

### **EXTERNAL MEMORANDUM**

**To:** Jason Kvols

Vice President Ellicott Utilities Company

From: Alan J. Leak, P.E.

Date: October 6, 2023

**Subject:** Mayberry -Sketch Plan – Wastewater Review



This wastewater review is for Mayberry's Sketch Plan located within the northeast quarter of Section 14; the northwest quarter of Section 14; all of the southwest quarter of Section 14, all of the east-half of the east-half of Section 15, all in Township 14 South, Range 63 West of the 6th Principal Meridian in El Paso County, Colorado; all within the Upper Black Squirrel Creek Designated Ground Water Basin and within the jurisdiction of Upper Black Squirrel Creek Designated Groundwater Management District (approximately 620+/- acres) (see Appendix A). This property will have its water and wastewater provided by the Ellicott Utilities Company (EUC).

Mayberry (the development) is planning to connect to the central water and wastewater systems that are owned and operated by EUC. It is understood that improvements to the central systems will need to be made and the developer has agreed to make these improvements and dedicate them to EUC. EUC currently has sufficient wastewater treatment capacity at the Ellicott Springs Wastewater Treatment Plant (WWTP) to accept wastewater flow from about 1562.5 wastewater EQRs or 250,000 gallons per day based upon the wastewater from one EQR of 160 gpd. The 160 gpd/EQR is based on water usage from the Ellicott Springs development (a project served by EUC) whose indoor water use averages about 147 gpd/EQR (see Table 1) with an estimated wastewater return flow of 95% of indoor water usage and using a 15% safety factor (147\*0.95\*1.15=161), rounded to 160

720 SOUTH COLORADO BLVD.
SUITE 410 S
DENVER, CO 80246
303.757.3655



gpd/EQR. In addition to the infrastructure improvements being dedicated to EUC, the developer will purchase sewer taps from EUC for each lot at the rates charged by EUC at the time of purchase.

Currently the WWTP serves existing customers in the Sunset Village development, Ellicott Schools, and Mayberry Filings 1, 1A, 2, 2A, and 3. Sunset Village wastewater is conveyed from a lift station located at 23799 Jayhawk Avenue Colorado Springs, Colorado 80928. This lift station pumps sewage through a force main to the WWTP. The second lift station is located just outside the bus barn at Ellicott School District Property. This lift station pumps sewage to a gravity line which is then carried south to the WWTP.

In January 2002, the WWTP completed an upgrade to a permitted capacity of 250,000 gallons per day (gpd), discharging to an unnamed tributary to Black Squirrel Creek. CDPS Permit No. CO0047252 (see permit in Appendix B) for EUC's WWTP with a facility flow of 250,000 gallons per day was issued on July 31, 2014, and expired at midnight on August 31, 2019. The Colorado Water Quality Control Division (Division) received an application from EUC for an individual permit renewal on August 7, 2019. The Division notified EUC of its eligibility for administrative extension and the permit has been administratively extended through the current time frame and allows continued operation of the plant. The WWTP is a 3-cell aerated lagoon facility with chlorine disinfection. The WWTP has not discharged effluent to date based on the limited development and low flows from the service area.

In addition to the current wastewater service to Filings 1, 1A, 2, 2A, and 3, EUC has also committed to provide future wastewater treatment at the WWTP for Mayberry Filings 4 and 5. In total, the WWTP currently has commitments to treat an estimated 103,770 gallons per day (approximately 41.5% of capacity). The EUC wastewater service commitment status is summarized in the attached Table 2.

As shown in Table 2, the EUC WWTP has the capacity to provide wastewater service for an additional 913.94 wastewater EQRs. Planning for future upgrades to this facility will begin before reaching 80% of the capacity (200,000 gpd capacity) based on the regulations set forth by the Division and specified in EUC's WWTP discharge permit. Thus, EUC can provide



wastewater service to an additional 601.44 wastewater EQRs for a total of 1250 wastewater EQR's before planning for expansion of the WWTP must commence.

Future construction of the WWTF expansion will commence upon reaching 90% capacity (225,000 gpd). The WWTP will be expanded in phases as needed to meet the demand for wastewater service. Ultimately, the WWTP will be designed and constructed to meet the full build out wastewater demand of Mayberry, which is approximately 415,318 gpd serving about 2,596 EQRs, plus about 46,240 gpd from the other sub-territorial developments and Ellicott Schools that EUC serves for a total of about 461,558 gpd. When the WWTP is expanded, the treatment processes will be modified to allow for the discharge of reuse water which meets the requirements of the Water Quality Control Commission (WQCC) Regulation #84, thus allowing for the delivery of this reuse water for irrigation within the Mayberry Communities sketch plan development. All lots within the Mayberry Communities sketch plan will be required to connect to the existing (or to be constructed) central wastewater systems owned and operated by EUC. Wastewater system improvements will be designed and constructed in accordance with EUC Standard Specifications for provision of municipal water and domestic wastewater treatment, and these facilities will ultimately be dedicated to EUC.

Table 1 Ellicott Utilities Company

#### Review of Water Usage at Ellicott Springs (2018-2019 Monthly Usage)

	2018												
	January	February	March	April	May	June	July	August	September	October	November	December	Total /Average
Usage (ac-ft)	1.06 af	0.97 af	0.90 af	1.11 af	0.99 af	1.30 af	1.37 af	1.49 af	1.69 af	1.42 af	1.22 af	1.29 af	14.80 af
Accounts	90	91	91	91	90	90	89	91	91	90	90	90	90
Indoor Use (average of													
December, January, February)	1.19 af	1.19 af	1.19 af	1.19 af	1.19 af	1.19 af	1.19 af	1.19 af	1.19 af	1.19 af	1.19 af	1.19 af	14.25 af
Outdoor Use	0.00 af	0.00 af	0.00 af	0.00 af	0.00 af	0.11 af	0.18 af	0.30 af	0.50 af	0.23 af	0.03 af	0.10 af	1.46 af
	2019												
	January	February	March	April	May	June	July	August	September	October	November	December	Total /Average
Usage (ac-ft)	1.51 af	1.49 af	1.19 af	1.39 af	1.33 af	1.53 af	1.35 af	1.36 af	1.44 af	1.26 af	1.03 af	1.34 af	16.23 af
Accounts	91	91	91	92	92	92	92	90	90	89	89	90	91
Indoor Use (average of December,													
January, February)	1.29 af	1.29 af	1.29 af	1.29 af	1.29 af	1.29 af	1.29 af	1.29 af	1.29 af	1.29 af	1.29 af	1.29 af	15.52 af
Outdoor Use	0.22 af	0.20 af	0.00 af	0.10 af	0.04 af	0.23 af	0.05 af	0.07 af	0.15 af	0.00 af	0.00 af	0.05 af	1.11 af

