

**Final Drainage Report  
Falcon Eye Care  
Woodmen Hills Filing 7, Lot 4  
El Paso County, Colorado**

Prepared for:  
T- Bone Construction  
Colorado Springs, Colorado 80911

Prepared by:  
  
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Kiowa Project No. 20034

Sept 17, 2020

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## STATEMENTS AND APPROVALS

### ENGINEER'S STATEMENT:

The attached drainage plan and report were prepared under my direction and supervision and are correct to the best of my knowledge and belief. Said drainage report has been prepared according to the criteria established by the County for drainage reports and said report is in conformity with the 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.

Kiowa Engineering Corporation, 1604 South 21st Street, Colorado Springs, Colorado 80904

\_\_\_\_\_  
Todd Cartwright PE #33365  
For and on Behalf of Kiowa Engineering Corporation

\_\_\_\_\_  
Date

### DEVELOPER'S STATEMENT:

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

By: \_\_\_\_\_

\_\_\_\_\_  
Date

Print Name: \_\_\_\_\_

Address: \_\_\_\_\_  
Colorado Springs, Colorado

### EL PASO COUNTY:

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

\_\_\_\_\_  
Jennifer Irvine, P.E. Date  
El Paso County Engineer/ECM Administrator

## **I. GENERAL LOCATION AND DESCRIPTION**

Falcon Eye Care is located at 7615 McLaughlin Road or Lot 4 of Woodmen Hills Filing 7. The property will be developed as commercial located in the Falcon area of El Paso County. The property is located west of McLaughlin Road, north of Midnight Road, south of Greenough Road and west of Safeway.

The site contains 1.63 acres of improved but undeveloped land. A vicinity map of the site is shown on Figure 1 included in the Appendix. The site is not within any designated floodplain as indicated on FEMA panel 08041C0553G.

The existing vegetative cover within the development is in poor to fair condition with minimal grasses throughout the site. The site is relatively flat drainage to the south east at approximately 2%. Soils within the subject site are classified to be within Hydrologic Soils Group A as shown in the El Paso County Soils Survey. For the purposes of computing the existing and proposed hydrology for the site, Hydrologic Soil Group A was used.

## **II. MAJOR DRAINAGE BASINS AND SUBBASINS**

The site lies within the Falcon drainage basin. The vicinity has existing storm drainpipes that collect surface flows and discharge to detention pond 4 as defined on the Phase III Preliminary and Filing 7 Final Drainage and Erosions Control Report for Woodmen Hills Subdivision. Pond 4 is located to the east in between the adjacent Safeway and Highway 24.

The Woodmen Hills Filing 7 drainage report has runoff calculations based on a fully developed lot used to size pond 4. WE are not proposing any changes to the drainage pattern or flow.

The subject property limits are shown on Flood Insurance Rate Map (FIRM) 08041C0553G with effective dates of December 7, 2018 that are included in the Appendix. The FIRMs also show that the property to be developed with buildable lots is located outside of the FEMA regulated floodplain in an unshaded Zone X area, which is described as "Area of Minimal Flood Hazard."

## **III. DRAINAGE DESIGN CRITERIA**

Hydrologic and hydraulic calculations for the site were performed using the methods outlined in the *El Paso County Drainage Criteria Manual*. Topography for the site was compiled using a one-foot contour interval and is presented on the Drainage Plan. The hydrologic calculations were made for the historic and developed site conditions. The Drainage Plan presents the drainage patterns for the site, including the sub-basins. The peak flow rates for the sub-basins were estimated using the Rational Method. The 5-year (Minor Storm) and 100-year (Major Storm) recurrence intervals were determined. The one-hour rainfall depth was determined from Table 6-2 of the *Drainage Criteria Manual*. These depths are shown in the runoff calculations spreadsheet. The peak flow data generated using the rational method was used to verify street capacities and to size inlets and storm sewers within the subdivision. The drainage basin area, time of concentration, and rainfall intensity were determined for each of the sub-basins within the property. The onsite soils were assumed to be Hydrologic Soil Group A, based on the *Soil Survey* and the result of earth-moving operations. For existing conditions, runoff coefficients were determined using a land use of pasture/meadow. The land use for the proposed development will be Commercial.

## **IV. DRAINAGE FACILITY DESIGN**

All necessary drainage facilities were installed with the construction of Woodmen Hills Filing 7. No new storm drain or detention pond facilities are needed.

## **WATER QUALITY METHODOLOGY (4-STEP PROCESS):**

### **STEP 1: RUNOFF REDUCTION PRACTICES**

New construction will utilize existing and proposed grassed areas as buffers, allowing sediment to drop out of the storm runoff and helping to reduce runoff. The existing grassed swales along the north side of the site shall remain.

### **STEP 2: IMPLEMENT BMP'S THAT SLOWLY RELEASE THE WATER QUALITY CAPTURE VOLUME**

Detention Pond 4 is existing and will not be modified.

