

Concept Utility Letter

FOR

The Brickyard
TOWN OF CASTLE ROCK, COUNTY OF DOUGLAS
STATE OF COLORADO

August 25th, 2022
Revised: November 20th, 2024

Prepared for:

Confluence Companies, LLC
430 Indiana Street, Suite 200
Golden, Colorado 80401
Phone: (720) 643-5775

Prepared by:



1120 Lincoln Street, Suite 1000
Denver, CO 80203
Ph.: 303-623-6300, Fax: 303-623-6311

Harris Kocher Smith Project No.: 200726
Town of Castle Rock Project No.: PDP22-0002 – ACME Brickyard

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CONTACT INFORMATION

Applicant

Company Name: Confluence Companies, LLC
Contact: Anthony DeSimone
Email: tony@confluenceco.com
Mailing Address: 430 Indiana Street, Suite 200
Golden, CO 80401
Telephone #: (303) 643-5779

Concept Utility Letter Consultant

Company Name: Harris Kocher Smith
Contact: John O'Rourke, PE
Email: jorourke@hkseng.com
Mailing Address: 1120 Lincoln Street, Suite 1000
Denver, CO 80203
Telephone # (303) 623-6300
Fax # (303) 623-6311

I. Project Location and Description

A. Site Location

The Site is located at 401 Prairie Hawk Drive in Section 10 and Section 11, Township 8 South, Range 67 West of the 6th P.M. within the Town of Castle Rock in Douglas County, Colorado. The Site is bounded by Prairie Hawk Drive to the east, Topeka Way to the northwest, and W Plum Creek Parkway to the southwest. The Site is near downtown Castle Rock on the west side of Interstate 25. A Vicinity Map is included in Appendix C.

B. Description of Property and Land Use

This Concept Utility Letter has been prepared for The Brickyard Planned Development Plan (PD) and is intended to assess the property's existing as well as proposed water and wastewater systems. The 31.10-acre Brickyard development ("Site") will consist of a hotel, condos, apartments, recreation center, retail, office buildings, a water quality/detention pond, landscaped areas, and paved surfaces. See Appendix D for the Planned Development Plan – Conceptual Utility Plan.

The property is currently zoned as an IO, Interchange Overlay District and I-2, General Industrial in support of a Mixed-Use Development. The property is being rezoned to Interchange Overlay Planned Development Plan. It is assumed the project will consist of 69,523 square feet of office/retail/commercial space, 22,119 square feet of restaurant space, a 123-room hotel, a 145,000 square foot recreation center, and 528 dwelling units of residential space. The provided uses and square footages are for conceptual use only and are not necessarily reflective of the actual future usage. There is vacant and undeveloped land to the south and west of the property. However, a future water main will be installed to the west in the future Prairie Hawk extension as part of the Miller's Landing. From the assumed uses for the project, it is expected that 748 water SFEs and 771 wastewater SFEs will be produced. The project will most likely be phased, and phasing will be addressed in the future preliminary utility report. See Appendix F for the tabulation of the number of SFEs proposed for the overall development.

II. Existing Water System

A. Existing Distribution System

The Brickyard is near an existing 12-inch yellow zone and meadows blue water main along Prairie Hawk Drive. Existing 12" yellow zone water main that cannot service the site. See Appendix E for the Utility Maps.

B. Existing Supply Facilities

The Town of Castle Rock's "Yellow" Pressure zone is in the northeast portion of the site and some of the existing services for the Brickyard are fed from this pressure zone. The Town's "Blue" Pressure zone is located on the north and west side of the industrial tributary within Topeka Way and Atchinson Way (future Prairie Hawk Drive extension). The city requested

that the Site be extend up existing Prairie Hawk Drive to Topeka Way to connect to the “Blue” Pressure zone that the Miller’s Landing Site is adding. See Appendix E for the Pressure Zone Map.

III. Proposed Water System

A. Proposed Distribution System

The Brickyard is located mostly within the Town of Castle Rock’s Blue Pressure Zone and Tank No. 8 will serve the area. The Brickyard will be connecting to the Town of Castle Rock’s Blue Pressure Zone and Tank No. 8 will serve the area. The proposed offsite improvements to connect to the Blue Pressure system is approximately 2,454 LF. The offsite connection will extend from the north end of the site along existing Prairie Hawk Drive and connect into the existing main within Topeka Way. A second off-site water main will be installed as part of this development in Praxis Street connecting to main in Plum Creek Parkway. The proposed onsite improvements will consist of approximately 3,117 LF of additional lines to connect to the existing water main on Prairie Hawk Drive and proposed main in Praxis Street. The proposed water system will be analyzed further as the design of the project progresses. The waterline sizing will be confirmed using a detailed hydraulic analysis. The project is estimated to require 748 water SFEs, which is significantly higher than the current land use that is estimated to require approximately 93 SFEs. An additional analysis will be required to ensure that there is adequate capacity available for the project due to the increase in SFEs. The preliminary and final utility reports will address the increase in SFEs and determine the available capacity. The proposed and existing infrastructure serving the Brickyard may need to be revised or up sized upon further analysis of demands and existing infrastructure. Any future development of the existing water infrastructure needed to service this site is the responsibility of the developer. However, the Town has indicated in the development agreement for Miller’s Landing that the adjacent property owner is responsible for extending the water main in the future Prairie Hawk Extension west of the site.

See Appendix F, for the water SFE calculations.

B. Proposed Supply Facilities

There are no additional water supply facilities that are anticipated to serve this development. The system will be further analyzed throughout the project design process to confirm that there is no demand for additional supply facilities.

IV. Existing Wastewater System

A. Existing Collection System

There is an existing 18-inch sanitary sewer main along Prairie Hawk Drive to the east of the project site. There is also an existing 8-inch sanitary sewer main that is along Topeka Way just northwest of the site.

V. Proposed Wastewater System

A. Proposed Collection System

The onsite proposed improvements consist of approximately 1,813 LF of sanitary lines connecting to the Prairie Hawk Drive main. The existing 12-inch sanitary main will be upsized to 24-inches on the northeast side of the Site located in the existing Prairie Hawk Drive. The existing 18-inch sanitary main in Prairie Hawk Drive from the northern property edge up to Wolfensberger Road will be upsized to 24-inch. The proposed 24-inch main is extended south past the Site boundary to a stub for a future connection by Dawson Trails. An 18-inch pipe is required with this development. Per discussions with the Town this main will be upsized to 24-inch to accommodate future developments in the area. Upsizing of 12-inches sanitary sewer is to be replaced as indicated in the Town's Master Plan. Owner is also required to contribute to the downstream Malibu Sewer Upsize project. The exact location, both horizontally and vertically, of the existing sanitary sewer system will be verified early in the design process. The project is estimated to produce about 771 SFEs, which is significantly higher than the current land use which is estimated to be approximately 93 SFEs. Additional analysis will be required in the future to ensure that adequate capacity is available for the project Site due to the increase in SFEs. The preliminary and final utility reports will address the increase in SFEs and will be used to determine the available capacity. The proposed and existing infrastructure serving the Brickyard may need to be revised or up-sized dependent on further analysis of the demand and existing infrastructure. Any future development of the existing wastewater infrastructure needed to service this site is the responsibility of the developer.

