plastic storm drain under the existing Calm Breeze Point. Runoff will be routed via overland flow into the existing Black Squirrel Creek, running along the south side of the site.

Design Point 4 (Q5 = 3.0 cfs, Q100 = 7.2 cfs) consists of runoff from undeveloped **Basin B** and **Basin OS2**. **Basin B** is 1.54 acres of undeveloped land located within the subject site. **Basin OS2** is 1.84 acres of undeveloped land located to the north of the subject site. Runoff from the two basins is conveyed to an existing 24" CMP located under Calm Breeze Point on the site. Runoff will join **Basin E** to be conveyed off-site, ultimately joining Black Squirrel Creek to the East of the subject site.

Design Point 5 (Q5 = 15.0 cfs, Q100 = 34.1 cfs) consists of runoff from **Basin OS3**. **Basin OS3** is 16.77 acres of low density residential and undeveloped land located to the north the subject site. Runoff from the basin is conveyed to an existing 18" corrugate plastic storm drain located under Calm Breeze Point. The pipe inlet is located to the North of the subject site, while the outlet is located on the subject site. Current Infrastructure at **DP5** is currently undersized, as the maximum flow through an 18" corrugated plastic pipe at 0.7% slope is approximately 8.5 cfs. The overflow runoff from **DP5** will be conveyed over Calm Breeze Point. Runoff from the existing 18" pipe and overflow will join **Basin E** to be conveyed off-site, ultimately joining Black Squirrel Creek to the East of the subject site.

Design Point 6 (Q5 = 18.9 cfs, Q100 = 43.0 cfs) consists of runoff from undeveloped **Basin E**, **DP4** and **DP5**. **Basin E** is 3.94 acres of undeveloped land and existing gravel road (Calm Breeze Point) located within the subject site. Runoff from the basins will be conveyed off-site, ultimately joining Black Squirrel Creek to the East of the subject site.

Design Point 7 (Q5 = 197.5 cfs, Q100 = 458.4 cfs) consists of runoff from **Basin F**, **DP1**, **DP2** and **DP3**. **Basin F** is 9.56 acres of undeveloped land, existing gravel road (Calm Breeze Point), and a portion of the proposed, impervious surface associated with the public turnaround located within the subject site. Runoff from the basins will be conveyed into Black Squirrel Creek.

Include analysis and narrative of the condition (stability, vegetation, erosion) of all larger drainageways crossing the subdivision (notated on plat and drainage map) and use the extents to notate drainage easements on the plat drawing.

Water Quality Provision and Maintenance

No water quality facilities are proposed with the proposed development on site. As this drainage report is only serving the construction of the public turnaround, further analysis may be required with future development of Lots 1-4.

This drainage report should address the anticipated development of the lots. Please discuss why this project is excluded from permanent water quality treatment, identify all exclusions being utilized.

Same comment as above.

Erosion Control

It is the policy of the El Paso County that a grading and erosion control plan (GEC) be provided with the drainage report. The GEC incorporates silt fence, vehicle traffic control, inlet and outlet controls, rock check dams and other best management practices (BMP's) as identified in the DCM Volume 2.

Drainage and Bridge Fees

This site is located in the Upper Black Squirrel Drainage Basin. Per the El Paso County Drainage Basin Fees Resolution No. 25-302, there are no drainage basin fees associated with the Upper Black Squirrel Drainage Basin; therefore, no drainage fees are due with Clam Breeze Filing No. 1.

Summary

The proposed design associated with Calm Breeze Filing No. 1 shows negligible difference in stormwater runoff when comparing the existing and proposed conditions. The current infrastructure on site sufficiently conveys existing and proposed stormwater runoff for the 5-yr and 100-yr storm events, with the exception of an 18" corrugated plastic pipe located at DP5. The construction of the turnaround on the southwest portion of the property will not negatively impact existing drainage patterns currently experienced on site, on adjacent properties, and/or within existing channels and floodplains.

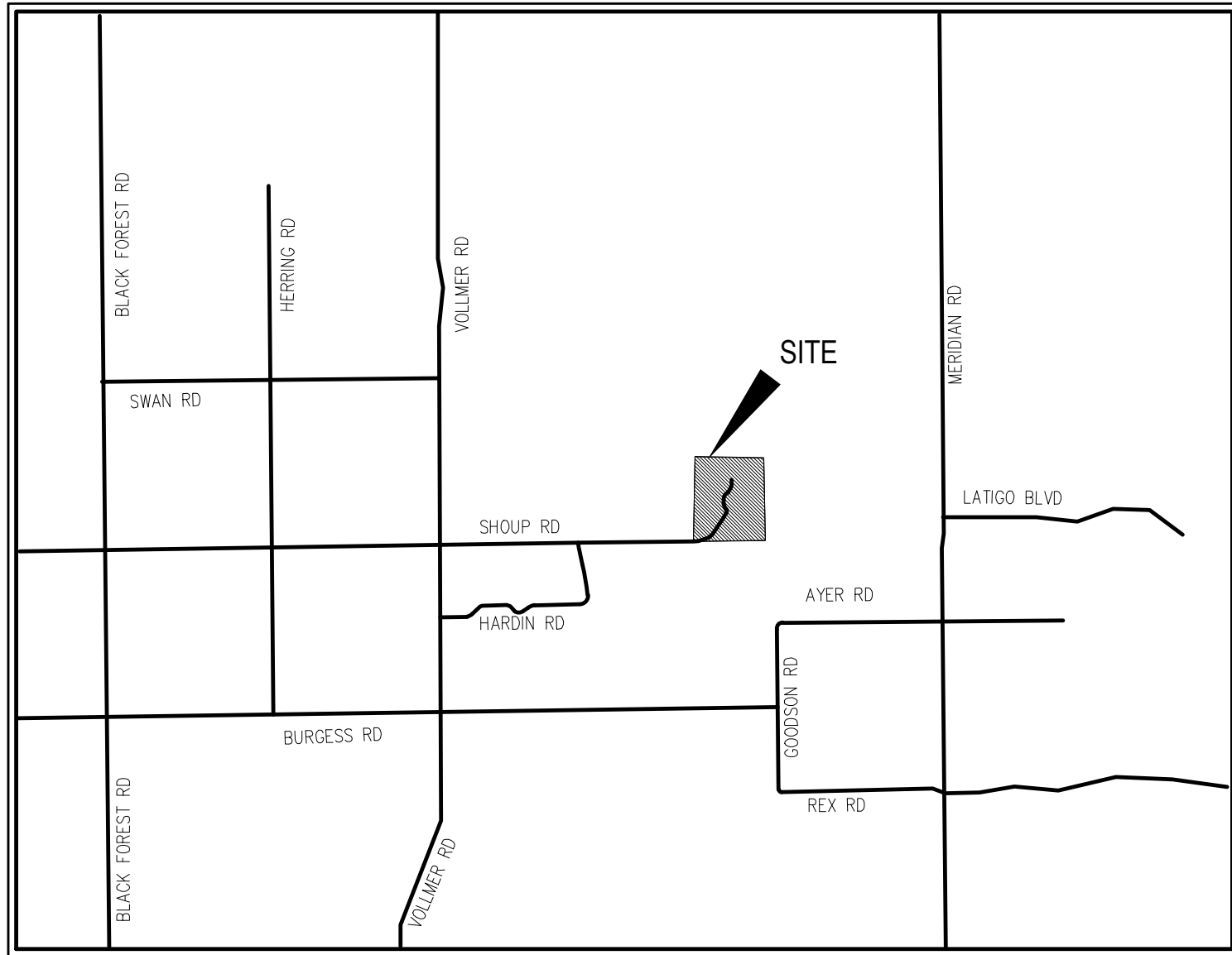
Once the proposed homes, driveways, etc. are included in the report, please provide a comparison of existing vs. proposed runoff for the 5 and 100 year events.

References

1. "El Paso County and City of Colorado Springs Drainage Criteria Manual".
2. "Urban Storm Drainage Criteria Manual"
3. Soil Survey Staff, Natural Resources Conservation Service, United States Department of Agriculture. Web Soil Survey. Available online at the following link: <http://websoilsurvey.sc.egov.usda.gov/>. Accessed: February 02, 2023.
4. Flood Insurance Rate Map (FIRM), Federal Emergency Management Agency, Effective dated December 7, 2018.
5. 2026 Drainage, Bridge, and Pond Fees, City of Colorado Springs, Effective January 1st, 2026.

Appendix

Vicinity Map



VICINITY MAP

N.T.S.

Soils Map

Soil Map—El Paso County Area, Colorado
(Calm Breeze Point)



Soil Map—El Paso County Area, Colorado
(Calm Breeze Point)

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 23, Aug 29, 2025

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

Date(s) aerial images were photographed: Jul 23, 2024—Aug 4, 2024

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
26	Elbeth sandy loam, 8 to 15 percent slopes	19.8	47.0%
41	Kettle gravelly loamy sand, 8 to 40 percent slopes	22.4	53.0%
Totals for Area of Interest		42.2	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

26—Elbeth sandy loam, 8 to 15 percent slopes

Map Unit Setting

National map unit symbol: 367y
Landscape: Uplands
Elevation: 7,300 to 7,600 feet
Farmland classification: Not prime farmland

Map Unit Composition

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

Description of Elbeth

Setting

Landscape: Uplands
Landform: Hills
Landform position (three-dimensional): Side slope
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Alluvium derived from arkose

Typical profile

A - 0 to 3 inches: sandy loam
E - 3 to 23 inches: loamy sand
Bt - 23 to 68 inches: sandy clay loam
C - 68 to 74 inches: sandy clay loam

Properties and qualities

Slope: 8 to 15 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 (0.20 to 0.60 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: Moderate (about 7.1 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 4e
Hydrologic Soil Group: B
Ecological site: F048AY908CO - Mixed Conifer
Hydric soil rating: No

Minor Components

Other soils

Percent of map unit: 10 percent
Hydric soil rating: No

Pleasant

Percent of map unit: 5 percent

Landform: Depressions

Hydric soil rating: Yes

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

Map Unit Setting

National map unit symbol: 368h

Landscape: Uplands

Elevation: 7,000 to 7,700 feet

Farmland classification: Not prime farmland

Map Unit Composition

Kettle and similar soils: 85 percent

Minor components: 15 percent

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

Description of Kettle

Setting

Landscape: Uplands

Landform: Hills

Landform position (three-dimensional): Side slope

Down-slope shape: Linear

Across-slope shape: Linear

Parent material: Sandy alluvium derived from arkose

Typical profile

E - 0 to 16 inches: gravelly loamy sand

Bt - 16 to 40 inches: gravelly sandy loam

C - 40 to 60 inches: extremely gravelly loamy sand

Properties and qualities

Slope: 8 to 40 percent

Depth to restrictive feature: More than 80 inches

Drainage class: Somewhat excessively drained

Runoff class: Medium

Capacity of the most limiting layer to transmit water (Ksat): High (2.00 to 6.00 in/hr)

Depth to water table: More than 80 inches

Frequency of flooding: None

Frequency of ponding: None

Available water supply, 0 to 60 inches: Low (about 3.4 inches)

Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 7e

Hydrologic Soil Group: B

Ecological site: F048AY908CO - Mixed Conifer

Custom Soil Resource Report

Hydric soil rating: No

Minor Components

Other soils

Percent of map unit: 10 percent

Hydric soil rating: No

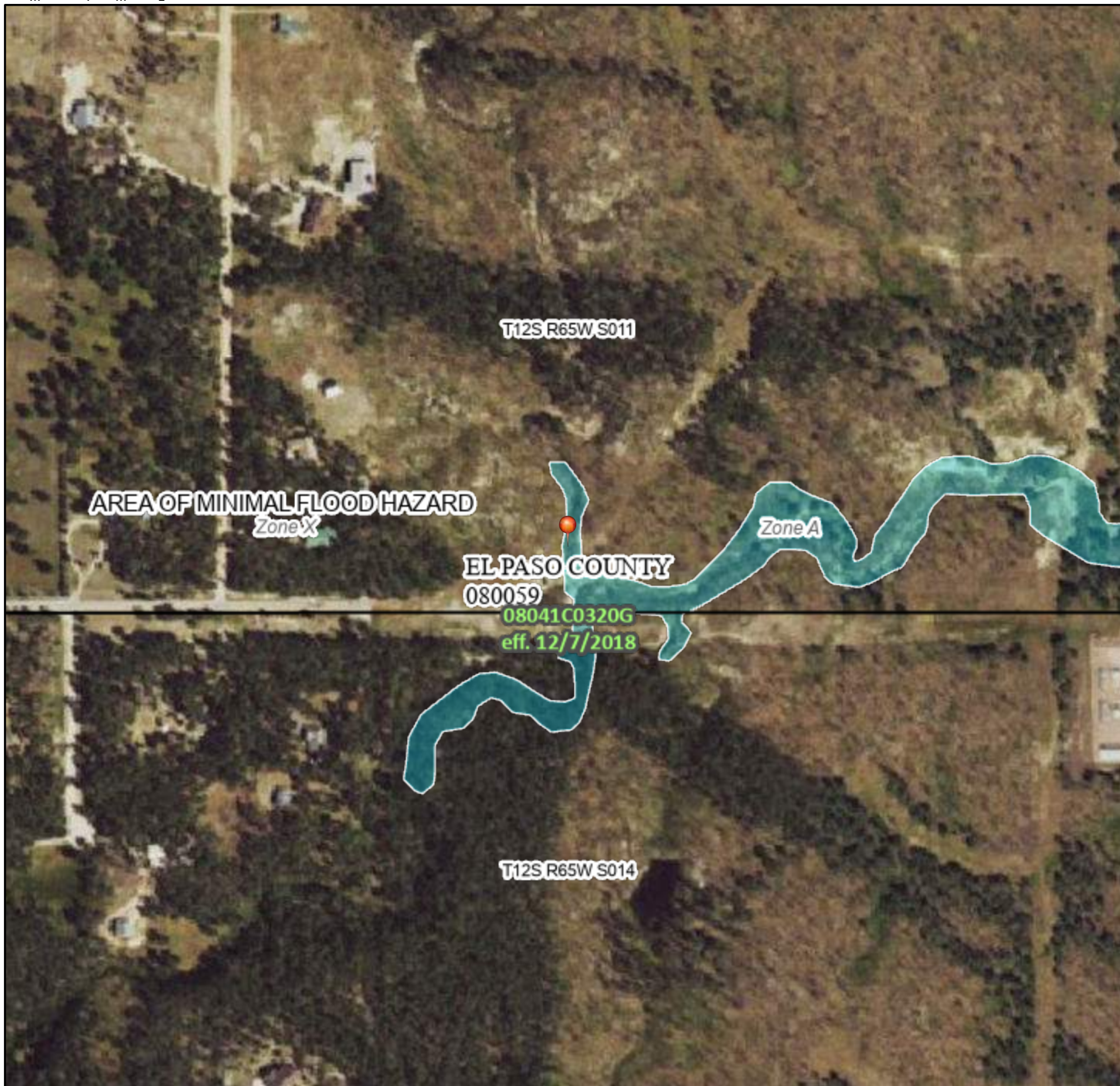
Pleasant

Percent of map unit: 5 percent

Landform: Depressions

Hydric soil rating: Yes

FEMA FIRM Panel



6((),6 5(3257)25 '(7\$,/' /(*(' \$1' ,1'(; 0\$3)25),50

63(&,\$/)/22' +\$=\$5' \$5(:LWKR XW %DVH)ORRG (O =RQH \$ 9 \$:LWK %)(R RQHHSWK2 \$+ 9 5HJXODWRU\)ORRGZD\

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27+(5 \$5(\$6 2))/22' +\$=\$ \$UHD ZLWK)ORRG 5-LRN