### **STEP 3: STABILIZE DRAINAGEWAYS**

Drainage ways are existing and will not be modified.

### **STEP 4: IMPLEMENT SITE SPECIFIC & SOURCE CONTROL BMP'S**

There are no potential sources of contaminants that could be introduced to the County's MS4 that will not be controlled by temporary construction BMPs. Maintenance and sweeping of parking areas is recommended to limit sediment transport to new inlets, pipes and detention areas. Construction BMPs in the form of vehicle tracking control, concrete washout area, inlet protection, rock socks, and silt fences will be utilized during construction activities to protect receiving waters.

The Following is a description of the on-site drainage sub-basins:

#### **Basin H1**

1.63 acres of graded undeveloped land. Graded to approximately 2%.

#### **Basin D1**

1.63 acres of graded commercial land. Graded to approximately 1-2%.

## **WATER QUALITY**

Storm water quality measures are required by the County in Volume 2 of the County's Drainage Criteria Manual. The water quality measures to be instituted for the development will include:

1. Existing water quality treatment and storage within the detention basin 4.
2. Pond 4 The outlet structure will include a water quality orifice plate and a micropool.

### **A. COST OF PROPOSED DRAINAGE FACILITIES**

There are no proposed drainage facilities therefore there are no drainage facilities costs.

### **B. DRAINAGE AND BRIDGE FEES**

The site is platted land. Fees were paid when Filing 7 was recorder in approximately 1998.

## **V. CONCLUSIONS**

The Falcon Eye Care will be a commercial subdivision covering approximately 1.63 acres. The site will use existing infrastructure to handle runoff to include the existing storm drain system and detention pond 4. The site will not adversely impact or deteriorate improvements or natural drainageways downstream of the property.

## VI. REFERENCES

- 1) Phase III Preliminary and Filing 7 Final Drainage and Erosions Control Report for Woodmen Hills Subdivision, prepared by URS Greiner Woodward Clyde, dated December 23, 1998.
- 2) Master Development Drainage Plan for Woodmen Hills Subdivision, prepared by URS Greiner, dated October 7, 1998.
- 3) El Paso County Drainage Criteria Manual (Volumes 1 and 2) and Engineering Criteria Manual, current editions.
- 4) Custom Soil Resource Report for El Paso County Area, Colorado, prepared by United States Department of Agriculture, Natural Resources Conservation Service, dated September 16, 2020.
- 5) National Flood Insurance Hazard layer FIRMette portion of panel 08041C0553G, Federal Emergency Management Agency, Effective Date 12/7/2018

## **APPENDIX A**

**Figure 1: Vicinity Map**

**Figure 2: Soils Map**

**Figure 3: FEMA Flood Insurance Rate Map**



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



**Figure 2**

September 16, 2020

# Custom Soil Resource Report Soil Map



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
8	Blakeland loamy sand, 1 to 9 percent slopes	0.2	13.2%
19	Columbine gravelly sandy loam, 0 to 3 percent slopes	1.4	86.8%
Totals for Area of Interest		1.7	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,

## Custom Soil Resource Report

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

### 8—**Blakeland loamy sand**, 1 to 9 percent slopes

#### Map Unit Setting

*National map unit symbol:* 369v  
*Elevation:* 4,600 to 5,800 feet  
*Mean annual precipitation:* 14 to 16 inches  
*Mean annual air temperature:* 46 to 48 degrees F  
*Frost-free period:* 125 to 145 days  
*Farmland classification:* Not prime farmland

#### Map Unit Composition

*Blakeland and similar soils:* 98 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, talus  
*Down-slope shape:* Linear  
*Across-slope shape:* Linear  
*Parent material:* Alluvium derived from sedimentary rock and/or eolian deposits  
derived from sedimentary rock

##### 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

#### Minor Components

##### Pleasant

*Percent of map unit:* 1 percent

## Custom Soil Resource Report

*Landform:* Depressions

*Hydric soil rating:* Yes

### **Other soils**

*Percent of map unit:* 1 percent

*Hydric soil rating:* No

## **19—Columbine gravelly sandy loam, 0 to 3 percent slopes**

### **Map Unit Setting**

*National map unit symbol:* 367p

*Elevation:* 6,500 to 7,300 feet

*Mean annual precipitation:* 14 to 16 inches

*Mean annual air temperature:* 46 to 50 degrees F

*Frost-free period:* 125 to 145 days

*Farmland classification:* Not prime farmland

### **Map Unit Composition**

*Columbine and similar soils:* 97 percent

*Minor components:* 3 percent

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

### **Description of Columbine**

#### **Setting**

*Landform:* Fans, flood plains, fan terraces

*Down-slope shape:* Linear

*Across-slope shape:* Linear

*Parent material:* Alluvium

#### **Typical profile**

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

*C - 14 to 60 inches:* very gravelly loamy sand

#### **Properties and qualities**

*Slope:* 0 to 3 percent

*Depth to restrictive feature:* More than 80 inches

*Drainage class:* Well drained

*Runoff class:* Very 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

*Available water capacity:* Very low (about 2.5 inches)

