



MONUMENT TOWN COUNCIL REGULAR MEETING AGENDA

MONDAY, APRIL 20, 2026 – 6:30 PM

Monument Town Hall - Council Chambers
645 Beacon Lite Road - Monument, CO 80132

[Participate Via Microsoft Teams](#)

Participate Via Telephone: 1-719-300-6099 ID: 462 019 505#

1. Call to Order, Pledge of Allegiance, Roll Call:

2. Disclosures of Conflicts of Interest:

- a. Disclosures of Potential Conflicts of Interest
- b. Vote on Excluding Council Members With Potential Conflicts of Interest From Consideration, Discussion and Voting on Identified Matters

3. Approval of the Consent Agenda:

- a. Agenda - April 20, 2026
- b. Meeting Minutes - April 6, 2026
- c. Invoices Over \$25K

4. Public Comments For Items Not on the Agenda: *Individuals attending in person may raise their hand to indicate their desire to comment. Individuals attending via Teams may "raise their hand" digitally to comment via connected devices. Please lower your hand when finished with your comments. Comments are limited to 3 minutes.*

5. Proclamations:

- a. Small Business Week - *(Pikes Peak Small Business Development Center)*
- b. Arbor Day - *(Andrew Archuleta)*

6. Presentations:

- a. Water Rate Study - *(Jennifer Phillips)*
- b. Introduction of the Draft 2026 Stormwater Master Plan - *(Dan Ungerleider)*
- c. Renaming Crossfield Road, Contest Vote - *(Jenna Gorney)*

7. Resolutions:

- a. Resolution No. 28-2026 - A Resolution to Approve a Contract to Repair the Town Hall Roof - *(Andrew Archuleta)*
- b. Resolution No. 29-2026 - A Resolution to Approve Americans With Disabilities Act Policies - *(Jennifer Phillips)*

8. Future Agenda Item Authorization:

9. Reports:

- a. Town Manager's Monthly Report - (*Madeline VanDenHoek*)

10. Council Comments:

11. Executive Sessions:

- a. Executive Session Pursuant to §24-6-402(4)(a) and §24-6-402(4)(b), C.R.S. to Discuss the Potential Purchase, Acquisition, Lease, Transfer, or Sale of Water Rights and for a Conference With the Town's Attorneys to Receive Legal Advice on Specific Legal Questions on the Same Matter
- b. Executive Session Pursuant to §24-6-402(4)(b), C.R.S. for Purposes of Receiving Legal Advice From the Town Attorney Regarding Legal Questions Related to 1041 Regulations

12. Reconvene In Open Session: *Council may act in open session on item(s) discussed in executive session.*

13. Adjournment:

**MONUMENT TOWN COUNCIL
MEETING MINUTES**

Monday, April 6, 2026 - 6:30 PM

Monument Town Hall - 645 Beacon Lite Rd., Monument CO 80132

Hybrid Meeting - Remote Participation Via Teams

1. Call to Order, Pledge of Allegiance, Roll Call:

Mayor Mitch LaKind called the regular meeting of the Monument Town Council and led those assembled in the Pledge of Allegiance. Proper notice of the meeting was posted for more than 24 hours in the designated posting locations. The following Councilmembers and staff were present for the meeting:

TOWN COUNCIL		TOWN STAFF	
PRESENT:		Madeline VanDenHoek, Town Manager	
Mayor Mitch LaKind		Patrick Regan, Police Chief	
Mayor Pro Tem Steve King		Tina Erickson, Town Clerk	
Councilmember Sana Abbott		Ashley Hernandez-Schlagel, Town	
Councilmember Kenneth Kimple		Attorney	
Councilmember Laura Kronick		Will Williams, Director of IT	
Councilmember Chad Smith		Jennifer Phillips, Director of Finance	
		Laura Hogan, Director of Administration	
		Dan Ungerleider, Director of Planning	
		Jonathan Rigaud, Water Manager	
		Andrew Archuleta, Assistant Public Works	
		Director	
		Jenna Gorney, Senior Planner	
		Rey Medina, Planner I	
ATTENDED REMOTELY:			
ABSENT WITH PRIOR NOTICE: Councilmember Marco Fiorito			
ABSENT WITHOUT PRIOR NOTICE:			

2. Disclosures of Conflicts of Interest:

- a. Disclosures of Potential Conflicts of Interest
- b. Vote on Excluding Council Members With Potential Conflicts of Interest From Consideration, Discussion and Voting on Identified Matters
- No conflicts of interest were received.

3. Approval of the Consent Agenda:

- a. Agenda - April 6, 2026
- b. Meeting Minutes - March 16, 2026
- c. Invoices Over \$25K

Mayor Pro Tem Steve King made a motion to approve the consent agenda as

presented, the motion was seconded by Councilmember Chad Smith. Roll call vote was taken and the motion passed 6 to 0.

4. Public Comments For Items Not on the Agenda:

- Haley Chapin- Spoke on the Taste of Tri-Lakes Cares event along with the participating businesses on May 13, 2026 @ Spruce Mountain Ranch.

5. Oaths of Office:

a. Lieutenant Mitch Mihalko and Officer Ethan Elmshaeuser
Regan led Lieutenant Mihalko and Officer Elmshaeuser into their oaths of office.

6. Proclamations:

a. Child Abuse Awareness Month - (*El Paso County Department of Human Services*)

Jessica Hardwicke and Holly McCoy with El Paso County Department of Human Services. Councilmember Chad Smith read the proclamation and the council proclaimed April 2026 as Child Abuse Awareness Month.

7. Land Use Applications:

a. Ordinance No. 08-2026 - An Ordinance Granting Approval of the Rezoning From Planned Unit Development (PUD) to Public (P), for the Monument Fire District Training Center, Located at 18650 W Highway 105

Medina presented ordinance no. 08-2026 as included in the council packet. Mayor Mitch LaKind opened the public hearing, no comments were received. Mayor Mitch LaKind closed the public hearing. Mayor Pro Tem Steve King made a motion to approve ordinance no. 08-2026 and the motion was seconded by Councilmember Laura Kronick. Roll call vote was taken and the motion passed 6 to 0.

b. Resolution No. 20-2026 - A Resolution Approving the Monument Fire District Subdivision Final Plat

Medina presented resolution no. 20-2026 as included in the council packet. Mayor Mitch LaKind opened the public hearing, no public comments were received. Mayor Mitch LaKind closed the public hearing. Mayor Mitch LaKind made a motion to approve resolution no. 20-2026 and the motion was seconded by Councilmember Laura Kronick. Roll call vote was taken and the motion passed 6 to 0.

c. Ordinance No. 09-2026 - An Ordinance Granting Approval of the Final Planned Unit Development Plan for Alpine Dealership at Falcon Commerce Center Located East of the Intersection of Squadron Drive and Terrazzo Drive

Gorney presented ordinance no. 09-2026 as included in the council packet. Brooks Swinson with NES spoke on behalf of the applicant and provided a presentation. Randal Shutter with Alpine Automotive provided information on the

proposed dealership. Tom Blunk with Falcon Commerce Center provided information regarding the design lines of the industrial building. Walid Elkhoury spoke regarding the pilon signage which is part of the building package with GMC. Andrea Barlow with NES spoke providing information and clarification to the proposed comments and questions. Mayor Mitch LaKind opened the public hearing, Darlene Skow spoke in favor of the steel building. Mayor Mitch LaKind closed the public hearing. Tom Bunk provided additional information on the Quik Trip sign that is already built. The Council gave staff direction to work with the applicant on the 3 conditions that the Planning Commission proposed and add a condition that no deliveries could be staged on Terrazzo Drive. The staff will work with the applicant on the sign element and come back with a code-compliant sign proposal. Mayor Mitch LaKind made a motion to continue ordinance no. 09-2026 to May 4, 2026, and the motion was seconded by Councilmember Laura Kronick. Roll call vote was taken and the motion passed 6 to 0.

d. Resolution No. 21-2026 - A Resolution Approving a Final Plat for the Alpine Dealership at Falcon Commerce Center

Gorney presented resolution no. 21-2026 as included in the council packet. Matt Erickson the engineer made comment on the current detention pond at the pilot and explained there is a pipe that discharges into the Alpine site and will be rerouted to the drainage easement at Terrazzo Drive detention pond. Mayor Mitch LaKind opened the public hearing, no public comments were received. Mayor Mitch LaKind closed the public hearing. Councilmember Kenneth Kimple made a motion to approve resolution no. 21-2026 and the motion was seconded by Councilmember Chad Smith. Roll call vote was taken and the motion passed 6 to 0.

- The Council took a recess at 9:13 p.m.
- The Council resumed the regular meeting at 09:23 p.m.

8. Ordinances:

a. Ordinance No. 10-2026 - An Ordinance Amending Title 1 Chapter 1.14 of the Monument Municipal Code Regarding Campaign Finance Complaints and Authorizing Referral to the Colorado Secretary of State Under C.R.S. § 1-45-111.7(10)

Hogan presented ordinance no. 10-2026 as included in the council packet. Mayor Mitch LaKind opened the public hearing, no public comments were received. Mayor Mitch LaKind closed the public hearing. Councilmember Kenneth Kimple made a motion to approve ordinance no. 10-2026 and the motion was seconded by Councilmember Sana Abbott. Roll call vote was taken and the motion passed 6 to 0.

b. Ordinance No. 11-2026 - An Ordinance Correcting Ordinance No. 04-2026 Which Annexed Certain Lands Known as the Town of Monument Beacon Lite Road Water Tank Site Annexation

Ungerleider presented ordinance no. 11-2026 as included in the council packet. Mayor Mitch LaKind opened the public hearing, no public comments were received. Mayor Mitch LaKind closed the public hearing. Mayor Pro Tem Steve King made a motion to approve ordinance no. 11-2026 and the motion was seconded by Councilmember Laura Kronick. Roll call vote was taken and the motion passed 6 to 0.

9. Resolutions:

a. Resolution No. 22-2026 - A Resolution to Approve A New PD Fence

Archuleta presented resolution no. 22-2026 as included in the council packet. Councilmember Chad Smith made a motion to approve resolution no. 22-2026 and the motion was seconded by Councilmember Sana Abbott. Roll call vote was taken and the motion passed 6 to 0.

b. Resolution No. 23-2026 - A Resolution of the Town Council of the Town of Monument, Colorado Approving New Fees and Updated Fee Schedule

Phillips presented resolution no. 23-2026 as included in the council packet. Councilmember Laura Kronick made a motion to approve resolution no. 23-2026 and the motion was seconded by Councilmember Sana Abbott. Roll call vote was taken and the motion passed 6 to 0.

c. Resolution No. 24-2026 - A Resolution Authorizing the Submission of a Grant Application to the Statewide Internet Portal Authority (SIPA) in the Amount of \$250,000 and Authorizing Use of General Fund Reserve Funds in the Amount of \$50,000 for the Local Match and Authorizing the Execution of Related Agreements.

Gorney presented resolution no. 24-2026 as included in the council packet. Councilmember Sana Abbott made a motion to approve resolution no. 24-2026 and the motion was seconded by Councilmember Laura Kronick. Roll call vote was taken and the motion passed 6 to 0.

d. Resolution No. 25-2026 - A Resolution of the Town Council of the Town of Monument, Colorado, Temporarily Modifying the Timeframe for Watering Procedures to Reduce Demand on the Town's Watering System

Rigaud presented resolution no. 25-2026 as included in the council packet. Councilmember Chad Smith made a motion to approve resolution no. 25-2026 and the motion was seconded by Councilmember Sana Abbott. Roll call vote was taken and the motion passed 6 to 0.

e. Resolution No. 26-2026 - A Resolution for the Town Council to Approve the Purchase of Shadow Systems Handguns and Required Accessories for Monument Police Department Officer On-Duty Use

Regan requested to remove resolution no. 26-2026.

10. Future Agenda Item Authorization:

a. Study Session to Review Draft AI Policy Before Regular Meeting on May 4

request for committee members to review Municipal Judge RFP's and make a selection, councilmember Laura Kronick and Mayor Mitch LaKind volunteered.

11. Council Comments:

- Mayor Pro Tem Steve King- moratorium on pylon signs on future submissions on steel buildings on over 20k square feet.

12. Executive Sessions:

a. Executive Session Pursuant to §24-6-402(4)(b), C.R.S. for a Conference with the Town Attorney for the Purpose of Receiving Legal Advice on Specific Legal Questions Regarding Pending Legal Projects

Mayor Mitch LaKind moved to enter into executive session pursuant to §24-6-402(4)(b), C.R.S. for a conference with the Town Attorney for the purpose of receiving legal advice on specific legal questions regarding pending legal projects. Councilmember Laura Kronick seconded the motion. The motion passed 6 to 0.

b. Executive Session Pursuant to §24-6-402(4)(e), C.R.S., to Determine Positions Relative to Matters That May Be Subject to Negotiation, Developing Strategy for Negotiations, and Instructing Negotiators, Regarding a proposed Economic Development Agreement With Project Cobalt

Mayor Mitch LaKind moved to executive session pursuant to §24-6-402(4)(e), C.R.S., to determine positions relative to matters that may be subject to negotiation, developing strategy for negotiations, and instructing negotiators, regarding a proposed economic development agreement with Project Cobalt. Councilmember Laura Kronick second the motion. The motion passed 6 to 0.

The Council entered executive session at 10:21 pm.

The Council concluded executive session at 11:07 pm.

The Council resumed regular meeting at 11:08 pm.

13. Reconvene In Open Session:

a. Resolution No. 27-2026 - A Resolution Approving an Economic Development Agreement With Project Cobalt

Mayor Mitch LaKind presented resolution no. 27-2026 as included in the council packet. Councilmember Chad Smith made a motion to approve resolution no. 27-2026 and the motion was seconded by Councilmember Laura Kronick. Roll call vote was taken and the motion passed 6 to 0.

14. Adjournment:

Mayor LaKind moved to adjourn the meeting, the motion was passed unanimously, the meeting was adjourned at 11:11 pm.

Respectfully Submitted,

Tina Erickson, Town Clerk

Statement of Account

Collins Cole Winn & Ulmer, PLLC
165 S. Union Blvd, Suite 785
Lakewood, CO 80228

Town of Monument
 645 Beacon Lite Road
 Monument, Colorado 80132

Date: 04/08/2026

Matter: Town of Monument-General-20028-0001

Responsible Attorney Robert Cole

Date	Activity	Due Date	Invoice Amount	Payments	Credit	Balance
Invoice #8844	Balance: \$26,420.00					
04/08/2026	Invoice #8844	05/08/2026	\$26,420.00			\$26,420.00
Totals:			\$26,420.00	\$0.00	\$0.00	\$26,420.00

Fortis - COLTAF: \$300.00

Matter: Town of Monument-Water-20028-0002

Responsible Attorney Robert Cole

Date	Activity	Due Date	Invoice Amount	Payments	Credit	Balance
Invoice #8844	Balance: \$1,301.50					
04/08/2026	Invoice #8844	05/08/2026	\$1,301.50			\$1,301.50
Totals:			\$1,301.50	\$0.00	\$0.00	\$1,301.50

Matter: Town of Monument-Plannning-20028-0008

Responsible Attorney Robert Cole

Date	Activity	Due Date	Invoice Amount	Payments	Credit	Balance
Invoice #8844	Balance: \$4,319.00					
04/08/2026	Invoice #8844	05/08/2026	\$4,319.00			\$4,319.00
Totals:			\$4,319.00	\$0.00	\$0.00	\$4,319.00
Totals for all Client Matters:			\$32,040.50	\$0.00	\$0.00	\$32,040.50



Proclamation to Recognize May 3rd – May 9th as Small Business Week in the Town of Monument

WHEREAS, National Small Business Week recognizes the important contributions of entrepreneurs and small business owners whose innovation, determination, and leadership drive economic opportunity across the United States; and

WHEREAS, the Town of Monument, home to more than 10,000 residents, is a vibrant and growing community in northern El Paso County that values entrepreneurship, local investment, and small business success; and

WHEREAS, small businesses are the backbone of Monument's local economy, providing jobs, supporting families, and contributing to the vitality of the Town's historic downtown district and surrounding commercial areas; and

WHEREAS, Monument's locally owned retailers, restaurants, service providers, professional offices, and community organizations play an essential role in creating the welcoming character and economic strength of the community; and

WHEREAS, organizations including the Pikes Peak Small Business Development Center, the Tri-Lakes Chamber of Commerce, the Better Business Bureau of Southern Colorado, and the Colorado Springs Chamber & Economic Development Corporation provide advising, resources, advocacy, and support that help entrepreneurs start, grow, and succeed; and

WHEREAS, these organizations will host the 19th annual Small Business Week celebration in the Pikes Peak region, offering workshops, networking opportunities, and recognition of outstanding small businesses while strengthening connections among entrepreneurs, community partners, and local governments.

NOW, THEREFORE, the Monument Town Council hereby proclaims May 3 through May 9, 2026, as Small Business Week in the Town of Monument and expresses its sincere appreciation to the entrepreneurs, small business owners, employees, lenders, advisors, and community partners whose dedication strengthens the local economy and enriches the quality of life in the Monument community.
PROCLAIMED THIS 20th day of April 2026.

Attest:

Town of Monument

Tina Erickson, Town Clerk

Mitch LaKind, Mayor



Proclamation to Mark April 24th, 2026, as Arbor Day

WHEREAS, in 1872, the Nebraska Board of Agriculture established a special day to be set aside for the planting of trees, and;

WHEREAS, this holiday, called Arbor Day, was first observed with the planting of more than a million trees in Nebraska, and;

WHEREAS, Arbor Day is now observed throughout the nation and the world, and;

WHEREAS, trees can be a solution to combating climate change by reducing the erosion of our precious topsoil by wind and water, cutting heating and cooling costs, moderating the temperature, cleaning the air, producing life-giving oxygen, and providing habitat for wildlife, and;

WHEREAS, trees are a renewable resource giving us paper, wood for our homes, fuel for our fires, and countless other wood products, and;

WHEREAS, trees in our city increase property values, enhance the economic vitality of business areas, and beautify our community, and;

WHEREAS, trees — wherever they are planted — are a source of joy and spiritual renewal.

NOW, THEREFORE, the Town of Monument Town Council hereby proclaims April 24th, 2026, as Arbor Day in the Town of Monument, and encourages all residents to support efforts to protect our trees and our woodlands.

PROCLAIMED this 20th day of April 2026

TOWN OF MONUMENT

Mitch LaKind, Mayor

ATTEST:

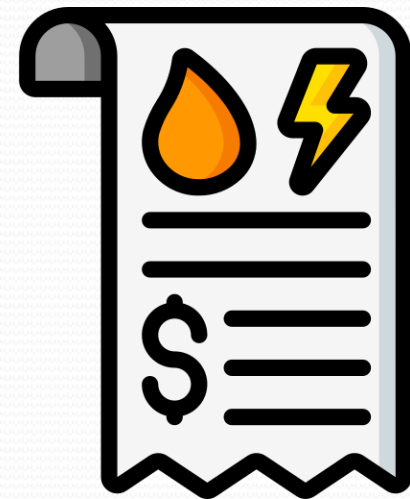
Tina Erickson, Town Clerk

PRESENTATION CONTENTS

- Utility rate study overview
- Financial plan
- Summary of proposed revenue increases
- Comparisons

UTILITY RATE STUDY OVERVIEW

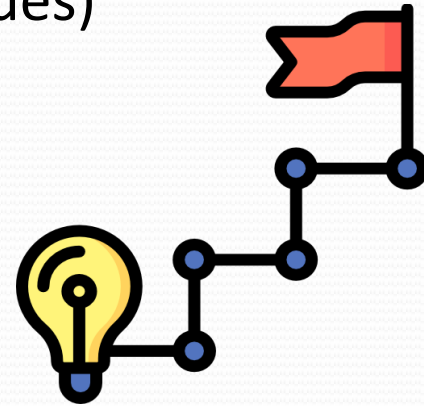
- Why Conduct a Rate Study?
 - Increased Demands and Costs
 - Ensure Adequate Revenue Generation
 - Current Operating
 - Future Operating
 - Maintenance
 - Capital Expenses
- Purpose of Rate Study
 - Last Increase was 5 years ago



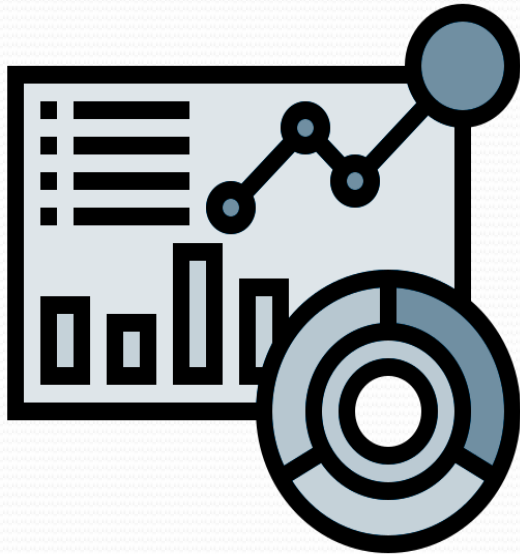
UTILITY RATE STUDY OVERVIEW

- Result

- Knowledge of developing trends (expenses/revenues)
 - Revenue Stability
- Knowledge of existing and potential capital needs
- Improving future year activity projections
- Meet obligations associated with minimum reserve levels
- **Recommend rates that generate sufficient revenue to meet the cost of providing essential services**



Current State



Key Objectives

- Understand Methodology
- Understand Status Quo
- Recommend Rate Adjustments
- Understand How Monument Compares

UTILITY RATE STUDY OVERVIEW

Current water statements are billed based on the following:



- Base Charges
 - Monthly
 - Meter Size
 - Regardless of Usage
- Usage Charges
 - Usage is based on actual meter readings and rounded down to nearest thousand gallons

FINANCIAL PLAN

How Much Revenue Is Needed?

Revenue Sufficiency Analysis

Purpose/Analysis:

Development of financial plan which ensures adequate revenue to fund operating / capital expenses, maintain sufficient fund balances

Data:

- ✓ Beginning Balances (Audited Financials)
- ✓ Budgeted Operating Revenue / Expenses
- ✓ Capital Improvement Plan
- ✓ Outstanding Debt
- ✓ Management Goals / Policies
- ✓ Other Assumptions

WHY INCREASE WATER REVENUE?

- Additional revenue is needed to:
 - Meet increasing O&M costs
 - Fund capital needs
 - Valve and waterline replacements
 - Meet targeted reserve levels
 - Last rate increase was 5 years ago

CASHFLOW - STATUS QUO

Year	2026	2027	2028	2029	2030
Beginning Cash Reserves	\$9,698	\$6,764	\$4,103	\$1,703	(\$246)
Revenue	4,555	4,500	4,467	4,443	4,463
O&M Expenses	<u>2,714</u>	<u>2,832</u>	<u>2,954</u>	<u>3,081</u>	<u>3,215</u>
Net Revenue	1,841	1,668	1,513	1,362	1,248
Other Cash Outflows	<u>4,775</u>	<u>4,329</u>	<u>3,913</u>	<u>3,311</u>	<u>4,012</u>
Net Cashflow	<u>(2,934)</u>	<u>(2,661)</u>	<u>(2,400)</u>	<u>(1,949)</u>	<u>(2,764)</u>
End of Year Cash Reserves	\$6,764	\$4,103	\$1,703	(\$246)	(\$3,010)
Target Reserves	\$814	\$849	\$886	\$924	\$964

Figures in thousands

REVENUE RECOMMENDATIONS

Recommended Course of Action

- Increase **Revenue**
 - Meet Increasing O&M Costs
 - Fund Capital Needs
 - Ex. Valve and Waterline Replacements

Proposed Financial Plan	
Fiscal Year	Revenue Increase
2026	10.0%
2027	10.0%
2028	10.0%
2029	10.0%
2030	10.0%

CASHFLOW - PROPOSED

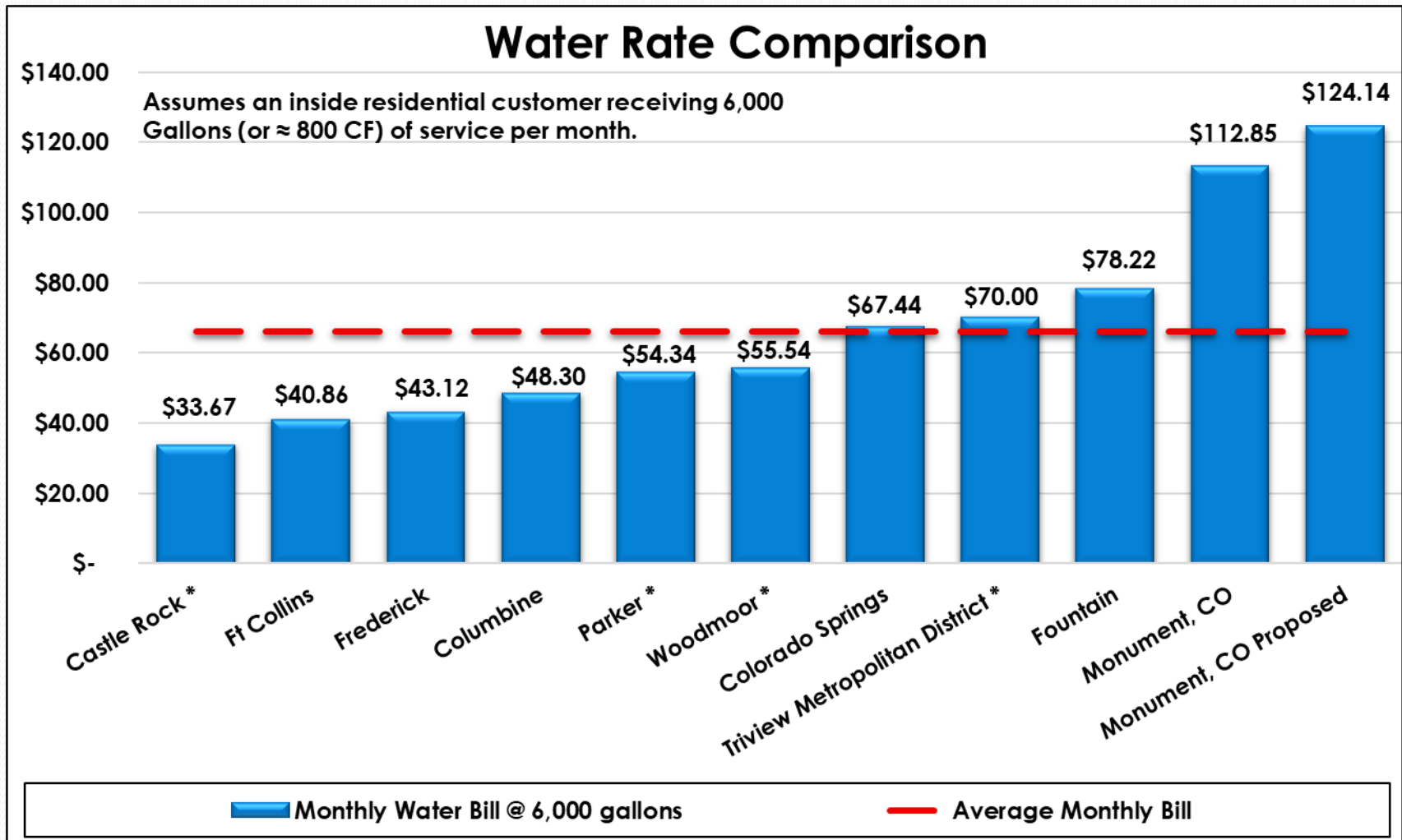
Year	2026	2027	2028	2029	2030
Beginning Cash Reserves	\$9,698	\$6,901	\$4,654	\$2,985	\$2,128
Revenue	4,692	4,914	5,198	5,535	5,918
O&M Expenses	<u>2,714</u>	<u>2,832</u>	<u>2,954</u>	<u>3,081</u>	<u>3,215</u>
Net Revenue	1,978	2,082	2,244	2,454	2,703
Other Cash Outflows	<u>4,775</u>	<u>4,329</u>	<u>3,913</u>	<u>3,311</u>	<u>4,012</u>
Net Cashflow	<u>(2,797)</u>	<u>(2,247)</u>	<u>(1,669)</u>	<u>(857)</u>	<u>(1,309)</u>
End of Year Cash Reserves	\$6,901	\$4,654	\$2,985	\$2,128	\$819
Target Reserves	\$814	\$849	\$886	\$924	\$964

Figures in thousands

CONSIDERATIONS IN COMPARING RATES TO OTHER ENTITIES

- Persons per household and water use
- Lot size
- Age of system
- Changes in elevation
- Treatment standards/methods
- Area (acres) covered by the system
- Subsidization through other revenue sources

COMPARISON



* These entities assess an additional monthly renewable water fee

QUESTIONS & DISCUSSION

Disclosure

Willdan Financial Services ("Willdan") is registered as a "municipal advisor" pursuant to Section 15B of the Securities Exchange Act and rules and regulations adopted by the United States Securities and Exchange Commission ("SEC") and the Municipal Securities Rulemaking Board ("MSRB"). The MSRB has made available on its website (www.msrb.org) a municipal advisory client brochure that describes the protections that may be provided by MSRB rules and how to file a complaint with the appropriate regulatory authority. As part of its SEC registration Willdan is required to disclose to the SEC information regarding criminal actions, regulatory actions, investigations, terminations, judgments, liens, civil judicial actions, customer complaints, arbitrations and civil litigation involving Willdan. Pursuant to MSRB Rule G-42, Willdan is required to disclose any legal or disciplinary event that is material to Client's evaluation of Willdan or the integrity of its management or advisory personnel. Willdan has determined that no such event exists. Copies of Willdan's filings with the United States Securities and Exchange Commission can currently be found by accessing the SEC's EDGAR system Company Search Page which is currently available at: <https://www.sec.gov/edgar/searchedgar/companysearch.html> and searching for either Willdan Financial Services or for our CIK number which is 0001782739.

For the avoidance of doubt and without limiting the foregoing, in connection with any revenue projections, cash-flow analyses, feasibility studies and/or other analyses Willdan may provide the municipality with respect to financial, economic or other matters relating to a prospective, new or existing issuance of municipal securities of the municipality, (A) any such projections, studies and analyses shall be based upon assumptions, opinions or views (including, without limitation, any assumptions related to revenue growth) established by the municipality, in conjunction with such of its municipal, financial, legal and other advisers as it deems appropriate; and (B) under no circumstances shall Willdan be asked to provide, nor shall it provide, any advice or recommendations or subjective assumptions, opinions or views with respect to the actual or proposed structure, terms, timing, pricing or other similar matters with respect to any municipal financial products or municipal securities issuances, unless formally engaged to provide such information.

Future Water Supply Scenarios

Future Water Supply Scenarios

- Reliable and safe access to water is critical for health, economic development and overall quality of life
- Town has continued to seek opportunities to secure additional water supplies
- Drought conditions, limited water
- Need to manage water resources efficiently and sustainably
- Requires integrated, strategic approaches
- Various options to consider with various costs

Future Water Supply Scenarios

- Scenario 1 – Multi-Agency Reuse System
 - Partnering with other agencies to build a wastewater, stormwater, greywater treatment plant
 - Expanded Delivery System – Collaboration
 - Speculative Total Project Cost = \$25 million
 - Monument = \$5 million – Capital Investment
 - Average residential monthly rate increase = \$163.00

Future Water Supply Scenarios

- Scenario 2 – Town Reuse System
 - Town builds a wastewater, stormwater, greywater treatment plant
 - Expanded Delivery System
 - Speculative Total Project Cost = \$25 million
 - Monument = \$25 million – Capital Investment
 - Average residential monthly rate increase = \$138.00

Future Water Supply Scenarios

- Scenario 3 – Lease water from another agency
 - Average residential monthly rate increase = \$306.00

Future Water Supply Scenarios

- Scenario 4 – New/Expanded Reservoir
 - Average residential monthly rate increase = \$246.00

Questions/Discussion



MEMORANDUM

TO: Mayor LaKind and Council
Madeline VanDenHoek, Town Manager
FROM: Dan Ungerleider, Planning Director
DATE: April 20, 2026
SUBJECT: Introduction of the draft 2026 Stormwater Master Plan

PURPOSE. The purpose of this memorandum is to formally introduce the Draft 2026 Monument Stormwater Master Plan (SWMP) to Town Council and the Monument community-at-large. The draft SWMP represents a comprehensive update to the Town's long-range stormwater planning framework and is intended to guide capital improvements, maintenance priorities, and regulatory implementation to the Town's stormwater management infrastructure and capital investment decisions as the community continues to grow over the next 10–20 years. The draft SWMP was developed in alignment with the Town's ongoing Monument 2040 Comprehensive Plan.

The Town of Monument's existing SWMP was last revised in 2006 and does not fully reflect current development patterns, updated engineering standards, evolving regulatory requirements, or recent storm events experienced by the community. In particular, continued growth, increasing impervious surfaces, aging infrastructure, and heightened public awareness of drainage and flooding issues underscore the need for a consolidated and updated stormwater planning effort.

The Stormwater Master Plan was initiated to:

- **Flood Risk Reduction.** Evaluate and develop measures to minimize the risk of flooding in residential, commercial, and industrial areas, including construction and maintenance of stormwater infrastructure.
- **Regulatory Compliance.** Ensure Town of Monument adherence to local, state, and federal stormwater regulations.
- **Infrastructure Planning and Maintenance.** Evaluate existing stormwater infrastructure and identify areas of need, with prioritized maintenance schedules and projects.
- **Climate Change Resiliency.** Addressing the impacts of climate change on stormwater management by incorporating adaptive strategies, assessing future climate scenarios, and implementing measures to enhance resilience to extreme weather events.

April 20, 2026

- **Regionwide Coordination.** Collaborate with upstream and downstream partners to address watershed-wide challenges and ensure continuity of management.

The Town Engineer has reviewed the draft SWMP and provided comments covering 18 categories, ranging in priority from Critical to Informational. A copy of V3's memorandum outlining IMEGS input is included with this report. The final version will address the Town Engineer's comments as well as others submitted during the public review period.

PLANNING PROCESS. The draft SWMP was developed by V3 Consulting Engineers Noah Nemmers, PE and Andrew Regnery, PE, through a multidisciplinary process that included data collection, field investigations, hydrologic and hydraulic modeling, and coordination across Town departments. Key elements of the planning process included:

- Seek input for area stakeholders and regulatory partners
- Review existing stormwater studies, mapping, and infrastructure records
- Analyze watershed conditions and drainage basins within Town limits
- Identify problem areas based on historic flooding, citizen complaints, and system performance
- Develop improvement concepts and order-of-magnitude cost estimates
- Align with the Town's comprehensive planning (Monument 2040) and capital improvement planning efforts

NEXT STEPS. The draft 2026 Stormwater Master Plan, including Technical Appendices and Maps, is posted at www.townofmonument.org/m2040 to allow the public, area stakeholders and regulatory partners the opportunity to review the document and provide comments to Staff and the V3 consultant team. Please note that the file is large and may take time to download. Following public and Town Council input, staff anticipates refining the document and presenting the final SWMP to Town Council for adoption by resolution at Council's May 4, 2026, regular meeting.

When adopted the SWMP is intended to function as a planning-level document and will not authorize construction or funding of specific projects without subsequent Council action.

STRATEGIC PRIORITIES. The Council has established **Enabling Responsible Community Development** as a strategic priority for 2026–2028, emphasizing the importance of clear, consistent, and accountable plans, processes, and procedures that foster positive conditions for thoughtful, sustainable, and enduring growth within the community. This requested code amendment is consistent with this strategic priority.

April 20, 2026

FISCAL IMPACT. Resolution No. 01-2025 approved a professional services agreement for comprehensive plan and stormwater management plan consultant services with The Lakota Group and V3 Companies. There have been no changes in scope or cost since the project started.

RECOMMENDED ACTION. No formal action is requested at this time unless Council elects to provide direction.

Attachments:

1. Consultant Presentation
2. Noah Nemmers, PE (V3) Letter to Monument Planning Director, dated 4/13/2026
3. Due to the size of the draft 2026 Stormwater Master Plan (pdf), it has been posted on the Town website at www.townofmonument.org/m2040 or by clicking [[here](#)].

Submitted February 20, 2026

Town of Monument Stormwater Master Plan



HISTORIC MONUMENT

V3 COMPANIES

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2026



February 20th, 2026

Dan Ungerleider, AICP
Director of Planning – Town of Monument
645 Beacon Lite Road
Monument, CO 80132
719-481-2954

RE: Town of Monument Stormwater Master Plan – Draft for Review

Dear Mr. Ungerleider,

V3 Companies is pleased to submit this Draft for Review of the Town of Monument Stormwater Master Plan. This report provides a comprehensive assessment of stormwater conditions, infrastructure capacity, and flood risk across the Monument Creek watershed north of the United States Air Force Academy. The plan was developed in alignment with the Town’s ongoing Monument 2040 Comprehensive Plan process and is intended to guide stormwater infrastructure planning and capital investment decisions as the community continues to grow.

The Master Plan updates and substantially expands the 2006 Stormwater Master Plan prepared by Ayres Associates. Where the previous effort focused primarily on the Central Business District, this plan extends the analysis to the full Monument Creek watershed, incorporating updated topographic data, modern hydrologic modeling standards, current rainfall data, and future condition projections for both land use and climate. The result is a technically current and forward-looking foundation for the Town’s stormwater management program.

The enclosed report includes a detailed description of existing watershed conditions, the methodology and results of the hydrologic analysis, an inventory and assessment of field conditions and problem areas, capital improvement recommendations with conceptual cost estimates, and a review of Town stormwater codes and ordinances with recommended revisions. The plan is designed to serve as both a technical reference for engineering staff and a decision-making framework for Town leadership.

The Master Plan is designed to address current and future stormwater challenges, with a focus on flood risk reduction, water quality improvement, regulatory compliance, and environmental stewardship. In alignment with the goals identified in the Town’s Comprehensive Plan revisions, this report leverages advanced watershed modeling, local mapping data, and best management practices to guide infrastructure planning and capital improvement recommendations.

Thank you for the opportunity to complete this important project.

Noah J. Nemmers, P.E.,

Project Manager

Andrew Regnery, P.E.

Stormwater Master Plan Lead



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Executive Summary

The Town of Monument Stormwater Master Plan is presented herein. The Town of Monument is experiencing rapid growth and shifting environmental conditions which increase the urgency and importance of a modern, comprehensive Stormwater Master Plan (SMP). This effort builds upon the Town’s ongoing Monument 2040 Comprehensive Plan process and updates the 2006 Stormwater Management Plan (Ayres Associates, 2006) to improve infrastructure resilience, mitigate flood risk, support future development, and align with El Paso County standards.

The Stormwater Master Plan is structured to be data-driven, community-informed, and integrated with future land-use strategies and infrastructure planning.

The complete plan includes detailed information about the existing conditions in the watershed, background and results of the hydrologic modeling process, and identification of potential infrastructure and policy improvements to assist the Town of Monument as they plan for the future. The plan was informed by an extensive body of technical references, including federal and state hydrologic guidance, regional watershed studies, local planning documents, and site-specific construction records, all of which are documented in Chapter 7 of this report.

ES.1 Purpose and Objectives

The purpose of the Stormwater Master Plan is to provide a clear, technically sound strategy for managing Monument’s stormwater infrastructure today and into the future. Major objectives include:

- Assessing the Town’s stormwater system to understand how it has evolved since the 2006 Stormwater Master Plan was developed.
- Expanding upon and updating the results from the 2006 Stormwater Master Plan.
- Incorporating updated rainfall data and modern hydrologic and hydraulic modeling standards.
- Supporting compliance with El Paso County Drainage Criteria, MS4 permit requirements.
- Integrating stormwater planning with land-use, mobility, and sustainability goals from the Monument 2040 Comprehensive Plan.
- Identifying funding opportunities and prioritizing projects to ensure financial sustainability.

The scope of this plan includes watershed delineation, stormwater modeling, stakeholder engagement, alternatives development, and a comprehensive implementation roadmap.

The Plan includes a focused hydrologic analysis of Monument Creek and its major tributaries and confluences north of the boundary with the United States Air Force Academy (USAF), which convey the majority of flows that pass through the Town of Monument and the surrounding area. Using updated LiDAR data and modern modeling criteria, the analysis evaluates how runoff from these northern drainage areas influences flow volumes, flood risk, and system performance within Monument. This scope is expanded from the scope of the 2006 Stormwater Master Plan which focused primarily on the Central Business District.

ES.2 Alignment with Comprehensive Master Plan Goals

The Stormwater Master Plan is a parallel track within the Monument 2040 Comprehensive Plan and directly supports several established planning goals:

- **Sustainable Growth & Land Use:** The plan evaluates stormwater capacity and flooding constraints while considering long-range land-use strategies, especially in growth areas, downtown, commercial corridors, and business parks.
- **Resilient Infrastructure:** Recommendations align with infrastructure and public facility needs identified in the Comprehensive Plan, creating consistency across transportation, utilities, and environmental systems.
- **Environmental Stewardship:** Recommends best management practices (BMPs), water quality enhancements, and naturalized drainage solutions.
- **Community Engagement:** Leverages the broader engagement framework of the Comprehensive Plan to ensure community transparency, involvement, and acceptance.
- **Economic Vitality:** Supports predictable and practical development conditions that reduce flood risk and maintenance costs while enhancing long-term community resilience.

These themes are prevalent throughout the Monument 2040 Comprehensive Master Plan, and will be referenced regularly throughout the Stormwater Master Plan.

ES.3 Project Area

The project area encompasses the entire Monument Creek watershed north of the United States Air Force Academy (USAF). The study is specifically focused on how the hydrology of the Monument Creek watershed affects the Town of Monument which is situated along the banks of Monument Creek and receives runoff from many of the surrounding communities including:

- Palmer Lake
- Woodmoor
- Triview Metropolitan District
- Gleneagle
- Forest Lakes
- Unincorporated El Paso County

The study limits extend generally from the where Monument Creek passes underneath North Gate Boulevard to the south, to the north by the Palmer Divide which approximately follows County Line Road (also referred to as Palmer Divide Road), to the east roughly by Roller Coaster Road, and to the west roughly by Rampart Range Road.



It should be noted that while the study looked at the entirety of the Monument Creek watershed north of USAFA, detailed analysis was not performed for the portions of the Beaver Creek and Monument Creek Watersheds for the westernmost portions that fall mostly within the Pike National Forest. The boundary line delineating the “undeveloped” area was selected based on the limits of previous studies of the Monument Creek Watershed which were set based on the availability of accurate data to characterize the watershed. This choice is explained further in Chapter 3.

Within the study area, three major ponds and lakes play a critical role in shaping the system’s hydrology. Monument Lake and its associated dam attenuate flows from both Monument Creek and Crystal Creek before they continue downstream. Lake Woodmoor, a drinking-water storage reservoir, provides substantial stormwater relief by moderating flows within the Dirty Woman Creek watershed. Bristlecone Lake similarly attenuates significant runoff originating from the largely undeveloped upper portion of Beaver Creek before the flows proceed downstream toward the United States Air Force Academy.

There are seven distinct subwatersheds within the studied portion of the Monument Creek watershed. Each tributary watershed passes through or influences runoff within the Town of Monument in some way. These tributaries are listed below from north to south by the location of its confluence with Monument Creek:

- Crystal Creek
- Dirty Woman Creek
- Teachout Creek
- Beaver Creek
- Jackson Creek
- Black Forest Creek
- Smith Creek

In total, the Monument Creek Watershed north of the boundary with the United States Air Force Academy encompasses 84.2 sq. miles spread across the 8 distinct subwatersheds. **See Exhibit 1.0 for an overall view of the watershed.**

ES.4 Hydrologic Analysis

The hydrologic analysis for this Stormwater Master Plan was developed to provide an updated and technically reliable understanding of how stormwater moves through Monument Creek and its surrounding tributaries within the described Project Area.

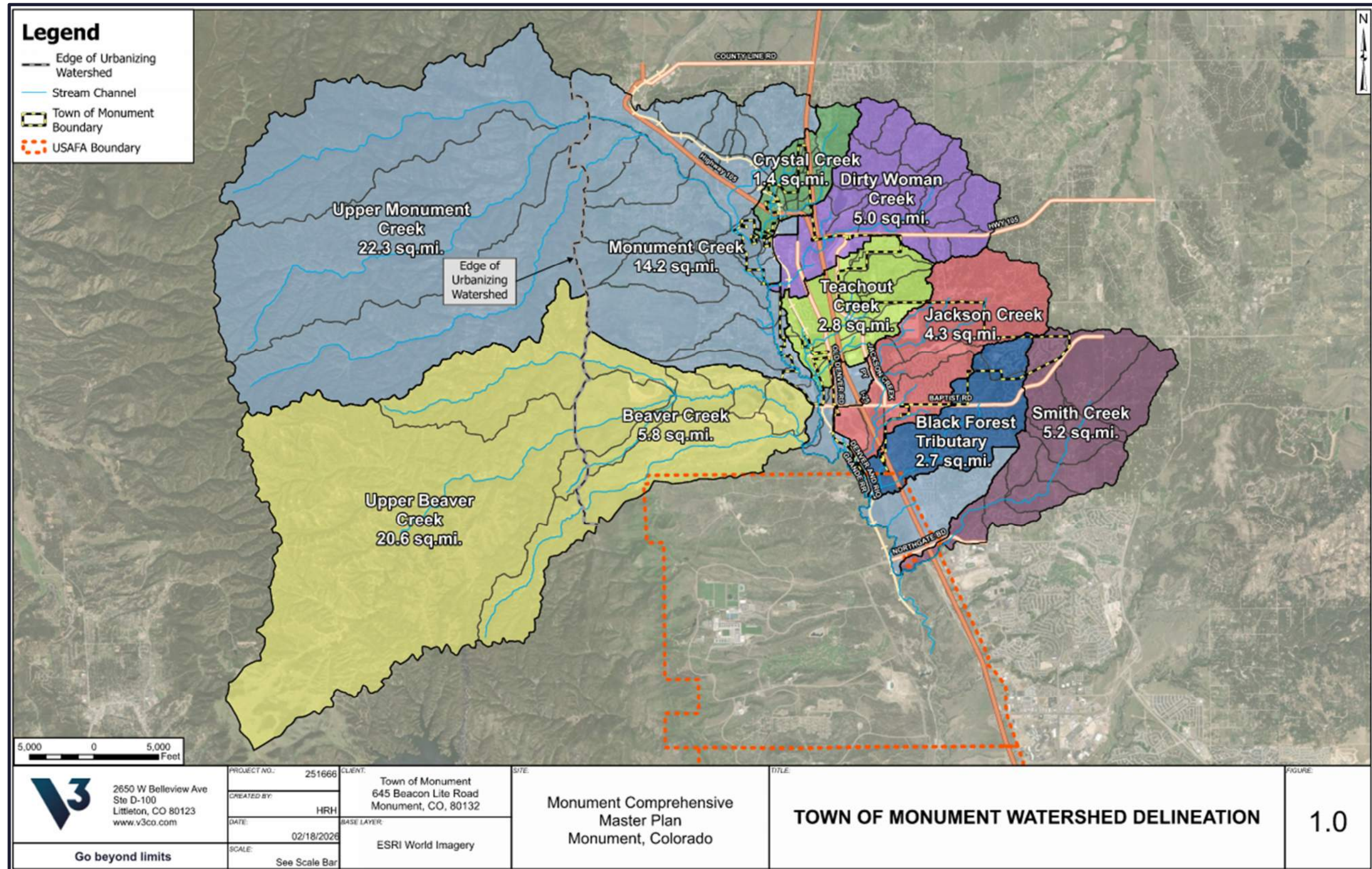
No previous hydrologic models were obtained for the entire project area and so V3 constructed a new model using the USACE Hydrologic Engineering Center program HEC-HMS version 4.12. The constructed hydrologic model incorporated the latest BMPs and modeling practices. Each tributary watershed was delineated and subdivided using 2018 El Paso County LiDAR, supplemented by current development plans, utility mapping, Google Earth historical and current aerial imagery (Google, 2025), and field investigations. Soil data was obtained from the NRCS Web Soil Survey to determine hydrologic soil groups across the study area. This

approach ensured that watershed boundaries, flow paths, and hydrologic response characteristics reflected current on-the-ground conditions.

When building the model V3 utilized the modeling and calculations criteria set forth in the El Paso County Drainage Criteria Manual. Existing rainfall data was sourced from the NOAA Atlas 14 Precipitation Frequency Data Server (PFDS), and future rainfall predictions were informed by the Intergovernmental Panel on Climate Change (IPCC) Sixth Assessment Working Group I Interactive Atlas. In addition to the CUHP rainfall distribution, V3 also modeled the watershed with the SCS Type II 24-hour distribution to allow for more direct comparison with the 2006 Stormwater Master Plan (Ayres Associates, 2006) hydrology model and the flows denoted in the FEMA Flood Insurance Studies for specific tributaries. Interstate 25 culvert sizing data was provided by Colorado DOT, including the Interstate 25 and Highway 105 Preliminary Hydrology and Hydraulics Report (Colorado Department of Transportation, 1997).

The hydrologic analysis also drew upon several previous watershed studies and planning documents to inform baseline conditions and validate modeling assumptions. Key references include the Fountain Creek Watershed Study: Watershed Management Plan (U.S. Army Corps of Engineers, 2009), the Monument Creek Watershed Restoration Master Plan (Matrix Design Group, 2016), the Monument Creek USAFA Corridor Planning Study (Matrix Design Group, 2023), and the Fountain Creek Corridor: Floodplain Management Opportunities Study (Matrix Design Group, 2019). Additionally, the Triview Drainage Facilities Existing Conditions Assessment Report (Kimley Horn and Associates, 2020) provided drainage facility routing and structure data within Triview Metropolitan District. Site-specific construction documents and drainage reports from developments within and adjacent to the study area, including the Falcon Commerce Center master plan and detailed planning documents (Kiowa Engineering Corporation, 2024) and (Kiowa Engineering Corporation, 2020), Promontory Pointe, Sanctuary Pointe, and Village Center at Woodmoor, were reviewed to verify drainage facility routing, structure data, and local drainage patterns. A complete list of references is provided in Chapter 7 of this report.

V3 modeled 36 culverts and bridges across the study area and evaluated each for overtopping under the existing condition El Paso County 2-hour design storm for both the 10-year and 100-year recurrence intervals. Of the 36 structures modeled, 13 were found to experience overtopping in either the 10-year or 100-year event under existing conditions. Ten of those 18 structures are predicted to overtop in the 10-year event, meaning they do not meet the regulatory requirements of El Paso County which calls for culverts to be able to pass the 10 year storm (El Paso County, 2018). The Crystal Creek and Teachout Creek basins account for more than half of all overtopping structures. Under the future land use and climate scenario incorporating the CMIP6 SSP2 projection of a 5.2 percent increase in maximum one-day precipitation (Intergovernmental Panel of Climate Change (IPCC) Working Group I (WGI), 2025), additional structures that currently pass the design storm are projected to begin overtopping without intervention.





ES.5 Alternatives Analysis and CIP Recommendations

Chapter 5 presents the capital improvement recommendations developed through the Stormwater Master Plan. These recommendations are the culmination of the watershed characterization, updated hydrologic analysis, hydrology assessment, field investigation, and problem area documentation described in the preceding chapters. The Capital Improvement Plan (CIP) translates these findings into a structured program of projects, maintenance actions, and partnerships that the Town of Monument can implement over a defined planning horizon. The CIP is designed to serve as both a technical guide for engineering staff and a decision-making framework for Town leadership. Every project has been evaluated against the six primary objectives established for this Master Plan: flood risk reduction, regulatory compliance, environmental protection, infrastructure planning and maintenance, climate change resiliency, and regionwide coordination.

Key Findings from the Overtopping Analysis

As part of the hydrologic analysis, V3 modeled 36 culverts and bridges across the study area, evaluating each structure for overtopping under the existing condition El Paso County 2-hour design storm for the 10-year and 100-year recurrence intervals. Of the 36 structures modeled, 13 were found to experience overtopping—a failure rate of nearly 49 percent. Ten of those 18 structures overtop in the 10-year event, meaning they fail during storms with a 10 percent annual probability of occurrence. The distribution of deficiencies is concentrated in several key areas:

- **Old Denver Road** is the single most significant corridor in regards to overall flooding concerns. Across two watersheds, every modeled culvert on Old Denver Road was found to be undersized, with all three overtopping in both the 10-year and 100-year events assuming the culverts are functioning at their design capacity. Additionally, in the existing condition, The Dirty Woman Creek crossing is completely non-functional as it is filled with debris. A coordinated improvement program for Old Denver Road crossings would address the highest-priority deficiencies in two watersheds simultaneously.
- **Crystal Creek** carries a disproportionate share of structural deficiencies relative to its basin size. At only 1.43 square miles, it accounts for 7 of the 18 overtopping structures which is more than any other single watershed. Its median curve number of 90.5 produces high peak flows relative to basin area, and the Monument Hill Road overtopping creates a documented inter-basin diversion that transfers Crystal Creek’s flood risk to Dirty Woman Creek. Given the number of issues within the watershed, there may be an opportunity for regional detention within this subwatershed to attenuate flows upstream of I-25, preventing the inter-basin transfer and overtopping at key structures.
- **Teachout Creek** faces the greatest future pressure with a projected 17 percent increase in 100-year peak flows—the largest proportional change among all study basins. Ongoing construction in the basin is likely to further increase runoff volumes, making this the basin where the gap between current infrastructure capacity and future demand is widening most rapidly.

- **Jackson Creek** presents critical risks including a trail crossing failure that threatens the regional wastewater treatment facility, and 10-foot-plus erosion incisions at the pond and dam series that are generating and delivering large volumes of sediment to Monument Creek.

Maintenance as a Cost-Effective Intervention

The analysis found that maintenance deficiencies are amplifying structural capacity shortfalls across the study area. At least five of the 18 overtopping structures have documented sediment, vegetation, or debris obstructions that reduce their effective capacity below design. The Highway 105 culverts in Crystal Creek are 50% filled with sediment; the Knollwood Drive culvert in Dirty Woman Creek is 50% obstructed by a beaver dam; the Leather Chaps Drive crossings in Jackson Creek are choked with cattails; and the Old Denver Road crossing in Dirty Woman Creek is completely clogged and deformed. A systematic inspection and maintenance program across all watersheds would be among the most cost-effective investments the Town can make, restoring partial or full design capacity at a fraction of the cost of structural replacement.

Capital Improvement Strategy

The CIP recommends improvements organized by subwatershed, including culvert replacements, regional detention facilities, channel stabilization projects, bridge rehabilitation, and ongoing maintenance programs. Key strategic principles guiding the CIP include:

- **Corridor-based improvements** offer the greatest efficiency. Old Denver Road accounts for four overtopping structures across two watersheds, and a coordinated construction program would reduce mobilization costs, minimize traffic disruption, and deliver corridor-wide benefits.
- **Future-condition design** ensures that all replacement structures and new detention facilities are sized to the future rainfall and land use scenario to build climate resilience into every capital investment and prevent costly replacement within the planning horizon. As a note, any detention facility sizing must consider water rights as part of the design.
- **Multi-jurisdictional coordination** is required for at least four of the 18 overtopping structures, involving the Union Pacific Railroad (Teachout Creek crossings), El Paso County (New Santa Fe Trail crossings), CDOT (I-25 and Highway 105 structures), and the Triview Metropolitan District (detention facility maintenance).

Water Quality Benefits

While the primary focus of the CIP is flood risk reduction and infrastructure resilience, the recommended projects also provide significant water quality benefits supporting the Town’s MS4 permit compliance. Principal water quality concerns in the watershed include sediment and total suspended solids from channel erosion and overtopping sediment-laden flows, elevated E. coli concentrations documented in the USAFA Corridor Planning Study, nutrient loading from residential and commercial runoff, thermal impacts from heated



impervious surfaces, and trash and debris accumulation at culvert inlets. Channel stabilization projects—particularly the Jackson Creek pond and dam erosion stabilization addressing 10-foot-plus erosion incisions—represent the most significant water quality intervention in the CIP by reducing the most significant individual, or focused, source of sediment delivery to Monument Creek. Regional detention facilities provide water quality treatment in addition to peak flow attenuation, and vegetation management programs balance conveyance needs with ecological function. Collectively, these improvements will reduce the upstream sediment contribution being conveyed from the study area to the 49 restoration projects identified downstream within the USAFA corridor.

Funding Considerations

The capital needs identified in this Master Plan substantially exceed what development impact fees alone can support. The Town should evaluate a combination of funding mechanisms including a dedicated stormwater utility fee assessed on all developed properties based on impervious area, recalibrated development impact fees reflecting CIP costs, state and federal grant programs (including the Colorado Water Conservation Board (CWCB), Fountain Creek Watershed District (FCWD), FEMA Hazard Mitigation Grant Program (HMGP), and Office of Local Defense Community Cooperation (OLDCC), regional cost-sharing with El Paso County, USAFA, and the Fountain Creek Watershed District, and capital improvement bonds backed by stormwater utility fee revenue. The funding strategy should be developed in coordination with the Monument 2040 Comprehensive Plan’s capital facilities element.

ES.6 Review and Suggested Revisions to Stormwater Policy

The long-term success of the capital improvements recommended in this Master Plan depends on the strength of the regulatory framework that governs how stormwater is managed on an ongoing basis. This plan includes a comprehensive review of the Town of Monument’s existing stormwater-related codes, comparing them against the El Paso County Drainage Criteria Manual and best practices from leading municipal stormwater programs. The review identified significant gaps in the current regulatory framework that should be addressed to support effective stormwater management as development continues.

Key Findings

The Town’s stormwater provisions are currently fragmented across multiple titles and chapters of the Municipal Code (Titles 3, 8, 13, 16, and 17) rather than consolidated in a single, purpose-built stormwater management ordinance. It seems likely that this fragmented structure creates inconsistency in how requirements are applied, making it difficult for developers and staff to identify all applicable standards, and complicates MS4 permit compliance demonstration. The review compared the Town’s framework against best-practice standards across 15 regulatory elements organized into four categories: development standards, water quality and environmental protection, facility maintenance and oversight, and administration and enforcement. Significant deficiencies were identified, including the absence of quantitative detention standards, no development thresholds triggering stormwater requirements, no approved BMP list or design specifications, no formal inspection program for private detention facilities, and insufficient stormwater impact fees.

Recommended Code Revisions

The plan recommends 11 code revisions organized into three implementation tiers:

Tier 1 – Immediate Priority:

- Adopt a dedicated stormwater management ordinance consolidating all provisions into a single code chapter, modeled on the Colorado Planning for Hazards model code and Mile High Flood District (MHFD) model ordinance, adapted for Town-specific conditions. It is ok to use El Paso County Standards as a baseline but may be prudent to be more stringent based on the specific watershed.
- Amend Section 8.30.060 as an interim measure to include quantitative BMP performance standards, WQCV sizing criteria, an approved BMP list, and required maintenance plans.
- Establish a private facility inspection and enforcement program with right-of-entry provisions, documented enforcement processes, and escalating penalties.
- Recalibrate stormwater impact fees (Chapter 3.28 of the Town of Monument Code of Ordinances) to reflect the capital costs identified in the CIP.

Tier 2 – Near-Term Priority (Years 1–3):

- Add quantitative stormwater requirements to subdivision regulations (Title 16), including minimum detention volumes and impervious coverage limits. Use El Paso County as a baseline and then evaluate needs based on watershed.
- Establish a stormwater facility certification process requiring as-built surveys, capacity verification, and professional engineer certification.
- Establish a fee-in-lieu program for regional detention where on-site detention is impractical.
- Require financial assurance (maintenance escrow, bond, or letter of credit) for stormwater facilities transferred to HOAs, private owners, or non-municipal entities.

Tier 3 – Ongoing Enhancement (Years 3–7):

- Incorporate impervious coverage limits and green infrastructure incentives into the zoning code (Title 17), with watershed overlay zones with additional requirements for specific watersheds like Crystal Creek and Teachout Creek that already have high imperviousness and increasing development.
- Establish riparian buffer and wetland protection standards along Monument Creek and named tributaries, coordinated with Preble’s Meadow Jumping Mouse habitat requirements.
- Strengthen floodplain management standards to exceed the FEMA National Flood Insurance Plan minimums, including higher freeboard requirements consistent with climate projections and evaluation and adoption of revised flood hazard areas based on the V3 hydrologic model.



Together with the capital improvement and operations recommendations, these regulatory improvements form a complete program for managing stormwater within the Town’s planning area. The code revision implementation timeline is aligned with the Monument 2040 Comprehensive Plan adoption schedule.

ES.7 Selected Plan

This section will highlight the preferred alternatives of the Town of Monument after their review of the Town of Monument Stormwater Master Plan draft delivered on February 20th, 2026.



Chapter 1 Introduction

1.1 Authorization

The creation of this Master Plan was authorized by the Town of Monument under Resolution No. 01-2025 which contracted with The Lakota Group and V3 Companies for the provision of master planning and engineering services for the Comprehensive Plan “Monument 2040” and an updated Stormwater Master Plan for the Town of Monument. There have been no changes in scope since the project started.

1.2 Purpose and Scope

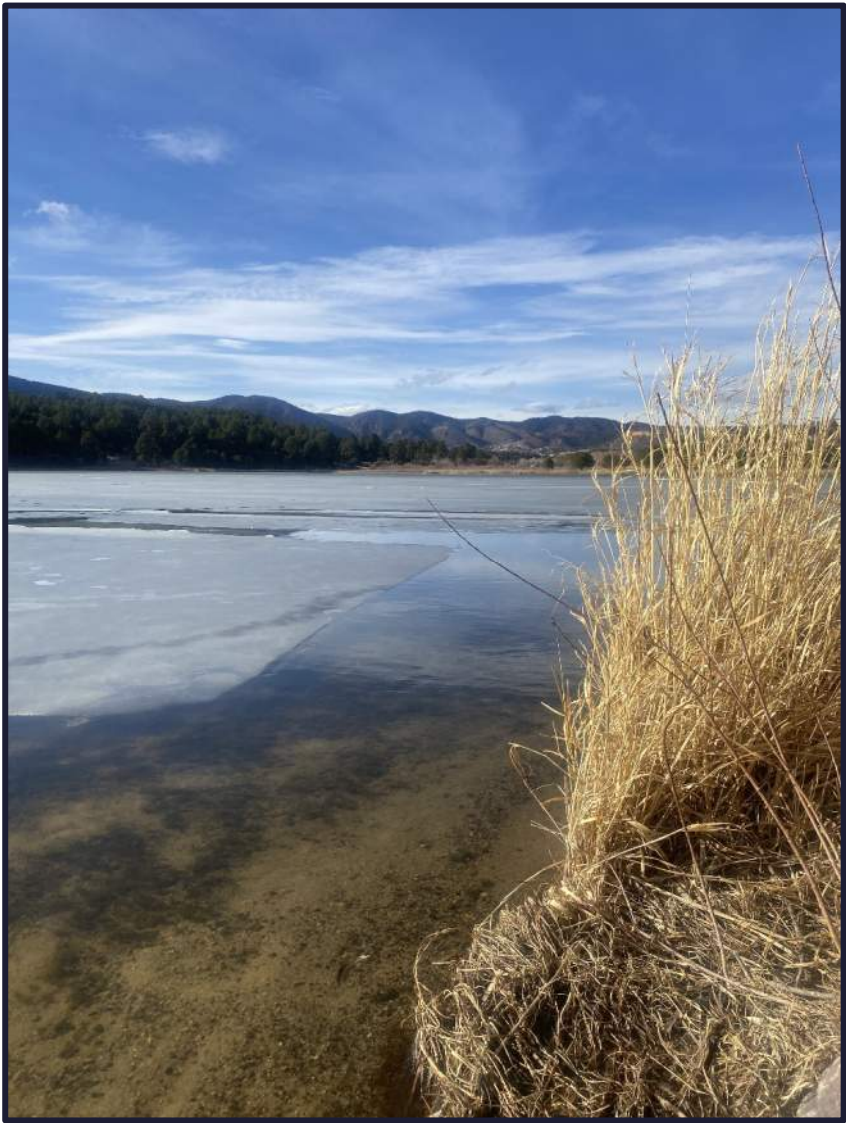
The purpose of the Town of Monument Stormwater Master Plan is to provide a strategic framework for managing stormwater within the Town of Monument and its surrounding watershed. The plan is designed to address current and future stormwater challenges, ensuring the protection of public health, safety, and the environment.

The primary objectives of the plan include:

- **Flood Risk Reduction:** Implementing measures to minimize the risk of flooding in residential, commercial, and industrial areas, including construction and maintenance of stormwater infrastructure such as detention basins, culverts, and drainage channels.
- **Regulatory Compliance:** Ensuring adherence to local, state, and federal stormwater regulations. The plan provides guidelines for compliance and supports the Town in meeting its regulatory obligations.
- **Environmental Protection:** Preserving and enhancing natural habitats and ecosystems affected by stormwater runoff, with strategies to protect wetlands, streams, and sensitive areas, including federally listed species such as Preble’s Mouse.
- **Infrastructure Planning and Maintenance:** Evaluating existing stormwater infrastructure and identifying areas in need of improvement or expansion, with prioritized maintenance schedules and projects.
- **Climate Change Resiliency:** Addressing the impacts of climate change on stormwater management by incorporating adaptive strategies, assessing future climate scenarios, and implementing measures to enhance resilience to extreme weather events.
- **Regionwide Coordination:** Collaborating with upstream and downstream partners, including special districts, private landowners, USAFA, El Paso County, and the Fountain Creek Watershed District, to address watershed-wide challenges and ensure continuity of management.

The Storm Water Master Plan summarizes the results for existing and future land use condition hydrologic analysis for the Monument Creek Watershed north of the United States Air Force Academy (USAFA). The watershed is approximately 84.2 square miles within El Paso County, Teller County, The Town of Palmer Lake, The Town of Monument, The Triview Metropolitan District, Woodmoor, Forest Lakes and Gleneagle.

Monument Creek flows southeast in the upper portion of the watershed until it reaches Monument Lake at which point it flows south, roughly following the alignment of Interstate 25 until it reaches the boundary of the USAFA, which is the downstream study limit for this Stormwater Master Plan.



Monument Lake looking northwest



1.3 Planning Process

Several previous planning efforts and technical studies provide important context for this updated Stormwater Master Plan. The Town’s earlier 2006 Stormwater Master Plan (Ayres Associates, 2006) serves as a foundational reference, offering the latest townwide assessment of drainage basins, stormwater conveyance systems, and anticipated capital improvements within the Central Business District. In addition, broader planning documents such as the 2017 Monument Comprehensive Plan (Plan Monument, 2017) provide policy direction regarding land use, transportation design, growth management, and environmental stewardship. These community-driven priorities helped shape how stormwater infrastructure needs were evaluated, and they reinforce the importance of integrating drainage planning with land-use decisions, transportation networks, and long-term community resilience.

Since these earlier efforts were completed, significant land use changes, roadway expansions, and development activity have affected the hydrology of the watershed throughout the community. Updated LiDAR topography, new hydrologic modeling tools, and revised rainfall intensities now allow for a more accurate representation of watershed behavior. For these reasons, a central objective of this update was to revisit the Town’s watershed hydrology, re-delineate drainage basins, and ensure that detention and conveyance needs reflect current conditions and future growth.

Throughout the development of this study, coordination meetings were held with Town staff district representatives, engineers, and planners to ensure that updated hydrologic assumptions, watershed boundaries, and modeling inputs aligned with existing knowledge and local observations. These discussions helped verify problem areas and ensured consistency with the Monument 2040 Comprehensive Master Plan that is being developed in parallel. A list of key meetings is below.

- March 4th 2025 - Monument Comprehensive and Stormwater Planning Open House
- March 6th 2025 – Stormwater Focus Group
- June 30th 2025 – Falcon Commerce Center and USAFA Coordination Meeting
- July 21st 2025 – Monument 2040 – Plan Commission and Town Council Meeting
- July 30th 2025 – Stormwater Existing Conditions Update Meeting with Planning Group
- September 11th 2025 – Stormwater Master Plan Update Meeting with Planning Group
- October 16th and 17th 2025 – Monument 2040 Phase 2 Engagement Meetings with Site Walks for Stormwater Investigations
- October 29th 2025 – Stormwater Management Plan Update – Technical Meeting with Stakeholders
- January 16th 2026 – Stormwater Master Plan Update meeting with Planning Group

In addition to the coordination meetings, the Town of Monument website was maintained by the Planning Group to inform the public of progress and solicit input. The website provides project information, presentations, and reports and can be accessed from address below.

<https://www.townofmonument.org/395/Comprehensive-Plan---Monument-2040>

1.4 Mapping and Surveys

Project mapping was based on terrain data collected by El Paso County in 2018, supplemented by development grading plans provided by the Town to accurately delineate the existing subwatersheds.

1.5 Data Collection

A comprehensive Geographic Information Systems (GIS) dataset was assembled to support the Stormwater Master Plan and to ensure that hydrologic, hydraulic, and planning analyses were based on the most current and accurate spatial information available. The Town of Monument provided detailed utility GIS shapefiles, and these were supplemented with additional datasets obtained through the El Paso County GIS portal and other public geospatial resources. GIS data incorporated into this study included:

- Town and County Boundaries
- Parcels and Property Ownership
- Roadways and Transportation Infrastructure
- Zoning Areas and Land Use
- Endangered Species Habitat and Environmental Constraints
- Water Bodies and Hydrologic Features
- El Paso County Stream Gauge and Hydrologic Monitoring Information
FEMA Floodplain Delineations
- Town of Monument Utility Infrastructure
 - » Storm Drainage: Pipe networks, inlets, manholes, outfalls, and development-constructed detention and retention facilities.
 - » Water Distribution: Transmission and distribution lines, hydrants, system valves, pressure-reducing valves, pump stations, storage tanks, and well locations.

Together, these GIS datasets formed the foundational mapping used throughout the hydrologic analysis, watershed delineation, infrastructure inventory, alternatives evaluation, and development of the updated Stormwater Master Plan.



1.6 Previous Studies

Several foundational studies have informed the development of this Stormwater Master Plan and provide important context for watershed dynamics, flood risks, and stormwater management opportunities in the Town of Monument and surrounding areas:

- **Stormwater Master Plan for the Town of Monument** (Ayres Associates, 2006) - Studied Crystal Creek, Monument Creek, Monument Lake, and Dirty Woman Creek basins focused primarily on the Central Business District of Monument. Hydrologic analysis was performed for existing and developed conditions for the 5- and 100-year rainfall events using the U.S. Army Corps of Engineers HEC-HMS Hydrologic Modeling System and utilized SCS Type II Rainfall methodology.
- **Flood Insurance Study of Monument Creek** (Federal Emergency Management Agency, 2018) - These studies, together with individual subdivision drainage reports provided by the Town as noted below, local mapping, survey data, and stakeholder input, provide a strong technical foundation for the recommendations and strategies presented in this Master Plan.
- **Fountain Creek Watershed Study Watershed Management Plan** (U.S. Army Corps of Engineers, 2009)– Studied the greater Fountain Creek Watershed, of which Monument Creek is a tributary and established recommendations for watershed management practices.
- **Monument Creek Watershed Restoration Master Plan** (Matrix Design Group, 2016) - Provided a comprehensive restoration strategy for the Monument Creek watershed, including recommendations for stream stabilization, sediment management, and habitat enhancement.
- **Fountain Creek Corridor Floodplain Management Opportunities Study** (Matrix Design Group, 2019) - Identified floodplain management opportunities and strategies for the broader Fountain Creek corridor, which included Monument Creek as a key tributary.
- **TriView Drainage Facilities Existing Conditions Assessment** (Kimley Horn and Associates, 2020) - Documented the existing conditions of drainage facilities within the district, identifying infrastructure needs and opportunities for improvement.
- **Monument Creek USAFA Corridor Planning Study** (Matrix Design Group, 2023) - Addressed corridor planning, watershed management, and infrastructure needs along Monument Creek within the USAFA boundaries.
- **Falcon Commerce Center Filing No. 4 – Final Drainage Report** (Kiowa Engineering Corporation, 2024) - Reviewed the final drainage design for a new property development within the Falcon Commerce Center in the Town of Monument.

- **Alpine Dealership at Falcon Commerce Center – Final Drainage Report** (Kiowa Engineering Corporation, 2025) - Reviewed the final drainage design for a new property development within the Falcon Commerce Center in the Town of Monument.
- **Interstate 25 and State Highway 105 at Monument, Colorado Preliminary Hydrology and Hydraulics Report** (Colorado Department of Transportation, 1997) - Addressed hydrologic and hydraulic calculations for the highway improvements to Interstate 25 and State Highway 105 and the associated culverts in the Crystal Creek and Dirty Woman Creek subwatersheds.

1.7 Acknowledgements

The project team’s assistance was essential in preparing this study. We thank Town staff, stakeholders, and regional partners for their input and collaboration.

Council

- Mayor Mitch LaKind
- Mayor Pro Tem Steve King
- Sana Abbott, Councilmember
- Laura Kronick, Councilmember
- Kenneth Kimple, Councilmember
- Marco P. Fiorito, Councilmember
- Chad Smith, Councilmember

Planning Commission

- Rey Egley, Chair
- Corey Petersen, Vice Chair
- Donna Hatch, Member
- John Parr, Member
- Martin Trujillo, Member
- Valerie Baumer, Member



Town Staff

- Madeline VanDenHoek, Town Manager
- Dan Ungerleider, AICP, Planning Director
- Rey Medina, Planner I
- Connie Driedger, GIS Specialist
- Jennifer Phillips, Finance Director
- Tom Tharnish, Public Works Director
- Andrew Archuleta, Public Works Assistant Director
- Public Works Stormwater Management Coordinator

External Partners Resources

- Colorado Department of Transportation
- El Paso County
- Pikes Peak Area Council of Governments
- Fountain Creek Watershed Conservation District
- United States Air Force Academy

Consultant Team

- V3 Companies
- The Lakota Group



Chapter 2 Study Area Description

2.1 Study Area

The Town of Monument is located in northern El Paso County, Colorado, within the Palmer Divide region, approximately twenty miles north of Colorado Springs. The Town covers approximately 7.35 square miles and is experiencing rapid growth, with an estimated population of 13,408 in 2024, up from 10,399 in 2020. This population increase, combined with significant economic expansion as new businesses enter the community, has prompted Town leadership to plan proactively for future infrastructure needs. These conditions helped drive the development of both the Monument 2040 Comprehensive Master Plan and this Stormwater Master Plan.

Monument is situated along both the east and west banks of Monument Creek. The creek originates in northwest El Paso County and flows approximately 35.7 miles to its confluence with Fountain Creek in Colorado Springs. Its watershed drains roughly 238 square miles. From its headwaters at about 9,350 feet, Monument Creek flows east through canyons and foothills before emerging near Palmer Lake at an elevation of approximately 7,100 feet. The creek then turns south, flowing through Monument and running parallel to the Front Range until it joins Fountain Creek.

This Stormwater Master Plan focuses on the portion of the Monument Creek Watershed north of the United States Air Force Academy. The study limits are generally defined as:

- **South:** Monument Creek crossing beneath North Gate Boulevard
- **North:** The Palmer Divide near County Line Road (also called Palmer Divide Road)
- **East:** Approximately to Roller Coaster Road
- **West:** Rampart Range Road approximately

Within this reach of Monument Creek, at least seven tributary sub watersheds contribute flow to the main Monument Creek channel:

- Crystal Creek
- Dirty Woman Creek
- Teachout Creek
- Beaver Creek
- Jackson Creek
- The Black Forest Tributary
- Smith Creek

These tributaries discharge into Monument Creek from north to south, with most draining from the northeast toward the southwest. Beaver Creek is the only major tributary flowing primarily west to east.

While other studies further subdivide the watershed—particularly upstream of Monument Lake—this plan treats the upstream area as a single watershed because it lies outside Town limits and the Town’s Growth Management Area. For the purposes of this analysis, detailed sub-watershed characterization in those upstream areas was not required.

Monument’s position along Monument Creek means its stormwater system is directly influenced by flows originating in surrounding communities. Within the study area, Monument receives runoff from:

- Palmer Lake
- Woodmoor
- Triview Metropolitan District
- Gleneagle
- Forest Lakes
- Unincorporated El Paso County

As part of this master plan, V3 will evaluate watershed management opportunities that may benefit Monument and several of these neighboring communities.

2.2 Watershed Features and Tributaries

The study area encompasses the principal drainageways that convey runoff to Monument Creek north of the United States Air Force Academy and within and around the Town of Monument. Together, these tributaries define the Town’s hydrologic setting, link upstream headwaters along the Palmer Divide to developed areas within the Town, and ultimately discharge to Monument Creek on its way to Fountain Creek and the Arkansas River.