12 6&5((\$UHD RI 0LQLPDO)ORRG (IIHFWLYH /205V

27+(5 \$5(\$6 \$UHD RI 8QGHWHUPLQH

*(1(5\$/ --- &KDQHO &XOYHUW RU 6758&785(16111 /HYHH 'LNH RU)ORRGZD

&URVV 6HFWRQLV ZLWK :DWHU 6XUIDFH (OHYDWL &RDVWDO 7UDQVHF %DVH)ORRG (OHYDWLRLQ /LPLW RI 6WXG\ -XULVGLFWLRQ %RXQGDU

27+(5 3URILQH %DVHOLQH)(\$785(6 +IGURJUDSKLF)HDWXUH

'LJLWDO 'DWD \$YDLODEO 1R 'LJLWDO 'DWD \$YDLOD 0\$3 3\$1(/6 8QPDSHG

7KH SLQ GLVSOD\HG RQ WKH SRLQW VHOHFWHG E\ WKH XV DQ DXWKRULDWLWLYH SURSHU

7KLV PDS FRPSOLHV ZLWK)(0\$ V VWDQ GLJLWDO IORRG PDSV LI LW LV QRW YR 7KH EDVHPDS VKRZQ FRPSOLHV ZLWK)(DFFXUD\ VWDQGDUGV

7KH IORRG KD]DUG LQIRUPDWLRQ LV GH DXWKRULDWLWLYH 1)+/ ZHE VHU\LFHV S ZDV H[SURWHG RQ W . DQG GRHV QRW UHIOHFW FKDQJHV RU DPHQGPHQWV VX WLPH 7KH 1)+/ DQG HIIHFWLYH LQIRUP EHFRPH VXSHUVHGHE E\ QHZ GDWD RYH

7KLV PDS LPDJH LV YRLG LI WKH RQH R HOHPHQWV GR QRW DSSHDU, EDVHPDS OHJHQG VFDOH EDU PDS FUDWLRQ G),50 SDQHO QXPEHU DQG),50 HIIHFWLY XQPDSSHG DQG XQPRGHUQLJHG DUHDV UHJXODWRU\ XSUSRVHV

NOTES TO USERS

This map is for use in administering the National Flood Insurance Program. It does not necessarily identify all areas subject to flooding, particularly from local drainage sources of small size. The community map repository should be consulted for 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, whereas differences in datum, spheroid, projection or UTM zones could result in the production of FRMs 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 Service
NOAA, NIMS12
National Geodetic Survey
2584C-3, BOSTON
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 Geodetic Survey, and/or other Federal, State, and/or local government agencies, 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 contain authoritative hydraulic data) may reflect stream channel elevations 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.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>.

El Paso County Vertical Datum Offset Table

Panel Location Map

This Digital Flood Insurance Rate Map (DFIRM) was produced through a Cooperative 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.

NOTE: MAP AREA SHOWN ON THIS PANEL IS LOCATED WITHIN TOWNSHIP 11 SOUTH, RANGE 65 WEST, AND TOWNSHIP 12 SOUTH, RANGE 66 WEST.

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NOTE: MAP AREA SHOWN ON THIS PANEL IS LOCATED WITHIN TOWNSHIP 11 SOUTH, RANGE 65 WEST, AND TOWNSHIP 12 SOUTH, RANGE 66 WEST.

LEGEND

SPECIAL FLOOD HAZARD AREAS (SFHAS) SUBJECT TO DETERMINATION 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, X, and VE. The Base Flood Elevation is the water-surface elevation of the 1% annual chance flood.

ZONE A No Base Flood Elevation determined.
ZONE AE Base Flood Elevation determined.
ZONE AH Flood depths of 1 to 3 feet (usually where flood depths are not determined).
ZONE AO Flood depths of 1 to 3 feet (usually where flood depths are not determined).
ZONE AR Special Flood Hazard Area formerly protected from the 1% annual chance flood by a flood control system that was subsequently destroyed. Zone AR indicates that the former flood control system is being replaced to provide protection from the 1% annual chance or greater flood.
ZONE AV Area to be protected from 1% annual chance flood by a flood control system, subject to construction. No Base Flood Elevation determined.
ZONE VE Coastal flood zone with velocity hazard (wave action). Base Flood Elevation 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 the 1% annual chance flood.

OTHER AREAS

ZONE B 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.

BOUNDARY LINES

Floodplain boundary
Floodway boundary
Zone-D boundary
CBRS or OPA boundary

BOUNDARY LINES

Boundary defining Special Flood Hazard Areas of different Base Flood Elevation, flood depths or flood velocities.

BOUNDARY LINES

Base Flood Elevation value and value elevation in feet.
Base Flood Elevation value where uniform within same elevation in feet.

BOUNDARY LINES

Referenced to the North American Vertical Datum of 1988 (NAVD88).

BOUNDARY LINES

Geographic coordinates referenced to the North American Datum of 1983 (NAD83).

BOUNDARY LINES

2000-meter Universal Transverse Mercator grid ticks, zone 13.

BOUNDARY LINES

500-foot grid ticks. Colorado State Plane coordinate system, central zone (PCS/CN 002).

BOUNDARY LINES

Location of National Flood Insurance Program (NFIP) community.

BOUNDARY LINES

Bench mark (see explanation in Notes to Users section of this DFIRM).

BOUNDARY LINES

State Mile.

MAP REPOSITORY

Refer to Map Repository list on map index.

EFFECTIVE DATE OF CO-OPERATION

FLOOD INSURANCE RATE MAP
MARCH 11, 1997

EFFECTIVE DATES OF REVISIONS TO THIS PANEL

DECEMBER 7, 2018 - To update corporate limits, to change Base Flood Elevation and Special Flood Hazard Areas, to update map format, to add roads and other features, and to incorporate previously issued Letters of Map Revision.

For community map revision history, prior to community 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 1-800-635-6868.

MAP SCALE 1" = 1000'

0 1000 2000
0 1000 2000
0 1000 2000

NFIP PANEL 0320G

FIRM

FLOOD INSURANCE RATE MAP

EL PASO COUNTY, COLORADO AND INCORPORATED AREAS

PANEL 320 OF 1300

(SEE MAP INDEX FOR FIRM PANEL LAYOUT)

CONTAINS:

COMMUNITY: EL PASO COUNTY

NUMBER: 0320

PANEL: 320

SHEET: 1

MAP NUMBER 080410320G

MAP REVISED DECEMBER 7, 2018

Federal Emergency Management Agency

HYDROLOGIC CALCULATIONS

CALM BREEZE FILING NO. 1
EXISTING CONDITIONS
(Area Runoff Coefficient Summary)

BASIN	TOTAL AREA (SF)	TOTAL AREA (Acres)	STREETS / GRAVEL ROADS			1 ACRE RESIDENTIAL			OPEN SPACE / LANDSCAPING				
			AREA (Acres)	C ₅	C ₁₀₀	AREA (Acres)	C ₅	C ₁₀₀	AREA (Acres)	C ₅	C ₁₀₀	C ₅	C ₁₀₀
A	1006236.151	23.10	0.00	0.90	0.95	0.00	0.30	0.40	23.10	0.25	0.35	0.25	0.35
B	66927.470	1.54	0.00	0.90	0.95	0.00	0.30	0.40	1.54	0.25	0.35	0.25	0.35
C	120881.214	2.78	0.00	0.90	0.95	0.00	0.30	0.40	2.78	0.25	0.35	0.25	0.35
D	56842.138	1.30	0.00	0.90	0.95	0.00	0.30	0.40	1.30	0.25	0.35	0.25	0.35
E	171546.419	3.94	0.35	0.80	0.85	0.00	0.30	0.40	3.59	0.25	0.35	0.30	0.39
F	416249.294	9.56	0.61	0.80	0.85	0.00	0.30	0.40	8.95	0.25	0.35	0.29	0.38
OS1	33848146.660	777.05	0.00	0.90	0.95	145.94	0.30	0.40	631.11	0.25	0.35	0.26	0.36
OS2	80255.120	1.84	0.00	0.90	0.95	0.00	0.30	0.40	1.84	0.25	0.35	0.25	0.35
OS3	730553.828	16.77	0.00	0.90	0.95	10.08	0.30	0.40	6.69	0.25	0.35	0.28	0.38

Calculated by: CR
Date: 4/21/2026
Checked by: VAS

CALM BREEZE FILING NO. 1 **EXISTING CONDITIONS** **(Area Drainage Summary)**

From Area Runoff Coefficient Summary				OVERLAND				STREET / CHANNEL FLOW				Time of Travel (T _t)		INTENSITY *		TOTAL FLOWS	
BASIN	AREA TOTAL (ACRES)	C ₅	C ₁₀₀	C ₅	Length (ft)	Height (ft)	T _C (min)	Length (ft)	Slope (%)	Velocity (fps)	T _t (min)	TOTAL (min)	CHECK (min)	I ₅ (in/hr)	I ₁₀₀ (in/hr)	Q ₅ (c.f.s.)	Q ₁₀₀ (c.f.s.)
		From DCM Table S-1															
A	23.10	0.25	0.35	0.25	100	11	7.0	1694	3.1%	2.6	10.8	17.7	20.0	3.3	5.5	18.9	44.4
B	1.54	0.25	0.35	0.25	100	2.0	12.2	202	4.0%	3.0	1.1	13.3	11.7	3.9	6.5	1.5	3.5
C	2.78	0.25	0.35	0.25	100	2.5	11.3	626	4.2%	3.1	3.4	14.8	14.0	3.6	6.1	2.5	5.9
D	1.30	0.25	0.35	0.25	100	5.0	9.0	528	5.6%	3.6	2.5	11.5	13.5	3.9	6.6	1.3	3.0
E	3.94	0.30	0.39	0.30	100	5.0	8.5	745	2.8%	2.5	4.9	13.4	14.7	3.6	6.0	4.2	9.3
F	9.56	0.29	0.38	0.29	100	3.0	10.2	755	6.4%	3.8	3.3	13.6	14.8	3.5	6.0	9.7	21.7
OS1	777.05	0.26	0.36	0.26	100	3.0	10.6	9187.5	2.8%	2.5	61.0	71.6	61.6	1.2	2.0	237.2	551.0
OS2	1.84	0.25	0.35	0.25	100	2.0	12.2	301.5	3.3%	2.7	1.8	14.1	12.2	3.8	6.4	1.8	4.1
OS3	16.77	0.28	0.38	0.28	100	6.0	8.2	1944.7	4.2%	3.1	10.5	18.7	21.4	3.0	5.0	14.0	32.0

* Intensity equations assume a minimum travel time of 5 minutes.

Calculated by: CR
Date: 4/21/2026
Checked by: VAS

CALM BREEZE FILING NO. 1
EXISTING CONDITIONS
(Surface Routing Summary)

From Area Runoff Coefficient Summary				OVERLAND				PIPE / CHANNEL FLOW				Time of Travel (T _t)	INTENSITY *		TOTAL FLOWS		COMMENTS
DESIGN POINT	CONTRIBUTING BASINS	CA ₅	CA ₁₀₀	C _s	Length (ft)	Height (ft)	T _c (min)	Length (ft)	Slope (%)	Velocity (fps)	T _t (min)	TOTAL (min)	I ₅ (in/hr)	I ₁₀₀ (in/hr)	Q ₅ (c.f.s.)	Q ₁₀₀ (c.f.s.)	
1	Basin A	5.78	8.09	0.26	100.00	3.00	10.6	10981	2.8%	2.5	72.9	83.5	0.9	1.6	196.2	455.5	EX 14' X 5' RCBC
	Basin OS1	201.56	279.26														
	Total	207.33	287.35														
2	Basin D	0.33	0.46	0.25	100.00	5.00	9.02	528	5.6%	3.6	2.5	11.5	3.9	6.6	1.3	3.0	EX 18" HDPE
	Total	0.33	0.46														
3	Basin C	0.69	0.97	0.25	100.00	2.50	11.34	626	4.2%	3.1	3.4	14.8	3.5	6.0	2.5	5.8	EX 18" HDPE
	Total	0.69	0.97														
4	Basin B	0.38	0.54	0.25	100.00	2.00	10.6	603.5	3.4%	2.8	3.6	14.2	3.6	6.0	3.0	7.2	EX 24" CMP
	BASIN OS2	0.46	0.64														
	Total	0.84	1.18														
5	Basin OS3	4.70	6.37	0.28	100.00	6.00	8.2	1944.7	4.2%	3.1	10.5	18.7	3.2	5.3	15.0	34.1	EX 18" HDPE
	Total	4.70	6.37														
6	Basin E	1.18	1.55	0.28	100.00	6.00	8.2	2789	3.8%	2.9	15.9	24.1	2.8	4.7	18.9	43.0	Offsite to adjacent property, then to Black Squirell Creek
	DP4	0.84	1.18														
	DP5	4.70	6.37														
	Total	6.72	9.11														
7	Basin F	2.72	3.65	0.26	100.00	3.00	10.6	11836	3.2%	2.7	73.5	84.1	0.9	1.6	197.4	458.2	Black Squirrel Creek
	DP1	207.33	287.35														
	DP 2	0.33	0.46														
	DP 3	0.69	0.97														
	Total	211.08	292.43														

* Intensity equations assume a minimum travel time of 5 minutes.