#### **Interpretive groups**

*Land capability classification (irrigated):* 4e

*Land capability classification (nonirrigated):* 6e

**Hydrologic Soil Group: A**

*Ecological site:* R049XB215CO - Gravelly Foothill

## Custom Soil Resource Report

*Hydric soil rating:* No

### **Minor Components**

#### **Pleasant**

*Percent of map unit:* 1 percent

*Landform:* Depressions

*Hydric soil rating:* Yes

#### **Other soils**

*Percent of map unit:* 1 percent

*Hydric soil rating:* No

#### **Fluvaquentic haplaquolls**

*Percent of map unit:* 1 percent

*Landform:* Swales

*Hydric soil rating:* Yes



# National Flood Hazard Layer FIRMette

104°36'30"W 38°56'44"N



## Legend

SEE FIS REPORT FOR DETAILED LEGEND AND INDEX MAP FOR FIRM PANEL LAYOUT

### SPECIAL FLOOD HAZARD AREAS

- Without Base Flood Elevation (BFE)  
Zone A, V, AE, AH, VE, AR
- With BFE or Depth  
Zone AE, AO, AH, VE, AR
- Regulatory Floodway

- 0.2% Annual Chance Flood Hazard, Areas of 1% annual chance flood with average depth less than one foot or with drainage areas of less than one square mile Zone X
- Future Conditions 1% Annual Chance Flood Hazard Zone X
- Area with Reduced Flood Risk due to Levee, See Notes, Zone X
- Area with Flood Risk due to Levee Zone D

### OTHER AREAS OF FLOOD HAZARD

- NO SCREEN
- Area of Minimal Flood Hazard Zone X
- Effective LOMRs
- Area of Undetermined Flood Hazard Zone D
- Channel, Culvert, or Storm Sewer
- Levee, Dike, or Floodwall

### OTHER AREAS

### GENERAL STRUCTURES

- Cross Sections with 1% Annual Chance Water Surface Elevation
- Coastal Transect
- Base Flood Elevation Line (BFE)
- Limit of Study
- Jurisdiction Boundary
- Coastal Transect Baseline
- Profile Baseline
- Hydrographic Feature

### OTHER FEATURES

- Digital Data Available
- No Digital Data Available
- Unmapped

### MAP PANELS



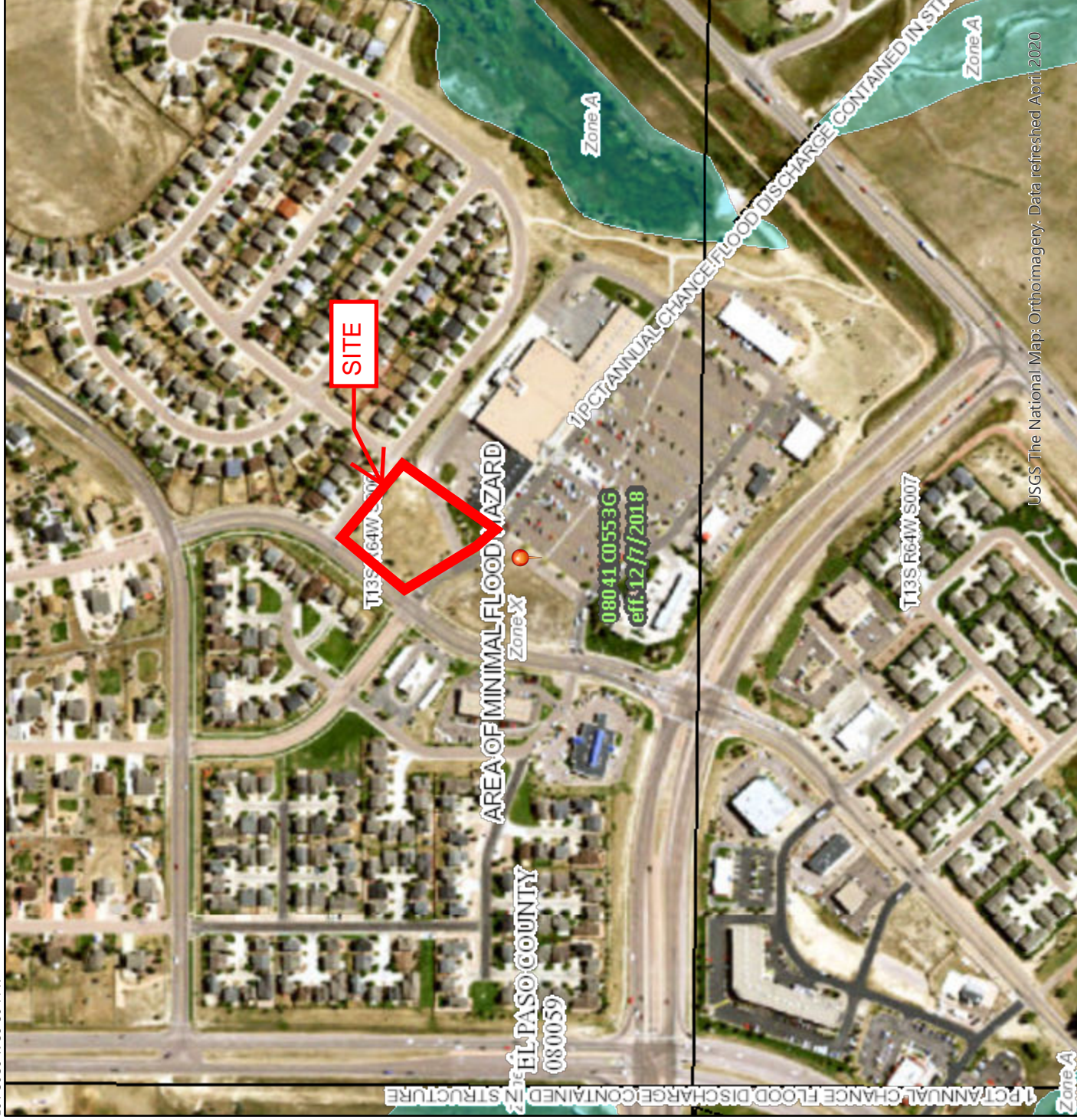
The pin displayed on the map is an approximate point selected by the user and does not represent an authoritative property location.