See Appendix F, for the wastewater SFE calculations.

B. Proposed Wastewater Facilities

It is anticipated that there will be future grease/oil interceptors for restaurant/commercial use and in the parking garages, but exact locations will be determined in the SDP and CD phases of the project. Additional sanitary sewer and sanitary service connections will be provided for future private development on the property.

VI. References

Castle Rock 2018 Water System Design, Castle Rock Water Engineering, December 2018

Castle Rock 2017 Water Master Plan, Castle Rock Water Engineering, March 2018

Castle Rock 2018 Wastewater Collection Design, Castle Rock Water Engineering, December 2018

Castle Rock 2016 Wastewater Master Plan Update, Castle Rock Water Engineering, March 2017

Please contact me if you have any questions or require additional information at jorourke@hkseng.com or 303-623-6300.

Sincerely,
HARRIS KOCHER SMITH

A handwritten signature in black ink, appearing to read 'Libbey Endersbe', with a stylized, flowing script.

Libbey Endersbe, PE
Project Engineer

APPENDIX A

Conceptual Utility Letter Checklist



Concept Utility Letter Checklist

The Concept Utility Letter must be in conformance with the latest Town of Castle Rock Water and Wastewater System Design Criteria Manuals, available on the Town's website.

The Concept Utility Letter may be submitted in letter format, signed and sealed by a Professional Engineer licensed in the State of Colorado. The purpose of the Concept Utility Letter is to confirm that the utilities proposed for the development can be feasibly connected to the Town's water distribution system and/or wastewater collection system, that the Town's system can adequately support the development, and to ensure consistency with the Town's Water/Wastewater Master Plans.

The preparer should contact and work with the Town Utility Engineering Staff regarding any design, utility master planning and existing system questions (720-733-6000). Whenever possible, water and wastewater utility reports should be combined into a single document provided that separate sections clearly identify the information associated with each of the two systems. The following outline sets forth the **required minimum** content to be provided in the Concept Utility Letter that shall be submitted with the Planned Development Plan (PDP). A copy of this checklist must be submitted with the Concept Utility Letter.

Please check off the following items to assure your letter is complete. Appropriate notations shall be provided with the checklist. For example, if a specific item is not addressed or not applicable, an explanation needs to be provided.

Included	N/A	
		PROJECT INFORMATION
✓		A. Name of Project, including legal name of development
✓		B. Address
✓		C. Owner
✓		D. Developer
✓		E. Engineer
✓		F. Submittal date and revision dates as applicable
		PROJECT LOCATION AND DESCRIPTION
✓		A. Site Location
✓		B. Description of Property and Land Use
		EXISTING WATER SYSTEM
✓		A. Existing Distribution System
✓		B. Existing Supply Facilities
		PROPOSED WATER SYSTEM
✓		A. Proposed Distribution System
✓		B. Proposed Supply Facilities

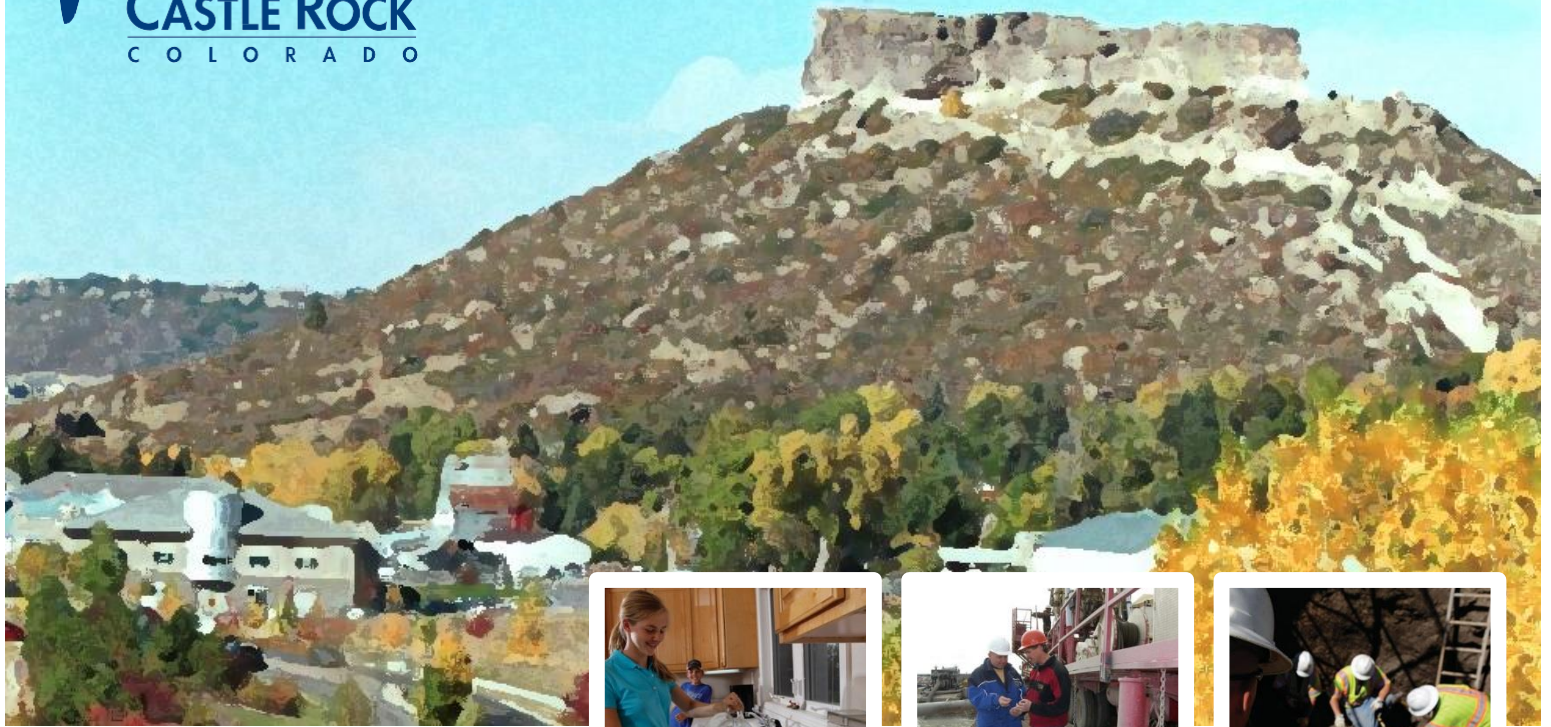
Concept Utility Letter – Formatting Checklist

Included	N/A	
		EXISTING WASTEWATER SYSTEM
		A. Existing Collection System
		PROPOSED WASTEWATER SYSTEM
		A. Proposed Collection System
		B. Proposed Wastewater Facilities
		REFERENCES
		APPENDICES
		Appendix A — Copies of all pertinent information from reference materials
		Appendix B — Vicinity Map
		Appendix C — Planned Development Plan
		Appendix D — Utility Map(s) provided by Castle Rock Water, Engineering Division

Notes/Comments:

APPENDIX B

Reference Materials



TOWN OF CASTLE ROCK

Water System Design

2018 CRITERIA MANUAL



Published by the Town of Castle Rock, 100 N. Wilcox St., Castle Rock, CO 80104
December 4, 2018

associated with the Town's Concept, Preliminary, and Final Development Packages are documented in Chapter 3 of these Criteria.