Calculated by: CR
Date: 4/21/2026
Checked by: VAS

CALM BREEZE FILING NO. 1
PROPOSED CONDITIONS
(Area Runoff Coefficient Summary)

BASIN	TOTAL AREA (SF)	TOTAL AREA (Acres)	STREETS / GRAVEL ROADS			1 ACRE RESIDENTIAL			OPEN SPACE / LANDSCAPING				
			AREA (Acres)	C ₅	C ₁₀₀	AREA (Acres)	C ₅	C ₁₀₀	AREA (Acres)	C ₅	C ₁₀₀	C ₅	C ₁₀₀
A	1006236.151	23.10	0.10	0.90	0.95	0.00	0.30	0.40	23.00	0.25	0.35	0.25	0.35
B	66927.470	1.54	0.00	0.90	0.95	0.00	0.30	0.40	1.54	0.25	0.35	0.25	0.35
C	120881.214	2.78	0.00	0.90	0.95	0.00	0.30	0.40	2.78	0.25	0.35	0.25	0.35
D	56842.138	1.30	0.00	0.90	0.95	0.00	0.30	0.40	1.30	0.25	0.35	0.25	0.35
E	171546.419	3.94	0.35	0.80	0.85	0.00	0.30	0.40	3.59	0.25	0.35	0.30	0.39
F	416249.294	9.56	0.65	0.80	0.85	0.00	0.30	0.40	8.91	0.25	0.35	0.29	0.38
OS1	33848146.660	777.05	0.00	0.90	0.95	145.94	0.30	0.40	631.11	0.25	0.35	0.26	0.36
OS2	80255.120	1.84	0.00	0.90	0.95	0.00	0.30	0.40	1.84	0.25	0.35	0.25	0.35
OS3	730553.828	16.77	0.00	0.90	0.95	10.08	0.30	0.40	6.69	0.25	0.35	0.28	0.38

Calculated by: CR
Date: 4/21/2026
Checked by: VAS

CALM BREEZE FILING NO. 1 **PROPOSED CONDITIONS** **(Area Drainage Summary)**

From Area Runoff Coefficient Summary				OVERLAND				STREET / CHANNEL FLOW				Time of Travel (T _t)		INTENSITY *		TOTAL FLOWS	
BASIN	AREA TOTAL (ACRES)	C ₅	C ₁₀₀	C ₅	Length (ft)	Height (ft)	T _C (min)	Length (ft)	Slope (%)	Velocity (fps)	T _t (min)	TOTAL (min)	CHECK (min)	I ₅ (in/hr)	I ₁₀₀ (in/hr)	Q ₅ (c.f.s.)	Q ₁₀₀ (c.f.s.)
		From DCM Table S-1															
A	23.10	0.25	0.35	0.25	100	11	6.9	1694	3.1%	2.6	10.8	17.7	20.0	3.3	5.5	19.1	44.7
B	1.54	0.25	0.35	0.25	100	2.0	12.2	202	4.0%	3.0	1.1	13.3	11.7	3.9	6.5	1.5	3.5
C	2.78	0.25	0.35	0.25	100	2.5	11.3	626	4.2%	3.1	3.4	14.8	14.0	3.6	6.1	2.5	5.9
D	1.30	0.25	0.35	0.25	100	5.0	9.0	528	5.6%	3.6	2.5	11.5	13.5	3.9	6.6	1.3	3.0
E	3.94	0.30	0.39	0.30	100	5.0	8.5	745	2.8%	2.5	4.9	13.4	14.7	3.6	6.0	4.2	9.3
F	9.56	0.29	0.38	0.29	100	3.0	10.2	755	6.4%	3.8	3.3	13.5	14.8	3.5	6.0	9.7	21.8
OS1	777.05	0.26	0.36	0.26	100	3.0	10.6	9187.5	2.8%	2.5	61.0	71.6	61.6	1.2	2.0	237.2	551.0
OS2	1.84	0.25	0.35	0.25	100	2.0	12.2	301.5	3.3%	2.7	1.8	14.1	12.2	3.8	6.4	1.8	4.1
OS3	16.77	0.28	0.38	0.28	100	6.0	8.2	1944.7	4.2%	3.1	10.5	18.7	21.4	3.0	5.0	14.0	32.0

* Intensity equations assume a minimum travel time of 5 minutes.

Calculated by: CR
Date: 4/21/2026
Checked by: VAS

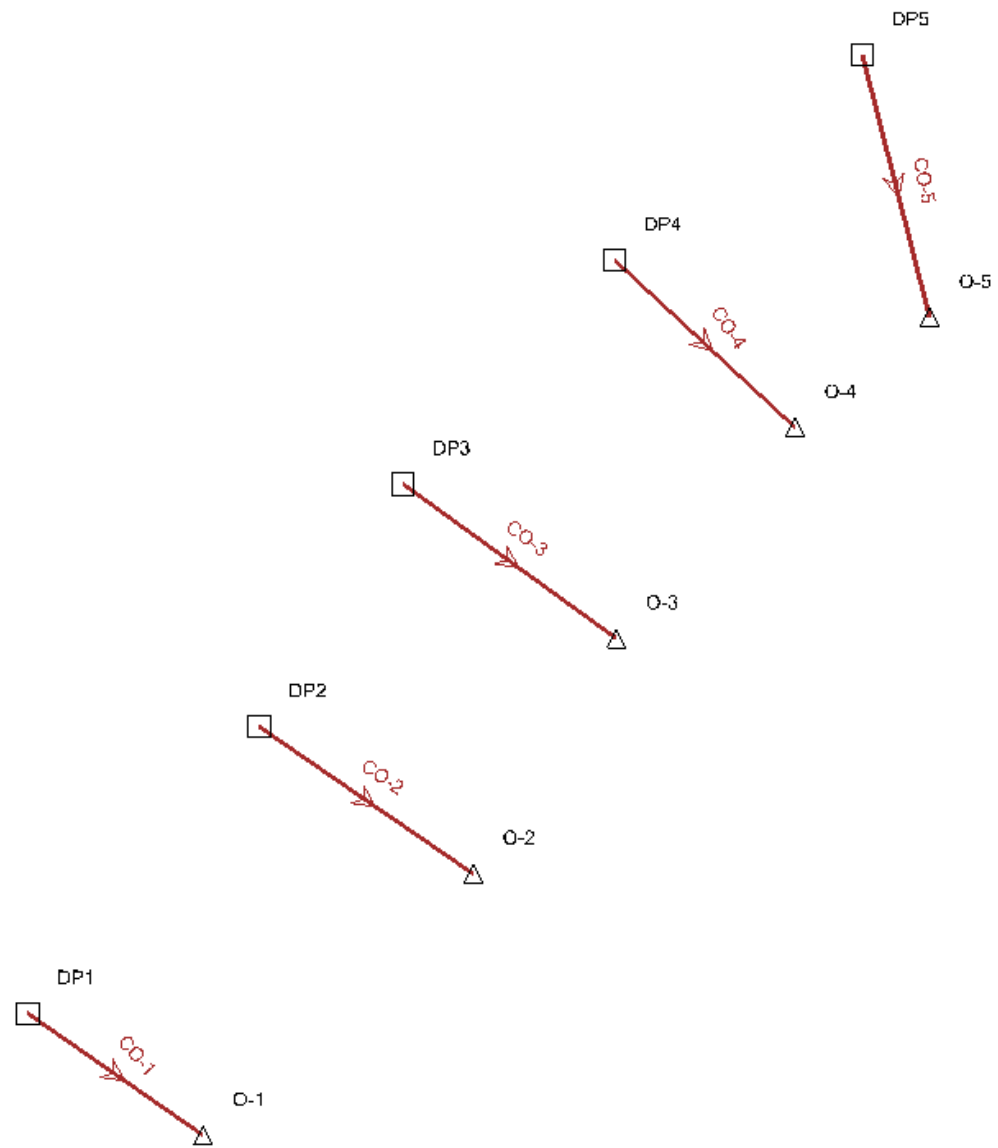
CALM BREEZE FILING NO. 1
PROPOSED CONDITIONS
(Surface Routing Summary)

From Area Runoff Coefficient Summary				OVERLAND				PIPE / CHANNEL FLOW				Time of Travel (T _t)	INTENSITY *		TOTAL FLOWS		COMMENTS
DESIGN POINT	CONTRIBUTING BASINS	CA ₅	CA ₁₀₀	C _s	Length (ft)	Height (ft)	T _c (min)	Length (ft)	Slope (%)	Velocity (fps)	T _t (min)	TOTAL (min)	I ₅ (in/hr)	I ₁₀₀ (in/hr)	Q ₅ (c.f.s.)	Q ₁₀₀ (c.f.s.)	
1	Basin A	5.84	8.15	0.26	100.00	3.00	10.6	10981	2.8%	2.5	72.9	83.5	0.9	1.6	196.2	455.6	EX 14' X 5' RCBC
	Basin OS1	201.56	279.26														
	Total	207.40	287.41														
2	Basin D	0.33	0.46	0.25	100.00	5.00	9.02	528	5.6%	3.6	2.5	11.5	3.9	6.6	1.3	3.0	EX 18" HDPE
	Total	0.33	0.46														
3	Basin C	0.69	0.97	0.25	100.00	2.50	11.34	626	4.2%	3.1	3.4	14.8	3.5	6.0	2.5	5.8	EX 18" HDPE
	Total	0.69	0.97														
4	Basin B	0.38	0.54	0.25	100.00	2.00	10.6	603.5	3.4%	2.8	3.6	14.2	3.6	6.0	3.0	7.2	EX 24" CMP
	BASIN OS2	0.46	0.64														
	Total	0.84	1.18														
5	Basin OS3	4.70	6.37	0.28	100.00	6.00	8.2	1944.7	4.2%	3.1	10.5	18.7	3.2	5.3	15.0	34.1	EX 18" HDPE
	Total	4.70	6.37														
6	Basin E	1.18	1.55	0.28	100.00	6.00	8.2	2789	3.8%	2.9	15.9	24.1	2.8	4.7	18.9	43.0	Offsite to adjacent property, then to Black Squirell Creek
	DP4	0.84	1.18														
	DP5	4.70	6.37														
	Total	6.72	9.11														
7	Basin F	2.75	3.67	0.26	100.00	3.00	10.6	11836	3.2%	2.7	73.5	84.1	0.9	1.6	197.5	458.4	Black Squirrel Creek
	DP1	207.40	287.41														
	DP 2	0.33	0.46														
	DP 3	0.69	0.97														
	Total	211.17	292.51														

* Intensity equations assume a minimum travel time of 5 minutes.

Calculated by: CR
Date: 4/21/2026
Checked by: VAS

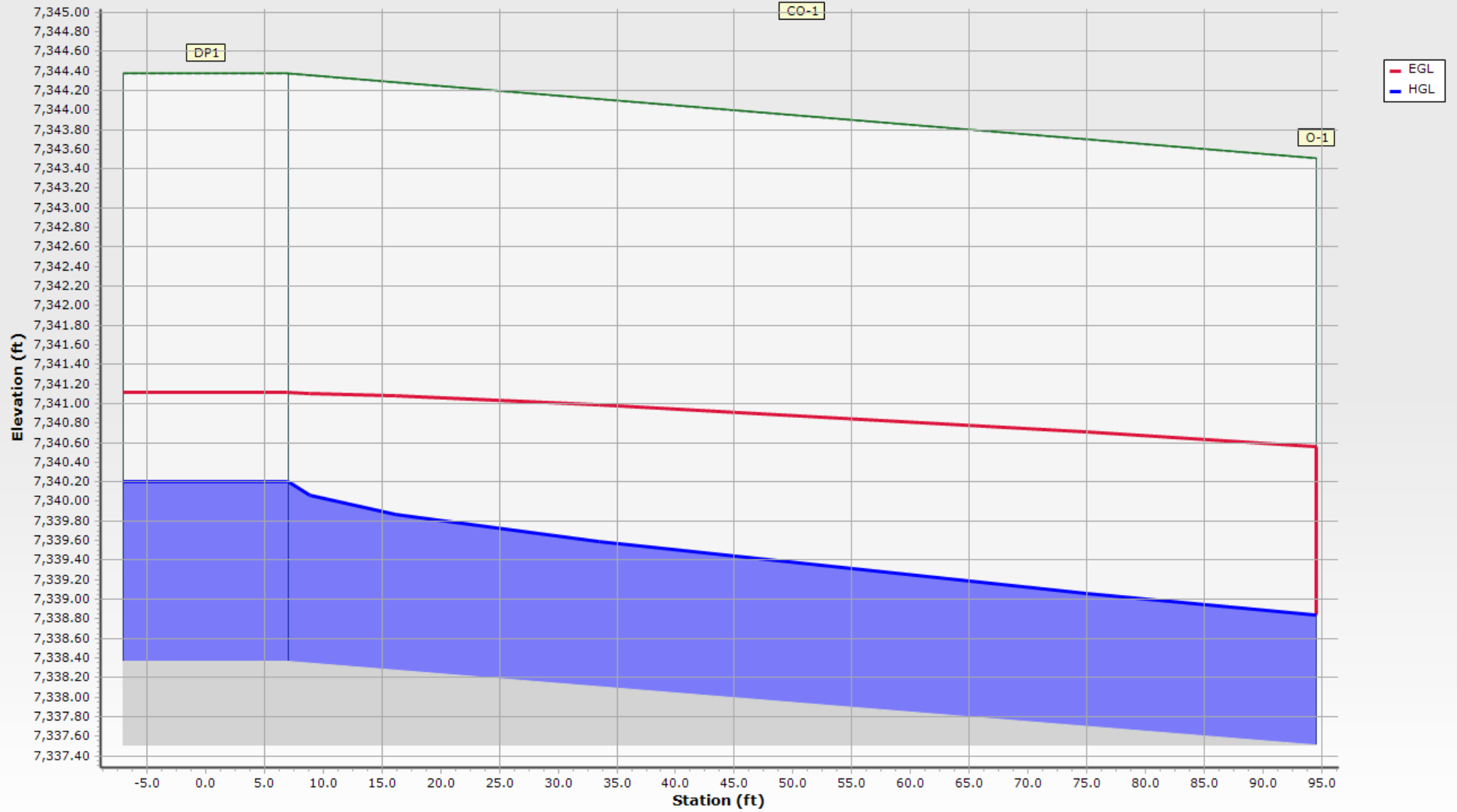
HYDRAULIC CALCULATIONS / SFB WQCV CALCULATIONS