This map complies with FEMA's standards for the use of digital flood maps if it is not void as described below. The basemap shown complies with FEMA's basemap accuracy standards.

The flood hazard information is derived directly from the authoritative NFHL web services provided by FEMA. This map was exported on 9/16/2020 at 8:17 PM and does not reflect changes or amendments subsequent to this date and time. The NFHL and effective information may change or become superseded by new data over time.

This map image is void if the one or more of the following map elements do not appear: basemap imagery, flood zone labels, legend, scale bar, map creation date, community identifiers, FIRM panel number, and FIRM effective date. Map images for unmapped and unmodernized areas cannot be used for regulatory purposes.

Figure 3



USGS The National Map: Orthoimagery. Data refreshed April 2020

104°35'52"W 38°56'16"N

Feet

0

250

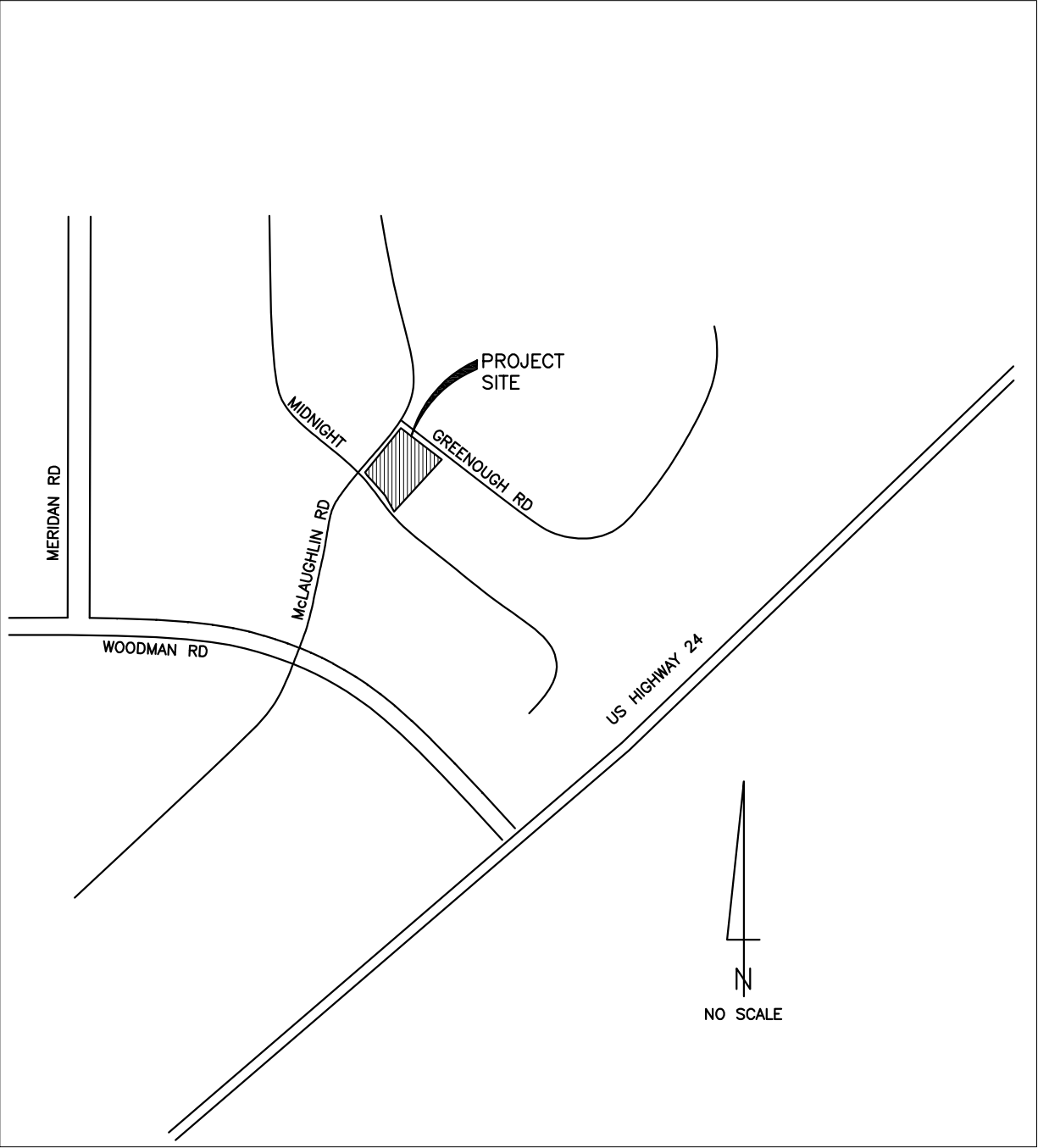
500

1,000

1,500

2,000

1:6,000



VICINITY MAP

Figure 1

**APPENDIX B**  
**Hydrologic Calculations**

# Falcon Eye Care - Woodmen Hills Filing 7, Lot 4

## Final Drairage Report

### Area Runoff Coefficient Summary - EXISTING

BASIN	TOTAL AREA		DEVELOPED			UNDEVELOPED			WEIGHTED	
	(SF)	(Acres)	AREA (Acres)	C <sub>5</sub>	C <sub>100</sub>	AREA (Acres)	C <sub>5</sub>	C <sub>100</sub>	C <sub>5</sub>	C <sub>100</sub>
H-1	71,334	1.6	0.0	0.90	0.90	1.6	0.15	0.20	0.15	0.20
			0.0	0.90	0.90	0.0	0.15	0.20	#DIV/0!	#DIV/0!