2.2.1 Monument Creek

Monument Creek is the primary receiving watercourse, passing through the western half of the Town and flowing generally north-to-south through the planning area. Within the developed portion of the Town, adjacent land use is predominantly large-lot residential with pockets of compact residential, commercial, and retail. Approximate limits: Within this Master Plan, Monument Creek is considered from the vicinity north of Monument Lake and the Palmer Lake area downstream to the United States Air Force Academy (USAFA) boundary, with lateral limits that roughly track the I-25 corridor and Old Denver Road on the east and the foothill transition on the west. **(See Exhibits 1.4A and 1.4B: Monument Creek Subwatershed).**



2.2.2 Crystal Creek

Crystal Creek drains the northern end of Monument and part of the Woodmoor community , with roughly half the basin east of I-25. Flow is generally southwest toward Highway 105, then southerly to its confluence with Monument Creek. The subwatershed covers 1.43 square miles with elevations ranging from ~7,500 feet at the high point to ~6,920 feet at the low point. Land use is primarily residential with commercial/retail nodes and substantial undeveloped open space. Approximate limits: The Crystal Creek subwatershed extends from near the County Line Road/Palmer Divide to Highway 105 and the confluence area, bounded generally by White Fawn Road to the east and Monument Lake to the west. **(See Exhibit 1.1: Crystal Creek Subwatershed.)**

2.2.3 Dirty Woman Creek

Dirty Woman Creek drains an area northeast of the Town, with nearly 90% of the basin east of I-25. Flow trends southwesterly to Monument Creek. The 4.93-square-mile subwatershed is primarily residential with commercial/retail areas, open space, and a golf course. Woodmoor Lake, just east of I-25, provides a significant water feature within the drainage network. Elevations range from just over 7,500 feet to ~6,860 feet at the western outfall, with 2–8% slopes (most commonly 3–5%). Approximate limits: The subwatershed extends from Top O the Moor Drive East south toward Highway 105 and westerly towards Monument Creek. The watershed is bounded to the east approximately by White Fawn Road. **(See Exhibit 1.2: Dirty Woman Creek Subwatershed.)**

2.2.4 Teachout Creek

Teachout Creek originates east of the Town of Monument in unincorporated El Paso County and flows southwest toward its confluence with Monument Creek. The watershed covers 2.8 square miles and is characterized by rolling terrain (~6,800 to >7,200 feet). The watershed is characterized by primarily residential lots with additional commercial and residential lots under construction. The watershed is bounded to the north by Highway 105, to the east by Roller Coaster Road, to the south by the confluence of Bever Creek and Monument Creek, and to the west by Mitchell Avenue. **(See Exhibit 1.6: Teachout Creek Subwatershed.)**

2.2.5 Jackson Creek

Jackson Creek begins to the east of Monument, just south of Highway 105 and west of Roller Coaster Road. The tributary flows southeast towards Baptist Road and I-25, eventually passing under the UPRR before reaching the confluence with Monument Creek. The watershed covers ~4.3 square miles with moderate to steep upper slopes that flatten near the confluence. Approximate limits: Jackson Creek extends from Highway 105 to the southern boundary of the Town of Monument. It is bounded on the east by Roller Coaster Road and to the west by Monument Creek. **(See Exhibit 1.3: Jackson Creek Subwatershed.)**

2.2.6 Beaver Creek

Beaver Creek originates west or southwest of Monument and flows generally east or northeast to meet Monument Creek. The watershed covers ~26.4 square miles, with Oak-aspen-mountain brush, farmsteads, and some residential landuse. Approximate limits: Beaver Creek spans approximately from the Rampart Range Road/Pike National Forest foothills eastward toward the I-25 corridor. Once the creek leaves the foothills it is bounded to the south by the USAFA boundary and to the east by Monument Creek. **(See Exhibit 1.7A and 1.7B: Beaver Creek Subwatershed.)**

2.2.7 Black Forest Tributary

The Black Forest Tributary covers a 2.7 square mile portion of the eastern highlands within the study area. The watershed is characterized by residential developments, farmsteads, and some herbaceous open space. Flow generally trends southwest toward its confluence with Monument Creek south of the Jackson Creek confluence. Approximate limits: The tributary extends from the approximately Roller Coaster Road to the east southeast past Baptist road toward I-25. The watershed is bounded to the west by the UPRR and Monument Creek. **(See Exhibit 1.8: Black Forest Tributary Subwatershed.)**

2.2.8 Smith Creek

Smith Creek drains from approximately the intersection of State Road 83 and Baptist Road southwest towards where Monument Creek crosses North Gate Boulevard. The watershed covers ~5.2 square miles, with moderate slopes that steepen near the divide and flatten near the confluence. **(See Exhibit 1.5: Smith Creek Subwatershed.)**

2.2.9 Monument Lake

Monument Lake is a key waterbody within the Town. It receives inflow from Monument Creek and drains back to Monument Creek downstream, functioning as both a local reservoir and a recreational amenity. The lake attenuates 100-year flows within Monument Creek to mitigate some flooding and erosion concerns within Monument Creek. The regulated outflow continues south toward Colorado Springs. **(See Exhibit 6.4: Monument Creek Ponds.)**

2.2.10 Bristlecone Lake

Bristlecone Lake is a significant waterbody located in the lower reaches of the Beaver Creek watershed. It functions as a storage reservoir influencing upstream and downstream hydrology by attenuating peak flows before they enter the main Beaver Creek channel. The lake lies within an area characterized by farmsteads and some residential developments. **(See Exhibit 6.7 Beaver Creek Urbanizing Region Ponds.)**

2.2.11 Lake Woodmoor

Lake Woodmoor is a major hydrologic and recreational feature within the Dirty Woman Creek watershed and plays an important role in moderating flows from the northeastern portion of the basin. Located east of I-25 within the Woodmoor community, the lake collects runoff from several housing communities before releasing



flow westward toward Dirty Woman Creek. The surrounding area consists primarily of residential development, golf course lands, and wooded open space. **(See Exhibit 6.2: Dirty Woman Creek Ponds.)**

2.2.12 Piñon Lake

Piñon Lake is a small waterbody located in the Beaver Creek watershed and contributes to localized hydrologic storage within the basin. This lake was not included as a private basin but it is understood that water quality and hydrologic benefits are provided. **(See Exhibit 6.7: Beaver Creek Urbanizing Region Ponds).**

2.3 Land Use Characteristics

Land use patterns across the Monument Creek Watershed strongly influence stormwater behavior, runoff volumes, and the design of future drainage infrastructure. The study area spans a diverse set of landscapes—from forested mountainous terrain in the west to established neighborhoods and rapidly developing residential and commercial districts in and around the Town of Monument. Understanding these land use characteristics is essential to evaluating existing hydrologic conditions and planning for future growth.

2.3.1 Existing Land Use

Existing land use within the study area reflects a transition from natural, undeveloped headwaters to more urbanized environments near the Town core:

Mountainous and Forested Lands dominate the upper Monument Creek and Beaver Creek basins. Much of this land lies within Pike National Forest and includes steep, rocky terrain, dense vegetation, and limited development. These areas exhibit high runoff potential, particularly where soils are shallow and slopes are steep. Additionally, the rainfall in the upper basins is more than 0.6 inches higher than in the lower watershed during the 100 year storm (+10%).

Rural Residential and Agricultural Areas occur along the foothill transition zones and throughout the eastern portions of the watershed. These areas typically include large-lot residences, pastureland, and herbaceous rangeland. Imperviousness in these zones is generally low, resulting in moderate infiltration when compared to steeper forested terrain.

Developed Areas Within the Town of Monument include a mix of single-family residential neighborhoods, multi-family developments, commercial districts, industrial areas, schools, civic facilities, and roadway networks. These zones have higher impervious surface coverage, ranging from approximately 20–65% for varying residential densities and up to 90–95% in commercial districts, leading to high expected runoff volumes and reduced infiltration.

Major Waterbodies and Open Space, including Monument Lake, Lake Woodmoor, Bristlecone Lake, and Piñon Lake, provide both hydrologic storage and recreational value. These features moderate local flood peaks and play a significant role in shaping watershed flow patterns.

Transportation Corridors such as I-25, Highway 105, Old Denver Road, and the Union Pacific Railroad create hard boundaries within the drainage system, concentrating flow at limited crossing structures and influencing sub watershed delineation.

Overall, existing land uses vary widely across the watershed, producing a mosaic of hydrologic responses that the stormwater model accounts for through zoning-based curve numbers and hydrologic soil group assignments.

2.3.2 Future Land Use

Future land use projections are informed by the 2017 Town of Monument Comprehensive Plan and were reviewed in coordination with the Monument 2040 Comprehensive Plan. The town anticipates continued growth driven by population increase, economic expansion, and regional development pressures. While there are no significant land use changes expected within Town limits and designated Growth Management Areas (GMA) with respect to zoning, the increase in development and continued construction will influence stormwater system needs throughout the watershed.

Key themes in projected future land use include:

- **Continued Residential Development**
 - » Much of the remaining developable land within Town limits is planned for low- to medium-density residential neighborhoods, with pockets of multi-family housing near commercial centers. These changes result in increased imperviousness and higher curve numbers for many subwatersheds.
- **Expansion of Commercial and Mixed-Use Districts**
 - » Growth along major corridors, particularly near I-25, Jackson Creek Parkway, and Highway 105, is anticipated to increase commercial activity. These zones will see some of the highest imperviousness values in the future condition modeling.
- **Redevelopment and Infill**
 - » Older commercial and industrial areas may redevelop into higher-density or mixed-use districts. In many cases, this will lead to higher imperviousness and the need for detention.
- **Open Space Preservation and Recreation**
 - » The Comprehensive Plan emphasizes strategic preservation of open space corridors, trail systems, and greenways that serve dual purposes of recreation and stormwater management as they provide some relief for flooding within specific subwatersheds. While these areas may not drastically change hydrologic conditions, their integration into community planning supports long-term watershed resilience as well as promotes the habitat of the Preble’s Meadow Jumping Mouse (PMJM).
- **Areas Outside Town Jurisdiction**
 - » For unincorporated El Paso County and neighboring communities (e.g., Woodmoor, Triview, Palmer Lake, and Forest Lakes), future land use projections are not available at a level of detail suitable for watershed modeling. As a result, the future-condition hydrologic model applies existing land use to these areas to ensure consistency and avoid speculative assumptions.



2.4 Special Districts and Private Lands

Stormwater management within the Monument Creek Watershed is shaped not only by the Town of Monument’s municipal responsibilities but also by the presence of several special districts, homeowners associations (HOAs), and private property owners who own, operate, or influence drainage infrastructure. Because watershed hydrology does not align with jurisdictional boundaries, effective stormwater management requires coordinated planning and communication across multiple entities.

2.4.1 Role of Special Districts in Stormwater Management

Special districts play an important role in the operation and maintenance of drainage facilities throughout the watershed. The Triview Metropolitan District is one of the most significant of these partners, maintaining 16 detention ponds and one drainage channel within the Town’s boundaries. These facilities fall under the Town of Monument’s MS4 permit and must comply with modern stormwater management standards, including vegetation control, sediment removal, structural inspection, and access requirements.

The 2020 Triview drainage assessment (Kimley Horn and Associates, 2020) identified several maintenance needs, including cattail overgrowth, sediment accumulation, undercut culverts, steep or eroded banks, and missing or outdated outlet control structures. Triview District representatives have since stated that all deficiencies noted in the assessment have been addressed, and the District has expressed its intent to remain an active and responsible participant in regional watershed stewardship. This commitment reflects Triview’s ongoing effort to coordinate with the Town of Monument, maintain regulatory compliance, and ensure that its facilities contribute positively to overall stormwater performance.

2.4.2 Private Lands and Maintenance Responsibilities

A substantial portion of the developed and undeveloped land within the watershed is privately owned. This includes residential parcels, commercial centers, industrial areas, and privately owned detention ponds built as part of subdivision development. The Triview assessment highlights several examples where detention facilities initially thought to be district-owned were later confirmed to be the responsibility of private property owners. For example, Pond 1 located on the “My Storage at Jackson Creek” property, where the private owner is responsible for maintenance even though the facility contributes flows into the district and Town systems.

This type of arrangement is common throughout the watershed. Private detention ponds and stormwater features are typically required during development to manage on-site runoff, but long-term ownership may fall to HOAs, commercial property owners, or individual landowners. Because the Town cannot directly maintain privately owned drainage facilities, their condition can vary significantly, and unmanaged facilities may degrade over time, leading to sedimentation, vegetation encroachment, clogged outlets, or altered flow paths that affect downstream areas.

Ensuring effective stormwater performance on private lands therefore requires:

- **Clear and enforceable long-term maintenance obligations**
- **Periodic inspection by the Town under MS4 requirements**
- **Communication of operation and maintenance expectations**

- **Coordination during redevelopment to upgrade outdated facilities to current standards**

2.4.3 Need for Coordinated Watershed Management

Effective watershed-scale stormwater management within the Town of Monument depends on strong partnerships among the Town, special districts, HOAs, private owners, and regional entities such as El Paso County and the U.S. Air Force Academy.

The challenges documented in the Triview assessment, including steep slopes, rapid vegetation growth, sediment accumulation, failing spillways, and outdated infrastructure—demonstrate that maintenance gaps in any jurisdiction can create downstream impacts. Because these systems are hydrologically connected, coordinated planning and shared standards are essential to protecting downstream residents, roadways, and public infrastructure.

As the community continues to grow, the Town’s Stormwater Master Plan encourages:

- **Regular communication and data sharing among districts and private entities**
- **Alignment with El Paso County Drainage Criteria and Monument’s MS4 requirements**
- **Joint planning of regional detention and water quality facilities**
- **Shared approaches to long-term maintenance funding and capital improvements**
- **Continuous verification of ownership and responsibility for each drainage asset**

Together, these partnerships are critical to building a resilient stormwater system that can meet the demands of future growth, climate variability, and regulatory requirements within the Monument Creek Watershed.

2.5 Downstream Watershed Impacts and the U.S. Air Force Academy

As described in Sections 2.1 through 2.4, the Monument Creek Watershed encompasses a complex network of tributaries, special districts, private lands, and municipal infrastructure that together shape how stormwater moves through the Town of Monument. These flows do not stop at the Town’s southern boundary. Monument Creek continues south through the U.S. Air Force Academy (USAFA) and into the City of Colorado Springs, carrying with it the cumulative effects of every upstream land use decision, detention facility, and maintenance practice within the watershed.

The Monument Creek USAFA Corridor Planning Study (Matrix Design Group, July 2023), listed in Section 1.7 of this Master Plan as a foundational reference, documents the extent of these downstream impacts. Funded through the Office of Local Defense Community Cooperation (OLDCC) and administered by the City of Colorado Springs Stormwater Enterprise, the study evaluated approximately 18.5 miles of the Monument Creek mainstem and thirteen tributaries within and adjacent to USAFA. It identified 49 prioritized restoration projects containing 134 individual project elements, addressing channel incision, bank erosion, habitat degradation, infrastructure risk, and excess sediment loading throughout the USAFA corridor.



2.5.1 Upstream Conditions as a Driver of Downstream Degradation

The USAFA Corridor Planning Study identifies urban development and road construction as the primary land uses influencing sediment supply and channel stability within the Monument Creek Watershed. As El Paso County’s population has grown 37 percent since 2000, a trend reflected in the Town of Monument’s own growth from 10,399 residents in 2020 to an estimated 13,408 in 2024, impervious surfaces have expanded, peak stormwater flows have increased, and the natural capacity of channels and floodplains to attenuate runoff has diminished. These are the same development pressures described in Section 2.3 of this Master Plan.

The relationship between local stormwater facility performance and downstream conditions on USAFA is direct. As documented in Section 2.4, the Triview Metropolitan District maintains 16 detention ponds and one drainage channel within the Town’s boundaries, and additional facilities are operated by other districts, HOAs, and private property owners throughout the watershed. The 2020 Triview drainage assessment identified maintenance deficiencies including sediment accumulation, cattail overgrowth, undercut culverts, and outdated outlet structures—conditions that, if left unaddressed, reduce detention capacity and allow unattenuated peak flows, excess sediment, and degraded water quality to pass downstream into Monument Creek.

The USAFA Corridor Planning Study’s 49 restoration projects carry estimated costs ranging from thousands to millions of dollars per project, sorted into categories by cost threshold and location on or off USAFA property. Many of the documented problems—channel instability, floodplain disconnection, riparian habitat loss, and infrastructure risk—originate from or are worsened by conditions in the upper watershed. The performance of upstream detention facilities, the condition of private stormwater features, and the pace of new development within the Town’s planning area all influence the scale and urgency of restoration needs downstream.

2.5.2 Regional Context

The downstream connection between the Town of Monument and USAFA has been recognized across multiple regional planning efforts. The Colorado Springs Regional Joint Land Use Study (JLUS, 2018) identified stormwater impacts in the Monument Creek Watershed as a compatibility issue between the City of Colorado Springs and USAFA, citing negative effects on aesthetics, natural disaster resiliency, utilities, and habitat for the Preble’s Meadow Jumping Mouse (PMJM). The Monument Creek Watershed Restoration Master Plan (2016) provided a watershed-scale restoration framework, and the Monument Creek Site Conservation Team (SCT), established by the U.S. Fish and Wildlife Service in 2021, continues to guide PMJM recovery planning across the broader watershed. The USAFA Corridor Planning Study builds on all of these efforts and is grounded in five core values, all of which align with the goals of this Stormwater Master Plan and the Town’s MS4 permit obligations:

- **Resiliency**
- **Community**
- **Environment**
- **Compatibility**
- **Economic/Fiscal Development.**

These regional studies collectively reinforce that the Monument Creek Watershed functions as a single hydrologic system. The stormwater management decisions made within the Town of Monument, by the Town itself, by special districts, by HOAs, and by private property owners, have measurable consequences for a federal military installation, a federally listed species, and the downstream communities. Understanding this connection is essential context for the capital improvement recommendations, maintenance strategies, and partnership opportunities presented later in this Master Plan.

2.6 General Soil and Infiltration Characteristics

Soil characteristics across the study area directly influence how stormwater infiltrates, how much runoff is generated, and how susceptible channels and hillslopes are to erosion. Soil data for this Master Plan was obtained from the Natural Resources Conservation Service (NRCS) Web Soil Survey for El Paso County. Each mapped soil unit is assigned to one of four Hydrologic Soil Groups (HSGs) based on its drainage capability, ranging from Type A (well-draining, low runoff potential) to Type D (poorly draining, high runoff potential). Infiltration rates for each group, as defined in the El Paso County Drainage Criteria Manual (DCM), are summarized in Table 2.6-1.

Hydrologic Soil Group	Infiltration Rate (in/hr)
A	> 0.30
B	0.15 – 0.30
C	0.05 – 0.15
D	0.00 – 0.05

Table 2.6-1 Infiltration Rates by Hydrologic Soil Group

The majority of the urbanizing study area, encompassing the Town of Monument and the tributary basins of Crystal Creek, Dirty Woman Creek, Teachout Creek, Jackson Creek, Black Forest Tributary, and Smith Creek, is classified as HSG Type B. These soils are characterized by moderate infiltration rates (0.15–0.30 inches per hour) with moderately deep, well-drained profiles and moderately fine to moderately coarse textures. The predominantly sandy loam soils in the urbanizing region generate moderate runoff under natural conditions but become increasingly sensitive to changes in imperviousness as development occurs.

Conditions differ in the mountainous western portions of the study area. The upper reaches of Monument Creek and Beaver Creek, located within Pike National Forest, are classified as primarily HSG Type D based on the NRCS third-order soil survey completed in 1992. The El Paso County DCM provides alternative HSG classifications for these mountain soils that would reclassify them as predominantly Type B, reflecting the higher infiltration rates observed in the field. However, the V3 hydrologic model retained the original Type D designations to produce conservative runoff estimates and to maintain consistency with the FEMA regulatory models for the area. The HSGs and their effect on runoff curve numbers are discussed in detail in Chapter 3. **(See Exhibits 2.0 to 2.8: USGS Soils Maps for soil group distribution across each subwatershed.)**



2.7 Flood History

The Town of Monument and the surrounding region have experienced numerous significant flood events throughout its history, underscoring the importance of robust stormwater management and flood mitigation strategies. Notable flood events include:

- **Memorial Day Flood (May 30–31, 1935)**
 - » Monument Creek overflowed due to extreme rainfall, reaching nearly 50,000 cubic feet per second (cfs). The flood caused widespread destruction in Colorado Springs and El Paso County, washing away bridges and structures, and resulting in significant loss of life and property damage.
- **July 14, 1996:**
 - » El Paso County experienced severe flooding, washing out numerous roads and bridges.
- **September 2013 Floods:**
 - » Prolonged heavy rainfall led to severe flooding in the South Platte River Basin and also impacted the Fountain Creek Basin, including Monument Creek. The event caused extensive damage, with over 31,000 structures affected and an estimated \$3 billion in damages statewide.
- **May 18, 2023**
 - » Heavy rains caused high and fast-running waters in Monument Creek, leading to the discovery of a body in the creek near Colorado Springs believed to have been a death resulting from fast rising flood waters.

These events highlight the vulnerability of the region to flash flooding and the critical need for ongoing investment in stormwater infrastructure, floodplain management, and community preparedness. Preventing and mitigating damages and loss of life during flooding events has influenced the recommendations and strategies presented in this Stormwater Master Plan, with a focus on enhancing flood resilience, protecting public safety, and minimizing future losses.



Chapter 3 Hydrologic Analysis

3.1 Overview

The Monument Creek Watershed has been the subject of numerous hydrologic and hydraulic studies focusing on flow analysis, erosion, sedimentation, and floodplain delineation. However, these previous investigations were conducted at a broader regional scale and failed to account for the specific flood mitigation infrastructure within the Town of Monument's boundaries, with the exception of the Town 2006 Stormwater Master Plan. Even so, the 2006 study had a more narrow focus, primarily on the Central Business District. Additionally, many of the flow calculations are now over 20 years old, during which time Monument has experienced considerable expansion and increased impervious surface area, necessitating updated flow evaluations and review of restrictive or failing drainage elements.

For this study, a new hydrologic model was developed for Monument Creek and its surrounding tributaries for the area north of the United States Air Force Academy, with specific emphasis on the subbasins that pass through the Town of Monument. The model establishes hydrology for the 10- and 100-year design storm frequencies. The Colorado Urban Hydrograph Procedure (CUHP) rainfall time-distribution philosophy as recommended in the El Paso County Drainage Manual was used to develop runoff hydrographs for each subwatershed using the HEC-HMS hydrology program. Hydrographs were also developed using the SCS Type II precipitation depth versus time distribution for comparison to previous studies.

V3 selected HEC-HMS as the primary analytical tool for watershed hydrology modeling since use of the HEC-HMS modeling provides a continuation of the general hydrologic modeling methodology established under the 2006 Stormwater Master Plan. The analysis was built upon several critical data sources:

- Current aerial imagery from Google Earth
- 2018 El Paso County LIDAR data
- Field measurements and investigations of existing structures and conveyance systems
- Previous watershed studies and reports
- USGS Web Soil Survey Reports
- GIS

The Monument Creek watershed was subdivided into 8 individually modeled subbasins represented by each stream tributary to Monument Creek, including Monument Creek as one of those subbasins. The area occupied by these 8 basins was defined as the study area, of which there are two main ‘regions’, the eastern portion, which encompasses the Town of Monument, was considered the urbanizing, or developed, region, while the western portions of Monument and Beaver Creek are referred to as the mountainous, or upper watershed region. Each subbasin was further subdivided into discrete subwatersheds for which drainage parameters were developed. Once all parameters were determined for each subwatershed, each basin tributary to Monument Creek was constructed individually using the USACE HEC-HMS v4.12 to determine discharges at key points within each basin, as well as to determine each basin’s output hydrograph at its confluence with Monument Creek. Output hydrographs from each basin were then routed into the model of Monument Creek to determine peak flows throughout the main reach.

3.2 Design Rainfall

Within the region of Colorado where the Town of Monument is located, historically there have been two main design storms used for hydrological modeling that match the front range rainfall response. Short duration thunderstorms, which have a typical duration of 2-hours, and longer duration frontal storms, for which the standard distribution for hydrological study is the SCS Type II distribution. It was decided to model both of these design storms in order to provide continuity with previous studies, as well as to provide a more complete understanding of runoff response in the area. In order to develop the rainfall distributions for this study, one- and 24-hour rainfall depths were obtained from the NOAA Atlas 14 Point Precipitation Frequency Data Server. Within the urbanizing region, which is the primary focus of this study, point precipitation values varied by less than 0.1 inches for all basins. Because of the small degree of variance, it was decided that it would be sufficient to use the centroid of the urbanizing study region to obtain the point precipitation values for all urbanizing region watersheds. The point precipitation rainfall depths varied more into the mountainous region and additional rainfall data was generated from NOAA Atlas 14 at the centroids of the upper/mountainous regions of both Beaver Creek and Monument Creek for each design storm, which can be found in **Error! Reference source not found..** The 10-year and 100-year storm were modeled, which are the design frequencies called for by the El Paso County Drainage Criterion Manual (DCM) for this type of drainage basin planning study. These frequencies were also included in all of the previous studies that were reviewed for comparison, allowing for more throughout validation of the results. **(See Exhibit 11 NOAA Rainfall Centroids).**

To estimate future rainfall the CMIP6 SSP2 climate projection model was selected, which represents a “middle of the road” response for use in determining drainage mitigation solutions for increased resiliency due to the potential impacts of future climate change. This CMIP6 SSP2 model predicts a near term (2021-2040) increase of 5.2% in the maximum 1-day precipitation total for the study area, when compared to a baseline from 1981-2010. This increase was applied to both the 10-year and 100-year SCS Type II 24-hour storm in the V3 model. (An interactive atlas representing a variety of climate models, including the CMIP6 SSP2 model used in this study, can be accessed here: <https://interactive-atlas.ipcc.ch/>)

Storm Duration	Watershed/Region	10-year frequency	100-year frequency
1-hour	Urbanizing Region	1.46	2.52
	Mountainous Beaver Creek	1.32	2.29
	Mountainous Monument Creek	1.32	2.32
24-hour	Urbanizing Region	3.15	5.37
	Mountainous Beaver Creek	3.53	6.06
	Mountainous Monument Creek	3.53	5.95
Future 24-hour	Urbanizing Region	3.31	5.65
	Mountainous Beaver Creek	3.71	6.38
	Mountainous Monument Creek	3.71	6.26

Table 0-1: Point Precipitation Depths (inches)



The study area was modeled using the CUHP/El Paso County method of generating a 2-hour storm, by using the 1-hour point precipitation normalized over a 2-hour period. The SCS Type II 24-hour storm event was also modeled to compare peak flows with FEMA Flood Insurance Study (FIS) data. These two design storm distributions, using their respective rainfall depths, were modeled for the 10-year and 100-year storms.

To account for the differing size of each subbasin and the fact that a point precipitation value was used for the design rainfall depth (taken from NOAA Atlas 14), depth area reduction factors (DARFs) were applied to the rainfall for each subwatershed according to the location of the subwatershed within the overall study area, that is, how much drainage area is tributary to the subwatershed of interest. In most cases this reduced the amount of rainfall each basin received. DARF adjusted rainfall distributions provided in the El Paso County DCM Table 6-5 were applied to the relevant design storms. These reduction factors are intended only to be used for the short, 2-hour duration storm modeled using the CUHP precipitation distribution methodology and were not applied to the longer duration SCS Type II 24-hour storms. For drainage basins less than 10 square miles, the El Paso DCM does not recommend the use of DARF for SCS Type II storms, for drainage basins larger than 10 square miles, the DCM adopts the reduction factors of the Mile High Flood District (MHFD) for SCS Type II storms. However, the choice was made to not utilize the MHFD reduction factors as the 24-hour storm was included as an addition to the study requirement, primarily for continuity with the previously completed Ayres and FEMA FIS studies of the area, which are believed to have also neglected use of these parameters based on initial model results.

3.3 Subwatershed Characteristics

As required by the DCM, SCS Curve Number methodology was used to determine runoff parameters for each subwatershed. The data inputs for this method are:

- Subwatershed area
- Initial abstraction
- Curve number
- Peak Rate Factor
- Lag Time

Additional factors involved in the determination of these parameters include time of concentration, imperviousness, land use, hydrologic soil type, and watershed slope. The subwatershed characteristics for each subwatershed delineated as part of this study are further described below and can be found in Appendix B.

The model prepared for the Town of Monument study area includes land directly tributary to Monument Creek, as well as 7 tributary creeks that have their confluence with Monument Creek through the Town of Monument or upstream of where Monument Creek enters the USAFA property. Monument Creek itself was split into 49 subbasins, covering 36.5 square miles. Of that area, 22.3 square miles, split into 3 subbasins, make up the upper Monument Creek branches that encompass the headwaters in Pike National Forest. The Monument Creek basin east of the Town of Monument is largely rural farmhouses, with the exception of the Palmer Lake surrounding area. The area of the Monument Creek basin within the town boundary is more developed having

primarily commercial and more dense residential areas. **(See Exhibits 1.4A and 1.4B Monument Creek Subbasins)**

Crystal Creek is the upstream-most tributary to Monument Creek, outletting directly into Monument Lake. It is the smallest basin, at only 1.43 square miles, but has a complex hydrology due to the convergence of several major roads and rail lines and was therefore modeled using 31 subwatersheds. The Crystal Creek basin has significant residential, industrial, and commercial areas. **(See Exhibit 1.1 Crystal Creek Subbasins)**

Dirty Woman Creek has its confluence with Monument Creek approximately half a mile downstream of Monument Lake. The Dirty Woman Creek Basin includes much of the central business district, as well as other commercial areas, more dense residential developments, and large-lot housing. Dirty Woman Creek basin was modeled by 21 subwatersheds for a total 4.93 square miles of drainage area. **(See Exhibit 1.2 Dirty Woman Creek Subbasins)**

The Teachout Creek basin is directly south of the Dirty Woman Creek basin and has its confluence with Monument Creek just north of West Baptist Road. The 2.8 square miles that make up this basin were modeled by 20 subwatersheds. The area encompassed by this basin is primarily residential and commercial and has developed significantly in the past twenty years. **(See Exhibit 1.6 Teachout Creek Subbasins)**

The Beaver Creek basin includes both Beaver Creek and its branches, as well as Hay Creek, which joins with Beaver Creek shortly before the confluence with Monument Creek is reached. Like Monument Creek, Beaver Creek originates in Pike National Forest, the forested portion of which makes up the majority of the 26.4 square mile subbasin drainage area. Only 5.8 square miles of the subbasin makes up the developed portion of the subbasin drainage area. The basin was modeled by 11 subwatersheds, 4 of which make up the upper region. The developed area of the Beaver Creek basin is largely farmsteads, with some denser residential housing. **(See Exhibit 1.7 Beaver Creek Subbasins)**

Jackson Creek originates just north of Higby Road and meets Monument Creek just north of the the USAFA border. Like the Teachout Creek basin, the Jackson Creek basin has seen a large amount of recent development, primarily residential and commercial in nature, which makes up much of the lower basin, with large-lot housing only in the northern portions. The basin is 4.3 square miles and was modeled by 8 subwatersheds. **(See Exhibit 1.3 Jackson Creek Subbasins)**

Black Forest Tributary is the second smallest basin at 2.7 square miles and has its confluence with Monument Creek downstream of Jackson Creek. It was modeled using 4 subwatersheds that are largely residential areas, with a mix of denser developments and sparser farmsteads. **(See Exhibit 1.8 Black Forest Tributary Subbasins)**

Smith Creek is the downstream-most tributary included in this study. It has its confluence with Monument Creek just south of North Gate Boulevard, within the USAFA boundary. The 5.2 square miles that make up the Smith Creek basin were modeled using 11 subbasins, which are primarily composed of large-lot housing, with the exception of a few denser residential developments. **(See Exhibit 1.5 Smith Creek Subbasins)**



3.3.1 Subbasin Delineation

The overall study area was divided into 148 subbasins encompassing the 41.5 square miles of urbanizing or developed watershed area, with an additional 7 subbasins to represent the 42.9 square miles of mountainous upper Monument Creek and Beaver Creek basins located in Pike National Forest. Each subbasin was delineated using the project mapping as described in Section 1.4. In the urbanizing watershed area, subbasins ranged in size from one acre to 1,590 acres, with a median size of 90 acres. In the mountainous upper Monument Creek and Beaver Creek basins the subbasins ranged in size from 150 acres to 10,100 acres, with a median size of 4,260 acres.

Each subwatershed and subbasin was delineated in GIS using the most recent El Paso County LiDAR data, which was flown in 2018. Within the Town of Monument, the boundary delineations were further refined using observations from the field investigation and detailed infrastructure data, such as development as-built plan sets. After examination of the Ayres study delineation of the Central Business District, it was decided to preserve the drainage divide between Monument Creek and Dirty Woman Creek defined in the earlier study, as it was completed to a higher degree of detail than this updated study with the use of detailed topographic survey, and the drainage features in this area remain largely unchanged. However, to maintain the planning level scale required, the subbasins in the area were not kept to the same level of detail. This results in the central business district being represented by only 3 subbasins based on the major outfall systems in the area. Considerable new development is underway in the Teachout Creek and Jackson Creek watersheds that is not reflected in the 2018 LiDAR or the plan sets reviewed by V3. It is recommended that any future planning in these basins review the basin and subwatershed boundaries to determine if further refinement of subwatershed delineations are warranted with updated survey.

3.3.2 Land Use and Imperviousness

Characterizations of subwatershed imperviousness were determined both for existing land use and future land use conditions. Land use delineation was conducted using 2025 aerial imagery (Google, 2025) and Town of Monument 2024 zoning maps and then categorized according to El Paso County DCM classifications. Table 6-10 of the DCM, which gives NRCS curve numbers applicable for the design storms (see Section 3.2 above) included in the V3 model for developed or undeveloped watershed conditions. Future land use was determined from the Town of Monument 2017 Comprehensive Plan zoning projections within the Town of Monument borders and for areas that have been identified as possible annexations for the Town. County level future planning for the unincorporated areas around the Town of Monument was not available. A list of land use classifications used in this analysis, as well as the associated curve numbers and percent imperviousness (when provided in El Paso County DCM) are included in Table 3.3.2-1. **(See Exhibit 3.9: Town of Monument Land Use Comparison and Exhibit 10.0: Town of Monument Future Zoning Comparison).**

Land Use Classification	Percent Impervious	NRCS Curve Number per Hydrologic Soil Group			
		A	B	C	D
Oak-aspen-mountain brush mixture - Fair	--	--	48	57	63
Herbaceous - Fair	--	--	71	81	89
Desert shrub - Fair	--	55	72	81	86
Farmsteads	--	59	74	82	86
Open Space - Fair	--	49	69	79	84
Residential: 2 acre	12	46	65	77	82
Residential: 1 acre	20	51	68	79	84
Residential: 1/2 acre	25	54	70	80	85
Residential: 1/3 acre	30	57	72	81	86
Residential: 1/4 acre	38	61	75	83	87
Residential: 1/8 acre or less (town houses)	65	77	85	90	92
Streets: Paved; open ditches	--	83	89	92	93
Urban districts: Commercial and business	85	89	92	94	95
Urban district: Industrial	72	81	88	91	93
Newly graded areas	12	46	65	77	82
Open Water *	100	98	98	98	98

Table 3.3.2-1: El Paso County Land Use classifications and NRCS Curve Numbers assigned to those land use classifications within the study area (* Impervious percentage and curve number for open water not included in the El Paso DCM tables.)



The amount of imperviousness for any given subwatershed area is not typically explicitly called out, or separate from, the SCS Curve Number when using the SCS method of calculating runoff. While imperviousness can be specified, as may be done in an EPA SWMM model, this study incorporates all imperviousness within the subwatersheds in the curve number assigned to each land use classification consistent with the El Paso County DCM CN assignment. Typical imperviousness values for land uses within the Town or County may be found below in Table 3.3.2-2.

Jurisdiction	Zoning Classification	Zoning Description	UDFCD Zoning Classification	Percent Impervious
Monument	OS	Open Space	Undeveloped Areas Greenbelts, agg	2
	R-1	Residential, Single-Family (Low)	Single-family 2.5 acres or larger	12
	R-2	Residential, Single-Family (Medium)	Single-family 0.25-0.75 acres	30
	R-3	Residential, Multi Family	Apartments	75
	PRD	Planned Residential District	Mixed Use Residential	75
	MHP	Manufactured Home Park District	Single-family 2.5 acres or less	45
	PCD	Planned Commercial District	Business Suburban Areas	75
	C	Commercial District	Business Downtown Areas	95
	I	Industrial District	Industrial Heavy	90
	PUD	Planned Unit Development	Mix of Uses	80
El Paso	OS, CAD-O, GA-O, RLUP-O	Conservation	Undeveloped Areas Greenbelts, agg	2
	MHP, MHP-R, MHS, RVP	Mobile Home RV	Single-family 2.5 acres or less	45
	A-35, A-5, F-5, RR-5, RR-2.5	Rural Residential	Single-family 2.5 acres or larger	12
	CC,CR,CS	Commercial Destination	Business Suburban Areas	75
	I-2	Industrial Light	Industrial Light areas	80
	I-3	Industrial Heavy	Industrial Heavy areas	90

Table 3.3.2-2: Imperviousness of zoning classes within the jurisdictions of the study area

3.3.3 Soil and Infiltration

Soils data was obtained from Natural Resources Conservation Service (NRCS) web soil survey reports for El Paso County. Soils are classified based on their characteristics and assigned a map unit symbol. For hydrologic purposes, the soils, by map unit symbol, are assigned to one of four major Hydrologic Soil Groups (HSGs) in order to represent the drainage infiltration capacity of a particular soil. The Hydrologic Soil Groups are consecutively alphabetized and range from Type A, representing well-draining soils that have low runoff potential, to Type D, representing poorly draining soils with high runoff potential. A majority of the soils in the

study area are classified as HSG Type B, which is described as having moderate infiltration rates with moderate runoff potential. The infiltration rates of the different groups, as defined by the El Paso County DCM, are included below in Table 3.3.3-1. To account for losses within the basin due to infiltration, initial abstraction was calculated for each subwatershed using the equation 6-12 presented in the DCM, which multiplies the potential maximum retention in the watershed by 0.1, as opposed to the SCS standard equation default value of 0.2.

NRCS Hydro Soil Group	Infiltration (inch/hr)
A	> 0.30
B	0.15 – 0.30
C	0.05 - 0.15
D	0.00-0.05

Table 3.3.3-1: Infiltration of NRCS Hydrologic Soil Groups

The upper portions of Beaver Creek and Monument Creek are located in Pike National Forest, for which the most detailed soil survey is a NRCS third-order study completed in 1992, as opposed to the El Paso County data, which derives from a more detailed second-order study. From the third-order study the soils within Pike National Forest have been largely assigned a Type D classification, despite the high infiltration rates observed in the soils. Due to this the El Paso County DCM has assigned alternative HSG classification for map symbols within the third-order study zone that can be used for city planning, but don’t necessarily apply for regulatory modeling. This would result in the upper Beaver Creek and Monument Creek basins being assigned to primarily B type soil, increasing infiltration within the basins and reducing runoff volumes and downstream peak flow rates. In order to present the most conservative estimates, and to align more closely with the FEMA regulatory models in the area, it was decided to utilize the original HSG classifications that are reflected in the NRCS data. **(See Exhibits 2.0 to 2.8: USGS Soils Maps for soil group distribution)**

3.3.4 SCS Curve Number Calculation

In the SCS Curve Number method of calculating runoff the curve number represents a combination of both the land use and soil classification to reflect the amount of runoff that would be generated within a given watershed or subbasin. Composite runoff curve numbers for each subbasin were calculated using the process outlined in section 4.4 of the El Paso County DCM using the curve numbers and hydrologic soil groups already discussed. Where HSG Type A/D soils existed, an average CN was calculated from the listed HSG Type A and HSG Type D values. Where values in the table were missing, such as for some HSG Type A soils, the next highest available CN value (in this example, HSG Type B soils) for that land use condition was chosen.

Overall, the composite curve numbers for the subbasins ranged from 57.6 to 92.0, with a median of 74. The Crystal Creek watershed had the highest curve numbers, with a median of 90.5, Jackson Creek had the second highest at 76.6, and Beaver Creek had the lowest at 66.0. **(See Table 1 in Appendix B and Exhibits 1.0 to 1.8: Subwatershed Maps for a breakdown of the characteristics of the individual subbasins)**

Future land use mapping was used to develop estimated curve numbers for modeling the projected conditions of the study area for the near term (2021-2040) climate window. In areas where the proposed zoning differs from existing zoning in a way that reduces the imperviousness of a subbasin, and thereby reducing the curve



number, a conservative decision was made to use the existing higher CN value for the future condition within the watershed model. This was observed to be largely due to differing levels of granularity between the current and future zoning maps, which included more open space areas than previous maps. The underlying soil type was assumed not to change in the future condition. **(See Exhibit 9.0: Town of Monument Future Condition Curve Numbers and Exhibit 10.0: Town of Monument Zoning Comparison).**

3.3.5 Time of Concentration Calculation, Watershed Slope, and Peak Rate Factor

Time of concentration calculations followed the methodology outlined in Section 6.3.2 of the El Paso County DCM Volume 1 Update, with lag time calculated as 0.6 times the time of concentration. The flow path from the hydrologically furthest point was delineated using 2-foot contours generated from the 2018 El Paso County LiDAR. Where available detailed plan sets for new developments were consulted but storm sewer networks were not included in the modeling, due to the high-level scope of the study, and were used only to clarify overall drainage patterns when there was confusion about flow paths. Roughness coefficients were determined from Table 6-11 of the El Paso County DCM for overland flow, and from table 10-2 for open channel flow; flow velocity during shallow concentrated flow conditions were estimated from Figure 6-25. Roughness coefficients used in time of concentration calculations can be found below in tables 3.3.5-1 and 3.3.5-2.

Surface Description	Roughness Coefficient (Manning’s n)
Smooth surfaces (concrete, asphalt, gravel, bare soil, etc.)	0.011
Short grass prairie	0.150
Dense grasses	0.240
Range (natural)	0.130
Woods, light underbrush	0.400

Table 3.3.5-1: Selected roughness coefficients for overland flow

Type of Channel & Description	Normal Roughness Coefficient
Lined or built-up channel: concrete	0.013
Lined or built-up channel: grass	0.040
Natural Streams: Clean, straight, full stage, no rifts or deep pools	0.030
Natural Streams: Clean, winding, some pools and shoals, some weeds and stones	0.045
Natural Streams: Sluggish reaches, weedy, deep pools	0.070
Natural Streams: Very weedy reaches, deep pools, or floodways with heavy stand of timber and underbrush	0.100

Table 3.3.5-2: Selected roughness coefficients for open channel flow

Watershed slope was calculated along the same paths that were delineated for the time of concentration calculation. Spot elevations were taken at the 10% and 85% distances from the terminus of the flow path, and the slope between those two points was taken as the average subwatershed slope. The steepest subwatershed slope in the study area was 15.8%, found in upper Beaver Creek, the shallowest slope was 1%, found in Monument Creek, and the median was 4%. Beaver Creek, including the upper basin area, was the steepest basin on average, and Teachout Creek basin was the shallowest.

In the SCS Unit Hydrograph method of calculating runoff, the peak rate factor (PRF) determines the overall shape of the hydrograph in conjunction with a given rainfall pattern. Lower peak rate factors are typically associated with flatter terrain or terrain with significant storage features resulting in peak flow rate attenuation and higher peak rate factors are associated with steep terrains having little potential for storage and peak flow attenuation The SCS standard PRF is 484, which represents a rolling landscape. Due to the steeper slopes present in the study area, a peak rate factor of 600 was used for all subwatersheds.



3.4 Watershed Characteristics Summary

3.4.1 Monument Creek Watershed

Monument Creek originates in the mountains to the west of the Town of Monument and is the main drainage collector in the area. It runs generally north to south near the western edge of the Town and terminates in Colorado Springs where it meets Fountain Creek. Within the study area there are seven named tributary streams to Monument Creek, in addition to a handful of smaller unnamed minor tributaries that were included as part of the Monument Creek basin. Major hydrologic features include Monument Lake, which provides detention for a considerable portion of the basin. Features which played a large role in the delineation of subwatersheds were Highway 105, which runs through the Town of Monument and through the northern part of the urbanizing region, and Interstate 25 and the Union Pacific Railroad, which both run parallel to the Creek through the urbanizing region. All of these major transportation features have a big influence on drainage in the region, restricting flow to a limited number of crossings, which often served as the downstream most point for the subwatershed delineation.

Monument Creek in the mountainous region is very rocky, with thick brush and numerous small ponds. In the urbanizing region, the channel is more meandering, with a wider floodplain, less rockiness, and sparser vegetation. Monument Creek flows 19.7 miles from its origin to its confluence with Smith Creek (the southernmost boundary of this study). The main upper branch in the mountainous region is 7.4 miles long, and the portion in the urbanizing region is 12.0 miles long. The highest elevation in the basin is in the mountains where the Monument Creek originates, at 9,420 feet. Runoff collects and forms a defined channel at an elevation of about 9200 feet. The downstream most point of Monument Creek within the study area is at the confluence with Smith Creek, with an elevation of 6,570 feet. Monument Creek exits the mountainous region and enters the urbanizing region at an elevation of 7,290 feet. The general overall slope of the stream is 2.5%. The general slope in the mountainous slope is 5.0%, and the general slope in the urbanizing region is 1.1%.

Subwatershed size varied greatly in the Monument Creek basin. The smallest delineations were within the Town of Monument, and in areas with complex flow paths due to numerous structures or detention facilities, while the edges of the study area, with little to no development, required less detail. Of the 49 delineated subwatersheds, the largest was 5,760 acres, the smallest was 6 acres, and the median size was 105 acres. In the upper subwatersheds, in Pike National Forest, Monument Creek basin is primarily HSG Type D soils, with poor infiltration, and high rates of runoff. In the urbanizing region, the soils shift to Type B soils, showing improved infiltration and less runoff in these subwatersheds. The mountainous region of Monument Creek is forested mountain terrain, assigned as oak-aspen-mountain brush for NRCS land use classification. The urbanizing region of the watershed is primarily farmsteads, herbaceous rangeland, and large-lot residential housing, with the areas with the Town of Monument a mix of commercial, industrial, and denser residential developments. The median calculated curve number based on soil type and land use is 73.7. **(See Appendix B Table 1F for a detailed breakdown of all subwatershed characteristics)**

A description of all major named tributary branches of Monument Creek follows, organized by where the tributaries join Monument Creek from upstream to downstream

3.4.2 Crystal Creek Watershed

Crystal Creek is the upstream and northernmost tributary of Monument Creek. It has two main branches and is divided east to west by Interstate 25, with runoff from the eastern subwatersheds, and main branch, flowing

through a single culvert under the Interstate. Highway 105 and the Union Pacific Railroad also served as major drainage divides in the basin. It was found in the FIS studies, and confirmed in the results here, that a diversion exists between Crystal Creek and Dirty Woman Creek at the I25 crossing, where water overtopping Monument Hill Road in large storm event flows south into Dirty Woman Creek.

Crystal Creek is an urbanized stream, with its origin in a residential area northeast of the Town of Monument. The main branch is largely confined to narrower channels flanked by built areas. The secondary branch and the area downstream of where the two branches meet is more open, with a wider floodplain that is primarily grassy, with few trees and little brush. The highest elevation in the watershed is at 7,510 feet, with the beginning of the defined channel at an elevation around 7,290 feet. The confluence of Crystal Creek occurs at Monument Lake at an elevation of 6,920 feet. The main branch is 2.5 miles long with a general overall slope of 1.6%.

The delineation of Crystal Creek included many smaller subwatersheds in order to determine flow to the many culverts along both branches of the creek. The largest of the 31 subwatersheds is 360 acres, the smallest one acre, and the median subwatershed size is 15 acres. Like all of the urbanizing regions, the Crystal Creek basin is almost entirely Type B soils. Land use in Crystal Creek is primarily commercial, though a large portion of the area assigned as commercial is school campus, which is not assigned its own land use class in the El Paso DCM. It was determined that the two could have a similar percent impervious, since, even though the school area includes what seems like more green space, the green space is mostly sports fields, which are typically built to be well draining but can generate considerable runoff. The median calculated curve number based on soil type and land use is 90.5. **(See Appendix B Table 1B for a detailed breakdown of all subwatershed characteristics)**

3.4.3 Dirty Woman Creek Watershed

Dirty Woman Creek is the next downstream tributary to Monument Creek and is south of the Crystal Creek Basin. Like the Crystal Creek Basin it is divided east to west by Interstate 25, with a single culvert allowing for conveyance under the interstate. The Union Pacific Railroad largely divides this basin from the Monument Creek basin, with only a small area west of the railroad before its confluence with Monument Creek. This basin also includes Woodmoor Lake which provides considerable storage to attenuate the flows of the subwatersheds draining to it. Two other important transportation features that determine the flow of runoff within the Dirty Woman Creek Basin and those south of it are Old Denver Road and the New Santa Fe Regional Trail.

Dirty Woman Creek flows primarily through residential areas and has a wide grassy floodplain with several small ponds and wetland-type zones along its length. The highest elevation in the Dirty Woman Creek basin is 7,510 feet. Runoff collects and forms a defined channel at an elevation of around 7,320 feet. The confluence of Dirty Woman Creek and Monument Creek occurs south of Monument Lake, at an elevation of 6,860 feet. Dirty Woman Creek has one main channel, with a secondary branch to the north that flows into Woodmoor lake. The main branch is 4.1 miles long with a general overall slope of 2.1%.

For the 21 delineated subwatersheds, the size varied from 7 acres to 397 acres, with a median size of 156 acres. The Dirty Woman Creek basin is primarily made up of Type B soils, with some Type D along the wide floodplain areas of the main and secondary branches. The majority of the basin is 1/3 – 2 acre residential housing, with commercial zones in the central business district. The median calculated curve number based on soil type and land use is 70.8. **(See Appendix B Table 1C for a detailed breakdown of all subwatershed characteristics)**



3.4.4 Teachout Creek Watershed

Teachout Creek has many small branches and two large branches, the main to the north, and a secondary to the south. The main branch originates around Lewis-Palmer Highschool in a residential area. Interstate 25 continues to serve as a major drainage divide, with two crossing points, one each for the north and south branches of Teachout Creek. Old Denver Road, the New Santa Fe Trail, and the Union Pacific Railroad (UPRR) run parallel to Interstate 25 and serve as a similar barrier. Teachout Creek has seen the most development in the last twenty years, with ongoing construction that will continue to alter the hydrology of the basin.

Teachout Creek is similar to Dirty Woman Creek, with wide floodplains and only a small amount of brush and trees. The highest elevation in the Teachout Creek watershed is 7,410 feet, with the defined channel beginning at an elevation around 7,000 feet. The lowest point in the watershed occurs at the confluence with Monument Creek, which occurs downstream of Willow Ranch Road, at an elevation of 6,770 feet. The main branch of Teachout Creek is 2.3 miles long, with a general overall slope is 1.9%.

The subwatershed delineation of Teachout Creek was the most impacted by the age of the available LiDAR. Construction plans were used when possible to reflect the development that has occurred and is in progress within the basin. The largest of the 20 subwatersheds delineated is 266 acres, the smallest 12 acres, and the median size is 73 acres. The Teachout Creek basin is almost entirely Type B soils and the land use in the basin is a mix of residential, commercial, and developing open areas. The median calculated curve number based on soil type and land use is 76.4. **(See Appendix B Table 1H for a detailed breakdown of all subwatershed characteristics)**

3.4.5 Beaver Creek Watershed

The next downstream tributary to Monument Creek is Beaver Creek, which is southwest of the Town Of Monument, and was included primarily to understand flow into the USAFA. The Beaver Creek watershed includes one main branch and 3 secondary branches, one of which is named Hay Creek Tributary. Two larger storage ponds, Bristlecone Lake and Pinon Lake, provide significant detention within the basin. This is the most rural of all the basins included in the study, with no major roadways to divide the basin.

In the mountainous region Beaver Creek is very rocky, with thick brush and numerous small ponds. In the urbanizing region, Beaver Creek is more meandering, with a wider floodplain, less rockiness, and sparser vegetation. The highest elevation in the Beaver Creek basin occurs in the mountainous region, at 8930 feet. Runoff collects into a defined channel which begins at an elevation around 8,800 feet. The lowest elevation in the basin occurs at the confluence with Monument Creek, at 6,720 feet. The transition from the mountainous region to the urbanizing region occurs at 7,900 feet. The main branch of Beaver Creek is 8.5 miles long, with 3.8 miles in the mountainous region, and 4.7 miles in the urbanizing region. The general overall slope of the entire Creek is 4.6%, with the mountainous portion having a general slope of 5.9%, and the urbanized area having a general slope of 3.6%.

As there were no major structures of interest along Beaver Creek, the subwatershed delineation was less detailed. Of the 11 subwatersheds, the largest is 10,140 acres, the smallest is 150 acres, and the median size is 344 acres. In the mountainous region the soils are primarily Type D, with some type C. In the urbanizing region the soils are Type B and D. The mountainous region of Beaver Creek is forested mountain terrain, assigned as oak-aspen-mountain brush for NRCS land use classification. The urbanizing region of the basin is the oak-aspen-mountain brush mixture, farmsteads, and herbaceous rangeland. The denser residential

housing is based around Bristlecone Lake and Pinon Lake. The median calculated curve number based on soil type and land use is 66. **(See Appendix B Table 1A for a detailed breakdown of all subwatershed characteristics)**

3.4.6 Jackson Creek Watershed

Jackson Creek is similar to Teachout Creek in many ways. It has many small branches and has also seen considerable recent development. The downstream portion has many notable transportation features that serve to break up the basin, including Baptist Road, Old Denver Road, UPRR, New Santa Fe Trail, and Interstate 25, which all run through the basin not far from the Monument Creek confluence.

Jackson Creek has many branches, most of which have wide grassy floodplains with pools and wetland-like areas. The main branch of Jackson Creek includes areas with severe erosion. The central branch is partially buried as it crosses through a large commercial area. The highest elevation in the Jackson Creek watershed is 7,540 feet, with the start of the main defined channel at an elevation around 7,260 feet. The confluence of Jackson Creek and Monument Creek occurs at 6,670 feet. The main branch of Jackson Creek is 4.4 miles long, with a general overall slope of 2.6%.

Jackson Creek was delineated into 8 subwatersheds, the largest is 1,570 acres, the smallest is 60 acres, and the median size is 156 acres. The Jackson Creek basin is primarily made up of Type B soils, with some Type D along the upstream wide floodplain areas. Land use in Jackson Creek is primarily a mix of large lot residential housing, denser residential developments, and herbaceous rangeland, with some commercial and industrial zones. The median calculated curve number based on soil type and land use is 76.6. **(See Appendix B Table 1E for a detailed breakdown of all subwatershed characteristics)**

3.4.7 Black Forest Tributary Watershed

Black Forest Tributary joins Monument Creek just south of the Town of Monument boundary, within the USAFA boundary. Interstate 25 also runs through the basin close to the Monument Creek Confluence, with a single crossing.

The tributary originates in a dense residential area as a narrow channel surrounded by brush with several small ponds inline ponds. The downstream portion is more similar to Jackson Creek and Dirty Woman Creek with large floodplains and little brush. The highest elevation in the Black Forest Tributary basin is 7,540 feet, with the start of the defined channel at an elevation around 7,070 feet. The lowest elevation in the basin occurs at its confluence with Monument Creek at 6,650 feet. Black Forest Tributary is 2.5 miles long, with a general overall slope of 3.2%.

Of the 4 subwatersheds that were delineated in Black Forest Tributary, the largest is 1,200 acres, the smallest is 52 acres, and the median size is 236 acres. Like the rest of the urbanizing region, the Black Forest Tributary basin is almost entirely Type B soils, with only a small amount of Type D and C. The basin is a mix of dense residential developments, farmsteads, and herbaceous rangeland. The median calculated curve number based on soil type and land use is 72.3. **(See Appendix B Table 1D for a detailed breakdown of all subwatershed characteristics)**



3.4.8 Smith Creek Watershed

Smith Creek flows through large lot residential areas, having a more confined channel in the upstream half of the subbasin with more brush and trees. The downstream half of the subbasin has wider floodplains, but also a series of road crossings close together. The highest elevation in the Smith Creek basin is 7600 feet, with the start of the defined channel at and elevation around 7,350 feet. The lowest elevation in the basin is at the confluence with Monument Creek, just south of North Gate Boulevard at 6,570 feet. Smith Creek is 4.7 miles long with a general overall slope of 3.1%.

Smith Creek was delineated into 11 subwatersheds, ranging in size from 62 acres to 660 acres, and the median size was 220 acres. Save for a small section of Type D soil along the main channel branch, the Smith Creek basin is entirely Type B soil. Smith Creek is entirely residential housing, a good portion of which is farmsteads, with some newer, more dense developments to the north and south of the basin. The median calculated curve number based on soil type and land use is 74. **(See Appendix B Table 1G for a detailed breakdown of all subwatershed characteristics)**

3.5 Hydrograph Routing

When combining subwatersheds and routing the subwatershed hydrographs from subwatershed confluence to subwatershed confluence along each individual basin’s main streamline, the Kinematic Wave routing method was selected. This method required establishing basin streamline channel length, slope, manning’s n, bottom width, and side slope for each reach where routing was determined to be important or appropriate for inclusion in the hydrologic model. Roughness coefficients (Manning’s ‘n’ values) for routing channel flow in HEC-HMS were selected using Table 10-2 of the El Paso County DCM. Simplified trapezoidal sections were used for all modeled reaches, and approximate channel slope, side slope and base width were estimated for each channel section based on the County LiDAR. While HEC-HMS allows for an unlimited number of reaches within a basin, it was decided to limit the sections included in the model to the major downstream portions of each stream. The most complexity was reserved for those basins that have the most overlap with the Town of Monument boundary, including Crystal Creek, Dirty Woman Creek, Jackson Creek, and Teachout Creek.

To better enable analysis and validation of each individual subbasin, or the entire watershed, Monument Creek and each one of the 7 tributary creeks were modeled separately. Outfall hydrographs from each of the tributary streams were then routed via a source element into the Monument Creek watershed at the appropriate confluence locations. In HEC-HMS source elements are used to provide additional flow to the model of interest from another model. In this fashion tributary hydrographs were developed first so as to provide the necessary flow hydrograph data into the Monument Creek model. In order to determine the flow hydrograph to input to the source element, a sink element is used, which in HEC-HMS serves as the outlet of a watershed by determining the total inflow with no outflow. Similarly, during large storm events a diversion from Crystal Creek to Dirty Woman Creek exists just upstream of the I25 culvert structure. In order to model this connection, a sink element was used in the Crystal Creek watershed to capture flow that overtopped the Monument Hill Road culvert, which field investigation revealed to be the most likely connection. The hydrograph of this secondary Crystal Creek outfall was then assigned to a source element within the Dirty Woman Creek watershed model to simulate the connection, or overflow from one basin to another adjacent basin.

HEC-HMS allows for the modeling of culverts with a defined upstream storage area but is not able to represent complex hydraulic systems such as flow restrictors or storm sewers, except perhaps through inclusion of a system of tables computed to approximate or represent the restrictor or storm sewer capacity. Therefore,

changing backwater influences or other complex flow interchange situations are better computed in other hydraulic modeling programs. **(See Exhibit 10: HEC-HMS Schematics).**

3.5.1 Detention Facilities

Likely detention facilities were identified through field survey and current aerial imagery. Stage storage relationships were developed for ponds within the study area based on 2018 El Paso County LiDAR data and field inspection, supplemented by as-built plans when needed. Ponds deemed to have only minor storage potential for the scale of the current study were excluded, as were those that are privately owned, unless a drainage easement and maintenance agreement are in place. Regional regulatory detention facilities that are located along major drainage ways, and meet the above requirements, were included in the V3 model.

(See Exhibit 6: Ponds and Detention Facilities for mapped detention basins and Exhibit 7: Field Photo Documentation for field inspection photos)

3.5.2 Evaluation of Existing Facilities

A comprehensive field investigation was carried out to assess the condition and effectiveness of the Town’s current flood mitigation infrastructure, including major culverts, bridges, and regional detention facilities. The evaluation leveraged:

- 2025 aerial imagery (Google Earth)
- 2018 El Paso County LIDAR data
- On-site measurements and inspections

Special attention was given to infrastructure within the Town limits, where basin subdivisions were refined using detailed facility data rather than relying solely on topographic contours. This approach ensured greater accuracy in understanding and modeling existing urban drainage patterns and infrastructure interactions. The assessment identified several facilities that require upgrades to accommodate increased runoff resulting from urban expansion and corresponding increased imperviousness over the past two decades.

After compiling a list of all structures identifiable by the above measure, those located within the Town of Monument deemed critical by either (1) their location along a significant waterway, or (2) those identified as having issues during the field inspection were included in the V3 HEC-HMS model. Pipe inverts and lengths were determined first by detailed plan sets or County DOT data, or else by current aerial imagery and County LiDAR if more specific information was not available. 2018 County LiDAR was used to generate stage-storage relationships for the area upstream of each culvert, as well as an approximate cross section of the roadway in order to determine the potential for overtopping.

Representative infrastructure and field observations are documented in **Exhibit 7: Field Photo Documentation**, the results of the culvert modeling can be found in **Chapter 5 Capital Improvement Recommendations**.



Chapter 4 Field Conditions and Problem Areas

4.1 Overview

To complement the hydrologic modeling presented in Chapter 3, V3 Companies conducted a comprehensive field investigation of stormwater infrastructure throughout the study area during 2025. The investigation included on-site inspections of major culverts, bridges, road crossings, regional detention facilities, and open channels across all seven modeled basins. Our team used 2025 aerial imagery, 2018 El Paso County LiDAR data, as-built plan sets, and County DOT records to identify and evaluate existing structures, documenting conditions including sediment accumulation, vegetation encroachment, structural deterioration, scour, debris blockage, and beaver activity.

A total of 36 culverts and bridges were assessed and incorporated into the HEC-HMS model. Of these, 18 were found to overtop in either the 10-year or 100-year design storm under existing conditions. The Crystal Creek and Teachout Creek basins account for more than half of all overtopping structures, and Old Denver Road emerged as the single most deficient corridor, with every modeled culvert on that roadway undersized across three separate watersheds. The investigation also documented significant erosion at the Jackson Creek pond and dam complex, the Teachout Creek channels near Lewis-Palmer High School, and the Monument Creek corridor at Mount Herman Road, as well as widespread sediment-related capacity reductions at multiple crossings.

Section 4.2 presents the observed problem areas organized by deficiency type, with references to Exhibit 7 (Field Photo Documentation) and Exhibit 8 (Problem Area and Risk Identification). Section 4.3 addresses ownership and maintenance responsibility for each identified problem area, with reference to Exhibit 9 (Ownership and Maintenance Map). Together, these findings provide the field-verified foundation for the capital improvement recommendations in Chapter 5.

4.2 Observed Problem Areas

The field investigation identified problem areas throughout the study area that fall into three principal categories: conveyance bottlenecks and flooding locations, active erosion and channel instability, and undersized road crossings. The following subsections describe the findings by category. Visual evidence is provided in Exhibit 7 (Field Photo Documentation) and mapped locations are shown on Exhibit 8 (Problem Area and Risk Identification).

4.2.1 Conveyance Bottlenecks and Flooding Locations

Multiple locations were identified where sediment accumulation, vegetation overgrowth, structural deterioration, or debris blockage has reduced conveyance capacity to the point of causing or threatening road overtopping and upstream ponding.

Crystal Creek at Monument Hill Road. The culvert immediately upstream of I-25 is undersized, causing flow to be diverted south into the Dirty Woman Creek watershed during high-flow events. This diversion pattern is consistent with the FEMA regulatory floodplain mapping for the area. Upstream of the N Monument Lake Road crossing, a wide flood area with dense vegetation clogging was observed (Photo 1), reducing effective conveyance into the structure.

Dirty Woman Creek at Old Denver Road. The culvert at this crossing is completely clogged and structurally deformed, with erosion matting on the roadway surface suggesting repeated overtopping (Photo 8). The structure is no longer functional. Between Old Denver Road and the Union Pacific Railroad, ponding and active erosion were documented (Photo 11), confirming that flow that cannot pass through the clogged culvert is backing up and finding alternative paths.

Dirty Woman Creek at Highway 105. Standing water and possible blockage were observed at the crossing, with large ponding upstream seemingly caused by vegetation overgrowth that has choked the conveyance corridor (Photo 10).

Teachout Creek at Union Pacific Railroad. The railroad divides the majority of the Teachout Creek basin from its confluence with Monument Creek. All culverts under the railroad are undersized and exhibit maintenance deficiencies. The southern crossing shows heavy sediment buildup and overgrowth (Photo 24). The northern crossing has an upstream pond impounded by beaver dams (Photo 28). West of the electrical substation, a culvert has been completely washed out (Photo 27).

Teachout Creek at Old Denver Road. The culvert downstream of the railroad was observed at capacity during low-flow conditions (Photo 34), likely due to a sediment build up and indicating that even routine runoff events stress this crossing. Similar to the railroad crossings, further development in the basin will compound this deficiency.

Teachout Creek at Bowstring Road. The upstream intake grate is flush with grade (Photo 31), and the 36-inch circular culvert is not sized for design flows. Water will overtop Bowstring Road during storm events.

Jackson Creek at Leather Chaps Drive. The downstream end of the crossing is choked with cattails and sediment (Photo 14). The upstream pond that serves as a regional detention facility is poorly maintained. A second outfall at the same crossing is also clogged with cattails (Photo 17).

4.2.2 Erosion and Channel Instability

Active erosion and channel instability were documented at several locations, with the most severe conditions concentrated along Jackson Creek, Teachout Creek, and Monument Creek.

Jackson Creek pond and dam complex. A series of ponds and dams along Jackson Creek upstream of Jackson Creek Parkway has created permanent ponding through the reach, with overland flow channels around the dams exhibiting vertical erosion incisions exceeding ten feet in places (Photos 13, 15, and 16). Head cutting is actively migrating upstream, threatening additional infrastructure. An overflow structure for the detention basin upstream of Leather Chaps Drive (Photo 12) shows signs of stress from flows exceeding its design capacity. Poor erosion control measures were also observed at active development sites on the northeast side of Leather Chaps Drive (Photo 18).

Teachout Creek south of Lewis-Palmer High School. Two channel reaches and culvert outlets in this area exhibit active erosion. At the intersection of Higby Road and Bowstring Road, the riprap energy dissipation is insufficient for expected flows, terminates at the property line, and the channel downstream is incised (Photo 32). North of Jackson Creek Parkway, outfalls on the east side of the Teachout basin show poor erosion control with visible erosion and sedimentation (Photo 33).



Monument Creek at Mount Herman Road. The Mt. Herman Road bridge is deteriorating, with steel beams displaced into the creek channel causing localized erosion, and abutments in declining condition (Photo 20). Active erosion was observed both upstream (Photo 21) and downstream of the crossing.

4.2.3 Undersized Crossings

Of the 36 culverts and bridges assessed in the HEC-HMS watershed model, 18 were found to be undersized in either the 10-year or 100-year design storm. The majority of undersized structures are located in the downstream portions of their respective watersheds, where contributing drainage areas are largest and the cumulative effects of upstream development are most pronounced.

In the Crystal Creek watershed, 7 of 13 modeled culverts were found to be undersized. Field inspection confirmed vegetation clogging at the Highway 105 crossing (Photo 3), sediment and structural concerns at the Union Pacific Railroad crossing (Photo 4), and overgrowth at the Washington Street crossing (Photo 5). In the Dirty Woman Creek watershed, 3 of 5 modeled culverts were undersized, with the Old Denver Road crossing completely non-functional as described above. Signs of deterioration were documented at the Knollwood Drive crossing, though flow remained unobstructed at the time of inspection (Photo 6). In the Jackson Creek watershed, 3 of 9 modeled culverts were undersized, with sediment buildup and upstream failures documented at Jackson Creek Parkway (Photo 13) and cattail blockage at Leather Chaps Drive (Photos 14 and 17). In the Teachout Creek watershed, 5 of 10 modeled culverts were undersized, with field evidence of sediment, overgrowth, beaver activity, and structural failure at multiple railroad and road crossings (Photos 24 through 29 and 34).

Old Denver Road is the single most deficient corridor in the study area. Across two watersheds—Dirty Woman Creek, Teachout Creek north branch, and Teachout Creek south branch—every modeled culvert on this roadway was found to be undersized. More than half of all undersized structures in the study area are concentrated in the Crystal Creek and Teachout Creek watersheds. The Teachout Creek watershed has experienced significant development over the past two decades and continues to have active construction, which will further worsen existing capacity deficiencies if not addressed.

4.3 Ownership and Maintenance Responsibility

The problem areas identified in Section 4.2 are distributed across infrastructure owned or maintained by several distinct entities. Because the Town of Monument’s MS4 permit creates regulatory responsibility for all stormwater facilities within the permit boundary—regardless of ownership—understanding who controls each facility is essential for determining how deficiencies will be addressed, who bears the cost of improvements, and what coordination is required before work can proceed. Exhibit 9 (Ownership and Maintenance Map) displays the ownership classification for each problem area identified in this chapter.

Town of Monument. The Town directly owns and maintains a limited number of road crossings and drainage conveyances, primarily along local roads within the municipal boundary. Town-owned problem areas include crossings on Washington Street, Knollwood Drive, and portions of the Crystal Creek and Dirty Woman Creek conveyance corridors. For these facilities, the Town has direct authority to program maintenance, fund capital improvements, and set inspection schedules. Many of the sediment- and vegetation-related capacity reductions documented in Section 4.2 at Town-owned structures can be addressed through the maintenance programs recommended in Chapter 5.

Triview Metropolitan District. Triview is the most significant special district partner within the study area. Several of the problem areas along Jackson Creek, including one of the detention facilities upstream of Leather Chaps Drive where cattail overgrowth and sediment accumulation were documented (Photos 14 and 17)—are within Triview’s maintenance jurisdiction. The 2020 Kimley-Horn drainage assessment identified multiple deficiencies at Triview facilities, including cattail overgrowth, sediment accumulation, undercut culverts, steep or eroded banks, and outdated outlet structures. Triview representatives have stated that all deficiencies noted in the assessment have been addressed and have expressed their intent to remain an active partner in regional watershed stewardship. Formalizing this commitment through a maintenance coordination agreement, as recommended in Chapter 5, would provide accountability and ensure consistent maintenance standards across the permit boundary.

El Paso County. Several problem areas are located on County-maintained roads or infrastructure. The crossings along Old Denver Road—the single most deficient corridor in the study area, with every modeled culvert undersized across two watersheds—fall within County jurisdiction. The New Santa Fe Regional Trail crossings on Dirty Woman Creek and Jackson Creek are also County facilities. Improvements at these locations will require intergovernmental coordination, shared funding, and joint project delivery with El Paso County.

Colorado Department of Transportation (CDOT). CDOT owns and maintains the Highway 105 crossings on Crystal Creek and Dirty Woman Creek, as well as the I-25 crossings on Teachout Creek. The Highway 105 crossing on Crystal Creek is operating at approximately 50 percent capacity due to sediment blockage, and the Teachout Creek crossings at I-25 show cattail and reed overgrowth (Photo 26). Capital improvements and maintenance at these locations require coordination through CDOT’s permitting and project development process.

Union Pacific Railroad (UPRR). The railroad crossings on Crystal Creek, Dirty Woman Creek, and Teachout Creek are owned by the Union Pacific Railroad. The Teachout Creek crossings are among the most problematic in the study area, with documented sediment buildup, beaver dams, washed-out culverts, and overgrowth (Photos 24, 27, and 28). Any improvements to railroad crossings require coordination with UPRR’s engineering and right-of-way departments, which typically involves extended lead times and compliance with railroad design and access requirements.

HOAs and Private Property Owners. Private detention ponds and stormwater features constructed as part of subdivision development are typically the long-term maintenance responsibility of HOAs, commercial property owners, or individual landowners. Ownership ambiguity has been documented at several locations, including the pond at the My Storage at Jackson Creek property, where the private owner is responsible for maintenance even though the facility contributes flows into the district and Town systems. The erosion control deficiencies observed at the active development site northeast of Leather Chaps Drive (Photo 18) and the cattail-choked outfalls along Jackson Creek illustrate the consequences of inadequate private maintenance. The current Municipal Code does not provide the inspection authority, right-of-entry provisions, or enforcement procedures needed for the Town to ensure private facilities are maintained to MS4 standards—a gap addressed in the regulatory recommendations of Chapter 6.



Chapter 5 Capital Improvement Recommendations

5.1 Overview

This chapter presents the capital improvement recommendations developed through the Town of Monument Stormwater Master Plan. These recommendations are the culmination of the watershed characterization (Chapter 2), hydrologic analysis (Chapter 3), flood hazard identification, and field investigation (Chapter 4) described in the preceding chapters. Together, these efforts provide the technical foundation for a prioritized program of stormwater investments that addresses the Town’s most pressing infrastructure deficiencies while positioning the community for long-term resilience.

5.1.1 Purpose of the Capital Improvement Plan

The purpose of this Capital Improvement Plan (CIP) is to translate the hydrologic studies findings into a structured program of projects, maintenance actions, and partnerships that the Town can implement over a defined planning horizon. The CIP serves as both a technical guide for engineering staff and a decision-making framework for Town leadership, providing the information needed to sequence investments, allocate funding, coordinate with regional partners, and track progress.

5.1.2 Relationship to Study Goals

The CIP advances each of the six study objectives as follows:

Flood Risk Reduction. The CIP identifies culvert replacements, regional detention facilities, and channel improvements that will eliminate or reduce overtopping at 18 structures across four watersheds. High-priority projects include the non-functional Old Denver Road crossing in Dirty Woman Creek, the inter-basin diversion at Monument Hill Road in Crystal Creek, and the New Santa Fe Trail crossing that threatens the regional wastewater treatment facility in Jackson Creek. All replacement structures are recommended to be sized to the future-condition scenario.

Regulatory Compliance. Regional detention facilities and channel stabilization projects incorporate water quality BMPs consistent with El Paso County Drainage Criteria, the Town’s MS4 permit post-construction requirements, and FEMA floodplain management standards.

Environmental Protection. Channel stabilization, sediment reduction, and water quality improvements directly support Preble’s Meadow Jumping Mouse habitat protection and the broader restoration objectives of the Monument Creek Watershed Restoration Master Plan (2016), the USAFA Corridor Planning Study (2023), and the Monument Creek Site Conservation Team.

Infrastructure Planning and Maintenance. The CIP provides both capital and maintenance recommendations. At least five of the 18 overtopping structures have maintenance-related obstructions that, if cleared, could restore partial or full design capacity at a fraction of the cost of structural replacement. The parallel maintenance program—sediment removal, vegetation management, structure inspection, and beaver management—addresses these deficiencies.

Climate Change Resiliency. The hydrologic model incorporates the CMIP6 SSP2 climate projection, which predicts a 5.2 percent near-term increase in maximum one-day precipitation. The CIP recommends sizing all

new and replacement infrastructure to this future rainfall scenario. Without intervention, three structures that do not currently overtop in the 10-year event will begin doing so under the projected climate condition.

Regionwide Coordination. The CIP identifies projects requiring partnership with the Union Pacific Railroad, El Paso County, CDOT, Triview Metropolitan District, USAFA, and the Fountain Creek Watershed District. For each, the CIP notes coordination requirements and recommends early engagement to establish partnership agreements and shared funding mechanisms.

5.1.3 Organization of Chapter

The remainder of this chapter is organized as follows:

Section 5.2 – Summary of Structure Overtopping Analysis presents the results of the HEC-HMS overtopping evaluation for all 36 modeled structures, summarizes the findings by watershed, identifies the key patterns driving capital needs, and provides a detailed table of the 18 structures that experience overtopping under existing conditions.

Section 5.3 – Investment Opportunities by Subwatershed organizes the recommended improvements by watershed, describes the existing conditions and problems at each location, explains the anticipated benefits of each proposed improvement, and provides preliminary cost estimate tables for project planning and budgeting. Subsections address Crystal Creek, Dirty Woman Creek, Teachout Creek, Jackson Creek, Monument Creek, and the combined Beaver Creek, Black Forest Tributary, and Smith Creek basins.

Section 5.4 – Prioritization and Phasing will present the prioritization framework used to rank projects across watersheds, the recommended phasing of capital investments over the planning horizon, and the relationship between phasing and available funding.

Section 5.5 – Water Quality Impacts will describe the water quality benefits associated with the recommended improvements, including sediment reduction, nutrient management, and MS4 compliance.

Section 5.6 – Operations and Maintenance will present the recommended maintenance program for existing and new facilities, including inspection schedules, sediment removal, vegetation management, and coordination with special districts and private owners.

Section 5.7 – Environmental will address environmental permitting considerations, PMJM habitat requirements, and coordination with the Monument Creek Site Conservation Team.



5.2 Summary of Overtopping Analysis

As part of the hydrologic analysis described in Chapter 3, V3 modeled 36 culverts and bridges across the study area using the HEC-HMS watershed model. Each structure was evaluated for overtopping under the existing condition El Paso County 2-hour design storm for both the 10-year and 100-year recurrence intervals. When overtopping occurs, it creates public safety hazards, mobility disruptions, infrastructure damage, and uncontrolled downstream flooding.

Of the 36 structures modeled, 13 were found to experience overtopping in either the 10-year or 100-year event under existing conditions. Seven of those 13 structures overtop in the 10-year event, meaning they do not meet the regulatory requirements of El Paso County.

The overtopping results are displayed geographically on Exhibit 11.0 (Structure Overtopping Results – Existing Condition El Paso 2H Storm) and are summarized in this section. These results form the primary basis for the capital improvement recommendations presented.

5.2.1 Modeling Methodology

Structures were modeled as outlets from reservoirs within HEC-HMS to take advantage of the program’s limited ability for hydraulic analysis. For the structure analysis, stage-storage relationships were developed from the 2018 El Paso County LiDAR data, supplemented by field measurements and as-built plan sets where available. Pipe inverts and lengths were determined first from detailed plan sets or County DOT data, and then from current aerial imagery and County LiDAR when more specific information was not available. Roadway cross-sections were approximated from the LiDAR to determine the overtopping elevation at each crossing. The structure hydraulic data for development of the other necessary table of elevation versus flow was determined using the HY-8 hydraulic program with detailed structure inputs as described above. It should be noted that the term ‘reservoir’ here should not suggest intent for storing water but simply recognizing the small amount of storage upstream of the culvert for purposes of computing the head versus discharge relationship using just the hydrologic program for efficiency of analysis at the planning level.

It is important to note that several structures in the study area were not modeled due to their location outside the primary drainage network or because they were deemed to have only minor influence at the planning-level scale of this study. Field observations for these unmodeled structures are documented in Chapter 5 and, where relevant, are noted in the tables below. The absence of a structure from the HEC-HMS model does not necessarily indicate that it is free of capacity concerns.

5.2.2 Summary by Watershed

The distribution of overtopping structures across the study area is not uniform. The Crystal Creek and Teachout Creek basins account for more than half of all overtopping structures, reflecting their high degree of urbanization, the concentration of undersized crossings on key roadways, and in the case of Teachout Creek, the rapid pace of development that has altered basin hydrology since many of these structures were originally constructed. The following table summarizes the overtopping results by watershed.

Table 5.1.1: Structure Overtopping Summary by Watershed

Watershed	Structures Modeled	Overtop in 10yr and 100yr	Overtop in 100yr	Total Overtopping
Crystal Creek	13	2	2	4
Dirty Woman Creek	5	1	2	3
Teachout Creek	10	2	2	4
Jackson Creek	8	2	2	4
Monument Creek	5	0	0	0
Beaver Creek	*	0	0	0
Black Forest Tributary	*	0	0	0
Smith Creek	*	0	0	0
Total	41	7	6	15

* Structures in Monument Creek, Beaver Creek, Black Forest Tributary, and Smith Creek were assessed through field investigation and included in the model where appropriate. None experienced overtopping. See Chapter 5 for field observation details.

5.2.3 Key Findings

Old Denver Road is the single most significant corridor of structural deficiency in the study area. Across two watersheds (Dirty Woman Creek and Teachout Creek), every modeled culvert on Old Denver Road was found to be undersized, with all three overtopping in both the 10-year and 100-year events. In the current condition, the Dirty Woman Creek crossing is completely non-functional. Old Denver Road serves as a parallel route to I-25 and provides critical local connectivity; repeated overtopping at multiple points along this road creates compounding public safety, transportation corridors, and emergency access risks. A coordinated improvement program for Old Denver Road crossings, potentially delivered as a single capital project, would address the highest-priority deficiencies in two watersheds simultaneously.

Crystal Creek is the smallest basin in the study area at only 1.43 square miles, yet it accounts for 30% of the overtopping structures. Its median curve number of 90.5 produces high peak flows relative to basin area, and sediment accumulation has reduced the effective capacity of multiple structures below their design performance. The Monument Hill Road overtopping creates a documented inter-basin diversion that transfers Crystal Creek’s flood risk to Dirty Woman Creek, a condition confirmed in both the FEMA Flood Insurance



Study and the V3 model. Crystal Creek’s problems are interconnected: addressing the sediment issues, the diversion, and the undersized crossings requires a basin-wide approach rather than individual structure fixes.

Teachout Creek faces the greatest future pressure. While 4 structures currently overtop, the 17 percent projected increase in 100-year peak flows, the largest proportional change among all study basins, means that structures currently passing the design storm with limited freeboard may begin overtopping as development continues and rainfall intensities increase. Ongoing construction in the basin, which is not fully reflected in the 2018 LiDAR used for model development, is likely to further increase runoff volumes. Teachout Creek is the basin where the gap between current infrastructure capacity and future demand is widening most rapidly.

Maintenance deficiencies are amplifying structural capacity shortfalls. Multiple structures across the study area are underperforming due to sediment accumulation, vegetation encroachment, beaver activity, or structural deterioration has reduced their effective capacity. The Highway 105 culverts in Crystal Creek are 50% filled with sediment. The Knollwood Drive culvert in Dirty Woman Creek is 50% obstructed with a beaver dam upstream. The Leather Chaps Drive crossings in Jackson Creek are choked with cattails. The Old Denver Road crossing in Dirty Woman Creek is completely clogged and deformed. In each of these cases, a maintenance intervention could restore partial or full design capacity. A systematic inspection and maintenance program across all watersheds would be among the most cost-effective investments the Town can make.

Overtopping has direct downstream consequences for USAFA. When a crossing overtops, flow that was intended to pass through a controlled structure moves overland in an uncontrolled manner, often at higher velocities and with greater erosive force than channel flow. This increases sediment mobilization, accelerates bank erosion, and delivers higher peak flows to downstream reaches with less attenuation than the drainage system was designed to provide. Because all flows within the study area ultimately pass through USAFA, the cumulative effect of 15 overtopping structures is a measurable increase in the sediment loads, peak flows, and water quality degradation documented in the USAFA Corridor Planning Study (2023).