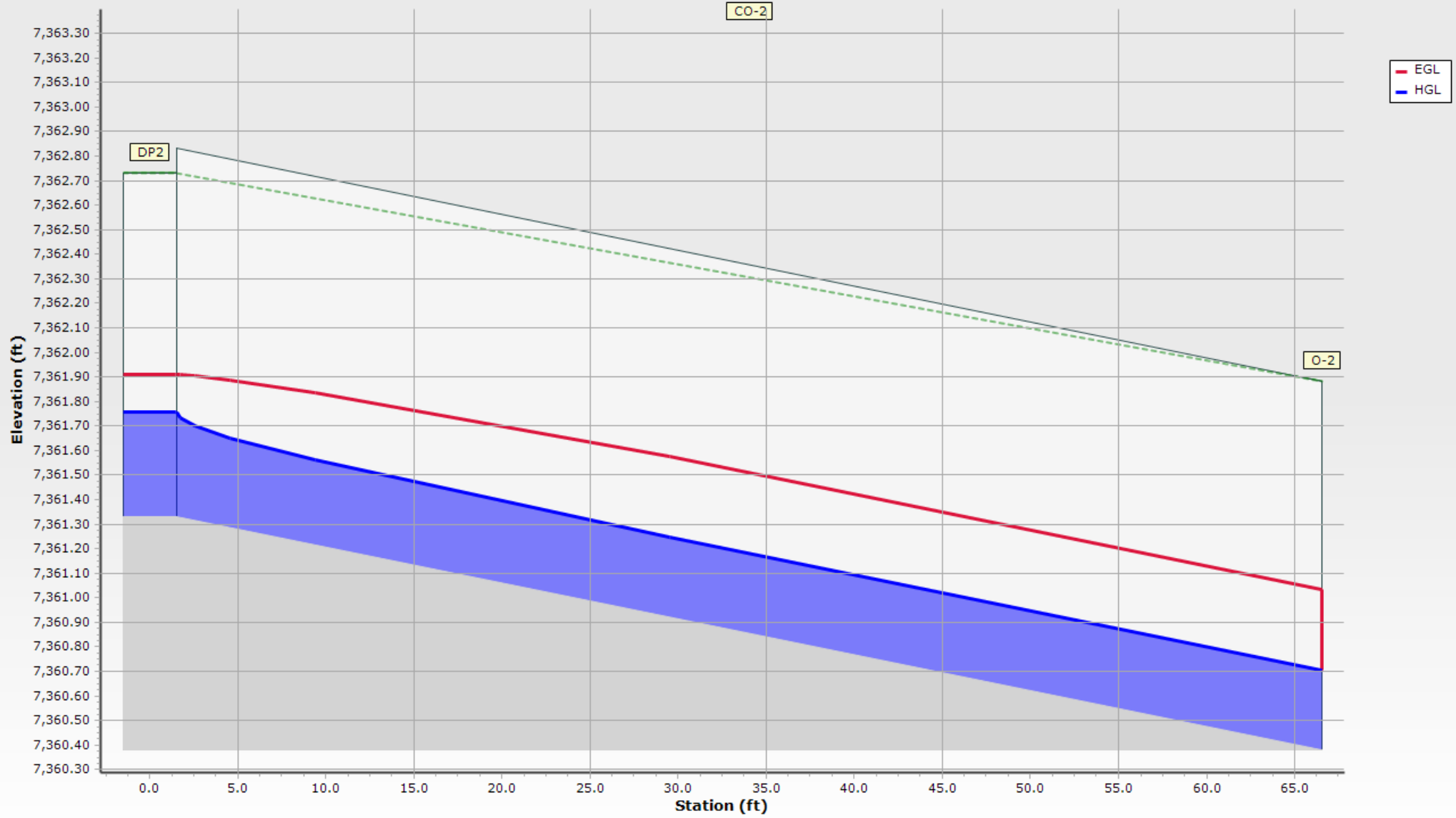
Existing Conduit Table - 5 YR

Label	ID	Upstream Structure	Flow (cfs)	Flow / Capacity (Design) (%)	Length (Unified) (ft)	Velocity (ft/s)	Depth (Normal) (ft)	Depth (Critical) (ft)	Energy Grade Line (In) (ft)	Energy Grade Line (Out) (ft)	Hydraulic Grade Line (Out) (ft)	Hydraulic Grade Line (In) (ft)	Headloss (ft)	Upstream Structure Hydraulic Grade Line (In) (ft)
CO-1	285	O-1	196.20	13.1	94.5	11.29	1.24	1.83	7,341.11	7,340.56	7,338.84	7,340.20	1.36	7,340.20
CO-2	295	O-2	1.30	10.4	66.5	4.59	0.33	0.43	7,361.91	7,361.03	7,360.71	7,361.76	1.05	7,361.76
CO-3	299	O-3	2.50	7.8	115.4	10.78	0.28	0.60	7,373.34	7,363.89	7,362.08	7,373.12	11.04	7,373.12
CO-4	303	O-4	3.00	17.4	60.1	4.12	0.56	0.60	7,388.89	7,388.55	7,388.28	7,388.67	0.39	7,388.67
CO-5	307	O-5	15.00	172.3	78.6	8.49	(N/A)	1.41	7,394.40	7,392.81	7,391.63	7,393.29	1.66	7,392.26
Upstream Structure Velocity (In-Governing) (ft/s)	Upstream Structure Headloss Coefficient	Upstream Structure Headloss (ft)	Elevation Ground (Start) (ft)	Elevation Ground (Stop) (ft)	Invert (Start) (ft)	Invert (Stop) (ft)	Conduit Description							
7.67	1.000	0.00	7,344.37	7,343.51	7,338.37	7,337.51	Box - 14.0 x 6.0 ft							
3.14	1.000	0.00	7,362.73	7,361.88	7,361.33	7,360.38	Circle - 18.0 in							
3.80	1.000	0.00	7,374.02	7,363.30	7,372.52	7,361.80	Circle - 18.0 in							
3.75	1.000	0.00	7,390.07	7,389.72	7,388.07	7,387.72	Circle - 24.0 in							
8.49	1.000	0.00	7,392.26	7,391.72	7,390.76	7,390.22	Circle - 18.0 in							