Calculated by: TAC  
 Date: 9/15/2020  
 Checked by:

# Falcon Eye Care - Woodmen Hills Filing 7, Lot 4

## Final Drairage Report

### Area Runoff Coefficient Summary - PROPOSED

<i>BASIN</i>	<i>TOTAL AREA</i>		<i>DEVELOPED</i>			<i>UNDEVELOPED</i>			<i>WEIGHTED</i>	
	<i>(SF)</i>	<i>(Acres)</i>	<i>AREA</i>	<i>C<sub>5</sub></i>	<i>C<sub>100</sub></i>	<i>AREA</i>	<i>C<sub>5</sub></i>	<i>C<sub>100</sub></i>	<i>C<sub>5</sub></i>	<i>C<sub>100</sub></i>
			<i>(Acres)</i>			<i>(Acres)</i>				
D-1	71,334	1.6	1.6	0.90	0.90	0.0	0.15	0.20	0.90	0.90
				0.90	0.90	0.0	0.15	0.20	#DIV/0!	#DIV/0!

Calculated by: TAC  
 Date: 9/15/2020  
 Checked by: \_\_\_\_\_

**Falcon Eye Care - Woodmen Hills Filing 7, Lot 4**  
**Final Drainage Report**  
**Area Drainage Summary - EXISTING**

		WEIGHTED			OVERLAND				STREET / CHANNEL FLOW				T <sub>t</sub>		CA		INTENSITY		TOTAL FLOW	
BASIN	AREA TOTAL (Acres)	C <sub>5</sub>	C <sub>100</sub>	C <sub>5</sub>	Length (ft)	Height (ft)	T <sub>C</sub> (min)	Grass/ Paved	Length (ft)	Slope (%)	Velocity (fps)	T <sub>t</sub> (min)	TOTAL (min)	CA <sub>5</sub>	CA <sub>100</sub>	I <sub>5</sub> (in/hr)	I <sub>100</sub> (in/hr)	Q <sub>5</sub> (c.f.s.)	Q <sub>100</sub> (c.f.s.)	
		* Free Calc-Sec Runoff Summary																		
H-1	1.6	0.15	0.20	0.15	100	2	14.1	Grass	300	2.0%	1.3	3.8	17.9	0.24	0.33	3.2	5.4	0.8	1.8	
				0.15			#DIV/0!					#VALUE!	#DIV/0!			#DIV/0!	#DIV/0!			
							0.0					0.0								
							0.0					0.0								