<sup>\*</sup> Water Usage Records were delivered to RESEPC by Ellitcott Utilites Company.

	Indoor Use Per Lot (EQR)	
2018	0.1578 af/lot/yr	141 gallons/lot/day
2019	0.1710 af/lot/yr	153 gallons/lot/day
Average	0.1644 af/lot/yr	147 gallons/lot/day

# Table 2 Ellicott Utilities Company

#### Waterwater Commitments - Mayberry Communities Sketch Plan

WWTP Capacity (gpd)	250,000.00
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	EQR	Estimated
Total Capacity		Wastewater
		(gpd)
Current Commitments:		
Sunset Village Filings 1-5	184	29,440
Ellicott Schools (1,000 students)	105	16,800
Mayberry Filing 1, 1A, 2, 2A, and 3	263.1	42,096
Mayberry Filing 4 - 8 Industrial Lots	9.04	1,446
Mayberry Filing 5 - 146 Mulit-Family Units	87.42	13,987
Total Current Commitments	648.56	103,770
% of WWTP Capacity CurrentlyCommitted		41.5%
Remaining EQR's Available	913.94	146,230

Current commitments based on previous submittals to El Paso County.

The wastewater calculations are based on a 160 gallons per day per EQR from Ellicott Springs WTP operations.

EQR caculations are the same as those used in the water resource reports.



# Appendix A

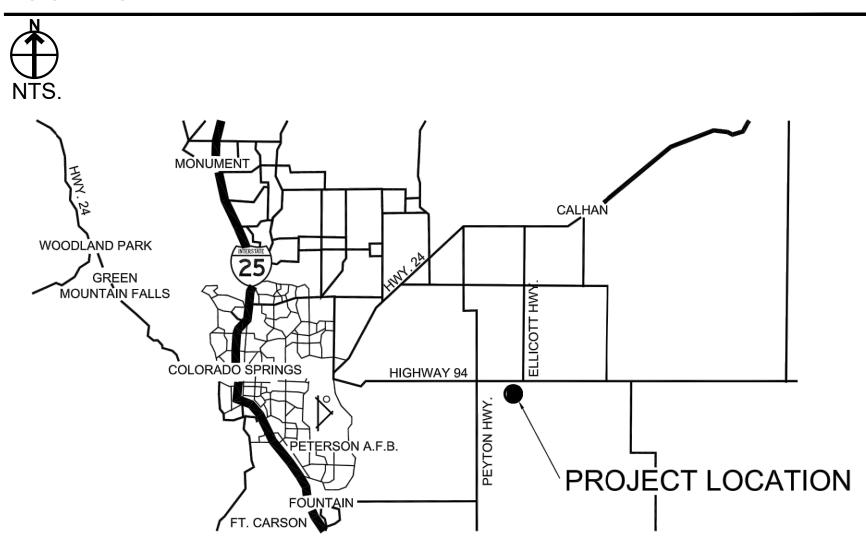
# MAYBERRY COMMUNITIES

SECTION 14 & 15, IN TOWNSHIP 14 SOUTH, RANGE 63 WEST OF THE 6TH PRINCIPAL MERIDIAN,

EL PASO COUNTY, COLORADO.