4.4.1. Design Demands

The tabulation below provides the Average Daily Demand (ADD) rates that shall be applied to compute the demands associated with the various types of land use within the development. Demands shall be computed for intermediate and full build-out phases of the development, and shall be assigned to the appropriate design points within the model to accurately reflect the geographical distribution of land use throughout the site.

Land Use	Typical ADD/Unit	Typical SFEs/Unit
Single Family Residential and Duplexes	400 gpd/dwelling unit	1.00/dwelling unit
Multi-Family Residential (Townhomes and	260 gpd/dwelling unit	0.65/dwelling unit
Retail/Offices	0.2 gpd/SF	0.0005/SF
Hotels/Motels	75 gpd/room	0.19/room
Restaurants	3.0 gpd/SF	0.0075/SF
Car Washes	5,000 gpd/facility	12.5/facility
Industrial / Other Commercial	1,200 gpd/acre	3.0/acre
Institutional	800 gpd/acre	2.0/acre
Rates for Typical Douglas County		
School Sizes:		
Elementary (10 ac, 675 students)	3,375 gpd/school	8.44/school
Middle (25 ac, 850 students)	8,500 gpd/school	21.25/school
High (50 ac, 1,700 students)	17,000 gpd/school	42.50/school
Rates for Alternate School Sizes:		
Elementary – Domestic	5 gpd/student	0.013/student
Middle – Domestic	10 gpd/student	0.025/student
High – Domestic	10 gpd/student	0.025/student
Elementary Schools – Irrigation	3,000 gpd/total acreage	7.5/total acreage
Middle Schools – Irrigation	5,250 gpd/total acreage	13.1/total acreage
High Schools – Irrigation	4,400 gpd/total acreage	11.0/total acreage
Churches	600 gpd/church	1.5/church
Gym/Fitness Center	0.5 gpd/SF	0.00125 SFE/SF
Irrigated Land (Sports Fields and School Sites Excluded)	3,750 gpd/ irrigated acre	9.38/acre

4.4.1.1 Wastewater System Average Daily Flow (ADF)

Land Use	Typical ADF/Unit	Typical SFEs/Unit
Single Family Residential and Duplexes	200 gpd/dwelling unit	1.00/dwelling unit
Multi-Family Residential (Townhomes and Condos)	130 gpd/dwelling unit	0.65/dwelling unit
Retail/Offices	0.1 gpd/SF	0.0005/SF
Hotels/Motels	75 gpd/room	0.375/room
Restaurants	1.5 gpd/SF	0.0075/SF
Car Washes	5,000 gpd/acre	25.0/acre
Industrial/Other Commercial	600 gpd/acre	3.0/acre
Institutional	400 gpd/acre	2.0/acre
Churches	300 gpd/church	1.5/church
Gym/Fitness Center	0.5 gpd/SF	0.00125 SFE/SF
Irrigated Land	0 gpd/acre	0.0/acre
<u>Rates for Typical Douglas County School Sizes:</u>		
Elementary (10 ac, 675 Students)	3,375 gpd/school	16.88/school
Middle (25 ac, 850 students)	8,500 gpd/school	42.50/school
High (50 ac, 1700 students)	17,000 gpd/school	85.00/school
<u>Rates for Alternate School Sizes:</u>		
Elementary	5 gpd/student	0.025/student
Middle	10 gpd/student	0.050/student
High	10 gpd/student	0.050/student

The demands noted in the table above represent the “winter time” or “dry weather” Average Daily Flow (ADF) with no allowance for infiltration and inflow (I/I). I/I shall be accounted for in accordance with the Peak Design Flow computation discussed in the sections to follow.

Regarding design flows for schools, planned school sizes shall be confirmed with the Douglas County School District and documented in the Utility Report. The tabulated rates