5.2.4 Detailed Structure Overtopping Results

Table 5.2-1 presents the complete overtopping results for all modeled structures. The table includes the structure identification from the V3 model, the crossing location and type, the responsible entity (where known), overtopping status for both existing and future conditions, the priority classification, field observations, and a summary of the downstream risk created by each overtopping event. Structures are grouped by watershed, ordered from upstream to downstream.

5.2.5 Implications for Capital Planning

The overtopping analysis reveals several patterns that should guide the Town’s capital improvement strategy.

Corridor-based improvements offer the greatest efficiency - Old Denver Road accounts for four overtopping structures across two watersheds. A coordinated construction program that addresses all Old Denver Road crossings in a single phased project would reduce mobilization costs, minimize cumulative traffic disruption, and deliver corridor-wide benefits that individual structure replacements cannot achieve independently.

Maintenance can provide near-term capacity recovery at low cost - At least five of the 15 overtopping structures have documented sediment, vegetation, or debris obstructions that reduce their effective capacity

below design. A targeted maintenance program could restore partial or full capacity at these locations within months, reducing flood risk before capital replacement projects can be designed and constructed.

Future conditions will worsen without intervention - The future land use and future climate scenario shows that structures currently passing the 100-year storm with limited freeboard will begin overtopping as development continues and rainfall intensities increase. Three structures that do not currently overtop in the 10-year event are projected to begin doing so under the future scenario. Designing replacement structures to the future condition—rather than existing—ensures that capital investments remain effective over their full service life.

Multi-jurisdictional coordination is required - Of the 15 overtopping structures, at least four involve infrastructure owned or managed by entities other than the Town of Monument—including the Union Pacific Railroad (two Teachout Creek crossings) and El Paso County (New Santa Fe Trail crossings in Teachout and Jackson Creeks). Advancing improvements at these locations will require partnership agreements, shared funding mechanisms, and coordinated project delivery. Early engagement with these partners is recommended.

Regional detention reduces the scope and cost of structural replacements - Where regional detention facilities can attenuate peak flows upstream of a cluster of undersized crossings—as in Crystal Creek and Teachout Creek—the required replacement culvert sizes are reduced, lowering both construction costs and the extent of roadway and utility disturbance. Regional detention also provides system-level resilience against the cumulative effects of future development and climate change, supplementing the site-level detention required of individual developments.

The specific improvement opportunities and anticipated benefits for each watershed are presented in Section 5.3.

5.3 Investment Opportunities by Subwatershed

The following sections present potential stormwater management investment opportunities for each subwatershed within the study area. Each section summarizes the problems identified through the V3 hydrologic modeling and field investigation, describes the types of improvements under consideration, explains the anticipated benefits of each category of improvement, and provides a cost estimate table to be refined during the alternatives evaluation phase. Benefits are described in terms of flood risk reduction, infrastructure protection, downstream flow attenuation, water quality improvement, and alignment with regional watershed objectives including the Monument Creek USAFA Corridor Planning Study and the Town’s MS4 permit obligations.

5.3.1 Crystal Creek

Crystal Creek has the highest concentration of undersized structures in the study area, with 4 of 15 modeled culverts experiencing overtopping under the existing El Paso 2-hour design storm. The basin carries the highest median curve number among all study watersheds (90.5), reflecting its heavily urbanized land use of commercial, industrial, and residential development.



Culvert Upsizing and Replacement - Replacing the undersized culverts at Monument Hill Road, and Willow Park Way would eliminate roadway overtopping in the 10-year and 100-year events at these crossings, restoring safe passage during storm events and reducing the risk of road closure, vehicle damage, and potential loss of life. At Monument Hill Road specifically, upsizing the structure would eliminate the inter-basin diversion to Dirty Woman Creek, removing a flood risk that currently burdens a neighboring watershed and complicating drainage management for both basins.

Sediment Removal and Maintenance Program - Establishing a routine sediment and vegetation removal and inspection program for Crystal Creek culverts would restore the full design capacity of structures that are currently partially obstructed as shown in Chapter 4. A proactive maintenance program would extend the service life of existing infrastructure and ensure that structures perform as designed during storm events. This is the most cost-effective near-term investment in the Crystal Creek basin.

Regional Detention Upstream of I-25 - Constructing a regional detention facility in the upper Crystal Creek basin would attenuate peak flows before they reach the constrained downstream crossing network. A regional facility would reduce the 10-year and 100-year peak flows delivered to some of the most strained crossings, reducing the required size of replacement culverts and lowering the total cost of the structural improvement program.

Table 5.3.1: Crystal Creek – Preliminary Cost Estimates

Project ID	Description	Est. Cost	Priority	Anticipated Benefits
C02-struct01	Culvert Upsize at Monument Lake Road	\$426,400	Medium	Eliminates 100yr overtopping; reduces upstream ponding and property risk
C10-struct09	Willow Park Way culvert replacement	\$319,800	High	Eliminates 10yr and 100yr overtopping; improves local road safety; reduces upstream ponding in residential area
C02-struct01	N Monument Lake Rd culvert rehabilitation	\$277,160	Medium	Addresses upstream vegetation clogging
CC-01	Regional detention – upstream of I-25	\$5,500,000	Low	Attenuates peak flows; downstream water quality benefits
CC-02	Sediment removal and maintenance program	\$150,000/yr	High	Restores existing capacity at minimal cost; defers or reduces scope of capital replacements; extends infrastructure service life

5.3.2 Dirty Woman Creek

Three of five modeled structures in Dirty Woman Creek overtop in both the 10-year and 100-year events. Field investigation found the Old Denver Road 6-foot culvert completely clogged and deformed, with erosion matting suggesting repeated overtopping in addition to being undersized. The Mitchell Avenue 48-inch culvert shows signs of deterioration but remains partially functional. The Knollwood Drive 48-inch crossing is approximately 50% obstructed, with a beaver dam upstream further reducing effective capacity. Dirty Woman Creek also receives diverted flow from Crystal Creek at the Monument Hill Road overtopping, adding flood volume that the basin was not designed to accommodate. Under the future scenario, 100-year peak flow at the Monument Creek confluence increases from 1,920 cfs to 2,160 cfs. Woodmoor Lake provides significant detention for the upper basin but does not mitigate these downstream crossing deficiencies.

Old Denver Road Culvert Replacement - The existing 6’ CMP is currently non-functional—completely clogged and structurally deformed. Replacing this crossing would restore conveyance under Old Denver Road, eliminate roadway overtopping and associated public safety risk, and reduce uncontrolled overland flow that currently bypasses the crossing and contributes to downstream erosion. Because Old Denver Road serves as a primary local road connecting communities throughout the study area, restoring reliable passage at this crossing has mobility and emergency access benefits beyond stormwater management alone.

Mitchell Avenue Culvert Upsizing - Replacing or upsizing the deteriorating 48-inch CMP at Mitchell Avenue would eliminate overtopping at this crossing and reduce upstream flood risk to adjacent developed parcels. The current structure is still passing flow but is showing signs of material failure that, if left unaddressed, could lead to sudden loss of capacity. Proactive replacement avoids the higher cost of emergency repair and the associated disruption to roadway access.

Knollwood Drive Crossing Improvement - Improving the Knollwood Drive crossing—including clearing the 50% obstruction and addressing the upstream beaver dam—would restore the structure’s design capacity and reduce overtopping frequency. Beaver activity in this area creates a recurring maintenance challenge; a long-term management strategy that includes wildlife-compatible flow devices or regular dam removal would sustain the capacity improvements over time. Addressing this crossing also benefits downstream reaches by reducing the unattenuated peak flows that currently bypass the structure during overtopping events.

Channel Vegetation Management - Dirty Woman Creek’s wide, grassy floodplain with wetland-type zones supports natural attenuation but also allows vegetation encroachment that reduces channel capacity over time. A targeted vegetation management program—focused on maintaining conveyance in critical reaches while preserving the ecological and attenuation benefits of the riparian corridor—would reduce localized flooding, improve water quality through reduced sediment transport, and support the basin’s natural ability to moderate peak flows before they reach Monument Creek.



Table 5.3.2: Dirty Woman Creek – Preliminary Cost Estimates

Project ID	Description	Est. Cost	Priority	Anticipated Benefits
D09-struct01	Old Denver Rd culvert replacement (6' CMP)	\$447,720	High	Restores conveyance at non-functional crossing; eliminates road overtopping and public safety hazard; reduces downstream erosion; restores mobility on key local road
D02-struct01	Mitchell Ave culvert upsizing (48" CMP)	\$1,066,000	Med	Eliminates 10yr and 100yr overtopping; proactive replacement avoids emergency failure; reduces upstream flood risk to adjacent properties
D18-struct01	Knollwood Dr crossing improvements	\$426,400	High	Restores design capacity; reduces overtopping frequency; reduces unattenuated peak flows to downstream reaches
DW-04	Channel vegetation management program	\$100,000/yr	Med	Maintains conveyance in critical reaches; reduces localized flooding; improves water quality; preserves natural attenuation and ecological value of riparian corridor

Regional Detention - Teachout Creek’s 17 percent projected increase in 100-year peak flows—the largest among all study basins—makes regional detention a high-priority investment. A strategically sited facility in the upper basin would attenuate peak flows before they reach the constrained downstream crossing network, reducing both the frequency and depth of overtopping at existing structures. Regional detention would also reduce peak flows delivered to Monument Creek and ultimately to USAFA, directly supporting the watershed-scale objectives documented in the USAFA Corridor Planning Study. Additionally, regional detention could serve as a mechanism for the Town to manage cumulative runoff increases from the substantial ongoing development in this basin, ensuring that individual development-level detention requirements are supplemented by system-level capacity.

Channel Stabilization at Lewis-Palmer HS / Higby Road - Stabilizing the eroded channel outlets south of Lewis-Palmer High School would arrest active headcutting, reduce sediment delivery to downstream reaches, and protect adjacent school district and residential property. Left unaddressed, these erosion sites will continue to migrate upstream, increasing the volume of sediment entering the system and potentially undermining nearby infrastructure. Stabilization techniques such as grade control structures, bioengineered bank treatments, and riparian revegetation would provide both structural and ecological benefits.

New Santa Fe Trail Crossing Improvements - Upsizing the trail crossing would eliminate 100-year overtopping, protecting the trail as a community recreation asset and reducing the risk of trail damage and closure during storm events. Because the trail parallels the UPRR corridor, overtopping at this location can also contribute to flow that impacts the adjacent railroad infrastructure. Coordination with El Paso County, which manages the trail, would be required.

5.3.3 Teachout Creek

Teachout Creek has 4 of 10 modeled structures experiencing overtopping and is the basin most affected by recent and ongoing development.

Old Denver Road Culvert Replacements - Replacing both Old Denver Road crossings would eliminate 10-year overtopping at two locations on the same road, restoring reliable access along this critical north-south corridor. Repeated overtopping during relatively frequent storm events (10-year return period) creates unacceptable public safety and mobility risks. Upsized crossings would improve the controlled delivery of flow to downstream reaches rather than uncontrolled overland discharge.

Union Pacific Railroad Crossing Coordination - The UPRR crossings present both a capacity constraint and a coordination challenge, as the railroad right-of-way is not under Town or County jurisdiction. One crossing was documented as washed out during field investigation. Improving these structures would reduce the backwater effects of undersized railroad crossings on upstream development, eliminate a source of uncontrolled overland flow during storm events, and address an existing failure before it worsens. Because railroad crossing improvements require coordination with UPRR, early engagement and partnership agreements are necessary to advance these projects. The benefits extend beyond the Town—maintaining railroad infrastructure integrity protects a regional transportation asset.



Table 5.3.3: Teachout Creek – Preliminary Cost Estimates

Project ID	Description	Est. Cost	Priority	Anticipated Benefits
T01-struct03	Old Denver Rd culvert replacement – 48” RCP	\$559,650	High	Eliminates 10yr and 100yr overtopping; restores safe passage on key local road; reduces upstream backwater flooding
T04-struct01	Old Denver Rd culvert replacement – Two 28”x44” Elliptical	\$1,332,500	High	Eliminates 10yr and 100yr overtopping; restores corridor mobility; reduces uncontrolled overland flow
T01-struct01	UPRR culvert improvements (two locations)	\$692,900	Medium	Reduces backwater on upstream development; eliminates washed-out crossing; protects regional rail infrastructure
TC-04	New Santa Fe Trail crossing upsizing	\$900,000	Medium	Eliminates 100yr overtopping; protects recreation asset and adjacent UPRR corridor
TC-05	Regional detention facility	\$7,500,000	High	Attenuates peak flows across all downstream structures; offsets 17% projected flow increase from development and climate change; reduces flows to Monument Creek and USAFA; system-level supplement to individual development detention
TC-06	Channel stabilization – Lewis-Palmer HS / Higby Rd	\$650,000	Medium	Arrests active erosion; reduces sediment delivery to downstream reaches; protects school and residential property; ecological benefits from revegetation

5.3.4 Jackson Creek

Jackson Creek has 3 of 8 modeled structures experiencing overtopping. The most significant non-structural problem in this basin is a series of ponds and dams along the main channel with overland flow channels that have created massive erosion incisions exceeding 10 feet deep in places. Jackson Creek’s 100-year peak flow at the Monument Creek confluence increases from 2,560 cfs to 2,880 cfs under the future scenario, and ongoing development in the basin will continue to increase impervious coverage.

New Santa Fe Trail Crossing Replacement - Replacing the triple 36” CMP crossing with an adequately sized structure would eliminate overtopping in both the 10-year and 100-year events at a location with significant downstream consequences. The UPRR bridge immediately downstream appears adequately sized, but the regional wastewater treatment facility is at direct risk from uncontrolled flow that overtops the trail crossing. Failure to address this deficiency exposes critical public infrastructure to flood damage, with potential environmental and public health consequences if wastewater operations are disrupted. Replacing this crossing also protects the New Santa Fe Trail as a recreation and transportation asset.

Leather Chaps Drive Crossing Rehabilitation - Rehabilitating the two Leather Chaps Drive crossings—including clearing cattail and sediment blockage from the downstream ends—would restore effective capacity and eliminate 100-year overtopping. The upstream crossing includes a regional detention facility that appears poorly maintained and may not have been sized to accommodate recent development; restoring this facility’s function would provide peak flow attenuation benefits for the entire downstream reach. These crossings serve a growing residential area, and reliable road access during storm events is increasingly important as development continues.

Pond and Dam Erosion Stabilization - The series of ponds and dams along Jackson Creek with 10-foot-plus erosion incisions represents the most severe geomorphic instability documented in the study area. Left unaddressed, these incisions will continue to deepen and widen, generating large volumes of sediment that are delivered downstream to Monument Creek and ultimately USAFA. Stabilization through grade control structures, bank armoring, and redesigned overflow channels would arrest the active erosion, dramatically reduce sediment loading, protect adjacent property and infrastructure, and contribute directly to the sediment reduction objectives of the USAFA Corridor Planning Study. This is one of the highest-impact opportunities in the study area for improving downstream watershed conditions.

Development Coordination and Detention Compliance - As Jackson Creek continues to develop, ensuring that new construction provides adequate on-site detention and does not transfer additional flood risk to downstream infrastructure is essential. A regional detention facility in the upper basin would supplement site-level requirements and provide a margin of safety for the cumulative effects of buildout. Coordination with developers during the plan review process to verify that proposed detention meets current El Paso County criteria—rather than potentially outdated standards from earlier phases of development—would help prevent the kind of incremental capacity shortfalls that have contributed to the current overtopping problems at Leather Chaps Drive.

Table 5.3.4: Jackson Creek – Preliminary Cost Estimates

Project ID	Description	Est. Cost	Priority	Anticipated Benefits
J01-struct04	New Santa Fe Trail crossing replacement	\$1,800,000	Low	Eliminates 10yr and 100yr overtopping; protects WWTP from flood damage and environmental release; protects recreation asset
J05-struct 01	Leather Chaps Dr crossing rehabilitation (upstream)	\$150,000/yr	Medium	Eliminates 100yr overtopping; restores regional detention facility function; reduces downstream peak flows
J05-struct 02	Leather Chaps Dr crossing rehabilitation (downstream)	\$150,000/yr	Medium	Eliminates 100yr overtopping; restores road access in growing residential area
JC-04	Pond/dam erosion stabilization program	\$3,500,000	High	Arrests 10'+ active erosion incisions; dramatically reduces sediment delivery to Monument Creek and USAFA; protects adjacent property; highest-impact sediment reduction opportunity in study area
JC-05	Regional detention – upper basin	\$2,500,000	Medium	Supplements site-level detention for cumulative buildout effects; provides system-level peak flow attenuation; reduces downstream structure overtopping frequency

5.3.5 Monument Creek

No modeled mainstem structures experienced overtopping under the existing El Paso 2-hour storm. However, field investigation documented significant deterioration at the Mount Herman Road bridge, including a failing roadway surface, steel beams displaced into the creek, deteriorating abutments, and active erosion both upstream and downstream of the crossing. Monument Creek’s cumulative 100-year peak flow reaches 16,620 cfs at North Gate Boulevard under existing conditions, increasing to 18,640 cfs under the future climate scenario—the largest absolute flows in the study area. The 2016 Monument Creek Watershed Restoration Master Plan classified this reach as Protect-In-Place and Monitor, indicating current stability with risk of future degradation if upstream conditions change.

Mount Herman Road Bridge Rehabilitation - Rehabilitating or replacing the Mount Herman Road bridge would address the structural deterioration, remove debris from the channel that is causing localized scour, and restore safe vehicular crossing. The displaced steel beams currently in the creek are creating turbulence and redirecting flows into the banks, accelerating erosion that threatens the bridge abutments. Proactive rehabilitation before further structural failure would avoid the significantly higher cost of emergency replacement and prevent the closure of a key local road.

Channel Monitoring and Bank Stabilization Program - Given the Protect-In-Place designation and the projected 12 percent increase in 100-year peak flows at North Gate Boulevard, a systematic monitoring program for the Monument Creek mainstem would provide early detection of bank instability, channel migration, or other signs of degradation before they escalate into costly failures. Targeted bank stabilization at locations showing early distress would protect adjacent property and infrastructure, reduce sediment delivery to USAFA, and maintain the currently stable condition of the reach. This is a cost-effective approach for a reach that does not yet require major capital investment but faces growing pressure from upstream flow increases.

Monument Lake Outlet and Spillway Assessment - Monument Lake serves as a critical hydrologic feature, receiving inflow from Monument Creek and Crystal Creek and providing detention that moderates peak flows to downstream reaches. Assessing the condition and capacity of the lake’s outlet and spillway would verify that this natural attenuation function is performing as expected and identify any maintenance or improvement needs. Given the projected increases in inflow from Crystal Creek (which outlets to Monument Lake) and from the mainstem, ensuring the lake’s outlet infrastructure can safely pass future design flows is a low-cost, high-value investment in system-level resilience.

Table 5.3.5: Monument Creek – Preliminary Cost Estimates

Project ID	Description	Est. Cost	Priority	Anticipated Benefits
MC-01	Mount Herman Rd bridge rehabilitation / erosion repair	\$2,000,000	Medium	Addresses structural deterioration; removes channel debris causing scour; restores safe crossing; avoids higher emergency replacement cost
MC-02	Channel monitoring and bank stabilization program	\$50,000/yr	Medium	Early detection of instability; targeted stabilization at distress locations; reduces sediment delivery to USAFA; maintains Protect-In-Place status
MC-03	Monument Lake outlet / spillway assessment	\$40,000	Low	Verifies detention function under projected increased inflows; identifies maintenance needs; low-cost system resilience investment



5.3.6 Beaver Creek, Black Forest Tributary, and Smith Creek

No modeled structures in these three basins experienced overtopping under the existing El Paso 2-hour design storm. Beaver Creek is the most rural and least developed basin in the study area, with the lowest median curve number (66.0) and extensive forested land cover in the upper reaches within Pike National Forest. Black Forest Tributary (median CN 72.3) and Smith Creek (median CN 74.0) are predominantly residential with moderate development intensity. Despite the absence of structural deficiencies, these basins collectively deliver substantial flow to Monument Creek near the USAFA boundary—Beaver Creek alone contributes 6,950 cfs in the existing 100-year event, increasing to 7,670 cfs under the future scenario. Smith Creek’s confluence with Monument Creek occurs just south of North Gate Boulevard, within the USAFA boundary itself.

Beaver Creek Channel Monitoring Program - Given Beaver Creek’s large drainage area and the Type D soils in its mountainous upper reaches that generate high modeled runoff volumes, a monitoring program would track channel condition over time and detect early signs of instability that could increase sediment delivery to Monument Creek. Monitoring is particularly important because the 2012 Waldo Canyon fire burn scar impacts subbasins along the upper reaches of nearby West Monument Creek, and similar fire events in the Beaver Creek headwaters could rapidly alter runoff and sediment dynamics. A monitoring program provides a cost-effective baseline against which future changes can be measured.

Bristlecone Lake and Piñon Lake Outlet Assessment - These two lakes provide significant detention storage within the Beaver Creek system. Assessing their outlet structures and spillway capacity would verify that they are functioning as designed and can safely pass projected future inflows. If these facilities are underperforming, the downstream effects would propagate through Beaver Creek to Monument Creek at a location near the USAFA boundary. Ensuring their continued function is a low-cost investment with high systemic value.

Black Forest Tributary – Development Detention Compliance Review - As development continues in the Black Forest Tributary basin, verifying that individual projects are meeting current detention requirements is essential to preventing cumulative increases in peak flows delivered to Monument Creek. A compliance review would identify any facilities that have been constructed to outdated standards or that are not being maintained, and would establish a baseline for enforcement. Because this tributary’s confluence with Monument Creek occurs within the USAFA boundary, any uncontrolled increase in peak flows has direct consequences for federal property.

Smith Creek – Crossing Inventory and Condition Assessment - While no modeled structures overtop in Smith Creek, the downstream half of the basin includes a series of road crossings in close proximity. A field inventory and condition assessment of these crossings would identify any maintenance needs, undersized structures not captured in the model, or erosion concerns before they become urgent. Because Smith Creek enters Monument Creek at North Gate Boulevard within the USAFA boundary, infrastructure failures in this basin have immediate downstream consequences on federal land.

Table 5.3.6: Beaver Creek / Black Forest Trib. / Smith Creek – Preliminary Cost Estimates

Project ID	Description	Est. Cost	Priority	Anticipated Benefits
BV-01	Beaver Creek channel monitoring program	\$35,000/yr	Low	Establishes condition baseline; early detection of instability; tracks fire risk implications for upper basin; cost-effective long-term investment
BV-02	Bristlecone Lake / Piñon Lake outlet assessment	\$50,000	Low	Verifies detention function of two key storage features; identifies maintenance needs; protects downstream Monument Creek and USAFA
BF-01	Black Forest Trib. – detention compliance review	\$30,000/yr	Low	Identifies non-compliant or undermaintained detention; prevents cumulative peak flow increases to USAFA; establishes enforcement baseline
SC-01	Smith Creek – crossing inventory and condition assessment	\$60,000	Low	Identifies maintenance needs and undersized structures not in model; prevents infrastructure failures with immediate USAFA consequences

5.4.3 Recommended Phasing Plan

The recommended phasing plan organizes the CIP projects into four implementation horizons based on priority ranking, construction sequencing logic, partnership timelines, and the Town’s anticipated funding capacity. The phasing is designed to deliver the greatest risk reduction in the shortest time while maintaining a sustainable pace of capital investment.

Immediate Actions (Year 1)

Immediate actions are those that can be initiated within the first year of the planning horizon and do not require significant design, permitting, or land acquisition. These actions address either non-functional infrastructure or maintenance-related capacity deficiencies that can be corrected quickly and at relatively low cost.

DW-01: Old Denver Road Culvert Replacement (Dirty Woman Creek) - This structure is completely non-functional—clogged, deformed, and providing no conveyance. It represents the single most urgent structural deficiency in the study area. Because the crossing has already failed, there is no further capacity to lose; every storm event produces uncontrolled overland flow across Old Denver Road. Replacement should proceed as an emergency capital project.



JC-01: New Santa Fe Trail Crossing Replacement (Jackson Creek) - This crossing overtops in the 10-year event directly upstream of the regional wastewater treatment facility and a UPRR bridge. The consequence of continued overtopping includes potential flood damage to the WWTP, which could result in environmental contamination and public health risk. The severity of the downstream consequence justifies immediate action.

CC-08: Sediment Removal and Maintenance Program (Crystal Creek) - At least three Crystal Creek structures have documented sediment or vegetation blockage that reduces effective capacity below design. A targeted sediment removal campaign can restore capacity at the Highway 105 crossing (currently 50% blocked) and other locations within weeks, reducing flood risk while longer-term replacement projects are designed. This is the most cost-effective near-term action in the entire CIP.

Near-Term Projects (Years 1–3)

Near-term projects address the highest-priority structural deficiencies that require design and permitting but can be advanced within the first three years. These projects target the structures that overtop in the 10-year event, the most frequent and impactful failures, and the most critical erosion and stabilization needs.

The near-term program includes the Old Denver Road corridor improvements across Teachout Creek (TC-01 and TC-02), which should be packaged as a single construction project to reduce mobilization costs and minimize cumulative road closure impacts. The Crystal Creek crossings at Monument Hill Road (CC-02), Highway 105 (CC-01), and Willow Park Way (CC-03) are also near-term priorities because all three overtop in the 10-year event. The Monument Hill Road project is particularly important because it eliminates the inter-basin diversion to Dirty Woman Creek, reducing flood risk in two watersheds simultaneously.

The Dirty Woman Creek crossings at Mitchell Avenue (DW-02) and Knollwood Drive (DW-03) are included in the near-term phase because both overtop in the 10-year event and show structural deterioration that increases the risk of sudden failure. The Jackson Creek pond and dam erosion stabilization program (JC-04) is also near-term due to the severity of the active erosion (10'+ incisions) and the high sediment delivery rate to Monument Creek and USAFA. The Teachout Creek channel stabilization near Lewis-Palmer High School (TC-06) addresses active headcutting that will worsen if deferred.

Mid-Term Projects (Years 3–7)

Mid-term projects address structures that overtop only in the 100-year event, regional detention opportunities that require site identification and land acquisition, and improvements that depend on coordination with external partners.

The two regional detention facilities (CC-07 in Crystal Creek and TC-05 in Teachout Creek) are placed in the mid-term phase because they require site selection, geotechnical investigation, land acquisition or easement negotiation, and potentially environmental permitting. However, preliminary site identification and feasibility analysis should begin in the near-term phase so that these projects are ready for design when the mid-term window opens. Regional detention in these two basins provides the greatest system-level benefit because Crystal Creek has the highest curve number and Teachout Creek has the largest projected flow increase.

The Union Pacific Railroad crossing improvements in Teachout Creek (TC-03) and the New Santa Fe Trail crossings in Teachout Creek (TC-04) require coordination with UPRR and El Paso County respectively. These

partnerships take time to establish, and the mid-term phase allows for agreement development while maintaining project momentum. The remaining Crystal Creek crossings (CC-04, CC-05, CC-06) and the Leather Chaps Drive crossings in Jackson Creek (JC-02, JC-03) are mid-term because they overtop only in the 100-year event and present lower immediate risk. The Mount Herman Road bridge rehabilitation (MC-01) and the Beaver Creek and Smith Creek assessments (BV-02, SC-01) are also mid-term.

Long-Term Projects and Ongoing Programs (Years 7+)

Long-term projects include the Jackson Creek upper basin regional detention facility (JC-05), which depends on the pace of development in that basin and the resolution of site availability. This project may be accelerated if development activity increases faster than anticipated.

Several programs are classified as ongoing because they require recurring investment rather than a single capital expenditure. These include the Dirty Woman Creek vegetation management program (DW-04), the Monument Creek channel monitoring and stabilization program (MC-02), the Beaver Creek monitoring program (BV-01), and the Black Forest Tributary detention compliance review (BF-01). These programs should be funded through the Town's annual operating budget or a dedicated stormwater maintenance fund and should begin in Year 1 regardless of phasing for capital projects.

5.4.5 Funding Considerations

The implementation of this CIP will require a sustainable funding strategy that goes beyond the Town's current stormwater impact fee structure. As documented in Chapter 6, Chapter 3.28 of the Municipal Code establishes a stormwater impact fee for new development, but collected fees have been insufficient to complete all recommended stormwater projects. The capital needs identified in this Master Plan—spanning culvert replacements, regional detention facilities, channel stabilization, bridge rehabilitation, and ongoing maintenance—substantially exceed what development impact fees alone can support.

The Town should evaluate a combination of funding mechanisms to support CIP implementation:

Stormwater Utility Fee - A dedicated stormwater utility fee assessed on all developed properties based on impervious area would provide a stable, recurring revenue stream for both capital projects and ongoing maintenance. This is the most common funding mechanism for municipal stormwater programs in Colorado and would spread the cost of stormwater management across all properties that contribute runoff to the system, rather than relying solely on new development.

Development Impact Fees - The existing impact fee structure should be updated to reflect the capital costs identified in this Master Plan and calibrated to ensure that new development pays its proportional share of the infrastructure needed to serve it. Development in the Teachout Creek and Jackson Creek basins, where the greatest flow increases are projected, should be assessed fees that reflect the downstream consequences of increased impervious coverage.

Grant Funding - Several state and federal grant programs may be applicable to projects in this CIP. The Colorado Water Conservation Board (CWCB) provides grants for flood mitigation and watershed restoration. The Fountain Creek Watershed Flood Control and Greenway District offers regional coordination and potential funding for projects that benefit the broader Fountain Creek system. The USAFA Corridor Planning Study was



funded through the Office of Local Defense Community Cooperation (OLDCC), and similar federal programs may be available for projects that address the interface between military installations and surrounding communities. FEMA Hazard Mitigation Grant Program (HMGP) and Pre-Disaster Mitigation (PDM) funding may be applicable for projects that reduce flood risk to repetitive loss areas.

Regional Cost-Sharing - Projects that provide regional benefits—particularly the regional detention facilities and the Old Denver Road corridor improvements—are candidates for cost-sharing with El Paso County, the Fountain Creek Watershed District, and potentially USAFA. The UPRR crossing improvements in Teachout Creek will require railroad partnership and potentially shared funding for structures on railroad right-of-way.

Capital Improvement Bonds - For the largest capital projects, the Town may consider issuing stormwater revenue bonds backed by the stormwater utility fee. This approach allows the Town to advance critical infrastructure improvements immediately while spreading the cost over the service life of the assets. Bonding is most appropriate for the regional detention facilities and the major culvert replacement programs, where the capital cost is high but the long-term benefit and service life justify debt financing.

The funding strategy should be developed in coordination with the Monument 2040 Comprehensive Plan’s capital facilities element to ensure that stormwater investments are integrated with the Town’s broader infrastructure planning and fiscal management. The prioritization and phasing plan presented in this section is designed to be adaptable to funding availability—projects can be advanced or deferred as funding is secured, provided the immediate and near-term actions addressing the most critical public safety risks are maintained as the highest priority.

5.4 Water Quality Impacts

While the primary focus of the capital improvement recommendations in this Master Plan is flood risk reduction and infrastructure resilience, the recommended projects also provide significant water quality benefits. The Town of Monument operates under a Municipal Separate Storm Sewer System (MS4) permit that requires the management of post-construction stormwater runoff, the implementation of best management practices (BMPs), and the reduction of pollutant discharges to receiving waters. Section 8.30.060 of the Municipal Code specifically requires the operation and maintenance of permanent BMPs for water quality and downstream flood mitigation. Every project that reduces uncontrolled overland flow, stabilizes eroding channels, attenuates peak flows through detention, or improves the maintenance condition of existing facilities contributes to the Town’s water quality objectives and regulatory compliance.

5.4.1 Water Quality Concerns in the Monument Creek Watershed

The Monument Creek Watershed’s transition from a predominantly rural landscape to an increasingly urbanized one—reflected in the Town’s population growth from 10,399 in 2020 to 13,408 in 2024 and the ongoing development activity in the Teachout Creek and Jackson Creek basins—has progressively increased both the volume of stormwater runoff and the pollutant loads it carries.

The principal water quality concerns identified through this Master Plan, the USAFA Corridor Planning Study, and regional monitoring efforts are summarized in Table 5.4-1.

Table 5.4-1: Primary Water Quality Concerns in the Monument Creek Watershed

Pollutant / Concern	Primary Sources Within Study Area	Observed Effects	Relevant Regulatory Framework
Sediment / Total Suspended Solids (TSS)	Channel erosion and bank failure (especially Jackson Creek 10’+ incisions); construction site runoff; undersized culvert overtopping causing overland scour; sediment accumulation in culverts reducing capacity	Channel instability on USAFA (F/G type streams); habitat burial for PMJM and aquatic species; reduced capacity of detention facilities; turbidity impacts on downstream receiving waters	MS4 permit; El Paso County Drainage Criteria; USAFA Corridor Planning Study; Monument Creek Watershed Restoration Master Plan (2016)
E. coli / Pathogens	Urban runoff from developed areas; pet waste; wildlife (including beaver activity at Knollwood Dr and Teachout Creek); potential sanitary sewer cross-connections; WWTP proximity at Jackson Creek confluence	Elevated E. coli concentrations documented in USAFA Corridor Planning Study; potential contact recreation risk; indicator of broader microbial contamination	MS4 permit; Colorado Water Quality Control Commission standards; USAFA Corridor Planning Study
Nutrients (Nitrogen, Phosphorus)	Fertilizer application from residential lawns, parks, and golf course (Woodmoor); erosion of nutrient-rich topsoils during construction; decomposition of organic debris in poorly maintained detention facilities	Algal growth in detention ponds and Monument Lake; accelerated vegetation encroachment in channels; eutrophication risk in downstream receiving waters	MS4 permit; Colorado Regulation 31 nutrient criteria
Thermal Impacts	Runoff from heated impervious surfaces (parking lots, rooftops); lack of riparian shading in developed reaches; shallow ponding in poorly maintained detention facilities	Elevated stream temperatures reduce dissolved oxygen; stress to aquatic species and PMJM habitat; particularly acute during summer convective storm events	Colorado water temperature standards; PMJM habitat requirements
Trash and Debris	Commercial and residential areas; roadway runoff; illegal dumping; wind-transported litter accumulating at culvert inlets and detention facility outlets	Culvert blockage reducing hydraulic capacity; aesthetic degradation of streams and open space; wildlife entanglement; downstream accumulation on USAFA	MS4 permit; Town of Monument municipal code



5.4.2 Water Quality Benefits of Recommended Improvements

The capital improvement and maintenance projects recommended in this Master Plan address water quality through five primary mechanisms. While these projects were developed principally to reduce flood risk, their water quality co-benefits are substantial and, in several cases, represent the most cost-effective water quality interventions available to the Town.

Sediment Reduction Through Channel Stabilization. The most significant water quality benefit in this CIP is the reduction of sediment loading through channel and erosion stabilization. The Jackson Creek pond and dam erosion stabilization program (JC-04) addresses the most severe geomorphic instability in the study area, where 10-foot-plus erosion incisions are actively generating and delivering large volumes of sediment to Monument Creek. The Teachout Creek channel stabilization near Lewis-Palmer High School (TC-06) addresses active headcutting at two outlet locations. The Monument Creek monitoring and bank stabilization program (MC-02) provides targeted intervention where bank instability is detected. Collectively, these projects attack the dominant source of sediment loading within the study area. The USAFA Corridor Planning Study identified urban development and road construction as the primary land uses influencing sediment supply, and reducing the upstream sediment contribution from within the Town’s planning area directly supports the 49 restoration projects identified within the USAFA corridor.

Elimination of Uncontrolled Overland Flow. When a culvert overtops, flow that was intended to pass through a controlled structure instead moves overland at higher velocities, scouring exposed soil, mobilizing pollutants from disturbed surfaces, and delivering untreated runoff directly to receiving streams. The 15 overtopping structures identified in Section 6.1 each represent a location where pollutant transport is amplified during storm events. Replacing or upsizing these structures eliminates the uncontrolled overland flow path and ensures that stormwater is conveyed through designed channels and facilities where velocities are managed and pollutant transport is reduced. The Old Denver Road crossing in Dirty Woman Creek (DW-01), which is completely non-functional, is the most extreme example—every storm event at this location currently produces uncontrolled overland discharge with no treatment or attenuation.

Peak Flow Attenuation and Settling Through Regional Detention. The regional detention facilities recommended for Crystal Creek (CC-07) and Teachout Creek (TC-05) provide water quality treatment in addition to their primary flood attenuation function. Detention facilities reduce peak discharge velocities, increase residence time, and allow suspended sediment and associated pollutants to settle before flows are released downstream. When designed with appropriate forebays, outlet structures, and vegetated benches, regional detention facilities can achieve meaningful reductions in total suspended solids, particulate-bound nutrients, and gross pollutants. These facilities represent the most effective mechanism for treating the combined runoff from multiple upstream subwatersheds before it reaches Monument Creek. The Jackson Creek upper basin regional detention facility (JC-05) would provide similar benefits if advanced.

Maintenance-Driven Capacity Restoration and Pollutant Removal. The sediment removal and maintenance programs recommended for Crystal Creek (CC-08), Dirty Woman Creek (DW-04), and the broader study area directly remove accumulated pollutants from the drainage system. Sediment that has accumulated in culverts and detention facilities contains the pollutants that were captured during previous storm events—removing it prevents remobilization during future storms and restores the facility’s designed treatment capacity. The Triview Metropolitan District’s 16 detention ponds and one drainage channel within Town boundaries (Section 2.4) are particularly important in this regard: the 2020 Kimley-Horn assessment documented sediment accumulation and vegetation overgrowth at multiple facilities, conditions that reduce both hydraulic capacity

and water quality performance. Ensuring that these facilities are maintained to current MS4 standards is one of the most effective ongoing water quality investments available.

Riparian and Habitat Protection. Channel stabilization, vegetation management, and reduced erosion rates collectively support the health of the riparian corridor along Monument Creek and its tributaries. The Monument Creek Watershed supports habitat for the federally listed Preble’s Meadow Jumping Mouse (PMJM), and the Monument Creek Site Conservation Team (established by the U.S. Fish and Wildlife Service in 2021) continues to guide recovery planning. Stabilizing actively eroding reaches reduces the physical disturbance to riparian habitat, and maintaining natural channel geometry preserves the floodplain connectivity that PMJM and other riparian species depend on. The vegetation management programs recommended for Dirty Woman Creek and Monument Creek are designed to balance conveyance needs with ecological function, preserving the water quality and habitat benefits of the riparian corridor while preventing vegetation encroachment from reducing channel capacity.

5.4.3 Downstream Water Quality Implications for USAFA

The water quality conditions documented within the USAFA corridor are a direct function of what the upstream watershed delivers. The USAFA Corridor Planning Study (2023) found elevated *E. coli* concentrations, degraded channel morphology, and impaired aquatic and riparian habitat throughout the Monument Creek corridor on USAFA property. These conditions are driven by the cumulative effects of urbanization, increased impervious coverage, channel instability, and inadequate stormwater treatment within the upper watershed—the same conditions that this Master Plan documents and addresses.

The CIP projects that provide the greatest downstream water quality benefits to USAFA are those that reduce sediment loading (JC-04, TC-06, MC-02), attenuate peak flows through regional detention (CC-07, TC-05, JC-05), and restore controlled conveyance at overtopping structures along the Old Denver Road corridor and other critical crossings. Together, these projects reduce the frequency, magnitude, and pollutant concentration of stormwater discharges at North Gate Boulevard—the northern USAFA boundary and the downstream limit of this study—where Monument Creek currently delivers an estimated 18,640 cfs during a future-condition 100-year event.

Improving upstream water quality also reduces the cost and complexity of the 49 restoration projects identified within the USAFA corridor. Many of those projects address symptoms—channel incision, bank erosion, habitat degradation—that are caused or worsened by the sediment loads, peak flows, and pollutant concentrations arriving from upstream. Addressing the causes within the Town’s planning area, through the projects in this CIP, is more effective and more sustainable than treating symptoms downstream.

5.4.5 Summary

The capital improvement and maintenance recommendations in this Master Plan deliver water quality benefits that extend well beyond their primary flood risk reduction objectives. The most impactful water quality investments are the channel and erosion stabilization projects (JC-04, TC-06, MC-02), which address the dominant source of sediment loading in the watershed; the regional detention facilities (CC-07, TC-05, JC-05), which provide system-level treatment for suspended solids, nutrients, and gross pollutants; and the ongoing maintenance programs (CC-08, DW-04, BF-01), which sustain the performance of existing BMPs and prevent pollutant remobilization.

Every project in the CIP that eliminates overtopping at an undersized structure contributes to water quality by restoring controlled conveyance and reducing the uncontrolled overland flow that amplifies pollutant transport during storm events. These co-benefits reinforce the value of the CIP as an integrated stormwater management program that advances the Town’s flood risk, water quality, environmental, and regulatory objectives simultaneously—consistent with the Environmental Stewardship goals of the Monument 2040 Comprehensive Plan and the Regionwide Coordination objectives established in Section 1.2 of this Master Plan.

5.5 Operations and Maintenance

The long-term effectiveness of the capital improvement program depends on a sustained commitment to operations and maintenance (O&M). Infrastructure that is designed and constructed to current standards will degrade over time without routine inspection, cleaning, and repair—and the resulting loss of capacity can recreate the very flood risks and water quality problems that the CIP is designed to resolve. This section presents the recommended O&M program for existing and proposed stormwater facilities within the Town of Monument, including inspection protocols, sediment removal, vegetation management, beaver activity management, coordination with special districts and private owners, and record-keeping practices. The O&M program is designed to function as a complement to the capital investments in Section 5.3 and the phasing plan in Section 5.4, ensuring that completed projects continue to perform as intended and that existing infrastructure is maintained at or near its design capacity throughout its service life.

As documented in Section 5.2, maintenance deficiencies are amplifying structural capacity shortfalls across the study area. At least three Crystal Creek structures have documented sediment or vegetation blockage that reduces effective capacity well below design, and field investigation found similar conditions at crossings in Dirty Woman Creek, Teachout Creek, and Jackson Creek. The overtopping analysis in Chapter 5 evaluated structures in their current condition—meaning that maintenance-related obstructions are contributing directly to the modeled flood risk. A structured O&M program would restore partial or full design capacity at several locations, reducing flood risk in the near term while longer-lead capital projects are designed and funded.

5.5.1 Inspection Program

Regular inspection is the foundation of an effective maintenance program. Inspections allow the Town to identify emerging problems—sediment accumulation, vegetation encroachment, structural deterioration, debris blockage, erosion, and animal activity—before they escalate into capacity failures or public safety hazards. The inspection program should be organized by facility type, with frequencies scaled to the risk and rate of change at each location.

Culverts and Road Crossings - All culverts and road crossings identified in the Structure Overtopping Analysis (Section 5.2) should be inspected at least twice per year: once in spring following snowmelt to assess winter damage and sediment deposition, and once in late summer or early fall following the rainy season to document storm-related debris accumulation, scour, and structural damage. Structures that have documented maintenance deficiencies—including the Highway 105 crossing (CC-01), the Knollwood Drive crossing (DW-03), and the Leather Chaps Drive crossings (JC-02 and JC-03)—should receive additional inspections after any storm event producing measurable runoff. Each inspection should document inlet and outlet condition, percentage of opening obstructed by sediment or debris, evidence of structural deterioration (cracking, joint separation, corrosion, deformation), scour at inlets and outlets, and the presence of beaver dams or other wildlife-related obstructions.

Detention and Water Quality Facilities - All detention basins, regional facilities, and permanent water quality BMPs within Town jurisdiction should be inspected at least annually, with a comprehensive inspection conducted in spring. Inspections should evaluate sediment accumulation relative to design storage volume, outlet structure condition and function, embankment and spillway integrity, evidence of seepage or piping, vegetation condition on slopes and within the basin floor, and trash or debris accumulation at inlet and outlet structures. For the regional detention facilities proposed in this CIP (CC-07, TC-05, JC-05), maintenance requirements should be incorporated into the design specifications so that access, sediment storage capacity, and cleanout frequency are planned from the outset rather than addressed retroactively.

Open Channels and Drainageways - The primary drainageways in the study area—Crystal Creek, Dirty Woman Creek, Teachout Creek, Jackson Creek, Monument Creek, and Beaver Creek—should be inspected annually during low-flow conditions, with targeted inspections at known problem areas including the Jackson Creek pond and dam erosion complex (JC-04), the Teachout Creek headcut locations near Lewis-Palmer High School (TC-06), and the Monument Creek reaches designated as Protect-In-Place in the 2016 Monument Creek Watershed Restoration Master Plan. Channel inspections should document bank stability, evidence of active erosion or headcutting, vegetation density and encroachment into the conveyance corridor, sediment bars or debris jams, and any changes in channel alignment or cross-section.

Bridges - The Mount Herman Road bridge (MC-01) and other bridges spanning Monument Creek and its tributaries should be inspected on the schedule required by CDOT and El Paso County bridge inspection programs. Supplemental stormwater-focused inspections should assess scour at abutments and piers, debris accumulation in the channel beneath the structure, and evidence of flow redirection or bank erosion caused by in-channel obstructions, consistent with the conditions documented in Section 5.3.5 for the Mount Herman Road crossing.

Post-Storm Inspections - Following any significant storm event (defined as a storm producing rainfall equal to or exceeding the 2-year recurrence interval, or approximately 1.5 inches in 2 hours under the El Paso County design storm), the Town should conduct rapid inspections of all high-priority structures and known problem areas within 48 hours. Post-storm inspections are essential for documenting damage, identifying new blockages, and triggering emergency maintenance before the next storm event compounds the problem. The inspection results should be recorded in the Town’s asset management system and used to update maintenance priorities.

5.5.2 Sediment Removal Program

Sediment accumulation is the single most widespread maintenance deficiency identified in the field investigation (Chapter 4). The Highway 105 crossing on Crystal Creek is operating at approximately 50 percent capacity due to sediment blockage alone, and multiple additional structures across Crystal Creek, Dirty Woman Creek, and Jackson Creek have documented sediment-related capacity reductions. Sediment removal is the most cost-effective near-term action available to the Town because it restores existing infrastructure capacity without requiring new construction.

The sediment removal program should include the following elements:

Annual Culvert Cleaning - All culverts with documented sediment accumulation exceeding 25 percent of the opening area should be cleaned annually, with priority given to structures that overtop in the 10-year event. The



Crystal Creek culvert network (CC-08) should be the initial focus, with cleaning scheduled in late spring after snowmelt stabilizes and before the summer storm season begins.

Detention Basin Sediment Management - Detention basins should be surveyed periodically to measure accumulated sediment depth relative to the original design volume. When accumulated sediment reduces available storage by more than 20 percent of the design volume, sediment removal should be scheduled. For the Triview Metropolitan District detention facilities documented in the 2020 Kimley-Horn assessment, sediment management should be coordinated through the intergovernmental framework described in Section 5.6.5.

Channel Sediment Bars - Sediment bars that form in drainageways and restrict conveyance should be removed when they reduce the effective cross-sectional area by more than 25 percent or when they redirect flow into erodible banks. Sediment removal in channels should be coordinated with the vegetation management program (Section 5.6.3) to avoid destabilizing vegetated banks during clearing operations.

Disposal and Permitting - Removed sediment must be handled in accordance with applicable water quality regulations. If sediment is removed from within a jurisdictional waterway, the Town should coordinate with the Colorado Department of Public Health and Environment (CDPHE) and the U.S. Army Corps of Engineers to determine whether Section 404 or state discharge permits are required. Sediment should be tested for contaminants if removed from areas with known urban runoff inputs and disposed of at an approved facility.

5.5.3 Vegetation Management Program

Vegetation encroachment is a recurring maintenance challenge across the study area, particularly in Dirty Woman Creek (DW-04), Crystal Creek, and the Leather Chaps Drive corridor in Jackson Creek. The Triview detention assessment identified cattail overgrowth as a deficiency at multiple pond locations, and field investigation documented vegetation blockage contributing to reduced culvert capacity at several crossings. While riparian vegetation provides important ecological and water quality benefits—including bank stabilization, sediment filtration, habitat value, and natural flow attenuation—unmanaged growth within the conveyance corridor reduces channel capacity and increases flood risk.

The vegetation management program should balance conveyance requirements with ecological preservation using the following approach:

Conveyance Corridor Maintenance - Within the primary conveyance corridor of each drainageway, vegetation should be managed to maintain at least 80 percent of the design cross-sectional flow area. This requires annual mowing or selective clearing of woody vegetation within the low-flow channel and the removal of cattails, willows, and other dense growth that obstructs flow through culvert inlets and outlets. The Dirty Woman Creek vegetation management program (DW-04) should serve as the template, with an annual clearing cycle timed to late summer or early fall when vegetation is at peak density but before the ground freezes.

Riparian Buffer Preservation - Vegetation on the upper banks and floodplain terraces outside the primary conveyance corridor should be preserved to the maximum extent practicable. These areas provide bank stabilization, sediment filtration, pollutant uptake, and habitat connectivity. Clearing should be limited to the minimum area necessary to restore conveyance, and native revegetation should be required where clearing is

extensive. This approach aligns with the Environmental Stewardship goals of the Monument 2040 Comprehensive Plan and supports the water quality objectives described in Section 5.5.

Detention Basin Vegetation - Vegetation within detention basins should be managed to prevent cattail or woody growth from obstructing outlet structures, reducing storage volume, or blocking emergency spillways. Basin side slopes should be maintained with stabilizing grasses to prevent erosion, and outlet trash racks should be cleared of accumulated vegetation and debris at least quarterly. For basins designed with a permanent pool or wetland bench for water quality treatment, vegetation management should be limited to maintaining outlet function and preventing dead vegetation from becoming a source of nutrient loading during decomposition.

Noxious Weed Control - The vegetation management program should include monitoring and treatment for noxious weeds listed under the Colorado Noxious Weed Act, particularly along disturbed channel banks and in areas where sediment removal or construction has exposed bare soil. Noxious weed colonization can outcompete native vegetation, reduce bank stability, and degrade habitat quality. Treatment methods should comply with El Paso County weed management requirements and avoid the application of herbicides within or adjacent to flowing waterways unless approved by CDPHE.

5.5.5 Coordination with Special Districts and Private Owners

As described in Section 2.4, a significant portion of the stormwater infrastructure within the Town’s boundaries is owned and maintained by entities other than the Town, including the Triview Metropolitan District, Woodmoor Water and Sanitation District, HOAs, and private property owners. The Town’s MS4 permit requires the management and oversight of stormwater discharges from the entire permitted area, regardless of facility ownership. Effective O&M therefore requires a structured coordination framework that ensures all facilities are maintained to a consistent standard.

Triview Metropolitan District - Triview maintains 16 detention ponds and one drainage channel within the Town’s boundaries, as documented in Section 2.4. The Town should establish a formal maintenance coordination agreement with Triview that includes annual reporting of inspection results and maintenance activities, shared inspection protocols and maintenance standards consistent with the Town’s MS4 requirements, a schedule for periodic joint inspections of Triview facilities by Town staff, and a process for the Town to request corrective maintenance when inspections identify deficiencies that could affect downstream water quality or flood risk. Triview representatives have expressed their intent to remain an active and responsible partner in regional watershed stewardship, and formalizing this commitment through a written agreement would provide accountability and transparency for both parties.

HOAs and Private Detention Facilities - Private detention facilities constructed as part of subdivision development are typically the maintenance responsibility of HOAs, commercial property owners, or individual landowners. The Town should compile and maintain a complete inventory of all private detention facilities within its jurisdiction, including documentation of the responsible party, original design parameters, and any recorded maintenance easements. The Town should conduct periodic compliance inspections of private facilities under its MS4 authority and establish a notification and enforcement process for facilities that are not being adequately maintained. For new development, the Town should require recorded maintenance agreements with clear long-term obligations, as recommended in Section 2.4, and should consider requiring financial assurance (such as a maintenance escrow or bond) to ensure that maintenance funding is available regardless of changes in ownership.



Regional Partners - Maintenance activities that affect facilities shared with or adjacent to El Paso County, CDOT, the Union Pacific Railroad, or the U.S. Air Force Academy should be coordinated through the appropriate intergovernmental channels. The UPRR crossing improvements in Teachout Creek (TC-03), the CDOT highway crossings in Crystal Creek (CC-01), and the downstream interface with USAFA all involve infrastructure under the jurisdiction of other entities. The Town should establish or maintain points of contact with each partner agency and include maintenance coordination items on the agenda of any standing watershed coordination meetings.

5.5.6 Asset Management and Record-Keeping

An effective O&M program requires accurate, accessible records of all stormwater assets and the maintenance activities performed on them. The Town should establish or expand a stormwater asset management system that includes the following elements:

Facility Inventory - A GIS-based inventory of all culverts, bridges, detention basins, channels, outfalls, and water quality BMPs within Town jurisdiction, including those maintained by special districts and private owners. Each facility should be attributed with its location, type, size, material, year of construction or last rehabilitation, ownership, responsible maintenance entity, and design capacity. The 36 structures modeled in this Master Plan and the Triview facilities documented in the 2020 Kimley-Horn assessment provide the foundation for this inventory.

Inspection Records - Standardized inspection forms that capture facility condition, maintenance needs, photographs, and recommended follow-up actions. Inspection records should be linked to the GIS inventory so that condition trends can be tracked over time and maintenance can be prioritized based on objective, repeatable assessments. Digital inspection forms completed in the field using tablet or mobile devices would improve data quality and reduce the lag between inspection and data entry.

Maintenance Logs - Records of all maintenance activities performed, including date, location, type of work, quantities (such as cubic yards of sediment removed), cost, and responsible crew or contractor. Maintenance logs provide the data needed to track program expenditures, justify budget requests, demonstrate MS4 permit compliance, and evaluate whether maintenance frequencies are adequate or need adjustment.

Condition Rating System - A standardized condition rating scale (such as a 1-to-5 system ranging from Excellent to Failed) should be applied to each facility during every inspection. The rating system provides a consistent, comparable metric that can be used to prioritize maintenance spending, identify facilities approaching the end of their useful life, and communicate infrastructure condition to the Town Board and the public. Facilities rated at the lowest condition levels should be flagged for immediate maintenance or capital replacement consideration.

5.5.7 Recommended O&M Budget Framework

The O&M program should be funded through the Town’s annual operating budget or through a dedicated stormwater maintenance fund, as recommended in the funding discussion in Section 5.4.5. The phasing plan in Section 5.4.4 classifies several programs as “Ongoing” activities that should begin in Year 1 and continue annually regardless of the pace of capital project delivery. These include the Crystal Creek sediment removal and maintenance program (CC-08), the Dirty Woman Creek vegetation management program (DW-04), the

Monument Creek channel monitoring and stabilization program (MC-02), the Beaver Creek channel monitoring program (BV-01), and the Black Forest Tributary detention compliance review (BF-01).

The O&M budget should be structured to cover four categories of recurring expenditure:

Routine Inspection - Staff time and equipment for biannual culvert inspections, annual channel inspections, annual detention basin inspections, and post-storm rapid assessments. This category also includes the ongoing monitoring programs for Monument Creek (MC-02), Beaver Creek (BV-01), and the detention compliance review for Black Forest Tributary (BF-01).

Sediment and Debris Removal - Equipment, labor, hauling, and disposal costs for the annual sediment removal program (CC-08) and reactive debris clearing at culverts and outfalls throughout the system. This is expected to be the largest recurring O&M expenditure and should be budgeted based on the quantities documented during inspections.

Vegetation Management - Annual mowing, selective clearing, cattail removal, noxious weed treatment, and revegetation associated with the channel vegetation management programs (DW-04 and similar activities in other basins). Vegetation management should be contracted or performed by trained crews that can distinguish between invasive or obstructive growth requiring removal and native riparian vegetation that should be preserved.

Emergency and Unplanned Maintenance - A contingency allocation for unplanned maintenance triggered by storm damage, beaver dam failures, bank collapses, or other emergencies. Industry practice for municipal stormwater programs suggests that emergency and unplanned maintenance should be budgeted at 15 to 25 percent of the total routine O&M budget to ensure that funds are available to respond to urgent conditions without diverting resources from the scheduled maintenance program.

As additional capital projects from the CIP are completed and brought online, the O&M budget should be adjusted to incorporate the maintenance requirements of those new facilities. Regional detention basins, in particular, will require ongoing sediment management, outlet structure maintenance, and embankment inspection that should be planned and budgeted during the design phase, not deferred until after construction is complete.

5.5.8 Summary

The O&M program is an essential complement to the capital improvement program. Without sustained maintenance, the capacity gains achieved through capital investments will erode over time, and the Town will find itself in a recurring cycle of infrastructure degradation, emergency repair, and deferred replacement. The most cost-effective stormwater management strategy is one that combines targeted capital improvements to address the most critical structural deficiencies with a reliable, adequately funded maintenance program that sustains the performance of all facilities over their full service life.

The recommended O&M actions are summarized in Table 5.5-1. The inspection frequencies, maintenance triggers, and coordination requirements in this section should be adopted by the Town as minimum standards and refined over time as the asset management system matures and additional data on facility condition and maintenance costs become available.



Table 5.5-1: Recommended Operations and Maintenance Program Summary

Activity Category	Applicable Facilities / Projects	Frequency	Responsible Party	Key Actions
Culvert and Crossing Inspection	All 36 modeled structures; priority structures CC-01, DW-03, JC-02, JC-03	Biannual (spring and fall); post-storm for high-priority structures	Town of Monument	Document inlet/outlet condition, percent obstruction, structural deterioration, scour, beaver activity; trigger maintenance work orders
Detention Basin Inspection	All Town-owned basins; proposed regional facilities CC-07, TC-05, JC-05	Annual (spring)	Town of Monument; Triview Metropolitan District (for district facilities)	Measure sediment depth vs. design volume; inspect outlet structures, embankments, spillways; assess vegetation and debris accumulation
Open Channel Inspection	Crystal Creek, Dirty Woman Creek, Teachout Creek, Jackson Creek, Monument Creek, Beaver Creek	Annual (low-flow); targeted at known problem areas	Town of Monument	Assess bank stability, active erosion, headcutting, vegetation density, sediment bars, debris jams, channel alignment changes
Post-Storm Rapid Assessment	All high-priority structures and known problem areas	Within 48 hours of any storm $\geq$ 2-year event ($\approx$ 1.5" in 2 hrs)	Town of Monument	Document storm damage, new blockages; trigger emergency maintenance; update asset management records
Sediment Removal — Culverts (CC-08)	Crystal Creek culvert network (priority); all culverts with >25% obstruction	Annual (late spring, pre-monsoon)	Town of Monument	Remove accumulated sediment and debris from culvert barrels, inlets, and outlets; restore design conveyance capacity; document quantities removed
Sediment Removal — Detention Basins	All Town and district detention basins	When sediment reduces storage by >20% of design volume	Town of Monument; Triview Metropolitan District; private owners (per facility)	Survey sediment accumulation; excavate and dispose per CDPHE requirements; test for contaminants at urban runoff locations
Channel Vegetation Management (DW-04 and system-wide)	Dirty Woman Creek (primary); Crystal Creek, Jackson Creek corridors; detention basin outlets	Annual (late summer / early fall)	Town of Monument	Maintain $\geq$ 80% of design cross-sectional flow area; mow/clear low-flow channel; remove cattails and obstructive woody growth at culvert inlets/outlets; preserve riparian buffer on upper banks; clear outlet trash racks quarterly



Activity Category	Applicable Facilities / Projects	Frequency	Responsible Party	Key Actions
Noxious Weed Control	All disturbed channel banks, construction areas, bare soil exposures	Annual monitoring; treatment as needed	Town of Monument	Monitor and treat species listed under Colorado Noxious Weed Act; comply with El Paso County requirements; avoid herbicide application in/adjacent to flowing waterways unless CDPHE-approved
Beaver Activity Management	Knollwood Dr (DW-03); infrastructure protection zones at all culverts, outlets, and bridge abutments	Monitored during routine inspections; dam removal as needed	Town of Monument; coordinate with CPW	Remove beaver dams within infrastructure protection zones; install flow devices (Clemson Pond Levelers) at chronic locations; allow coexistence in rural reaches; obtain CPW permits for removal/relocation
Monument Creek Channel Monitoring (MC-02)	Monument Creek mainstem (Protect-In-Place reaches)	Annual; per 2016 Watershed Restoration Master Plan	Town of Monument	Track bank stability and channel migration; targeted bank stabilization at distress locations; monitor projected 12% peak flow increase effects; reduce sediment delivery to USAFA
Beaver Creek Monitoring (BV-01)	Beaver Creek channel and upper basin	Annual	Town of Monument	Establish condition baseline; detect early instability; monitor fire risk implications for upper basin; track sediment dynamics
Black Forest Trib. Detention Compliance (BF-01)	Development detention facilities in Black Forest Tributary basin	Annual review	Town of Monument	Verify individual projects meet current detention requirements; identify facilities built to outdated standards or not maintained; establish enforcement baseline; prevent cumulative peak flow increases to USAFA
Triview District Coordination	16 Triview detention ponds and 1 drainage channel	Annual reporting; periodic joint inspections	Town of Monument and Triview Metropolitan District	Formal maintenance coordination agreement; shared inspection protocols; annual maintenance activity reports; Town authority to request corrective action under MS4 permit
Private Facility Compliance	All private detention facilities, HOA-maintained BMPs	Periodic (per MS4 program schedule)	Town of Monument (oversight); private owners (maintenance)	Maintain facility inventory with responsible parties; conduct compliance inspections; notification and enforcement for deficient facilities; require recorded maintenance agreements for new development
Asset Management and Record-Keeping	All stormwater assets (Town, district, and private)	Continuous	Town of Monument	Maintain GIS-based facility inventory; standardized digital inspection forms; maintenance logs with dates, quantities, and costs; 1-to-5 condition rating system; annual program reporting for MS4 compliance

5.6 Environmental and Safety

The capital improvement projects recommended in this Master Plan involve construction activities within and adjacent to waterways, floodplains, and riparian corridors that support sensitive environmental resources—including federally designated critical habitat for the Preble’s Meadow Jumping Mouse (PMJM). These projects also involve work in and around roadways, railroads, utilities, and active waterways that present construction safety risks requiring careful planning and management. This section describes the environmental permitting requirements, species protection obligations, wetland and riparian resource considerations, post-fire watershed risks, and construction safety protocols that apply to CIP implementation. The guidance in this section is intended to be used alongside the project-specific descriptions in Section 5.3 to ensure that each project proceeds in compliance with applicable federal, state, and local environmental and safety regulations.

5.6.1 Environmental Permitting Overview

Most of the capital improvement projects in this Master Plan involve work within or immediately adjacent to waters of the United States and will require one or more environmental permits or authorizations before construction can begin. The permitting requirements vary by project type, location, and the involvement of federal funding or federal lands, but the following regulatory frameworks are applicable across the CIP.

Clean Water Act Section 404 - Any project that involves the discharge of dredged or fill material into waters of the United States—including stream channels, wetlands, and floodplain features—requires authorization under Section 404 of the Clean Water Act, administered by the U.S. Army Corps of Engineers (USACE). Culvert replacements, channel stabilization, regional detention facility construction, and bridge rehabilitation all have the potential to trigger Section 404 requirements. Many of the CIP projects may qualify for coverage under USACE Nationwide Permits (particularly NWP 3 for maintenance activities, NWP 14 for linear transportation projects, and NWP 43 for stormwater management facilities), which provide a streamlined authorization process for activities with limited impacts. Projects that exceed Nationwide Permit thresholds will require Individual Permits with more detailed impact analysis, mitigation planning, and public notice.

Clean Water Act Section 401 - Any activity requiring a Section 404 permit must also obtain a Section 401 Water Quality Certification from the Colorado Department of Public Health and Environment (CDPHE), confirming that the proposed discharge will comply with state water quality standards. The Section 401 certification process may impose additional conditions on construction methods, erosion control, and post-construction monitoring to protect downstream water quality.

Colorado Discharge Permit System (CDPS) - All construction activities disturbing one acre or more of land require coverage under the CDPS General Permit for Stormwater Discharges Associated with Construction Activity. This permit requires the preparation of a Stormwater Management Plan (SWMP) that includes erosion and sediment control BMPs, a site inspection schedule, and corrective action procedures. Given the proximity of all CIP projects to receiving waters, construction stormwater management will be a critical compliance element for every project. The SWMP should be tailored to the specific risks at each site, with particular attention to sediment-laden runoff entering Monument Creek and its tributaries.

Endangered Species Act Section 7 - Any project that involves a federal action—including a federal permit (such as a Section 404 permit), federal funding (such as FEMA, CWCB, or OLDCC grants), or work on federal property (such as the USAFA interface)—triggers consultation requirements under Section 7 of the Endangered Species

Act (ESA). Because Monument Creek and several of its tributaries within the study area are designated critical habitat for the PMJM, Section 7 consultation with the U.S. Fish and Wildlife Service (USFWS) will be required for most projects in this CIP. Section 7 consultation evaluates whether the proposed action is likely to adversely affect listed species or destroy or adversely modify critical habitat, and may result in project-specific conditions, conservation measures, or reasonable and prudent alternatives. The PMJM-specific requirements are described in detail in Section 5.7.2.

Endangered Species Act Section 10 - For projects that do not involve a federal nexus but may result in incidental take of the PMJM, the project proponent may need to obtain an Incidental Take Permit under Section 10(a)(1)(B) of the ESA, which requires the preparation of a Habitat Conservation Plan (HCP). The USFWS Colorado Ecological Services Field Office has processed HCPs for residential and infrastructure projects in El Paso County within the Monument Creek watershed, and early coordination with USFWS is recommended to determine whether an HCP is necessary for any Town-funded project.

National Environmental Policy Act (NEPA) - Projects that receive federal funding or require a federal permit are subject to NEPA review. The level of NEPA analysis—Categorical Exclusion, Environmental Assessment, or Environmental Impact Statement—depends on the scope, cost, and environmental impact of the project. Many of the smaller CIP projects (culvert replacements, sediment removal, vegetation management) may qualify for Categorical Exclusion, while the regional detention facilities and major channel stabilization programs may require an Environmental Assessment.

Floodplain Development Permits - Projects within the FEMA-designated 100-year floodplain require floodplain development permits issued through the Town or El Paso County. Projects that alter the base flood elevation or modify the regulatory floodway may require a Conditional Letter of Map Revision (CLOMR) before construction and a Letter of Map Revision (LOMR) after completion. The regional detention facilities, in particular, have the potential to alter flood elevations and may require hydraulic analysis to demonstrate no adverse impact to the regulatory floodplain.

CDOT and Railroad Permits - Projects affecting CDOT highway right-of-way (such as the Highway 105 crossing in Crystal Creek, CC-01) or Union Pacific Railroad property (such as the Teachout Creek railroad crossings, TC-03) require separate access and encroachment permits from those agencies. These permits may impose additional design requirements, construction windows, and safety protocols that must be incorporated into the project schedule and budget.

5.6.2 Preble’s Meadow Jumping Mouse Habitat Protection

The Preble’s Meadow Jumping Mouse is listed as a threatened species under the Endangered Species Act. The PMJM occupies well-developed riparian corridors with dense herbaceous ground cover, a shrub canopy layer (typically willow, alder, or chokecherry), and proximity to perennial or seasonal water sources. Monument Creek and several of its tributaries within and downstream of the study area are designated as PMJM critical habitat, and the Monument Creek watershed has been identified as a suitable location for a medium Recovery Population (500–2,499 individuals) under the PMJM recovery plan. The Monument Creek Site Conservation Team (SCT), established by the USFWS in 2021, continues to guide recovery planning across the broader watershed.



The capital improvement projects in this Master Plan have the potential to both benefit and impact PMJM habitat. Channel stabilization projects (JC-04, TC-06, MC-02) that reduce erosion and sediment delivery will improve riparian habitat quality over time. Regional detention facilities that moderate peak flows will reduce the frequency and severity of flood events that scour riparian vegetation and destroy nesting and hibernation sites. However, construction activities within and adjacent to riparian corridors can temporarily disturb habitat, displace individuals, and alter vegetation structure. The following project-level requirements should be applied to all CIP projects within or adjacent to PMJM habitat.

Habitat Assessment - Before design is initiated for any project within 300 feet of a perennial or seasonal waterway, a qualified biologist should conduct a PMJM habitat assessment to determine whether suitable habitat is present within the project footprint and adjacent areas. The assessment should evaluate riparian vegetation structure, shrub canopy density, herbaceous ground cover, proximity to water, and connectivity with known occupied habitat.

Seasonal Activity Window - The PMJM hibernates from approximately September or October through May. Ground-disturbing construction activities within PMJM habitat should be scheduled during the hibernation period (November 1 through April 30) to the maximum extent practicable, as recommended by the USFWS for projects in occupied or potentially occupied habitat. Construction during the active season (May 1 through October 31) requires additional conservation measures and may trigger formal consultation requirements.

Impact Avoidance and Minimization - Project designs should minimize the permanent loss of riparian vegetation and avoid clearing mature shrub stands that provide PMJM cover and nesting habitat. Temporary disturbance areas should be the minimum necessary for construction access and staging. Where riparian clearing is unavoidable, the disturbed area should be revegetated with native riparian species (willow, alder, native grasses, and sedges) that are consistent with PMJM habitat requirements. Revegetation plans should target the establishment of a dense, multi-storied vegetation structure with greater than 80 percent herbaceous ground cover and a well-developed shrub canopy.

Critical Habitat Considerations - Projects within designated critical habitat must demonstrate that they will not destroy or adversely modify the physical and biological features essential to PMJM conservation, including riparian shrub cover, herbaceous ground cover, adjacent upland habitat for hibernation, and hydrologic conditions that support riparian vegetation. The Section 7 consultation process will evaluate whether proposed projects meet this standard and may impose project-specific conditions to ensure that critical habitat function is maintained or improved.

Net Benefit Approach - The CIP should be presented to USFWS as an integrated program that delivers a net benefit to PMJM habitat across the Monument Creek watershed. The erosion stabilization, sediment reduction, peak flow attenuation, and water quality improvements in the CIP directly address the upstream conditions that the USAFA Corridor Planning Study and the Monument Creek Watershed Restoration Master Plan have identified as drivers of habitat degradation. Early, programmatic coordination with USFWS—rather than project-by-project consultation—may streamline the permitting process and establish a consistent framework for balancing short-term construction impacts against long-term habitat improvement.

5.6.3 Coordination with the Monument Creek Site Conservation Team

The Monument Creek Site Conservation Team (SCT) was established by the USFWS in 2021 to guide PMJM recovery planning across the Monument Creek watershed. The SCT includes representatives from Colorado

Springs Stormwater, the USAFA, Colorado Parks and Wildlife, the USFWS, and other stakeholders with jurisdiction or management responsibility within the watershed. The SCT’s work is directly relevant to this Master Plan because the upstream stormwater conditions documented in Chapters 2 through 5—including increased peak flows, channel instability, sediment loading, and riparian habitat fragmentation—are among the factors that the SCT is working to address at the watershed scale.

The Town of Monument should engage with the SCT as a participating stakeholder to ensure that the CIP is coordinated with ongoing recovery planning efforts. Specific coordination actions include:

Information Sharing - The hydrologic modeling results (Chapter 3), overtopping analysis (Section 5.2), and project descriptions (Section 5.3) in this Master Plan provide data that is directly useful to the SCT’s understanding of upstream conditions affecting PMJM habitat. The Town should share this information and provide updates as projects are designed and implemented.

Project Review - As CIP projects are advanced to the design phase, the Town should coordinate with the SCT and the USFWS Colorado Ecological Services Field Office to identify potential PMJM impacts early in the design process, when avoidance and minimization measures can be incorporated most effectively and cost-efficiently.

Recovery Population Support - The SCT has identified the Monument Creek watershed as a suitable location for a medium PMJM Recovery Population. The Town’s CIP investments—particularly the channel stabilization, erosion control, and riparian revegetation components—directly support this recovery objective by improving the quantity and quality of PMJM habitat in the upper watershed. Documenting these benefits through the SCT framework may strengthen the Town’s position in future ESA consultations and demonstrate proactive compliance with the recovery plan.

Monitoring Coordination - The channel monitoring programs recommended for Monument Creek (MC-02) and Beaver Creek (BV-01) in Sections 5.3.5 and 5.6 should be coordinated with any SCT-sponsored biological monitoring to maximize the value of field data and avoid duplication of effort. Where feasible, the Town’s channel condition monitoring should include observations of riparian vegetation structure and habitat quality that are relevant to PMJM recovery tracking.

5.6.4 Wetland and Riparian Resource Protection

The study area contains wetland and riparian features distributed along the primary drainageways and their tributaries. Dirty Woman Creek’s wide, grassy floodplain with wetland-type zones, Jackson Creek’s series of ponds and associated wetland areas, and the riparian corridors along Monument Creek and Beaver Creek all support aquatic and riparian habitat that is protected under federal and state law. In addition to the PMJM-specific protections described in Section 5.7.2, the following resource protection measures apply to CIP projects.

Wetland Delineation - Prior to design of any project that involves ground disturbance within or adjacent to a drainageway, a jurisdictional wetland delineation should be performed in accordance with the USACE 1987 Wetland Delineation Manual and the Western Mountains, Valleys, and Coast Regional Supplement. The delineation establishes the boundaries of wetlands and other waters of the United States that are subject to



Section 404 regulation and provides the basis for impact avoidance, minimization, and compensatory mitigation planning.

Impact Avoidance and Mitigation Sequencing - Consistent with USACE and EPA guidance, all CIP projects should follow the mitigation sequencing framework: first avoid impacts to wetlands and waters, then minimize unavoidable impacts, and finally compensate for remaining impacts through mitigation. For the regional detention facilities (CC-07, TC-05, JC-05), site selection should prioritize locations that avoid existing wetlands and riparian areas. Where avoidance is not feasible, compensatory mitigation may be required through wetland creation, restoration, or the purchase of credits from an approved mitigation bank.

Riparian Buffer Standards - As recommended in Section 5.6.3 (Vegetation Management Program), riparian vegetation on the upper banks and floodplain terraces should be preserved to the maximum extent practicable during construction. Construction staging, material storage, and equipment access routes should be located outside the riparian corridor wherever possible. Where temporary riparian disturbance is unavoidable, a revegetation plan using native species appropriate to the site elevation and hydrology should be implemented within the first growing season following construction.

Erosion and Sediment Control During Construction - All projects within or adjacent to waterways must implement robust erosion and sediment control BMPs throughout construction. At a minimum, this includes perimeter sediment fencing, stabilized construction entrances, temporary sediment basins for dewatering discharge, inlet protection at downstream storm drain structures, and daily inspection during active construction. For in-channel work (culvert replacements, channel stabilization, bridge rehabilitation), flow diversion and dewatering plans should be designed to isolate the work area from the active channel and prevent sediment-laden discharge to downstream reaches.

5.6.5 Post-Fire Watershed Risk

The 2012 Waldo Canyon fire demonstrated the vulnerability of Front Range watersheds to wildfire and its cascading hydrologic effects. The burn scar from the Waldo Canyon fire affected subbasins along the upper reaches of West Monument Creek, and similar fire events in the Beaver Creek headwaters within Pike National Forest or in the forested uplands above the study area could rapidly and dramatically alter runoff and sediment dynamics throughout the Monument Creek watershed. Post-fire conditions—including the loss of vegetative cover, hydrophobic soil layers, and increased debris flow potential—can increase peak flows by an order of magnitude or more, overwhelm existing infrastructure, deliver massive sediment loads that fill detention basins and bury culverts, and destroy riparian habitat that supports the PMJM and other species.

The CIP should incorporate post-fire risk awareness into both design and operations:

Design Resilience - Regional detention facilities (CC-07, TC-05, JC-05) should be designed with sediment storage allowances that account for the potential for post-fire sediment delivery. Outlet structures should be designed to remain functional under high sediment loading conditions, and emergency spillways should be sized to pass post-fire peak flows that may substantially exceed the design storm.

Monitoring Triggers - The Beaver Creek monitoring program (BV-01) should include fire risk as an explicit monitoring parameter. If a wildfire occurs within the Beaver Creek headwaters or adjacent Pike National Forest drainages, the Town should immediately activate an emergency monitoring and maintenance protocol that

includes rapid assessment of all downstream infrastructure, pre-emptive sediment removal at critical culverts, and coordination with El Paso County, the U.S. Forest Service, and USAFA on post-fire flood response.

Coordination with Wildfire Mitigation - The Town should coordinate with the El Paso County Wildfire Mitigation Program, the Pike National Forest, and the Colorado State Forest Service to stay informed about forest health, fuel loading, and planned prescribed burns in the upper watershed. Community wildfire protection planning and fuel reduction activities in the Beaver Creek and upper Monument Creek headwaters directly reduce the probability and severity of the post-fire hydrologic impacts that this CIP is designed to manage.

5.6.6 Summary

The environmental requirements described in this section are integral to the successful implementation of the capital improvement program. Environmental permitting—particularly Section 404, Section 7 ESA consultation, and CDPS construction stormwater coverage—should be initiated early in the design process for each project to avoid schedule delays and ensure that permit conditions can be incorporated into the design. PMJM habitat protection is a central consideration for all projects within or adjacent to riparian corridors, and early coordination with the USFWS and the Monument Creek Site Conservation Team will help the Town navigate the regulatory process efficiently while contributing to watershed-scale species recovery.



Chapter 6 Review and Suggested Revisions to Stormwater Policy

6.1 Overview

The capital improvements, operations and maintenance programs, and watershed partnerships recommended in the preceding chapters of this Master Plan will reduce flood risk, improve water quality, and protect downstream resources. However, the long-term success of those investments depends on the strength of the regulatory framework that governs how stormwater is managed on an ongoing basis—particularly as new development continues to increase impervious coverage and peak runoff throughout the study area. Regulations establish how development is required to control runoff, what standards apply to detention and water quality treatment, how facilities are maintained over their service life, and what enforcement tools are available when standards are not met.

This chapter reviews the Town of Monument’s existing stormwater-related codes, compares them against the El Paso County Drainage Criteria Manual (DCM) and best practices drawn from leading municipal stormwater programs, identifies specific gaps and deficiencies, and recommends code revisions organized by priority. The review is grounded in the conditions documented throughout this Master Plan: Structure overtopping (Chapter 5), the ongoing development pressure in the Teachout Creek and Jackson Creek basins (Chapter 2), the maintenance coordination challenges with special districts and private owners (Section 2.4), the downstream impacts on the U.S. Air Force Academy documented in the USAFA Corridor Planning Study (2023), and the funding shortfalls described in Section 5.4.6.

The recommendations are aligned with the six study objectives established in Section 1.2, the five themes of the Monument 2040 Comprehensive Plan (Section ES.2), and the Town’s MS4 permit obligations. Together with the capital improvement and operations recommendations in Chapter 5, these regulatory improvements form a complete program for managing stormwater within the Town’s planning area.

6.2 Inventory of Existing Stormwater Codes

The Town of Monument’s stormwater provisions are currently distributed across multiple titles and chapters of the Municipal Code rather than consolidated in a single, purpose-built stormwater management ordinance. This fragmented structure creates inconsistency in how stormwater requirements are applied, makes it difficult for developers and Town staff to identify all applicable standards, and complicates the Town’s ability to demonstrate compliance with its MS4 permit. The principal code sections that address stormwater are inventoried in Table 6.2-1.