DP1 - 14'x6' RCBC - 5 YR



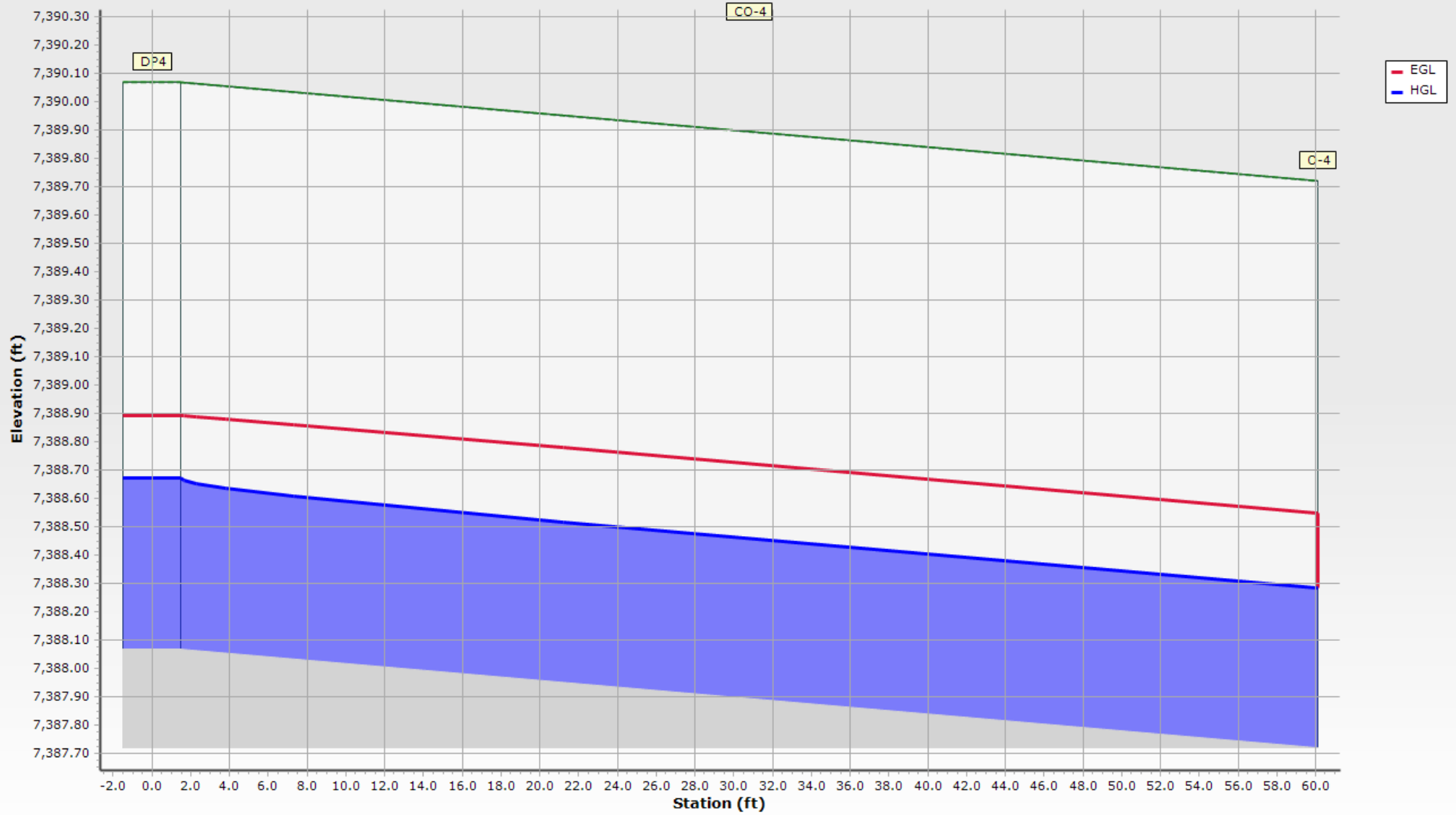
DP2 - 18" Corrugated Plastic - 5 YR



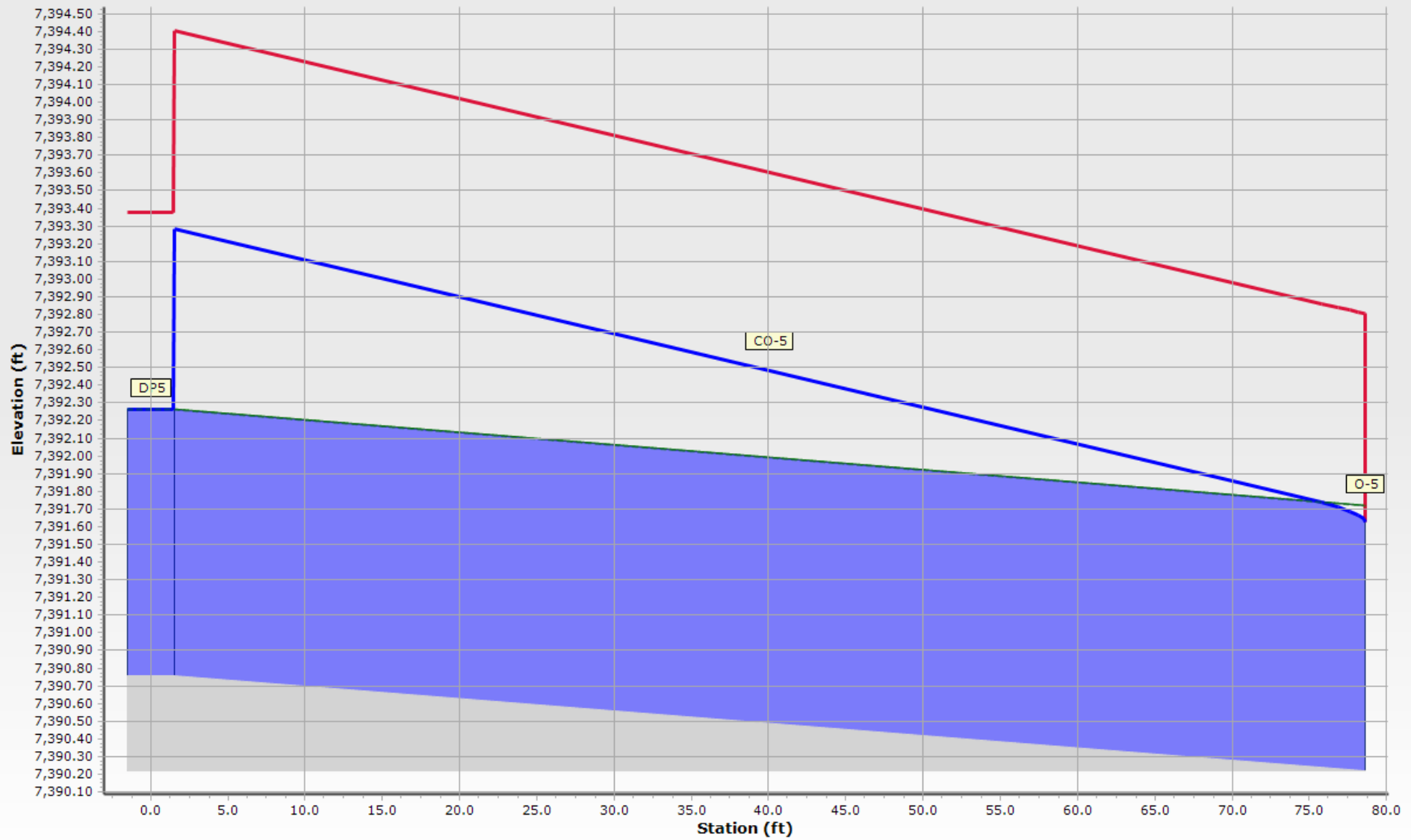
DP3 - 18" Corrugated Plastic - 5 YR



DP4 - 24" CMP - 5 YR



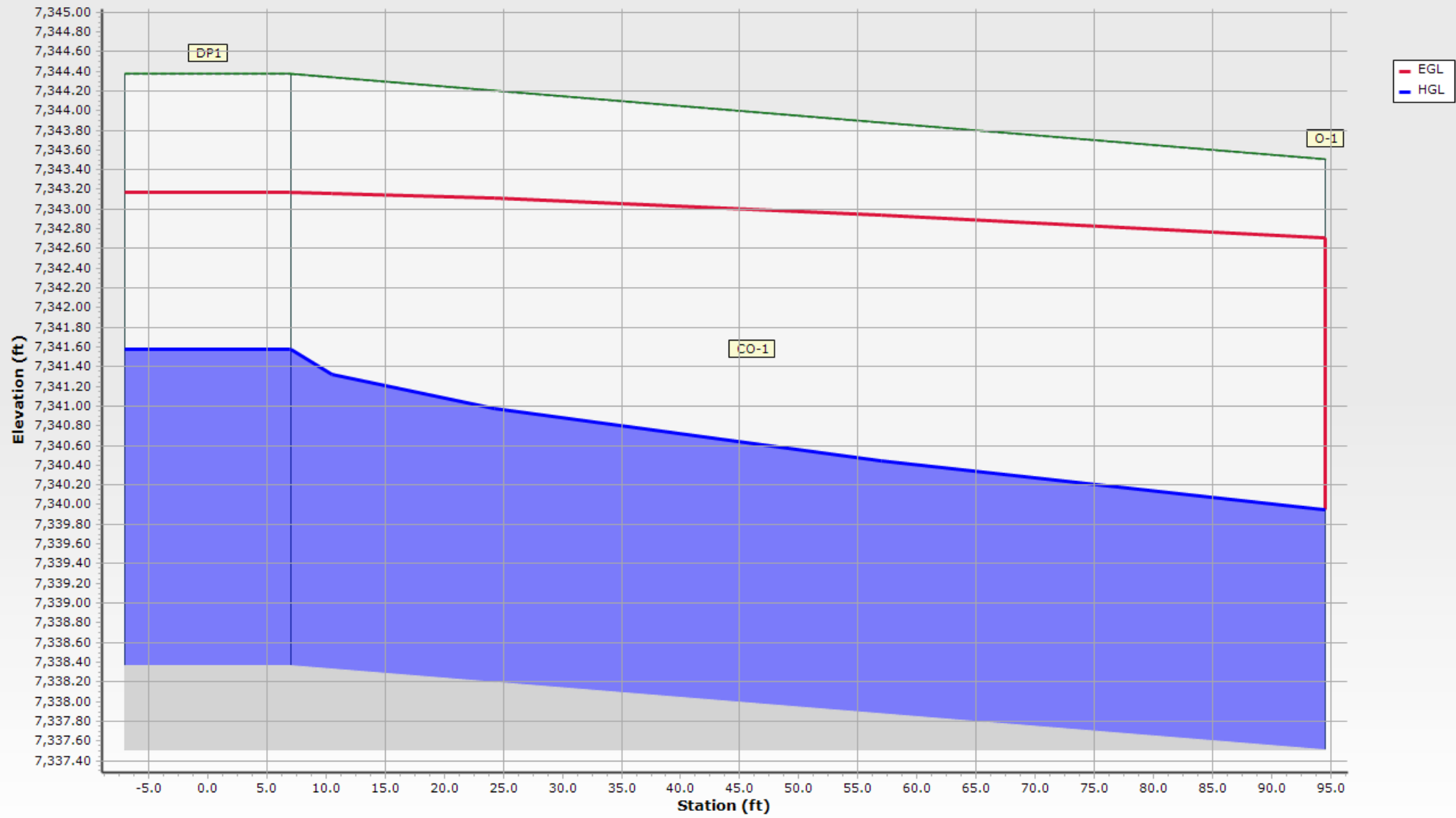
DP5 - 18" Corrugated Plastic - 5 YR



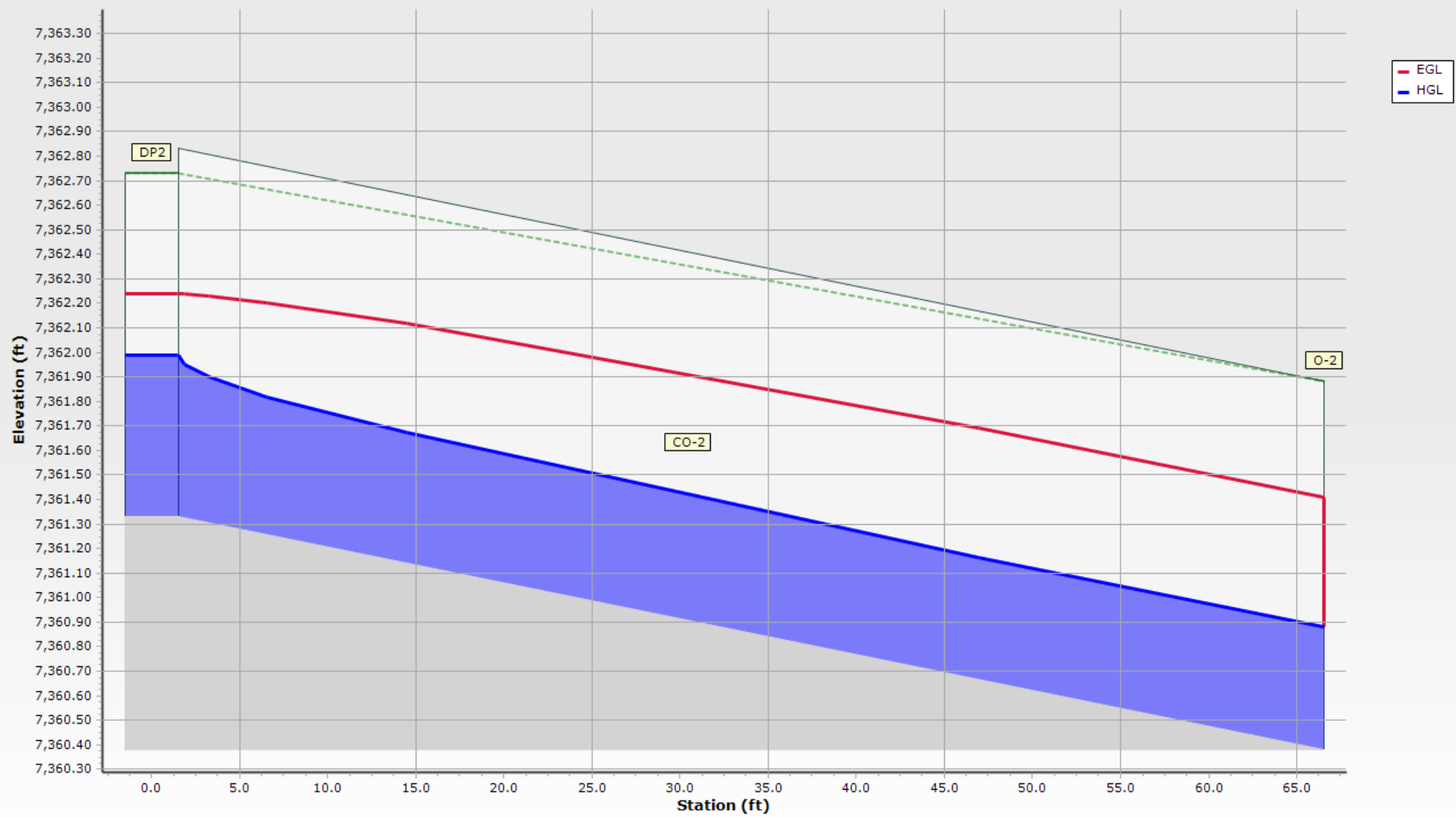
Existing Conduit Table - 100 YR

Label	ID	Upstream Structure	Flow (cfs)	Flow / Capacity (Design) (%)	Length (Unified) (ft)	Velocity (ft/s)	Depth (Normal) (ft)	Depth (Critical) (ft)	Energy Grade Line (In) (ft)	Energy Grade Line (Out) (ft)	Hydraulic Grade Line (Out) (ft)	Hydraulic Grade Line (In) (ft)	Headloss (ft)	Upstream Structure Hydraulic Grade Line (In) (ft)
CO-1	285	O-1	455.50	30.3	94.5	15.17	2.14	3.20	7,343.18	7,342.71	7,339.95	7,341.57	1.62	7,341.57
CO-2	295	O-2	3.00	23.9	66.5	5.83	0.50	0.66	7,362.24	7,361.41	7,360.88	7,361.99	1.11	7,361.99
CO-3	299	O-3	5.80	18.1	115.4	13.75	0.43	0.93	7,373.84	7,365.17	7,362.23	7,373.45	11.22	7,373.45
CO-4	303	O-4	7.20	41.7	60.1	5.25	0.90	0.95	7,389.39	7,389.05	7,388.62	7,389.02	0.40	7,389.02
CO-5	307	O-5	34.10	391.7	78.6	19.30	(N/A)	1.50	7,405.79	7,397.51	7,391.72	7,400.00	8.29	7,392.26
Upstream Structure Velocity (In-Governing) (ft/s)	Upstream Structure Headloss Coefficient	Upstream Structure Headloss (ft)	Elevation Ground (Start) (ft)	Elevation Ground (Stop) (ft)	Invert (Start) (ft)	Invert (Stop) (ft)	Conduit Description							
10.15	1.000	0.00	7,344.37	7,343.51	7,338.37	7,337.51	Box - 14.0 x 6.0 ft							
4.02	1.000	0.00	7,362.73	7,361.88	7,361.33	7,360.38	Circle - 18.0 in							
5.04	1.000	0.00	7,374.02	7,363.30	7,372.52	7,361.80	Circle - 18.0 in							
4.88	1.000	0.00	7,390.07	7,389.72	7,388.07	7,387.72	Circle - 24.0 in							
19.30	1.000	0.00	7,392.26	7,391.72	7,390.76	7,390.22	Circle - 18.0 in							