Water Master Plan 2017



Engineering Division

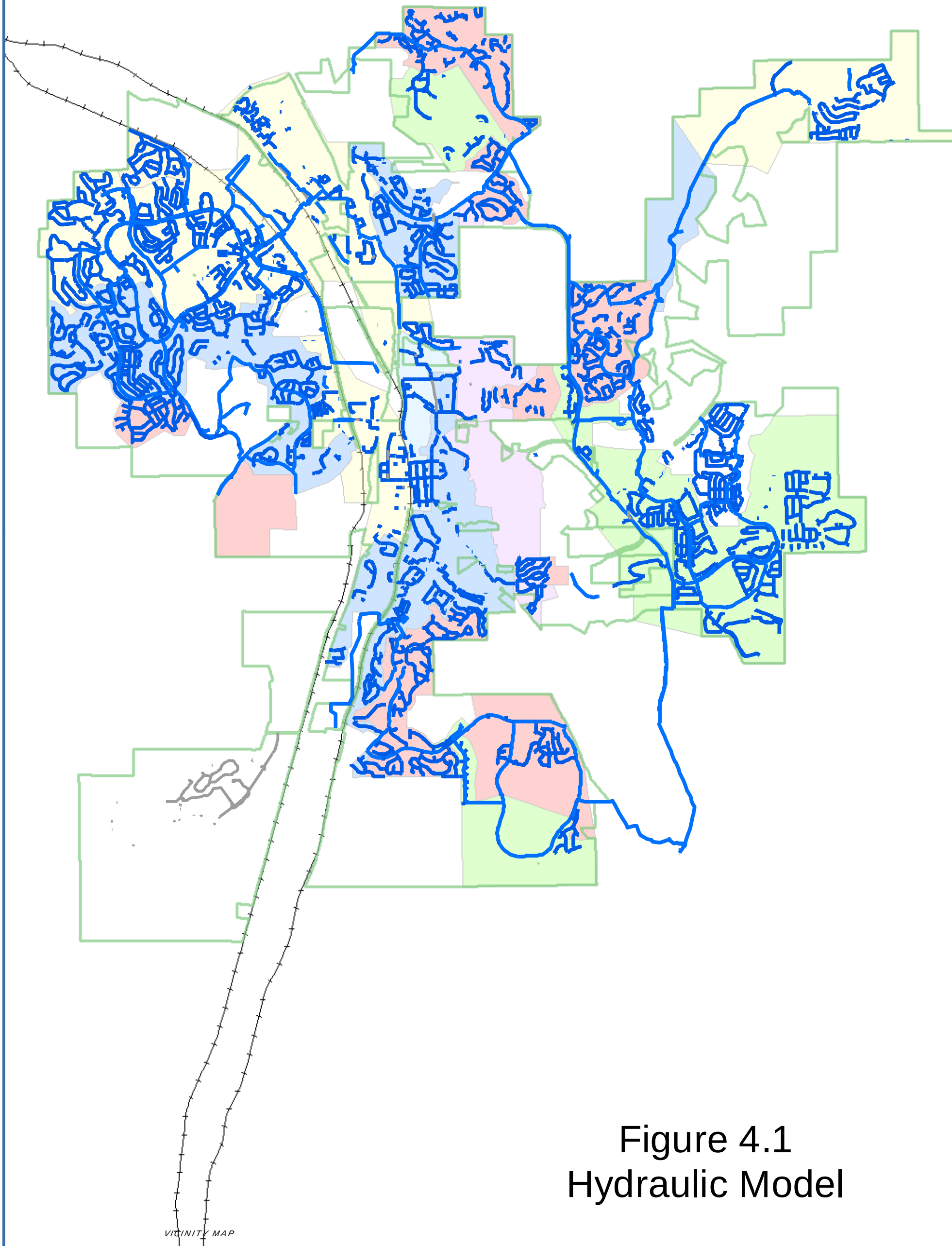


Figure 4.1
Hydraulic Model

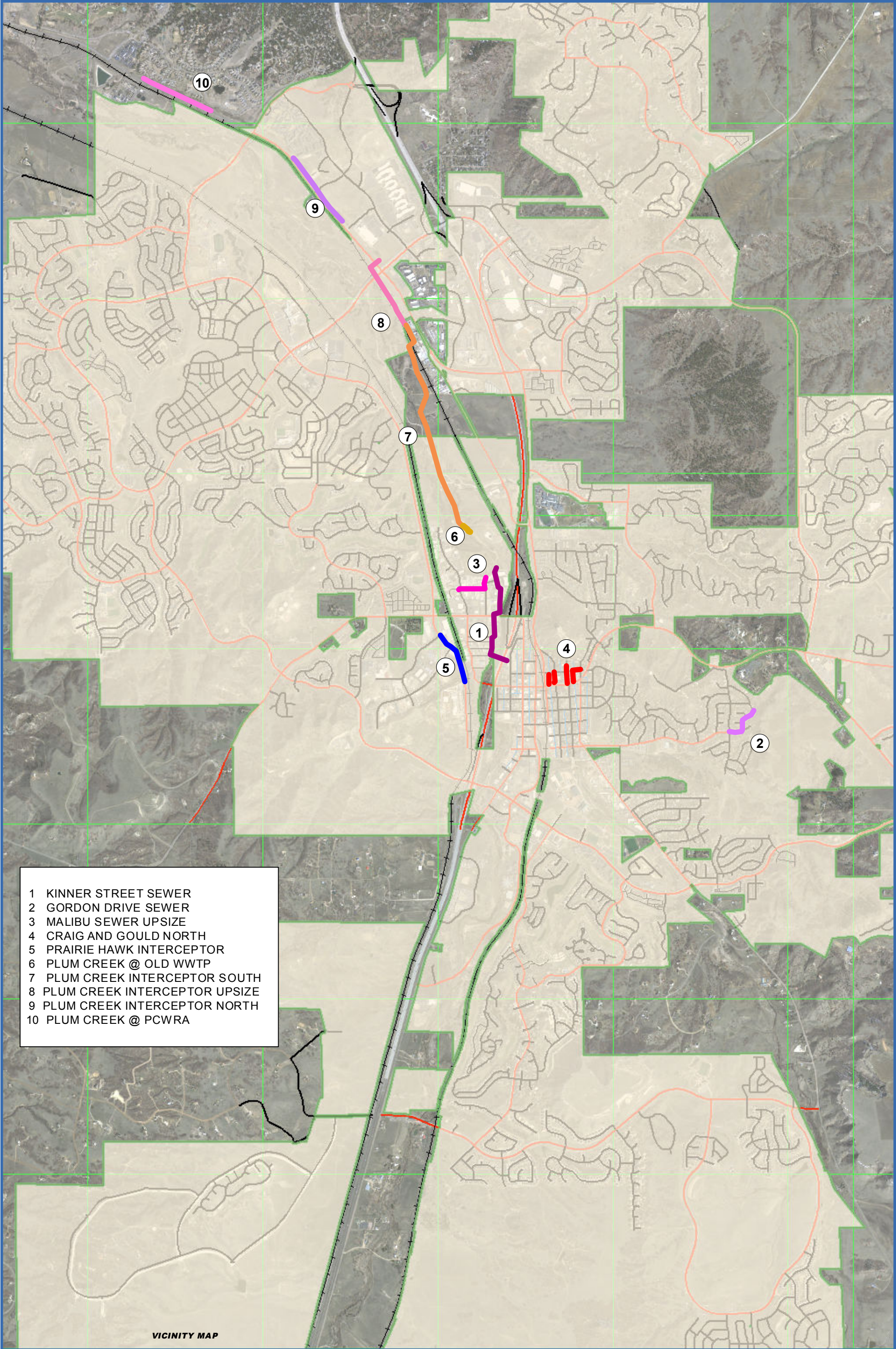




Wastewater Master Plan 2016



Engineering Division



- 1 KINNER STREET SEWER
- 2 GORDON DRIVE SEWER
- 3 MALIBU SEWER UPSIZE
- 4 CRAIG AND GOULD NORTH
- 5 PRAIRIE HAWK INTERCEPTOR
- 6 PLUM CREEK @ OLD WWTP
- 7 PLUM CREEK INTERCEPTOR SOUTH
- 8 PLUM CREEK INTERCEPTOR UPSIZE
- 9 PLUM CREEK INTERCEPTOR NORTH
- 10 PLUM CREEK @ PCWRA