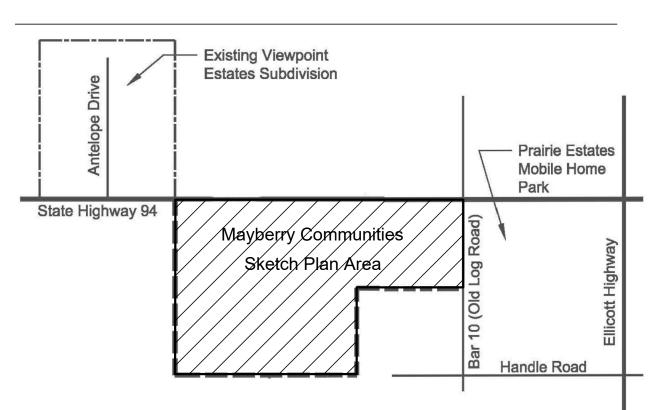
# SKETCH PLAN

### **LOCATION MAP**

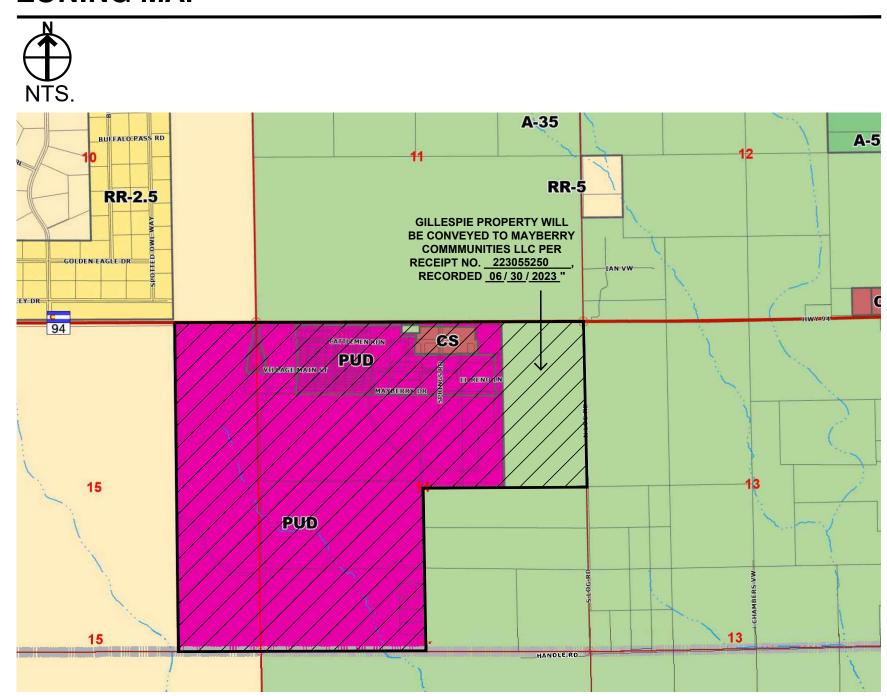


### **VICINITY MAP**





### **ZONING MAP**



### LEGAL DESCRIPTION

THE NORTHEAST QUARTER OF SECTION 14; THE NORTHWEST QUARTER OF SECTION 14; ALL OF THE SOUTHWEST QUARTER OF SECTION 14, ALL OF THE EAST-HALF OF THE EAST-HALF OF SECTION 15, ALL IN TOWNSHIP 14 SOUTH, RANGE 63 WEST OF THE 6TH PRINCIPAL MERIDIAN IN EL PASO COUNTY, COLORADO; SUBJECT TO: RIGHT-OF-WAY FOR S. LOG ROAD ALONG THE EAST LINE OF SAID NORTHEAST QUARTER ESTABLISHED BY ROAD ORDER BY THE BOARD OF COMMISSIONERS TO EL PASO COUNTY, COLORADO RECORDED OCTOBER 3. 1887 IN ROAD RECORD BOOK A AT PAGE 78:

#### **LESS AND EXCEPTING THEREFROM** THE FOLLOWING:

THE NORTHERLY 180.00 FEET OF THE EASTERLY 290.00 FEET OF SAID NORTHWEST QUARTER CONVEYED TO CHEROKEE WATER AND SANITATION DISTRICT IN THE QUIT CLAIM DEED RECORDED JULY 5, 1988 IN BOOK 5527 AT PAGE 376;

THAT PART OF SAID EAST-HALF OF THE EAST-HALF OF SECTION 15 CONVEYED TO ELLICOTT UTILITIES COMPANY, LLC IN THE TRUSTEE'S DEED RECORDED MARCH 25, 2013 AS RECEPTION NO. 213038197;

RIGHT-OF-WAY FOR STATE HIGHWAY 94 RIGHT-OF-WAY ALONG THE NORTH LINES OF SAID NORTHEAST AND NORTHWEST QUARTERS ESTABLISHED BY: RIGHT-OF-WAY DEED RECORDED NOVEMBER 8, 1939 IN BOOK 978 AT PAGE 99; QUIT CLAIM DEED RECORDED DECEMBER 18, 1939 IN BOOK 978 AT PAGE 146; AND THE WARRANTY DEED RECORDED DECEMBER 23, 2020 AS RECEPTION NO. 220211233.

### **GENERAL NOTES**

- 1. A TOTAL OF 2800 DWELLING UNITS ARE ALLOWED WITHIN THE MAYBERRY COMMUNITIES **PROJECT**
- 2. CLUSTERING OF UNITS WITHIN RESIDENTIAL DISTRICTS IS PERMITTED, BUT NOT REQUIRED, SO LONG AS THE OVERALL DENSITY LIMIT IS NOT EXCEEDED. THE USE OF CLUSTERING IS ENCOURAGED TO PROMOTE COMMON OPEN SPACE, PROTECT NATURAL FEATURES, AND PROVIDE CREATIVE AND FLEXIBLE DESIGN ALTERNATIVES.
- 3. SPECIFIC DEVELOPMENT STANDARDS SUCH AS SETBACKS, LOT COVERAGE, BUILDING HEIGHTS AND LAND USES SHALL BE ADDRESSED WITH SITE SPECIFIC PUD PHASES FOR THE PROPERTY AT A LATER DATE. THESE STANDARDS WILL EITHER FOLLOW SPECIFIC PROPOSED PUD DEVELOPMENT PLANS OR PER COUNTY ZONING STANDARDS
- DESIGNATED PUD PHASES ARE NOT REQUIRED TO BE DEVELOPED SEQUENTIALLY. ANY PHASE MAY BE PURSUED AHEAD OF ANOTHER AS MARKET DEMANDS DICTATE.
- 5. COMMERCIAL USES SHALL BE ALLOWED TO DEVELOP INDEPENDENT OF THE PHASING PLAN AS MARKET FACTORS ALLOW.
- 6. ALL COMMON LANDSCAPE, OPEN SPACE, PARKS, TRACTS AND DRAINAGE FACILITIES WITHIN THIS DEVELOPMENT SHALL BE OWNED AND MAINTAINED BY THE DISTRICT.
- 7. COMMERCIAL USES ARE ALLOWED IN ALL AREAS DESIGNATED AS PARKS TO ACCOMMODATE PRIVATE BUSINESS PROVIDING COMPLEMENTARY SERVICES
- ALL DETENTION PONDS AND CROSS LOT DRAINAGE DITCHES WILL BE LOCATED WITHIN DRAINAGE EASEMENTS PROVIDING ACCESS FOR MAINTENANCE TO THE MAYBERRY METROPOLITAN DISTRICT.
- PARK IMPROVEMENTS PROVIDED BY THE DEVELOPER MAY BE APPLIED TO PARK LAND DEDICATION AND/OR FEES WITH REVIEW AND APPROVAL BY EL PASO COUNTY PARKS. ANY PARK IMPROVEMENTS WILL BE COORDINATED AT A LATER DATE WITH EL PASO COUNTY PARKS VIA PARK LAND AGREEMENTS.
- 10. SITE LIGHTING, IF REQUIRED, WILL MEET THE REQUIREMENTS SET FORTH IN SECTION 6.2.3 OF EL PASO COUNTY LAND DEVELOPMENT CODE.
- 11. THE MAILBOX KIOSKS WILL BE DETERMINED WITH EACH FINAL PLAT AND IN COORDINATION WITH THE U.S. POSTAL SERVICE.
- 12. STREETS WILL MEET THE STANDARDS OF EL PASO COUNTY ENGINEERING CRITERIA MANUAL. A DEVIATION REQUEST AND/OR PUD MODIFICATION MUST BE APPROVED FOR ANY DESIGN THAT DOES NOT CONFORM WITH THESE STANDARDS.
- 13. SIDEWALKS OR WALKWAYS WILL BE PROVIDED ALONG ALL STREETS AND INTERIOR TO DEVELOPMENT PARCELS, LINKING SCHOOLS, PARKS AND TRAIL SYSTEMS.
- 14. PUBLIC STREETS WITHIN THIS DEVELOPMENT SHALL PROVIDE FOR LEVELS OF VEHICULAR CIRCULATION REQUIRED BY THE TRAFFIC STUDY AND SHALL BE PAVED.