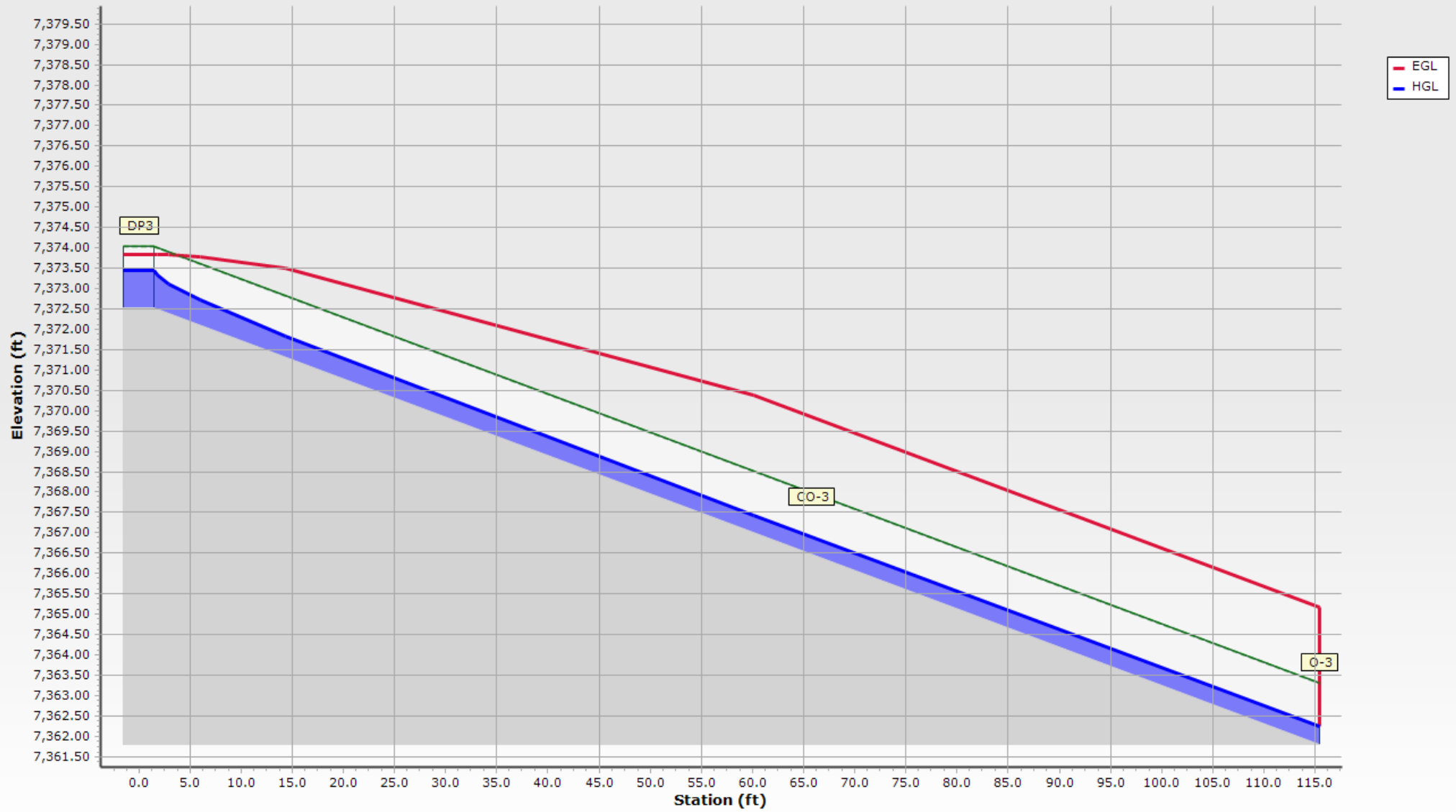
DP1 - 14'x6' RCBC - 100 YR



DP2 - 18" Corrugated Plastic - 100 YR



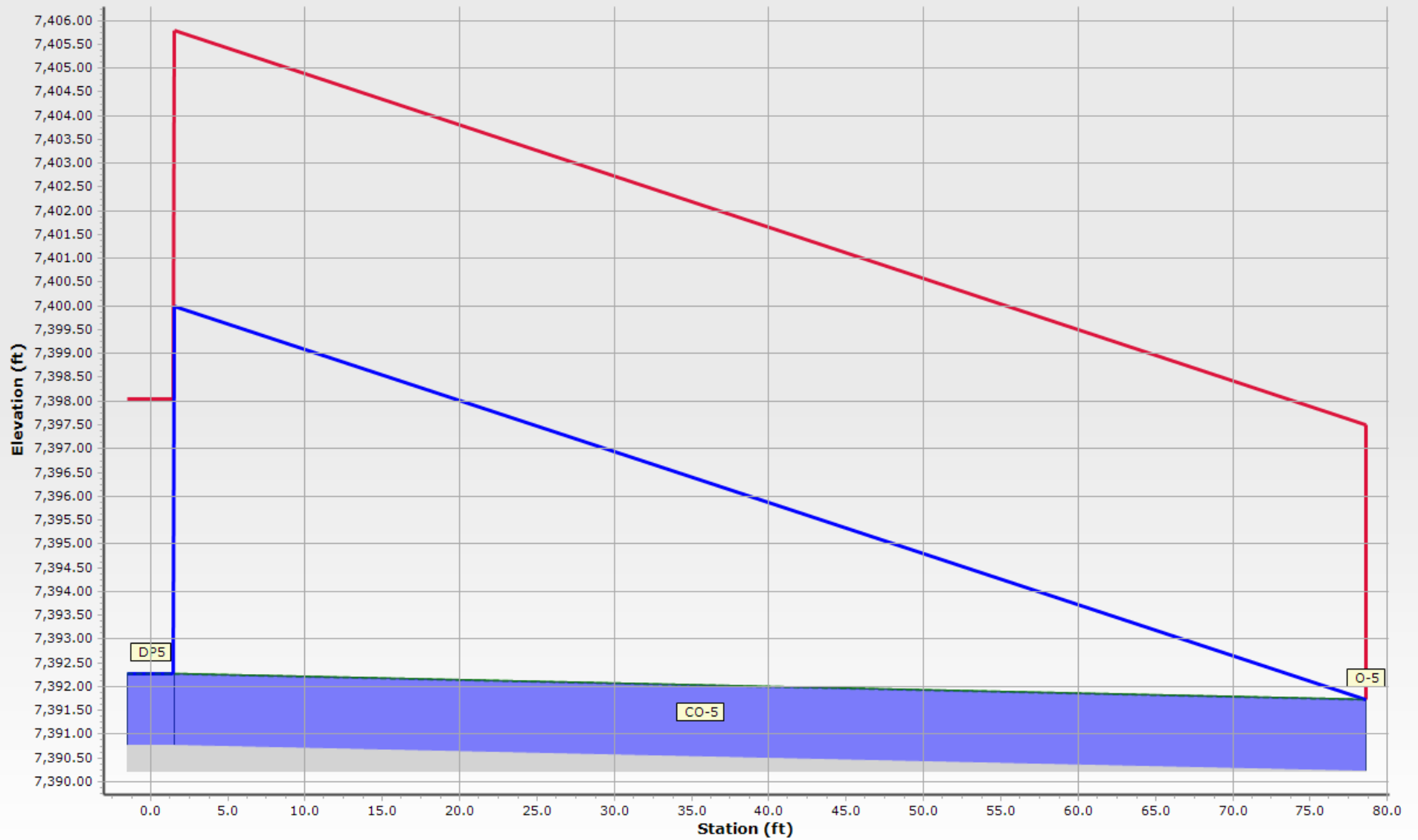
DP3 - 18" Corrugated Plastic - 100 YR



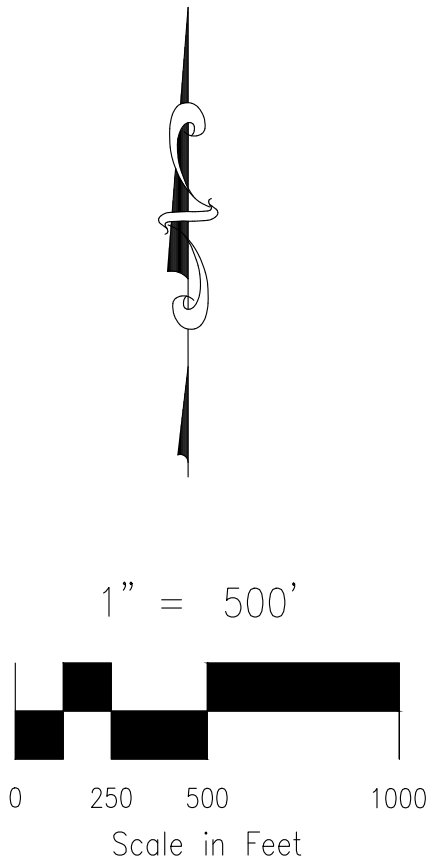
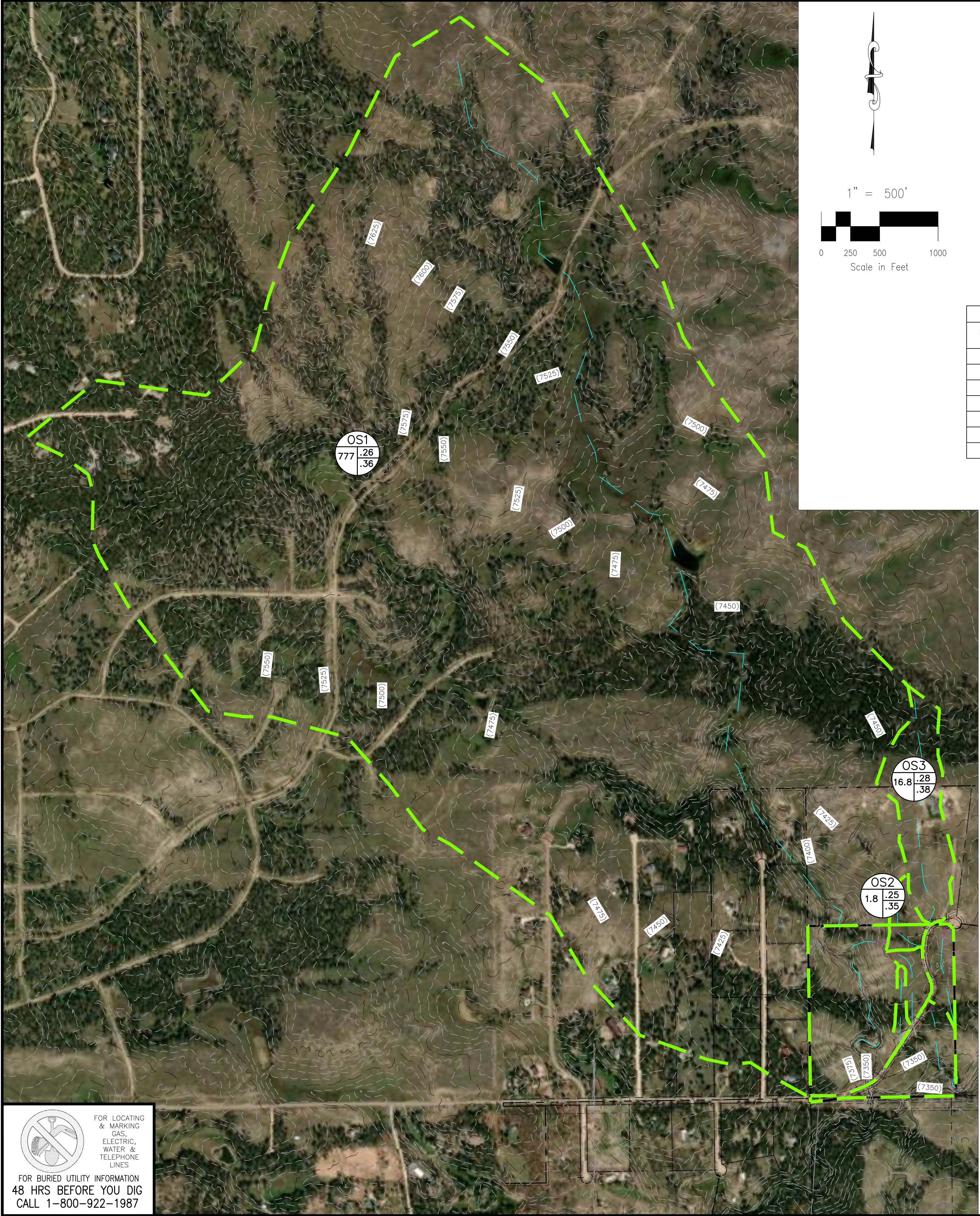
DP4 - 24" CMP - 100 YR



DP5 - 18" Corrugated Plastic - 100 YR



EXISTING DRAINAGE MAP



BASIN SUMMARY			
BASIN	AREA (ACRES)	Q ₅	Q ₁₀₀
A	23.10	18.9	44.4
B	1.54	1.5	3.5
C	2.78	2.5	5.9
D	1.30	1.3	3.0
E	3.94	4.2	9.3
F	9.56	9.7	21.7
OS1	777.05	237.2	551.0
OS2	1.84	1.8	4.1
OS3	16.77	14.0	32.0

DESIGN POINT SUMMARY			
DESIGN POINT	Q ₅	Q ₁₀₀	CONTRIBUTING BASINS AND DP
1	196.2	455.5	A, OS1
2	1.3	3.0	D
3	2.5	5.8	C
4	3.0	7.2	B, OS2
5	15.0	34.1	OS3
6	18.9	43.0	E, DP4, DP5
7	197.4	458.2	F, DP1, DP2, DP3

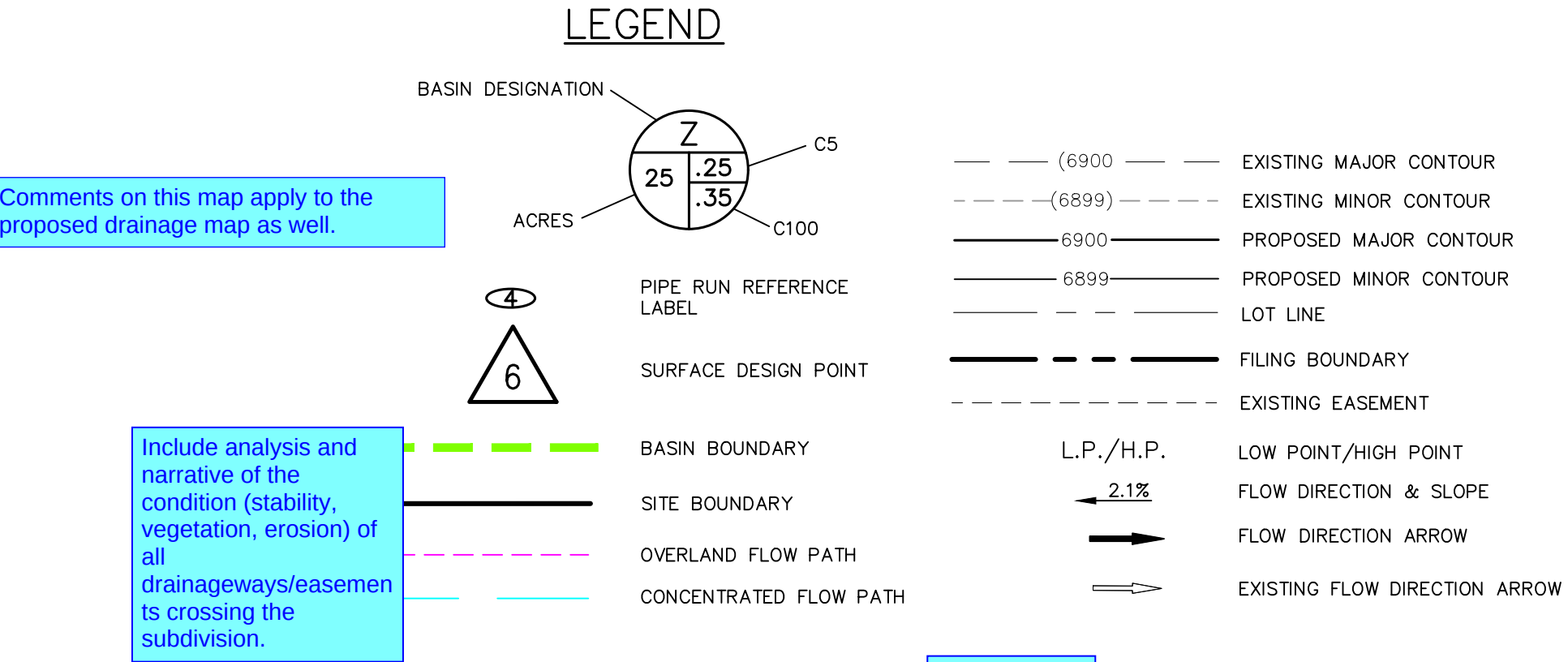
		OUTFALL	
		14' X 6' RCBC	
		18" HDPE	
		18" HDPE	
		24" CMP	
		18" HDPE	
		ADJACENT PROPERTY TO BLACK SQUIRREL CREEK	
		BLACK SQUIRREL CREEK	