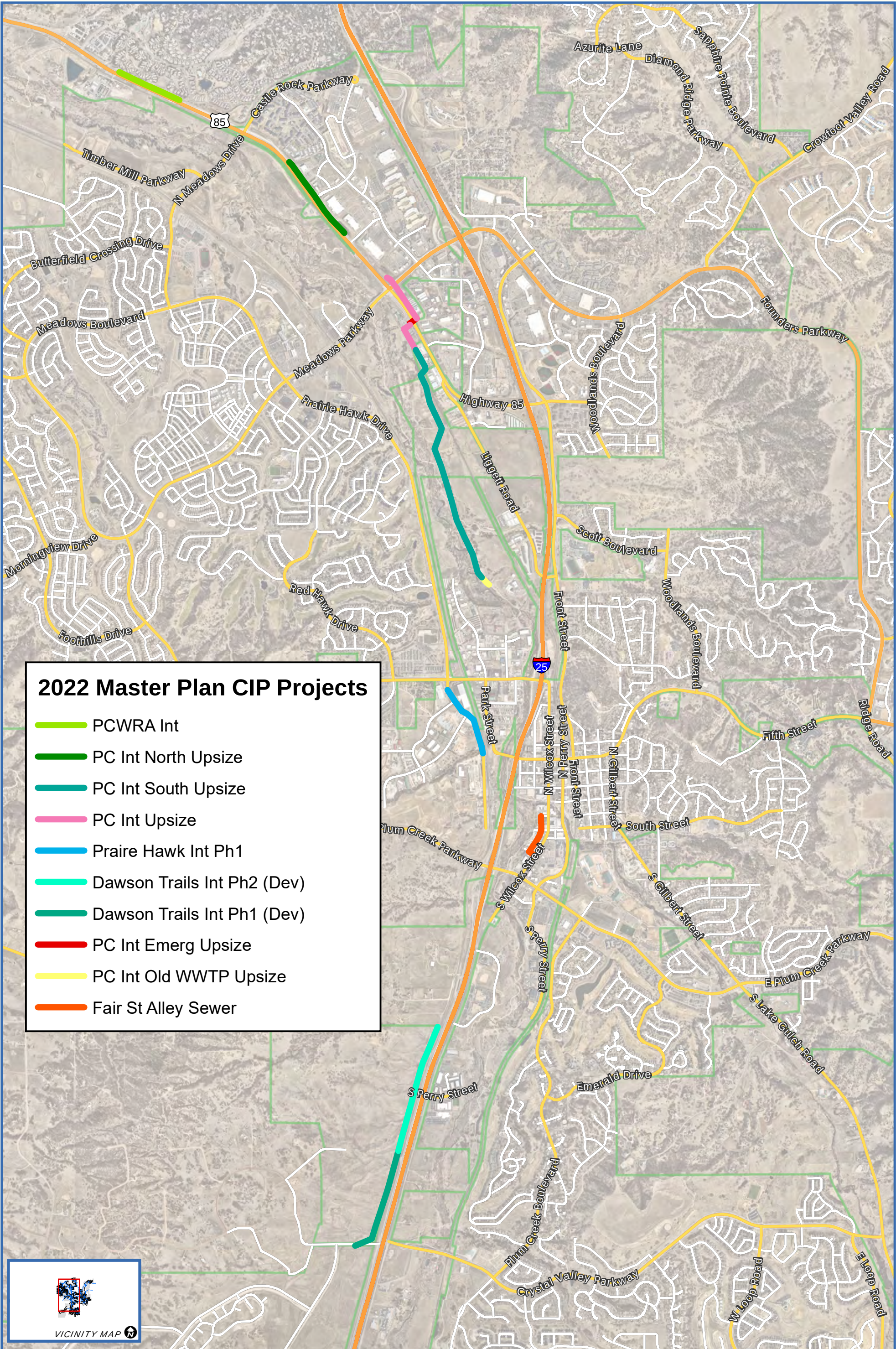
VICINITY MAP



1 inch = 1 miles



CASTLE ROCK UTILITIES
2016 MASTER PLAN
WASTEWATER PROJECTS
FIGURE 5.2



2022 Master Plan CIP Projects

- PCWRA Int
- PC Int North Upsize
- PC Int South Upsize
- PC Int Upsize
- Praire Hawk Int Ph1
- Dawson Trails Int Ph2 (Dev)
- Dawson Trails Int Ph1 (Dev)
- PC Int Emerg Upsize
- PC Int Old WWTP Upsize
- Fair St Alley Sewer



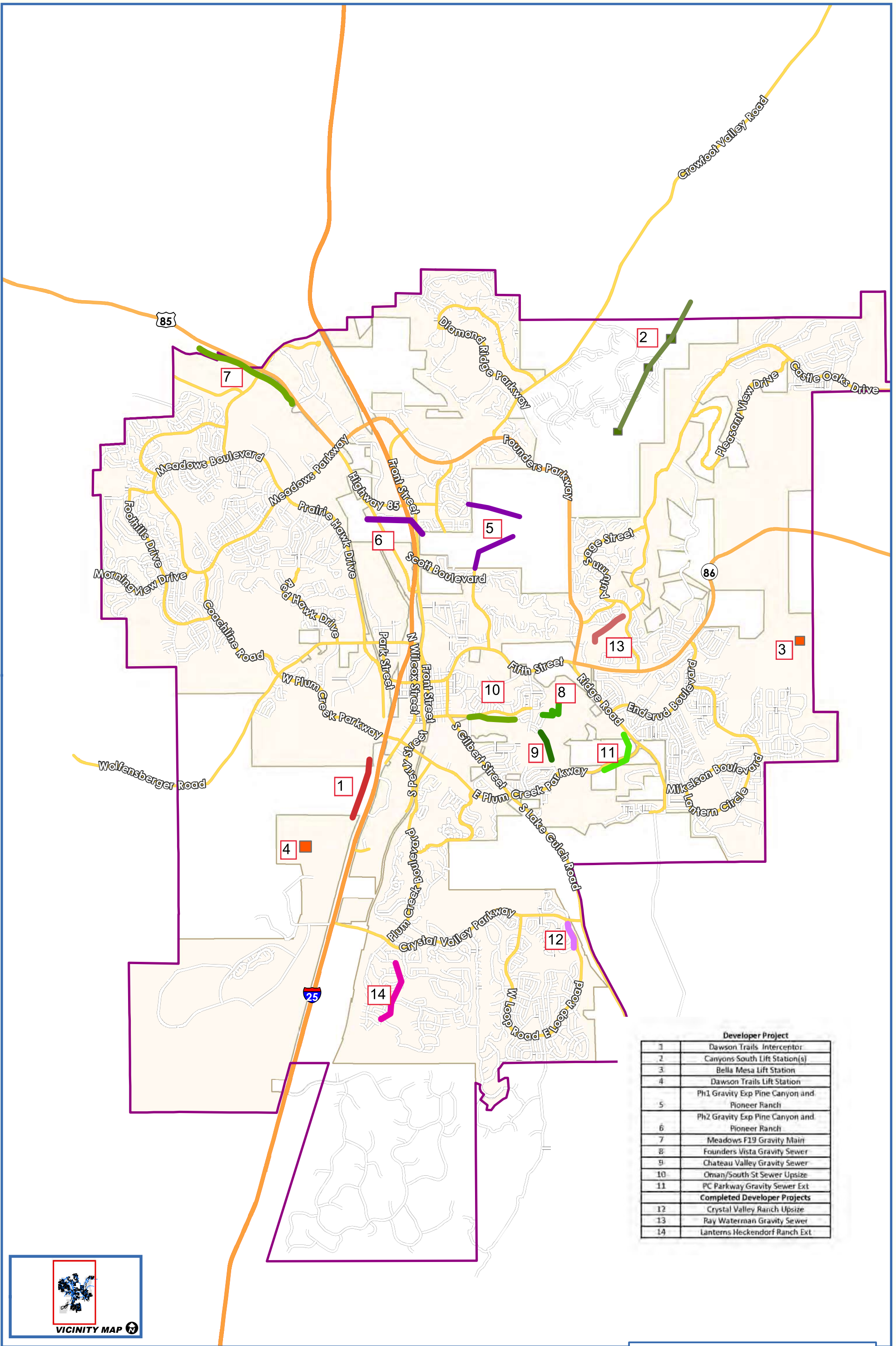
0 1,150 2,300 4,600 6,900 Feet

1 inch = 2,337 feet



Disclaimer: The data presented has been compiled from various sources, each of which introduces varying degrees of inaccuracies or inconsistencies. Such discrepancies in data are inherent and in supplying this product the Town of Castle Rock assumes no liability for it's use or accuracy. Questions or comments regarding the cartographic composition of this map including, but not limited to, errors, omissions, corrections, and/or updates, should be directed to the Utilities Department, Town of Castle Rock, (720) 733-6056. Copyright 2022, Town of Castle Rock Utilities Mapping.