## SOIL & GEOLOGY CONDITIONS, CONSTRAINTS & HAZARDS

A GEOLOGICAL HAZARDS EVALUATION & PRELIMINARY GEOTECHNICAL INVESTIGATION WAS COMPLETED BY CTL THOMPSON INC. ON MARCH 13, 2023.

#### **SUMMARY NOTES**

THE CONDITIONS ENCOUNTERED IN OUR BORINGS DRILLED AT THE SITE CONSISTED OF PREDOMINANTLY NATURAL SILTY AND CLAYEY SANDS WITH SPORADIC LAYERS OF CLAY WITH VARYING AMOUNTS OF SAND. THE SAND SOILS ARE GENERALLY NON-EXPANSIVE. THE CLAY SOILS WERE GENERALLY FOUND IN RELATIVELY THIN LAYERS AND EXHIBITED LOW MEASURED SWELL WHEN WETTED. LOCALIZED LAYERS OF CLAY WITH MODERATE TO HIGH EXPANSION POTENTIAL MAY BE PRESENT BETWEEN OUR BORING LOCATIONS.

AT THE TIME OF DRILLING, GROUNDWATER WAS ENCOUNTERED IN THREE OF OUR BORINGS AT DEPTHS RANGING BETWEEN 12 AND 22 FEET. GROUNDWATER WAS MEASURED AFTER DRILLING IN THREE BORINGS AT DEPTHS RANGING BETWEEN 10.5 AND 15 FEET.

WE BELIEVE SITE GRADING AND UTILITY INSTALLATION FOR THE PROPOSED DEVELOPMENT CAN BE ACCOMPLISHED USING CONVENTIONAL, HEAVY-DUTY CONSTRUCTION EQUIPMENT.

WE ANTICIPATE SPREAD FOOTING FOUNDATIONS WILL BE APPROPRIATE FOR LIGHTLY TO MODERATELY LOADED BUILDINGS. WHERE LOOSE OR EXPANSIVE SOILS ARE ENCOUNTERED AT OR NEAR FOOTING AND FLOOR SLAB ELEVATIONS FOLLOWING GRADING, IT WILL LIKELY BE NECESSARY TO SUB-EXCAVATE THIS MATERIAL AND THEN RECONSTRUCT THE EXCAVATED SOILS AS MOISTURE CONDITIONED, DENSELY COMPACTED FILL, PRIOR TO FOOTING CONSTRUCTION. METHODS OF MITIGATION ARE DESCRIBED IN THE REPORT.

THE NATURAL SANDS AND DENSE FILLS CONSTRUCTED USING SANDS SHOULD PROVIDE GOOD SUPPORT FOR THE LIGHTLY TO MODERATELY LOADED SLABS-ON-GRADE. PERFORMANCE OF SLABS WILL LIKELY BE POOR IF SITE GRADING CAUSES CLAYS OR CLAYSTONE BEDROCK WITH HIGH OR VERY HIGH POTENTIAL FOR EXPANSION TO BE NEAR FLOOR LEVELS.

OVERALL PLANS SHOULD PROVIDE FOR THE RAPID CONVEYANCE OF SURFACE RUNOFF

### CITE DATA

Road Easements

R.O.W.