Calculated by: TAC  
Date: 9/15/2020  
Checked by:

**Falcon Eye Care - Woodmen Hills Filing 7, Lot 4**  
**Final Drairage Report**  
**Area Drainage Summary - PROPOSED**

BASIN	AREA TOTAL (Acres)	WEIGHTED		OVERLAND				STREET / CHANNEL FLOW					T <sub>i</sub>		CA		INTENSITY		TOTAL FLOW	
		C <sub>5</sub>	C <sub>100</sub>	C <sub>5</sub>	Length (ft)	Height (ft)	T <sub>C</sub> (min)	Grass/ Paved	Length (ft)	Slope (%)	Velocity (fps)	T <sub>i</sub> (min)	TOTAL	CA <sub>5</sub>	CA <sub>100</sub>	I <sub>5</sub> (in/hr)	I <sub>100</sub> (in/hr)	Q <sub>5</sub> (c.f.s.)	Q <sub>100</sub> (c.f.s.)	
* For C <sub>5</sub> See Runoff Summary		0.90	0.90	0.15	10	1	3.3	Paved	360	1.0%	1.4	4.3	7.6	1.47	1.47	4.5	7.9	7	12	
D-1	1.6																			
				0.15			#DIV/0!					#VALUE!	#DIV/0!				#DIV/0!	#DIV/0!		
							0.0					0.0								
							0.0					0.0								

Calculated by: TAC  
Date: 9/15/2020  
Checked by: \_\_\_\_\_

**APPENDIX C**  
**Existing and Proposed Drainage Plans**



NOTES:

1) ALL ELEVATIONS ARE FLOW LINE UNLESS OTHERWISE INDICATED.

2) ADD 6800 TO SPOT ELEVATIONS.

LEGEND

C-4

2.67 AC

0.31

0.50

C100

RUNOFF

CS RUNOFF

5-YEAR RUNOFF  
100-YEAR RUNOFF

DIRECTIONAL FLOW ARROW

DRAINAGE BASIN C BOUNDARY

DRAINAGE BASIN D BOUNDARY

INTERM (FLING 10) 100-YR W.S.E.L.

ULTIMATE (FLINGS 10-12) 100-YR W.S.E.L.