CASTLE ROCK
2022 WWMP
FIGURE 4.2



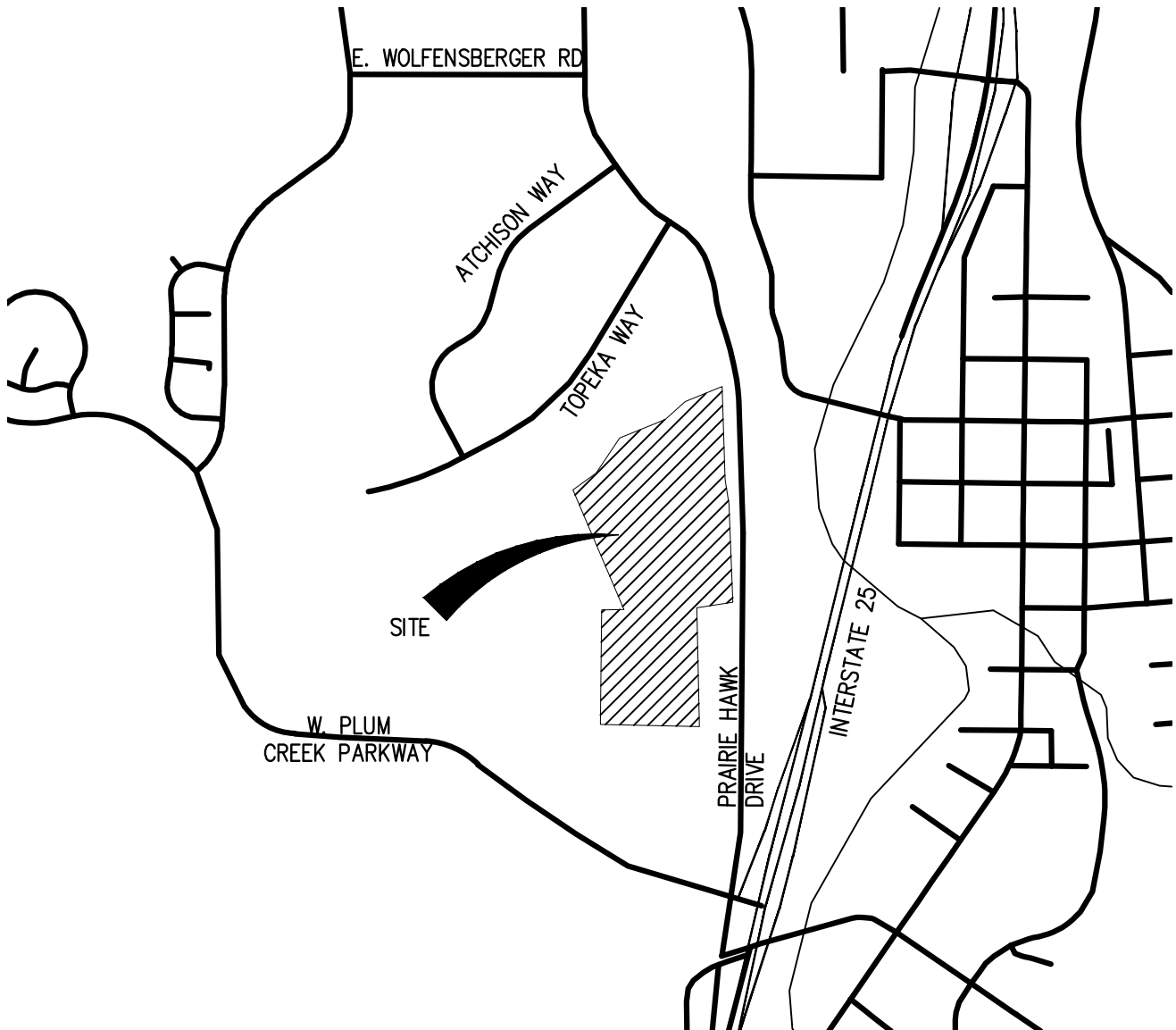
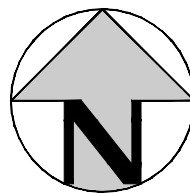
Developer Project	
1	Dawson Trails Interceptor
2	Canyons South Lift Station(s)
3	Bella Mesa Lift Station
4	Dawson Trails Lift Station
5	Ph1 Gravity Exp Pine Canyon and Pioneer Ranch
6	Ph2 Gravity Exp Pine Canyon and Pioneer Ranch
7	Meadows F19 Gravity Main
8	Founders Vista Gravity Sewer
9	Chateau Valley Gravity Sewer
10	Oman/South St Sewer Upsize
11	PC Parkway Gravity Sewer Ext
Completed Developer Projects	
12	Crystal Valley Ranch Upsize
13	Ray Waterman Gravity Sewer
14	Lanterns Heckendorf Ranch Ext



APPENDIX C

Vicinity Map

Plotted: WED 08/24/22 1:48:53P By: Jessica Metcalf Filepath: k:\200726\engineering\ref\vicinity map.dwg Layout: layout1



SCALE: 1" = 1000'



1120 Lincoln Street, Suite 1000
Denver, Colorado 80203
P: 303.623.6300 F: 303.623.6311
HarrisKocherSmith.com

CONFLUENCE COMPANIES, L.L.C.

THE BRICKYARD VICINITY MAP

PROJECT #: 200726
SHEET NUMBER

1

1 OF 1

APPENDIX D

Planned Development Plan – Concept Utility Plan

MATCH LINE - KEY MAP

WOLFENBERG STREET

PIONEER WAY

LOGAN WAY

MATCH LINE - KEY MAP

PRAIRIE HAWK DRIVE (OFFSITE)

ZONE: 1-2
USE: INDUSTRIAL

EXISTING
100-YEAR
FLOODPLAIN

MATCHLINE - SEE SHEET 6

PR

MANHOLE
HYDRANT
INLET
WATER
STORM SEWER
SANITARY SEWER
SANITARY SERVICE
WATER QUALITY/
DETENTION POND
SIDEWALK

MANHOLE
HYDRANT
INLET
WATER
STORM SEWER
SANITARY SEWER
SANITARY SERVICE
WATER QUALITY/
DETENTION POND
SIDEWALK

70 0 70 140

SCALE: 1" = 70'

*NOTE: THE PROPOSED UTILITY SIZES ARE BASED ON PRELIMINARY ASSUMPTIONS AND HAVE NOT BEEN ANALYZED FOR CAPACITY. SIZING IS SUBJECT TO CHANGE