## DDO IECT TEAM

SHEET 3 OF 6 ADJACENT LAND OWNERS

SHEET 5 OF 6 PRELIMINARY PHASING PLAN

SHEET 6 OF 6 TRAILS & MULTI MODAL STREETS

SHEET 4 OF 6

PHYSICAL FEATURES MAP

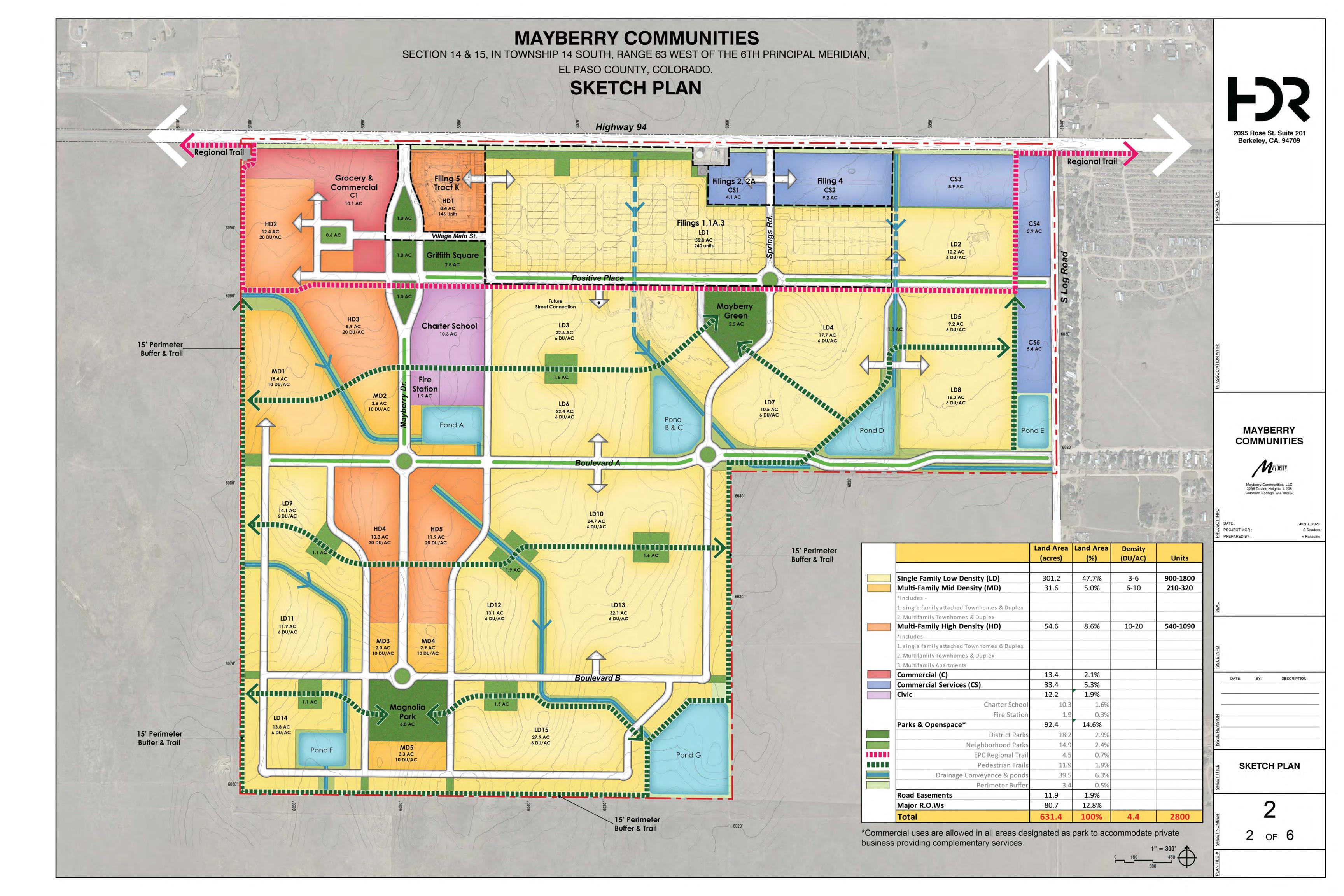
SITE DATA		PROJECT TEAM			
Existing Land Use PUD, Agricultura Commercial Service		OWNER / APPLICANT	RANDY GOODSON MAYBERRY COMMUNITIES LI 3296 DEVINE HEIGHTS, #208, COLORADO SPRINGS,		
Existing Zoning P	UD, CS, A-35		CO. 80922		
Proposed Zoning	PUD, CS	MACTED DI ANNED	LIDD		
Site Acreage	631.4 AC	MASTER PLANNER	HDR 2095 ROSE ST. SUITE 201		
Maximum Number of Units	2,800		BERKELEY, CA. 94709		
Maximum Gross Density	4.4 DU/AC	LAND PLANNER	KIMLEY-HORN 2 N NEVADA AVE. SUITE 900 COLORADO SPRINGS, CO. 80903		
TOTAL AREAS (see landuse ch	nart on sheet 2)		CO. 80903		
RESIDENTIAL Single Family Low Density Multi Family Mid Density	387.4 AC 301.2 AC 31.6 AC	ENGINEERS & SURVEYORS	<b>R&amp;R</b> 1635 W 13TH AVE. SUITE 310 DENVER, CO. 80204		
Multi Family High Density	54.6 AC	GEOTECH	CTL   THOMPSON		
COMMERCIAL  Neighborhood Commercial  Commercial Services	46.8 AC 13.4 AC 33.4 AC		5170 MARK DABLING BLVD. COLORADO SPRINGS, CO. 80918		
Civic / Institutional	12.2 AC				
Charter School	10.3 AC				
Fire Station	1.9 AC				
Open Space District Park	87.9 AC 18.2 AC	SHEET IND	)FX		
Neighborhood Park	14.9 AC				
Pedestrian Trails Drainage Perimeter Buffer	11.9 AC 39.5 AC 3.4 AC	SHEET 2 OF 6 S	OVER SHEET KETCH PLAN DIACENT LAND OWNERS		