CALM BREEZE FILING NO. 1

COUNTY OF EL PASO, STATE OF COLORADO

EXISTING DRAINAGE MAP

APRIL 2026



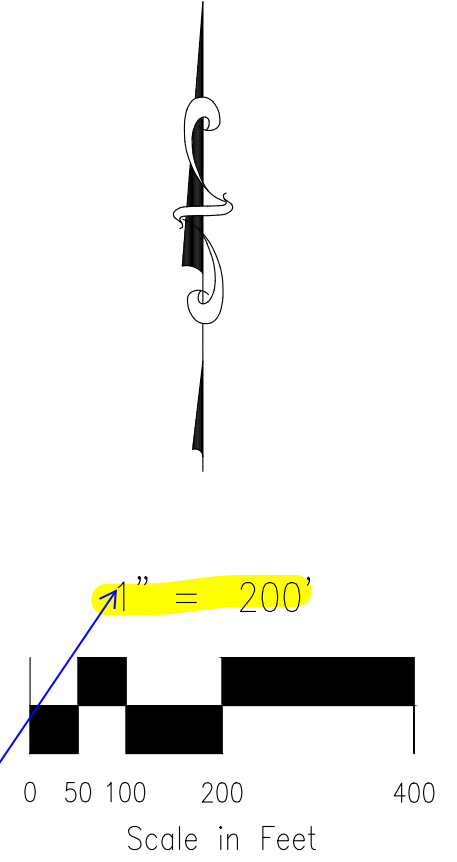
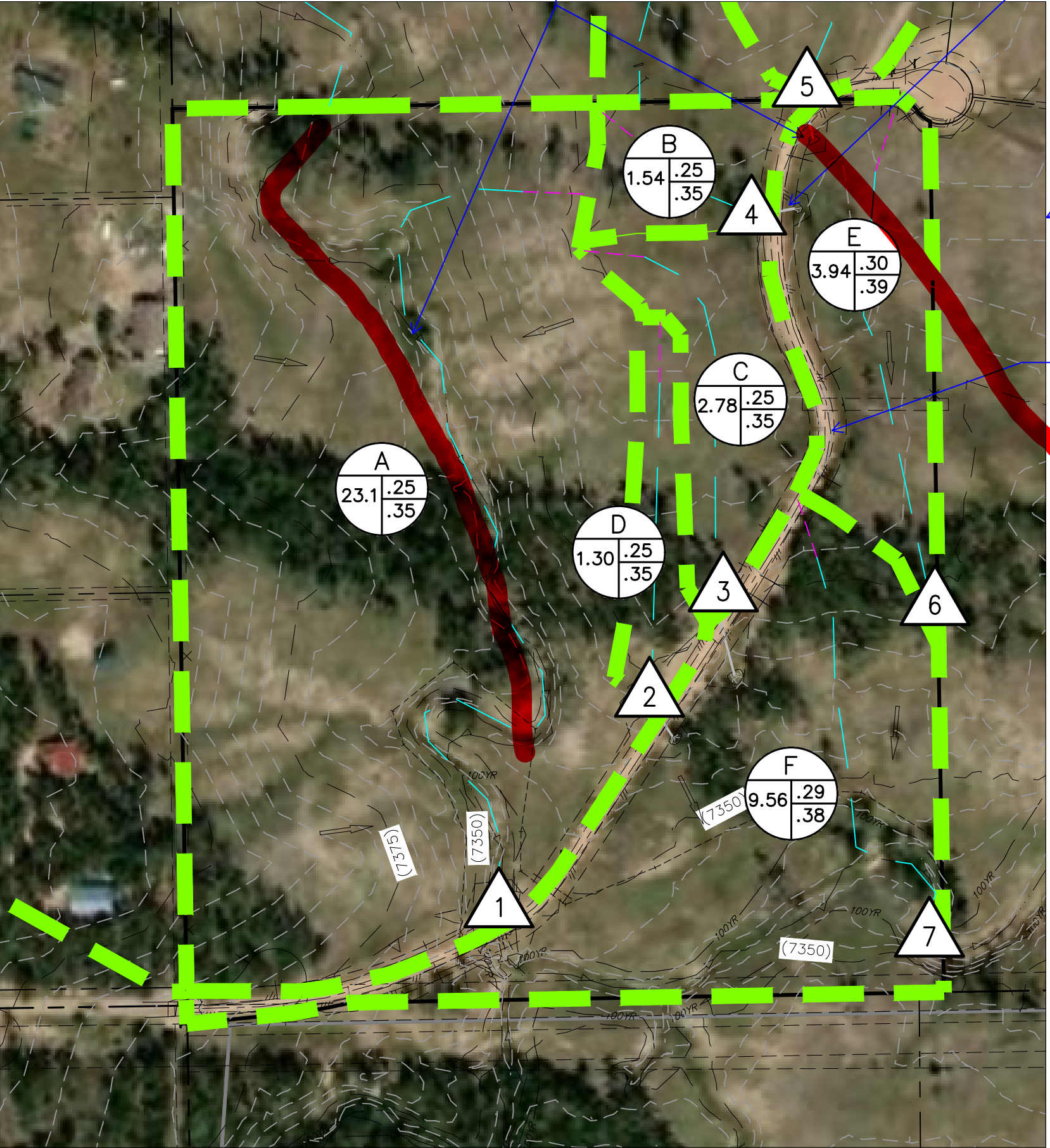
Comments on this map apply to the proposed drainage map as well.

Include analysis and narrative of the condition (stability, vegetation, erosion) of all drainageways/easements crossing the subdivision.

Label pipe types and sizes

Please provide 2 foot contours as the 5 foot contours do not provide enough detail.

Contours are not accounting for the existing road. Please revise.



This is the maximum scale allowed in DCM chapter 4 and does not provide enough detail for this ~40 acre subdivision. Please revise scale.

FOR LOCATING & MARKING GAS, ELECTRIC, WATER & TELEPHONE LINES

FOR BURIED UTILITY INFORMATION 48 HRS BEFORE YOU DIG CALL 1-800-922-1987



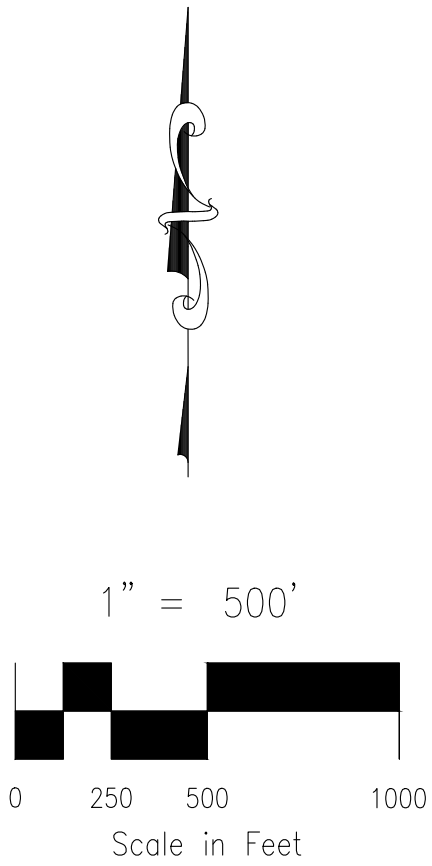
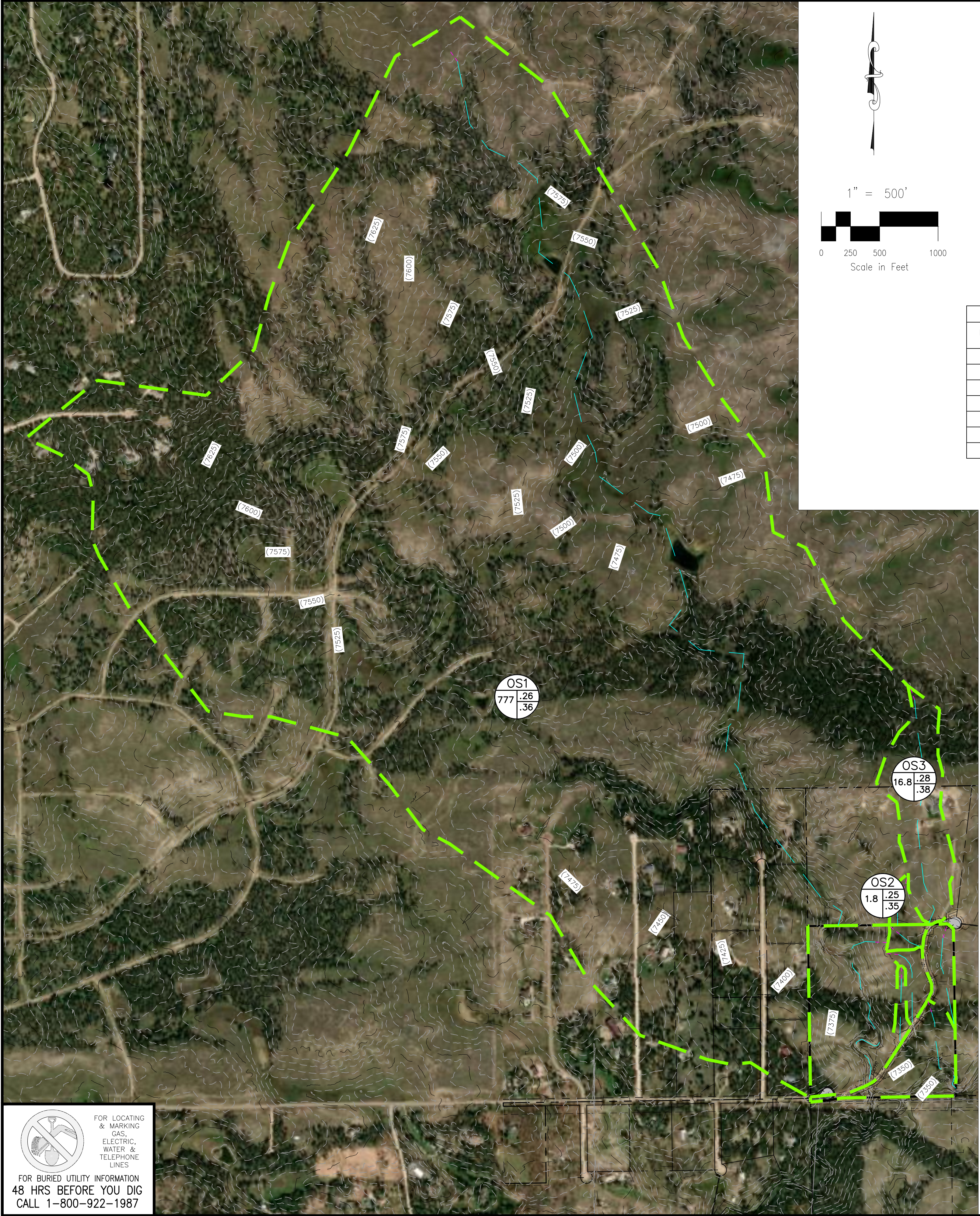
212 N. WAHSATCH AVE
COLORADO SPRINGS, CO 80905
PHONE: 719.955.5485

CALM BREEZE FILING NO. 1

EXISTING DRAINAGE MAP

PROJECT NO. 08-101	SCALE: HORIZONTAL:	DATE: 04/21/2026
DESIGNED BY: CCR	VERTICAL:	SHEET 1 OF 1
DRAWN BY: CCR		EDM01
CHECKED BY: VAS		

PROPOSED DRAINAGE MAP



BASIN SUMMARY				
BASIN	AREA (ACRES)	Q ₅	Q ₁₀₀	
A	23.10	19.1	44.7	
B	1.54	1.5	3.5	
C	2.78	2.5	5.9	
D	1.30	1.3	3.0	
E	3.94	4.2	9.3	
F	9.56	9.7	21.8	
OS1	777.05	237.2	551.0	
OS2	1.84	1.8	4.1	
OS3	16.77	14.0	32.0	

DESIGN POINT SUMMARY				
DESIGN POINT	Q ₅	Q ₁₀₀	CONTRIBUTING BASINS AND DP	OUTFALL
1	196.2	455.6	A, OS1	14' X 6' RCB
2	1.3	3.0	D	18" HDPE
3	2.5	5.8	C	18" HDPE
4	3.0	7.2	B, OS2	24" CMP
5	15.0	34.1	OS3	18" HDPE
6	18.9	43.0	E, DP4, DP5	ADJACENT PROPERTY TO BLACK SQUIRREL CREEK
7	197.5	458.4	F, DP1, DP2, DP3	BLACK SQUIRREL CREEK