THE BRICKYARD PLANNED DEVELOPMENT PLAN
TOWN OF CASTLE ROCK PROJECT NO: PDP22-0002

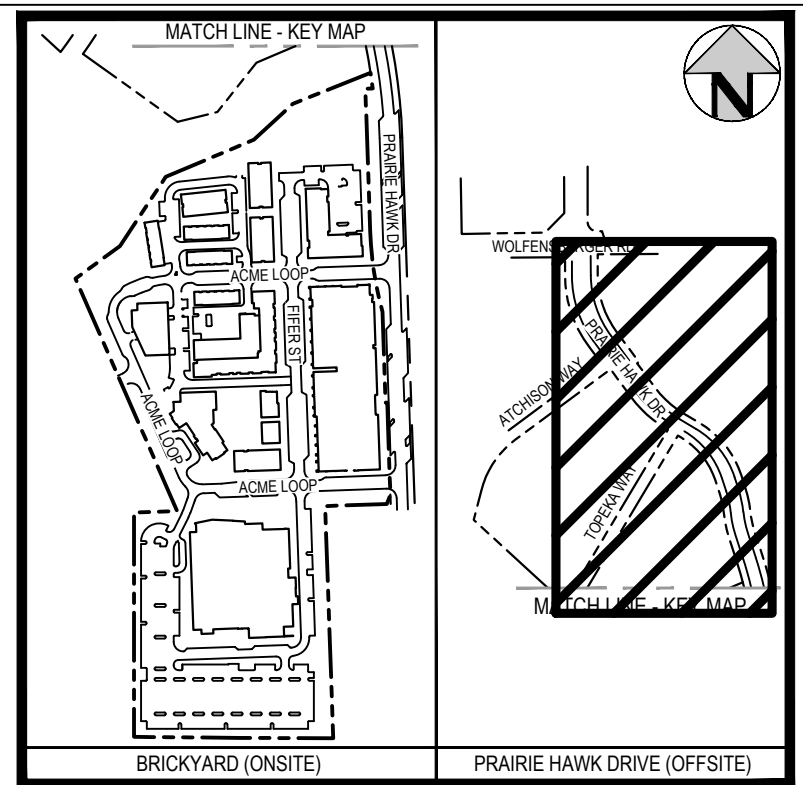
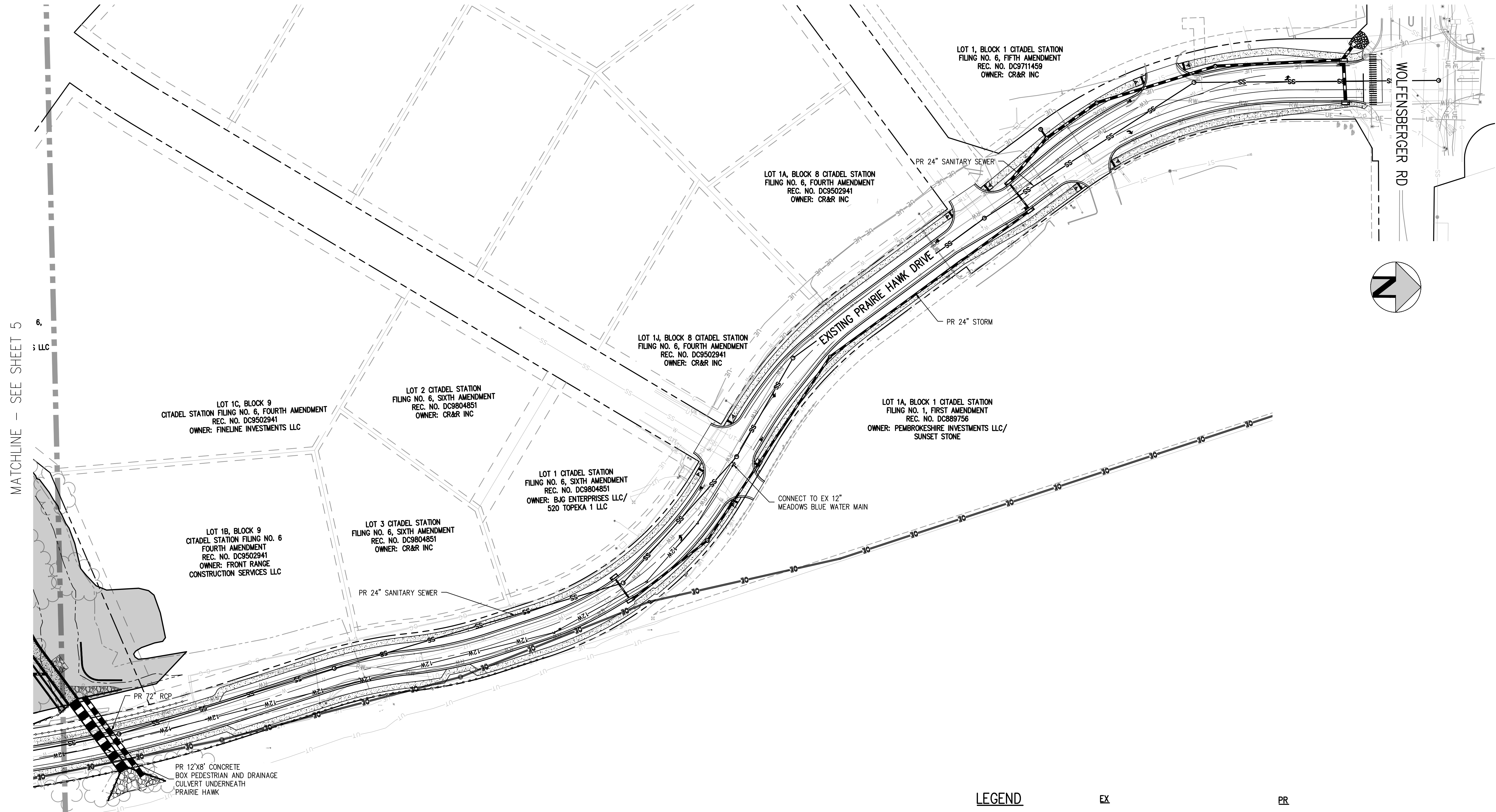
PDP UTILITY PLAN
SHEET 5 OF 13

THE BRICKYARD

PLANNED DEVELOPMENT PLAN AND ZONING REGULATIONS

CASTLE ROCK, COLORADO

SITUATED IN THE NORTHEAST 1/4 OF SECTION 10 AND THE NORTHWEST 1/4 OF SECTION 11 TOWNSHIP 8 SOUTH, RANGE 67 WEST OF THE 6TH P.M. TOWN OF CASTLE ROCK, COUNTY OF DOUGLAS, STATE OF COLORADO.