Table 6.2-1: Inventory of Existing Stormwater-Related Code Provisions

Code Section	Current Provisions	Limitations Identified
Title 8, Chapter 8.30 Stormwater Management	Establishes Town authority over stormwater discharges; Section 8.30.060 requires operation and maintenance of permanent BMPs for water quality and downstream flood mitigation; references MS4 permit obligations	No quantitative performance standards for BMPs; no approved BMP list or design specifications; no defined maintenance schedules or reporting requirements; no enforcement mechanisms or penalties for non-compliance; no development thresholds triggering stormwater requirements
Title 3, Chapter 3.28 Stormwater Impact Fees	Establishes stormwater impact fee assessed on new development to fund stormwater infrastructure improvements	Fees have historically been insufficient to fund recommended CIP projects (Section 5.4.6); no watershed-based differentiation; no mechanism for periodic recalibration; fee does not account for degree of impervious coverage
Title 16 Subdivision Regulations	Includes general provisions for drainage and grading as part of development review; requires drainage analysis	No minimum detention volumes or release rate standards; no impervious coverage limits; no water quality treatment requirements as conditions of plat approval; relies on reviewer judgment rather than prescriptive standards
Title 17 Zoning	Addresses land use intensity and site design; establishes lot coverage and setback requirements by zoning district	No impervious coverage limits specific to stormwater; no pervious area ratios; no incentives for low-impact development (LID) or green infrastructure practices
Title 13 Public Services	General provisions for public utilities and services; limited stormwater-specific content	Does not establish a stormwater utility or dedicated funding mechanism for ongoing stormwater operations and maintenance

In addition to the Municipal Code, the Town relies on the El Paso County Drainage Criteria Manual (DCM) as its primary technical reference for stormwater design. The DCM provides comprehensive engineering criteria organized into two volumes covering drainage policy and technical design standards. The manual establishes a dual-design-storm approach requiring both a minor storm (typically the 5-year or 10-year event) for initial conveyance and a major storm (100-year event) for emergency overflow. It also defines the Water Quality Capture Volume (WQCV) methodology for sizing BMPs to treat the 80th percentile storm event.

While the DCM provides a sound technical foundation, it is a county-level document designed for use across a large and diverse jurisdiction. It does not address the Town-specific conditions identified in this Master Plan—including the inter-basin diversion at Monument Hill Road, the downstream impacts on USAFA, the maintenance coordination challenges with special districts and HOAs, or the basin-specific characteristics (such as Crystal Creek’s median curve number of 90.5) that affect stormwater performance within the Town’s planning area. Critically, the DCM functions as a technical manual rather than a regulatory ordinance—it provides design guidance but does not itself establish enforceable standards, permitting requirements, or penalties for non-compliance.



6.3 Comparison with Stormwater Management Best Practices

To identify opportunities for strengthening the Town’s regulatory framework, this section compares the Town’s current provisions and the El Paso County DCM against best practices drawn from leading municipal and county stormwater management programs. The best-practice standards referenced here are representative of the regulatory elements that mature, effective stormwater programs employ to manage development-driven runoff, ensure long-term facility performance, protect water quality, and maintain MS4 permit compliance. They include programs that operate comprehensive, standalone stormwater ordinances with defined permitting processes, quantitative detention and water quality standards, formal facility certification and inspection procedures, graduated enforcement mechanisms, fee-in-lieu options for regional detention, wetland and riparian buffer protections, and long-term financial assurance requirements for privately maintained facilities.

A key distinguishing characteristic of these best-practice programs is consolidation: rather than distributing stormwater provisions across multiple code titles, leading programs establish a single, dedicated stormwater management ordinance that serves as the sole regulatory reference for developers, engineers, Town staff, and enforcement personnel. This consolidated approach eliminates ambiguity about applicable standards, creates a clear connection between technical requirements and enforcement authority, and provides a transparent framework for MS4 permit compliance.

Table 6.3-1 compares the Town’s current framework against these best-practice standards across 15 regulatory elements organized into four categories.

Table 6.3-1: Comparative Analysis of Stormwater Regulatory Elements

Regulatory Element	Monument Current	El Paso County DCM	Best Practice Standard	Recommended Action
Development Standards				
Standalone Stormwater Ordinance	No dedicated ordinance; provisions fragmented across Titles 3, 8, 13, 16, and 17	Comprehensive technical manual but not a Town-adopted ordinance with enforcement provisions	Dedicated stormwater management ordinance with unified standards, permitting, and enforcement in a single code chapter; multi-article structure covering definitions, applicability, standards, maintenance, enforcement, and variances	Adopt a dedicated stormwater management ordinance as a new chapter of the Municipal Code
Development Thresholds	No defined impervious area or disturbance thresholds triggering stormwater requirements	Drainage report thresholds defined; varies by development type	Clear graduated thresholds (e.g., ≥0.5 acre disturbance or ≥5,000 sq ft new impervious) triggering stormwater management plan, detention, and water quality requirements; separate thresholds for minor vs. major development	Establish graduated thresholds triggering progressively more stringent requirements based on project size and impervious coverage
Detention Standards	Relies entirely on El Paso County DCM; no Town-specific detention requirements or basin-specific standards	Dual design storm (minor/major); detention required to limit post-development peaks to pre-development levels	Full-spectrum detention addressing storms from WQCV through 100-year; explicit volume and release rate criteria; basin-specific requirements where documented conditions warrant; climate-adjusted sizing	Adopt Town-specific detention standards that reference but supplement the DCM; add basin-specific provisions for Crystal Creek and Teachout Creek based on V3 model results
Impervious Coverage Limits	No impervious limits by zoning district or development type	Not addressed; DCM is a design manual, not a land use regulation	Maximum impervious coverage ratios by zoning district; incentives for pervious materials and green infrastructure; watershed overlay zones for sensitive basins	Incorporate impervious coverage limits into the zoning code; consider watershed overlay zones for Crystal Creek and Teachout Creek
Water Quality and Environmental Protection				
Water Quality Capture Volume	Section 8.30.060 requires BMPs but specifies no sizing criteria or capture volume	WQCV methodology defined; 80th percentile storm capture for BMP sizing	Mandatory WQCV capture for all development above threshold; specific BMP performance standards; approved BMP list with sizing guidance and maintenance specifications	Adopt WQCV capture requirement consistent with DCM methodology; establish approved BMP list with Town-specific guidance and maintenance requirements
Post-Construction BMP Requirements	Section 8.30.060 requires permanent BMPs but lacks performance standards, approved types, or design specs	Design criteria for various BMP types; guidance on selection and sizing	Prescriptive BMP requirements with performance standards, approved BMP menu, design specifications, and required maintenance plans submitted with development application; BMP maintenance agreements recorded with property	Require BMP maintenance plans as a condition of development approval; establish performance standards and an approved BMP list; require recorded maintenance agreements
Wetland and Riparian Protection	No wetland or riparian buffer requirements in Municipal Code	Limited; references federal and state wetland regulations	Defined riparian buffer setbacks; wetland delineation requirements; no-disturbance zones; compensatory mitigation; buffers coordinated with endangered species habitat	Establish riparian buffer requirements along Monument Creek and tributaries; coordinate with PMJM habitat protection and USFWS recovery planning
Floodplain Management	References FEMA regulations; participates in NFIP	Addresses floodplain hydraulics and encroachment; references FEMA standards	Enhanced regulations exceeding NFIP minimums; fill prohibitions in floodways; compensatory storage; freeboard above BFE; future-condition floodplain overlays	Strengthen floodplain regulations; consider higher freeboard consistent with climate projections; evaluate future-condition overlay from V3 model



Facility Maintenance and Oversight				
Facility Maintenance Standards	Section 8.30.060 requires BMP maintenance but defines no schedules, standards, or reporting	General maintenance guidance; no enforcement mechanism within Town jurisdiction	Mandatory maintenance agreements recorded with property deed; defined inspection schedules; annual reporting; compliance verification by municipality; specific maintenance performance standards for each BMP type	Require recorded maintenance agreements for all stormwater facilities; establish inspection and reporting per Section 5.6 O&M framework
Private Facility Inspection / Enforcement	No formal inspection program for private detention ponds or stormwater facilities; enforcement authority unclear	Not addressed; DCM is a design standard, not an enforcement framework	Regular municipal inspection of private facilities; documented enforcement with notice, corrective action timeline, and graduated penalties; right-of-entry provisions; stop-work authority	Establish inspection and enforcement program with clear authority, procedures, and penalties; coordinate with Section 5.6 coordination framework
Financial Assurance / Bonding	Standard subdivision improvement bonding; no stormwater-specific financial assurance	Not addressed	Stormwater-specific performance bonds for BMP installation; maintenance escrow or bond for long-term facility upkeep; financial assurance not released until facility certified	Require stormwater performance bonds for BMP installation and maintenance escrow for facilities transferred to HOAs or private owners
Facility Certification	No stormwater facility certification; no as-built verification requirement	As-built survey requirements for drainage improvements	Formal certification requiring as-built survey, capacity verification, and performance testing; engineer certification; baseline documentation for future inspections	Establish stormwater facility certification as condition of final plat or certificate of occupancy
Administration and Enforcement				
Stormwater Permitting	No standalone stormwater permit; review embedded in general development review	Drainage report required in development review; no separate permit	Standalone stormwater management permit with specific approval criteria; separate review track; compliance tracking through construction and into post-construction; inspections tied to permit conditions	Establish a stormwater management permit or defined stormwater review component with specific approval criteria and compliance tracking
Fee-in-Lieu / Regional Options	No fee-in-lieu program; no mechanism to contribute to regional facilities	Not addressed	Fee-in-lieu option for regional stormwater fund where on-site detention is impractical; funds dedicated to master-plan-identified regional facilities; fee calibrated to equivalent detention cost	Establish fee-in-lieu program tied to regional detention projects CC-07, TC-05, JC-05 from Chapter 5
Impact Fee Calibration	Chapter 3.28 fees insufficient to fund CIP (Section 5.4.6); no recalibration mechanism	Not applicable	Impact fees calibrated to current master plan capital costs; periodic recalibration every 3–5 years; watershed-based fee differentiation where downstream costs vary significantly	Recalibrate fees using Chapter 5 costs; establish recalibration schedule; consider watershed-based fee tiers



6.4 Gap Analysis

The comparative analysis reveals a consistent pattern: the Town’s regulatory framework is incomplete in the areas that matter most for effective stormwater management. The gaps are not theoretical—each one is connected to documented conditions within the study area.

The most consequential gap is the absence of a standalone stormwater management ordinance. Leading programs consolidate all stormwater provisions—definitions, applicability thresholds, design standards, maintenance obligations, inspection authority, enforcement procedures, variances, and funding mechanisms—into a single, comprehensive code chapter. This consolidation ensures that all parties—developers, engineers, Town staff, property owners, and special districts—can identify all applicable requirements in one place. Monument’s current approach distributes stormwater provisions across five different titles with no unifying framework, creating inconsistency in application and difficulty in enforcement.

The second critical gap is the lack of quantitative standards. Section 8.30.060 requires permanent BMPs but does not define what constitutes an acceptable BMP, how it should be sized, what performance it must achieve, or how it must be maintained. The subdivision regulations require drainage analysis but do not establish minimum detention volumes or water quality treatment requirements. The zoning code does not limit impervious coverage. The result is that development proceeds under general standards that rely on reviewer discretion rather than clear, enforceable criteria—contributing to the incremental capacity shortfalls observed at crossings in Jackson Creek and Teachout Creek where upstream development has added impervious coverage without proportional detention.

The third critical gap is the absence of an inspection, maintenance, and enforcement framework for private facilities. As documented in Section 2.4, stormwater management within the Town depends on facilities owned and operated by the Triview Metropolitan District (16 detention ponds and one drainage channel), multiple HOAs, and individual private property owners. The 2020 Triview drainage assessment documented sediment accumulation, cattail overgrowth, undercut culverts, and outdated outlet structures at multiple facilities. Ownership ambiguity at locations such as the My Storage pond at Jackson Creek demonstrates the difficulty of ensuring maintenance when responsibilities are unclear. The Town’s MS4 permit creates regulatory responsibility for all facilities within the permit boundary, but the current code does not provide the inspection authority, right-of-entry provisions, corrective action procedures, or penalties needed to exercise that responsibility.

Table 6.4-1 summarizes the most significant regulatory gaps, their documented impacts, priority level, and recommended corrective action.



Table 6.4-1: Regulatory Gap Analysis

Gap Area	Description	Documented Impact in Study Area	Priority	Recommended Action
No standalone ordinance	Stormwater provisions distributed across five titles with no unified standards, permitting, or enforcement	Inconsistent application of requirements; difficulty demonstrating MS4 compliance; developer ambiguity about applicable standards; no single enforcement authority	High	Adopt dedicated stormwater management ordinance
No quantitative BMP standards	Section 8.30.060 requires BMPs but defines no sizing, performance, or maintenance standards	BMPs installed without consistent standards; maintenance unclear to owners/HOAs; contributes to facility deterioration documented in Triview assessment	High	Amend to include WQCV sizing, approved BMP list, mandatory maintenance plans
No private facility inspection program	No authority, procedures, or penalties for inspecting and enforcing standards at privately owned facilities	Ownership ambiguity (My Storage at Jackson Creek); deferred maintenance at HOA facilities; inability to verify MS4 compliance across permit boundary	High	Establish inspection authority, right-of-entry, and enforcement procedures
Insufficient impact fees	Chapter 3.28 fees not recalibrated; no watershed differentiation; no recalibration mechanism	Collected fees insufficient to fund CIP (Section 5.4.6); high-growth basins do not pay proportional share of infrastructure costs	High	Recalibrate based on Chapter 5 costs; establish recalibration schedule; consider basin-specific tiers
No subdivision stormwater standards	Title 16 has no minimum detention volumes, impervious limits, or water quality requirements	Incremental capacity shortfalls; Leather Chaps Drive crossings overtop partly due to cumulative detention shortfalls from upstream development	High	Add quantitative stormwater requirements to subdivision regulations
No facility certification	No as-built verification, capacity testing, or engineer certification for completed facilities	Facilities accepted without performance verification; design intent may not be achieved; no baseline for future maintenance comparison	Medium	Require as-built certification as condition of final plat or CO
No stormwater permit	Stormwater review embedded in general development review; no dedicated tracking	Stormwater may receive less attention than other review elements; no mechanism to track compliance through construction into post-construction	Medium	Establish dedicated stormwater permit or defined review component
No impervious coverage limits	Title 17 has no impervious limits, pervious ratios, or LID incentives	No mechanism to limit runoff generation at parcel level; contributes to rising curve numbers across developing basins	Medium	Add impervious limits and LID incentives to zoning code
No fee-in-lieu program	No mechanism for developers to contribute to regional detention in lieu of on-site facilities	Missed opportunities for regional detention coordination; individual development detention without system-level contribution	Medium	Establish program tied to regional projects CC-07, TC-05, JC-05
No financial assurance	No bonding or escrow for long-term private facility maintenance	Facilities transferred without dedicated maintenance funding; long-term performance depends on HOA budgets	Medium	Require maintenance escrow or bond for privately maintained facilities
No riparian buffer standards	No setbacks or buffer requirements along streams or wetlands	Development encroaches on riparian areas; reduced water quality treatment, habitat value, and floodplain function	Lower	Establish riparian setbacks; coordinate with PMJM habitat requirements

6.5 Recommended Code Revisions

The following recommendations are organized into three implementation tiers based on their urgency, their connection to MS4 permit compliance and public safety, and their relationship to the capital improvement and operations programs in Chapter 5.

6.5.1 Tier 1 – Immediate Priority

These revisions address the most critical regulatory gaps and should be advanced immediately, ideally as part of the Monument 2040 Comprehensive Plan adoption process.

1. Adopt a Dedicated Stormwater Management Ordinance. The single most impactful regulatory action available to the Town is to consolidate its fragmented stormwater provisions into a single, dedicated code chapter. This ordinance should be modeled on the structure used by leading stormwater programs—organized into articles covering definitions and applicability, development standards and thresholds, detention and water quality requirements, facility design and certification, maintenance obligations, inspection and enforcement, variances, and funding mechanisms. The Colorado Planning for Hazards model code and the Urban Drainage and Flood Control District (UDFCD) model ordinance provide useful starting frameworks for Colorado communities. The Town should adapt these to reflect the specific conditions documented in this Master Plan, including the basin-specific challenges in Crystal Creek, Teachout Creek, and Jackson Creek, the downstream impacts on USAFA, and the multi-entity coordination requirements identified in Sections 2.4 and 5.6.

The ordinance should include, at minimum:

- **Clear development thresholds** that trigger stormwater requirements, graduated by project size and impervious coverage
- **Quantitative detention standards** that reference the El Paso County DCM dual-design-storm approach while adding Town-specific provisions for climate-adjusted sizing and basin-specific requirements
- **WQCV capture requirements** consistent with the DCM methodology, with an approved BMP list, design specifications, and required maintenance plans
- **A stormwater facility certification process** requiring as-built surveys, capacity verification, and professional engineer certification before facility acceptance
- **Mandatory maintenance agreements** recorded with property deeds for all stormwater facilities, with defined inspection schedules and annual reporting requirements
- **Inspection authority and enforcement procedures** including right-of-entry provisions, documented corrective action processes with defined timelines, and graduated penalties for non-compliance
- **A variance process** with defined criteria for when alternative approaches may be approved, ensuring flexibility without undermining standards

2. Amend Section 8.30.060 (Interim Measure). Until the dedicated ordinance is adopted, Section 8.30.060 should be amended to include quantitative BMP performance standards, WQCV sizing criteria consistent with the DCM, an approved BMP list, and a requirement for BMP maintenance plans as a condition of development approval. This interim measure addresses the most immediate MS4 permit compliance gap while the comprehensive ordinance is developed.

3. Establish a Private Facility Inspection and Enforcement Program. The Town should adopt code provisions establishing its authority to inspect all stormwater facilities within the MS4 permit boundary, regardless of ownership. The code should establish right-of-entry provisions, inspection schedules consistent with the Section 5.6 O&M framework, a documented enforcement process with notice, corrective action timelines, and escalating penalties, and a requirement for facility owners to provide annual maintenance reports. This program directly supports the coordination framework presented in Section 5.6.5 and addresses the challenges documented in the Triview assessment.

4. Recalibrate Stormwater Impact Fees. Chapter 3.28 should be amended to recalibrate the fee based on the capital costs identified in Chapter 5. The recalibrated fee should reflect actual infrastructure costs, differentiate by watershed where downstream consequences vary significantly, and include automatic recalibration every three to five years or upon adoption of an updated master plan. The Town should also evaluate whether a stormwater utility fee assessed on all developed properties should supplement the impact fee to provide stable, recurring revenue for operations and maintenance.

6.5.2 Tier 2 – Near-Term Priority (Years 1–3)

These revisions strengthen the regulatory framework and should be completed within one to three years, ideally incorporated into the dedicated ordinance development.

5. Add Quantitative Stormwater Requirements to Subdivision Regulations. Title 16 should require minimum detention volumes, impervious coverage limits as a condition of preliminary plat approval, and stormwater management plans demonstrating compliance with adopted standards. Proposed detention must meet current DCM criteria rather than potentially outdated standards from earlier development phases, and the cumulative effect of upstream development on downstream infrastructure must be evaluated.

6. Establish a Stormwater Facility Certification Process. All detention facilities, BMPs, and drainage improvements should be formally certified before acceptance. Certification should include an as-built survey, capacity verification, professional engineer’s certification, and baseline documentation (photographs, sediment depth, outlet condition) that serves as the reference for future inspections. Certification should be a condition of final plat acceptance, certificate of occupancy, or both.

7. Establish a Fee-in-Lieu Program for Regional Detention. A fee-in-lieu provision should allow developers to contribute to a regional stormwater fund where on-site detention is impractical or where a regional facility provides greater watershed benefit. The fee should be calibrated to the cost of providing equivalent detention volume at the nearest applicable regional facility. Collected funds should be dedicated exclusively to the regional detention projects recommended in Chapter 5: CC-07 in Crystal Creek, TC-05 in Teachout Creek, and JC-05 in Jackson Creek.



8. Require Financial Assurance for Long-Term Maintenance. Developers should provide a maintenance escrow, bond, or letter of credit for stormwater facilities transferred to HOAs, private owners, or other non-municipal entities. The financial assurance should fund estimated routine maintenance for a defined initial period (typically five to ten years) and should not be released until the facility has been inspected and certified as performing to approved standards.

6.5.3 Tier 3 – Ongoing Enhancement (Years 3–7)

These revisions represent program enhancements to be pursued as resources allow.

9. Incorporate Impervious Coverage Limits and Green Infrastructure Incentives. Title 17 should establish maximum impervious ratios by zoning district and incentivize pervious materials, bioretention, green roofs, and other low-impact development practices. Watershed-based overlay zones for the Crystal Creek and Teachout Creek basins, where the V3 model documents the greatest sensitivity to increased impervious coverage, should be considered.

10. Establish Riparian Buffer and Wetland Protection Standards. Defined riparian buffer setbacks should be adopted along Monument Creek and named tributaries, coordinated with PMJM habitat requirements and the Monument Creek Site Conservation Team recovery planning objectives. Wetland delineation should be required for development applications within areas of potential jurisdictional wetlands.

11. Strengthen Floodplain Management Standards. Enhanced standards exceeding NFIP minimums should be evaluated, including higher freeboard requirements consistent with climate projections, fill restrictions within the 100-year floodplain, compensatory storage requirements, and adoption of the future-condition flood hazard areas from the V3 model as a regulatory planning overlay. These enhancements may also improve the Town’s Community Rating System (CRS) classification, reducing flood insurance premiums for property owners.

6.6 Implementation Plan

Table 6.6-1 presents the recommended implementation timeline, aligned with the Monument 2040 Comprehensive Plan adoption schedule, the Chapter 5 capital improvement phasing plan, and the Section 5.6 operations and maintenance program.

Table 6.6-1: Code Revision Implementation Plan

Recommended Action	Code Section(s)	Priority	Timeline
Adopt dedicated stormwater management ordinance	New Municipal Code chapter	High	Year 1
Amend Section 8.30.060 (interim BMP standards)	Title 8, Ch. 8.30	High	Year 1
Establish private facility inspection/enforcement program	New ordinance + Title 8	High	Year 1
Recalibrate stormwater impact fees	Title 3, Ch. 3.28	High	Years 1–2
Add quantitative stormwater standards to subdivision regulations	Title 16	Medium	Years 1–3
Establish stormwater facility certification process	New ordinance	Medium	Years 1–3
Establish fee-in-lieu program for regional detention	New ordinance + Ch. 3.28	Medium	Years 2–3
Require financial assurance for long-term maintenance	New ordinance + Title 16	Medium	Years 2–3
Impervious coverage limits and green infrastructure incentives	Title 17 (Zoning)	Lower	Years 3–7
Riparian buffer and wetland protection standards	New ordinance + Title 17	Lower	Years 3–7
Enhanced floodplain management standards	Floodplain regulations	Lower	Years 3–7



6.7 Summary

The Town of Monument’s current regulatory framework for stormwater management is fragmented across five code titles, lacks quantitative standards, and does not provide the inspection, maintenance, or enforcement tools needed to ensure long-term facility performance and MS4 permit compliance. These regulatory gaps have direct, documented consequences within the study area: incremental detention shortfalls from development approved under general standards, deferred maintenance at privately owned facilities, ownership ambiguity, insufficient capital funding, and the cumulative downstream impacts on USAFA.

The most impactful action the Town can take is the adoption of a dedicated stormwater management ordinance—a single, comprehensive code chapter that consolidates all stormwater provisions into a unified regulatory framework with clear standards, a defined permitting process, and enforceable maintenance and inspection requirements. This approach is consistent with best practices used by leading stormwater programs and directly supports the capital improvement recommendations in Chapter 5 by ensuring that the conditions those investments are designed to correct are not recreated by inadequate development standards or deferred maintenance.

The 11 recommended code revisions are organized into three priority tiers. Tier 1 actions—adopting the dedicated ordinance, amending Section 8.30.060, establishing a private facility inspection program, and recalibrating impact fees—should be pursued immediately concurrent with the Comprehensive Plan adoption. Tier 2 actions—subdivision standards, facility certification, fee-in-lieu, and financial assurance—should be completed within one to three years. Tier 3 actions—impervious limits, riparian buffers, and enhanced floodplain standards—should be advanced within three to seven years.

Without these regulatory improvements, the Town risks a cycle in which capital investments address existing deficiencies while inadequate development standards and deferred maintenance create new ones. With them, the Town positions itself to manage stormwater effectively, comply with its MS4 permit, protect downstream water quality and habitat on USAFA, and sustain the infrastructure investments recommended in this Master Plan for decades to come.



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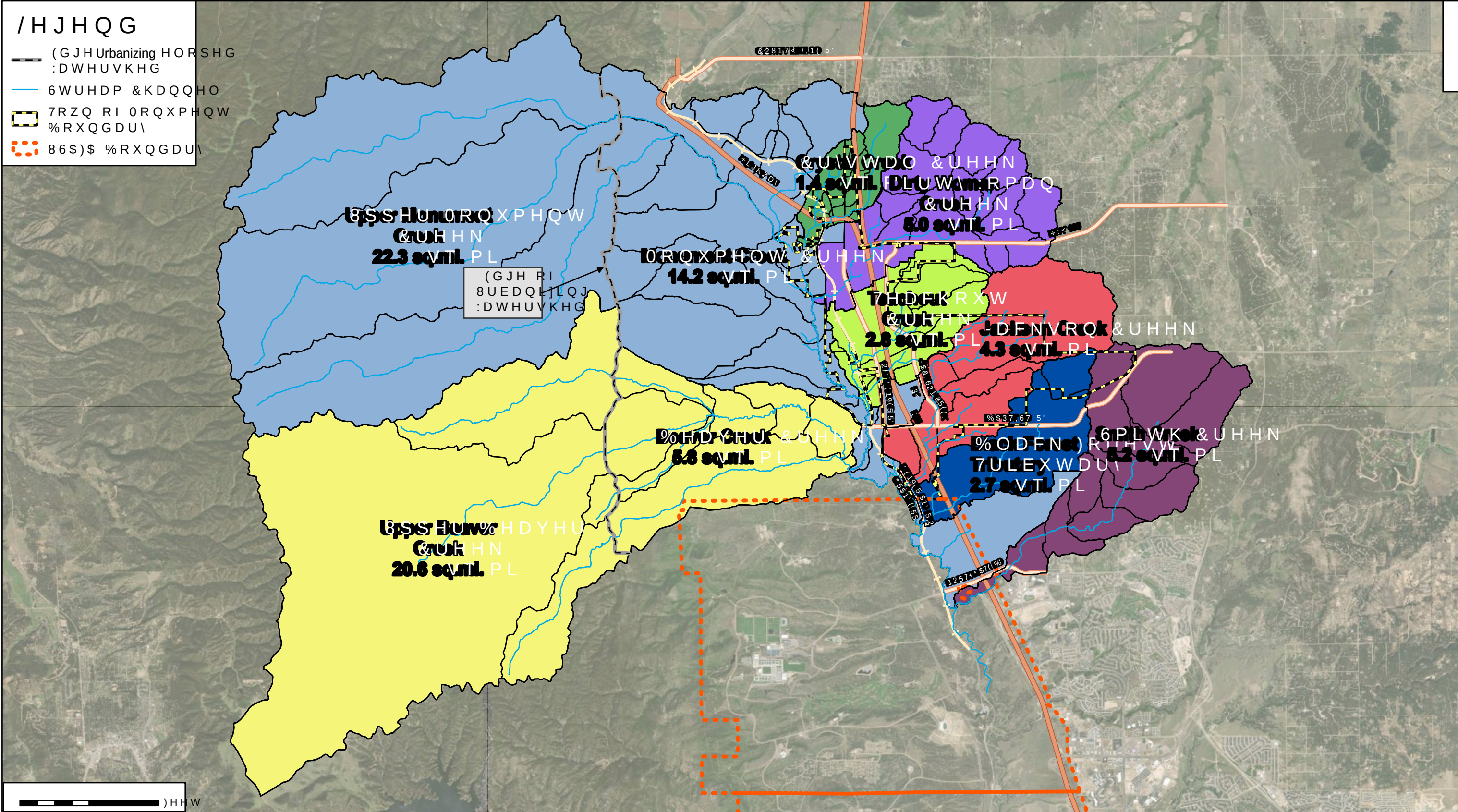
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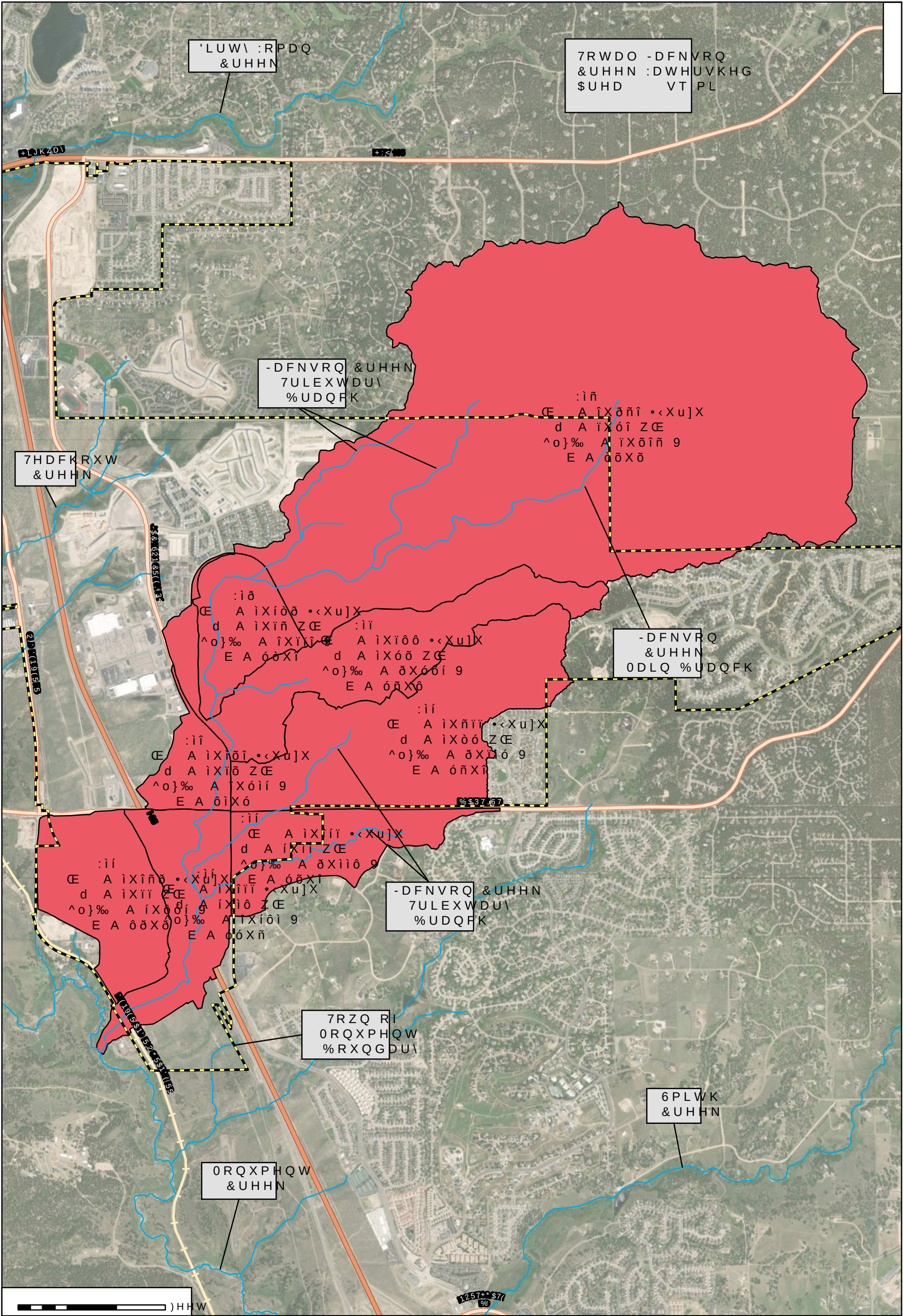
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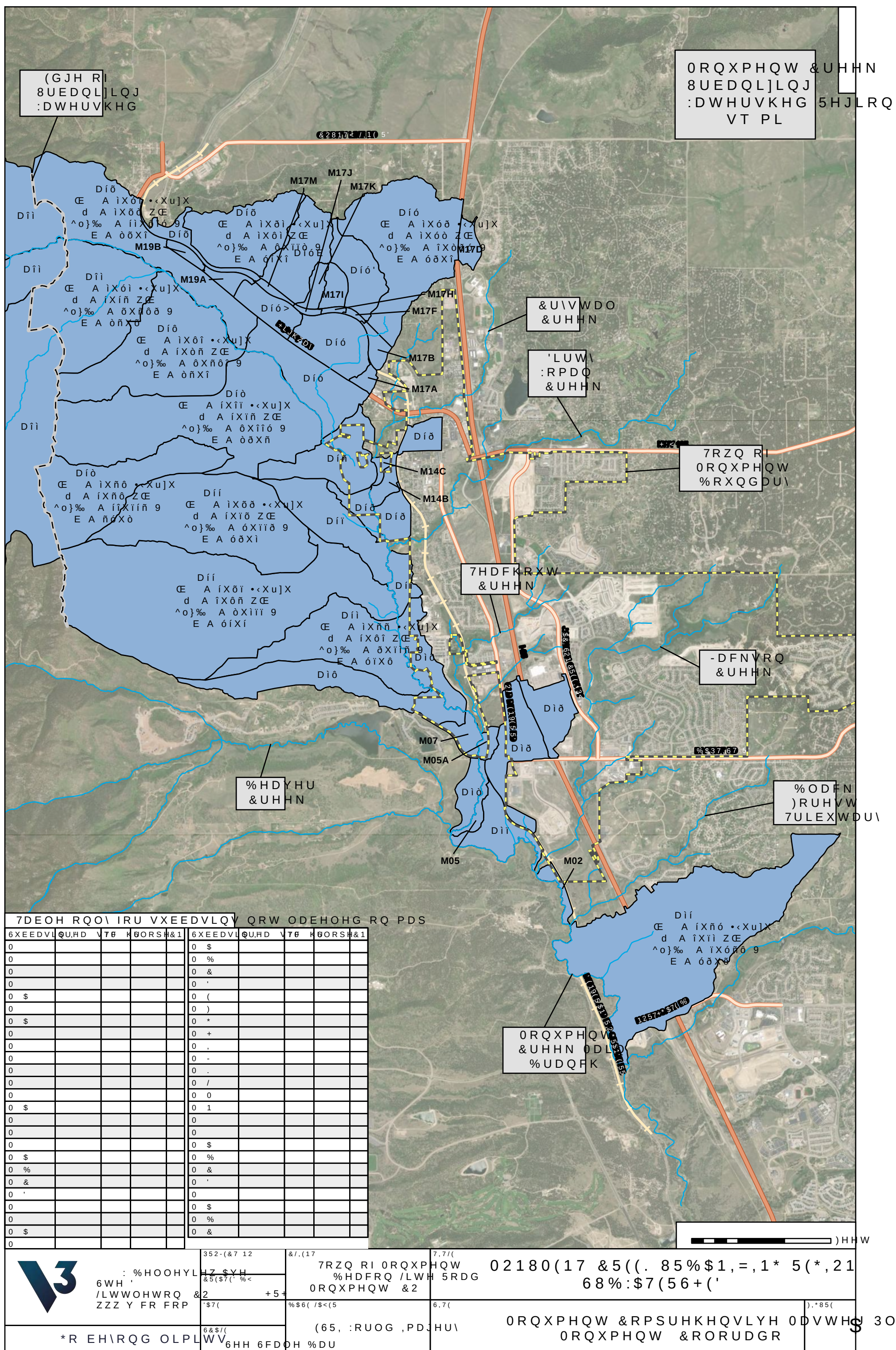
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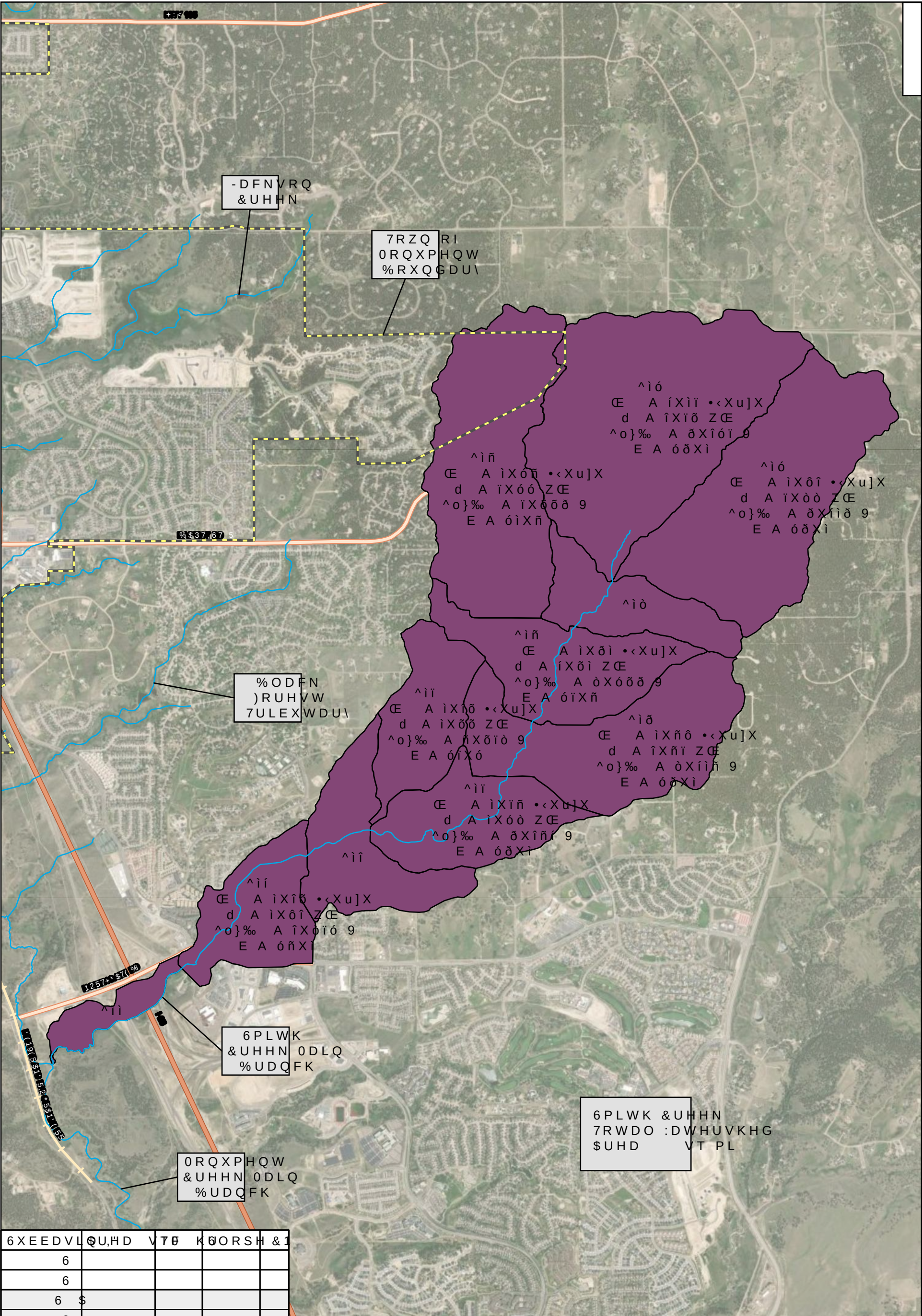
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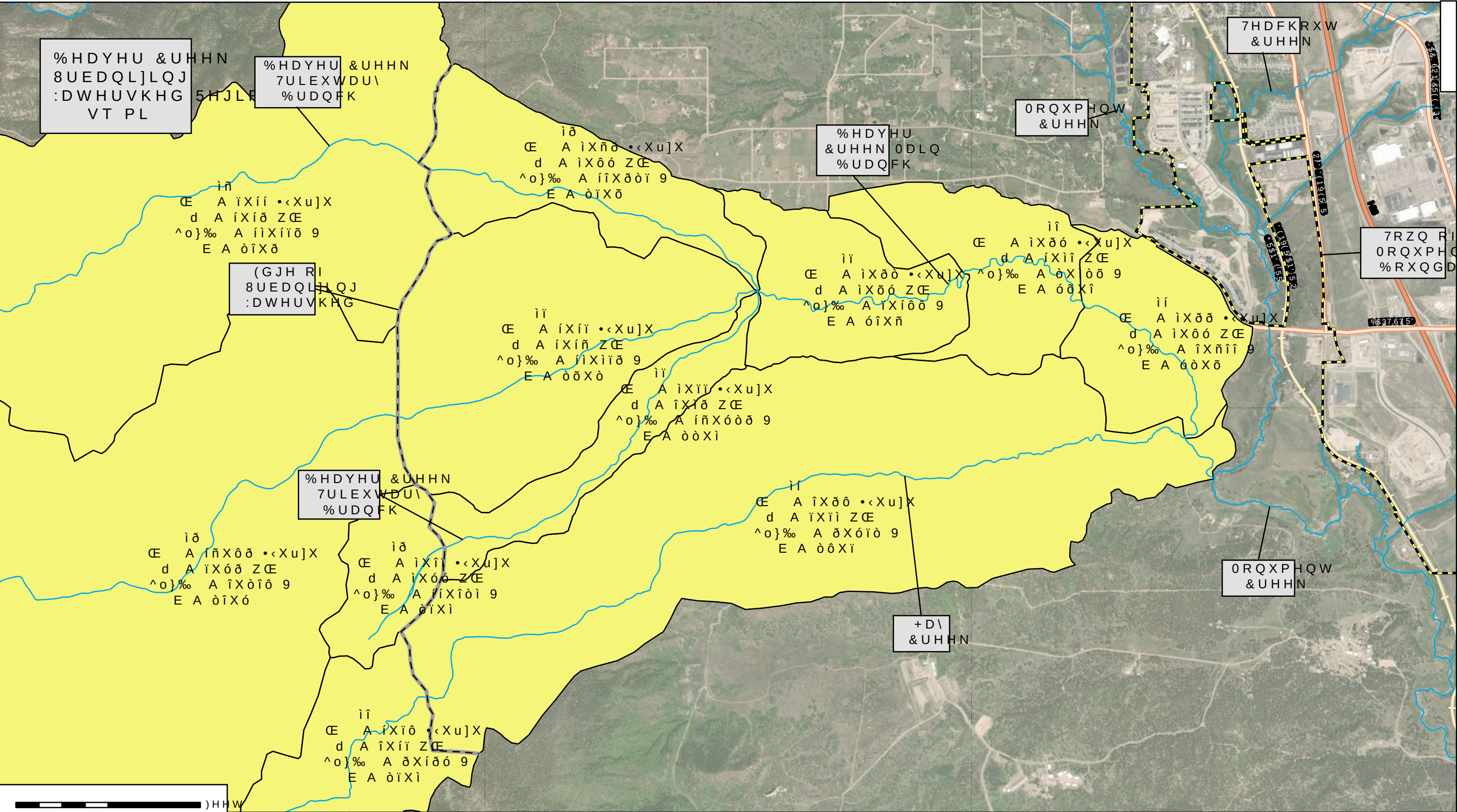
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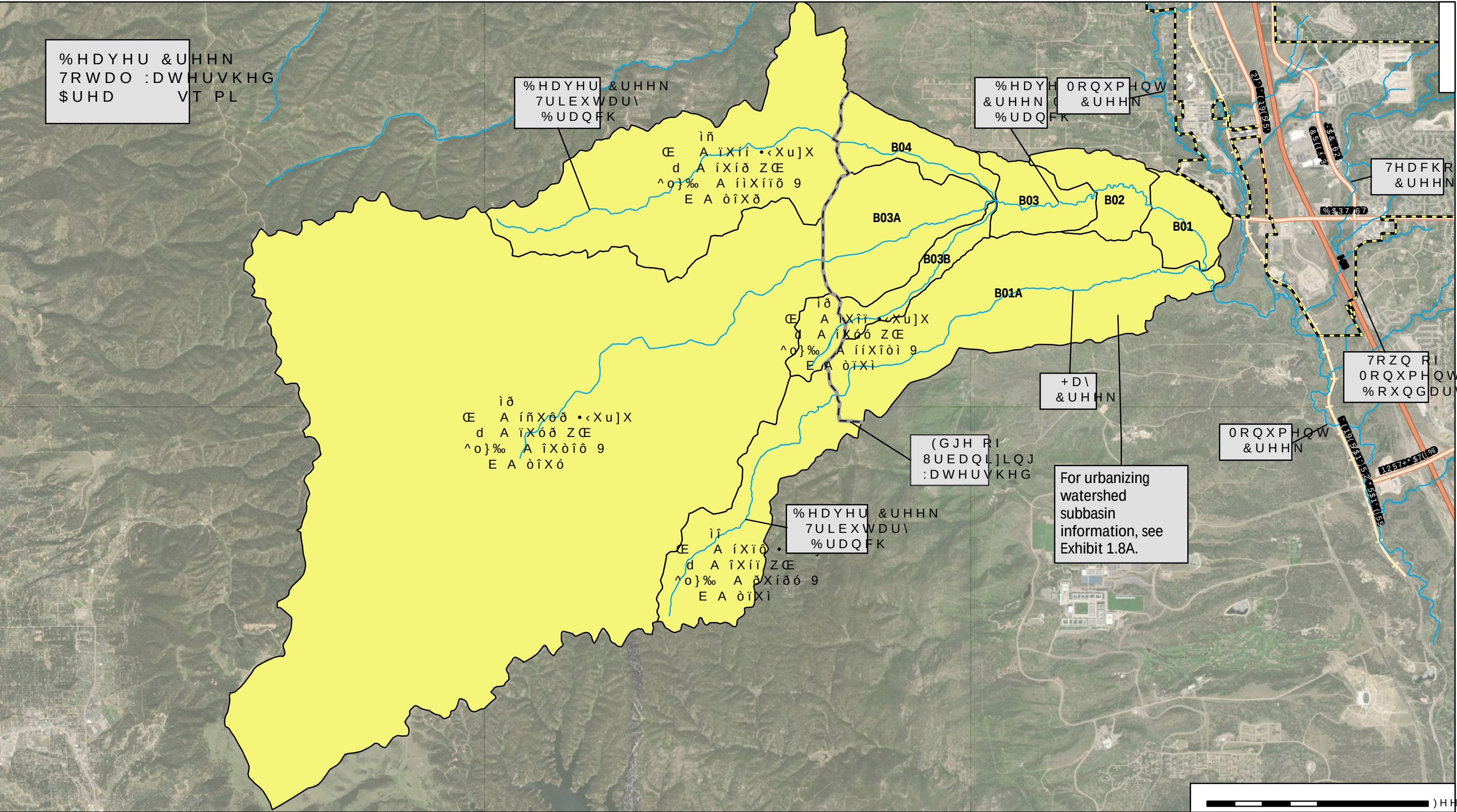


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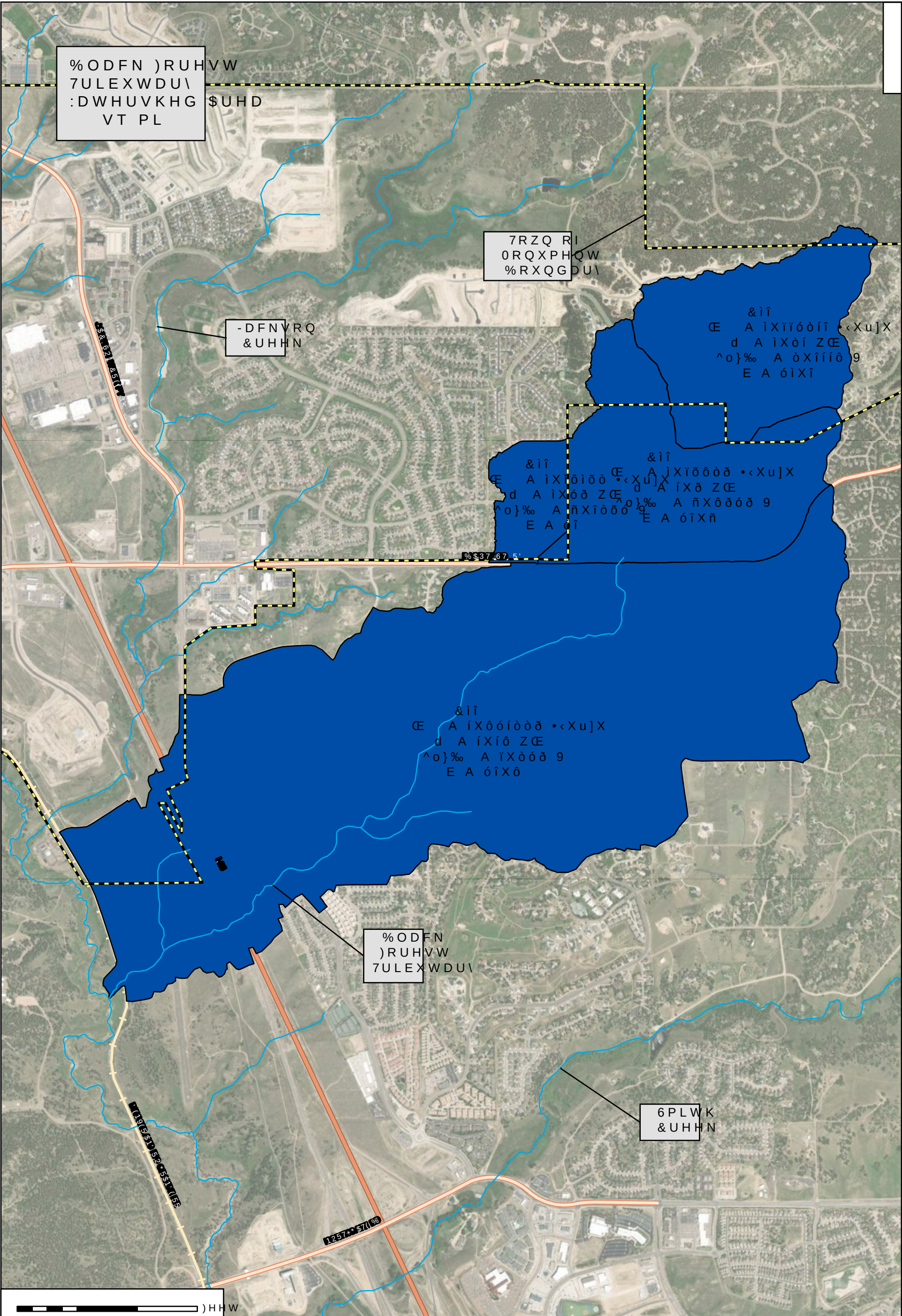
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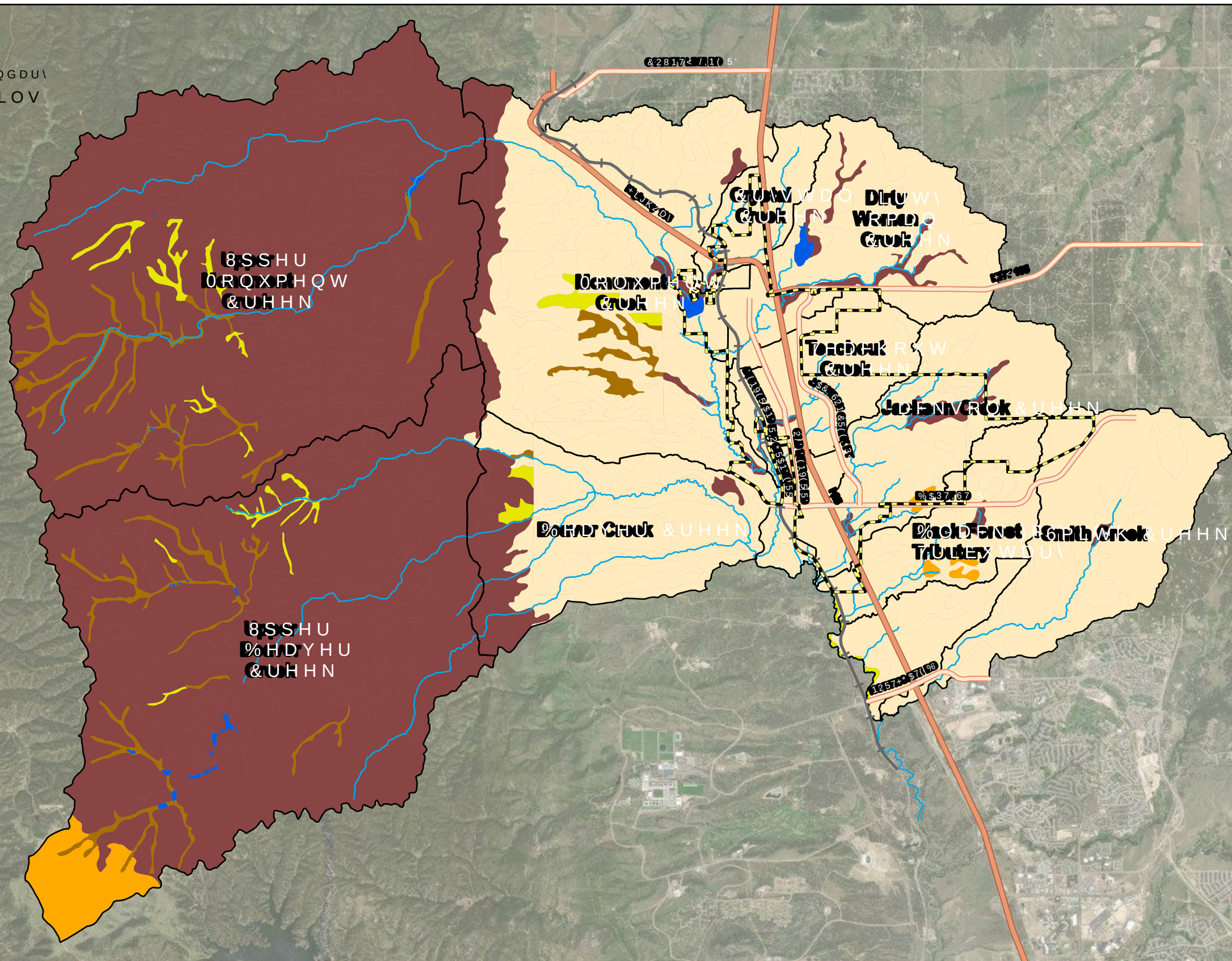
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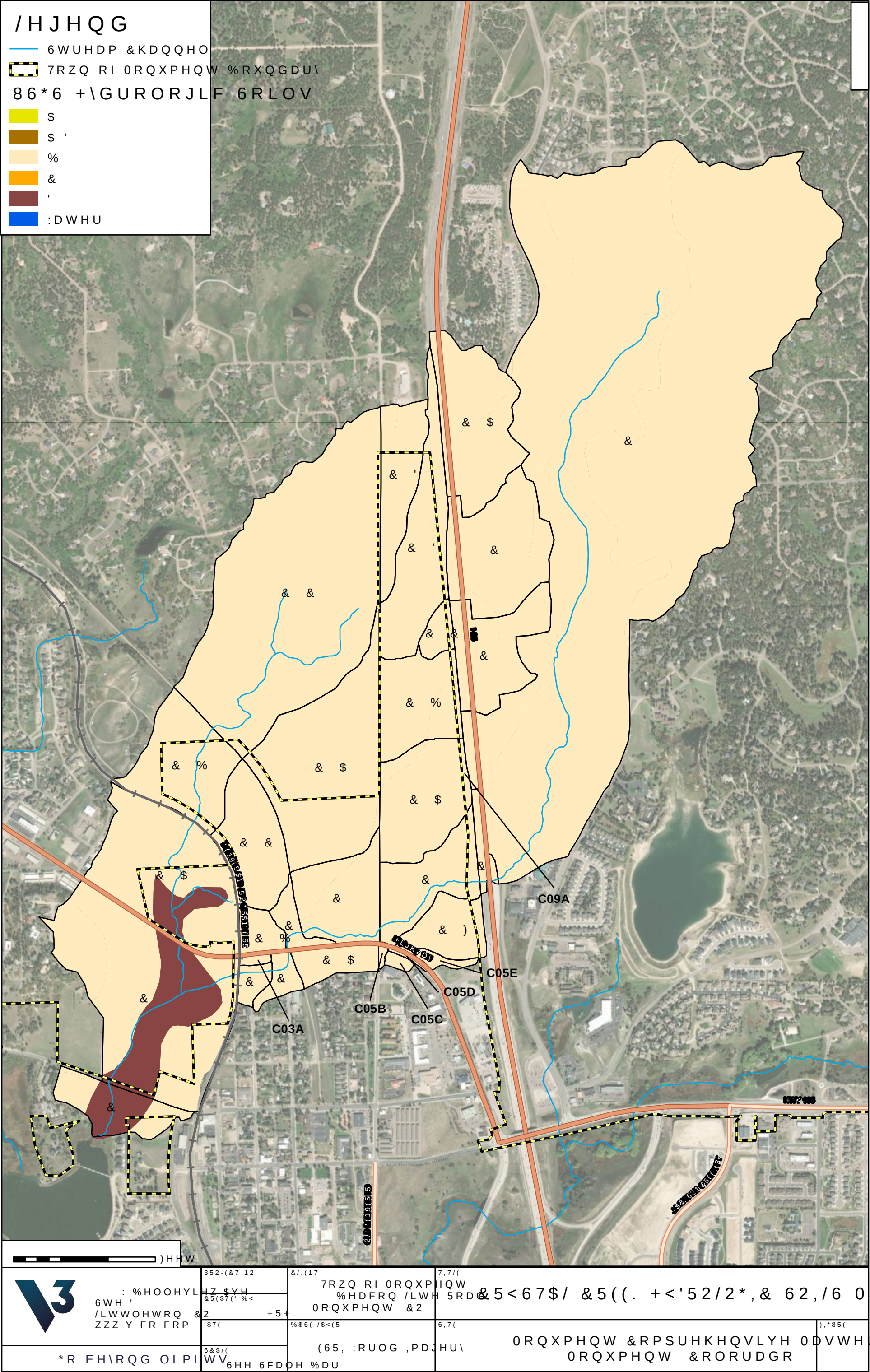
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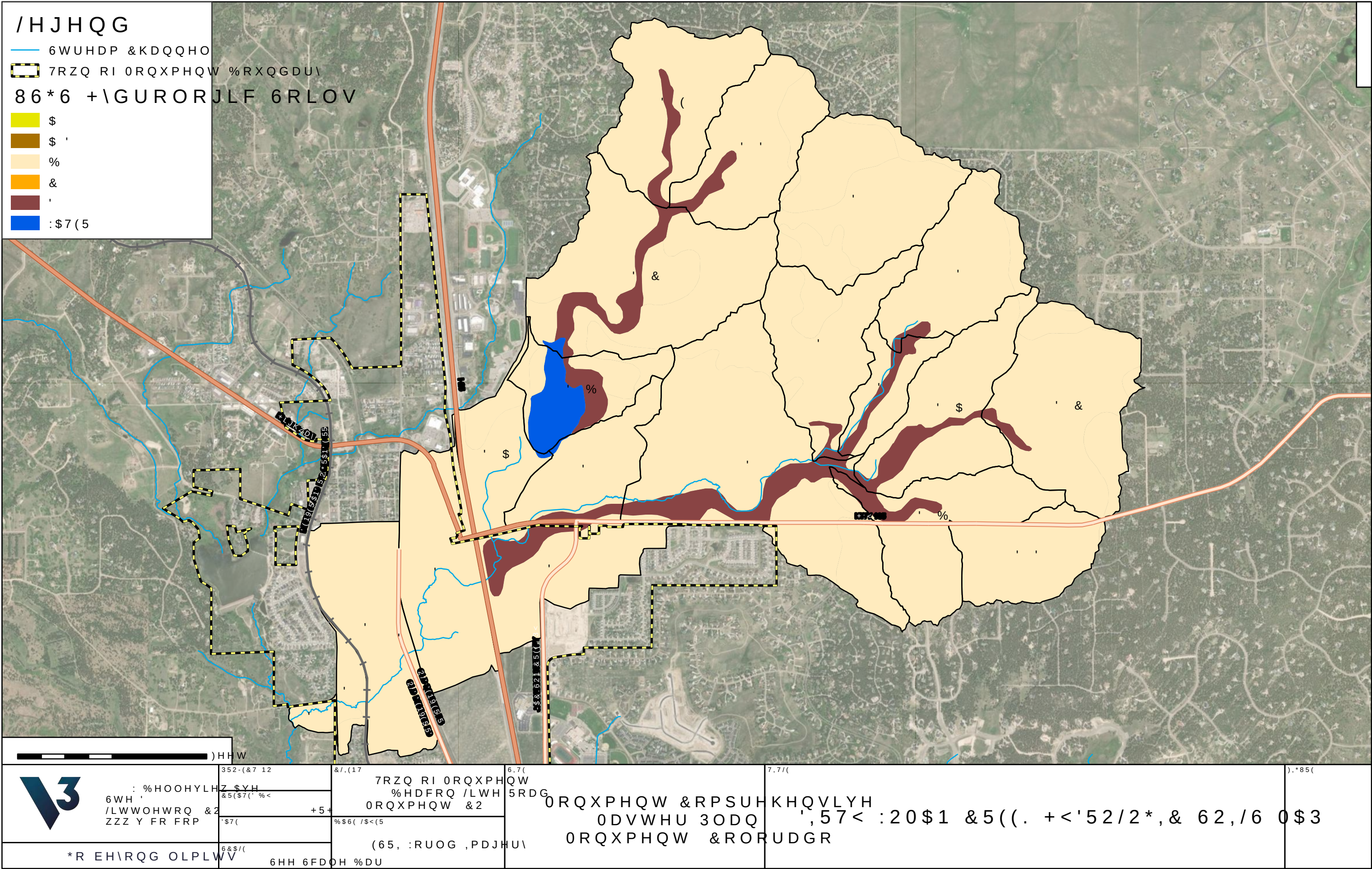
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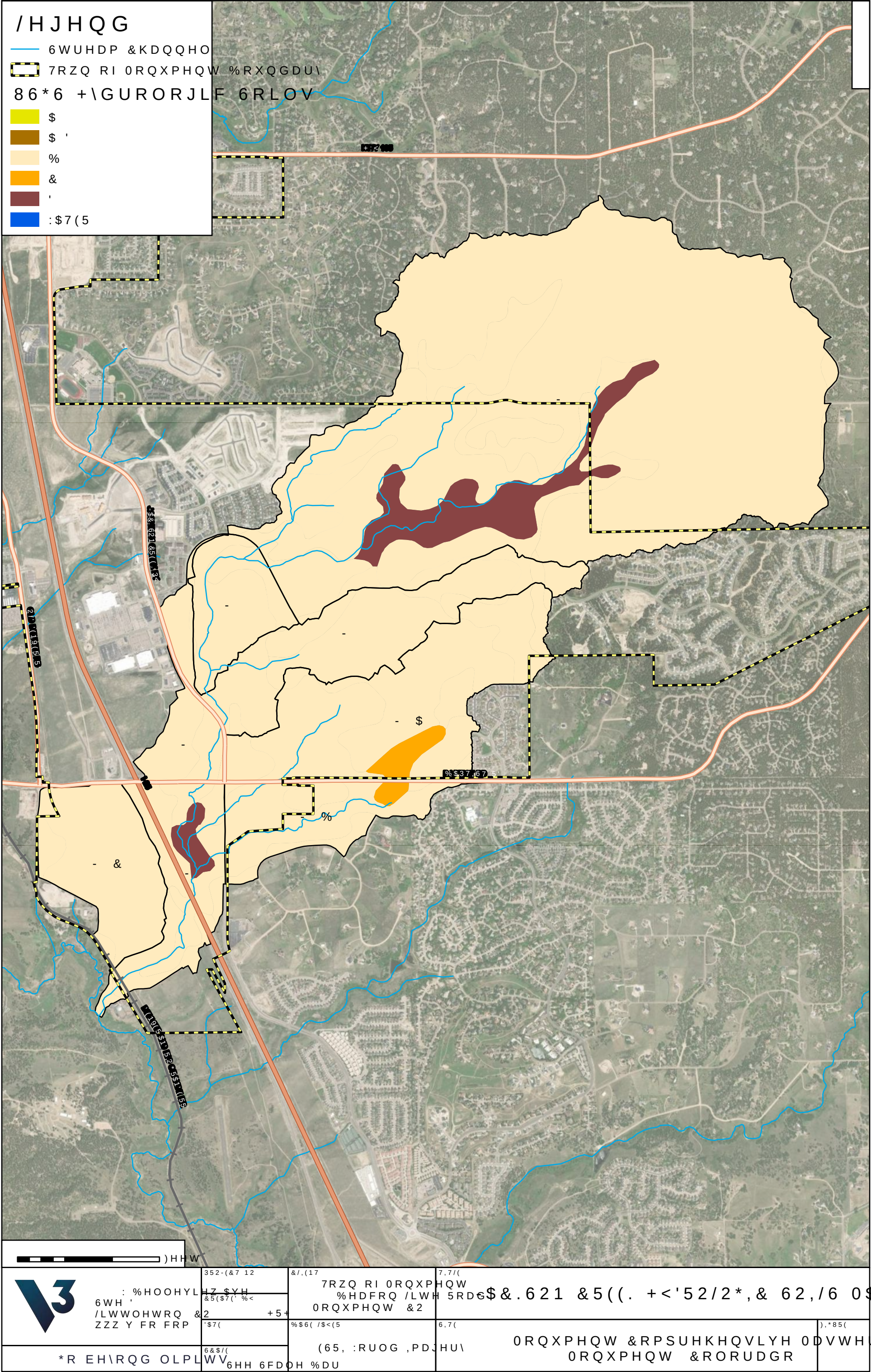
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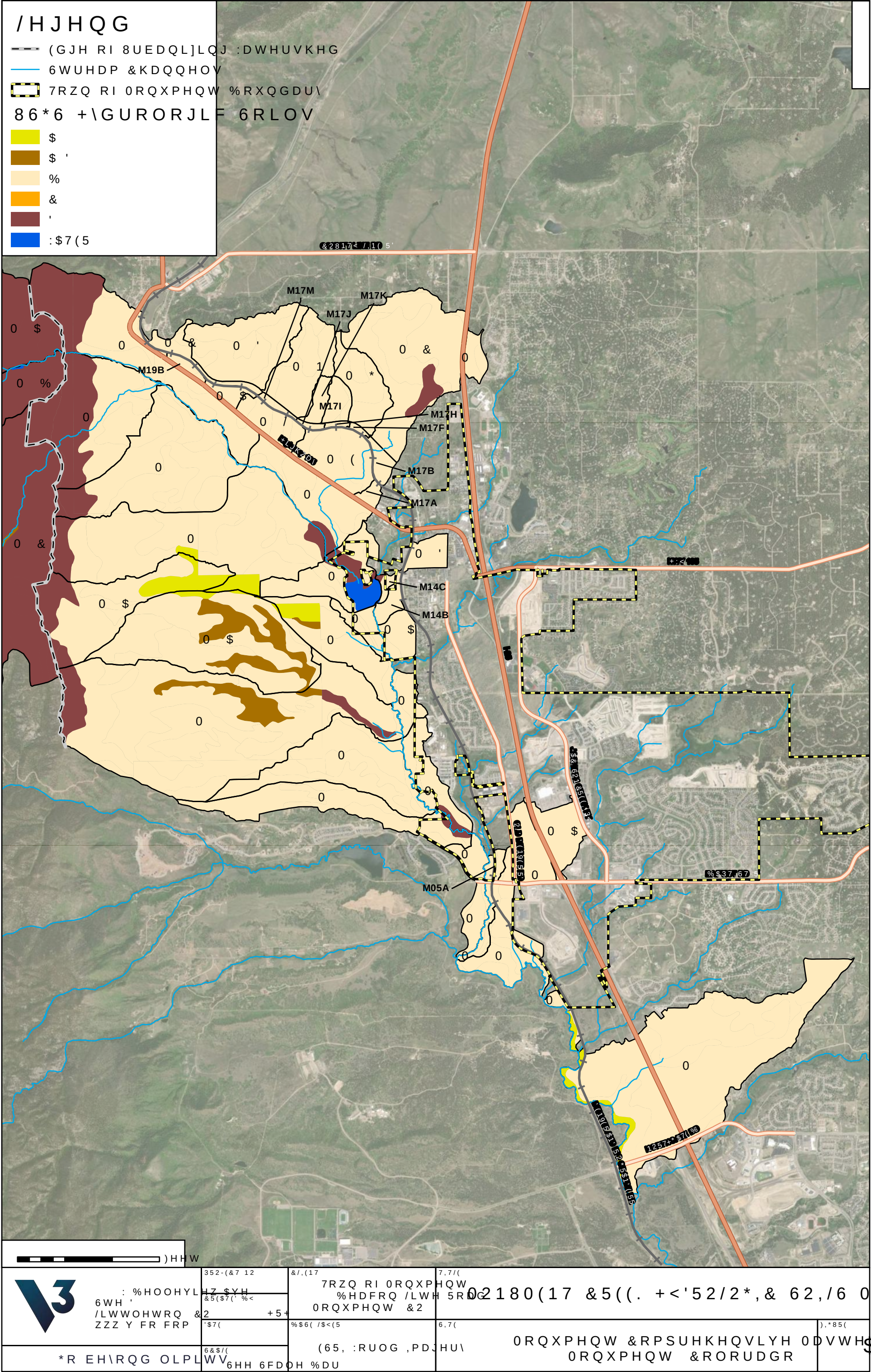
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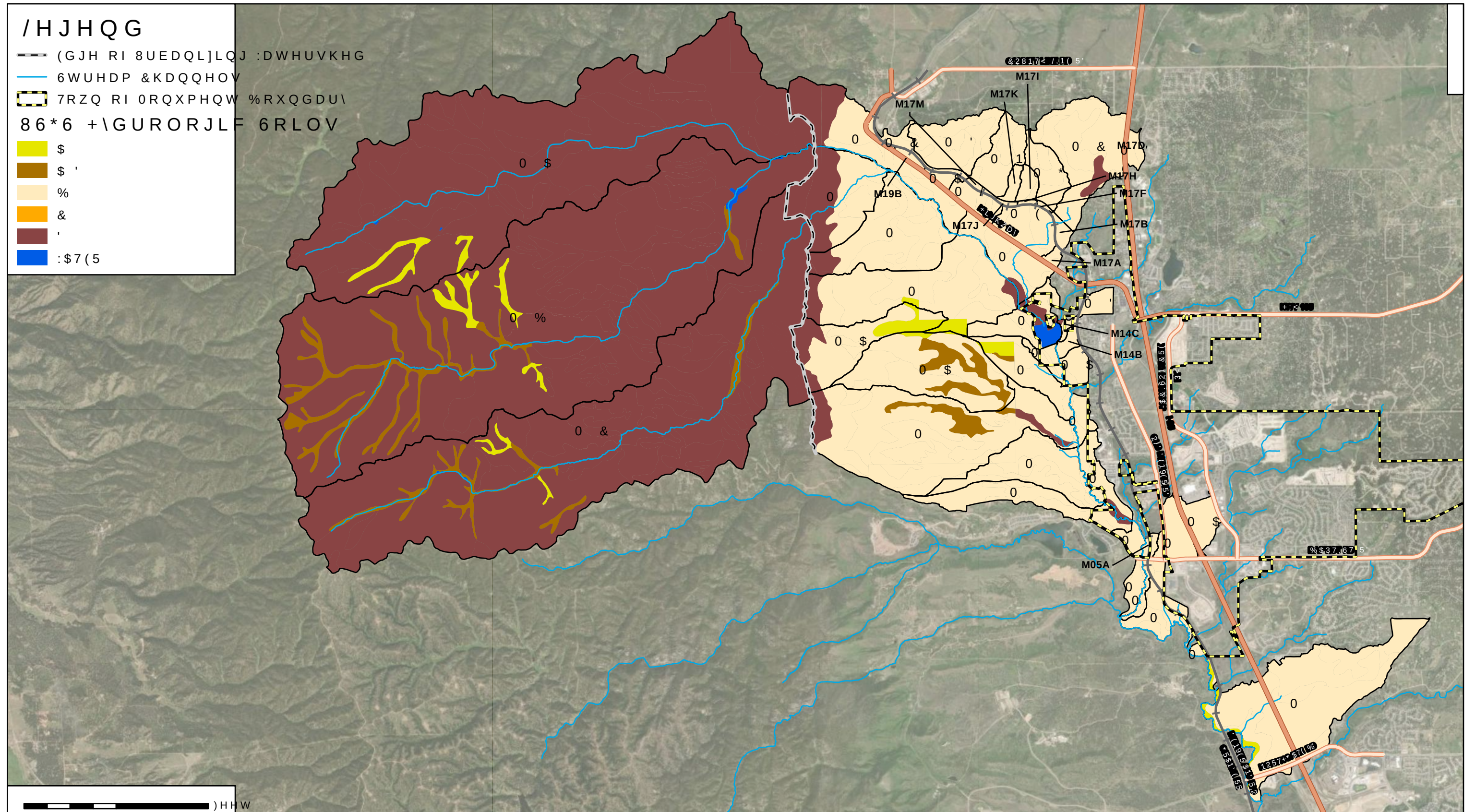