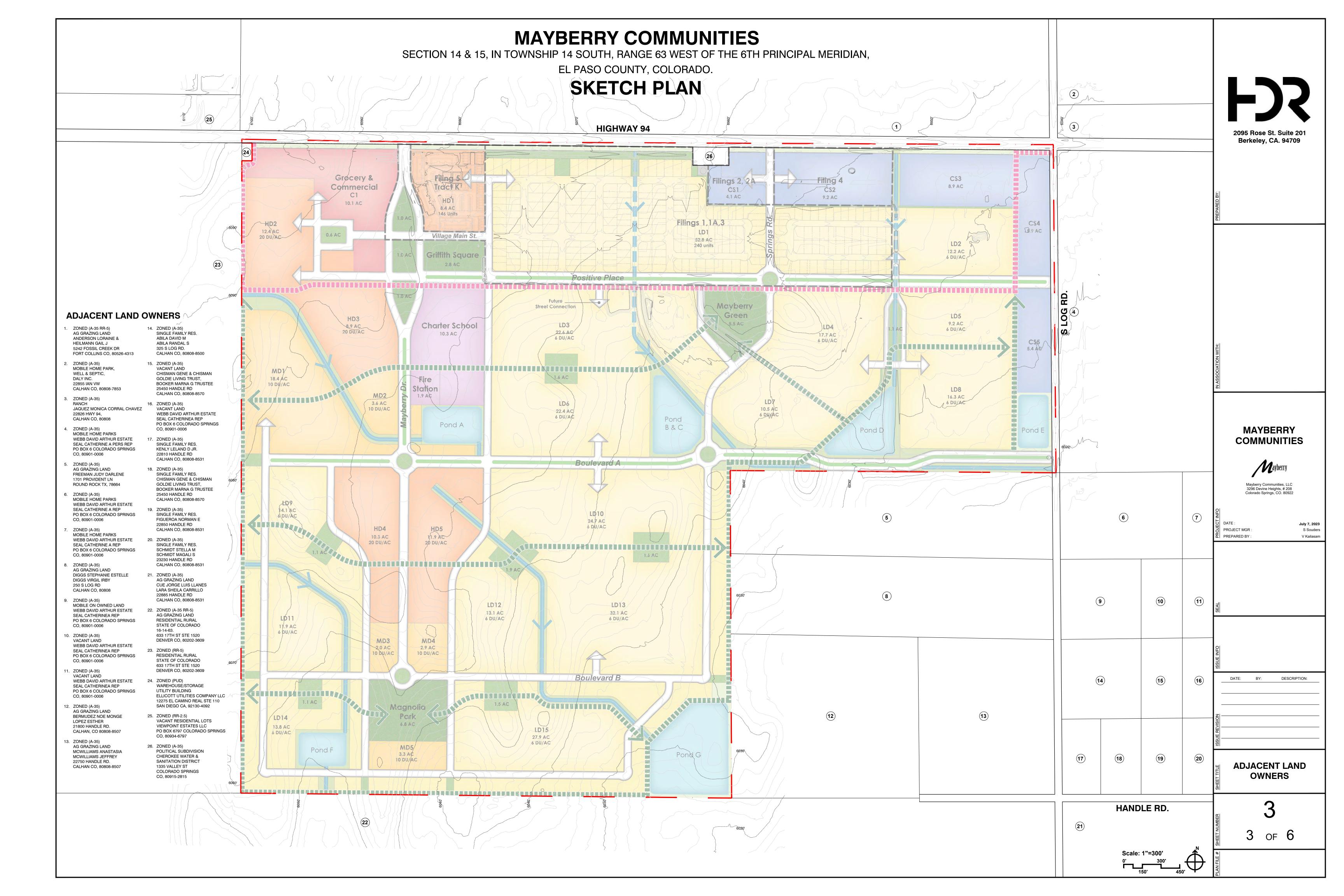
11.9 AC

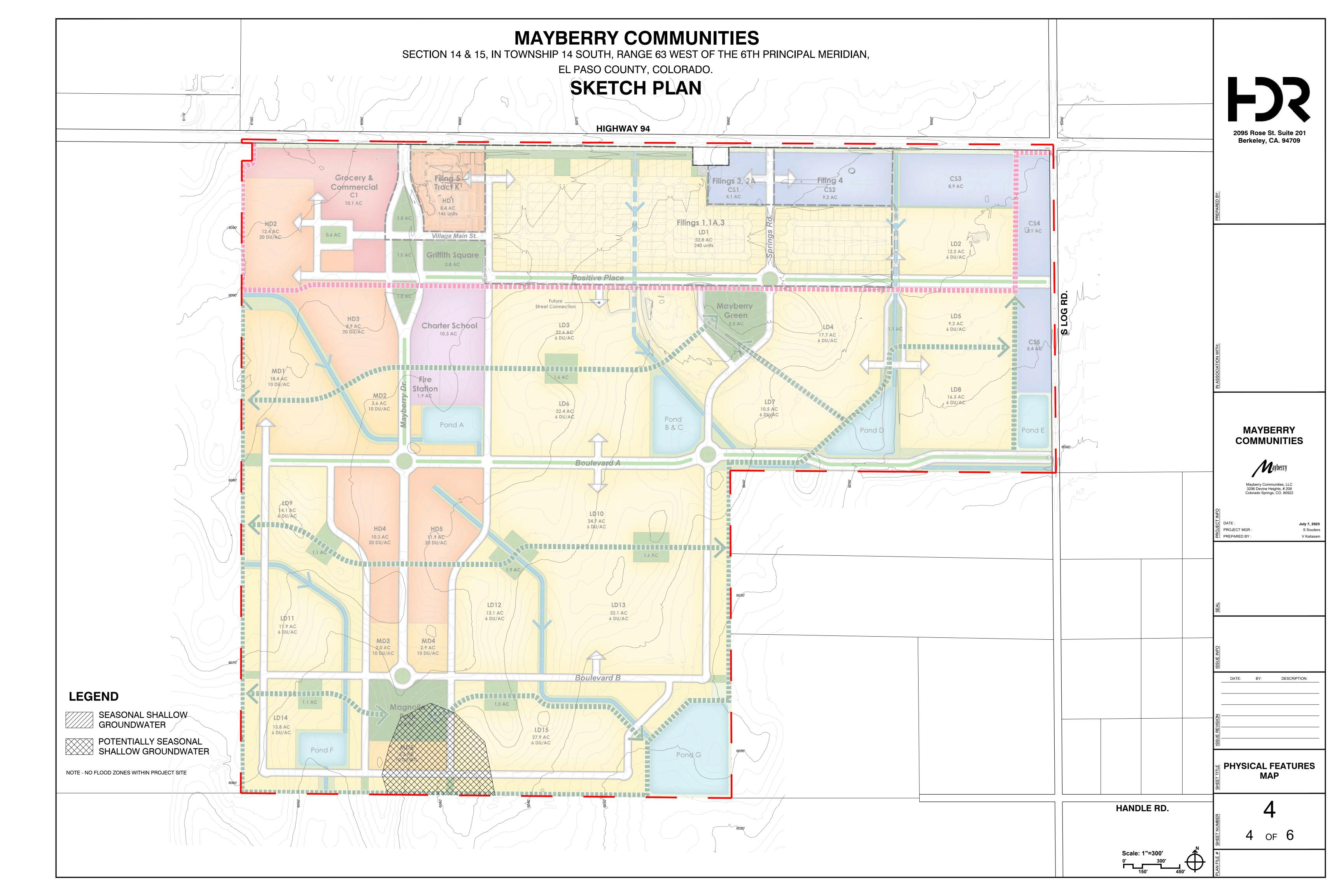
85.3 AC

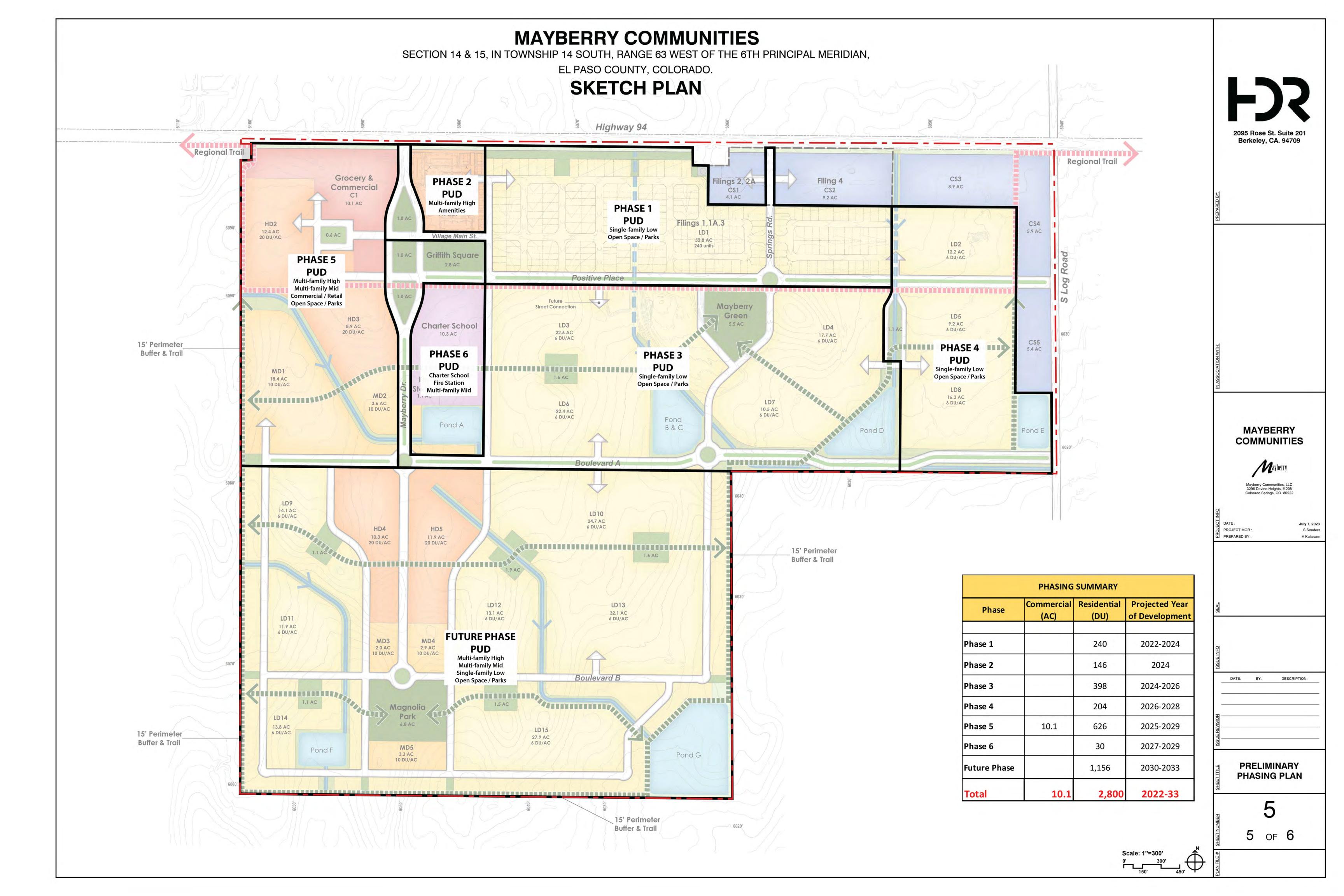


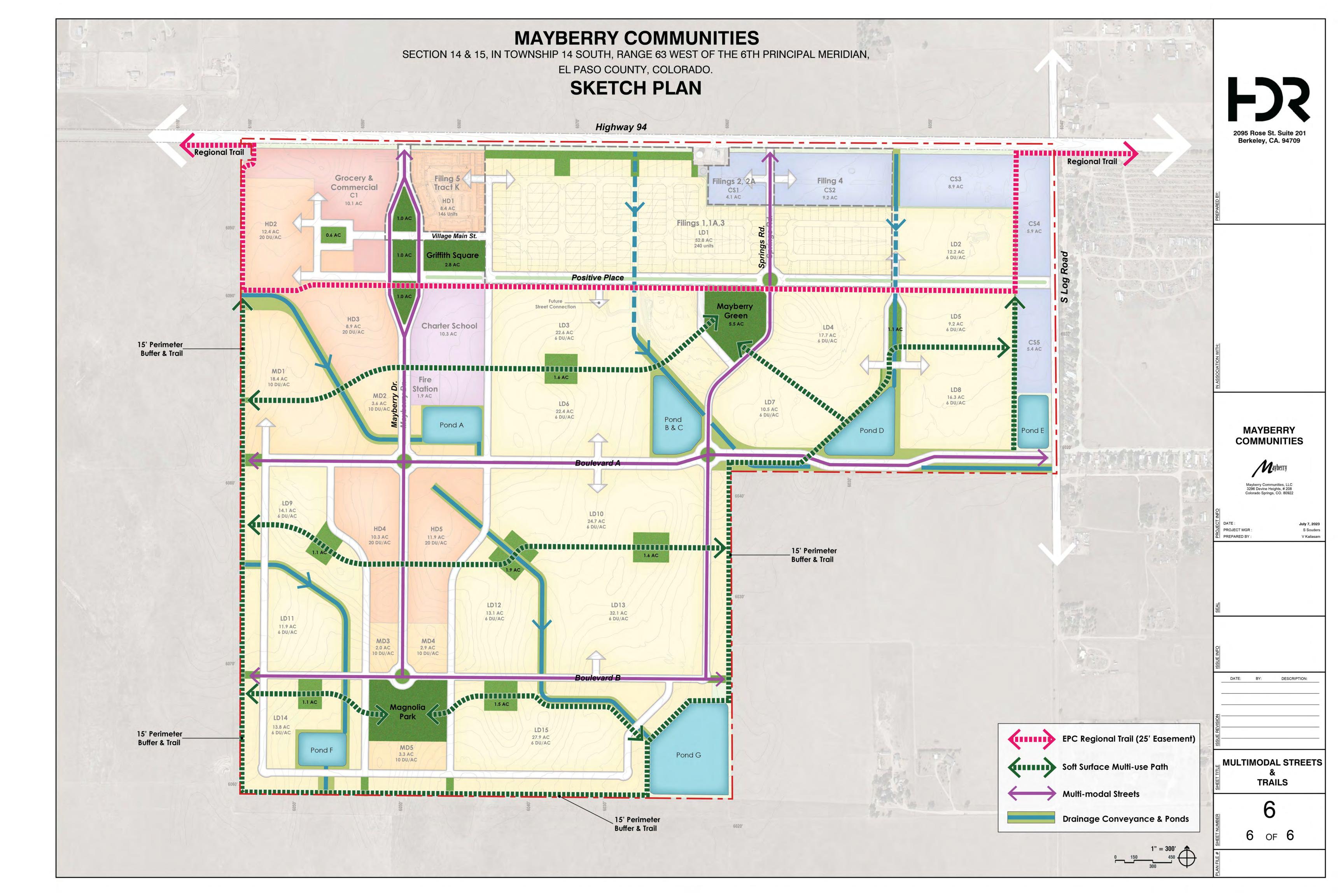
Mayberr 3296 De	MUNI  Tayber  Ty Communities evine Heights,	TIES  TY  s, LLC # 208
TE : DJECT MGR : EPARED BY :		<b>July 7, 2023</b> S Souders V Kailasam
DATE: B	<b>γ</b> : [	DESCRIPTION:
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	Mayberr 3296 De Colorado  TE : DJECT MGR : EPARED BY :  DATE: BY	DATE: BY: COVER SH













# Appendix B



Dedicated to protecting and improving the health and environment of the people of Colorado

Jason Hope, Mgr Ellicott Utilities Co LLC PO Box 231961 Encinitas, CA 92023

TO: Ellicott Utilities Co LLC

FROM: WQCD Permits Section 303-692-3517

DATE: 8/7/2019

**RE:** WQCD CDPS Permit application for CO-Individual permit

The Water Quality Control Division received an application from Ellicott Utilities Co LLC CO-Individual permit renewal on 8/7/2019 The application requests discharge authorization for Ellicott Springs WWTF located at Drennan Rd Calhan Facility SIC 4911. The assigned permit number is CO0047252.

The application has been reviewed and is considered complete for the purposes of filing. The Division has not verified all of the information contained in your application and has relied upon your signed certification to determine that the information is true, accurate, and complete. No permit has been issued at this time. The Division has 180 days to issue the permit from the date received.