LEGEND

MANHOLE	●	MANHOLE	⊙
HYDRANT	●	HYDRANT	▲
STREET LIGHT	●	INLET	□
UNDERGROUND ELECTRIC	—UE—	WATER	—W—
WATER	—W—	STORM SEWER	—SS—
IRRIGATION WATER	—IR—	SANITARY SEWER	—SS—
GAS	—G—	SANITARY SERVICE	—SS—
STORM SEWER	—ST—	WATER QUALITY/	—SS—
SANITARY SEWER	—SS—	DETENTION POND	—SS—
UNDERGROUND ELECTRIC	—UE—	SIDEWALK	—SS—
EXISTING TREE CANOPY	~~~~~		

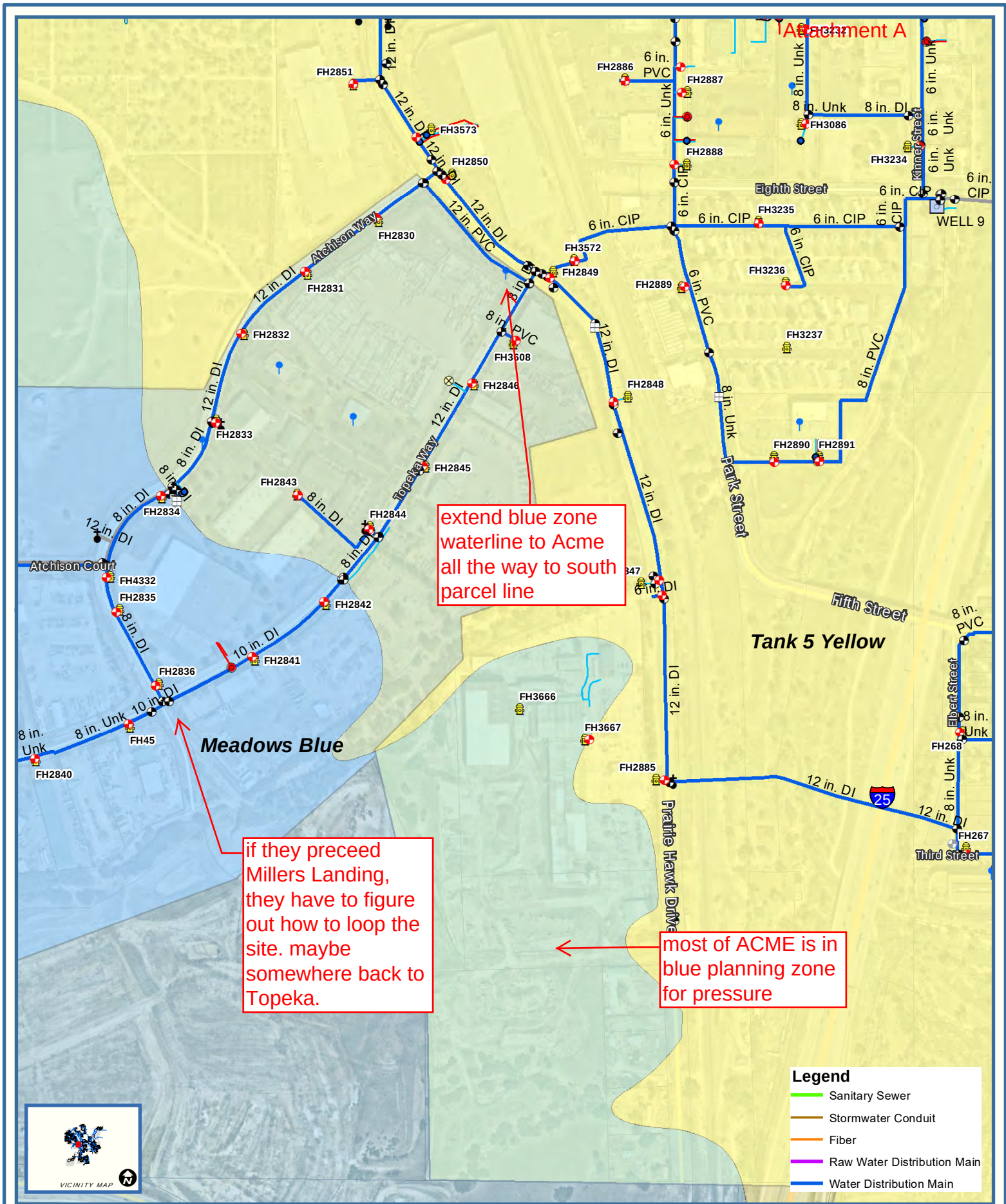
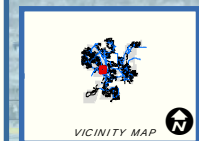
70 0 70 140
SCALE: 1" = 70'

*NOTE: THE PROPOSED UTILITY SIZES ARE BASED ON PRELIMINARY ASSUMPTIONS AND HAVE NOT BEEN ANALYZED FOR CAPACITY. SIZING IS SUBJECT TO CHANGE.

APPENDIX E

Utility Map(s)





APPENDIX F

SFE Calculations for Water and Wastewater

The Brickyard SFE Calculations

Project Number: 200726

Existing Land Use

Use	Amount	Unit	Water		Wastewater	
			SFEs/Unit	Total SFEs	SFEs/Unit	Total SFEs
Industrial	31.1	Acres	3/acre	93.3	3/acre	93.3

Proposed Configuration

Use	Amount	Unit	Water		Wastewater	
			SFEs/Unit	Total SFEs	SFEs/Unit	Total SFEs
Retail/Commercial/Office	69,523.00	SF	0.0005/SF	34.7615	0.0005/SF	34.7615
Restaurant	22,119.00	SF	0.0075/SF	165.8925	0.0075/SF	165.8925
Hotel	123.00	room	0.19/room	23.37	0.375/room	46.125
Residential	528.00	Du	0.65/du	343.2	0.65/du	343.2
Rec Center	145,000.00	SF	0.00125/SF	181.25	0.00125/SF	181.25
Total				748.474		771.229

Note: The provided uses and square footages are conceptual only, and are not necessarily reflective of the actual future uses.

* Note: 145,000 SF of the total retail/commercial usage is the recreational center usage

APPENDIX G

PCWRA/CRW Grease Interceptor Acknowledgement Form



Commercial Business Building Permit Grease Interceptor Requirement

All Commercial Business Building Permits for new business and construction of new buildings, remodels, or tenant improvement permits will be required to comply with Town Code 13.05, Grease Interceptors Required. Applicant will be required to submit an Industry Information Questionnaire through Plum Creek Water Reclamation Authority (PCWRA) to verify if the business will require an oil/grease interceptor. Please go to the PCWRA website at:

https://www.pcwracolorado.org/pretreatment/commercial_businesses/index.php

CONSTRUCTION DRAWINGS

Please note PCWRA requires all new commercial buildings to provide a stub-out for a separate waste line for future interceptor installation, if not proposed with the project. All drainage fixtures and grease waste lines that are tied to the oil/grease must be shown in the construction drawings as well as the location of the oil/grease.

ACKNOWLEDGEMENT

The applicant must sign and date this form to acknowledge that the applicant has read and understands the Town's Code requirement regarding Grease Interceptors, PCWRA's requirement to complete an Industry Information Questionnaire and Food Service Application, and the Town's requirement that a letter from PCWRA must be provided with the Town of Castle Rock Building Permit. This signed form is required to be included in the Utility Report with the Predevelopment Plan (PDP), Site Development Plan (SDP) and Construction Document (CD) submittals.

The Brickyard

Name of Project

Address of property, if known

[Signature]

Signature

3/30/23

Date