DESIGN POINT

TIME OF CONCENTRATION PATH

HYDRAULIC STRUCTURE IDENTIFIER

STORM SEWER IDENTIFIER

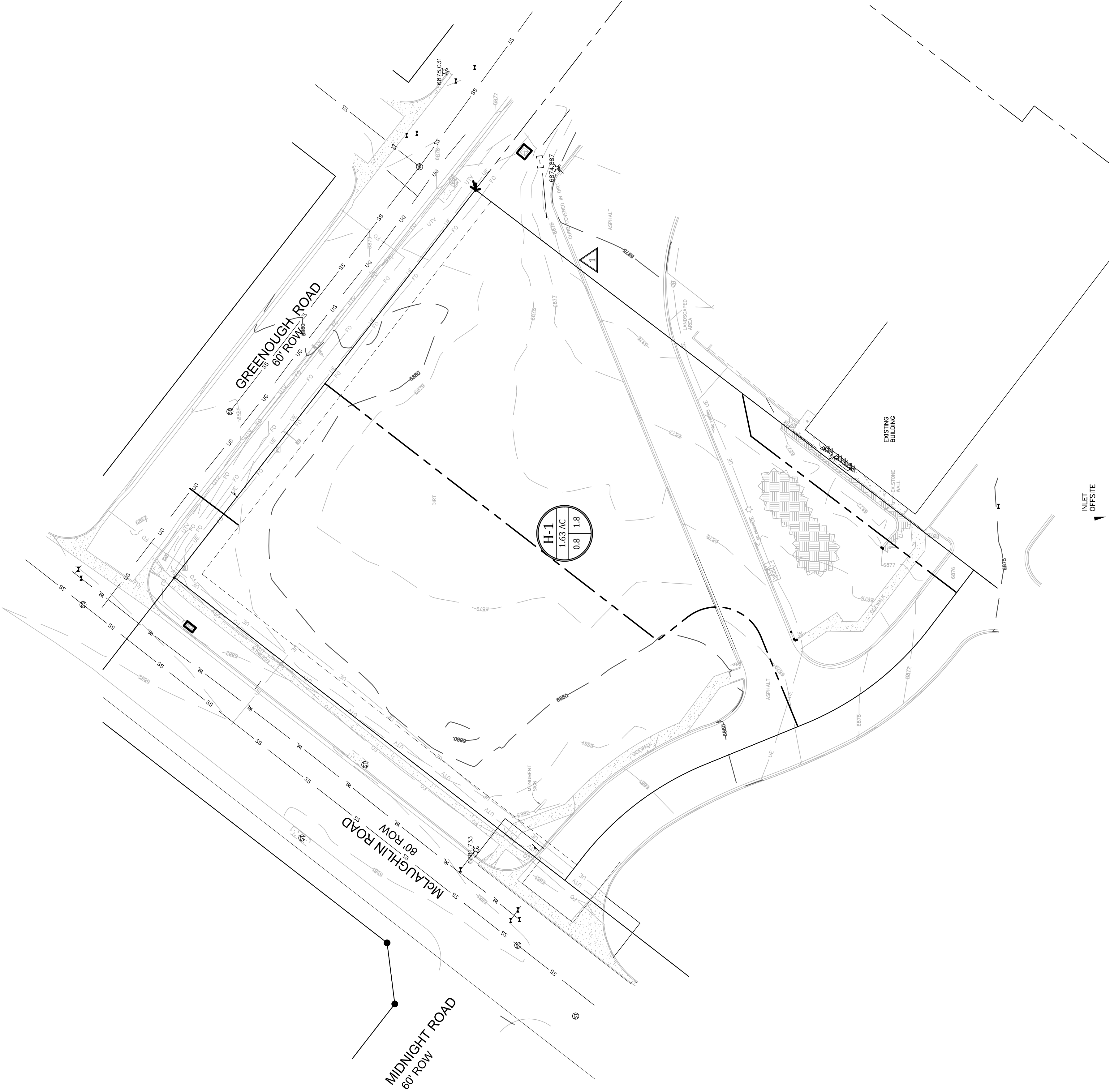
PROPOSED STORM SEWER PIPE

PROPOSED STORM SEWER MANHOLE

PROPOSED STORM DRAINAGE CURB INLET

EXISTING CONTOURS

PROPOSED CONTOURS

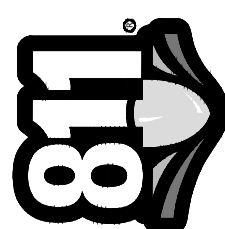
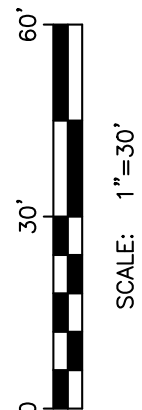