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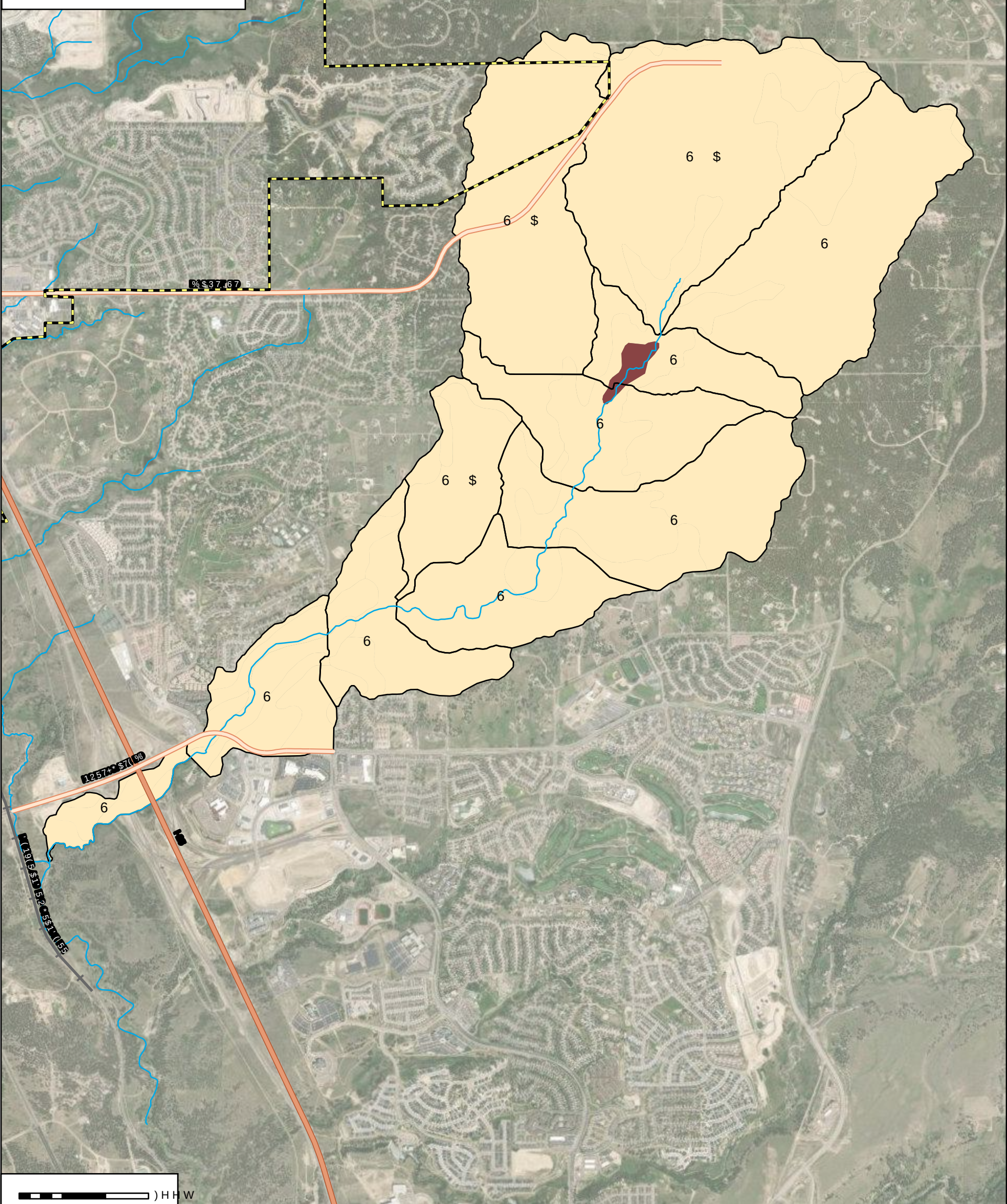
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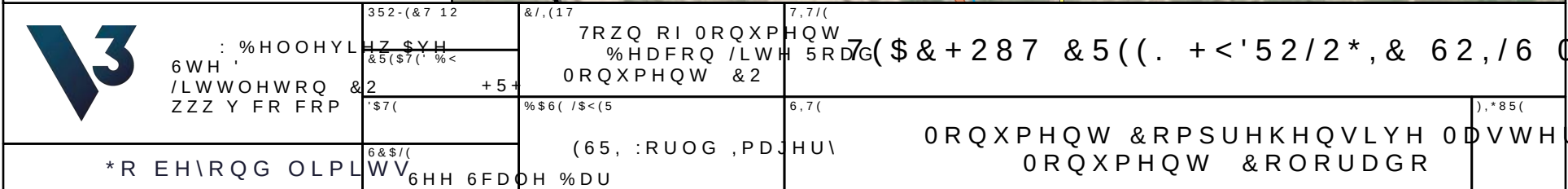
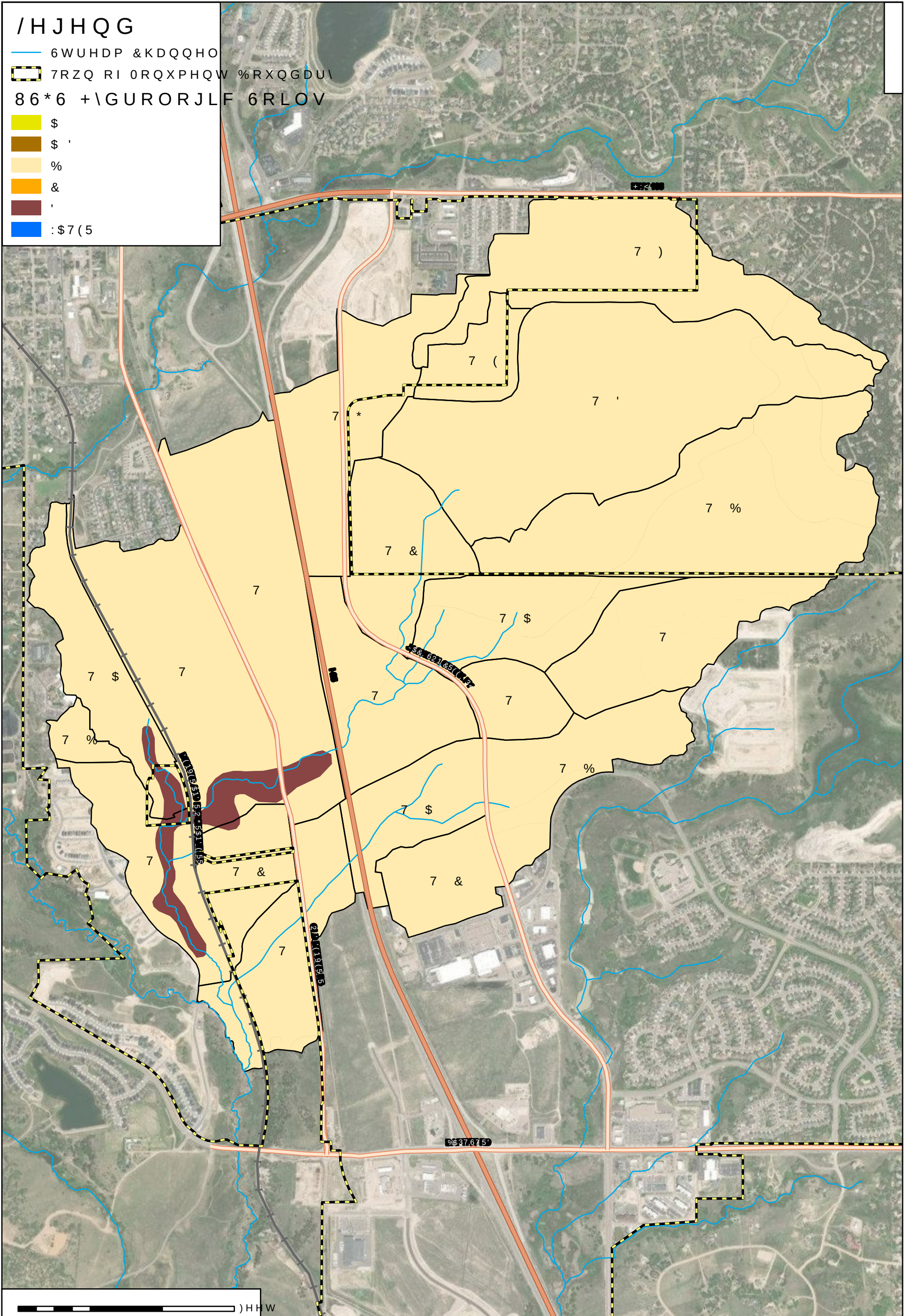
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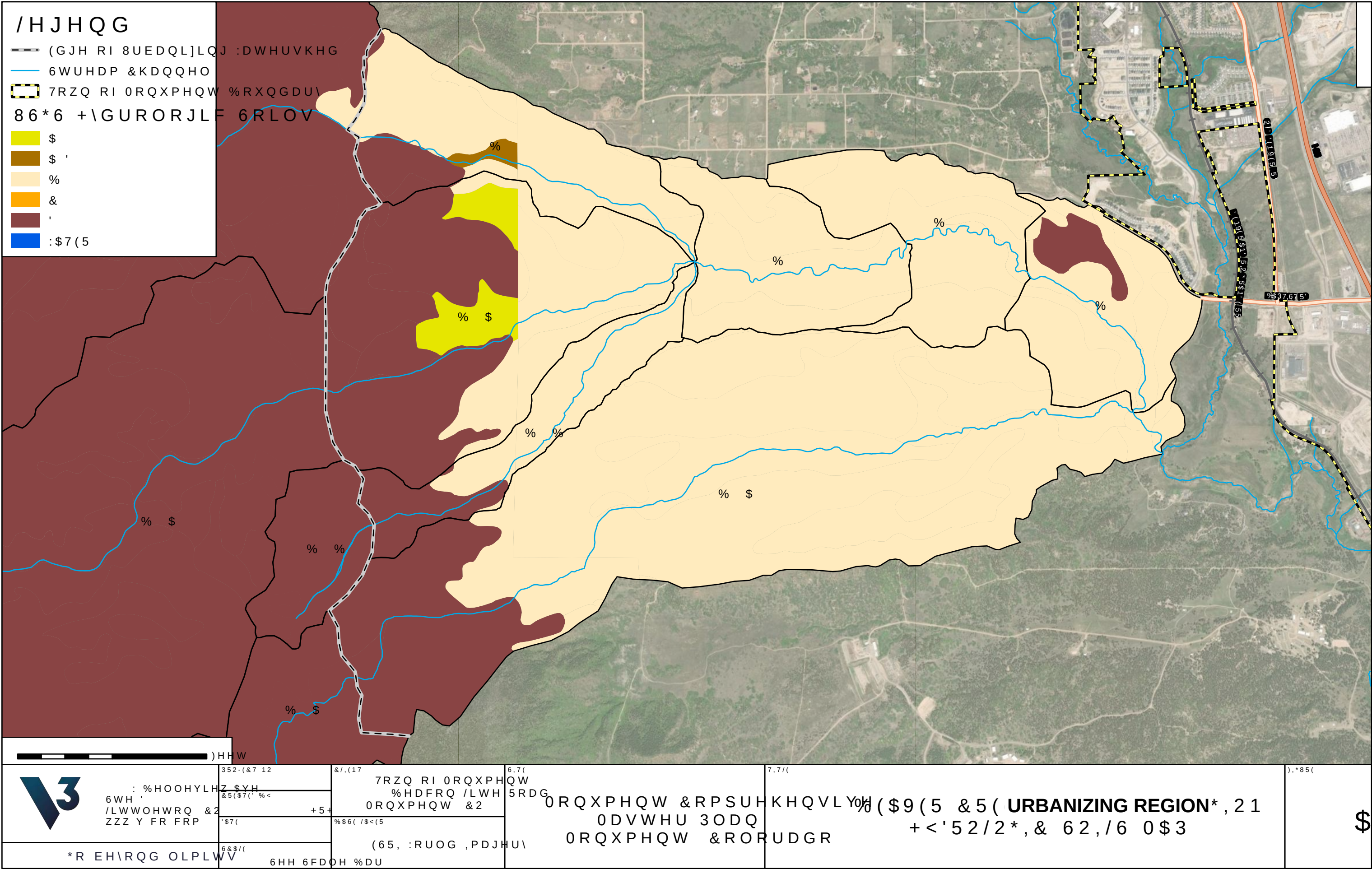
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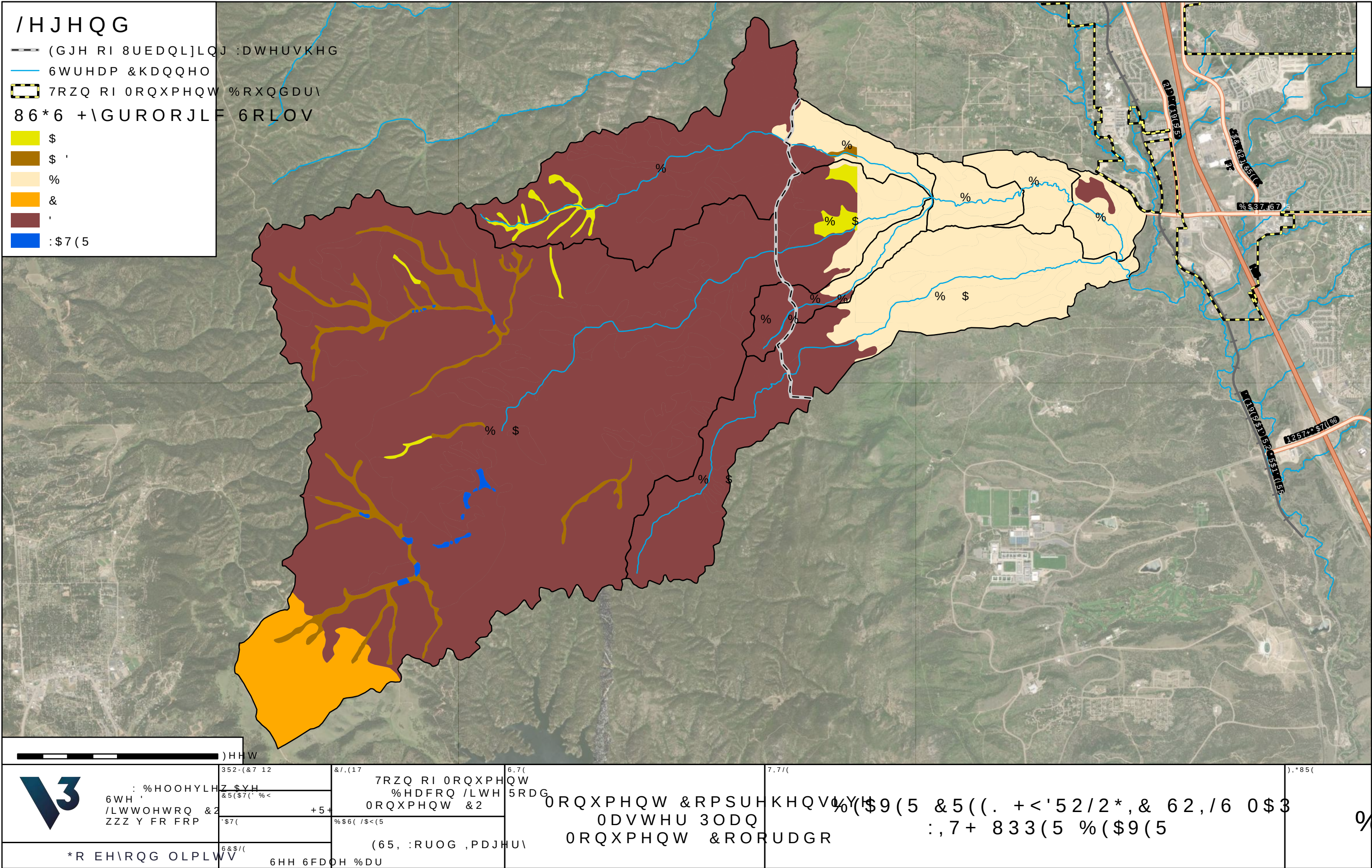


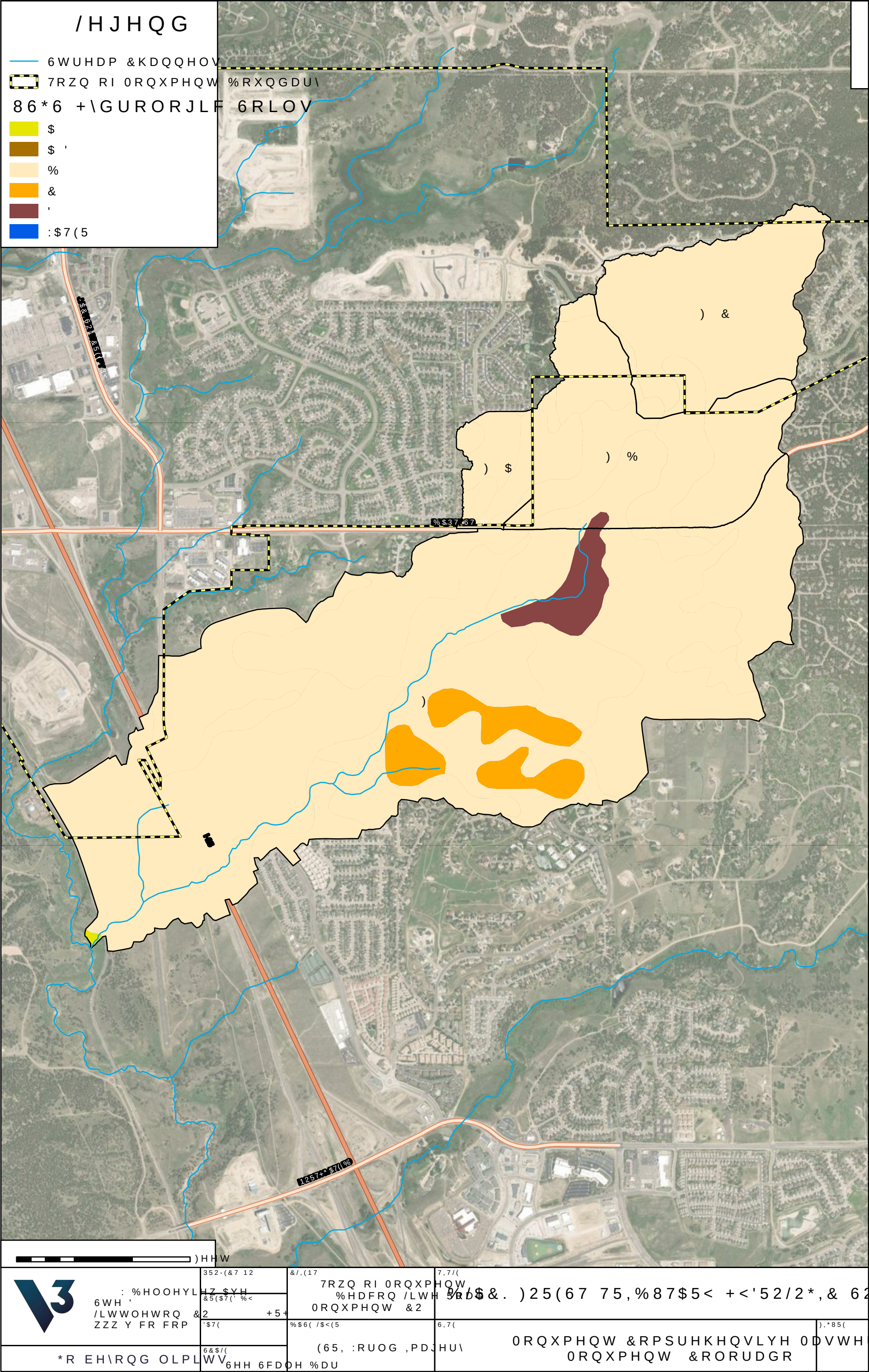
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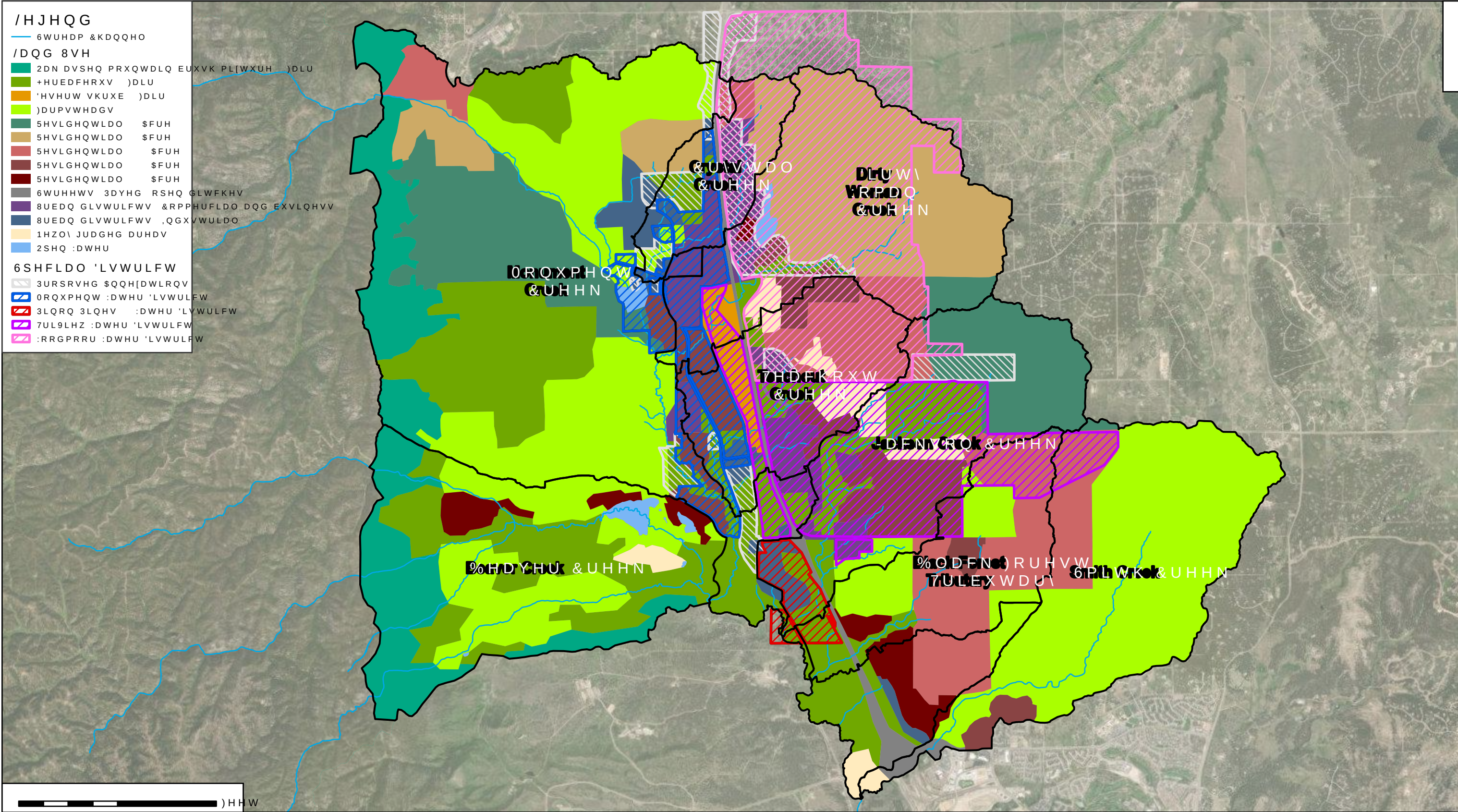
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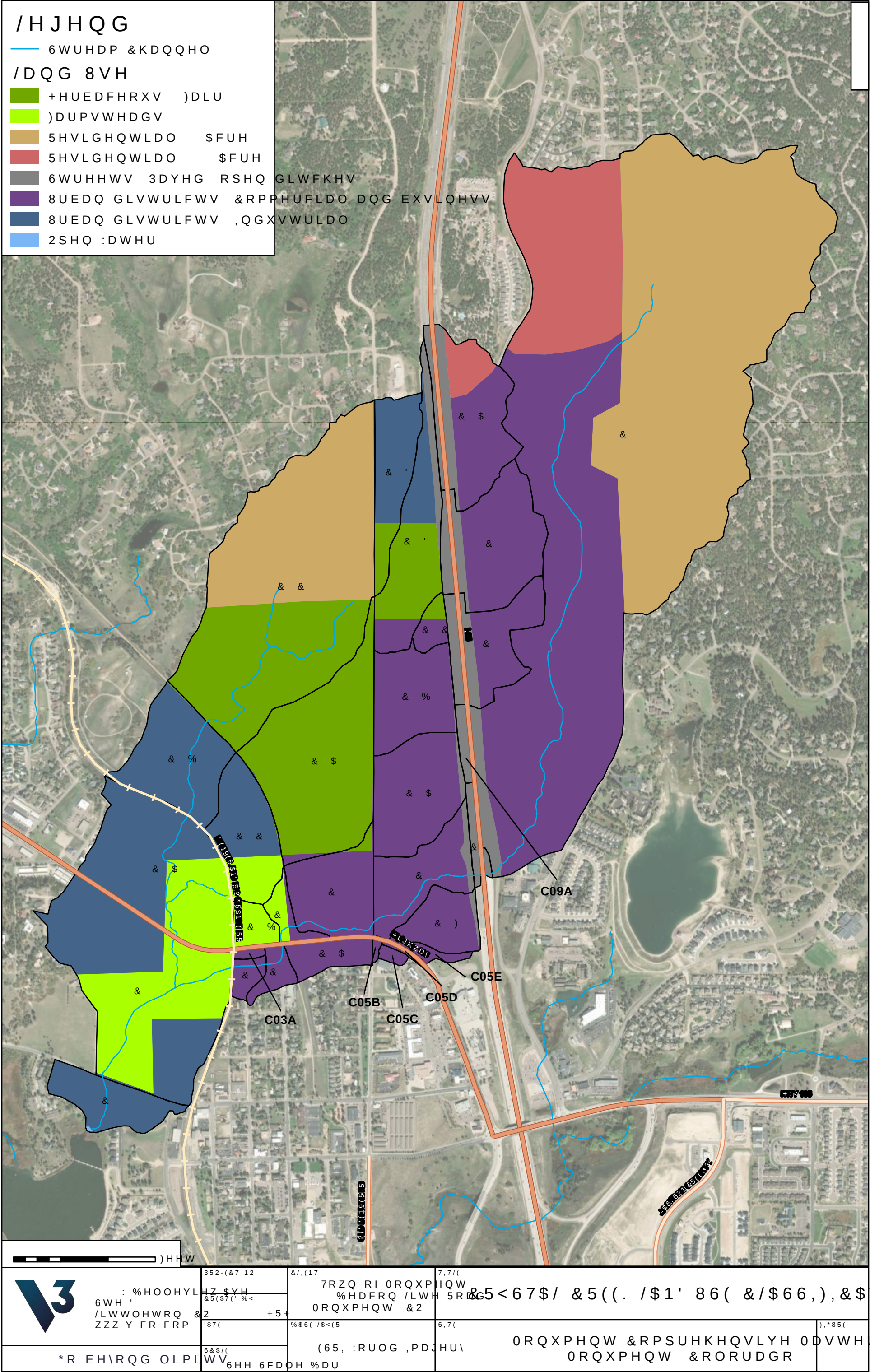
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 : %HOOHYLH 6WH ' /LWWOHWRO &2 ZZZ Y FR FRP *R EH\RQG OLPLW	352-(&7 12 Z \$YH &5(\$7(' %< +5+ \$7(6&\$/(	&/.(17 7RZQ RI 0RQXPHQW %HDFRQ /LWH 0RQXPHQW &2 %\$6(/\$<(5 (65, :RUOG ,PDJHU\	6,7(5RDG 0RQXPHQW &RPSUH KHQVLYH 0DVWHU 3ODQ 0RQXPHQW &RORUDGR	7,7/(72:1 2) 02180(17 /\$1' 86(&/\$66,) ,&\$7,21	),*85(- ? ? ?15?\$UF*,6 3UR? ?
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— 6WUHDP & KDQQHO

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2DN DVSHQ PRXQWDLQ EUXVK PL[WXUH)DLU

■ +HUEDFHRXV)DLU

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)DUPVWHDGV

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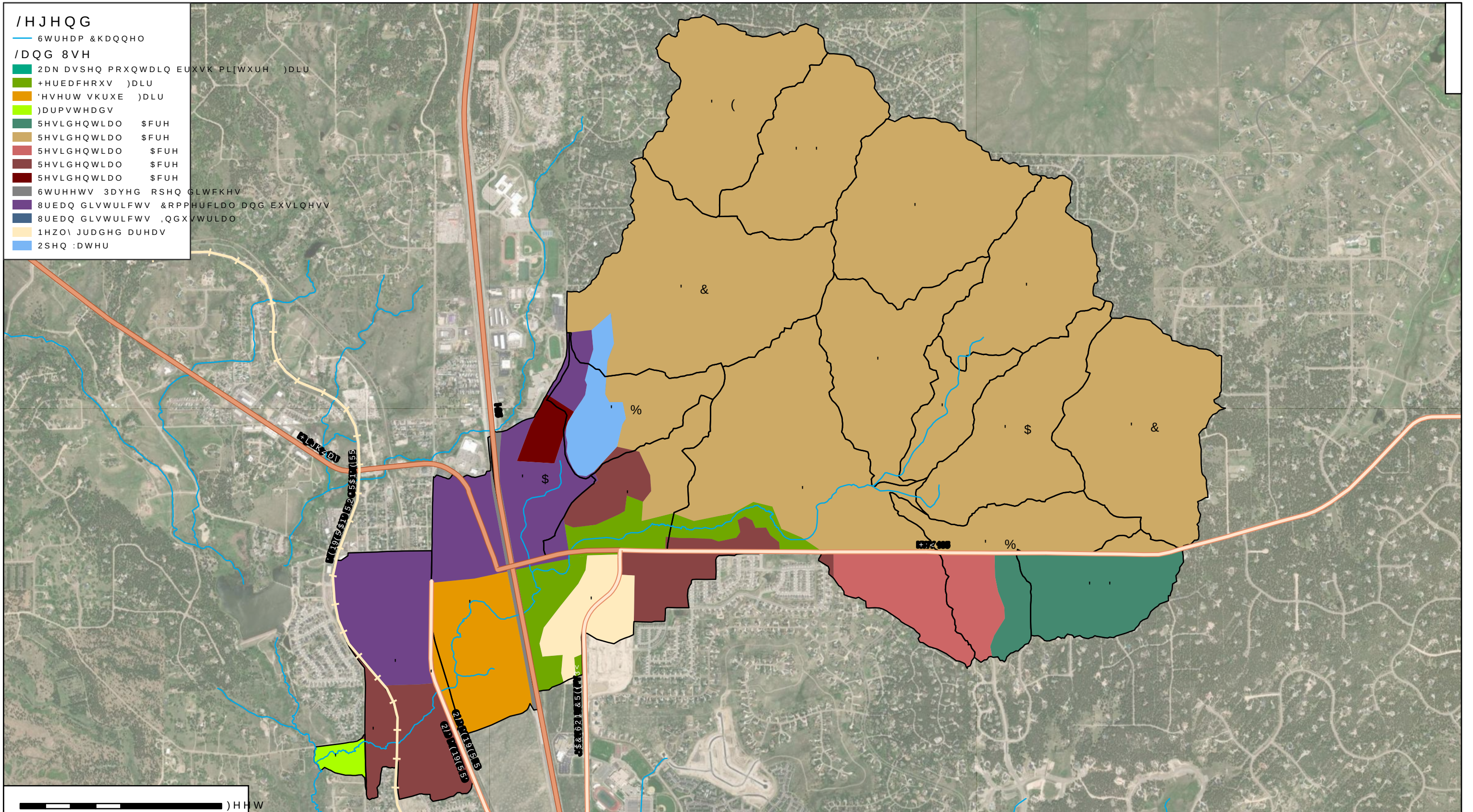
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8UEDQ GLVWULFWV &RPPHUFLDO DQG EXVLQHVV

8UEDQ GLVWULFWV ,QGXLVWULDO

1HZO\ JUDGHG DUHDV

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      : %HOOHYLH
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0DVWHU 3ODQ
0RQXPHQW &RORUDGR

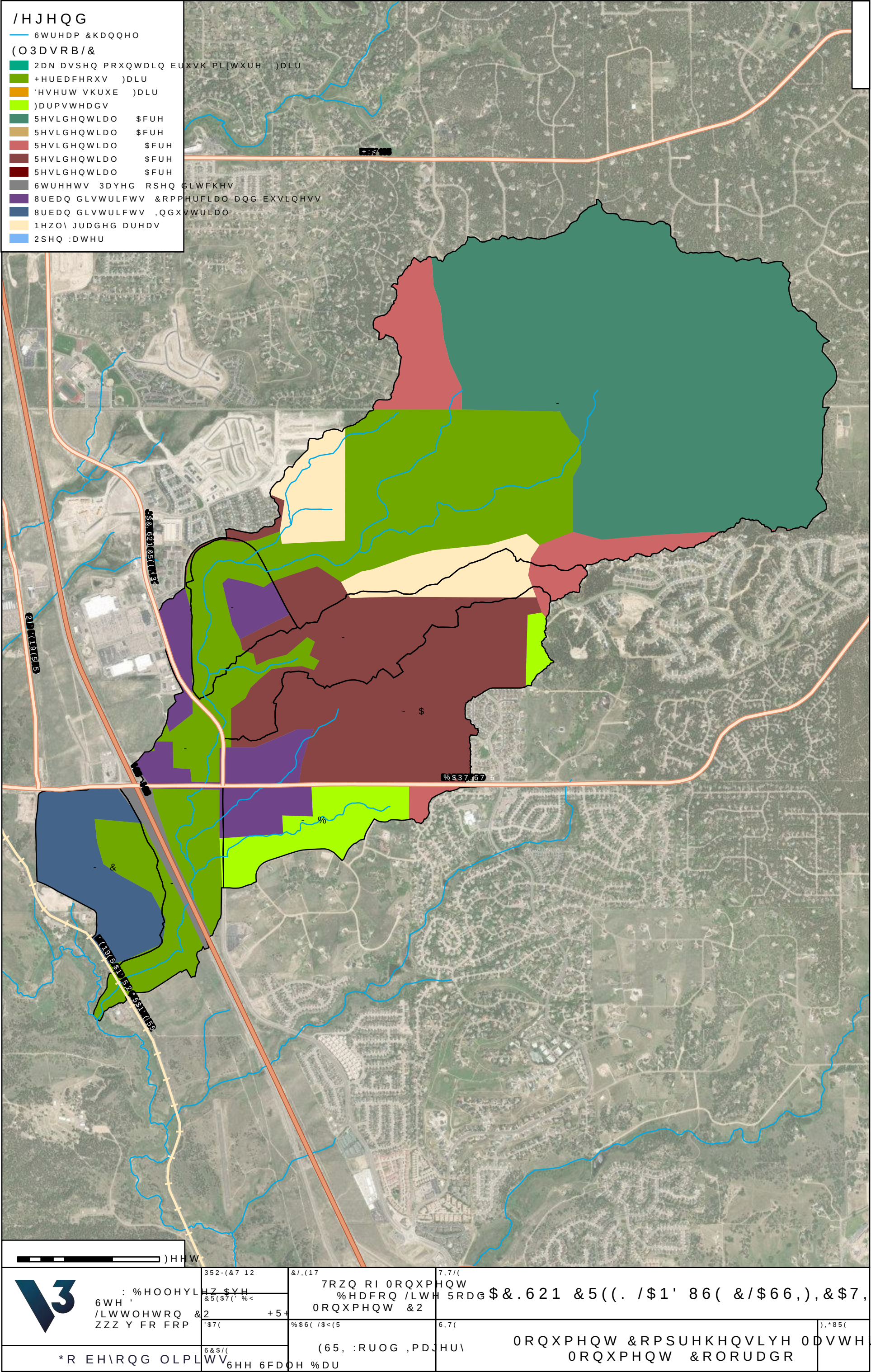
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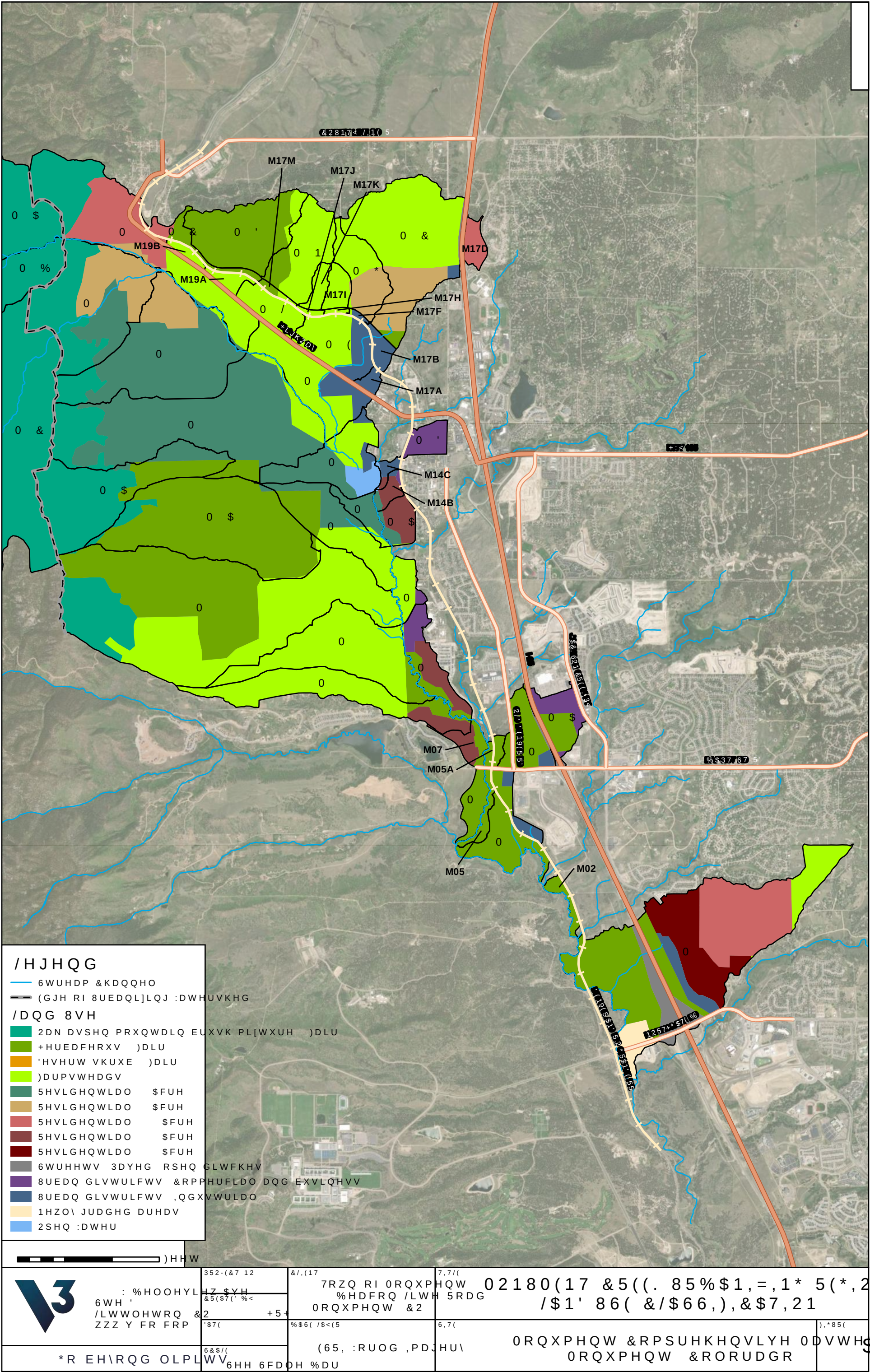
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2DN DVSHQ PRXQWDLQ EUXVK PL[WXUH)DLU

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8UEDQ GLVWULFWV &RPPHUFDO DQG EXVLQHV

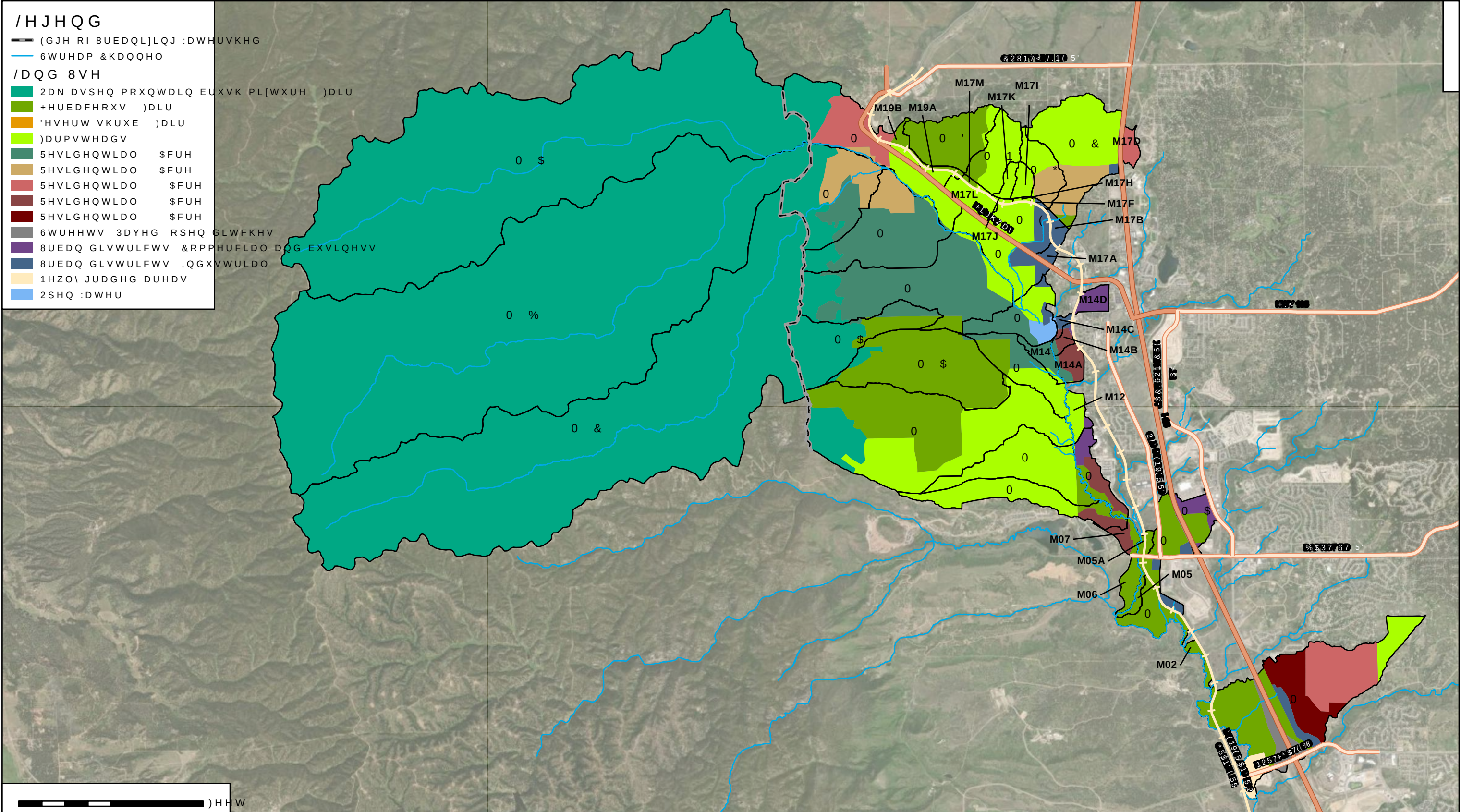
8UEDQ GLVWULFWV ,QG XVWLDQ

1HZ\ JUDGHG DUHDV

2SHQ :DWHU

3 6WH ' /LWWOHWRQ ZZZ Y FR FRP		352-(&7 12	7RZQ RI 0RQXPHQW 02180(17 &5((. 85%\$1,=,1* 5(*,21	
		6&\$/(	0RQXPHQW &2	
*R EH\RQG OLPLWV		6&\$/(	0RQXPHQW &RPSUHKHQVLYH 0DVWHQ	
6HH 6FDOH %DU		6&\$/(	0RQXPHQW &RORUDGR	

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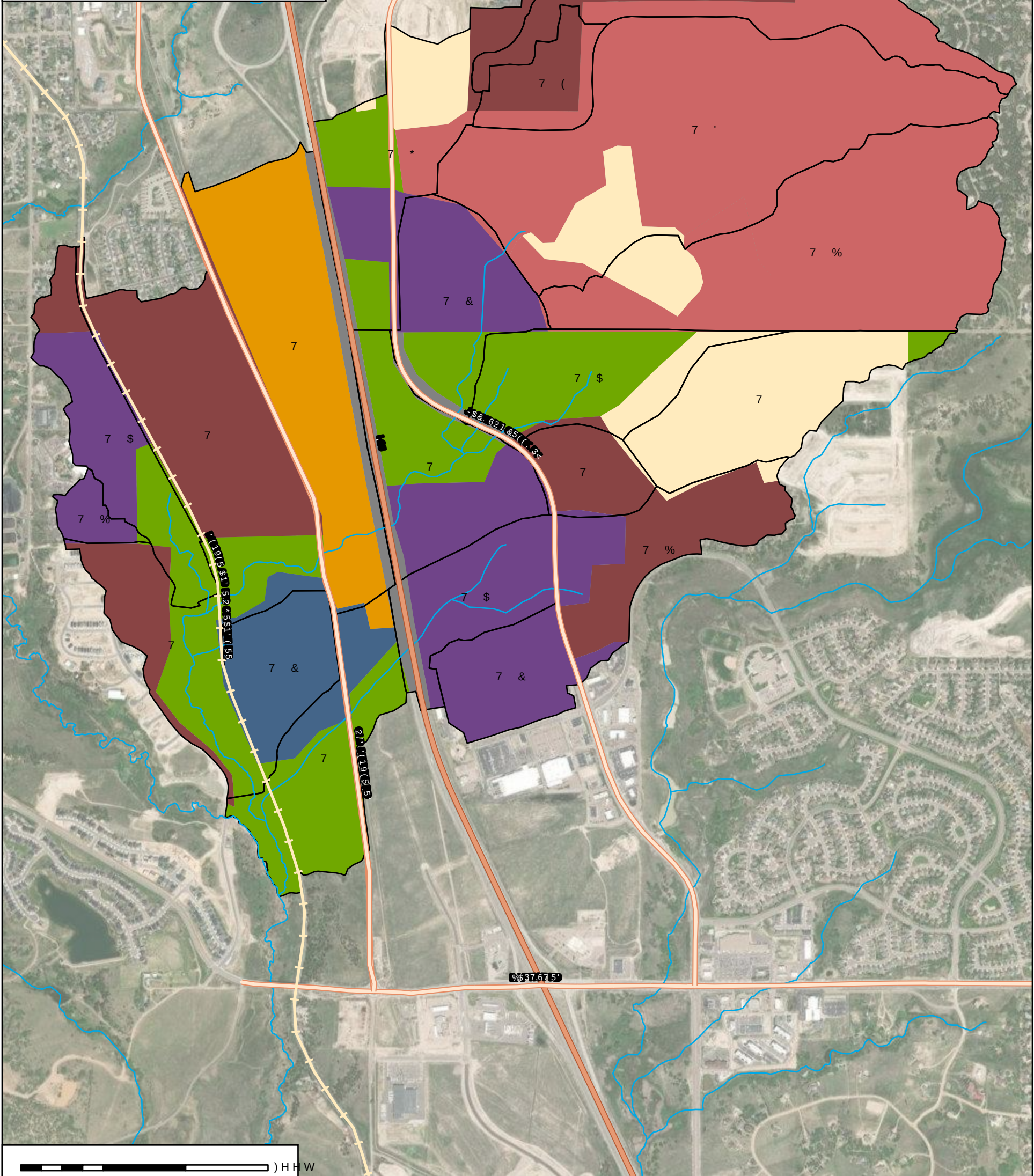
3 : %HOOHYLH 6WH /LWWOHWRO &2 ZZZ Y FR FRP		352-(&7 12 Z \$YH &5(\$7(' %<	7RZQ RI 0RQXPHQW %HDFRQ /LWH 0RQXPHQW &2		6,7(5RDG	0RQXPHQW &RPSUH 0DVWHU 3ODQ 0RQXPHQW &RORUDGR		7,7/(021180(17 &5((. /\$1' 86(&/ \$66,), &\$7,21 :,7+ 833(5 %\$6,16	),*85(%	
*R EH\RQG OLPLW		6&\$/(	(65, :RUOG ,PDJHU\							
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	: %HOOHYLHZ \$YH	7RZQ RI 0RQXP HQW	60,7+ &5((. /\$1' 86(&/ \$66,),&\$7
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		(65, :RUOG ,PDJ HU\	0RQXP HQW &RPSUHKKHQVLYH 0DVWH
*R EH\RQG OLPLWV	6&\$/(		0RQXP HQW &RORUDGR
	6HH 6FDOH %DU		),*85(

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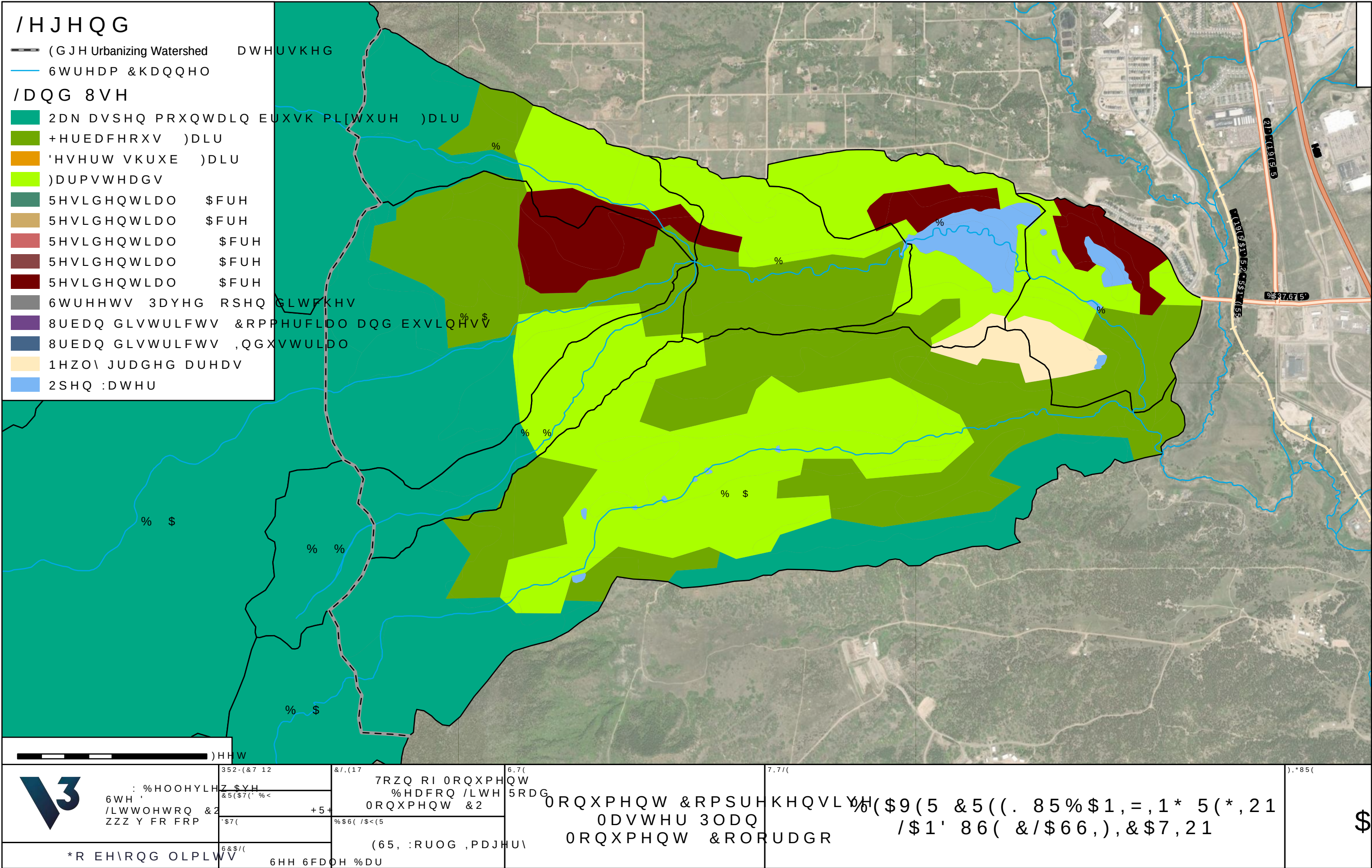
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0RQXPHQW	&RPSUHKHQLVLYH	0DVWHU	30
0RQXPHQW	&RORUDGR		

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2DN DVSHQ PRXQWDLQ EUXVK PL[WXUH)DLU

■ +HUEDFHRXV)DLU

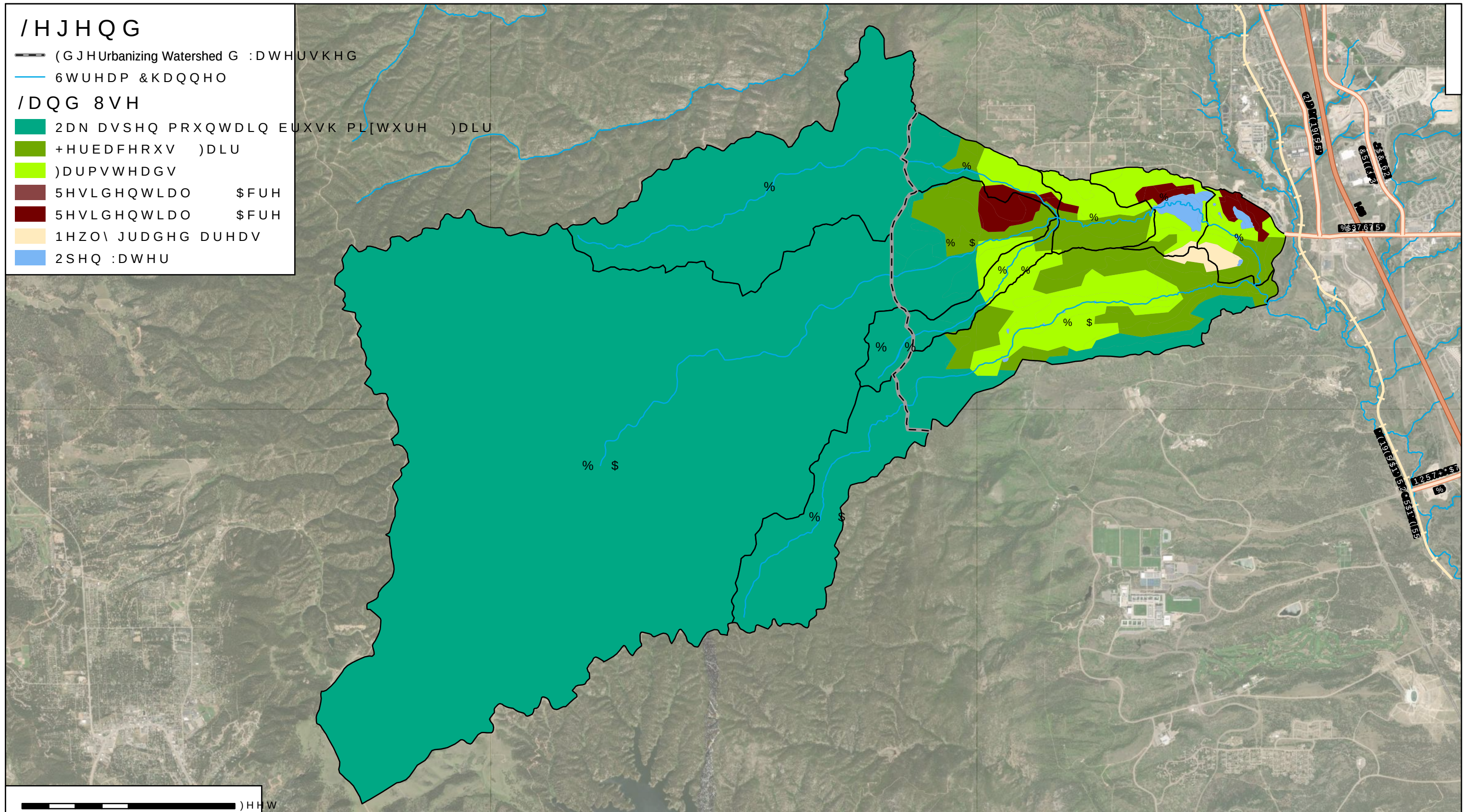
) D U P V W H D G V

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0 G B : , 7 + 8 3 3 (5 % \$ 6 , 1 6	

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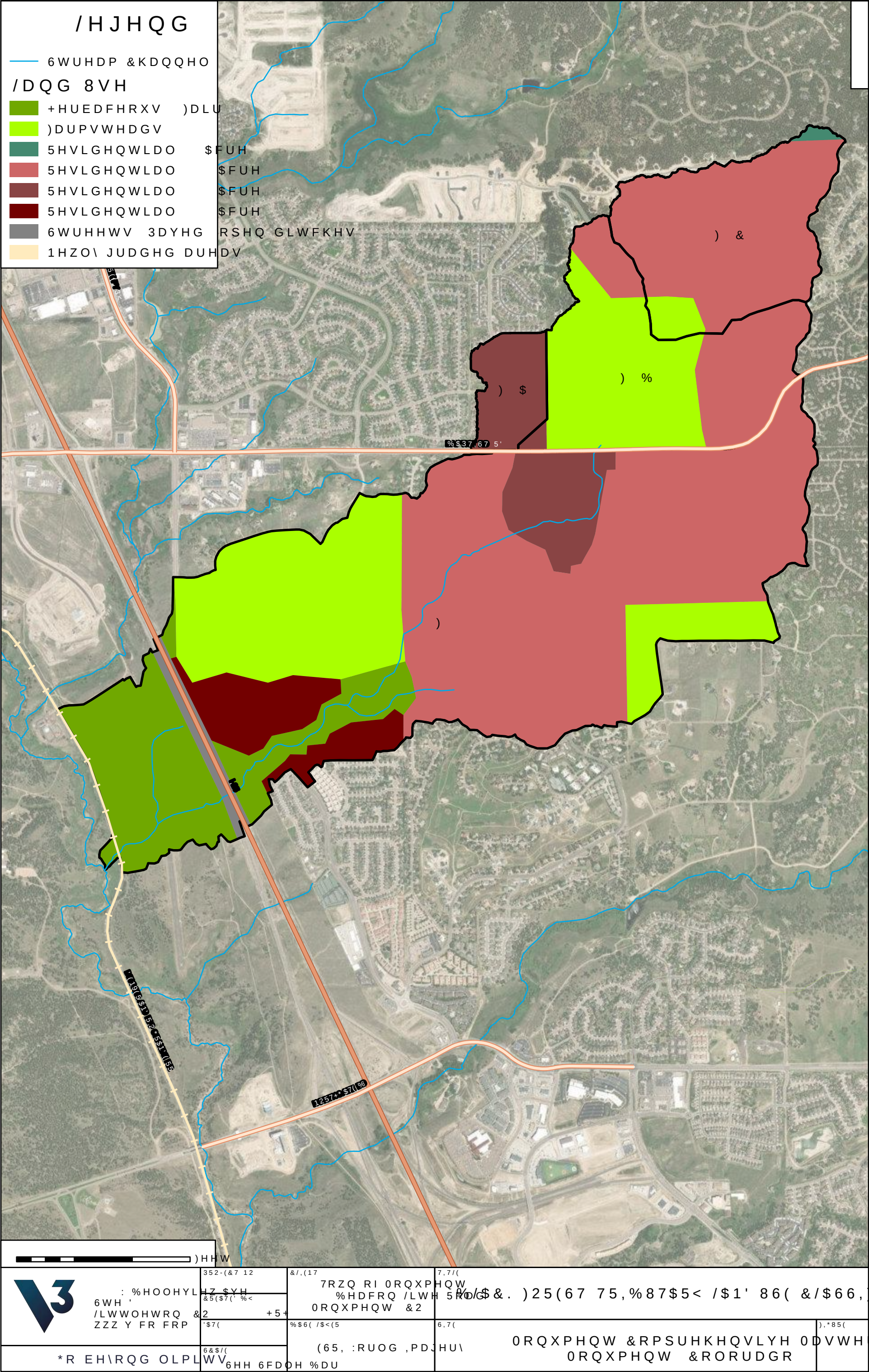
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*R EH\RQG OLPLWV 6&\$/(

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/HJHQG

6WUHD P & KDQQHO

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+HUEDFHRXV)DLU

)DUPVWHDGV

5HVLGHQWLDO \$FUH

5HVLGHQWLDO \$FUH

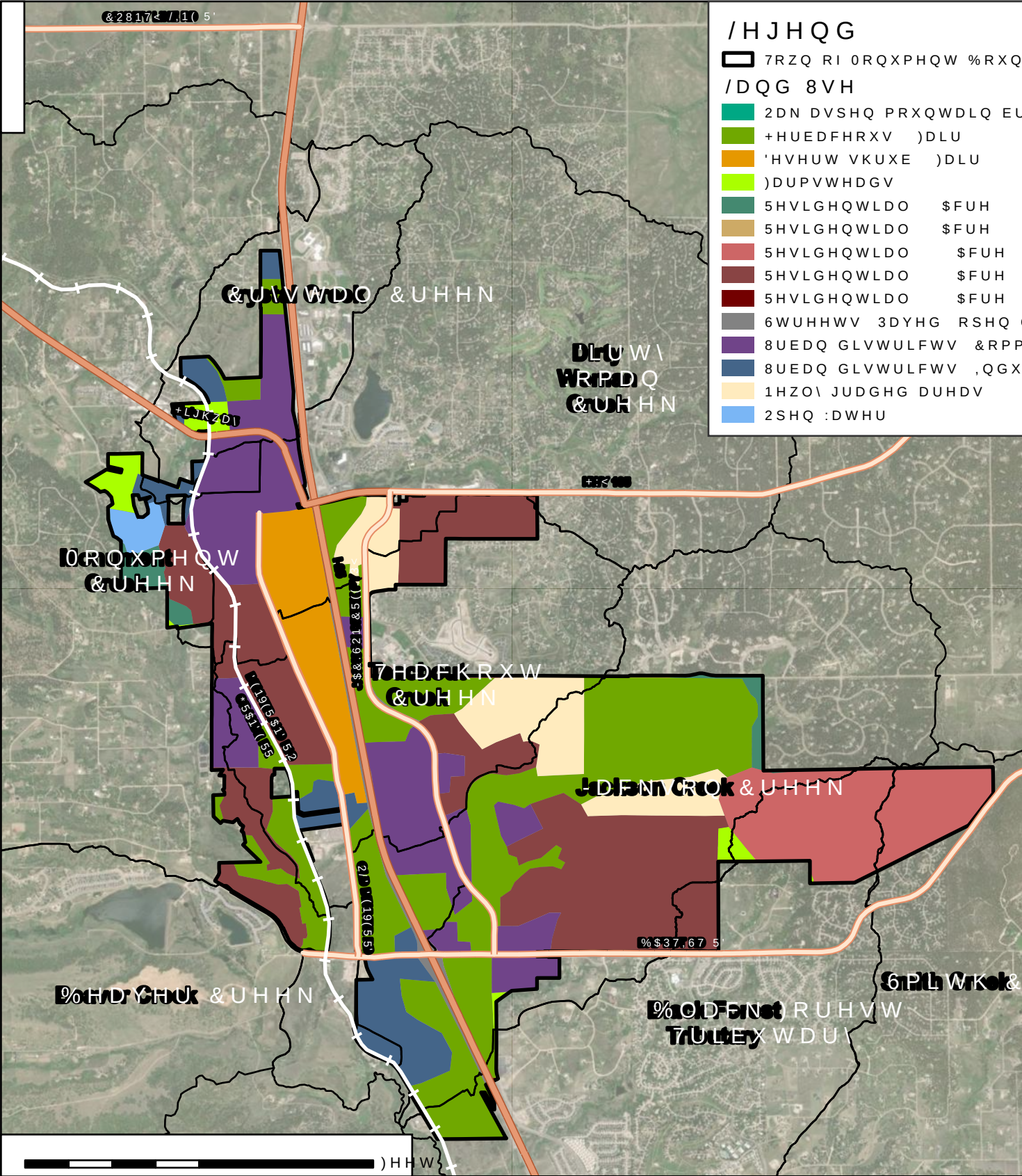
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5HVLGHQWLDO \$FUH

6WUHHWV 3DYHG RSHQ GLWFKHV

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V3 6WH : %HOOHYL /LWWOHWRO &2 ZZZ Y FR FRP	352-(&7 12 &5(\$7(' %<	7RZQ RI 0RQXPHQ %HDFRQ /LWH 5RQXPHQW &2		7,7/(
	+5+	0RQXPHQW &2		6,7(
	\$7(	65, :RUOG ,PDJHU\		),*85(
*R EHIRQG OLPL	6&\$7(WV6HH 6FDH %DU	0RQXPHQW &RPSUHKHQVLYH 0DVWHU 30 0RQXPHQW &RORUDGR		

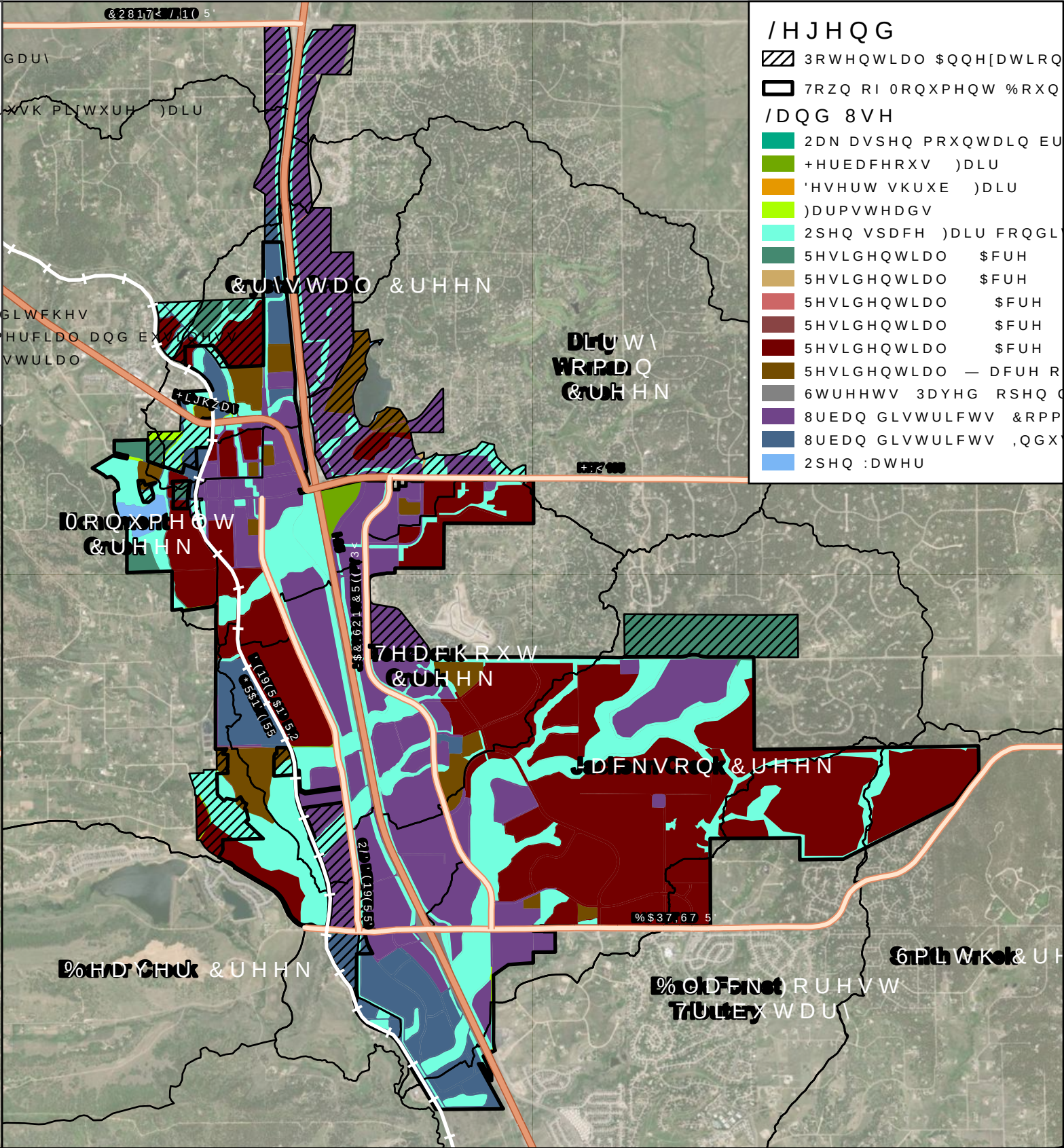


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- 2DN DVSHQ PRXQWDLQ EUXVK PLWXUH)DLU
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- 5HVLGHQWLDO \$FUH
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- 6WUHHWV 3DYHG RSHQ GLWFKHV
- 8UEDQ GLVWULFWV &RPPHUFDO DQG EX
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- 1HZ\ JUDGHG DUHDV
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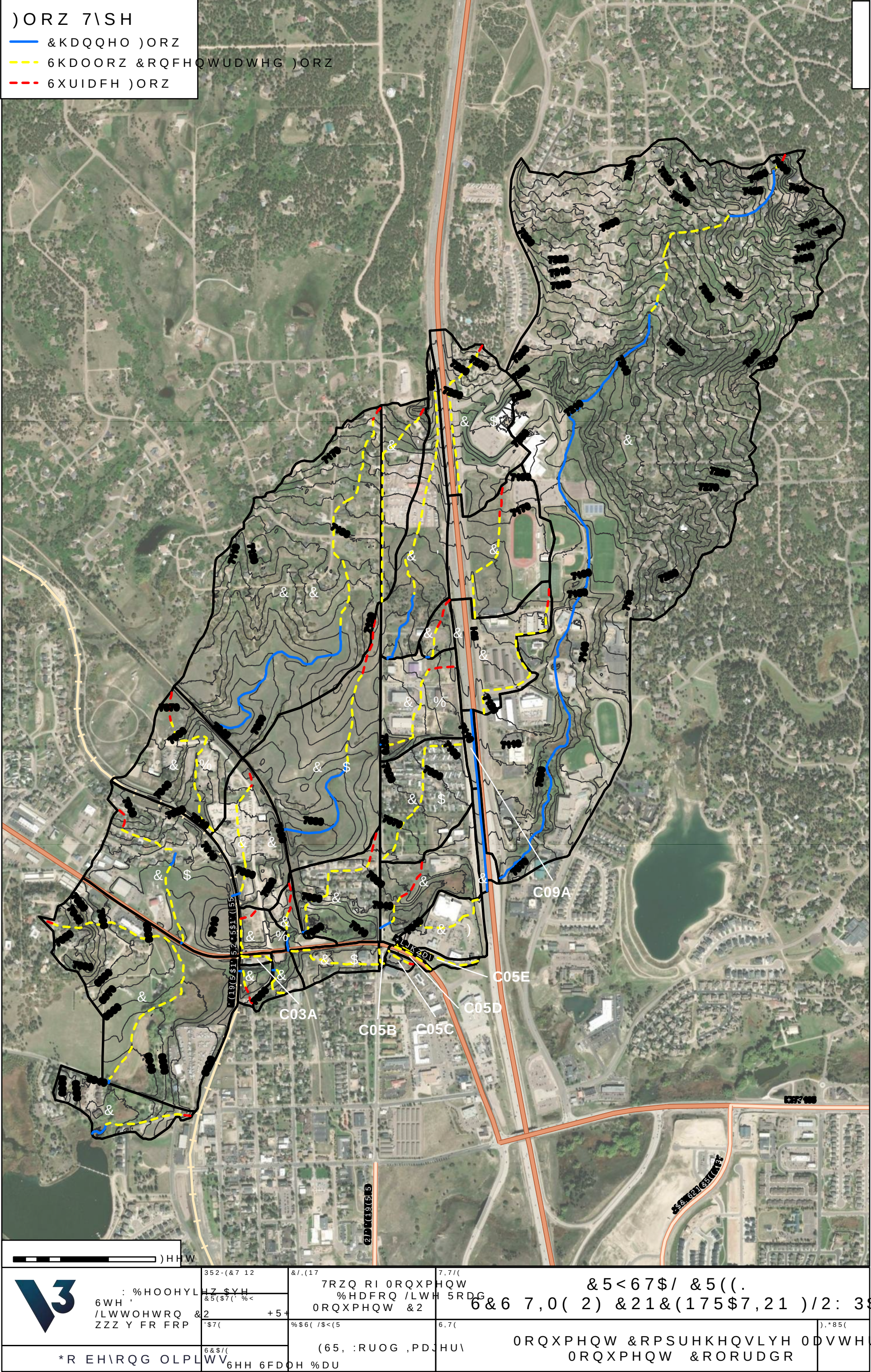
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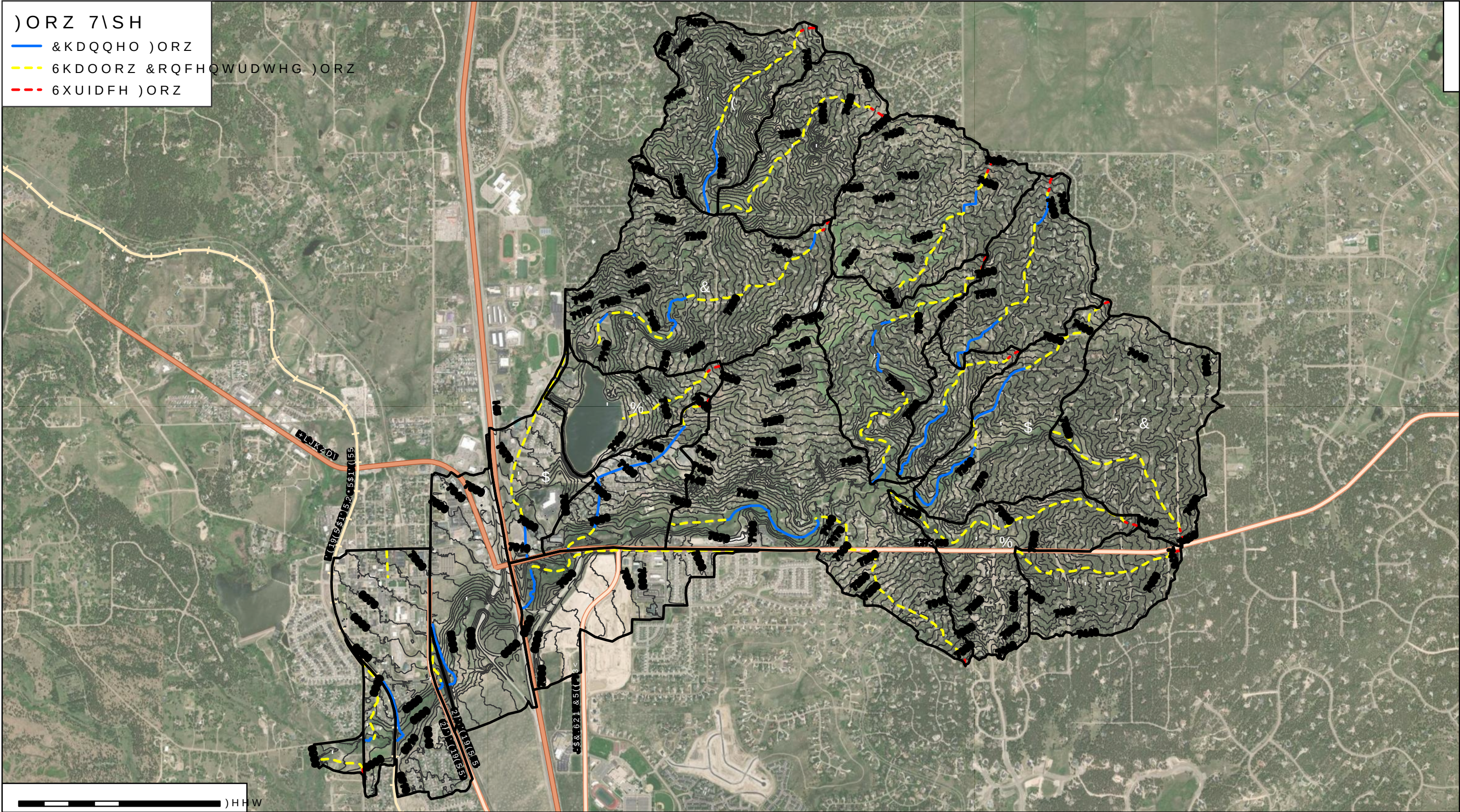
7RZQ RI 0RQXPHQW %RXQGDU\

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- 2DN DVSHQ PRXQWDLQ EUXVK PL
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-)DUPVWHDGV
- 2SHQ VSDFH)DLU FRQGLWLRQ
- 5HVLGHQWLDO \$FUH
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- 6WUHHWV 3DYHG RSHQ GLWFKHV
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- 8UEDQ GLVWULFWV ,QGXYWULDO
- 2SHQ :DWHU

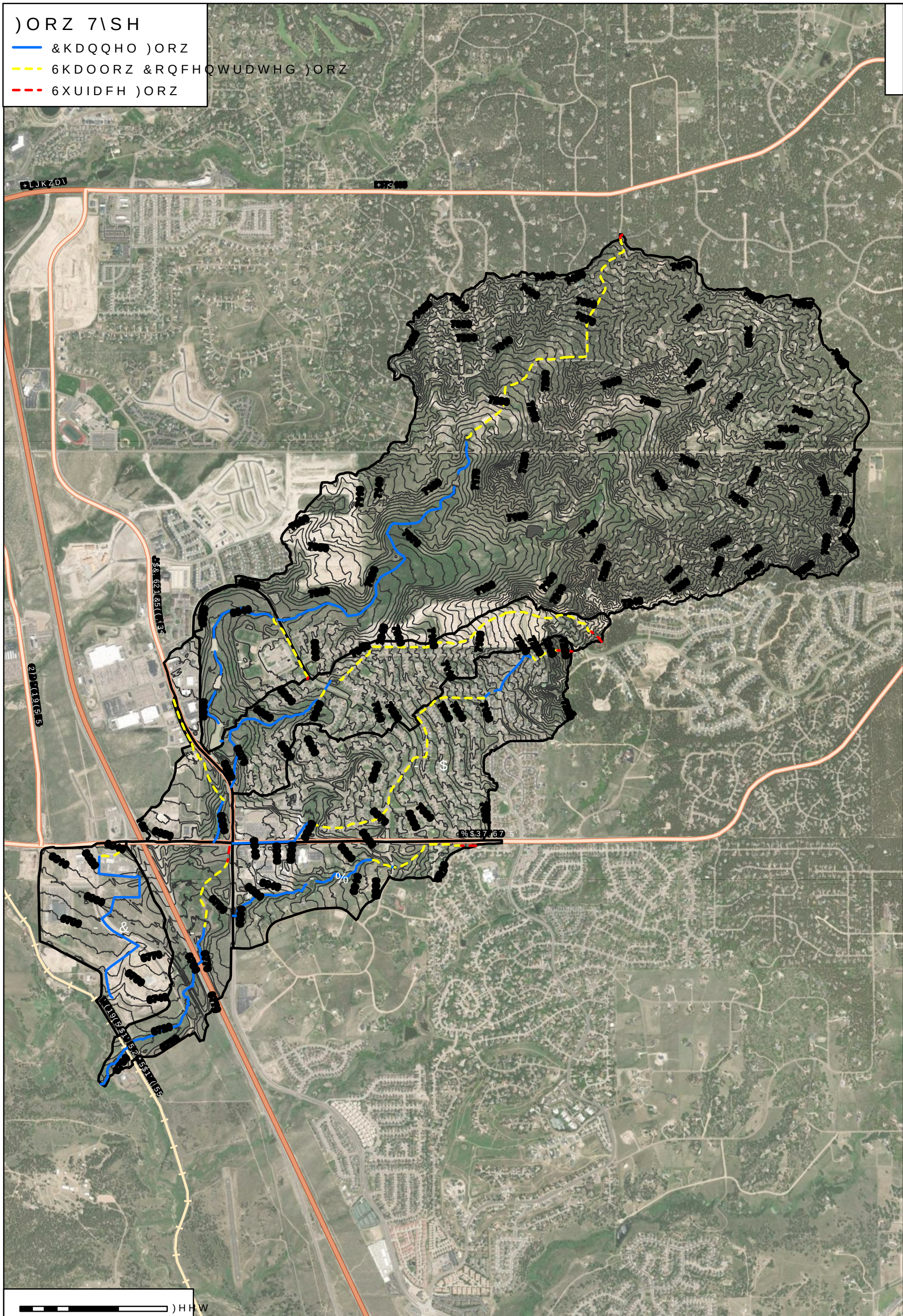
 : %HOOHYLH 6WH /LWWOHWRO &2 ZZZ Y FR FRP		352-(7 12 Z \$YH &5(\$7(' %<	7RZQ RI 0RQXPHQW %HDFRQ /LWH 0RQXPHQW &2		6,7(5RDG	0RQXPHQW &RPSUH KHQVLYH 0DVWHU 3ODQ 0RQXPHQW &RORUDGR		72:1 2) 02180(17 (: 67,1* 96)8785(/\$1' 86(&203\$5,621	),*85(- ? ? ?15?SUF*,6 3UR? ?	
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— &KDQQHO)ORZ
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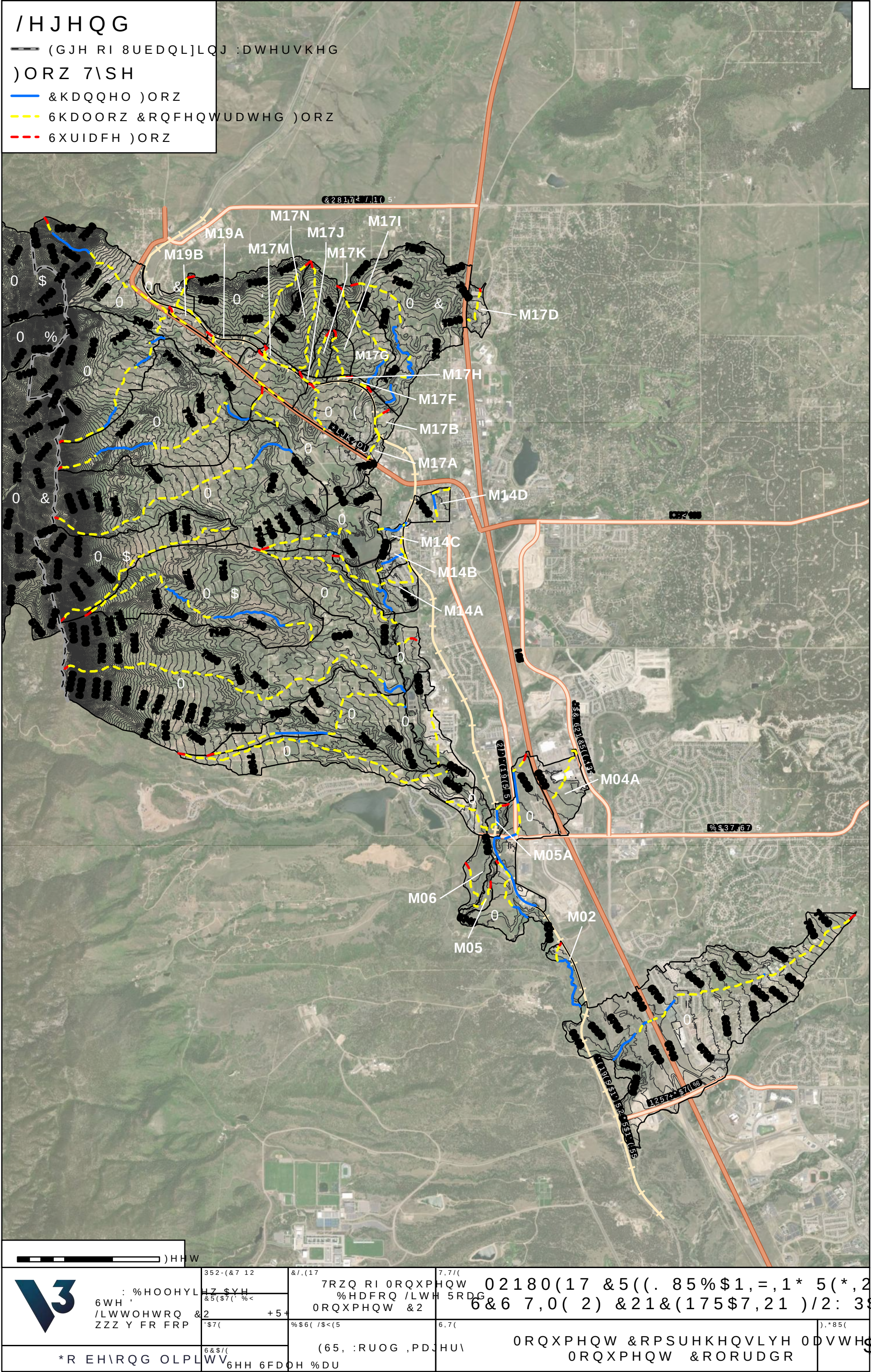
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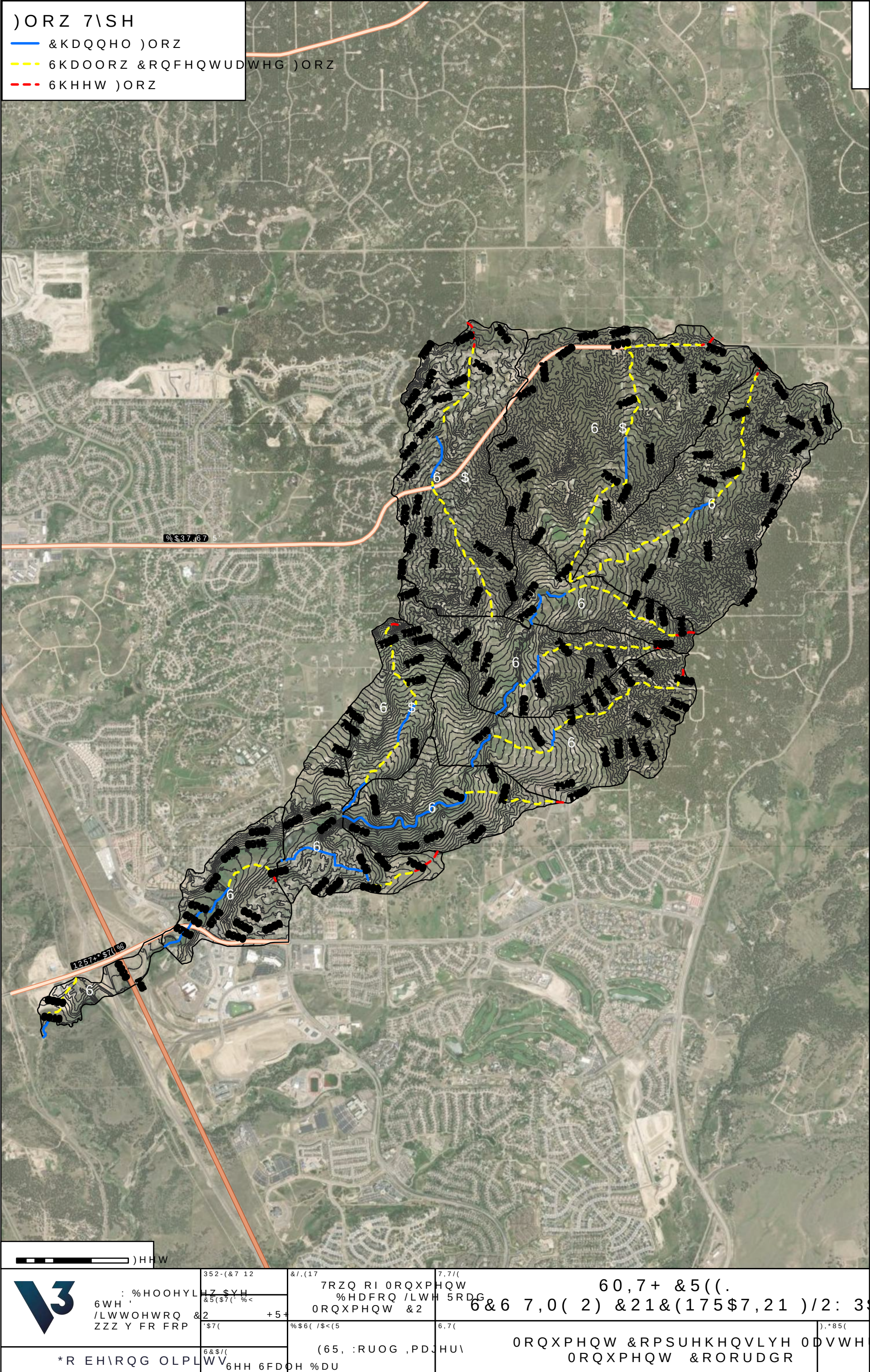
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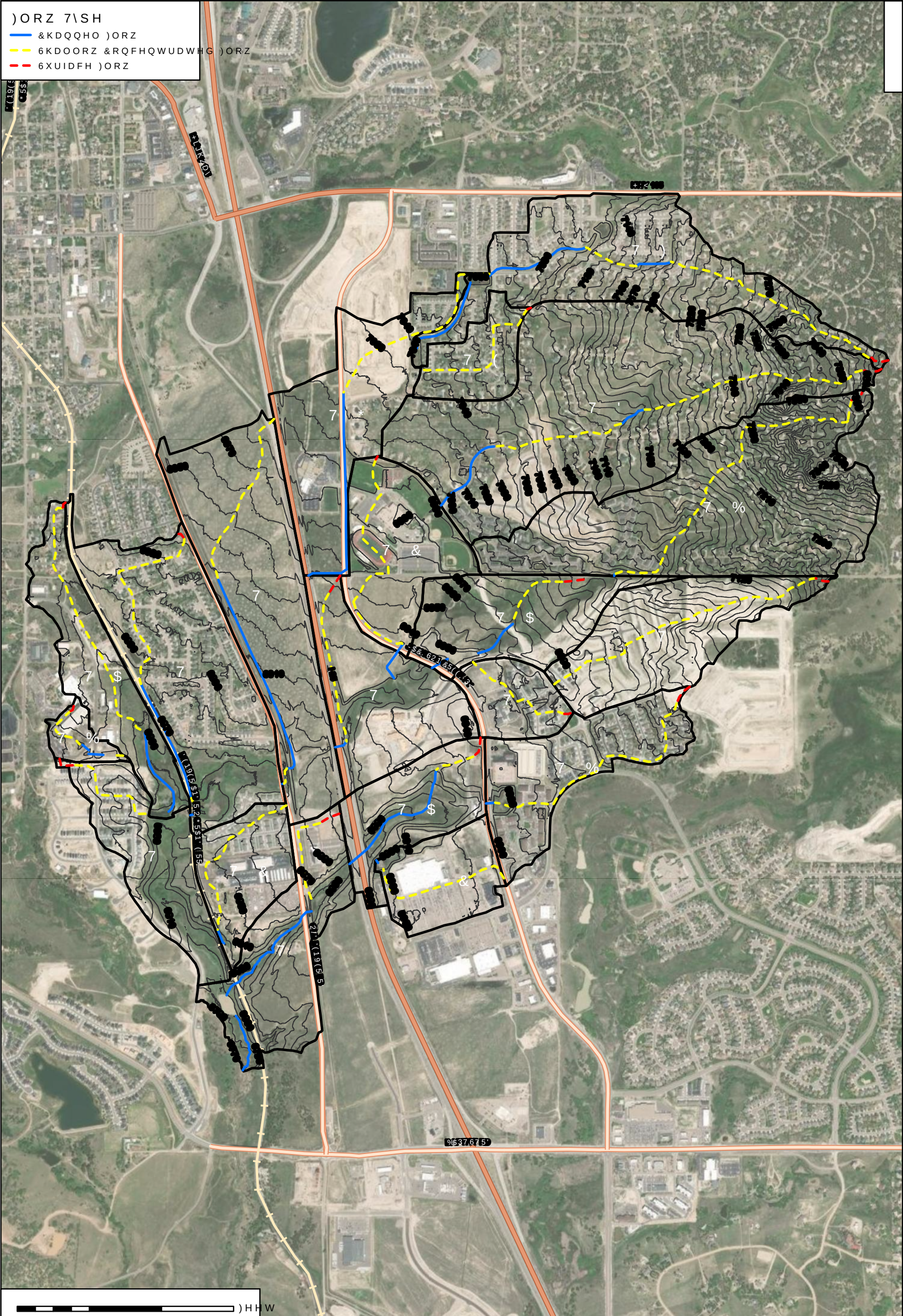
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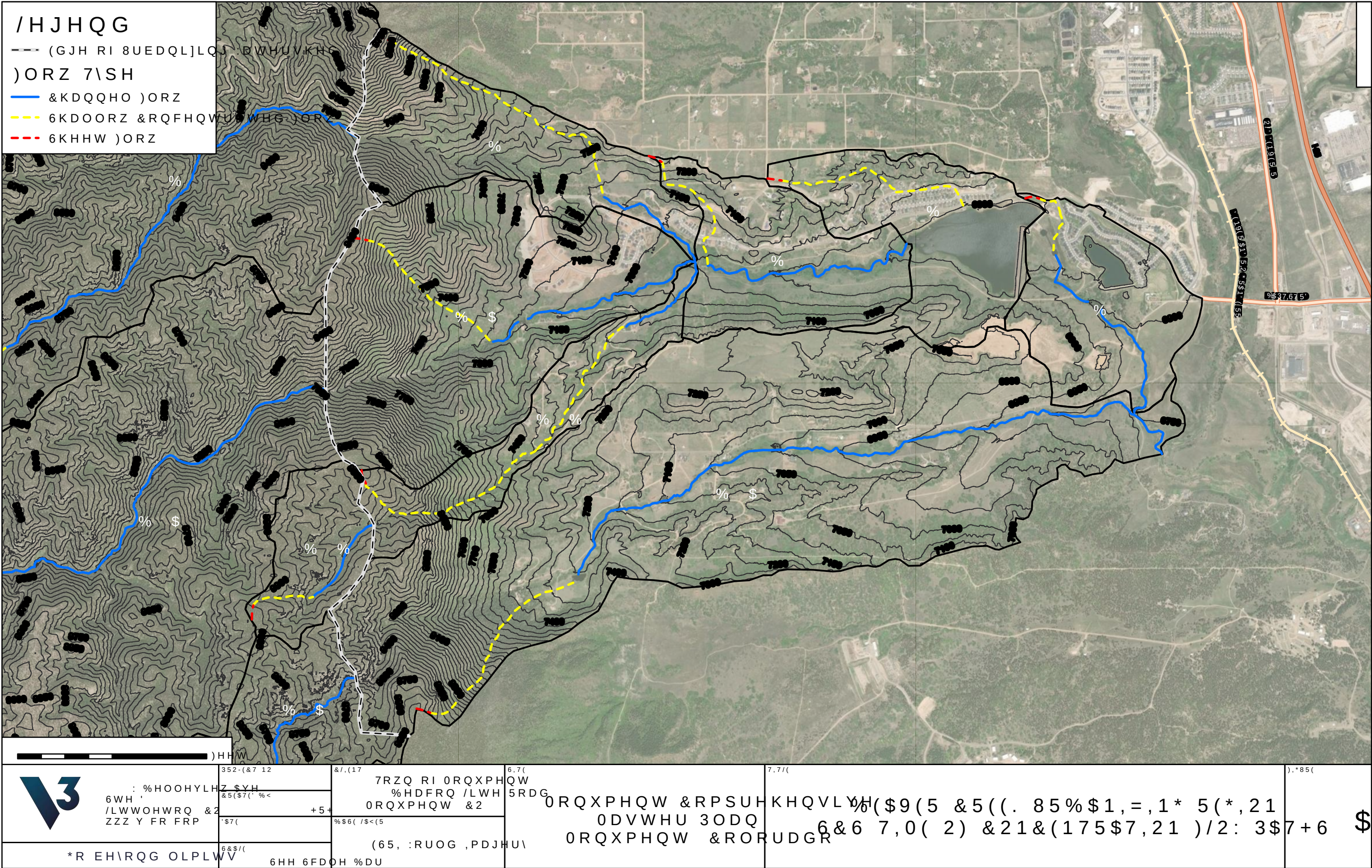