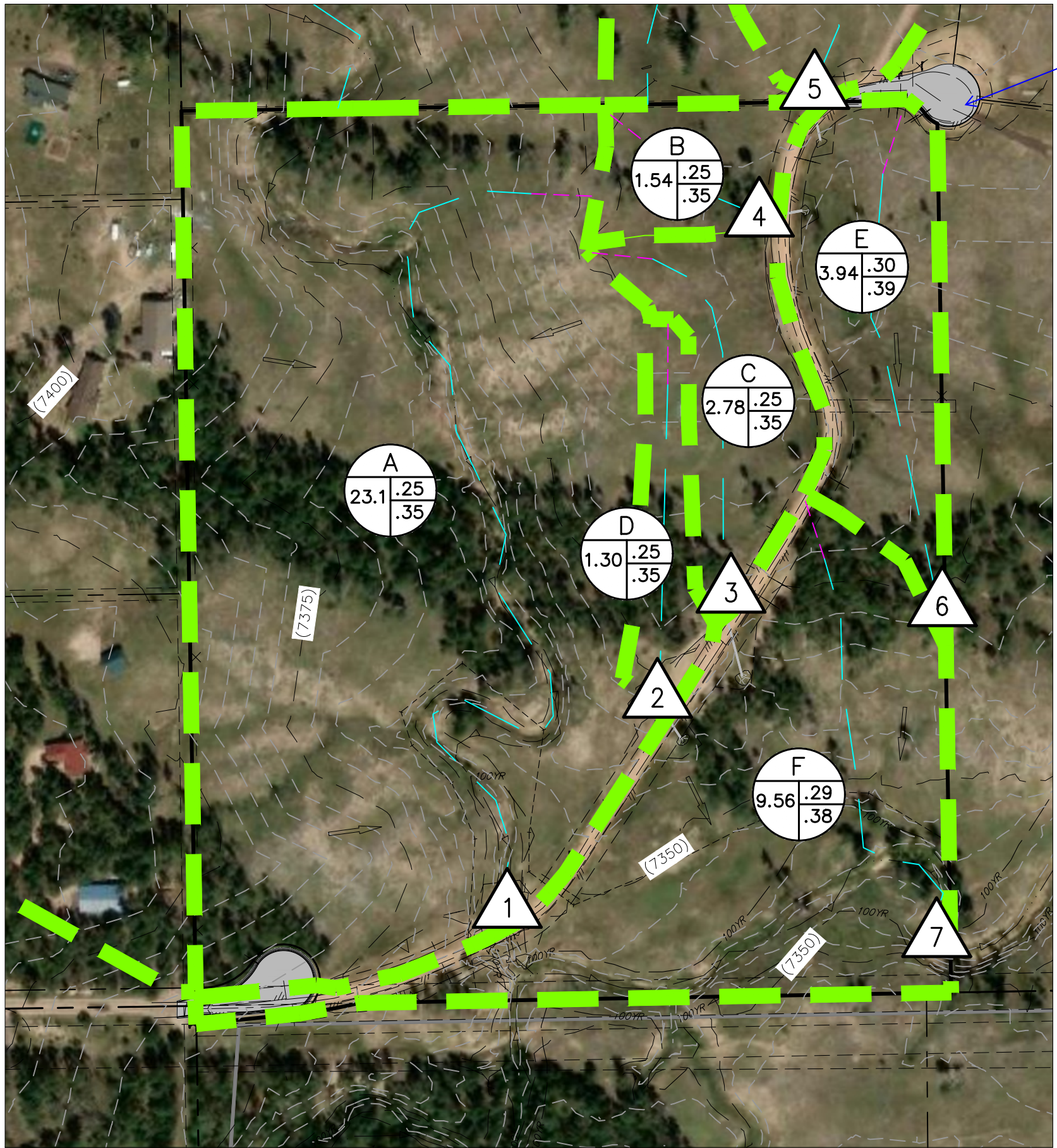
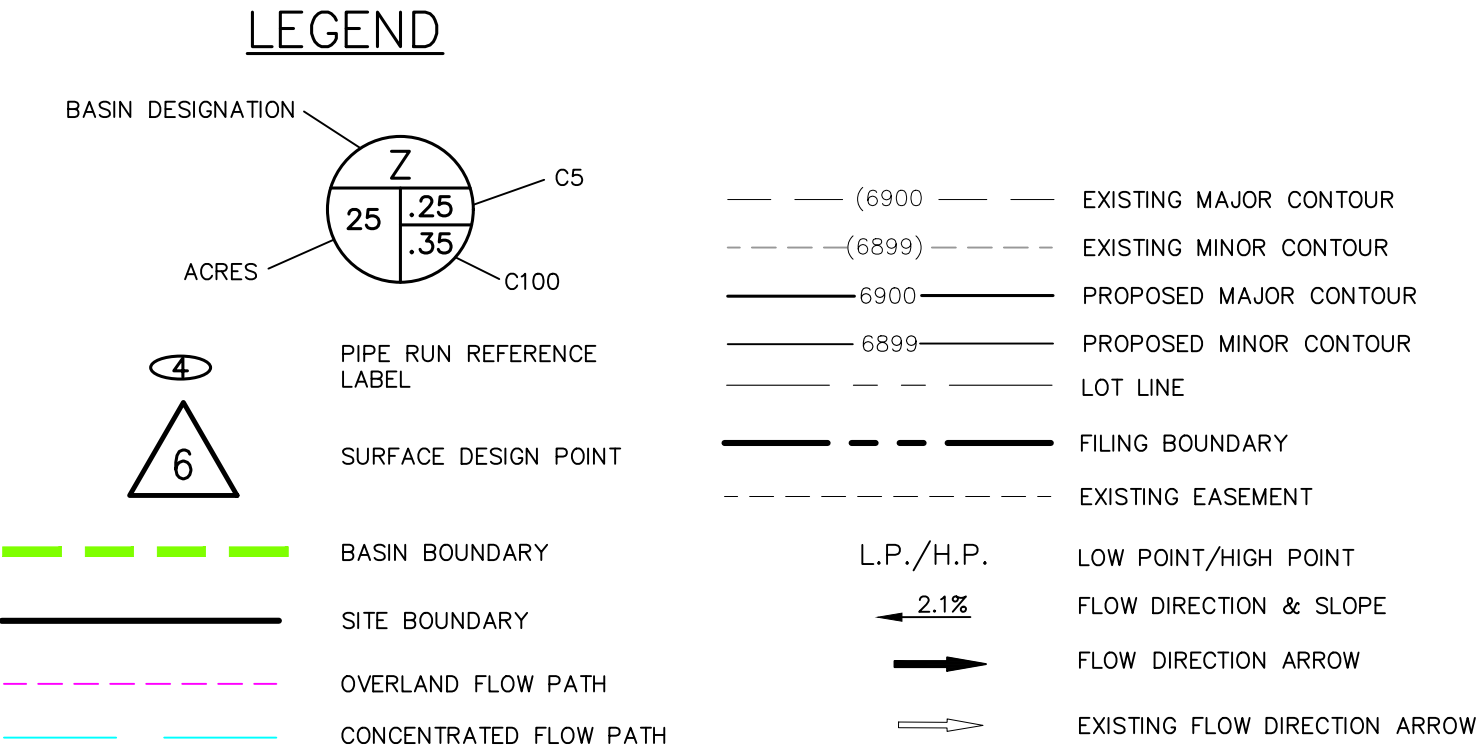
For the proposed condition, assume and show driveways and single family home sites for each of the lots.

CALM BREEZE FILING NO. 1

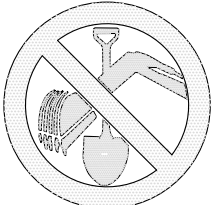
COUNTY OF EL PASO, STATE OF COLORADO

PROPOSED DRAINAGE MAP

APRIL 2026



Please remove for clarity as there are no proposed improvements here.



FOR LOCATING & MARKING GAS, ELECTRIC, WATER & TELEPHONE LINES

FOR BURIED UTILITY INFORMATION 48 HRS BEFORE YOU DIG CALL 1-800-922-1987



212 N. WAHSATCH AVE., STE 305
COLORADO SPRINGS, CO 80903
PHONE: 719.955.5485

CALM BREEZE FILING NO. 1

PROPOSED DRAINAGE MAP

PROJECT NO. 08-101

DESIGNED BY: CCR

DRAWN BY: CCR

CHECKED BY: VAS

SCALE:

HORIZONTAL:

VERTICAL:

DATE: 04/21/2026

SHEET 1 OF 1

PDM01

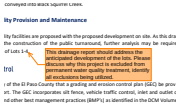
V1_Drainage Report - Final.pdf Markup Summary

EPC Stormwater- Zachary (2)



Subject: SW - Highlight
Page Label: 8
Author: EPC Stormwater- Zachary
Date: 7/27/2026 9:29:23 AM
Status:
Color: [Orange]
Layer:
Space:

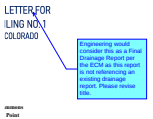
As this drainage report is only serving the construction of the public turnaround, further analysis may be required with future development of Lots 1-4.



Subject: SW - Textbox with Arrow
Page Label: 8
Author: EPC Stormwater- Zachary
Date: 7/27/2026 10:12:44 AM
Status:
Color: [Black]
Layer:
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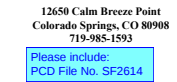
This drainage report should address the anticipated development of the lots. Please discuss why this project is excluded from permanent water quality treatment, identify all exclusions being utilized.

Joseph Sandstrom (31)



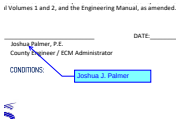
Subject: Callout
Page Label: 1
Author: Joseph Sandstrom
Date: 7/27/2026 4:36:37 PM
Status:
Color: [Blue]
Layer:
Space:

Engineering would consider this as a Final Drainage Report per the ECM as this report is not referencing an existing drainage report. Please revise title.



Subject: Text Box
Page Label: 1
Author: Joseph Sandstrom
Date: 7/27/2026 5:14:13 PM
Status:
Color: [Blue]
Layer:
Space:

Please include:
PCD File No. SF2614



Subject: Callout
Page Label: 2
Author: Joseph Sandstrom
Date: 7/22/2026 8:07:45 AM
Status:
Color: [Blue]
Layer:
Space:

Joshua J. Palmer



Subject: Highlight
Page Label: 2
Author: Joseph Sandstrom
Date: 7/22/2026 8:09:05 AM
Status:
Color: [Yellow]
Layer:
Space:

E LETTER

DATE: _____
15
38
Please include 2 owner signature lines

Subject: Text Box
Page Label: 2
Author: Joseph Sandstrom
Date: 7/22/2026 11:23:25 AM
Status:
Color: ■
Layer:
Space:

Please include 2 owner signature lines

AGE LETTER FO
EL PASO COUN

Subject: Highlight
Page Label: 3
Author: Joseph Sandstrom
Date: 7/22/2026 8:09:24 AM
Status:
Color: ■
Layer:
Space:

E LETTER

LETTER FOR CALM BREEZE FILING NO. 1
ASO COUNTY, COLORADO
TABLE OF CONTENTS

Subject: Callout
Page Label: 3
Author: Joseph Sandstrom
Date: 7/22/2026 8:09:52 AM
Status:
Color: ■
Layer:
Space:

Please update all future instances of report name.

MS

Subject: Cloud+
Page Label: 5
Author: Joseph Sandstrom
Date: 7/22/2026 3:13:10 PM
Status:
Color: ■
Layer:
Space:

Please update per Keith Curtis's comment in EDARP.

Existing Stormwater Infrastructure

Subject: Highlight
Page Label: 6
Author: Joseph Sandstrom
Date: 7/22/2026 8:34:31 AM
Status:
Color: ■
Layer:
Space:

Existing infrastructure exists to convey stormwater runoff under the existing private drive, including three (3) 18" corrugated plastic stormwater pipes, one (1) 24" CMP, and one (1) 14' x 6' RCBC

MS

Subject: Callout
Page Label: 6
Author: Joseph Sandstrom
Date: 7/27/2026 1:27:57 PM
Status:
Color: ■
Layer:
Space:

Please label pipes / box culvert on drainage maps.



Subject: Text Box
Page Label: 7
Author: Joseph Sandstrom
Date: 7/27/2026 4:50:04 PM
Status:
Color: ■
Layer:
Space:

Proposed conditions do not address the flows coming down Shoup road and ditches onto the proposed cul-de-sac and ditches. Please include in analysis and narrative. See comment in CDs.



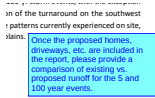
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Page Label: 8
Author: Joseph Sandstrom
Date: 7/27/2026 4:50:58 PM
Status:
Color: ■
Layer:
Space:

Same comment as above.



Subject: Text Box
Page Label: 8
Author: Joseph Sandstrom
Date: 7/27/2026 4:50:40 PM
Status:
Color: ■
Layer:
Space:

Include analysis and narrative of the condition (stability, vegetation, erosion) of all larger drainageways crossing the subdivision (notated on plat and drainage map) and use the extents to notate drainage easements on the plat drawing.



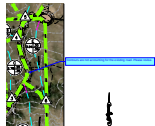
Subject: Text Box
Page Label: 9
Author: Joseph Sandstrom
Date: 7/22/2026 11:15:40 AM
Status:
Color: ■
Layer:
Space:

Once the proposed homes, driveways, etc. are included in the report, please provide a comparison of existing vs. proposed runoff for the 5 and 100 year events.



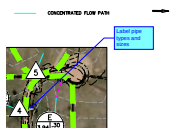
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Page Label: [1] Layout1
Author: Joseph Sandstrom
Date: 7/22/2026 9:10:14 AM
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Color: ■
Layer:
Space:

Please provide 2 foot contours as the 5 foot contours do not provide enough detail.



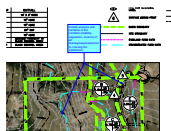
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Date: 7/27/2026 4:57:55 PM
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Contours are not accounting for the existing road. Please revise.



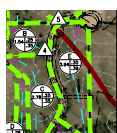
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Author: Joseph Sandstrom
Date: 7/23/2026 7:29:07 AM
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Space:

Label pipe types and sizes

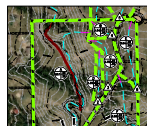


Subject: Callout
Page Label: [1] Layout1
Author: Joseph Sandstrom
Date: 7/23/2026 7:28:58 AM
Status:
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Layer:
Space:

Include analysis and narrative of the condition (stability, vegetation, erosion) of all drainageways/easements crossing the subdivision.



Subject: Highlight
Page Label: [1] Layout1
Author: Joseph Sandstrom
Date: 7/23/2026 7:28:49 AM
Status:
Color: ■
Layer:
Space:

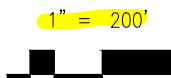


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Author: Joseph Sandstrom
Date: 7/23/2026 7:28:31 AM
Status:
Color: ■
Layer:
Space:

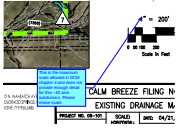


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Page Label: [1] Layout1
Author: Joseph Sandstrom
Date: 7/23/2026 7:42:14 AM
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Color: ■
Layer:
Space:

Comments on this map apply to the proposed drainage map as well.

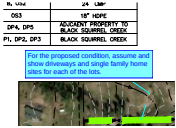


Subject: Highlight
Page Label: [1] Layout1
Author: Joseph Sandstrom
Date: 7/27/2026 4:53:11 PM
Status:
Color: ■
Layer:
Space:



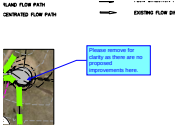
Subject: Callout
Page Label: [1] Layout1
Author: Joseph Sandstrom
Date: 7/27/2026 4:54:21 PM
Status:
Color:
Layer:
Space:

This is the maximum scale allowed in DCM chapter 4 and does not provide enough detail for this ~40 acre subdivision. Please revise scale.



Subject: Text Box
Page Label: [1] Layout1
Author: Joseph Sandstrom
Date: 7/22/2026 9:47:35 AM
Status:
Color:
Layer:
Space:

For the proposed condition, assume and show driveways and single family home sites for each of the lots.



Subject: Callout
Page Label: [1] Layout1
Author: Joseph Sandstrom
Date: 7/23/2026 7:29:59 AM
Status:
Color:
Layer:
Space:

Please remove for clarity as there are no proposed improvements here.