In the event that the Division does not issue a renewal permit in advance of the permit expiration date, the expired permit shall be administratively extended and continue in force to the effective date of the new permit. This is official notice of your eligibility of administrative extension and the permit shall become administratively extended on the date following your permit expiration. The permits duration may be extended only through administrative extensions and not through interim modifications.

The application will undergo a technical review once it is assigned to a permit writer. At that time the Division will contact you to inform you that permit renewal process has started and may request additional information in order to further evaluate the technical information included in your application and evaluate the discharge.

Based on the locational information provided in your application we have determined that your discharge would be to Segment: **COARMA04c**. This discharge designation is solely for permit tracking and work planning purposes. The Division may evaluate other waterbody segments, particularly downstream segment(s), as part of the permit development process.

If any of the information submitted in your application is no longer true, accurate, and complete please submit an application supplement using the form found on the Division's web site.

We have the following contacts on file, if any of this information changes from the date your application was submitted until we issue your permit, please send a revised application/change of contacts form

**Permittee Contact** the person authorized to sign and certify the permit application. This person receives all permit correspondences [Including invoice; is contacted for any questions relating to the facility; and receives DMRs as appropriate] and is the person responsible for ensuring compliance with the permit

Jason Hope, Mgr Ellicott Utilities Co LLC PO Box 231961 Encinitas, CA 92023

Phone number: 619-876-6990 Email: jason@foleydevelopment.net

#### **Facility Contact** (contacted for general inquiries regarding the facility):

Richard Cromwell, Operator 13627 Cromwell's Excavating Inc

18353 State Hwy 94

Colorado Springs, CO 80930 Phone number: 719-499-9993 Email: treistump@yahoo.com

#### **Billing Contact** (receives the invoice pertaining to the permit certification):

Jason Hope, Mgr Ellicott Utilities Co LLC PO Box 231961 Encinitas, CA 92023

Phone number: 619-876-6990 Email: jason@foleydevelopment.net

#### **DMR Contact:**

Richard Cromwell, Operator 13627 Cromwell's Excavating Inc 18353 State Hwy 94 Colorado Springs, CO 80930 Phone number: 719-499-9993

Phone number: 719-499-9993 Email: treistump@yahoo.com

If you have any questions, feel free to contact the Permits Section and refer to the permit number CO0047252. We have detailed email and telephone contact information available on the Division website at the "<u>Division Contacts</u>". You may also contact us by calling the permits line at 303-692-3517.

jason@foleydevelopment.net treistump@yahoo.com jason@foleydevelopment.net treistump@yahoo.com