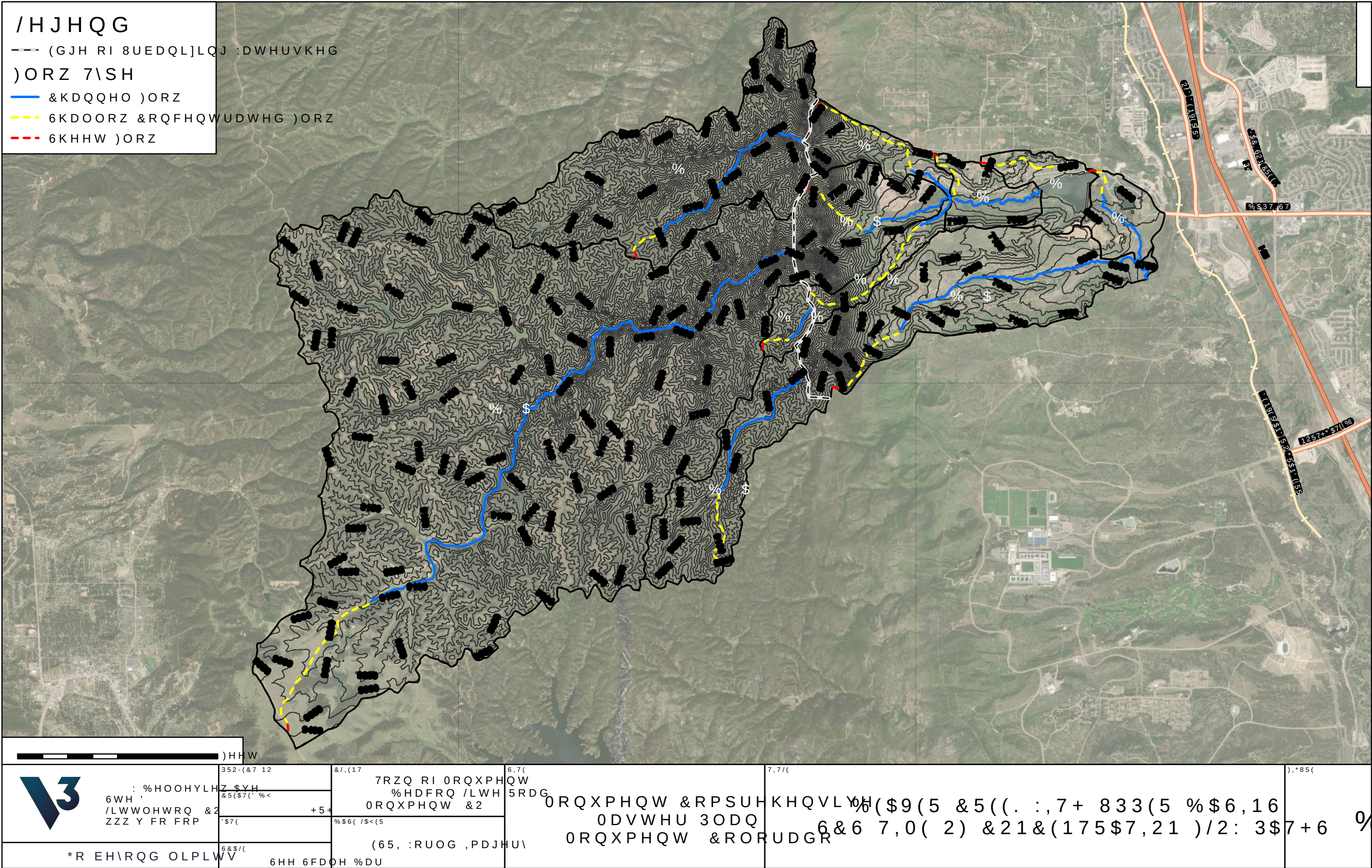


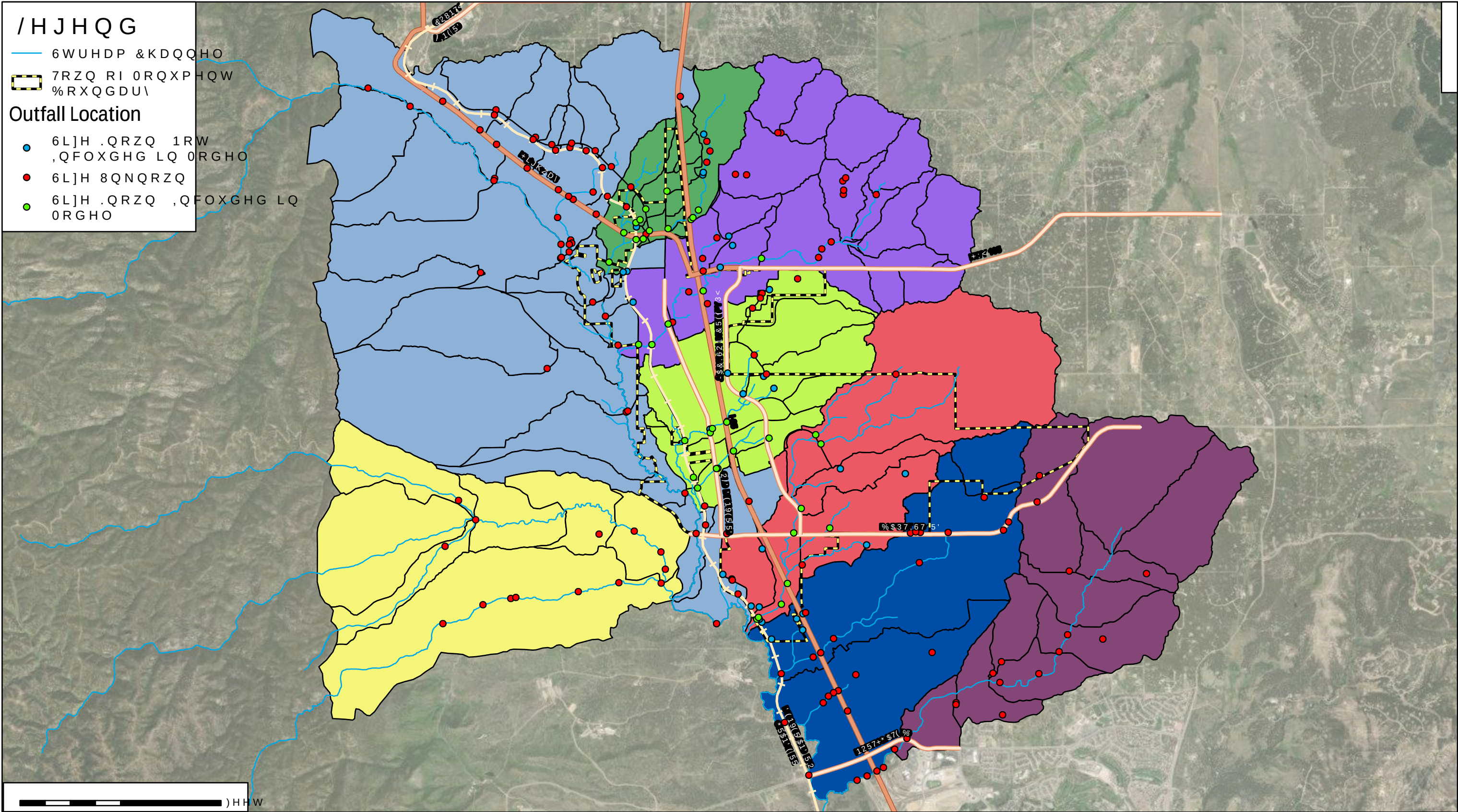
)ORZ 7\SH
— &KDQQHO)ORZ
- 6KDOORZ &RQFHQWUDWHG)ORZ
- 6XUIDFH)ORZ



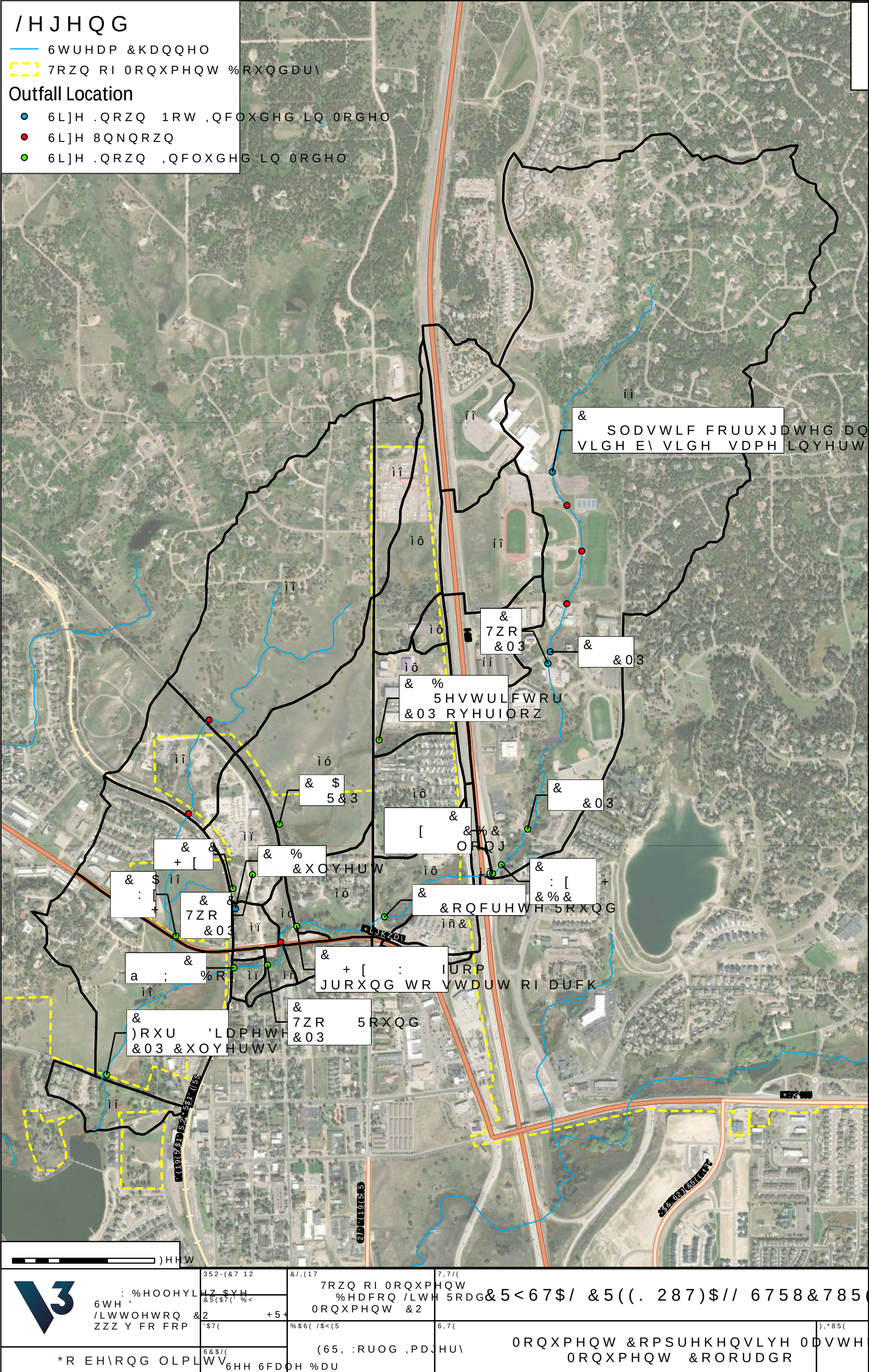
	: %HOOHYL 4Z \$YH 6WH ' /LWWOHWRO &2 +5+ ZZZ Y FR FRP \$7(		7RZQ RI 0RQXPHQW %HDFRQ /LWH 5RDG 0RQXPHQW &2		7(\$&+287 &5((6&6 7,0(2) &21&(175\$7,21)/2: 3\$7+6	
	*R EH\RQG OLPLWV 6HH 6FDOH %DU		(65, :RUOG ,PDJHUI 0RQXPHQW &RORUDGR		0RQXPHQW &RPSUHKHQVLYH 0DVWHU 30	







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Outfall Location

- 6LJH .QRZQ 1RW ,QFOXGHG LQ 0RGHO
- 6LJH 8QNQRZQ
- 6LJH .QRZQ ,QFOXGHG LQ 0RGHO

& SODVWLF FRUUXJDWHG DQ
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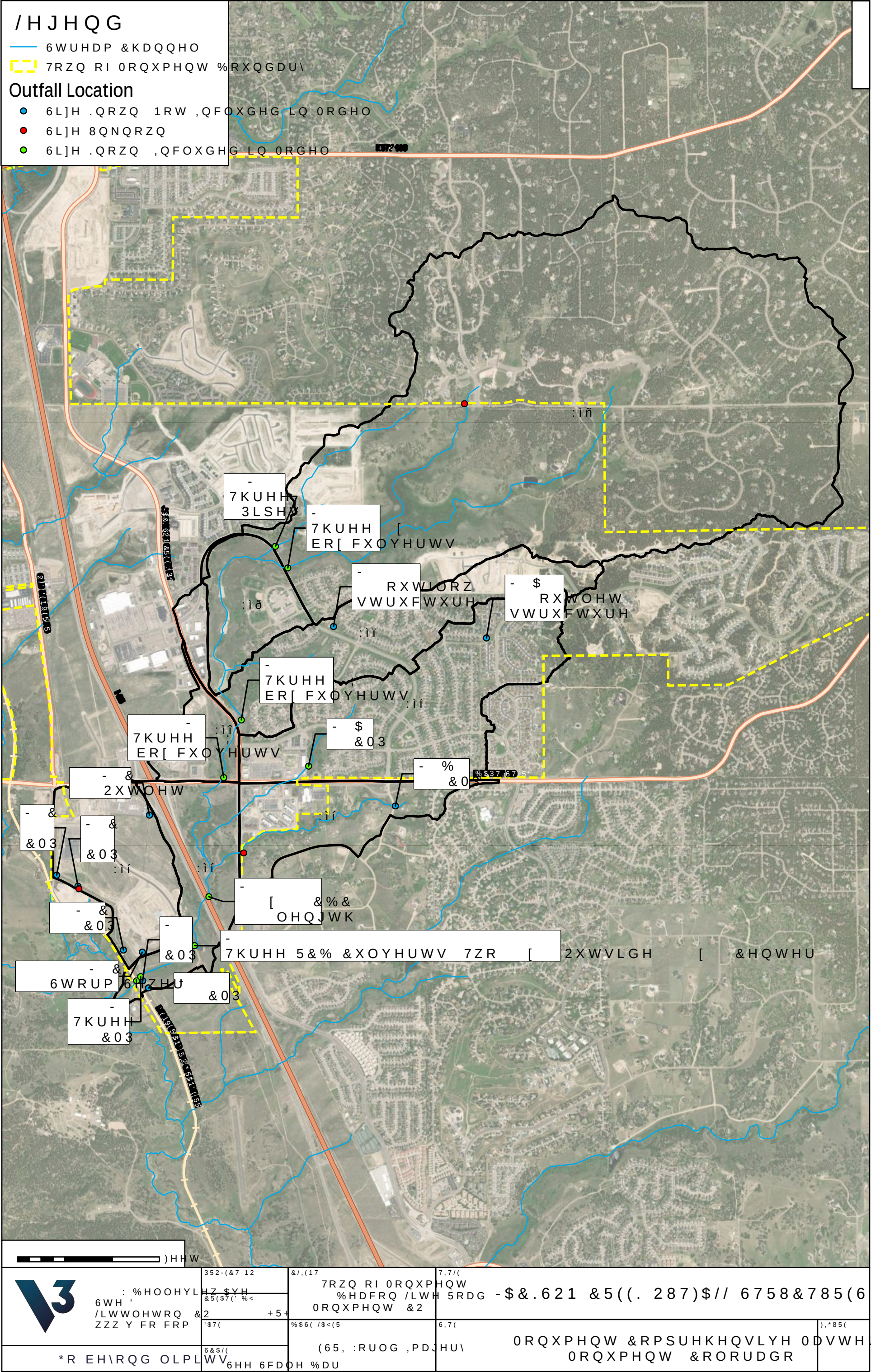
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0RQXPHQW &RORUDGR



/HJHQG

6WUHDP &KDQQHO

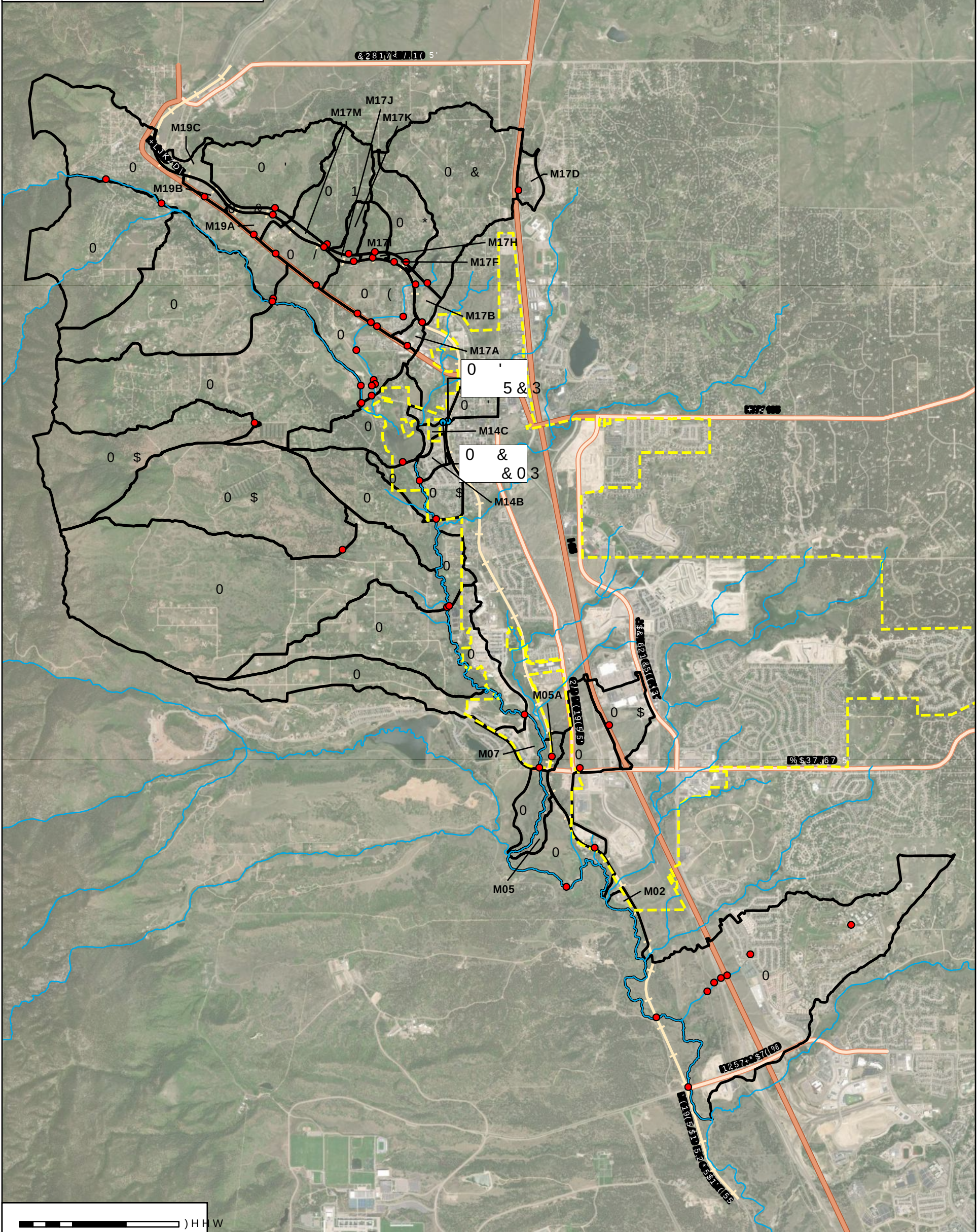
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Outfall Location

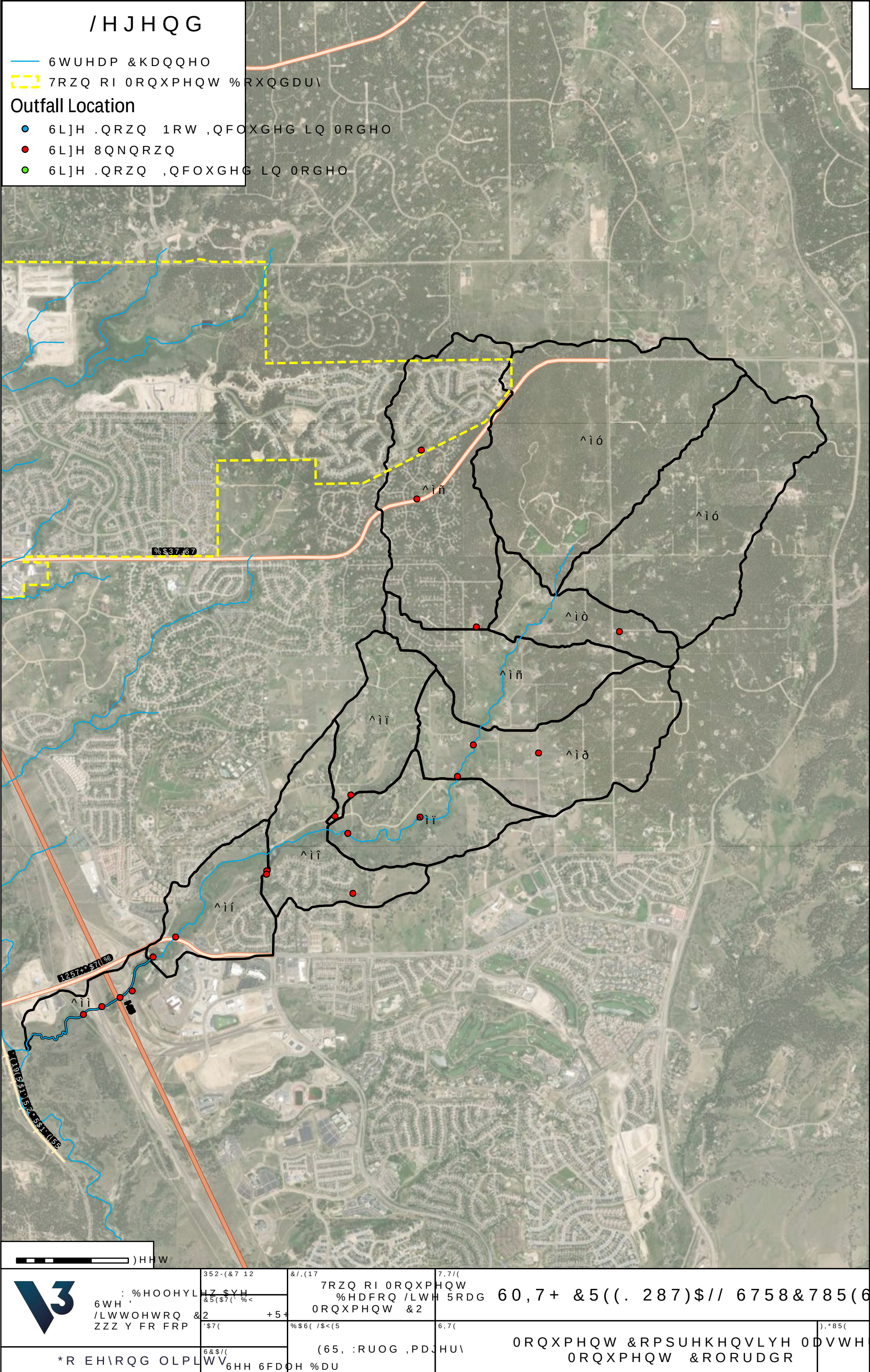
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6L]H 8QNQRZQ

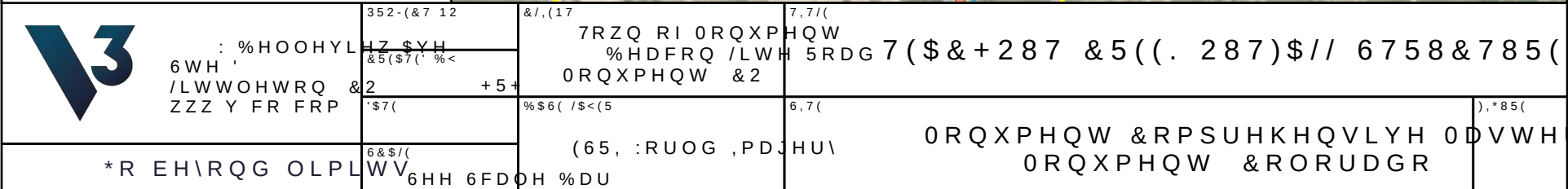
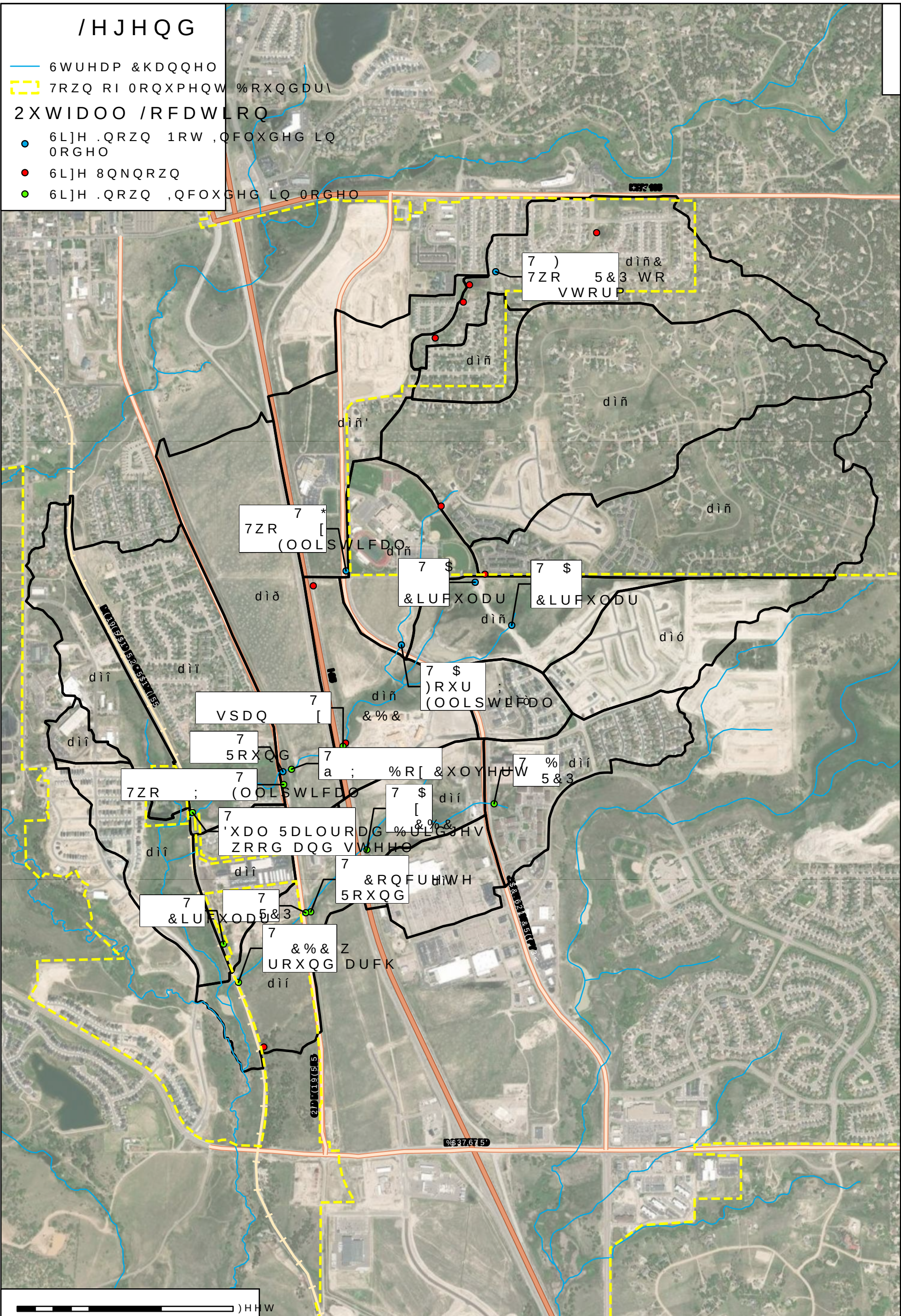
6L]H .QRZQ ,QFOXGHG LQ 0RGHO

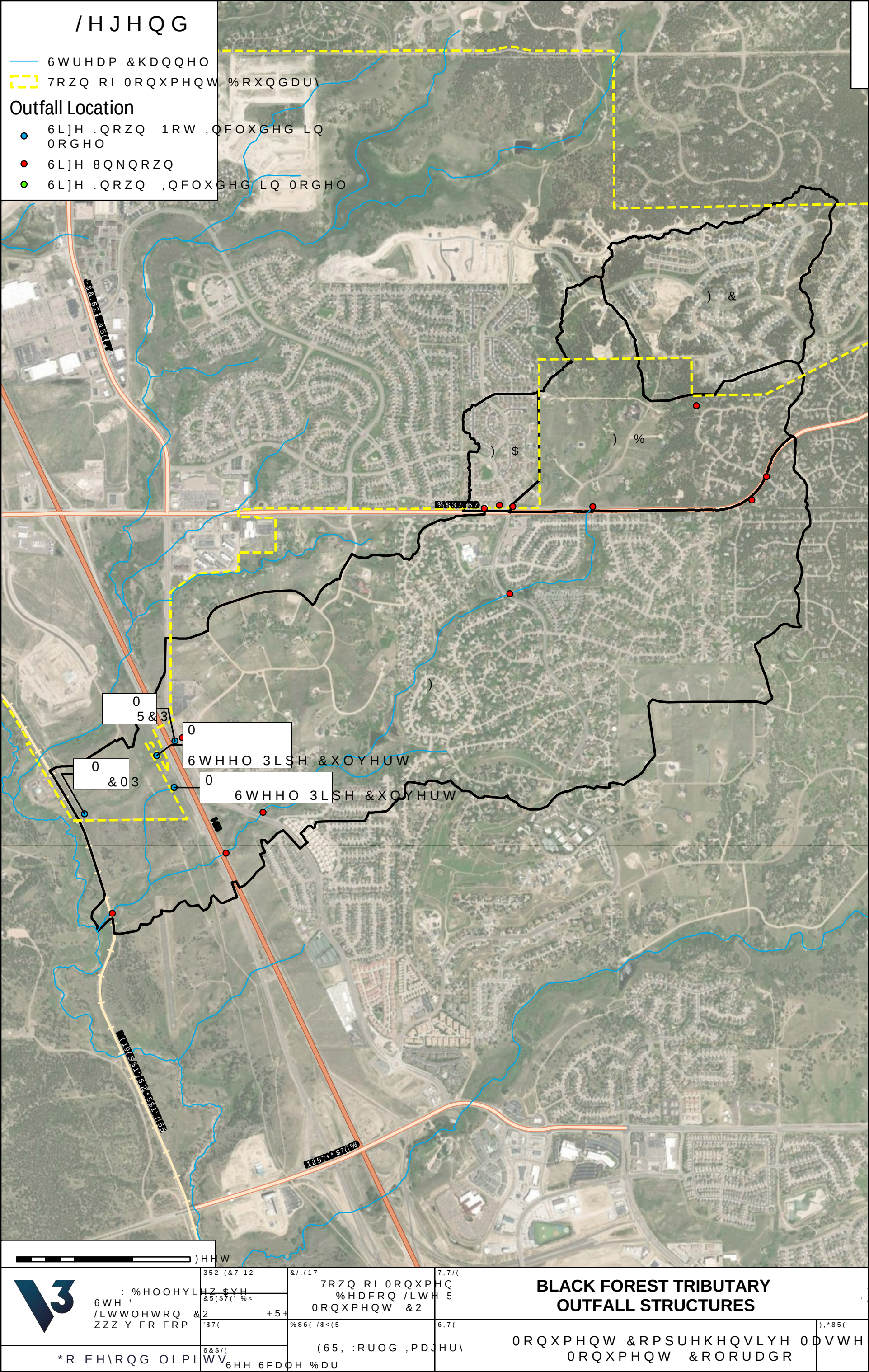


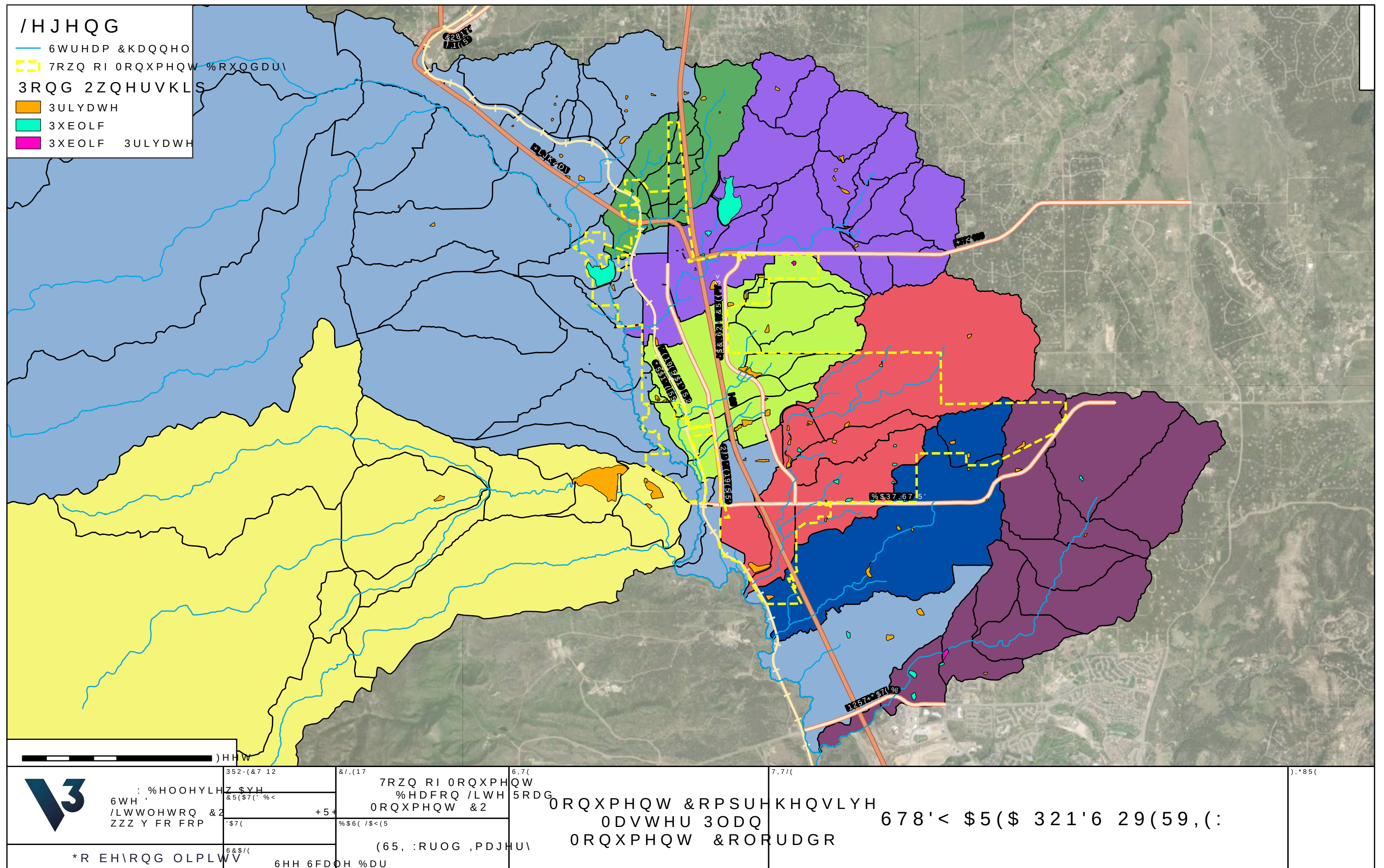
V3 : %HOOHYL 6WH ' /LWWOHWRQ ZZZ Y FR FRP	352-(&7 12	&/.(17		7,7/(	02180(17 &5((. 85%\$1,=,1* 5(*,2 287)\$// 6758&785(6
	4Z \$YH	7RZQ RI 0RQXPHQW %HDFRQ /LWH 5RDG			
	&5(\$7(%<	0RQXPHQW &2			
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*R EH\RQG OLPL	6&\$/(	(65, :RUOG ,PDJHU\			
	6HH 6FDQH %DU				



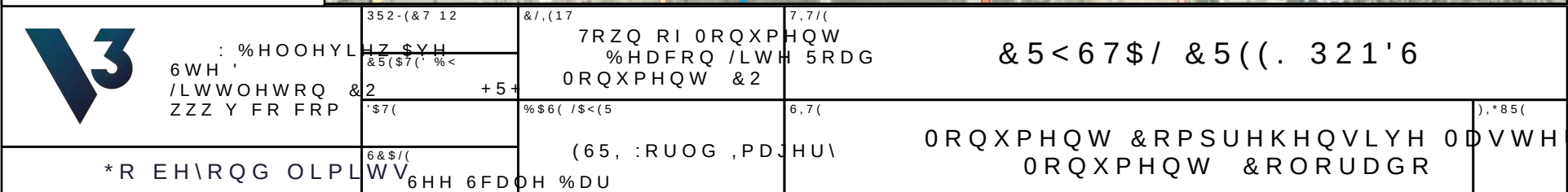
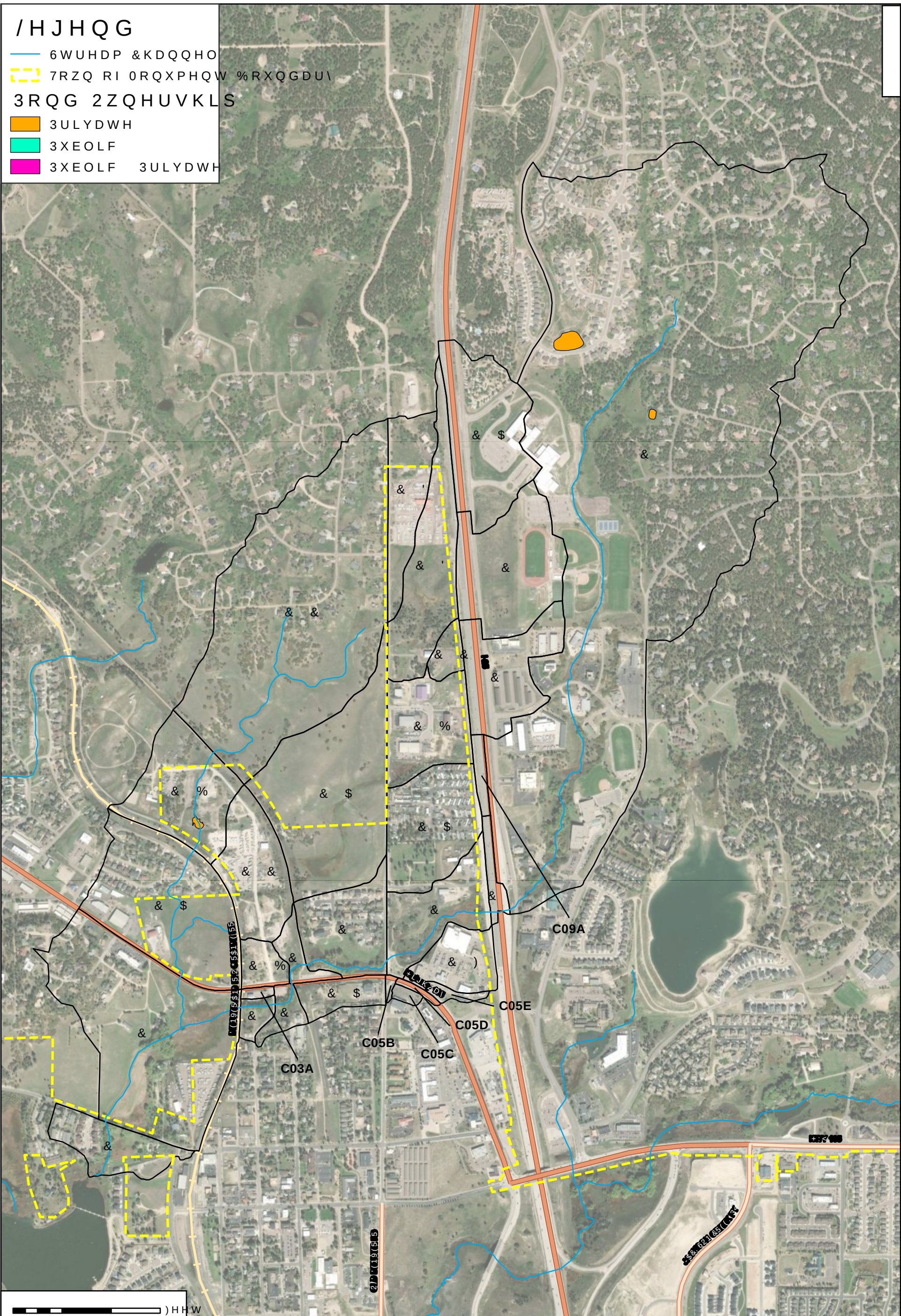
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7RZQ RI 0RQXPHQM %RXQGDU
2XWIDOO /RFDWLRQ
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0RGHO
6LJH 8QNQRZQ
6LJH .QRZQ ,QFOXGHG LQ 0RGHO

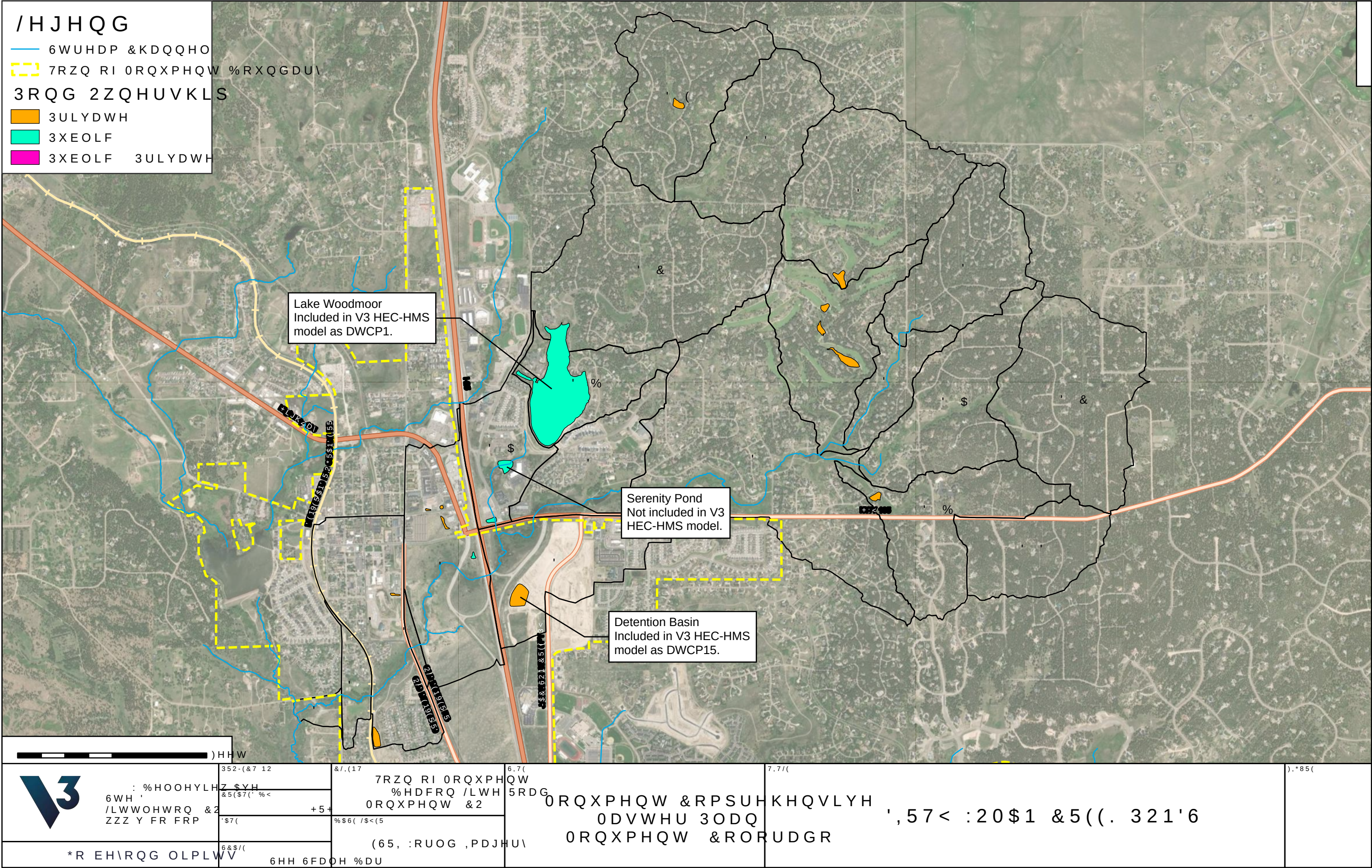


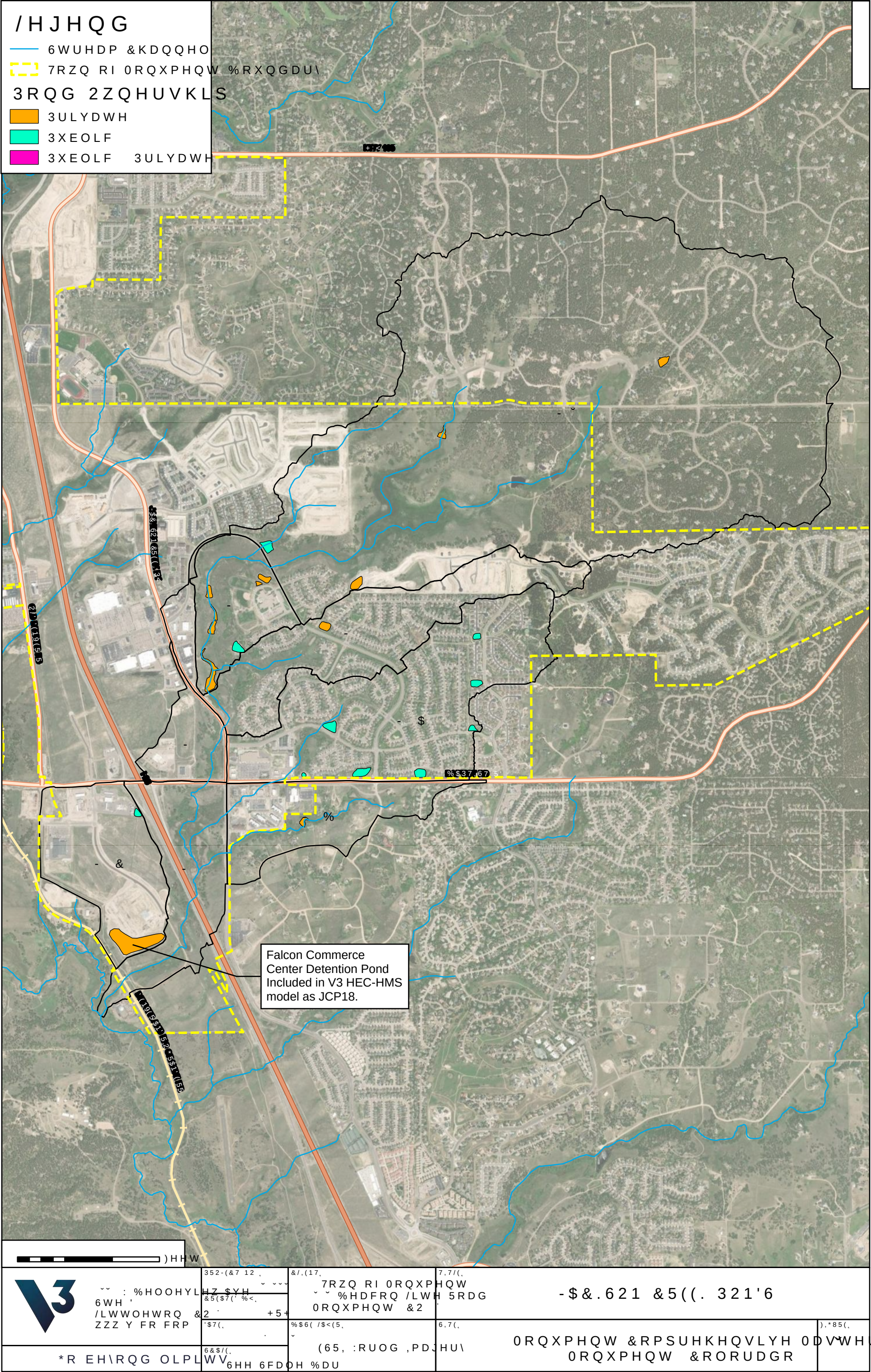


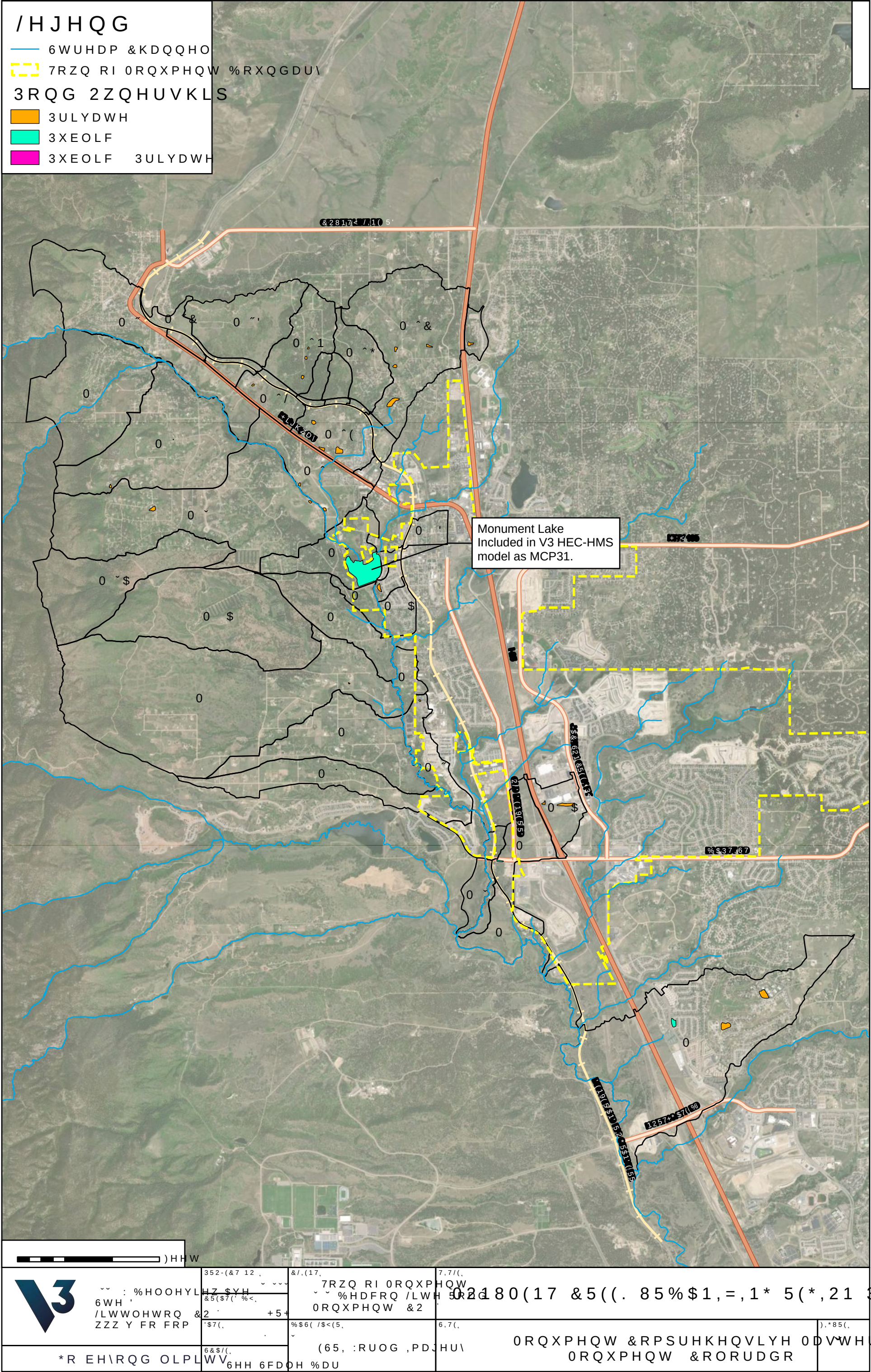


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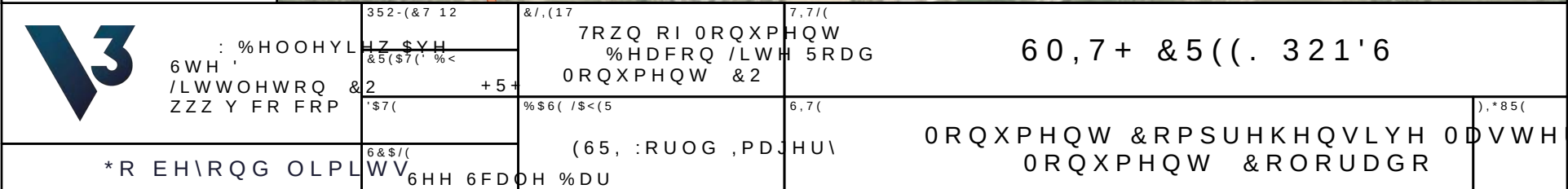
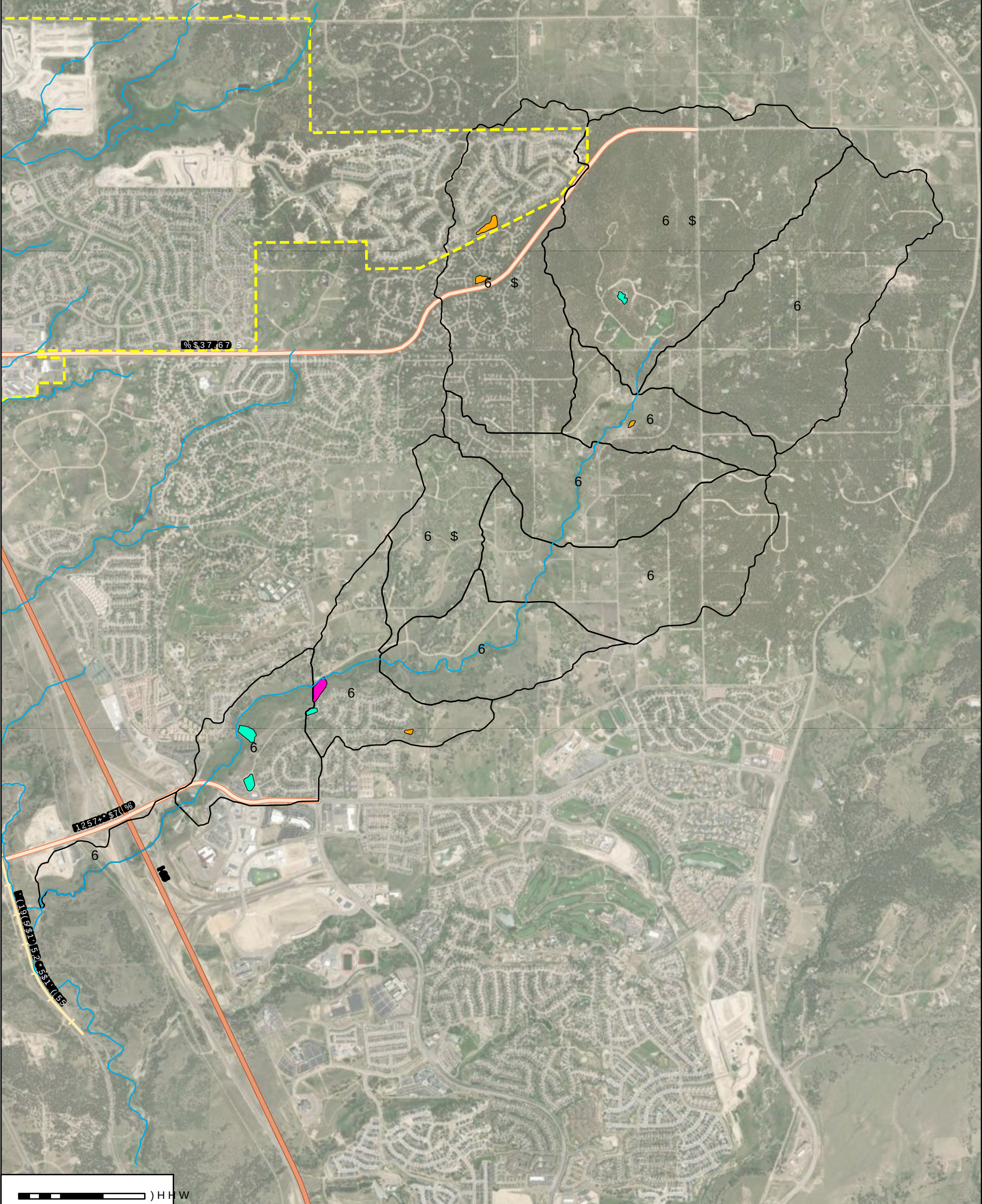


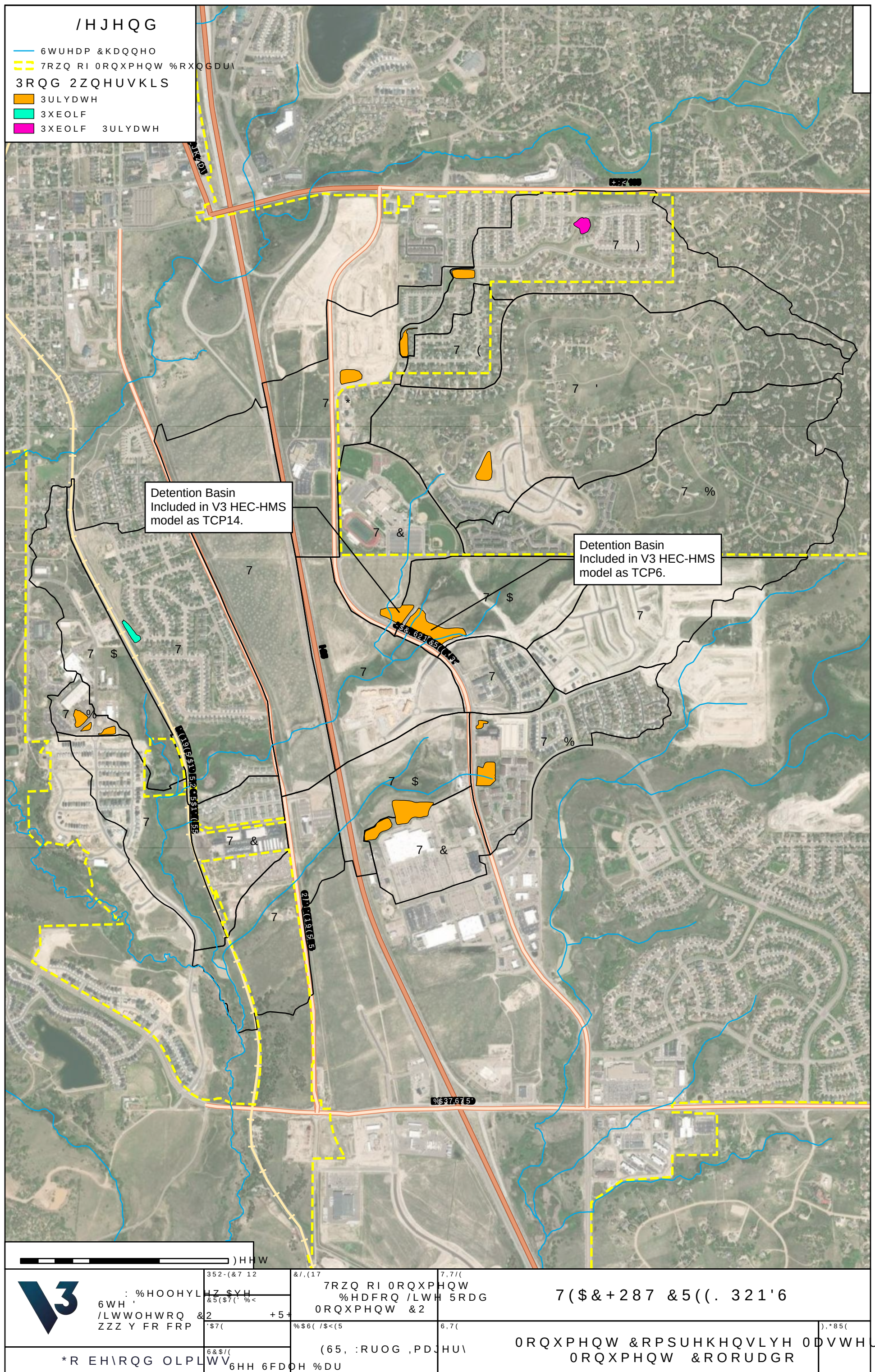


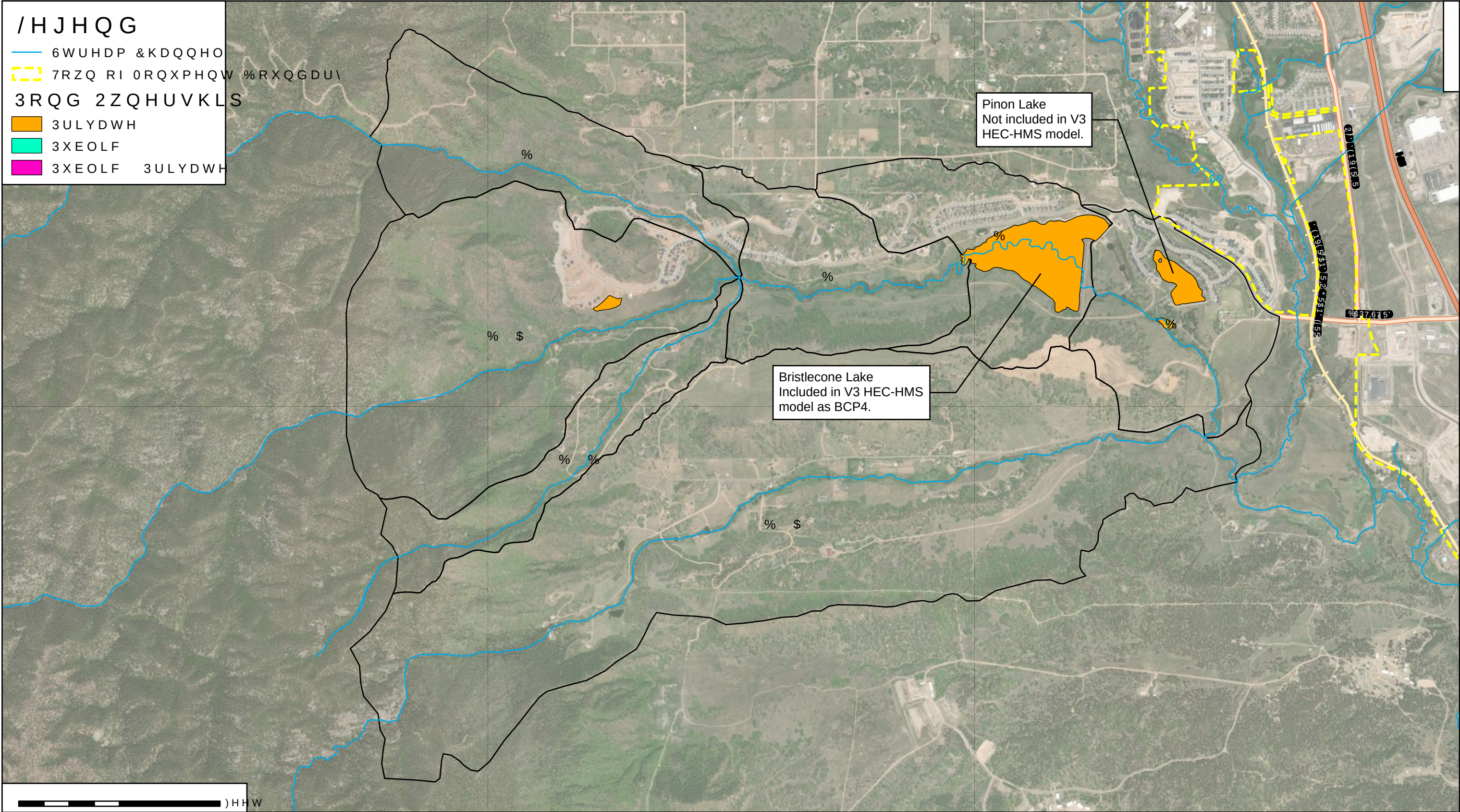




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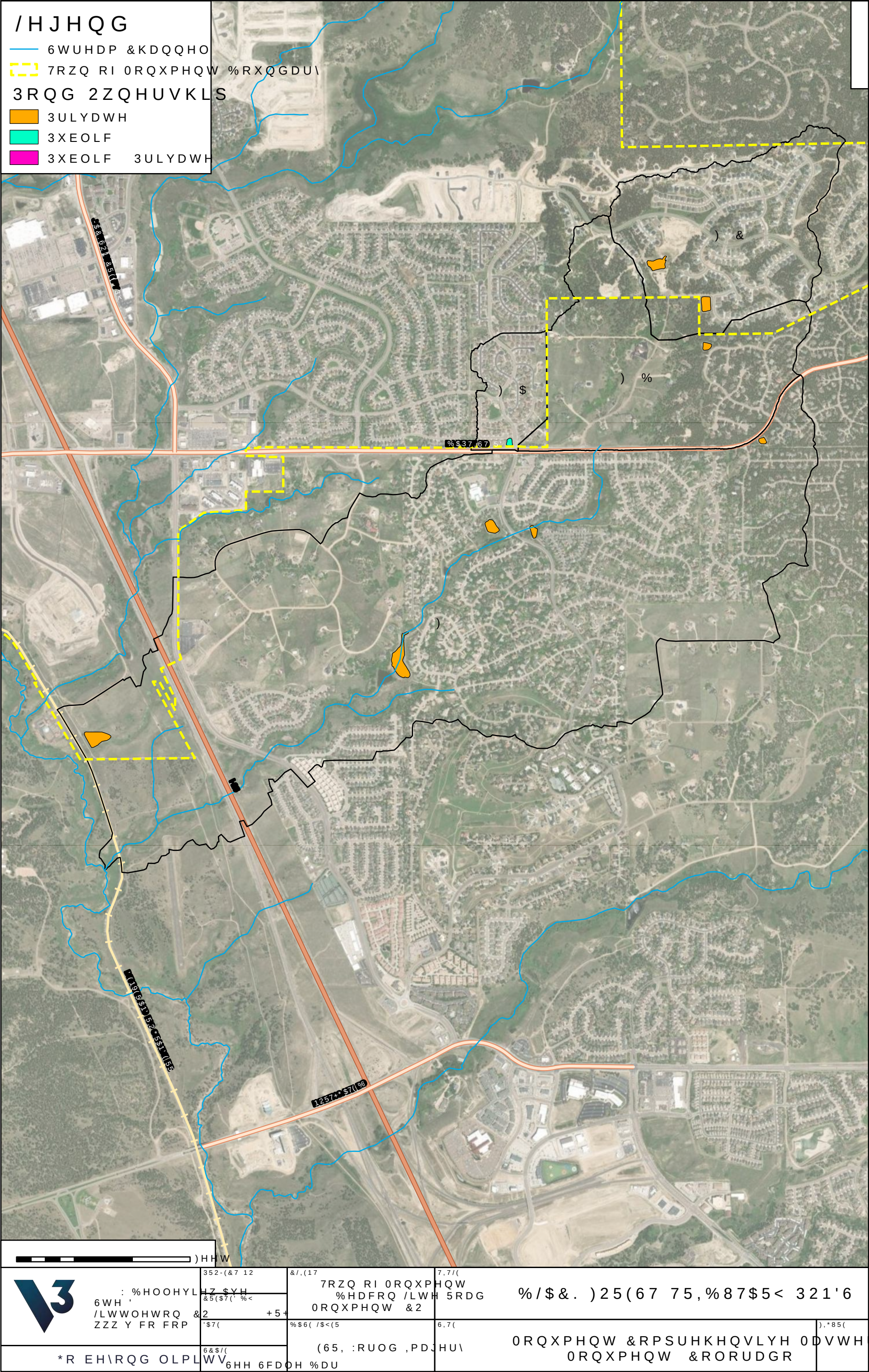




Photo 1: C02-struct01. Crystal Creek at N Monument Lake Road. Upstream has wide flood area with vegetation clogging.



Photo 3: C06-struct01. Crystal Creek at Highway 105 looking north.



Photo 5: C05-struct01. Crystal Creek at Washington Street.



Photo 2: C02-struct01. Crystal Creek at N Monument Lake Road. Downstream.



Photo 4: C03-struct01. Crystal Creek at Union Pacific Railroad.



Photo 6: D02-struct01. Dirty Woman Creek at Knollwood Drive looking north (upstream side). Signs of deterioration, flow unobstructed.



Photo 8: D04-struct01. Dirty Woman Creek at Old Denver Road. Completely clogged and deformed, erosion matting suggests possible overtopping. No longer functional.



Photo 10: D17-struct01. Dirty Woman Creek at W Highway 105. Standing water and possible blockage. Large ponding issues seemingly due to overgrowth.



Photo 7: D03-struct01. Dirty Woman Creek at Union Pacific Railroad. Large bridge/tunnel structure.



Photo 9: D10-struct01. Dirty Woman Creek at New Santa Fe Regional Trail. Large bridge/tunnel structure, filled with sediment. Downstream culvert clogged, leading to overtopping.



Photo 11: Subbasin D03. Dirty Woman Creek between Old Denver Road and the Union Pacific Railroad. Ponding and erosion present.

Jackson Creek Field Photos

Photograph Date: 06/06/2025



Photo 12: Overflow structure for detention basin on Jackson Creek upstream of Leather Chaps Drive.



Photo 14: J05-struct01. Jackson Creek at Leather Chaps Drive. Downstream end choked with cattails and sediment. Upstream pond serves as regional detention facility, poorly maintained.



Photo 16: Head cutting along Jackson Creek upstream of Jackson Creek Parkway.



Photo 18: Jackson Creek development north-east side (upstream end) of Leather Chaps Drive. Poor erosion control measures.