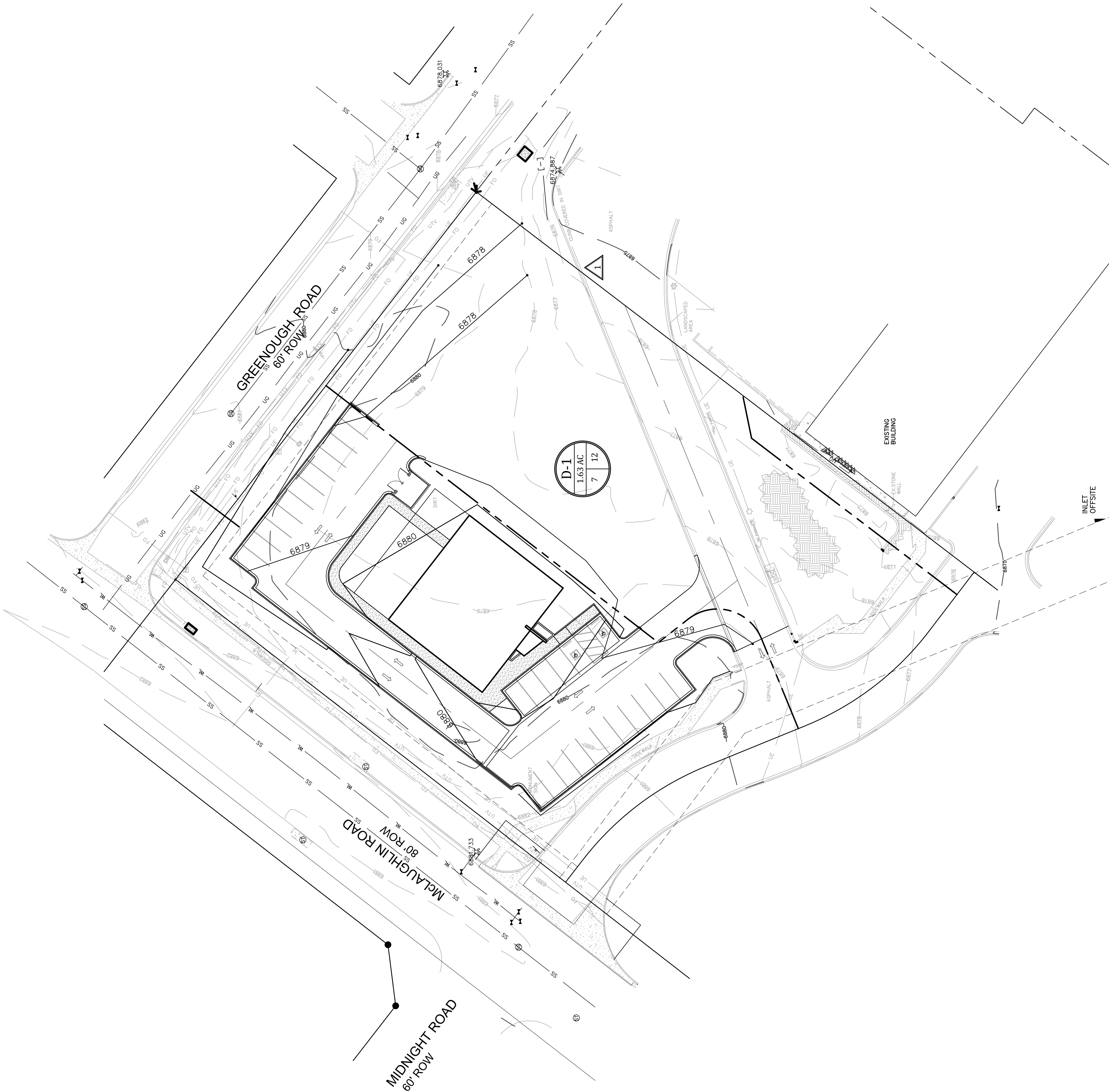
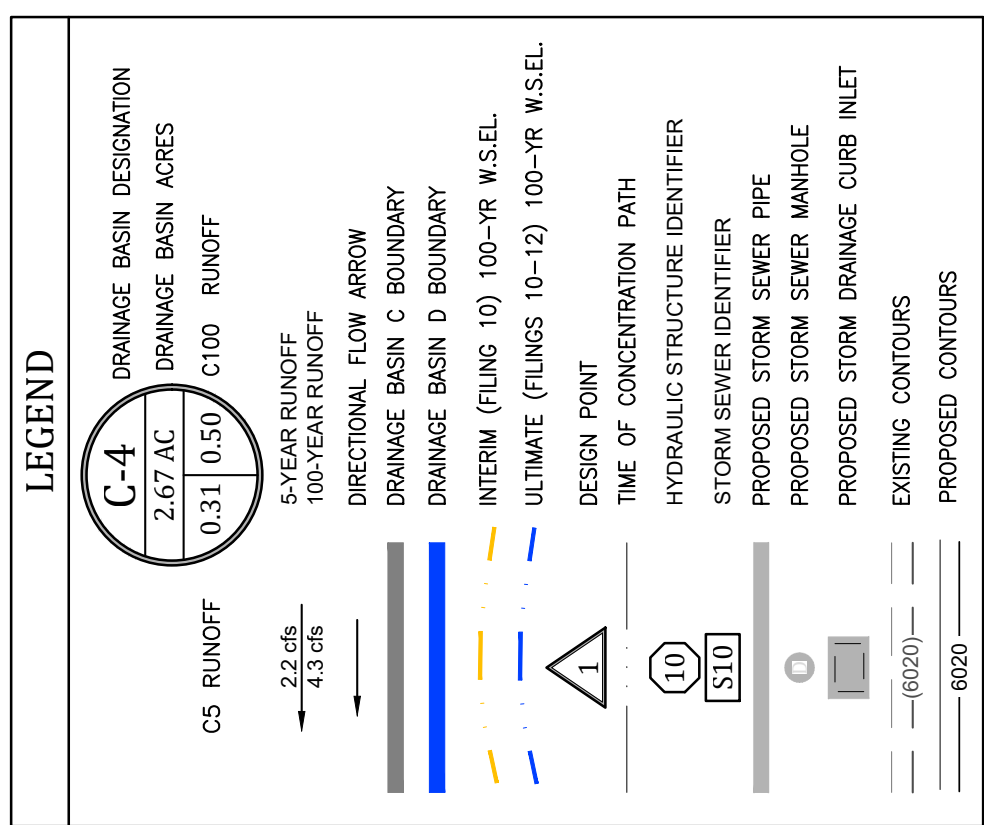
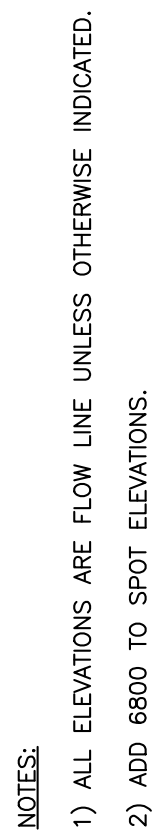




FALCON FAMILY EYE CARE  
7615 McLAUGHLIN ROAD  
DEVELOPED CONDITIONS MAP  
PEYTON, COLORADO

Project No.:	20034
Date:	8/27/2020
Design:	TAC
Drawn:	EAK
Check:	TAC
Revisions:	

D-1



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