Photo 13: J03-struct01. Jackson Creek at Jackson Creek Parkway. Sediment buildup and upstream failures. Series of ponds/dams along Jackson Creek with flatland overflows with 10+ ft erosion incisions.

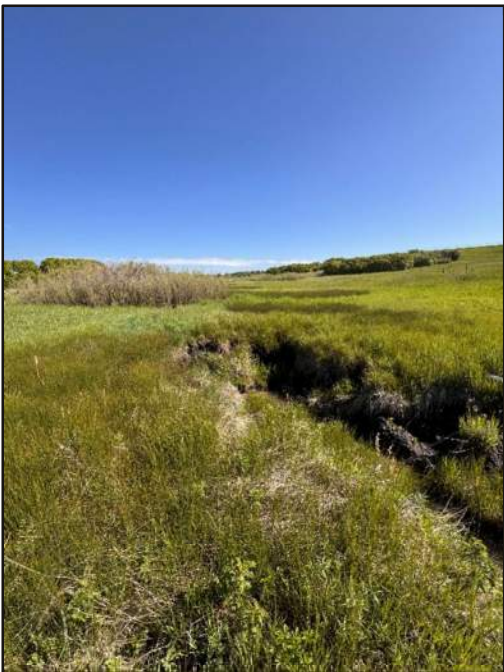


Photo 15: Jackson Creek upstream of Jackson Creek Parkway. Overflow from series of ponds/dams showing head cutting.



Photo 17: J05-struct02. Jackson Creek at Leather Chaps Drive. Outfall clogged with cattails.



Photo 19: Jackson Creek Parkway outfall to Jackson Creek.

Monument Creek Field Photos

Photograph Date: 06/06/2025



Photo 20: M14-struct01. Mt. Herman Road bridge over Monument Creek looking SW. Roadway Deteriorating, steel beams in creek causing erosion, abutments deteriorating, erosion both upstream and downstream.



Photo 21: Monument Creek looking north, erosion upstream of Mt. Herman Road bridge.



Photo 22: Energy dissipation at culvert outlet upstream of Monument Lake.



Photo 23: Monument Creek at Willow Ranch Road.

Teachout Creek Field Photos

Photograph Date: 06/06/2025



Photo 24: T01-struct01. Teachout Creek at Union Pacific Railroad (south). Sediment buildup, overgrowth.



Photo 26: T01A-struct01. Cattail/reed overgrowth. Teachout Creek at Access Road/I25 crossing.



Photo 28: T03-struct01. Teachout Creek at Union Pacific Railroad crossing (north). Upstream pond held by beaver dam(s).



Photo 25: T01-struct02 (top) and T01-struct03 (bottom). Teachout Creek, between New Santa Fe Trail (top) and Old Denver Road (bottom).



Photo 27: T02C-struct01. Teachout at Union Pacific Railroad, west of electrical substation looking west. Washed out culvert.



Photo 29: T04-struct03. Teachout Creek north branch at New Santa Fe Regional Trail.



Photo 30: Teachout Creek NE of Jackson Creek Parkway, energy dissipation downstream of detention facility.



Photo 32: T05A-struct03. At intersection of Higby Road and Bowstring Road. Riprap insufficient for expected flows, ends at PL, channel incised.

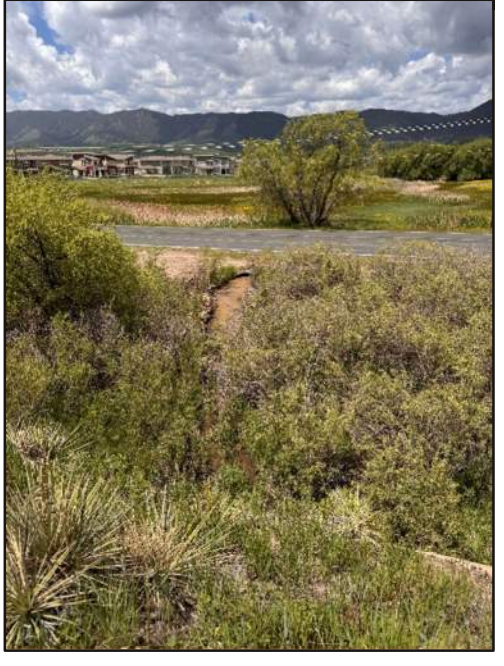


Photo 34: Teachout Creek Downstream of Railroad at Old Denver Road looking SW. Culvert at capacity in low flow condition.



Photo 31: Upstream grate flush with grade. Water will overtop Bowstring Road.



Photo 33: North Teachout basin upstream of Jackson Creek Parkway. East side outfalls looking SE. Poor erosion control measures. Erosion and sedimentation visible.



931 SANTA FE DRIVE, SUITE 200, DENVER, CO 80204



April 13, 2026

Dan Ungerleider, AICP
Planning Manager
Town of Monument
645 Beacon Lite Road
Monument, Colorado 80132

RE: Town of Monument Stormwater Master Plan — Comment Response Summary

Dear Mr. Ungerleider,

V3 Companies has completed its review of the comments provided on the V3 draft of the Town of Monument Stormwater Master Plan (SWMP), including the markup set from Shelley E. Cobau and the clarifications reached during our subsequent project meeting. A total of 46 comments were recorded across 18 topic categories, ranging in priority from Critical to Informational. This memorandum summarizes the substantive revisions that will be incorporated into the final Plan document for approval by the Planning Council in addition to any public comments or comments from the Council. A complete Comment-Response Matrix tracking each item is provided as an attachment.

The following describes how V3 will address the major themes raised in the review.

- **Study Area and Jurisdiction Mapping.** Study area exhibits will be updated to include the Town's corporate limits, the 3-mile planning area, future growth and annexation boundaries, and any pending annexation overlays. Exhibit coverage will be evaluated and V3 will look to capture the area adjacent to the U.S. Air Force Academy in planning exhibits.
- **Infrastructure Crossings.** Updates to the narrative and a summary capacity table (Qminor/Qmajor vs. existing capacity) will be added for railroad, I-25, and SR-105 crossings, providing a useful development-review reference for the Town. The deteriorating condition of the Mt. Herman Road bridge — a Critical-priority item — has been flagged as requiring immediate review outside the SWMP scope.
- **Overtopping Analysis.** Overflow path exhibits will be generated for each facility identified as overtopping during the minor or major design storm. Exhibits will identify downstream structures, roadways, and properties at risk.
- **Design Life, Material Standards, and CIP Structure.** An update to the CIP section will discuss design life by material type, including a facility-level table of estimated remaining service life and target replacement year. Town policy will be suggested in the Plan: all culvert replacements under public right-of-way shall use reinforced concrete pipe (RCP). Cost estimates will be revised to an RCP basis with a documented source. A fifth Capital Improvement Program (CIP) category — Design Life Replacements — will be added, structured as an annual allocation derived from the inventory, with a methodology explanation.
- **Inspection and Enforcement Program (New Section 7).** A new Section 7 will be drafted suggesting a formal private stormwater facility inspection and enforcement program. This section will discuss legal authority, right-of-entry provisions suitable for Land Development Code amendment, annual inspection frequency (with a comprehensive spring inspection), documentation requirements, and an escalating enforcement process from notice of violation through fines to Town-remediated repairs with lien. The Plan will recommend program launch within six months of SWMP adoption. Maintenance design-specification requirements will also be incorporated into the project fact sheets for regional facilities CC-07, TC-05, and JC-05.

- **Watershed-Specific Criteria.** Supplemental design criteria will be discussed in the narrative for the Crystal Creek, Dirty Woman Creek, and Teachout Creek watersheds, addressing detention release rates, water quality standards, and channel stability.
- **Terminology Reconciliation.** Terminology will be standardized throughout Section 5 to distinguish “Priority” projects (deficiency-driven) from “Opportunity” projects (regional or watershed-scale improvements), with a definitions box added at the start of Section 5. Land use terminology will also be aligned with the Town’s Land Development Code in lieu of NRCS classification language.
- **Hydrologic Summary Exhibits.** Hydrologic Summary elements will be added to each of the watershed exhibits, using the sample format provided by the reviewer as reference. Each exhibit will include facility identification, Qminor and Qmajor flows, existing capacity, overtopping status, and public/private/metropolitan ownership designation (which may require additional input from Town of Monument).
- **Field Verification and Ownership.** A public/private/metropolitan ownership column will be added to the facility database immediately. V3 will outline remaining data needs that could be incorporated into future versions of the report.
- **Technical Appendices.** Appendices will be updated for the Final Report. Delivery format for native HEC-HMS files will be confirmed with Town staff.

We look forward to presenting the final Plan to the Planning Council and remain available to discuss any questions regarding these revisions. Please do not hesitate to reach out.

Sincerely,

V3 Companies



Noah Nemmers, PE

Regional Leader, Colorado

Town of Monument Stormwater Master Plan (V3 Draft) — Comment-Response Matrix

Source: V3_ToM_SWMP_Draft_20260220 — SC Markups

Prepared following review meeting with Shelley E. Cobau, Town of Monument

ID	Page	Category	Comment	Suggested Action
C001	8	Study Area	Include Town jurisdictional boundary and future growth area on the overall map.	Revise overall map (Fig. on p. 8) to add Town corporate limits, 3-mile planning area, and future growth/annexation boundary. Coordinate with Town Planning for current GIS layer.
C002	9	Inspection Program	Endorses finding that systematic inspection/maintenance program is the most cost-effective investment.	Retain finding; strengthen Executive Summary language to explicitly recommend establishment of the program as Recommendation #1.
C003	10	Inspection Program	No formal inspection program exists for private detention facilities.	Retain finding; cross-reference to new Section 7 (Inspection & Enforcement Program).
C004	10	Inspection Program	Establish private facility inspection and enforcement program with right-of-entry provisions, documented enforcement, and escalating penalties.	Draft new Section 7 outlining program: legal authority, right-of-entry language for LDC amendment, inspection frequency, documentation requirements, enforcement escalation (notice → fine → Town remediation with lien).
C005	30	Crossings - Railroad	All culverts under the railroad are undersized and exhibit maintenance deficiencies.	Retain finding and elevate into a dedicated subsection. Cross-reference with new Qminor/Qmajor capacity table (see action for p. 30 narrative).
C006	30	Crossings - Railroad/I-25	Add a paragraph on railroad culvert deficiencies and another on I-25 culvert deficiencies. Include table of Qminor/Qmajor vs. crossing capacity for use as a development-review aid.	Draft two new narrative paragraphs in Section 3. Build capacity table listing each RR and I-25 crossing with drainage area, Qminor, Qmajor, existing capacity, and percent capacity. Add as Table 3.0x.
C007	31	Crossings - I-25/SR105	Are all I-25 and SR105 crossings appropriately sized to convey minor/major events? Discuss in this section.	Extend capacity table to include SR105 crossings; add narrative summarizing which crossings pass/fail minor and major event criteria.
C008	31	Crossings - Mt. Herman Rd.	Mt. Herman Road bridge is deteriorating, with steel beams exposed. Structural evaluation needed immediately. Town or County owned?	ACTION OUTSIDE SWMP: Confirm ownership with Town PW and El Paso County within 1 week. If Town-owned, initiate independent structural evaluation on parallel track. Add note to SWMP referencing the evaluation and recommending interim load posting pending results.
C009	33	Overtopping Analysis	Where facilities are overtopping, provide a map of overflow paths and discuss downstream impacts.	Generate overflow path exhibit for each overtopping facility using 2D model or GIS flow-direction analysis. Add downstream impact narrative identifying structures, roadways, and property at risk.
C010	34	Design Life	Include discussion of facilities meeting anticipated design life by material type. Many CMP crossings may be past threshold. Add CIP year for replacement even if not high-priority deficiency. Consider adding a table like the sample.	Add Section 5.0x 'Design Life and Material Condition' with narrative on typical service life by material (CMP ~25–50 yr; RCP 75+ yr). Build age/material/est. remaining life table per sample; assign target CIP year to each facility.
C011	34	Terminology	Priority vs. Opportunity?	Reconcile terminology throughout Section 5. Per meeting: use 'Priority' for deficiency-driven projects and 'Opportunity' for regional/watershed-scale improvements. Add definitions box at start of Section 5.
C012	34	Watershed Criteria	Does special criteria need to be established for Crystal Creek watershed?	Per meeting: YES. Draft supplemental criteria memo for Crystal Creek (detention release rates, water quality, channel stability). Incorporate recommendation into Section 5.03.
C013	35	Design Life - Tables	Add culvert material to each table to match Table 503.2. Confirm replacement cost basis. Specify replacements will be RCP with no new CMP under public roadways; footnote cost basis.	Add 'Material' column to all facility tables in Section 5. Add Town policy statement: all replacements under public ROW shall be RCP. Revise unit costs to RCP basis; add table footnote documenting cost source.
C014	35	Watershed Criteria	Does special criteria need to be established for Dirty Woman Creek watershed?	Per meeting: YES. Include Dirty Woman Creek in supplemental criteria memo.
C015	36	Watershed Criteria	Does special criteria need to be established for Teachout Creek watershed?	Per meeting: YES. Include Teachout Creek in supplemental criteria memo with specific attention to I-25 east swale and existing crossings.
C016	36	Teachout Creek	JC Parkway plans include a detention pond in the Higby R/W that may address some of this. Historic flows will be directed through and toward the I-25 east swale and existing I-25 crossings near Teachout Creek.	Incorporate JC Parkway pond into HEC-HMS model as future-condition scenario. Revise Teachout narrative to acknowledge flow path through I-25 east swale. Coordinate with JC Parkway design team for pond geometry.
C017	36	Editorial	Engineer markup: (6' CMP), (48" CMP), RCP — material callouts on crossings.	Incorporate reviewer's material annotations directly into figure labels and facility table.
C018	37	Editorial	Engineer markup: RCP.	Update facility description to reflect RCP material.
C019	40	Design Life	How does the design life discussion impact long-term projects?	Add paragraph connecting design life framework to CIP sequencing; explain how end-of-life replacements are phased into years 5–20 of CIP.
C020	43	Inspection Program	All detention basins, regional facilities, and permanent WQ BMPs should be inspected annually with comprehensive spring inspection. Inspection criteria listed. For regional facilities CC-07, TC-05, JC-05, maintenance requirements should be built into design specs from outset.	Incorporate reviewer's inspection criteria verbatim into new Section 7. Add maintenance design-spec requirements to CC-07, TC-05, and JC-05 project fact sheets in Section 5.
C021	43	Schedule	We should begin this process ASAP.	Add implementation timeline to Section 7 recommending program launch within 6 months of SWMP adoption.

C022	45	CIP Structure	Suggest adding a 5th category for design life replacements — how many should be in CIP? Annual cost line item? See p. 34 comment.	Per meeting: add 5th CIP category 'Design Life Replacements' structured as annual allocation (~\$X/yr based on inventory). Include methodology note explaining annual allocation approach.
C023	56	Study Area	Add jurisdiction boundary, area just north of USAFA, and growth boundary (see preceding comments).	Extend watershed exhibit to capture area north of USAFA; add boundary layers consistent with p. 8 revision.
C024	59	Study Area	Include this area due to proximity to USAFA.	Expand exhibit coverage northward; confirm HEC-HMS model extent already includes contributing area or document as data gap.
C025	63	Study Area	Verify jurisdiction boundary.	Pull current Town GIS boundary layer and overlay on all Section 6 exhibits; flag any discrepancies with draft.
C026	63	Study Area	This area has applied for annexation.	Add pending-annexation overlay to study area exhibits with footnote identifying parcel and application status per Town Planning.
C027	63	Exhibits	Could you add Qminor and Qmajor to these exhibits?	Add Qminor/Qmajor labels to all facility exhibits in Section 6. Use callout boxes or attribute tables adjacent to each facility.
C028	89	Terminology	'Large lot residential' (NRCS term) is not defined in Town's LDC; Town uses for lots > 2.5 acres.	Replace NRCS terminology with Town LDC-consistent definition or add footnote cross-walking the terms.
C029	100	Field Verification	Why are so many shown as 'facility size unknown'? Could field investigation improve this? Could a public/private distinction be made?	Per meeting: scope field verification effort as separate task order; bring cost and schedule to Town before executing. Add PUB/PRI/MET ownership column to facility database immediately.
C030	101	Exhibits	Add Q's for minor/major events to these exhibits. Combine with overtopping designation from separate exhibit.	Consolidate overtopping designation onto primary facility exhibits. Add Qminor/Qmajor labels.
C031	102	Exhibits	For each watershed provide a 'Hydrologic Summary' exhibit per sample image. Add PUB/PRI/MET ownership designation.	Build one Hydrologic Summary exhibit per watershed (5 total) using sample format. Include facility ID, Qminor, Qmajor, capacity, overtopping flag, ownership.
C032	112	Model Reference (Info)	Serenity Pond NOT included in V3 HEC-HMS model.	Add footnote to exhibit documenting exclusion and rationale. Confirm with Town whether Serenity Pond should be added in future update.
C033	136	Appendices	Will HMS output be provided?	Yes — include HEC-HMS project files and tabular output summary as Appendix C. Confirm delivery format (native .hms vs. PDF summary) with Town.
C034	150	Appendices	Could Tc and Composite C calculations be included in a technical appendix along with culvert hydraulic tables from the model?	Compile Tc/Composite C calculation sheets as Appendix A. Export culvert hydraulic tables from HEC-HMS/HY-8 as Appendix B.
C035	102	Exhibits	Image attachment (sample Hydrologic Summary).	Reference: sample template provided by reviewer. Use as basis for new exhibit series.
C036	113	Model Reference (Info)	Falcon Commerce Center Detention Pond included in V3 HEC-HMS model as JCP18.	Informational — no action. Verify label appears in model documentation appendix.
C037	112	Model Reference (Info)	Lake Woodmoor included in V3 HEC-HMS model as DWCP1.	Informational — no action.
C038	112	Model Reference (Info)	Detention Basin included in V3 HEC-HMS model as DWCP15.	Informational — no action.
C039	116	Model Reference (Info)	Detention Basin included in V3 HEC-HMS model as TCP14.	Informational — no action.
C040	116	Model Reference (Info)	Detention Basin included in V3 HEC-HMS model as TCP6.	Informational — no action.
C041	100	Model Reference (Info)	Outfall Location label.	Informational — no action.
C042	101	Model Reference (Info)	Outfall Location label.	Informational — no action.
C043	103	Model Reference (Info)	Outfall Location label.	Informational — no action.
C044	104	Model Reference (Info)	Outfall Location label.	Informational — no action.
C045	106	Model Reference (Info)	Outfall Location label.	Informational — no action.
C046	108	Model Reference (Info)	Outfall Location label.	Informational — no action.



MEMORANDUM

TO: The Honorable Mayor and Town Council
FROM: Jenna Gorney, Senior Planner
DATE: April 20, 2026
SUBJECT: Rename the Road: Crossfield Road Renaming Contest – Phase 2

HISTORY AND OVERVIEW.

The Crossfield Road renaming effort began during review of the Conexus development, which included a realignment of Old Denver Road. As a result of that project, the roadway segment between Santa Fe Avenue and Wagon Gap Trail required a new name. While “Crossfield Road” was assigned initially, Town Council expressed interest in selecting a name that better reflects Monument’s identity and community character. To meet that goal, the Town launched a community-driven renaming contest, inviting residents to submit their own ideas rather than selecting a name internally.

The contest began the morning of March 9th and officially wrapped up on March 30th. In reviewing the submission, its safe to say that Monument showed up with creativity, humor, and a whole lot of opinions.

In total, sixty (60) people submitted name ideas, resulting in one hundred and sixty-four (164) suggestions. After a thorough review, sixty-three (63) submissions met the required criteria and were deemed usable based on EPC911 street-naming requirements, Town and County standards, and overall appropriateness and clarity for emergency response and wayfinding.

Staff has evaluated the eligible submissions and narrowed the list to a small group of three final names that best reflect Monument’s history, character, and sense of place. These final options are presented to Town Council for discussion and final selection via vote this evening.

After the vote has closed, staff will coordinate with emergency services, mapping agencies, and other partners to complete the formal adoption process. The community member whose submission is chosen will be contacted and informed that their name was chosen. Additionally, the submission winner will be recognized by the Town in celebration of their contribution at a ceremony that will be held in Town Chambers on May 22.

Beyond the final selections for vote, staff would like to acknowledge that creativity was not in short supply. In addition to the entry finalists, several name ideas earned honorable mention for standing out in memorable (and entertaining) ways, including:

- Funniest Suggestion – Bob Avenue (Submitted by Bob Waltrip)
- Too Long for a Street Sign - Dirty Woman’s Revenge Road (Submitted by Marcia Alverson)



- Too Obvious (But Still Appreciated) – New Denver Road, Older Denver Road, and Old Old Denver Road

These honorable mentions may not advance for official consideration but deserve recognition for adding fun and personality to the process.

THE VOTE.

The following three suggestions have been evaluated by staff and provided to Town Council for a vote.

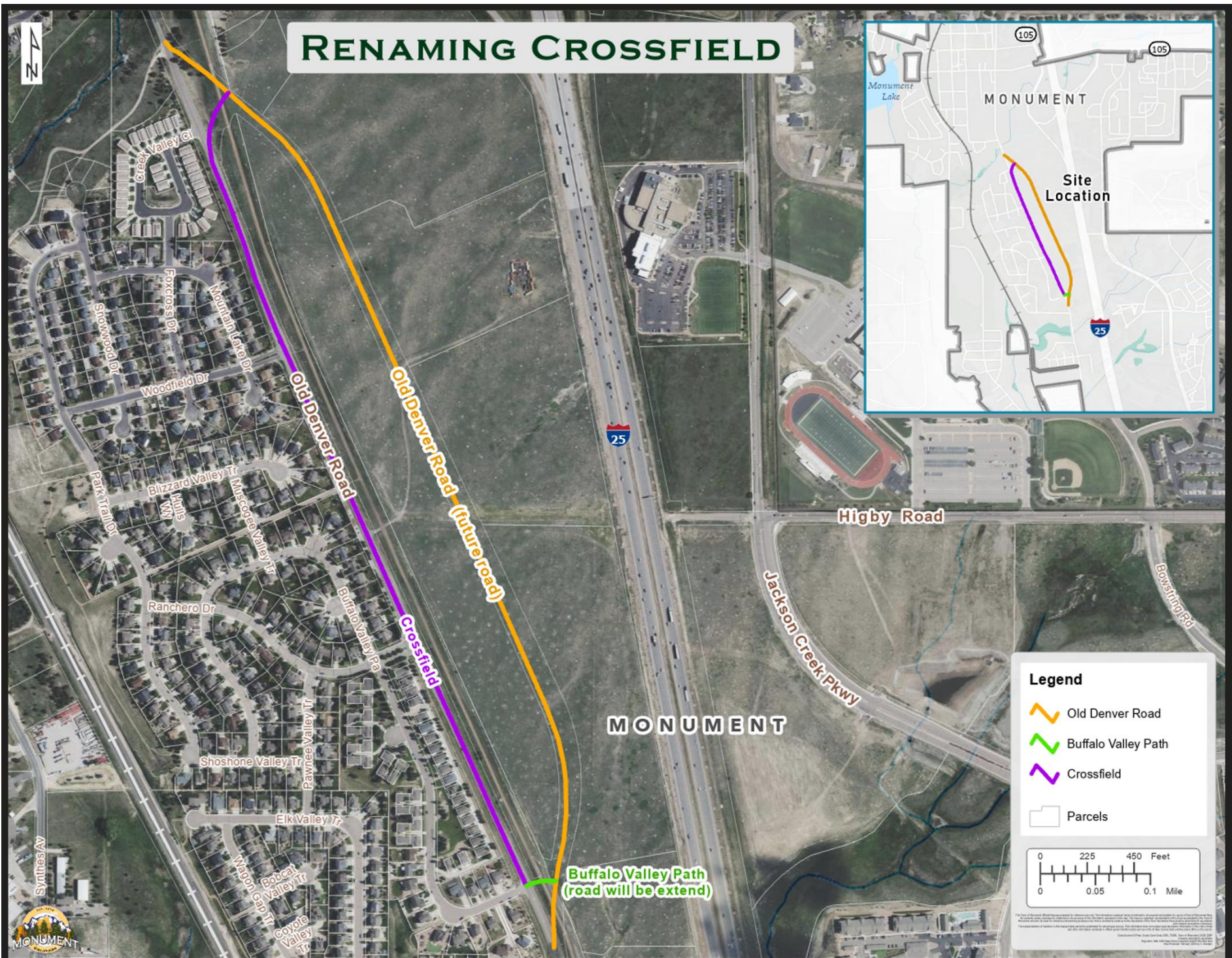
1. Doc Close Road (Submitted by Catherine McGuire)
2. Iron Rail Road (Submitted by Wendy Athanas)
3. Prairie Dog Road (Submitted by Stephanie Anderson)

If the initial vote does not result in a majority selection, Council may hold brief discussion and conduct an additional vote.

Next Steps.

- Staff will coordinate with EP911 to secure the name
- Staff will get signage ordered for posting and submission winner
- Ceremony in Chambers to recognize the chosen contribution - May 22, 2026 @ 10:00am

RENAMING CROSSFIELD





Outlook

Rename the road

From Catherine McGuire**Date** Sun 3/15/2026 5:06 PM**To** Planning Department <planning@tomgov.org>

I spoke with you last week regarding naming the road in honor of my grandfather, Thomas Close, MD. I have submitted my names on the form indicated on your website. My two choices are:

DOC CLOSE ROAD

DOC CLOSE AVENUE

DOC CLOSE ROAD

DOC CLOSE AVENUE

My father's father, Thomas Close, MD, was a medical doctor and pharmacist in Monument in the early 1900's. (Rumor has it that he did not lose a single patient during the flu epidemic of 1917.) He and his family lived in the house that is now Lolly's. My father was in elementary school at Big Red. He and Jim Higby were pals, and my dad related the story about them trying to shoot out gas streetlights with bb guns and sling shots. tsk tsk Dad's mother, Bertha Close, also went to Big Red and got her diploma while my dad was in elementary school. My father's name was Harland Close, MD.

My grandfather bought 240 acres between Elephant Rock and Ben Lomond Mountain in 1922. We, his grandchildren and great grandchildren, have preserved all of that property through conservation easements. Part of that easement is now The Santa Fe Open Space near the northern end of the Santa Fe Trail.

I think my grandfather, Dr Thomas Close, needs to join his childhood chum Higby with a road in his honor. Don't you? Contact me if you want to know more history. This is a very short synopsis!!

Thank you so much for the consideration.

Catherine Close McGuire



TOWN OF MONUMENT COUNCIL MEMORANDUM

TO: Mayor and Town Council

FROM: Andrew S. Archuleta, Assistant Director of Public Works

DATE: April 20, 2026

SUBJECT: Resolution No. 28-2026 A Resolution to Approve a Contract to Repair the Town Hall Roof

STRATEGIC PRIORITIES (2026–2028)

Ensure Long-Term Financial Health and Sustainability - Supports long-range financial health, forecasting and sustainability to ensure efficient and resilient municipal services.

BACKGROUND: On July 28, 2025, the Town engaged a consultant to conduct an infrared moisture survey (IMS) of the Town Hall roof to identify potential moisture intrusion beneath the existing roof membrane. The survey identified one anomaly measuring approximately 1' x 1', along with multiple soft spots across the roof surface. Following the survey, the consultant extracted two core samples to further investigate the anomaly, confirm the existing roof construction, and validate the infrared scan results. The analysis determined that a puncture in the roof membrane had allowed moisture to penetrate and compromise the insulation. The affected area was subsequently patched by the consultant to prevent further moisture intrusion.

DISCUSSION/ANALYSIS: Following completion of the infrared scan and core sampling, Town staff determined that roof maintenance was necessary to prevent further deterioration. Without timely repairs, continued deterioration could result in additional roof leaks, potentially creating unsafe working conditions for both Town maintenance personnel and Town Hall office staff. While roof repairs were not included in the 2025 budget, staff prioritized this project due to its urgency and planned the work for implementation in 2026.

Garland/DBS Inc. subsequently presented staff with three repair options, each varying in scope, cost, and warranty coverage. After reviewing the proposed options and associated pricing, staff determined that the roof restoration option best meets the Town's current operational needs and long-term asset management goals. This option also provides a 15-year warranty, offering extended protection and value.

FINANCIAL IMPACT: The contract for the roof restoration is not to exceed **\$55,797.00**. Public Works had previously budgeted \$90,000 within the Facilities Capital Projects Fund to cover the cost of the roof repairs.

The proposed roof restoration contract complies with the Town's Procurement Manual. Garland/DBS Inc. developed its proposal through the Master Intergovernmental Cooperative Purchasing Agreement (MICPA) utilizing OMNIA Partners, Public Sector (U.S. Communities). This cooperative purchasing method satisfies competitive procurement requirements and is authorized for use in lieu of issuing an Invitation for Bid (IFB) or Request for Proposal (RFP), consistent with the Procurement Method Selection provisions of the Town's Procurement Manual.

Use of this cooperative contract ensures pricing has been competitively solicited and evaluated at the national level while allowing the Town to expedite project delivery and reduce administrative costs. Staff have reviewed the procurement process and determined that it meets all applicable local procurement policies and standards

RECOMMENDED ACTION: Staff recommend the passage of Resolution No. 28-2026, approving a contract to repair the Town Hall roof.

**CONTRACT FOR
JOB # 25-CO-250918**

BETWEEN **Town of Monument** AND GARLAND/DBS, INC. FOR Town Hall Base Bid
Liquitec Restoration

- 1.) This CONTRACT is made at **El Paso County** as of March 30, 2026, ("Effective Date"), by and between the **Town of Monument** located at **645 Beacon Lite Road Monument, CO 80132** (hereinafter designated the "CUSTOMER"), and **Garland/DBS, Inc.**, located at **3800 East 91st Street Cleveland, OH 44105** (hereinafter designated the "CONTRACTOR").
- 2.) The CONTRACTOR shall furnish all material, labor, equipment, and tools necessary for the **Town of Monument** located at **645 Beacon Lite Road Monument, CO 80132**, as well as all work incidental and pertinent thereto, (hereinafter designated the "Project") all in accordance with the original proposal # **25-CO-250918** dated **03/30/2026** submitted by the CONTRACTOR (hereinafter together designated the "Specifications"), a copy of which is attached hereto as Exhibit A and incorporated herein. In the event of any conflict, ambiguity, or inconsistency between the terms contained in this CONTRACT and the Exhibits, the terms set forth in this CONTRACT shall govern and control.
- 3.) The term of the CONTRACT shall begin on the Effective Date first written above, and shall be completed **180** days thereafter, unless sooner terminated as permitted herein, or unless extended by agreement of the parties set forth in writing. The work shall commence within ten (10) days from the date that CONTRACTOR receives a copy or original of the fully executed CONTRACT, which receipt shall be considered Notice to Proceed. The CONTRACTOR is required to submit to the CUSTOMER a Certificate of Insurance and Performance and Payment bonds prior to commencing work. In addition, the work shall be scheduled as agreed upon by the parties.
- 4.) The sums to be paid to the CONTRACTOR shall be at the bid price(s) shown on the Specifications (Exhibit A), and the total to be paid to CONTRACTOR shall be a maximum of **\$55,797.00**, as set forth in the purchase order and Exhibit A. Invoices shall provide details of all Project expenses as permitted in this CONTRACT. CONTRACTOR shall apply no late charges, interest or penalties to any invoice or charges for services until 30 days from the CUSTOMER receipt of the invoice. If this CONTRACT is terminated for convenience for any reason, then the CONTRACTOR shall be paid pro rata for all services performed, materials purchased, and administrative costs incurred, including lost profit, to the effective date of termination.
- 5.) If the CUSTOMER wishes to terminate the CONTRACTOR for cause due to the failure of CONTRACTOR to perform as required under this CONTRACT and/or in a manner consistent with the degree of care and skill ordinarily exercised by members of the same profession currently practicing under similar circumstances, then the CUSTOMER must provide the CONTRACTOR with written notice of said failure to perform. The CUSTOMER must give ten (10) working days from the CONTRACTOR's receipt of the

Notice to Cure for the CONTRACTOR to cure or take reasonable action to commence to cure the performance concerns specified. If the CONTRACTOR does not take appropriate action within the ten (10) day period, the CUSTOMER may issue a Final Notice to Cure. The CONTRACTOR will have an additional five (5) working days from the receipt of the Notice to Cure to cure or take reasonable action to commence to cure before the CUSTOMER can terminate the CONTRACT. If the CONTRACTOR is terminated for cause, the CUSTOMER may provide or employ any necessary labor and materials in lieu of CONTRACTOR to finish part or all of the work under the CONTRACT or to supplement the work of CONTRACTOR, and to deduct the cost thereof from any money, then due or thereafter to become due to the CONTRACTOR; and if such cost shall exceed the balance due to CONTRACTOR, then the CONTRACTOR shall pay the difference to the CUSTOMER.

- 6.) CUSTOMER may issue subsequent modifications to the Purchase Order(s) for additional work that was not known or included in the Specifications that is found to be needed during the work on the Project to complete the Project over and above the amount set forth in this paragraph four (4) and in Exhibit A. CONTRACTOR must seek approval from the CUSTOMER before performing any additional work. The CUSTOMER must provide the CONTRACTOR written documentation of the modification to the Purchase Order within three (3) business days of verbal approval. CONTRACTOR is not obligated to perform additional work until written modification has been received from the CUSTOMER, but may commence work based upon a reasonable assumption that written modification will be issued. Incidental additional work performed by the CONTRACTOR without CUSTOMER consent will be evaluated and considered for payment based upon the work's merit. If the CUSTOMER determines the incidental additional work was not included in the original scope of the project and required for the CONTRACTOR's uninterrupted performance in fulfillment of the contract, then the CUSTOMER will approve the CONTRACTOR's request for payment for incidental additional work.
- 7.) All the work done under this CONTRACT shall be performed under the oversight of _____, the CUSTOMER'S representative. All notices hereunder shall be (a) in writing; (b) delivered to the representatives of the parties at the addressees set forth in the Specifications, unless changed by either party by notice to the other party; and (c) effective upon receipt.
- 8.) The CONTRACTOR shall furnish the CUSTOMER with a performance or contract bond and a labor and material bond, each in the amount of **\$55,797.00** a Certificate of Workers' Compensation, and a Certificate of Insurance evidential of comprehensive general liability insurance and property insurance with minimum coverage in amounts reasonable to or exceeding what is normally expected for a comparable project in size and scope. Further, said Certificate of Insurance shall name **Town of Monument** as an additional insured. Said Certificate of Insurance shall also provide that at least thirty (30) days written notice shall be given to the CUSTOMER of any material change in, or cancellation of, said insurance.
- 9.) Should the CONTRACTOR at any time refuse or neglect to supply a sufficiency of properly skilled workers or materials of the proper quality, or fail in any respect to

prosecute the work herein described with promptness and diligence, or fail in the performance of any of the agreements contained herein, the CUSTOMER shall have the right to immediately suspend all work, or any part thereof under this CONTRACT, upon the CUSTOMER's issuance of a stop work notice to the CONTRACTOR and the CONTRACTOR's confirmed receipt of the stop work notice. The work shall continue to be suspended until such time as the CUSTOMER and CONTRACTOR have come to a mutual agreement on how the work under the CONTRACT shall proceed. Should the CONTRACTOR continue to refuse or neglect to supply a sufficiency of properly skilled workers or materials of the proper quality, or fail in any respect to prosecute the work herein described with promptness and diligence, or fail in the performance of any of the agreements contained herein, then the CUSTOMER may, after following the procedures listed in Section 5 above, terminate the CONTRACT for cause.

- 10.) The CONTRACTOR shall indemnify, save harmless, and defend the CUSTOMER from and against all losses, claims, demands, payments, suits, actions, recoveries, and judgments of every nature and description, made, brought, or recovered against the CUSTOMER by reason of any negligent act or omission of the CONTRACTOR, its agents, its subcontractors, or its employees, in the execution of the work herein contracted for.
- 11.) The CONTRACTOR or CUSTOMER has the right to request and be granted a Termination for Convenience from the CONTRACT obligations if there is a joint determination from both the CUSTOMER and the CONTRACTOR that the termination is in the best interests of both parties, or if the CONTRACTOR or CUSTOMER believes the Termination for Convenience to be in its best interests because a timely resolution, within ten (10) days from the CUSTOMER'S receipt of written notification, will not be provided with regard to requests for information (RFI), request for clarification, or requests for modification to the Purchase Order(s) due to differing site conditions, vague Specifications, or unforeseen circumstances. Under a Termination for Convenience, the CONTRACTOR or CUSTOMER shall be reimbursed for all justifiable costs including price of supplies, services delivered, and administrative expenses, including lost profit under the CONTRACT or Purchase Order.
- 12.) This CONTRACT shall be deemed to contain all the terms and conditions agreed to between the parties, who both agree that no representations or promises of any kind whatsoever have been made other than herein contained, and this CONTRACT shall be binding upon both parties and their respective heirs, administrators, executors, successors, and assigns.
- 13.) This CONTRACT is contingent upon receipt of a written purchase order from CUSTOMER. All terms must be agreed upon by both parties.
- 14.) CUSTOMER shall have the right to approve all subcontracts or assignments of work equal to or exceeding \$10,000. CUSTOMER shall not unreasonably withhold, delay or condition subcontracting or assignments, but may express final and binding disapproval of a proposed assignee or subcontractor. Should the CONTRACTOR be forced to choose a different subcontractor/assignee that is of higher cost than the initial

subcontractor/assignee, due to the CUSTOMER's disapproval, the CONTRACTOR shall be able to request and will receive approval from the CUSTOMER for a modification to the CONTRACT to cover the additional cost. CONTRACTOR shall remain responsible for the work of any agent or independent contractor to whom it assigns its Work, and any assignment or subcontract shall incorporate the terms of this Contract into its contract delegating its Work.

- 15.) If the Project involves construction of a public improvement at a cost exceeding the threshold for payment prevailing wage rates of pay, each laborer, workman or mechanic employed by the CONTRACTOR for performance of the Project herein described or by the subcontractor shall be paid not less than the minimum rate of pay for the applicable pay classification. The CONTRACTOR and their subcontractors who are subject to the requirements of paying prevailing wages shall keep full and accurate payroll records covering all disbursements of wages to their employees to whom they are required to pay not less than the prevailing rate of wages. The CONTRACTOR and its subcontractors shall deliver to the CUSTOMER a certified copy of their respective payrolls, within two weeks of the CUSTOMER's request, for each pay period requested by the CUSTOMER.
- 16.) Payments to the CONTRACTOR shall be made at the rate of ninety-five percent (95%) of the approved partial payment estimate for each monthly progress billing. The CUSTOMER will retain five percent (5%) of every approved partial payment. The retained amount will be paid to the CONTRACTOR no later than thirty (30) days following Final Acceptance of the work. Upon completion and acceptance of the work, the CUSTOMER shall issue a certificate attached to the final payment request that the work has been accepted by it under the terms, promises and conditions of the CONTRACT.
- 17.) CONTRACTOR has been employed under this Contract as an independent contractor in order to construct its portion of the Project. CONTRACTOR agrees that no authority has been conferred upon it by CUSTOMER to hire any person(s) on behalf of CUSTOMER, and CUSTOMER undertakes no obligation of any sort to CONTRACTOR's employees or subcontractors. It is understood and agreed that the CONTRACTOR shall select, engage, and discharge its employees, agents, or servants and otherwise direct and control their services. CONTRACTOR will also comply with all laws concerning qualification to do business and engage in the work involved under this CONTRACT and will file all returns and reports required of it and pay all taxes and contributions imposed upon it.
- 18.) CONTRACTOR agrees not to discriminate against any employee or applicant for employment because of age, race, color, religion, sex, or national origin.
- 19.) The CUSTOMER shall not be considered to have accepted possession of the work under this CONTRACT until a notice of completion is issued to the CONTRACTOR by the CUSTOMER or CUSTOMER's representative, or payment of the full CONTRACT compensation is received by the CONTRACTOR, unless the Parties otherwise mutually agree.

- 20.) CONTRACTOR, at all times during its performance of its work under this CONTRACT, shall keep the work site, grounds, and roof tops surrounding the work site free from accumulation of waste materials or rubbish caused by its activities. Upon completion of the work under this CONTRACT, the CONTRACTOR shall promptly remove all its waste materials and rubbish from and about the work site, as well as, its tools, construction equipment, machinery, and surplus materials, as to leave the work site "Broom Clean" or its equivalent.
- 21.) The law is hereby agreed to be the law of the State where the Project is situated. The parties agree that the proper venue for action, suit, or other litigation arising under this agreement shall lie in the courts of **El Paso County, CO**. In the event legal action is instituted to enforce this agreement, each party agrees to bear its own attorney fees and costs while waiving the right to collect attorney fees and costs from the opposing party. Each party also agrees to waive its right to have any pending action or trial heard by a jury.

[SIGNATURE PAGE TO FOLLOW]

IN WITNESS WHEREOF, authorized representatives of each party to this CONTRACT, indicating their party's approval of the terms herein, have signed as of the dates set forth below.

WITNESSES:

GARLAND/DBS, INC.

1. _____

By: _____

2. _____

Printed Name

Title

Tax ID. No. _____

Date: _____

WITNESSES:

Town of Monument

1. _____

By: _____

2. _____

Date: _____

And

By: _____

Date: _____

Exhibit A



Garland/DBS, Inc.
3800 East 91st Street
Cleveland, OH 44105
Phone: (800) 762-8225
Fax: (216) 883-2055



ROOFING MATERIAL AND SERVICES PROPOSAL

**Town of Monument
Town Hall
645 Beacon Lite Rd
Monument, CO 80132**

**Date Submitted: 9/10/2025
Proposal #: 25-CO-250918
MICPA # PW1925**

Colorado General Contractor License #: NOT REQUIRED

Purchase orders to be made out to: Garland/DBS, Inc.

Please Note: The following proposal is being provided according to the pricing established under the Master Intergovernmental Cooperative Purchasing Agreement (MICPA) with Racine County, WI and OMNIA Partners, Public Sector (U.S. Communities). The line item pricing breakdown from Attachment C: Bid Form should be viewed as the maximum price an agency will be charged under the agreement. Garland/DBS, Inc. administered an informal competitive process for obtaining quotes for the project with the hopes of providing a lower market-adjusted price whenever possible.

Scope of Work: Base Bid Liquitex Restoration

1. Remove existing all existing counterflashing metal, legally dispose of off site.
2. Wipe to clean, then apply new bead of hybrid sealant to all existing terminations to effectively seal.
3. Inspect and repair all punctures and deficiencies within existing epdm membrane system, seal existing laps as required.
4. Remove and repair all areas of wet insulation in kind, as designated in infrared moisture scan report.
5. 3-course all pitch pan and penetration details w/ polyether mastic and polyester scrim, and install caulked storm collar.
6. Replace existing drain flashings with new 2' diameter epdm membrane and install new water block sealant.
7. Powerwash existing rubberized roof membrane w/ tsp or simplegreen solution, allow to completely dry.
8. Cover all rtu intakes with carbon filters.
9. Apply 4" strip of adhesive waterproofing reinforcement to all membrane lap seams throughout field, flashings and penetrations. Tape to be laid flat, free of blisters or fish-mouths
10. Apply base coat w/ fluid-applied polyurea at 2gal per square throughout all field and 1gal per square at flashings, fully saturating adhesive reinforcement tape.

11. Apply top coat w/ fluid-applied polyurea at 2.5gal per square throughout all field, and 1.5gal per square to all flashings.
12. Immediately following top coat application, evenly broadcast silica granules atop coating at 40lbs per square to provide non-slip surface.
13. Replace all existing attic vent covers with new kynar covers, install kynar metal flashing above with new neoprene fasteners.
14. Install new surface mounted counterflashing where existing, seal w/ hybrid sealant, and secure with new neoprene fasteners.
15. Contractor responsible for replacement of damaged metal w/ new 24 ga kynar metal. protect all adjacent substrates.
16. Installer to provide 2 year workmanship warranty.
17. Manufacturer to provide 15 year warranty.

Scope of Work: Alternate: 2-Ply KEE Membrane Roof Retrofit Scope of Work

1. Remove all damaged/wet insulation as identified in Infrared Scan Report, and repair in kind.
2. Remove all curb/wall vertical flashings and pipe boots, legally dispose of off site.
3. Install new tapered ISO insulation boards as required throughout all low slope roof areas to meet min. 1/4" per foot slope to existing internal drains.
4. Tapered PolyIso insulation crickets to be installed upslope of all curbs, to meet minimum final slope of 1/2 inch per foot as required. Sump all internal drains to meet minimum 1" inch per foot positive slope to drains as required.
5. Mechanically fasten new 1/2" DensDeck Prime cover board throughout field of all roof areas to properly secure to existing structural deck.
6. Install new SBS Modified Base Sheet throughout field of all roof areas, set in No-VOC cold applied adhesive at 2gal per 100sqft coverage rate.
7. Install new 60mil FB KEE-Modified Cap Sheet throughout field of all roof areas, set in splatter-spray adhesive per manufacturers specifications.
8. Install new SBS Modified Base Sheet to all equipment curb, roof hatch and parapet flashings set in No-VOC flashing grade adhesive at 3-4gal per 100sqft coverage rate.
9. Install new 60mil NF KEE-Modified Cap Sheet to all equipment curb, roof hatch and parapet flashings set in splatter-spray adhesive per manufacturers specifications.
10. All vertically terminated curb flashings to be fastened with new termination bar 6" o.c., caulk bar. Cover terminations with new 24ga Kynar counterflashing metal. Terminate perimeter wall flashings at 3ft above field of roof, seal with cover strip.
11. Heat weld to install new walkpads between all equipment and roof hatch.
12. Install new premanufactured accessories to properly detail per manufacturers specifications all penetrations, inside/outside corners and roof conditions.
13. Install new lead flashings to all drain sumps.
14. Set all plumbing and gas lines atop new rubberized slip pad.
15. Lift, move and re-set all existing lightning protection equipment as required. Re-set in adhesive. Contractor not required to recertify.
16. Replace existing attic vent covers with new kynar covers, install kynar metal flashing above with cover strip over new neoprene fasteners.
17. Install new cast iron drain covers and clamp rings.
18. All drains are required to be cleared and tested upon roofing installation completion.
19. Installer to provide 2 Year Workmanship Warranty.
20. Manufacturer to provide 25 Year NDL Warranty.

Proposal Price Based Upon Market Experience: Base Bids	\$ 55,797
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Garland/DBS Price Based Upon Local Market Competition:

Monument Roofing	\$ 55,797
Trafton Roofing	\$ 65,208
L.E. Roofing	\$ 104,180

Proposal Price Based Upon Market Experience: Alternate	\$ 154,466
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Garland/DBS Price Based Upon Local Market Competition:

Trafton Roofing	\$ 154,466
Monument Roofing	\$ 193,377
L.E. Roofing	\$ 210,755

Trafton Roofing - Unforeseen Site Conditions:

Additional Insulation Repair	\$ 23.20 per Sq. Ft.
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LE Roofing - Unforeseen Site Conditions:

Additional Insulation Repair	\$ 7.54 per Sq. Ft.
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Monument Town Hall - Unforeseen Site Conditions:

Additional Insulation Repair	\$ 12.09 per Sq. Ft.
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Potential issues that could arise during the construction phase of the project will be addressed via unit pricing for additional work beyond the scope of the specifications. This could range anywhere from wet insulation, to the replacement of deteriorated wood nailers.

Please Note – The construction industry is experiencing unprecedented global pricing and availability pressures for many key building components. Specifically, the roofing industry is currently experiencing long lead times and significant price increases with roofing insulation and roofing fasteners. Therefore, this proposal can only be held for 30 days. DBS greatly values your business, and we are working diligently with our long-term suppliers to minimize price increases and project delays which could effect your project. Thank you for your understanding and cooperation.

Clarifications/Exclusions:

1. Sales and use taxes are included.
2. Permits are Included.
3. Bonds are included.
4. Plumbing, Mechanical, Electrical work is excluded.
5. Masonry work is included to which it obtains to the scope of work.
6. Interior Temporary protection is excluded.
7. Prevailing Wages are excluded.
8. Any work not exclusively described in the above proposal scope of work is excluded.

If you have any questions regarding this proposal, please do not hesitate to call me at my number listed below.

Respectfully Submitted,

Nathan Parker

Nathan Parker
Garland/DBS, Inc.
(216) 302-3791



INTERSTATE ROOF SYSTEMS CONSULTANTS, INC
IL Office: 847-695-1460
WI Office: 262-336-8270
CO Office: 719-345-6460
Website: irscinc.com

Visual Evaluation

07/29/2025

General Information:

Report Writer:	Mario Boone	Project Name:	Monument Town Hall
IRSC Project #:	9322.I25	Client:	Town of Monument
Project Location:	645 Beacon Lite Rd, Monument, CO, 80132		

Observations:

On Monday, July 28, 2025, Mario Boone, Assistant Project Manager and licensed thermographer with Interstate Roof Systems Consultants, Inc. (IRSC), performed an on site infrared moisture survey (IMS) on the Monument Town Hall located in Monument, CO. The purpose of this survey was to scan the existing roof system using a FLIR T540 handheld infrared camera to identify any signs of moisture. During the scan, one (1) anomaly was observed and documented on the roof, measuring approximately 1 ft by 1 ft.

The following day, Tuesday, July 29, 2025, IRSC returned to the Town Hall to take verification core samples, one at the location of the anomaly observed during the IMS, and one in one of the soft areas observed while performing the scan. While taking the core samples, the roof system existing construction was observed as follows: a metal deck, 1 layer of 1 inch polyisocyanurate, 2 layers of 3 inch foam EPS, 1 layer of 1/2 inch wood fiber board, and fully adhered EPDM. While taking the core sample at the location of the anomaly, the top wood fiber board layer was observed to contain moisture. The EPS layer did not appear to be wet, nor the bottom insulation layer. Upon further investigation, a puncture hole was discovered. The area was patched in the process of patching the core sample location and should not be the source of water intrusion in the future. The second core sample location, taken on one of the soft spots felt on the roof, is marked on the map and did not contain any moisture to the existing roofing material.

Attached to this report are photos of the findings of the IMS as well as photos from when the core samples were taken, as well as an image taken from Google Earth with the locations of the anomaly and the second core sample marked for your review.

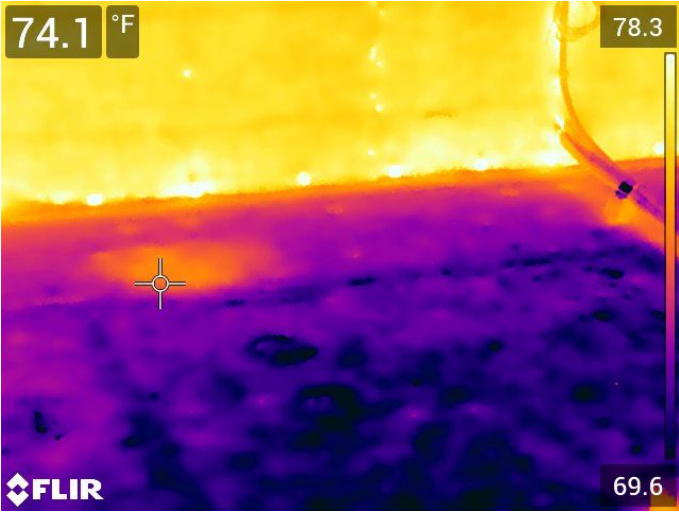
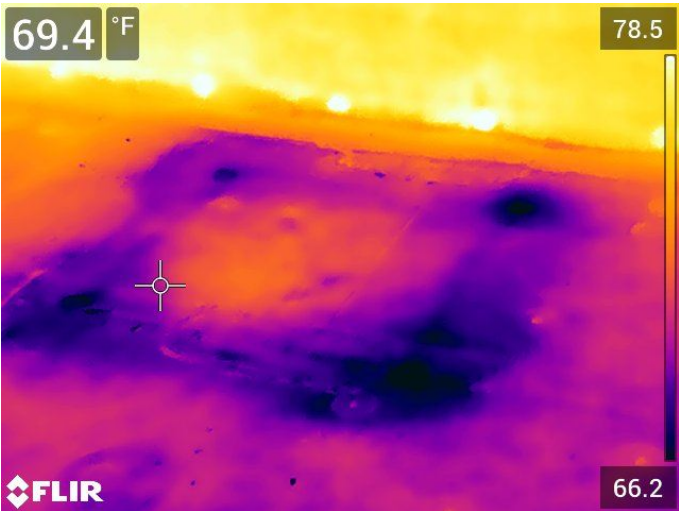
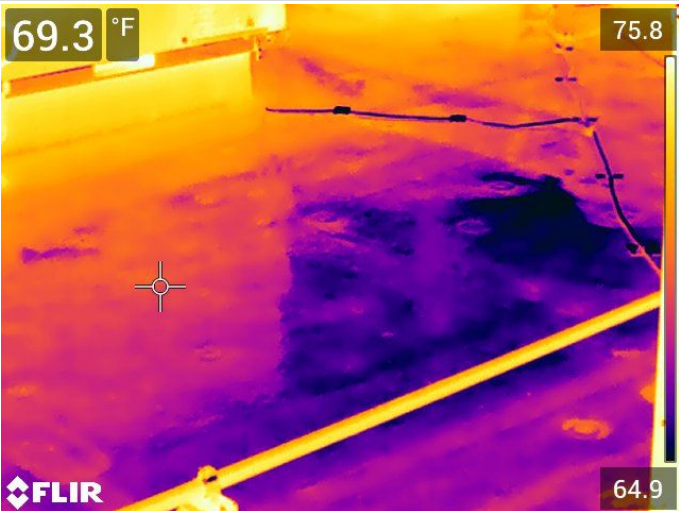


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Visual Evaluation

07/29/2025

Report Photos

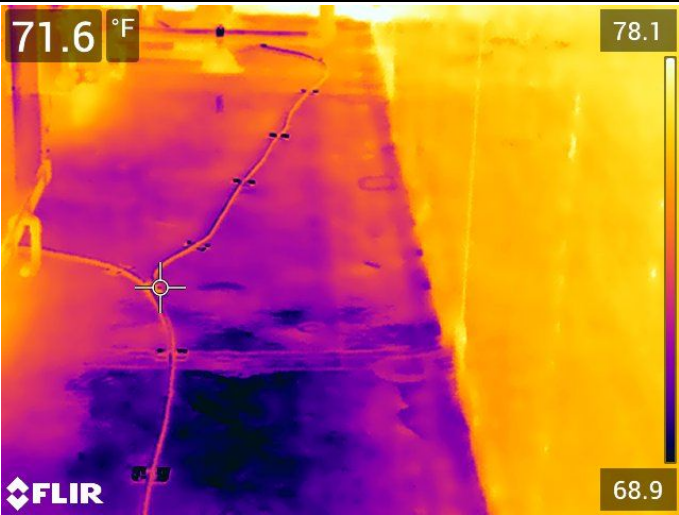
Image	Photo Description:
 A thermal image from a FLIR camera showing a roof surface. The temperature scale on the right ranges from 69.6 to 78.3 degrees Fahrenheit. A crosshair is centered on a dark, irregular area, indicating a thermal anomaly. The top of the image is bright yellow, while the bottom is dark purple.	Photo 1: Thermal image showing the anomaly observed during the IMS.
 A thermal image from a FLIR camera showing a different angle of the roof surface. The temperature scale on the right ranges from 66.2 to 78.5 degrees Fahrenheit. A crosshair is centered on a dark, irregular area, indicating a thermal anomaly. The top of the image is bright yellow, while the bottom is dark purple.	Photo 2: Additional angle from the thermal camera showing the anomaly observed during the scan.
 A thermal image from a FLIR camera showing a wide overview of the roof surface. The temperature scale on the right ranges from 64.9 to 75.8 degrees Fahrenheit. A crosshair is centered on a dark, irregular area, indicating a thermal anomaly. The top of the image is bright yellow, while the bottom is dark purple.	Photo 3: Thermal overview photo showing no signs of additional anomalies.



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07/29/2025

Image	Photo Description:
	Photo 4: Thermal overview photo showing no signs of additional anomalies.
	Photo 5: Thermal overview photo showing no signs of additional anomalies.
	Photo 6: Thermal overview photo showing no signs of additional anomalies.



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Visual Evaluation

07/29/2025

Image	Photo Description:
	Photo 7: Overview photo of the anomaly observed during the IMS.
	Photo 8: Photo showing the layer of foam EPS.
	Photo 9: Overview photo showing the top wood fiber board layer and the fully adhered EPDM.



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Visual Evaluation

07/29/2025

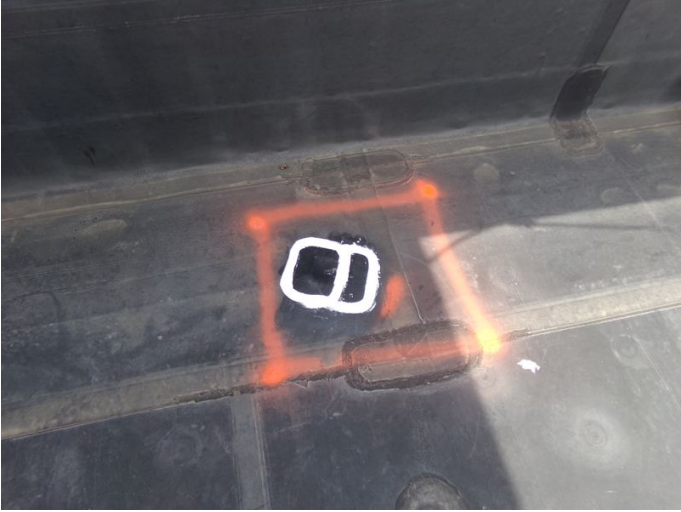
Image	Photo Description:
	Photo 10: Overview photo showing the core sample location sealed.
	Photo 11: Overview photo showing the location of the anomaly and second core sample location.
	Photo 12: Overview photo showing the foam EPS layer.



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Image	Photo Description:
	Photo 13: Overview photo showing the second core sample location sealed and sealant added.



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Visual Evaluation

07/29/2025

Summary:

After performing the infrared moisture survey (IMS), one anomaly was observed and multiple soft spots were observed while walking on the roof. The core sample taken at the location of the anomaly (see attached site map) was confirmed to contain moisture while the additional core sample showed now signs of moisture. A puncture hole was discovered at the location of the anomaly and covered while sealing the core sample taken in this area. No further signs of damage were observed and no other anomalies observed.

LEGEND

PENETRATIONS:

- ABANDONED
- ANTENNA
- CHIMNEY
- DUCT
- FLUE
- HATCH
- LADDER
- PIPE CHASE
- PIPE PORTAL
- ROOF TOP UNIT
- RTU ON RAILS
- SAT. DISH
- SKYLIGHT
- SMOKE HATCH
- SOIL STACK
- VENT
- ROOF PENETRATION
- WALKWAY

DRAINAGE:

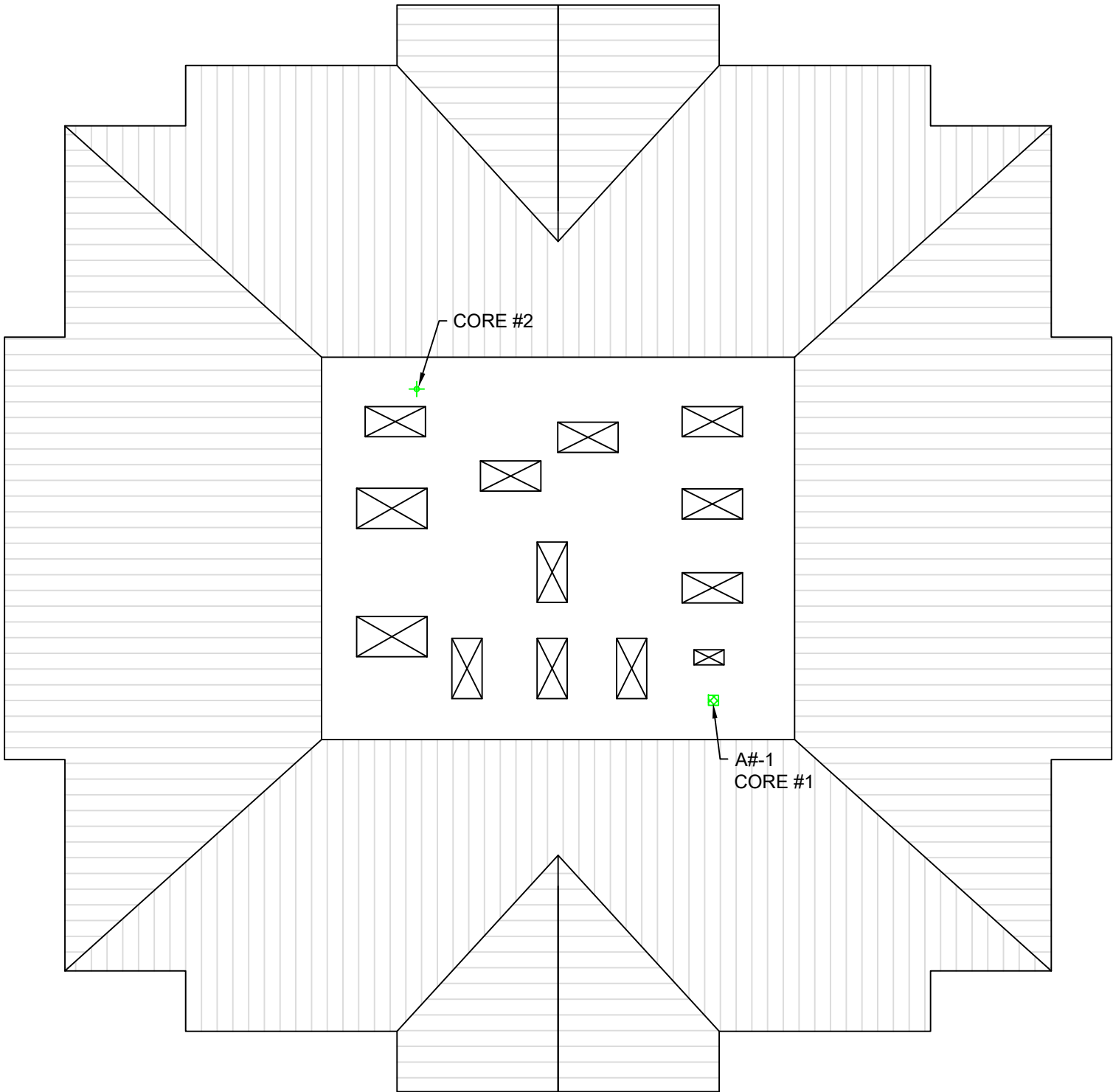
- DRAIN
- OVERFLOW
- DRAIN SUMP
- DOWN SPOUT
- SCUPPER
- OVERFLOW SCUPPER
- COLLECTOR BOX
- WALL DRAIN

LINE WORK:

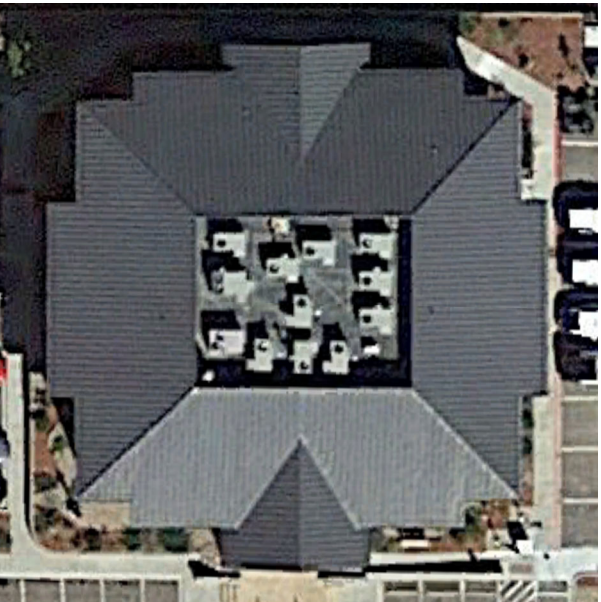
- EXP. JOINT
- MECH. SCREEN
- ROOF DIVIDER
- WALL EXP.

NOTES:

- ANOMALY
- TEST LOCATION
- SLOPE
- PHOTO NUM.
- DETAIL NUM.



ROOF DESIGNATION	SQ.FT ESTIMATED
FLAT ROOF	1,800
METAL ROOF	10,000
FOOR PRINT ONLY	



AERIAL IMAGE

N.T.S.



Interstate Roof Systems Consultants, Inc.
Wisconsin^(PO), Illinois, & Colorado
www.irsinc.com

ISSUED DATES:	DESCRIPTION	DATE	DRAFTER
9322.125 RP	9322.125 RP	07/31/25	JCV

PROJECT INFO:
TOWN OF MONUMENT
MONUMENT TOWN HALL
645 BEACON LITE ROAD
MONUMENT, CO 80132

IRSC #:
9322.125

TITLE:
ROOF PLAN
ANOMALY LOCATIONS

SCALE:
N.T.S.

SHEET #:
R1



Map of the Town of Monument, CO area. The map shows W Hwy 105 running horizontally across the middle. To the north of the highway are Century Pl and Buttonwood Ct. To the south are Buttonwood Pl and Jefferson St. A red pin marks the Town of Monument, CO, with an arrow pointing to it from the text "SITE LOCATION" below the map. Other landmarks include Safeway, Serranos Coffee Company, and Columbine Garden. The map also shows the New Santa Fe Regional Trail and a small body of water.

KEY PLAN

AREA OF WORK

SHT 1 - COVER SHEET
SHT 2 - BASE BID SCOPE OF
WORK & GENERAL NOTES
SHT 3 - ALTERNATE BID SCOPE
OF WORK & GENERAL NOTES
SHT 4 - ROOF PLAN

TOWN OF MONUMENT -
TOWN HALL UTILITY WELL ROOFING PROJECT
645 BEACON LITE RD, MONUMENT, CO 80132

REVISION:

DATE: 14/08/2025

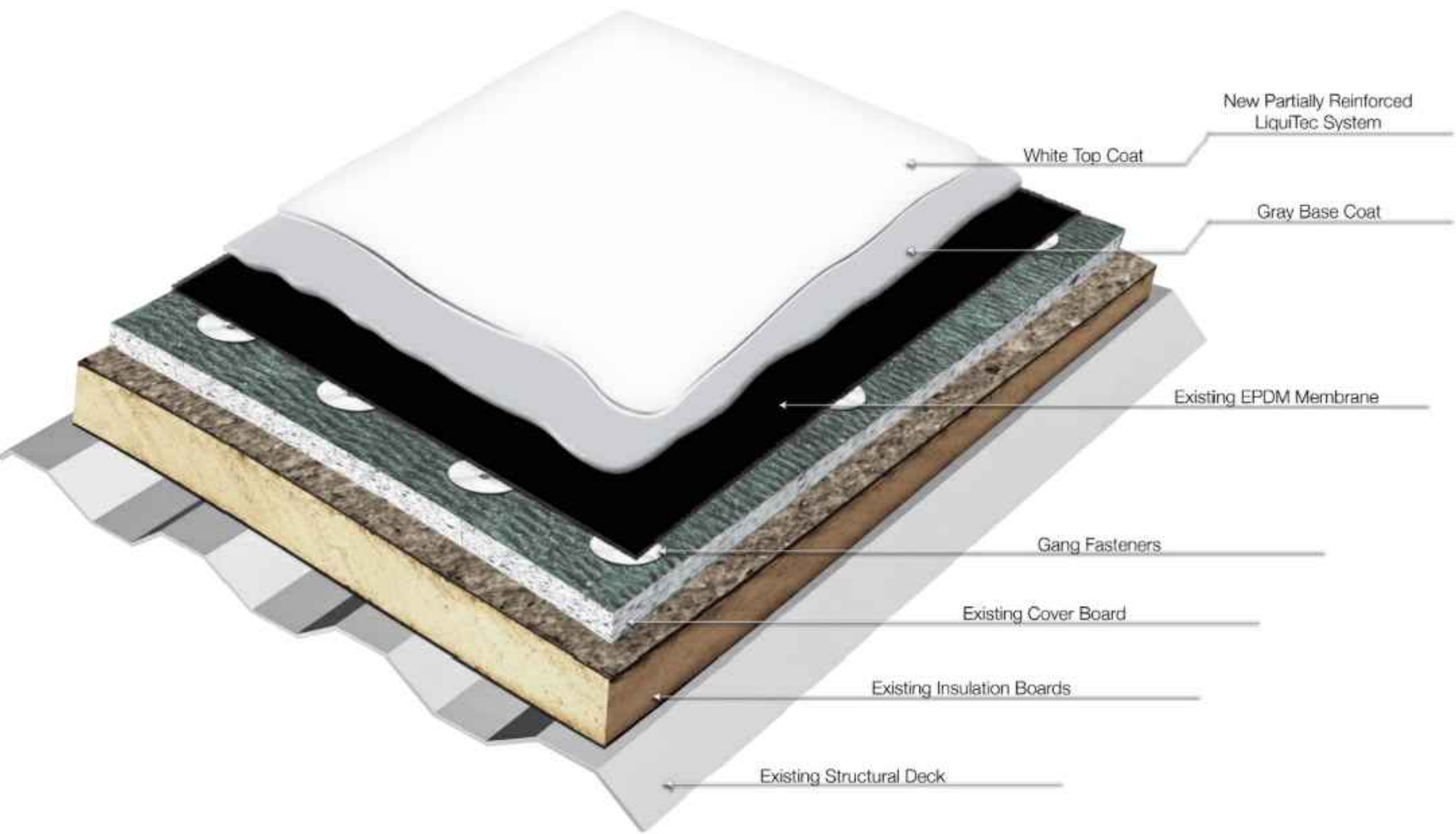
PROJECT NO: 645-1

GARLAND REP: G.B.H.

MOD BIT TYPICAL ROOF CROSS SECTION DETAIL

BASE BID: LIQUITEC RESTORATION

DESIGN CRITERIA



1. REMOVE EXISTING ALL EXISTING COUNTERFLASHING METAL, LEGALLY DISPOSE OF OFF SITE.
2. WIPE TO CLEAN, THEN APPLY NEW BEAD OF HYBRID SEALANT TO ALL EXISTING TERMINATIONS TO EFFECTIVELY SEAL.
3. INSPECT AND REPAIR ALL PUNCTURES AND DEFICIENCIES WITHIN EXISTING EPDM MEMBRANE SYSTEM, SEAL EXISTING LAPS AS REQUIRED.
4. REMOVE AND REPAIR ALL AREAS OF WET INSULATION IN KIND, AS DESIGNATED IN INFRARED MOISTURE SCAN REPORT.
5. 3-COURSE ALL PITCH PAN AND PENETRATION DETAILS W/ POLYETHER MASTIC AND POLYESTER SCRIM, AND INSTALL CAULKED STORM COLLAR.
6. REPLACE EXISTING DRAIN FLASHINGS WITH NEW 2' DIAMETER EPDM MEMBRANE AND INSTALL NEW WATER BLOCK SEALANT.
7. POWERWASH EXISTING RUBBERIZED ROOF MEMBRANE W/ TSP OR SIMPLEGREEN SOLUTION, ALLOW TO COMPLETELEY DRY.
8. COVER ALL RTU INTAKES WITH CARBON FILTERS.
9. APPLY 4" STRIP OF ADHESIVE WATERPROOFING REINFORCEMENT TO ALL MEMBRANE LAP SEAMS THROUGHOUT FIELD, FLASHINGS AND PENETRATIONS. TAPE TO BE LAID FLAT, FREE OF BLISTERS OF FISH-MOUTHS.
10. APPLY BASE COAT W/ FLUID-APPLIED POLYUREA AT 2GAL PER SQUARE THROUGHOUT ALL FIELD AND 1GAL PER SQUARE AT FLASHINGS, FULLY SATURATING ADHESIVE REINFORCEMENT TAPE.
11. APPLY TOP COAT W/ FLUID-APPLIED POLYUREA AT 2.5GAL PER SQUARE THROUGHOUT ALL FIELD, AND 1.5GAL PER SQUARE TO ALL FLASHINGS.
12. IMMEDIATELY FOLLOWING TOP COAT APPLICATION, EVENLY BROADCAST SILICA GRANULES ATOP COATING AT 40LBS PER SQUARE TO PROVIDE NON-SLIP SURFACE.
13. REPLACE ALL EXISTING ATTIC VENT COVERS WITH NEW KYNAR COVERS, INSTALL KYNAR METAL FLASHING ABOVE WITH NEW NEOPRENE FASTENERS.
14. INSTALL NEW SURFACE MOUNTED COUNTERFLASHING WHERE EXISTING, SEAL W/ HYBRID SEALANT, AND SECURE WITH NEW NEOPRENE FASTENERS.
15. CONTRACTOR RESPONSIBLE FOR REPLACEMENT OF DAMAGED METAL W/ NEW 24 GA KYNAR METAL. PROTECT ALL ADJACENT SUBSTRATES.
16. INSTALLER TO PROVIDE 2 YEAR WORKMANSHIP WARRANTY.
17. MANUFACTURER TO PROVIDE 15 YEAR WARRANTY.

- WIND UPLIFT REQUIREMENTS

1. WIND SPEED:

117 MPH

2. ROOF TYPE:

GABLE

3. EXPOSURE CATEGORY:

C

4. RISK CATEGORY

IV

5. ROOF SLOPE:

0.25 UNITS PER 12

RESULTING WIND UPLIFT PRESSURES:

ZONE 1: 39.4 PSF

ZONE 1': 25.4 PSF

ZONE 2: 49.9 PSF

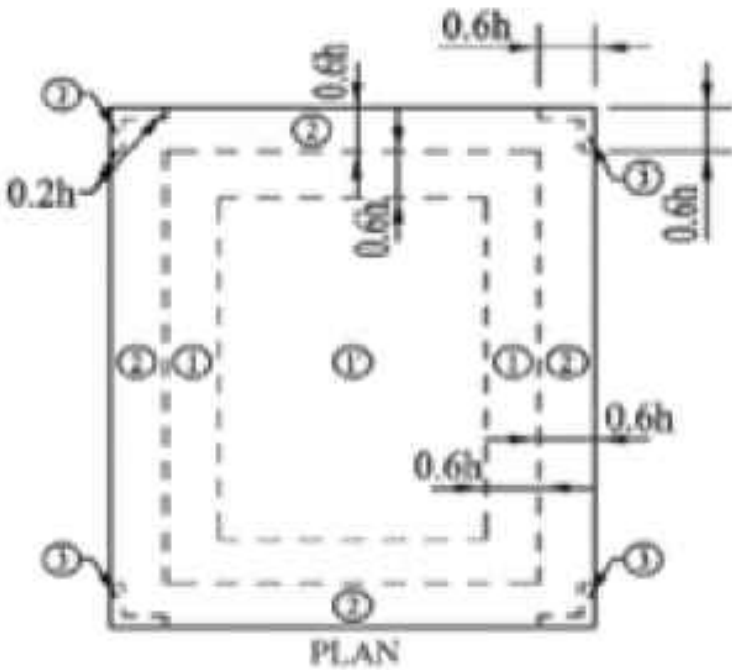
ZONE 3: 49.9 PSF

WALL PERIMTER:

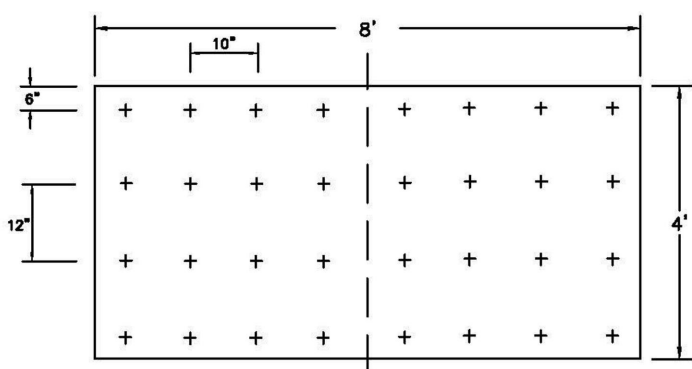
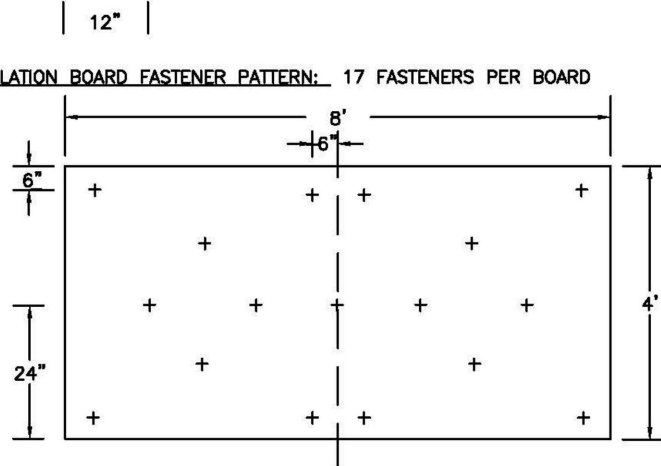
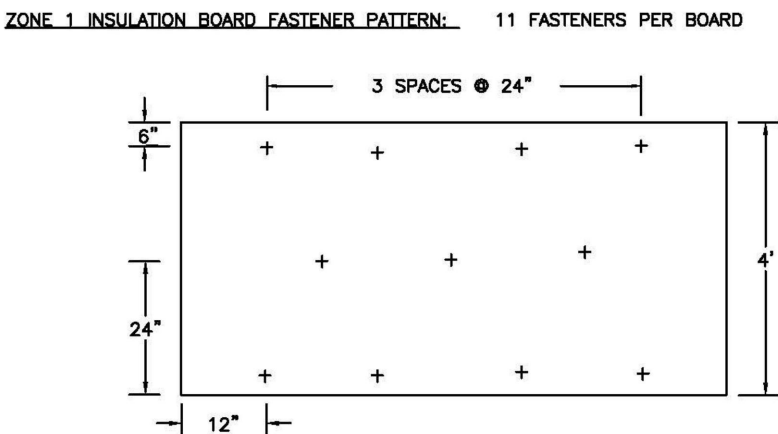
WALL CORNER:

ZONE 4: 27.0 PSF

ZONE 5: 31.7 PSF



INSULATION BOARD FASTENER PATERN



4 X 8 BOARD PATTERN

INSULATION BOARD FASTENER PATTERN

GENERAL NOTES

1. IT IS THE ROOFING CONTRACTOR'S RESPONSIBILITY TO FAMILIARIZE THEMSELVES WITH ALL DETAILS INVOLVED IN THE ROOFING CONTRACT.
2. ALL DRAWINGS ARE GRAPHIC REPRESENTATION OF APPROXIMATE LOCATION OF EXISTING AND NEW MATERIALS. IT IS THE CONTRACTOR'S RESPONSIBILITY TO VERIFY ALL EXISTING CONDITIONS PRIOR TO COMMENCEMENT OF WORK.
3. THE ROOFING CONTRACTOR TO PROTECT ALL ADJACENT SURFACES NOT SCHEDULED FOR WORK AND TO REPAIR ANY DAMAGED AREAS AS A RESULT OF CONTRACTOR WORK AT NO ADDITIONAL COST TO THE OWNER.
4. THE ROOFING CONTRACTOR SHALL BE RESPONSIBLE TO MAINTAIN WATER TIGHTNESS AND PROVIDE PROTECTION AT ANY/ALL OPENINGS IN THE ROOF LEFT AT THE END OF EACH CONSTRUCTION DAY.
5. ALL WOOD BLOCKING SHALL BE FIRE RATED.
6. CONTRACTOR SHALL FIELD VERIFY ALL DIMENSIONS, CONDITIONS, AND QUANTITIES.
7. STORE AND HANDLE ROOFING SHEETS IN A DRY, WELL-VENTILATED, WEATHER-TITE PLACE. STORE ROLLS OF MEMBRANE AND OTHER MATERIALS ON RAISED SURFACE. STAND ALL ROLL MATERIALS ON END. COVER ROLL GOODS WITH A CANVAS TARPULIN OR OTHER BREATHABLE MATERIAL (NOT POLYETHYLENE).
8. DO NOT LEAVE UNUSED MATERIALS ON THE ROOF WHEN ROOFING WORK IS NOT IN PROGRESS UNLESS PROTECTED FROM WEATHER AND OTHER MOISTURE SOURCES.
9. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO SECURE ALL MATERIAL AND EQUIPMENT ON THE JOB SITE. IF ANY MATERIAL OR EQUIPMENT IS STORED ON THE ROOF, THE CONTRACTOR MUST MAKE SURE THAT THE INTEGRITY OF THE DECK IS NOT COMPROMISED AT ANY TIME.

TOWN OF MONUMENT -

TOWN HALL UTILITY WELL ROOFING PROJECT

645 BEACON LITE RD, MONUMENT, CO 80132

REVISION:

PROJECT NO: 645-1

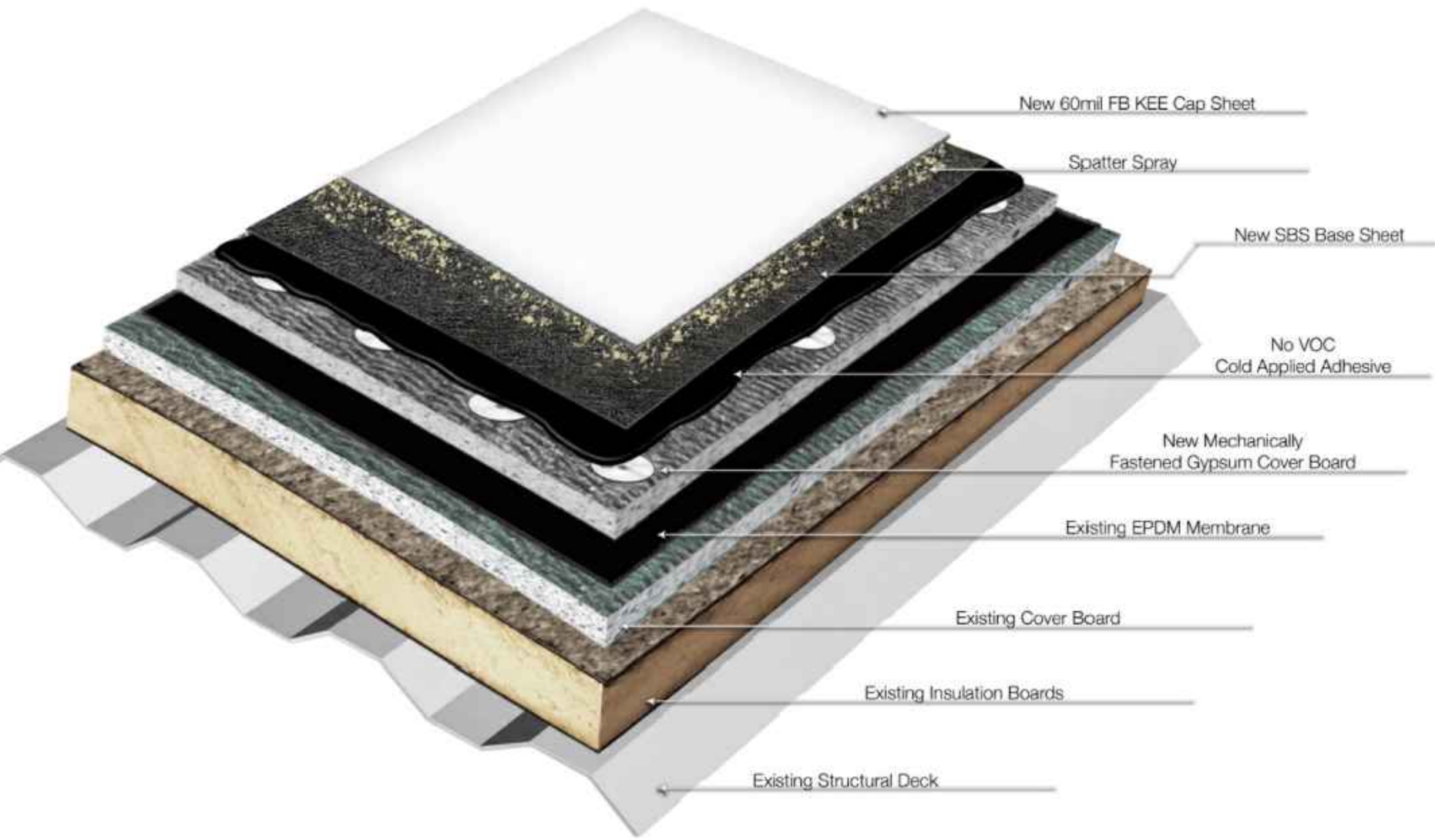
GARLAND REP: G.B.H.

DATE: 14/08/2025

MOD BIT TYPICAL ROOF CROSS SECTION DETAIL

ALTERNATE: 2-PLY KEE MEMBRANE ROOF RETROFIT SCOPE OF WORK

DESIGN CRITERIA



GENERAL NOTES

1. REMOVE ALL DAMAGED/WET INSULATION AS IDENTIFIED IN INFRARED SCAN REPORT, AND REPAIR IN KIND.
2. REMOVE ALL CURB/WALL VERTICAL FLASHINGS AND PIPE BOOTS, LEGALLY DISPOSE OF OFF SITE.
3. INSTALL NEW TAPERED ISO INSULATION BOARDS AS REQUIRED THROUGHOUT ALL LOW SLOPE ROOF AREAS TO MEET MIN. ¼” PER FOOT SLOPE TO EXISTING INTERNAL DRAINS.
4. TAPERED POLYISO INSULATION CRICKETS TO BE INSTALLED UPSLOPE OF ALL CURBS, TO MEET MINIMUM FINAL SLOPE OF 1/2 INCH PER FOOT AS REQUIRED. SUMP ALL INTERNAL DRAINS TO MEET MINIMUM 1” INCH PER FOOT POSITIVE SLOPE TO DRAINS AS REQUIRED.
5. MECHANICALLY FASTEN NEW 1/2” DENSDECK PRIME COVER BOARD THROUGHOUT FIELD OF ALL ROOF AREAS TO PROPERLY SECURE TO EXISTING STRUCTURAL DECK.
6. INSTALL NEW SBS MODIFIED BASE SHEET THROUGHOUT FIELD OF ALL ROOF AREAS, SET IN NO-VOC COLD APPLIED ADHESIVE AT 2GAL PER 100SQFT COVERAGE RATE.
7. INSTALL NEW 60MIL FB KEE-MODIFIED CAP SHEET THROUGHOUT FIELD OF ALL ROOF AREAS, SET IN SPLATTER-SPRAY ADHESIVE PER MANUFACTURERS SPECIFICATIONS.
8. INSTALL NEW SBS MODIFIED BASE SHEET TO ALL EQUIPMENT CURB, ROOF HATCH AND PARAPET FLASHINGS SET IN NO-VOC FLASHING GRADE ADHESIVE AT 3-4GAL PER 100SQFT COVERAGE RATE.
9. INSTALL NEW 60MIL NF KEE-MODIFIED CAP SHEET TO ALL EQUIPMENT CURB, ROOF HATCH AND PARAPET FLASHINGS SET IN SPLATTER-SPRAY ADHESIVE PER MANUFACTURERS SPECIFICATIONS.
10. ALL VERTICALLY TERMINATED CURB FLASHINGS TO BE FASTENED WITH NEW TERMINATION BAR 6” O.C., CAULK BAR. COVER TERMINATIONS WITH NEW 24GA KYNAR COUNTERFLASHING METAL. TERMINATE PERIMETER WALL FLASHINGS AT 3FT ABOVE FIELD OF ROOF, SEAL WITH COVER STRIP.
11. HEAT WELD TO INSTALL NEW WALKPADS BETWEEN ALL EQUIPMENT AND ROOF HATCH.
12. INSTALL NEW PREMANUFACTURED ACCESSORIES TO PROPERLY DETAIL PER MANUFACTURERS SPECIFICATIONS ALL PENETRATIONS, INSIDE/OUTSIDE CORNERS AND ROOF CONDITIONS.
13. INSTALL NEW LEAD FLASHINGS TO ALL DRAIN SUMPS.
14. SET ALL PLUMBING AND GAS LINES ATOPE NEW RUBBERIZED SLIP PAD.
15. LIFT, MOVE AND RE-SET ALL EXISTING LIGHTNING PROTECTION EQUIPMENT AS REQUIRED. RE-SET IN ADHESIVE. CONTRACTOR NOT REQUIRED TO RECERTIFY.
16. REPLACE EXISTING ATTIC VENT COVERS WITH NEW KYNAR COVERS, INSTALL KYNAR METAL FLASHING ABOVE WITH COVER STRIP OVER NEW NEOPRENE FASTENERS.
17. INSTALL NEW CAST IRON DRAIN COVERS AND CLAMP RINGS.
18. ALL DRAINS ARE REQUIRED TO BE CLEARED AND TESTED UPON ROOFING INSTALLATION COMPLETION.
19. INSTALLER TO PROVIDE 2 YEAR WORKMANSHIP WARRANTY.
20. MANUFACTURER TO PROVIDE 25 YEAR NDL WARRANTY.

- WIND UPLIFT REQUIREMENTS
1. WIND SPEED:117 MPH
2. ROOF TYPE:GABLE
3. EXPOSURE CATEGORY:C
4. RISK CATEGORYIV
5. ROOF SLOPE:0.25 UNITS PER 12

RESULTING WIND UPLIFT PRESSURES:

ZONE 1: 39.4 PSF

ZONE 1': 25.4 PSF

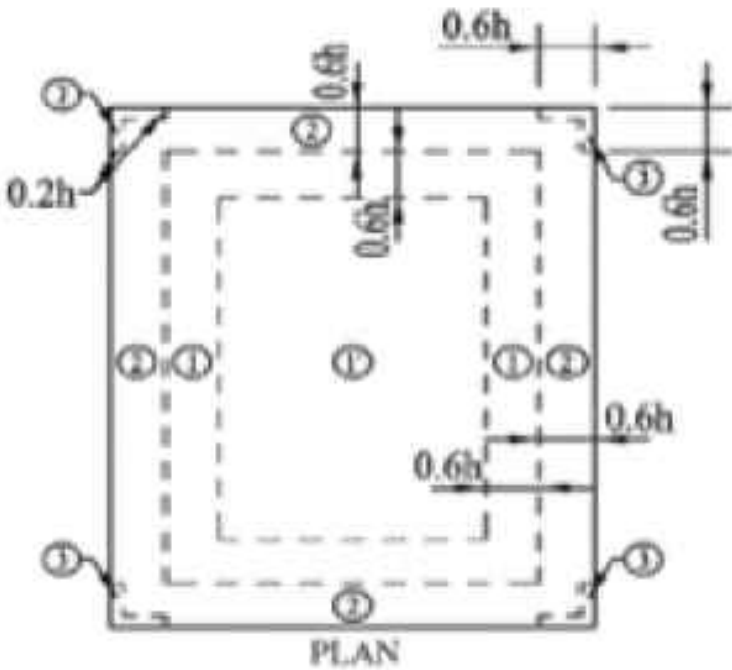
ZONE 2: 49.9 PSF

ZONE 3: 49.9 PSF

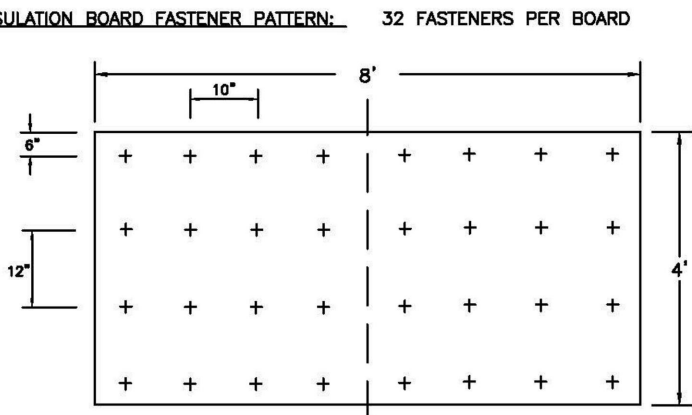
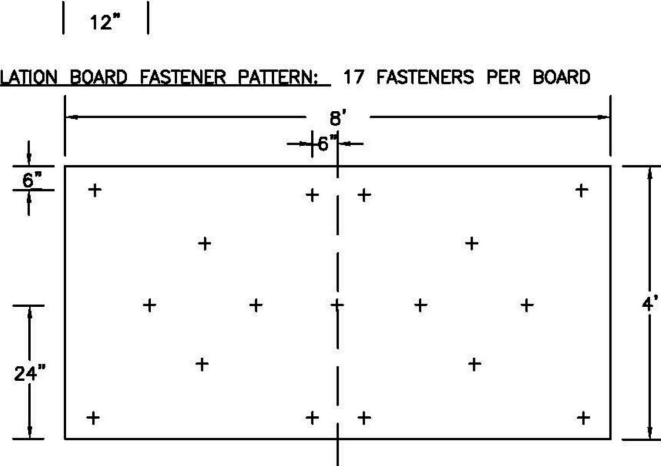
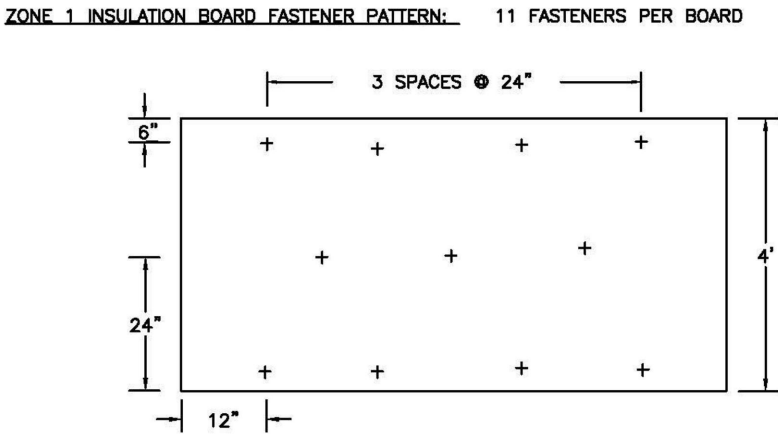
WALL PERIMTER:WALL CORNER:

ZONE 4: 27.0 PSF

ZONE 5: 31.7 PSF



INSULATION BOARD FASTENER PATERN



4 X 8 BOARD PATTERN

INSULATION BOARD FASTENER PATTERN

TOWN OF MONUMENT -

TOWN HALL UTILITY WELL ROOFING PROJECT

645 BEACON LITE RD, MONUMENT, CO 80132

REVISION:

DATE: 14/08/2025

PROJECT NO: 645-1

GARLAND REP: G.B.H.

SYMBOL LEGEND

- ⊠

RTU/RTE
- ◯

RTV
- ⊞

ROOF HATCH
- ⊕

ROOF DRAIN
- ▨

SKYLIGHT
- ←

STRUCTURAL SLOPE

WIND PRESSURE
ZONE DESIGNATIONZONE TYPE

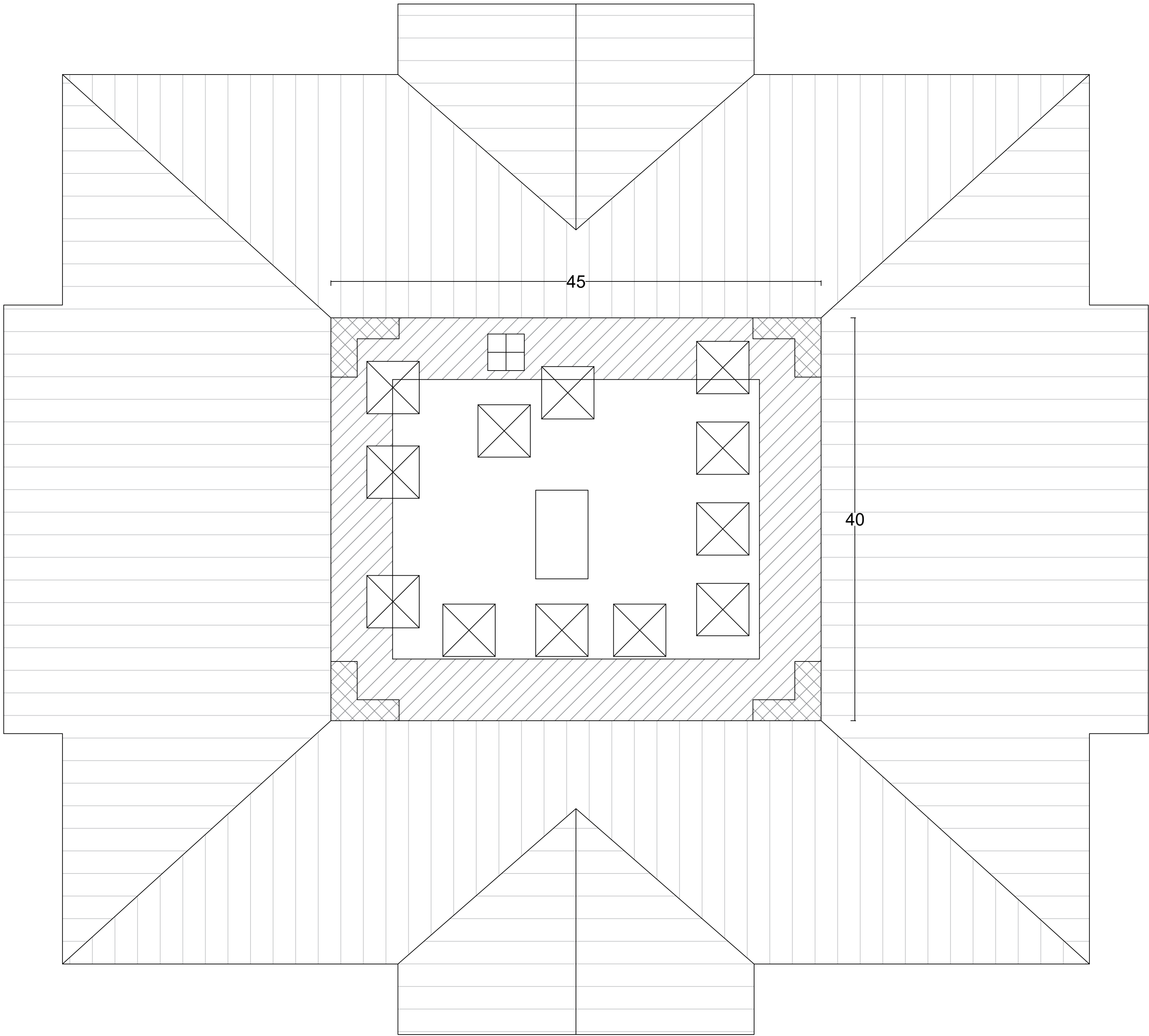
- ZONE 1
- ▨

ZONE 2
- ▩

ZONE 3

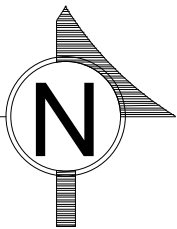
NOTE:

CONTRACTOR SHALL FIELD VERIFY ALL
DIMENSIONS, CONDITIONS, AND QUANTITIES.



TOWN HALL

ARCH. REF.: SCALE: 1" = 20'-0"



TOWN OF MONUMENT -
TOWN HALL UTILITY WELL ROOFING PROJECT
645 BEACON LITE RD, MONUMENT, CO 80132

REVISION:

PROJECT NO: 645-1

GARLAND REP: G.B.H.

DATE: 14/08/2025

RESOLUTION NO. 28-2026

**A RESOLUTION TO APPROVE A CONTRACT TO REPAIR THE TOWN HALL
ROOF**

WHEREAS, the Town of Monument has identified the need to ensure long-term financial health and sustainability as a strategic priority for 2026–2028, including supporting prudent financial planning, long-range forecasting, and responsible investment in order to maintain efficient, resilient, and high-quality municipal services for the benefit of the Monument community;

WHEREAS, Town staff has identified the need to repair the Town Hall roof in order to mitigate ongoing deterioration and avoid more significant and costly repairs in the future, and;

WHEREAS, Town staff has determined that Garland/DBS Inc. is qualified to perform the installation and has proposed a design that meets the Town’s operational needs, and;

WHEREAS, staff recommends approval of the contract proposal with Garland/DBS Inc. to proceed with roof repairs at Town Hall.

**NOW, THEREFORE, BE IT RESOLVED BY THE TOWN COUNCIL OF THE
TOWN OF MONUMENT, COLORADO THAT:**

The Town Council hereby approves a proposal to Garland/DBS Inc. to repair the Town Hall roof. The total amount of this proposal is not to exceed **\$55,797.00** which will be funded by the Facilities Capital Projects fund.

PASSED AND RESOLVED by the Town Council of the Town of Monument, El Paso County, Colorado, this 20th day of April 2026 by a vote of ____ for and ____ against.

TOWN OF MONUMENT

Mitch LaKind, Mayor

ATTEST:

Tina Erickson, Town Clerk



TOWN OF MONUMENT COUNCIL MEMORANDUM

TO: Mayor and Town Council

FROM: Jennifer Phillips

DATE: April 20, 2026

SUBJECT: Americans with Disabilities Act Self-Assessment and Transition Plan Update and Adoption of Policies

STRATEGIC PRIORITIES (2026-2028)

- ☒ **Ensure Long-Term Financial Health and Sustainability** - Supports long-range financial health, forecasting and sustainability to ensure efficient and resilient municipal services.
- ☒ **Strengthen Community Engagement** - Enhances community engagement, and strengthens communication and collaboration with residents, partners, and neighboring communities.
- ☐ **Enable Responsible Community Development** - Establishes clear, accountable plans, processes, and procedures for responsible and enduring community development and growth.
- ☐ **Reinforce a Positive Work Culture** - Promotes a positive and professional work culture that attracts and retains top talent and enhances high-quality service delivery to the community.

PURPOSE OF MEMORANDUM

To present the required policies outlining the Town's commitment to the Americans with Disabilities Act and request Town Council approval.

BACKGROUND

In April 2025, the Town Council approved a contract with Accessibility Consulting Partners (ACP) to perform a self-assessment and transition plan as required by the Americans with Disabilities Act. ACP performed a town-wide self-assessment of all public rights-of-way, buildings and parks to identify barriers to access. The self-assessment data was then used to create the transition plan, which includes each barrier, cost to resolve and priority level. This information was posted on the Town's website in November 2025 through January 2026 seeking community input. Staff continue to seek community input regarding barriers with the Town.

Along with requiring the self-assessment and transition plan, the ADA also requires the Town to satisfy and disclose the following:

- A notification of nondiscrimination on the grounds of disability (in accordance with ADA compliance),
- Provision of the name and contact information of an individual or individuals assigned to coordinate the Town's endeavors to adhere to and fulfill its obligations under the regulations, encompassing any investigation of complaints alleging noncompliance or actions prohibited by the regulations, and
- Embracing and disseminating a grievance procedure ensuring the swift and fair resolution of complaints alleging actions prohibited by ADA Title II regulations.

In addition to these core requirements, the Town should ensure that each document is publicly available in both HTML and tagged PDF formats, and that they are located within a clearly marked "Accessibility" section of the Town's website. Each of these documents should be reviewed annually to ensure the ADA Coordinator information, contact details, and procedural steps remain current. Maintaining a publicly available record of review reflects continuing compliance and supports good-faith documentation under § 35.106 and § 35.107.

DISCUSSION

To maintain consistent compliance, the Town should establish an Accessibility Governance Framework consisting of:

- Designation of an ADA Coordinator and a Digital Accessibility Coordinator to oversee Title II, Section 504, and digital accessibility compliance;
- Quarterly automated website scans and annual manual accessibility audits;
- Training for staff on effective communication, reasonable modifications, program access and public interaction to ensure consistent application of ADA policies; and
- An administrative record tracking policy adoptions, public requests, grievances, and resolutions.

These actions mirror the Town's digital accessibility commitments and Colorado HB 21-1110 (OIT 2025 Rules Addendum) requirements, ensuring that physical and digital accessibility governance remain aligned.

The attached policies are in compliance with ADA regulations.

FINANCIAL IMPACT

Adoption of these policies has no direct financial impact but implementation, monitoring and updating requires indirect costs related to staff time. Remedying the barriers identified in the

transition plan with require annual funding and will be included in both the operating and capital budgets.

RECOMMENDED ACTION

Adopt resolution 29-2026 adopting the Americans with Disabilities Act policies.

ATTACHMENTS

Americans with Disabilities Act Policies



Adopted MM/DD/YYYY

ADA Policy No. 01

THE AMERICANS WITH DISABILITIES ACT (ADA) SELF-EVALUATION POLICY (§35.105)

It is the policy of the Town of Monument, Colorado (the 'Town') to continually evaluate its current services, programs, activities, policies, practices, and the effects thereof, to identify any that do not or may not meet the requirements of the Americans with Disabilities Act Part 35 regulations. To the extent modification of any such services, programs, activities, policies, and practices is required, the Town will proceed to make the necessary modifications.

The Town will provide an opportunity for interested persons, including individuals with disabilities or organizations representing individuals with disabilities, to participate in the self-evaluation process by submitting comments.

Among the Town ADA Coordinator's duties is the responsibility for ensuring that the self-evaluation process is maintained. The ADA Coordinator will keep a log of interested persons who have been consulted, or who have made comments, or filed complaints. When complaints are filed, the ADA Coordinator will follow the Town's Grievance Procedure.

The ADA Coordinator will maintain a log describing areas of facilities or programs that have been examined and any problems identified; and a description of modifications made to mitigate problems.

The Town will ensure that accessible features of its facilities are maintained in operating order. While temporary interruptions in service or access due to maintenance or repairs are permitted, the Town will make efforts to ensure the prompt return to service of accessible features.

When new services, programs, or activities are introduced, the Town will ensure that such services, programs, and activities, when viewed in their entirety, will be accessible to and usable by individuals with disabilities. When programs are re-located to different facilities, the Town will remove or mitigate any architectural barriers in such facilities, prior to relocation of services, programs, or activities.



Adopted MM/DD/YYYY

ADA Policy No. 02

NOTICE UNDER THE AMERICANS WITH DISABILITIES ACT (§35.106)



In accordance with the requirements of Title II of the Americans with Disabilities Act of 1990 ("ADA"), the Town of Monument, Colorado (the 'Town') will not discriminate against qualified individuals with disabilities on the basis of disability in its services, programs, or activities.

Employment

The Town does not discriminate on the basis of disability in its hiring or employment practices and complies with all regulations promulgated by the U.S. Equal Employment Opportunity Commission under Title I of the Americans with Disabilities Act (ADA).

Effective Communication

The Town will generally, upon request, provide appropriate aids and services leading to effective communication for qualified persons with disabilities so they can participate equally in the Town programs, services, and activities, including qualified sign language interpreters, documents in Braille, and other ways of making information and communications accessible to people who have speech, hearing, or vision impairments.

Modifications to Policies and Procedures

The Town will make all reasonable modifications to policies and programs to ensure that people with disabilities have an equal opportunity to enjoy all the Town programs, services, and activities. For example, individuals with service animals are welcomed in Town offices, even where pets are generally prohibited.

Anyone who requires an auxiliary aid or service for effective communication, or a modification of policies or procedures to participate in a Town program, service, or activity, should contact Laura Hogan, Director of Administration, LHogan@tomgov.org, 719-651-1897 as soon as possible but no later than 48 hours before the scheduled event.

The ADA does not require the Town to take any action that would fundamentally alter the nature of its programs or services or impose an undue financial or administrative burden.

Complaints regarding a Town program, service, or activity that is not accessible to persons with disabilities should be directed to Laura Hogan, Director of Administration, LHogan@tomgov.org, 719-651-1897.



Adopted MM/DD/YYYY

The Town will not place a surcharge on a particular individual with a disability or any group of individuals with disabilities to cover the cost of providing auxiliary aids/services or reasonable modifications of policy, such as retrieving items from locations that are open to the public but are not accessible to persons who use wheelchairs.

THE AMERICANS WITH DISABILITIES ACT (ADA) DESIGNATION OF ADA COORDINATOR (§35.107(a))

The Town has designated an ADA Coordinator as required by the ADA. Questions, concerns, suggestions, or requests related to issues covered by the ADA must be brought to the attention of the ADA Coordinator.

The duties of the Town ADA Coordinator will include the coordination of the Town's efforts to comply with and fulfill its responsibilities under the Americans with Disabilities Act Title II regulations. The Town's ADA Coordinator will investigate any complaint communicated to the Town alleging its noncompliance with the Americans with Disabilities Act Title II regulations or alleging any actions that would be prohibited by the Americans with Disabilities Act Title II regulations. In response to complaints from the public, individuals with disabilities, or organizations representing individuals with disabilities, the ADA Coordinator will follow the Town's Grievance Procedure

The Town ADA Coordinator can be contacted by writing to Laura Hogan, ADA Coordinator, Town, 645 Beacon Lite Road, Monument, CO 80132; by telephoning 719-651-1897 between the hours of 8:00 a.m. and 5:00 p.m. on weekdays; and/or by email at LHogan@tomgov.org.

Where it is appropriate and necessary, the Town departments and divisions will designate an employee to coordinate the department or division's efforts to comply with and fulfill its responsibilities under the Americans with Disabilities Act Title II regulations. Any employees designated to perform these duties within their departments or divisions will liaise, interact, and coordinate with the Town's ADA Coordinator to ensure the Town's consistent and comprehensive compliance with the Americans with Disabilities Act Title II regulations.

THE AMERICANS WITH DISABILITIES ACT (ADA) GRIEVANCE PROCEDURE (§35.107(b))

This Grievance Procedure is established to meet the requirements of the Americans with Disabilities Act of 1990. It may be used by anyone who wishes to file a complaint alleging disability-based discrimination in the provision of services, activities, programs, or benefits by the Town. The Town's Personnel Policy governs employment-related complaints of disability discrimination.

Submitting a Complaint

The complaint should be in writing and contain information about the alleged discrimination such as name, address, phone number of complainant and location, date, and description of the problem.



Adopted MM/DD/YYYY

Alternative means of filing complaints, such as personal interviews or a tape recording of the complaint, will be made available for persons with disabilities upon request.

The complaint should be submitted by the grievant and/or his/her designee as soon as possible but no later than 60 calendar days after the alleged violation to: Laura Hogan, Director of Administration, LHogan@tomgov.org, 719-651-1897.

Complaint Process

Within 15 calendar days after receipt of the complaint, Laura Hogan, ADA Coordinator, or designee will meet with the complainant to discuss the complaint and the possible resolutions. Within 15 calendar days of the meeting, Laura Hogan, ADA Coordinator, or designee will respond in writing, and where appropriate, in format accessible to the complainant, such as large print, Braille, or audio tape. The response will explain the position of the Town and offer options for substantive resolution of the complaint.

Appeal

If the response by Laura Hogan, ADA Coordinator or designee does not satisfactorily resolve the issue, the complainant and/or designee may appeal the decision within 30 calendar days after receipt of the response to the Town Manager or designee.

Appeal Process

Within 45 calendar days after receipt of the appeal, the Town Manager or designee will meet with the complainant to discuss the complaint and possible resolutions. Within 30 calendar days after the meeting, the Town Manager or designee will respond in writing, and, where appropriate, in a format accessible to the complainant, with a final resolution of the complaint.

Response

All written complaints received by ADA Coordinator Laura Hogan or designee, appeals to the Town Manager or designee and responses from these two offices will be retained by the Town for at least three years.



Adopted MM/DD/YYYY

ADA Policy No. 03

THE AMERICANS WITH DISABILITIES ACT (ADA) GENERAL PROGRAM ACCESS POLICY (§35.130)

It is the policy of the Town of Monument, Colorado (the 'Town') to ensure that no qualified individual with a disability will, on the basis of disability, be excluded from participation in or be denied the benefits of its services, programs, or activities, or be subjected to discrimination by the Town.

The Town, in providing any aid, benefit, or service, will not, directly or through contractual, licensing, or other arrangements, on the basis of disability:

- i. Deny a qualified individual with a disability the opportunity to participate in or benefit from the aid, benefit, or service;
- ii. Afford a qualified individual with a disability an opportunity to participate in or benefit from the aid, benefit, or service that is not equal to that afforded others;
- iii. Provide a qualified individual with a disability with an aid, benefit, or service that is not as effective in affording equal opportunity to obtain the same result, to gain the same benefit, or to reach the same level of achievement as that provided to others;
- iv. Provide different or separate aids, benefits, or services to individuals with disabilities or to any class of individuals with disabilities than is provided to others unless such action is necessary to provide qualified individuals with disabilities with aids, benefits, or services that are as effective as those provided to others;
- v. Aid or perpetuate discrimination against a qualified individual with a disability by providing significant assistance to an agency, organization, or person that discriminates on the basis of disability in providing any aid, benefit, or service to beneficiaries of the public entity's program;
- vi. Deny a qualified individual with a disability the opportunity to participate as a member of planning or advisory boards;
- vii. Otherwise limit a qualified individual with a disability in the enjoyment of any right, privilege, advantage, or opportunity enjoyed by others receiving the aid, benefit, or service.

The Town will not deny a qualified individual with a disability the opportunity to participate in services, programs, or activities that are not separate or different, despite the existence of permissibly separate or different programs or activities.



Adopted MM/DD/YYYY

ADA Policy No. 04

THE AMERICANS WITH DISABILITIES ACT (ADA) CONTRACTORS, LICENSING, and CERTIFICATION POLICY (§35.130(b))

The Town of Monument, Colorado (the 'Town') will not directly or through contractual or other arrangements, utilize criteria or methods of administration:

- i. That have the effect of subjecting qualified individuals with disabilities to discrimination on the basis of disability; or
- ii. That have the purpose or effect of defeating or substantially impairing accomplishment of the objectives of the Town's program with respect to individuals with disabilities; or
- iii. That perpetuate the discrimination of another public entity if both the Town and the other entity are subject to common administrative control or both are agents of the State of Colorado.

The Town, in the selection of procurement contractors, may not use criteria that subject qualified individuals with disabilities to discrimination on the basis of disability.

The Town will not administer a licensing or certification program in a manner that subjects qualified individuals with disabilities to disability-based discrimination, nor will the Town establish requirements for the programs or activities of licensees or certified entities that subject qualified individuals with disabilities to discrimination on the basis of disability. The programs or activities of entities that are licensed or certified by the Town are not, themselves, covered by Title II.



Adopted MM/DD/YYYY

ADA Policy No. 05

THE AMERICANS WITH DISABILITIES ACT (ADA) REASONABLE MODIFICATION POLICY (§35.130(b)(7))

It is the policy of the Town of Monument, Colorado (the 'Town') to make reasonable modifications in policies, practices, or procedures when the modifications are necessary to avoid disability-based discrimination.

Requests for modifications in policies, practices, or procedures will be granted unless the Town can demonstrate that making the modifications would fundamentally alter the nature of the service, program, or activity.

The Town is not required to provide a reasonable modification to an individual who meets the definition of "disability" solely under the "regarded as" prong of the definition of disability. Nothing in the Americans with Disabilities Act Part 35 regulations provides the basis for a claim that an individual without a disability was subject to discrimination because of a lack of disability, including a claim that an individual with a disability was granted a reasonable modification that was denied to an individual without a disability.

The Town may impose legitimate safety requirements necessary for the safe operation of its services, programs, and activities. However, the Town will ensure that its safety requirements are based on actual risks, not on mere speculation, stereotypes, or generalizations about individuals with disabilities.

ADA Part 35 regulations do not require the Town to provide to individuals with disabilities personal devices, such as wheelchairs; individually prescribed devices, such as prescription eyeglasses or hearing aids; readers for personal use or study; or services of a personal nature including assistance in eating, toileting, or dressing.



Adopted MM/DD/YYYY

ADA Policy No. 06

**THE AMERICANS WITH DISABILITIES ACT (ADA) NONDISCRIMINATORY ELIGIBILITY CRITERIA
POLICY (§35.130(b)(8))**

The Town of Monument, Colorado (the 'Town') will not impose or apply eligibility criteria that screen out or tend to screen out an individual with a disability or any class of individuals with disabilities from fully and equally enjoying any service, program, or activity, unless such criteria can be shown to be necessary for the provision of the service, program, or activity being offered.

The Town may impose or apply eligibility criteria that screen out or might screen out an individual with a disability or any class of individuals with disabilities from fully and equally enjoying any service, program, or activity, when such eligibility criteria are in place to avoid a fundamental alteration in the nature of a program or because of a legitimate safety requirement. The Town will ensure that its safety requirements are based on actual risks, not on mere speculation, stereotypes, or generalizations about individuals with disabilities.

In those circumstances where personnel of the Town believe that waiving eligibility criteria would fundamentally alter a service, program, or activity, the Town must prove that waiving eligibility criteria would result in such alteration. The decision that waiving eligibility criteria would result in such alteration must be made by the Town Manager or his or her designee after considering all reasonable methods or means of providing access to the service, program, or activity, and must be accompanied by a written statement of the reasons for reaching that conclusion. If an action would result in such an alteration, the Town must take any other action that would not result in such an alteration but would nevertheless ensure that individuals with disabilities receive the benefits or services provided by the Town.



Adopted MM/DD/YYYY

ADA Policy No. 07

THE AMERICANS WITH DISABILITIES ACT (ADA) SERVICE ANIMAL POLICY (§35.136)

It is the policy of the Town of Monument, Colorado (the 'Town') to ensure that individuals with disabilities may be accompanied by their service animals wherever members of the public may go.

The U.S. Department of Justice enforces Title II of the ADA and the associated regulations and standards that apply to state and local governments. Under the ADA, service animals are dogs that are individually trained to do work or perform tasks for people with disabilities. The Town welcomes persons with disabilities who are accompanied by service animals in all our buildings, programs, and activities. No identification or special tags are required. Service animals must be harnessed or leashed unless those devices interfere with the work the service animal performs. In cases where the service animal is not leashed or harnessed, the handler must have the service animal under voice or signal control. If a service animal becomes disruptive, a Town staff person may ask that the service animal be removed. The Town will consider making a reasonable modification to this policy to permit the use of miniature horses, as a service animal, on a case-by-case basis. The Town's ADA coordinator should be contacted to discuss this.

Service animals are defined as dogs that are individually trained to do work or perform tasks for people with disabilities. Examples of such work or tasks include guiding people who are blind, alerting people who are deaf, pulling a wheelchair, alerting and protecting a person who is having a seizure, reminding a person with mental illness to take prescribed medications, calming a person with Post Traumatic Stress Disorder (PTSD) during an anxiety attack, or performing other duties. Service animals are working animals, not pets. The work or task a dog has been trained to provide must be directly related to the person's disability. Dogs whose sole function is to provide comfort or emotional support do not qualify as service animals under the ADA.

Where Service Animals Are Allowed

Under the ADA, the Town generally must allow service animals to accompany people with disabilities in all areas of the facility where the public is normally allowed to go. For example, in a hospital it would be inappropriate to exclude a service animal from areas such as patient rooms, clinics, cafeterias, or examination rooms. However, it may be appropriate to exclude a service animal from operating rooms or burn units where the animal's presence may compromise a sterile environment.

Service Animals Must Be Under Control

Under the ADA, service animals must be harnessed, leashed, or tethered, unless these devices interfere with the service animal's work or the individual's disability prevents using these devices. In that case, the individual must maintain control of the animal through voice, signal, or other effective controls.



Adopted MM/DD/YYYY

Inquiries, Exclusions, Charges, and Other Specific Rules Related to Service Animals

When it is not obvious what service an animal provides, only limited inquiries are allowed. Staff may ask two questions: (1) is the dog a service animal required because of a disability, and (2) what work or task the dog has been trained to perform.

Staff cannot ask about the person's disability, require medical documentation, require a special identification card or training documentation for the dog, or ask that the dog demonstrate its ability to perform the work or task.

Allergies and fear of dogs are not valid reasons for denying access or refusing service to people using service animals. When a person who is allergic to dog dander and a person who uses a service animal must spend time in the same room or facility, for example, in a school classroom or at a homeless shelter, they both should be accommodated by assigning them, if possible, to different locations within the room or different rooms in the facility.

A person with a disability cannot be asked to remove her service animal from the premises unless: (1) the dog is out of control, and the handler does not take effective action to control it or (2) the dog is not housebroken. When there is a legitimate reason to ask that a service animal be removed, staff must offer the person with a disability the opportunity to obtain goods or services without the animal's presence.

Establishments that sell or prepare food must allow service animals in public areas even if state or local health codes prohibit animals on the premises.

People with disabilities who use service animals cannot be isolated from other patrons, treated less favorably than other patrons, or charged fees that are not charged to other patrons without animals. In addition, if a program or agency requires a deposit or fee to be paid by patrons with pets, it must waive the charge for service animals.

If a program or agency normally charges patrons for damage that they cause, a customer with a disability may also be charged for damage caused by himself or his service animal.

Staff are not required to provide care or food for a service animal.



Adopted MM/DD/YYYY

ADA Policy No. 08

THE AMERICANS WITH DISABILITIES ACT (ADA) MOBILITY DEVICE POLICY (§35.137)

It is the policy of the Town of Monument, Colorado (the 'Town') to permit individuals with mobility disabilities to use wheelchairs and manually powered mobility aids, such as walkers, crutches, canes, braces, or other similar devices designed for use by individuals with mobility disabilities in any areas open to pedestrian use.

The Town will make reasonable modifications in its policies, practices, or procedures to permit the use of other power-driven mobility devices by individuals with mobility disabilities, unless the Town can demonstrate that the class of other power-driven mobility devices cannot be operated in accordance with legitimate safety requirements adopted by the Town. The Town will ensure that its safety requirements are based on actual risks, not on mere speculation, stereotypes, or generalizations about individuals with disabilities. The operation of other power-driven mobility devices in a manner or in a facility where such an operation violates the Town's legitimate safety requirements would fundamentally alter the nature of the program.

In determining whether a particular other power-driven mobility device can be allowed in a specific facility, as a reasonable modification, the Town will apply the following assessment factors:

- i. The type, size, weight, dimensions, and speed of the device;
- ii. The facility's volume of pedestrian traffic (which may vary at different times of the day, week, month, or year);
- iii. The facility's design and operational characteristics (e.g., whether its service, program, or activity is conducted indoors, its square footage, the density and placement of stationary devices, and the availability of storage for the device, if requested by the user);
- iv. Whether legitimate safety requirements can be established to permit the safe operation of the other power-driven mobility device in the specific facility; and
- v. Whether the use of the other power-driven mobility device creates a substantial risk of serious harm to the immediate environment or natural or cultural resources or poses a conflict with Federal land management laws and regulations.

The Town employees will not ask an individual using a wheelchair or other power-driven mobility device questions about the nature and extent of the individual's disability. However, the Town employees may make inquiries into the use of other power-driven mobility devices. The Town employees may ask a person using another power-driven mobility device to provide a credible assurance that the mobility device is required because of the person's disability. The Town, when permitting the use of another power-driven mobility device by an individual with a mobility disability, will accept the presentation of a valid, State-issued, disability parking placard or card, or other State-issued proof of disability as a credible assurance that the use of the other power-driven mobility device is for the individual's mobility disability. In lieu of a valid, State-issued disability parking placard or card, or State-issued proof of disability, the Town will accept as a credible assurance a verbal representation, not contradicted by



Adopted MM/DD/YYYY

observable fact, that the other power-driven mobility device is being used for a mobility disability. A “valid” disability placard or card is one that is presented by the individual to whom it was issued and is otherwise in compliance with the State of issuance’s requirements for disability placards or cards.



Adopted MM/DD/YYYY

ADA Policy No. 09

THE AMERICANS WITH DISABILITIES ACT (ADA) EQUAL EMPLOYMENT POLICY (§35.140)

The Town of Monument, Colorado (the 'Town') will provide equal employment opportunities for individuals with disabilities. The Town will not discriminate, based on disability, against a qualified individual in regard to:

- i. Recruitment, advertising, and job application procedures;
- ii. Hiring, upgrading, promotion, award of tenure, demotion, transfer, layoff, termination, right of return from layoff, and rehiring;
- iii. Rates of pay or any other form of compensation and changes in compensation;
- iv. Job assignments, job classifications, organizational structures, position descriptions, lines of progression, and seniority lists;
- v. Leaves of absence, sick leave, or any other leave;
- vi. Fringe benefits available by virtue of employment, whether or not administered by the Town;
- vii. Selection and financial support for training including apprenticeships, professional meetings, conferences and other related activities, and selection for leaves of absence to pursue training;
- viii. Activities sponsored by the Town, including social and recreational programs; and
- ix. Any other term, condition, or privilege of employment.

Prohibited Discrimination

For purposes of this policy, the term discrimination includes, but is not limited to, the following actions:

- i. Segregation, or classification of a job applicant or employee in a way that adversely affects his or her employment opportunities or status based on disability.
- ii. Participation in a contractual or other arrangement or relationship that has the effect of subjecting the Town's own qualified applicant or employee with a disability to the discrimination prohibited by the Americans with Disabilities Act Title I regulations. The phrase contractual or other arrangement or relationship includes, but is not limited to, a relationship with an employment or referral agency; labor union, including collective bargaining agreements; an organization providing fringe benefits to an employee of the Town; or an organization providing training and apprenticeship programs. This section applies to the Town, with respect to its own applicants or employees, whether the Town offered the contract or initiated the relationship, or whether the Town accepted the contract or acceded to the relationship. The Town is not liable for the actions of the other party or parties to the contract which only affect that other party's employees or applicants.
- iii. The Town will not use standards, criteria, or methods of administration, which are not job-related and consistent with business necessity, and:
 - a. That have the effect of discriminating based on disability; or
 - b. That perpetuates the discrimination of others who are subject to common administrative control.



Adopted MM/DD/YYYY

- iv. The Town will not exclude or deny equal jobs or benefits to, or otherwise discriminate against, a qualified individual because of the known disability of an individual with whom the qualified individual is known to have a family, business, social or other relationship or association.
- v. The Town will make reasonable accommodation to the known physical or mental limitations of an otherwise qualified applicant or employee with a disability, consistent with the Town ADA Reasonable Accommodation Policy.
- vi. The Town will not use qualification standards, employment tests or other selection criteria that screen out or tend to screen out an individual with a disability or a class of individuals with disabilities, on the basis of disability, unless the standard, test, or other selection criteria, as used by the Town, is shown to be job related for the position in question and is consistent with business necessity.
- vii. The Town will not use qualification standards, employment tests, or other selection criteria based on an individual's uncorrected vision, unless the standard, test, or other selection criterion, as used by the Town, is shown to be job related for the position in question and is consistent with business necessity. An individual challenging the Town's application of a qualification standard, test, or other criterion based on uncorrected vision need not be a person with a disability but must be adversely affected by the application of the standard, test, or other criterion.
- viii. The Town will select and administer tests concerning employment in the most effective manner to ensure that, when a test is administered to a job applicant or employee who has a disability that impairs sensory, manual or speaking skills, the test results accurately reflect the skills, aptitude, or whatever other factor of the applicant or employee that the test purports to measure, rather than reflecting the impaired sensory, manual, or speaking skills of such employee or applicant (except where such skills are the factors that the test purports to measure).
- ix. The Town will not discriminate against any individual because that individual has opposed any act or practice made unlawful by the Americans with Disabilities Act Title I regulations or because that individual made a charge, testified, assisted, or participated in any manner in an investigation, proceeding, or hearing to enforce any provision contained in the Americans with Disabilities Act Title I regulations.
- x. The Town will not coerce, intimidate, threaten, harass, or interfere with any individual in the exercise or enjoyment of, or because that individual aided or encouraged any other individual in the exercise of, any right granted or protected by the Americans with Disabilities Act Title I regulations.
- xi. The Town will not allow its employees to coerce, intimidate, threaten, or harass any employee or applicant with a disability.
- xii. The Town will not, except as permitted by EEOC regulation §1630.14, conduct a medical examination of an applicant or make inquiries as to whether an applicant is an individual with a disability or as to the nature or severity of such disability.
- xiii. The Town will not, except as permitted by EEOC regulation §1630.14, require a medical examination of an employee or make inquiries as to whether an employee is an individual with a disability or as to the nature or severity of such disability.



Adopted MM/DD/YYYY

Effective Communication

The Town will ensure that communication with applicants and employees who are deaf, hard of hearing, blind, low-vision, or have impaired speaking skills is as effective as communication with other applicants and employees. To achieve effective communication, the Town will provide auxiliary aids and services consistent with the Town ADA Effective Communication Policy.

Applicants

The Town may make pre-employment inquiries into the ability of an applicant to perform job-related functions, and/or may ask an applicant to describe or to demonstrate how, with or without reasonable accommodation, the applicant will be able to perform job-related functions.

The Town may require a medical examination (and/or inquiry) after making an offer of employment to a job applicant and before the applicant begins his or her employment duties, and may condition an offer of employment on the results of such examination (and/or inquiry), if all entering employees in the same job category are subjected to such an examination (and/or inquiry) regardless of disability. The Town will collect and maintain on separate forms and in separate medical files and treat as a confidential medical record any information obtained resulting from such medical examination (and/or inquiry), regarding the medical condition or history of the applicant, except that:

- i. Supervisors and managers may be informed regarding necessary restrictions on the work or duties of the employee and necessary accommodations;
- ii. First aid and safety personnel may be informed, when appropriate, if the disability might require emergency treatment; and
- iii. Government officials investigating compliance with this part will be provided relevant information on request.

The Town will not use the results of such examination for any purpose inconsistent with the Americans with Disabilities Act Title I regulations.

Employees

The Town may conduct medical examinations in accordance with the above section (Prohibited Discrimination, xiii.) that are job-related and consistent with business necessity. However, if the Town uses certain criteria to screen out an employee or employees with disabilities as a result of such an examination or inquiry, the exclusionary criteria must be job-related and consistent with business necessity, and performance of the essential job functions cannot be accomplished with reasonable accommodation as required by the Americans with Disabilities Act Title I regulations.



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The Town may require a medical examination (and/or inquiry) of an employee that is job-related and consistent with business necessity. The Town may make inquiries into the ability of an employee to perform job-related functions.

The Town will collect and maintain on separate forms and in separate medical files and treat as a confidential medical record any information obtained under the previous sections, regarding the medical condition or history of any employee, except that:

- i. Supervisors and managers may be informed regarding necessary restrictions on the work or duties of the employee and necessary accommodations;
- ii. First aid and safety personnel may be informed, when appropriate, if the disability might require emergency treatment; and
- iii. Government officials investigating compliance with this part shall be provided relevant information on request.

The Town will not use information regarding the medical condition or history of any employee for any purpose inconsistent with the Americans with Disabilities Act Title I regulations.

The Town may conduct voluntary medical examinations and activities, including voluntary medical histories, which are part of an employee health program available to employees at the work site.



Adopted MM/DD/YYYY

ADA Policy No. 10

THE AMERICANS WITH DISABILITIES ACT (ADA) REASONABLE ACCOMMODATION POLICY (§1630.9)

The Town of Monument, Colorado (the 'Town') will make reasonable accommodation to the known physical or mental limitations of an otherwise qualified applicant or employee with a disability, unless the Town can demonstrate that the accommodation would impose an undue hardship on the operation of the Town's business.

The Town will not deny employment opportunities to an otherwise qualified job applicant or employee with a disability based on the need of the Town to make reasonable accommodation to such individual's physical or mental impairments.

Americans with Disabilities Act Title I regulations do not require an individual with a disability to accept an accommodation, aid, service, opportunity, or benefit which such qualified individual chooses not to accept. However, Americans with Disabilities Act Title I regulations do not require the Town to consider to be qualified, an individual who rejects a reasonable accommodation, aid, service, opportunity or benefit that is necessary to enable the individual to perform the essential functions of the position held or desired, and who cannot, because of that rejection, perform the essential functions of the position.

The Town, absent undue hardship, will provide a reasonable accommodation to an otherwise qualified individual who meets the definition of disability under the Americans with Disabilities Act Title I regulations' "actual disability" prong, or "record of" prong. The Town will not provide a reasonable accommodation to an individual who meets the definition of disability solely under the Americans with Disabilities Act Title I regulations' "regarded as" prong.

The Town will, upon the request of a qualified individual who is known to have, or who discloses, a disability (as defined by the Americans with Disabilities Act Title I regulations, §1630.2 Definitions), enter into an interactive process to identify an appropriate reasonable accommodation for that individual. An appropriate reasonable accommodation will overcome a qualified individual's limitations, making it possible for the individual to perform the essential job functions of their position. An appropriate reasonable accommodation will not impose an undue hardship on the operation of the Town's business, cause a direct threat to members of the public or other Town employees, or violate legitimate safety requirements.



Adopted MM/DD/YYYY

ADA Policy No. 11

THE AMERICANS WITH DISABILITIES ACT (ADA) EFFECTIVE COMMUNICATION POLICY (§35.160)

It is the policy of the Town of Monument, Colorado (the 'Town') to ensure that communications with applicants, participants, members of the public, and companions with disabilities are as effective as communications are with others.

The Town, through its agencies, will furnish appropriate auxiliary aids and services where necessary to afford qualified individuals with disabilities, including applicants, participants, members of the public, and companions an equal opportunity to participate in, and enjoy the benefits of, a service, program, or activity conducted by the Town.

The type of auxiliary aid or service necessary to ensure effective communication will vary in accordance with the method of communication involved; and the context in which the communication is taking place. To be effective, auxiliary aids and services will be provided in accessible formats, in a timely manner, and in such a way as to protect the privacy and independence of the individual with a disability.

Auxiliary aids and services include:

- i. Qualified interpreters on-site or through video remote interpreting (VRI) services, notetakers, real-time computer-aided transcription services, written materials, exchanges of written notes, telephone handset amplifiers, assistive listening devices, assistive listening systems, telephones compatible with hearing aids, closed caption decoders, open and closed captioning, including real-time captioning, voice, text, and video-based telecommunications products and systems, including text telephones (TTY's), video telephones, and captioned telephones, or equally effective telecommunications devices, videotext displays, accessible electronic and information technology, or other effective methods of making aurally delivered information available to individuals who are deaf or hard of hearing; and
- ii. Qualified readers; taped texts; audio recordings, Braille materials and displays, screen reader software, magnification software, optical readers, second auditory programs (SAP), large print materials, electronic and information technology, or other effective methods of making visually delivered materials available to individuals who are blind or have low vision.

When an auxiliary aid or service is requested, the Town will give primary consideration to the choice expressed by the individual with disabilities. The Town will honor the choice unless:

- i. It can show that another effective means of communication is available;
- ii. It can show that the use of the means chosen would result in a fundamental alteration in the service, program, or activity; or
- iii. It can show that the use of the means chosen would result in undue financial burden to the Town.



Adopted MM/DD/YYYY

The Town agency will consult with the individual with a disability to identify an effective manner of communication that can be achieved with the individual in the context of the agency's program, service, or activity. The Town will not require an individual with a disability to bring another individual to interpret for him or her.

The Town will not require an adult accompanying an individual with a disability to interpret or facilitate communication except:

- i. In an emergency involving imminent threat to the safety or welfare of an individual or the public where there is no interpreter available; or
- ii. Where the individual with a disability specifically requests that the accompanying adult interpret or facilitate communication, the accompanying adult agrees to provide such assistance, and reliance on the adult for assistance is appropriate under the circumstances.

The Town will not rely on a minor child to interpret or facilitate communications, except in an emergency involving an imminent threat to the safety or welfare of an individual or the public where there is no interpreter available.

When the Town uses an automated-attendant system, including, but not limited to, voice mail and messaging, or an interactive voice response system, for receiving and directing incoming telephone calls, that system must provide effective real-time communication with individuals using auxiliary aids and services, including TTY's and all forms of FCC-approved telecommunications relay systems, including Internet-based relay systems.

The Town will respond to telephone calls from a telecommunications relay service established under Title IV of the ADA in the same manner that it responds to other telephone calls.



Adopted MM/DD/YYYY

ADA Policy No. 12

THE AMERICANS WITH DISABILITIES ACT (ADA) EMERGENCY MANAGEMENT PLAN DEVELOPMENT POLICY

The Town of Monument, Colorado (the 'Town') will not discriminate against an individual with a disability in connection with participation in services and activities provided in the development, implementation, and execution of the Town's emergency management plan. Town will ensure that in every aspect, facet, and feature, its emergency management plan will consider any potential barriers that might exclude or limit the opportunity for people with disabilities to participate in and benefit from Town emergency management plan. This policy extends to any and all public or private entities and organizations in conjunction with Town managed response to emergent situations.

The Town recognizes that emergency management is wide-ranging. It includes all programs, services, and activities related to emergencies and disasters, including, but not limited to the following:

- i. Preparation – advance planning for emergencies and disasters;
- ii. Testing of Preparedness – staging emergency simulations and other approaches to evaluating the effectiveness of emergency preparedness;
- iii. Notification – alerting the public to emergencies and disasters and to available programs, services, and activities;
- iv. Ensuring the functional operation of reverse 9-1-1, including texting capacity, and captioned warning announcements on television and websites;
- v. Provision for auxiliary aids and services necessary for effective communication at all planned emergency shelters;
- vi. Community Evacuation and Transportation;
- vii. Emergency Shelter Programs;
- viii. Temporary Lodging and Housing;
- ix. Social Services and Emergency – and Disaster-Related Benefit Programs;
- x. Emergency Medical Care and Services; Emergency food, water, and medical supplies;
- xi. Relocation Programs, Activities, and Services;
- xii. Transition and Transportation Back to the Community Following an Emergency or Disaster;
- xiii. Emergency and Disaster Recovery Programs, Services, and Activities; and
- xiv. Remediation of Damage Caused by Emergencies and Disasters– repairing and rebuilding damaged facilities, removing debris, and relocation and re-introduction of state and local government programs, services, and activities following an emergency or disaster.

The Town will create a voluntary registry for citizens requiring special assistance because of age or disability, during an emergency. The Town will include in its plans to provide the necessary capacity to transport, shelter, and provide any other necessary services for this population.



Adopted MM/DD/YYYY

ADA Policy No. 13

INFORMATION & COMMUNICATION TECHNOLOGY ACCESSIBILITY POLICY

Introduction

The Town of Monument, Colorado (the 'Town') is committed to providing equal access to all services, programs, and activities in accordance with federal and state laws. As part of that commitment, the Town is dedicated to creating an information and communication technology (ICT) environment that is accessible to all, including individuals with disabilities. Ensuring equal and effective electronic information and communication technology access is the responsibility of the Town staff, administrator, and supervisors.

Implementation Period

The ICT Accessibility Committee shall establish a prioritization schedule defining when different programs, services and activities must be compliant with this policy.

Definitions

- i. Accessibility Guidelines: Federal Access Board's Electronic and Information Technology Accessibility Standards.
- ii. Accessibility: A person with a disability is afforded the opportunity to acquire the same information, engage in the same interactions and enjoy the same services as a person without a disability in an equally effective and equally inclusive manner, with substantially equivalent ease of use.
- iii. Disability: Means a physical or mental impairment that substantially limits one or more life activities.
- iv. Information and Communication Technology: Any electronic system or equipment and content therein, used to create, convert, communicate, or duplicate data or information. The intent of this definition is to capture an inclusive spectrum of current and emerging technology.

ADA Coordinator

The Town shall appoint an ADA Coordinator who is responsible for:

- i. Creating, revising, and publishing ICT accessibility standards, best practices, and resource information.
- ii. Monitoring regulatory changes and coordinating with regulatory agencies as appropriate.
- iii. Providing guidance regarding implementation of ICT accessibility standards.
- iv. Reviewing and reporting on program effectiveness.
- v. Day-to-day management for the ICT accessibility program.
- vi. Maintaining ICT accessibility training content



Adopted MM/DD/YYYY

- vii. Executing any other responsibilities as assigned.

Accessibility Review Board

The Town will establish and maintain an ICT Accessibility Review Board, which shall include Town staff and will be responsible for:

- i. Approval of ICT accessibility standards, best practices and resource information proposed by the ADA Coordinator.
Note: ICT is the acronym used by the U.S. Access Board- Section 508
- ii. Review and grant any exceptions to this policy or the Accessibility Standards.
- iii. Determine the content and frequency of trainings.
- iv. Periodically review and update this Policy and the ICT Accessibility Standards.
- v. From time to time, not less than annually, oversee an evaluation of ICT accessibility compliance through diagnostic tests and end-user testing by individuals with various disabilities.

Procedure

- i. The Town will make training and resources readily available to all employees regarding accessible ICT. The training and resources shall include specific information for employees who are responsible for creating, selecting, or maintaining ICT in any program, service, or activity. The training will also include how to make ICT accessible, how to both manually check and use automated tools to ensure accessibility of content therein, furthermore, how to receive assistance.
- ii. The Town employees responsible for designing, developing, or maintaining ICT Resources should ensure the resources comply with the Accessibility Guidelines.
- iii. The Town employees purchasing ICT resources should ensure resources comply with Accessibility Guidelines before purchase.

**TOWN OF MONUMENT
RESOLUTION NO. 29-2026**

A RESOLUTION TO APPROVE AMERICANS WITH DISABILITIES ACT POLICIES

WHEREAS, the Town Council of the Town of Monument, through its Vision Statement, has committed to always ensure cooperative, transparent and inclusive Town governance; and

WHEREAS, the Town of Monument has identified the need to ensure long-term financial health and sustainability as a strategic priority for 2026–2028, including supporting prudent financial planning, long-range forecasting, and responsible investment in order to maintain efficient, resilient, and high-quality municipal services for the benefit of the Monument community; and

WHEREAS, the Town of Monument recognizes strengthening community engagement as a strategic priority for 2026–2028, with a focus on enhancing communication, transparency, and collaboration among Monument residents, neighboring communities, partner organizations, and town administration to support informed decision-making and shared community goals; and

WHEREAS, the Americans with Disabilities Act requires adoption of certain policies to ensure accessibility and compliance with the Act.

NOW THEREFORE, BE IT RESOLVED BY THE TOWN COUNCIL OF THE TOWN OF MONUMENT, COLORADO THAT:

The required Americans with Disabilities Act Policies attached hereto as Exhibit A are hereby adopted.

PASSED AND RESOLVED this 20th day of April 2026, by the Town Council of the Town of Monument by a vote of ____for and ____against.

TOWN OF MONUMENT

Mitch LaKind, Mayor

ATTEST:

Tina Erickson, Town Clerk, CMC

MONTHLY REPORT TO TOWN COUNCIL

MARCH
2026



With heartfelt appreciation and in memory of Councilman Jim Romanello, a bench has been dedicated in his honor in the Water Wise Garden near 3rd Street. His support and friendship meant so much to the community. We are grateful to his family who joined us for the dedication on March 27, 2026.

Prepared by
MADELINE VANDENHOEK
Town Manager

TOWN MANAGER'S MESSAGE

This month was marked by meaningful milestones and strong community engagement. We celebrated First National Bank's 125th anniversary, attended Monument Fire District's groundbreaking for a new fire station, participated in the Bearbotics Team open house, and gathered for a community dedication honoring Councilmember Jim Romanello. We also recognized the outstanding work of our Police Department at their annual awards ceremony. Internally, the leadership team participated in an off-site workshop and team-building activities, while staff came together for our monthly all-staff meeting, quarterly anniversary celebration, and a series of benefits roundtables focused on health care options.

We initiated an important partnership with the Pikes Peak Office of Emergency Management and began work on updating our Emergency Management and Continuity of Operations plans, an effort that will continue throughout much of the year. In addition, we launched the "Rename the Road" contest for Old Denver Road, encouraging community participation in shaping Monument's future.

Regional collaboration remains a priority. I attended the quarterly regional City Managers' lunch in Florence alongside representatives from CML, DOLA, and PPACG to discuss shared challenges and opportunities. Other engagements included the Colorado Women Leading Government International Women's Day luncheon, the GRIT City Summit focused on resilient communities, and the City Summit exploring partnerships among nonprofits, faith-based organizations, and local governments. Ongoing coordination also continues through meetings with Monument Fire District, the Tri-Lakes Chamber of Commerce, El Paso County's Community Development Block Grant Advisory Board, Loop Water Authority, and regular legislative committee meetings with Fountain and Woodland Park. We also met with organizations involved in Monument's Fourth of July events to explore ways to ensure these traditions remain financially sustainable.

Our commitment to community outreach continued as Planning Director Ungerleider presented Monument's strategic priorities and comprehensive plan to NEPCO, and I spoke to the Tri-Lakes Dynamic Rotary about Town finances and the importance of shopping locally as an investment in our community. We look forward to additional opportunities to share this information with our partners and residents. Operationally, the Police Department continued to build capacity through hiring and training while expanding tools such as drone deployment to enhance service delivery. Public Works, Parks, Fleet, and Water staff demonstrated exceptional responsiveness throughout the month, managing snow events, infrastructure maintenance, and critical systems with professionalism and coordination.



ADMINISTRATION

- Researched strategic plan dashboard options and developed a streamlined approach for biannual progress reporting to Council and on the Town website.
- Coordinated with T2 vendor on implementation of two paid parking kiosks and associated agreements; shared details with staff and gathered feedback.
- Researched STR program best practices, including coordination with Castle Rock; engaged Deckard Technologies on compliance monitoring, address identification, reporting, and outreach services.
- Coordinated with Magellan Strategies on the community survey.
- Created a centralized Council resource library in the board portal and added 23 publications.
- Facilitated a team meeting to review progress, align strategy, and identify next steps for strategic objectives.
- Assisted the Planning Department with research and drafted proposed updates to reintroduce retainer fees into the fee schedule.
- Reviewed draft Title 9 revisions and incorporated feedback on the fireworks section.
- Reviewed proposed amendments to the FCPA complaint review process and provided recommendations to legal counsel.
- Reviewed attorney invoices, requested billing adjustments, updated tracking spreadsheet.
- Updated Town Council agenda format to include potential action following executive sessions and repositioned public comment.
- Kat presented a webinar for NAGARA, receiving positive feedback and engagement from records management professionals.
- Kat completed the Finance file plan and added it to the shared resources folder.
- Kat collaborated with Finance staff to create a centralized folder and tracking template for Certificates of Liability Insurance, including expiration tracking and ongoing coordination on migration efforts.
- Kat continued records inventory and destruction efforts within Public Works.
- Kat continued developing a Laserfiche User Manual and refining system settings to support increased staff usage and familiarity.

New Brick-and-Mortar Business Licensed Issued in Quarter 1	
ARIAL LABANDERIA LLC	810 SKY VISTA PT #140
BRAIN BUILDERS TUTORING	251 FRONT ST STE 2
ECHO SALON & SPA	491 W HWY 105 STE0100
HEARTH HOUSE VENUE	192 FRONT STREET
HOME PLACE RANCH COMMUNITY CENTER	454 SANCTUARY RIM DRIVE
LOOP LIQUOR	1430 CIPRIANI LOOP
MASON LAW AND PLANNING GROUP	16055 OLD FOREST PT. STE 301
MCDONALD'S #10217	450 HIGHWAY 105
MCDONALD'S #32564	765 W BAPTIST ROAD
PANDA EXPRESS #3915	16481 CINEMATIC VIEW
PERSPIRE SAUNA STUDIO	830 SKY VISTA PR STE 100
RED STAR VAPOR & SMOKE	481 W HIGHWAY 105 UNIT C
SERRANOS COFFEE COMPANY	625 HIGHWAY 105
SILVER KEY SENIOR SERVICES , INC	586 HIGHWAY 105
TRAILS END TAVERN	252 FRONT STREET
TROPICAL SMOOTHIE CAFÉ	15932 JACKSON CREEK PKWY UNIT E
VISITING ANGELS MONUMENT	481 WEST HWY 105 UNIT 8
WARRIOR INSURANCE GROUP	16055 OLD FOREST PT STE 203
Blue highlight = change of location	
Yellow highlight = change of ownership	

Town Clerk – quarterly statistics	
Business Licenses Renewed	286
New Business Licensed Issued	106
Solicitor Permits Issued	15
Liquor Licenses Renewed	11
Interments Scheduled	2
Cora Requests Processed	10

FINANCE & HUMAN RESOURCES

- Finance continues to work collaboratively with Public Works on the Heart of Monument Park development.
- The Town's auditors were on-site the week of March 16 to perform work on the 2025 audit.
- The Citizen Service Levels Advisory Committee meet and reviewed community survey questions.
- Staff continues to pursue delinquent sales tax accounts.
- Finance staff supported the Police Department with the CDOT audit of the high visibility enforcement grant.
- The Request for Qualifications for a Municipal Judge was issued and questions were responded to.
- Council adopted an updated Investment Policy.
- Emily and Jennifer presented workshops at the Colorado GIS Quarterly meeting held at Town Hall.
- Jennifer was again invited as a guest lecturer at Pikes Peak State College and presented on Interviewing and Ethics.

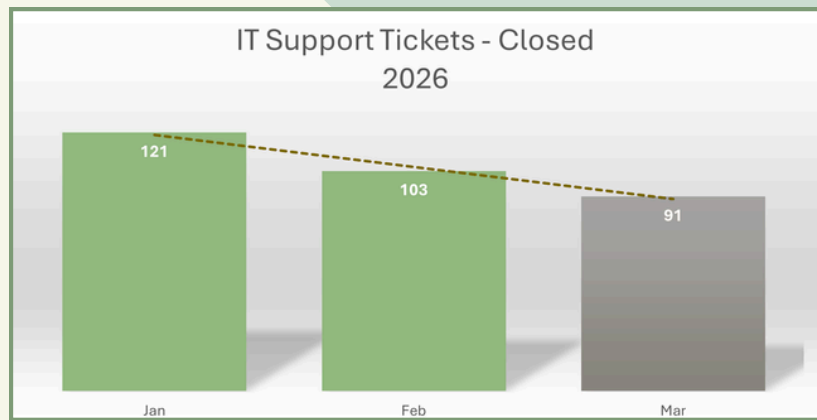


Laurie Young presents at the March all-staff meeting on how sales tax is applied in Monument, highlighting how different items are taxed. Below, James Schubeaur and Cpl. Rob Stewart display gifts presented by the Engagement Committee at the quarterly social, recognizing their 25 and 15 years of service to the Town of Monument, respectively.



INFORMATION TECHNOLOGY

- Completed 103 IT support tickets in February; IT Director resolved 39% of tickets.
- Completed 91 IT support tickets month-to-date in March; IT Director resolved 42% of tickets.
- Upgraded three mobile devices.
- Completed onboarding of a new Police Lieutenant and Records Specialist and offboarding of one Police Officer.
- Deployed and supported installation of the EthiCard mobile app for the Police Department via Microsoft Intune, including manual installs.
- Replaced three Police Department laptops (MDCs) that had reached end of life.
- Completed relocation and setup of Planning Department technology to new office space.
- Updated configuration of Planning Department business printer and plotter.
- Assisted with A/V setup for the Planning Director's conference room.
- Completed multiple technology change management initiatives, including two updates to the Caselle financial system within a three-week period.
- Completed onboarding of new Public Works staff (Water Technician and temporary Water Administrative Assistant) and offboarding of three team members.
- Reconfigured and relocated Public Works printers and front desk technology to support updated water and utility administration functions and customer service needs.
- Troubleshoot and resolved Council Chambers A/V system issues, including camera and audio functionality.
- Continued security updates for Police Department mobile applications, including Language Insight (83% complete) and Duo multi-factor authentication (78% complete), with a combination of automated and manual updates.
- Provided ongoing support for Public Works, including access adjustments for temporary staff and provisioning of two new laptops for Water Technicians.
- Prepared and planned a Senior Planet technology training course in coordination with Silver Key; coordinated on improved outreach after cancellation due to low enrollment.
- Provided two hours of one-on-one technology support to Silver Key members.



PLANNING

		Mar-26		CYTD-2026		Mar-25		CYTD-2025	
Permit Type		Quantity	Value	Quantity	Value	Quantity	Value	Quantity	Value
Single Family	Single Family								
	New	17	\$6,262,572	45	\$360,920,654	19	\$6,276,841	34	\$10,729,818
	Addition/Remodel	2	\$15,500	10	\$90,250	2	\$15,000	8	\$62,950
	SF Subtotal	19	\$6,278,072	55	\$361,010,904	21	\$6,291,841	42	\$10,792,768
Multi Family	Multi-Family								
	New	0	\$0	0	\$0	0	\$0	0	\$0
	Addition/Remodel	0	\$0	0	\$0	0	\$0	0	\$0
	MF Subtotal	0	\$0	0	\$0	0	\$0	0	\$0
Commercial	Commercial								
	New	0	\$0	2	\$2,100,000	0	\$0	0	\$0
	Addition/Remodel	0	\$0	2	\$205,000	0	\$0	0	\$0
	COM Subtotal	0	\$0	4	\$2,305,000	0	\$0	0	\$0
Total New Builds		19	\$6,278,072	59	\$363,315,904	21	\$6,291,841	42	\$10,792,768

- Brooke prepared invoices to collect reimbursement for attorney fees from project applicants, worked with Finance to organize project account details, and provided customer service to residents with water billing inquiries.
- Issued 26 permits this month, with 20 permits currently under review.
- Prepared to introduce the Stormwater Master Plan and Street Standards Manual at the April 20 and May 4 Town Council meetings, respectively. Both plans will be available on the Town's website for public review and feedback.
- Assisted in updates to Title 8 of the Town Code by drafting language addressing nuisance vehicles, including clearer standards for inoperable vehicles and limits on the number and storage of such vehicles to promote a cleaner community and clarify expectations.
- Initiated research into new permitting software and emerging AI tools to boost efficiency, streamline application review, and improve customer service within the department and across the organization.
- Launched the "Rename the Road" community contest on March 9 where residents are invited to help select a new name for Crossfield Drive. This is an opportunity to put a local stamp on the map and celebrate Monument's unique character. Participation has been strong and finalists will be voted on at the April 20 Town Council meeting.
- On March 21, Dan presented at the NEPCO membership meeting, providing an overview of the Town's strategic priorities, including updates on the 3-Mile Annexation Plan, Comprehensive Plan (Monument 2040), and the Stormwater Management Plan. He also highlighted coordination with the Monument Fire District, ongoing economic development efforts, and key infrastructure projects such as Jackson Creek Parkway, Higby Road improvements, and the future Public Works facility. The presentation concluded with updates on long-term planning initiatives, including development of the Town's first five-year Capital Improvement Plan and early efforts on a Master Transportation Plan, all aimed at supporting a well-planned and resilient community.
- On March 11, the Planning Commission recommended approval of the Alpine Buick Final Plat and Final PUD. Thoughtful refinements to site design, including vehicle display limitations, phased parking considerations, and sidewalk materials came on recommendations for conditions of approval. The Monument Fire rezone and Final Plat also received a recommendation of approval. Conversations covered everything from water usage to training tower operations, as well as discussion related to shared training facilities and overall site functionality. Both agenda items will be heard by the Town Council on April 6.
- In an effort shape the future look and feel of development in Monument, staff is preparing for an upcoming Planning Commission workshop on design standards for metal buildings across all zone districts.
- Several notable projects are under review, including the Santa Fe Meadows residential subdivision (located south of Terrazzo Drive within the Falcon Commerce Center), a request from District 38 to install a modular building on its downtown property to expand capacity, a multifamily project in the Conexus project (just south of the recently approved Meritage subdivision), a 7 Brew Coffee drive-through in Monument Marketplace, and a Monument Ridge PUD amendment for a medical office building.
- March saw 520 views on the Town's web maps over the past 30 days, offering helpful insight into how the community is engaging with our GIS tools.
- GIS supported both the Road Renaming campaign and Planning Department development review with the creation of clear, user-friendly maps.
- The team proudly coordinated, hosted, and joined fellow professionals for the GIS Colorado Winter Meetup at Town Hall on March 5–6.
- Annexation research continued with updated mapping and improved organization of historical records in Laserfiche, making information more accessible for future use.
- The Planning Commission has one regular member vacancy and two alternate member vacancies. Town of Monument residents interested in serving are encouraged to apply at: <https://www.townofmonument.org/263/Planning-Commission>.

Fees	26-Jan	26-Feb	26-Mar
Commerical Alteration	\$825	\$2,225	\$0
Commerical New - TOM	\$0	\$0	\$0
Commerical New - TRIVIEW	\$26,911	\$176,539	\$0
Commerical One Stop	\$100	\$400	\$200
Land Use	\$11,550	\$0	\$1,650
Miscellaneous	\$450	\$350	\$0
One Stop	\$157	\$0	\$572
Public Works	\$1,875	\$4,350	\$1,175
Residential Alteration	\$2,922	\$460	\$360
Residential New - TOM	\$53,202	\$33,163	\$18,796
Residential New - TRIVIEW	\$287,143	\$445,982	\$752,665
Total Fees	\$385,135	\$663,469	\$775,417
Number of Permits	19	37	28
Average Fees Per Permit	\$20,270	\$17,932	\$27,693

POLICE

- Officer Elmshauser has started his Field Training while Officers Guillen and Connell will be completing their training and going to their assigned patrol teams.
- Lt. Mihalko and our new record tech, Michelle Lundstedt started on March 16.
- Hiring boards were held for new officers.
- Our second Cops and Bobbers event is scheduled for June.
- We have seven licensed drone pilots, and the drones have now been deployed on patrol.
- MPD would like to thank Councilmember Kimple for his generous donation of two drones.
- The parking lot fencing project will be presented to Town Council for approval.
- Our Chief's Awards Banquet was a success, and we would like to thank all the guests that attended.



Monument Police Department officers and staff are recognized by Chief Regan at the annual awards banquet for their outstanding service and contributions. In the final image, Chief Regan and Commander Johnson accept a generous donation of two drones from Councilmember Kimple.



PUBLIC WORKS

FACILITIES

- Installed some new carpet in PD front office.
- Updated and fixed lighting outside of Town Hall.
- Fixing and repairing walls and painting the old planning office.
- Installing some new monitors in the senior planner's office.

FLEET

- Completed CPR certification; valid for the next two years.
- Replaced the fuel filter on the older loader.
- Replaced valve cover gaskets, crankcase valve, and exhaust donut on the older skid loader.
- Replaced a snowplow controller on one unit.
- Replaced an ECU on one of the snowplows.
- Repaired a sander harness on one unit.
- Completed additional ongoing equipment maintenance and repairs.
- Installed the shoulder apparatus on the Freightliner; temporarily reversed the installation due to storm forecast needs.



PARKS

- Framed and reconstructed a new wall to replace one removed due to vandalism; demolition and rebuild completed.
- Completed flooring at Limbach Park, Dirty Woman Creek Park restroom, and Santa Fe Trail Park.
- Participated in cross-training with the Streets Division.
- Installed erosion control blankets in Red Rock Ranch.
- Restriped the parking lot at the Town shop to improve organization.
- Removed roadway hazards following a snow event.
- Assisted with setup for a cemetery cremation service.
- Responded to an 8-inch snow event, including plowing operations.
- Supported Planning and GIS teams with office relocation, including moving cabinets, dismantling, and reassembling desks, and relocating equipment and shelving.
- Participated in cross-training with the Water Department, including response to an after-hours water break.
- Conducted cleanup and damage control following high winds, including removal of debris, branches, and other hazards.
- Completed cleaning, post-trip inspections, and minor repairs on all snowplow equipment.



WATER

- Installed a new HMI on the Well 7 drive after the previous unit stopped displaying data.
- Onboarded a new operator.
- Trained all operators on the Xpress Bill Pay system.
- Collected PFOS samples at Wells #11, #12, and #13.
- Completed additional compliance sampling at multiple well locations.
- Procured a replacement break van and began preparations for upfitting and service.
- Updated select SCADA system components.
- Cross-trained in billing programs to assist with backlog and support operations.
- Managed billing-related tasks, including bulk fill account setup, closing cost estimates, new homeowner accounts, and other requests.
- Responded to a service line break on 4th Street.
- Sent three operators to a four-day training.
- Continued asbestos abatement at the Beacon Lite future tank site.

