FINAL UTILITY REPORT

FOR

DAWSON TRAILS FILING 2 INFRASTRUCTURE
TOWN OF CASTLE ROCK, COLORADO
CD23-0045

Prepared for:

Dawson Trail I LLC
Dawson Trail II LLC
Westside Property Investment Company, Inc.
4100 E Mississippi Ave, Ste 500
Glendale, CO 80246
Contact: Lawrence Jacobson
Phone: 303-984-9800

Prepared by:

EMK Consultants, Inc.
7006 S. Alton Way, Bldg F
Centennial, CO 80112
Contact: Eric R. McDaniel
Phone: 303-694-1520
EMK Job No 13466

December 2024

Table of Contents

1. PROJECT LOCATION AND DESCRIPTION 4
A. General 4
B. Site Location 4
C. Project Description 4
2. WATER SYSTEM 5
A. General 5
B. Water Distribution System 5
C. Regional Offsite Improvements 5
D. Phasing 6
E. Demand Categories, Design Criteria 6
F. Water System Modeling and Analysis 7
3. WASTEWATER COLLECTION SYSTEM 9
A. General 9
B. Wastewater Collection System 9
C. Regional and Offsite Improvements 10
D. Phasing 10
E. Demand Categories, Design Criteria 11
F. Wastewater System Modeling and Analysis 12
4. CONCLUSIONS 12
REFERENCES 13

List of Appendices

Appendix A – Figures

Vicinity Map

Appendix B – Water Modeling Calculations

Water Demand Calculations (By MSK Consulting)
MDD Diurnal Curve (By MSK Consulting)
Water Model Results (By MSK Consulting)
Annual Estimated Irrigation Demand (Norris Design)

Appendix C – Sanitary Calculations

Sanitary Calculations

Appendix D – Excerpts/ Previous Studies

Excerpts Town of Castle Rock Water Master Plan (2017)
Excerpts Town of Castle Rock Wastewater Master Plan (2016)
Dawson Ridge Construction Drawings Sanitary Sewer Trunk Line
Town Utility Maps
Concept Utility Letter for Dawson Trails

Appendix E – Maps

Overall Utility and Phasing Map
Land Use Map
Overall Water Map
Overall Wastewater Map
Overall Utility Plan

1. PROJECT LOCATION AND DESCRIPTION

A. General

The purpose of this Final Utility Report is to present the design of the water and wastewater distribution systems for the Dawson Trails Filing 2 Infrastructure development. Final Utility Reports will be prepared for the various phases of the project as the project progresses through the Town's development process. This Final Utility Report analyzes the proposed infrastructure associated with the development of Dawson Trails, hereon referred to as the "Site". Any future development of the existing water infrastructure needed to serve this site is the responsibility of the developer.

B. Site Location

The Site is in part of Sections 21, 22, 27, 28, and 29 of Township 8 South, Range 67 West of the Sixth Principal Meridian, Town of Castle Rock, Douglas County, State of Colorado. The Site is bounded by Interstate 25 to the east, Keene Ranch Filing No. 1 to the west, an undeveloped Douglas County parcel to the south, and the Twin Oaks subdivision and Dawson Filing 1 Infrastructure to the north. A vicinity map for the site can be found in Appendix A.

C. Project Description

The purpose of this report is to analyze potential future densities of the development to ensure that proper infrastructure is accounted for and will be installed to accommodate the ultimate build-out of the project. Per the approved Planned Development Plan, dated September 2022 the Filing 2 Site will consist of approximately 2,233 residential units, 965,000 square feet of commercial development, one school site, and approximately 52 +/- acres of community parks, open space, and public land dedication across the Filing 2 site. The Filing 2 Site is approximately 670-acres and consists of planning areas B1, C2, D, E2, F3, G1, OSP-2, OSP-3, OSP-4, PL-1.02, PL-1.04, PL-1.05, PL-1.06, and PL-2.02. The Site is currently undeveloped but there were previous infrastructure improvements constructed and abandoned in the 1980s. These improvements include concrete roads, water lines, sanitary sewer lines, storm sewer, and water distribution infrastructure, including wells and a tank, all of which has been deemed unusable per conversations with the Town and is therefore anticipated to be removed or abandoned before development of the Site.

This report proposes conceptual locations and sizes for the water and wastewater systems and analyzes the proposed networks using criteria from the Town of Castle Rock Water System Design 2018 Criteria Manual and Wastewater Collection Design 2018 Criteria Manual. Construction documents for this filing are titled Dawson Trails Filing 2 Infrastructure, CD23-0045.

This report analyzes the proposed water and sanitary sewer systems which will be constructed as part of the development, as well as the connections to the surrounding existing infrastructure shown in the construction drawings of CD23-0045. The utility design will conform to the current Town of Castle Rock standards. Easements will be provided for utilities that fall out of the public right-of-way. These will be dedicated on the final plat or at the time of final design/construction documents. The proposed water line will be accessible within the site, predominantly within the proposed roadways.

The Land Use Map for each Planning Area is included in Appendix E.

2. WATER SYSTEM

A. General

The Filing 2 water system will be served by a network of Red and Green Zone water distribution lines operated by Castle Rock Water, primarily located within the backbone road system within the Site. An Overall Water Map has been included in Appendix E.

B. Water Distribution System

The layout and design of the major water distribution system proposed in this report generally conforms with the Town of Castle Rock 2017 Water Master Plan. The Site spans over two (2) different water zones – the Red and Green Zone. The water distribution system bringing potable water to the Site is shown on the Overall Water Map in Appendix E and will consist of the following:

- An existing 16" waterline connection from Filing 1 Infrastructure in Dawson Trails Blvd south of the CVI Interchange.
- An existing 20" waterline connection from Filing 1 Infrastructure at the CVI interchange in Crystal Valley Pkwy and Gambel Ridge Blvd.
- Pressure Reducing Valves between zones
- Water Booster Pump from the Red Zone to Green Zone
- Tank 19 or Feed 3 (Red Zone)
- Tank 21 (Green Zone)

Tanks 19 and 21 have not been constructed, the tanks will need to be designed and located before high water and low water levels are established. See Appendix E for an Overall Water Plan Map. It is also to be noted that the Green Zone distribution lines and Tank 21 has not be modeled or drawn as a part of this submittal package. Green Zone to be included in next submittal package.

Raw Water

A potential three (3) acre well site as part of Filing 1 is anticipated for the Site, located near the northern corner of the site in PL-1.07, as shown in the Land Use Map in Appendix E. The well's respective transmission line to convey the raw water to a water treatment plant would also be constructed. It should be noted that there is potential for a public facility located in PL-1.10, in the southeastern corner of the Site, which could include a treatment facility or well site. In either condition, these raw water facilities will be maintained and operated by the Town. Any potential supply to the distribution system is not included in the model.

C. Regional Offsite Improvements

The Dawson Trails development will require three (3) significant offsite improvements located within the vicinity of the development. The first is the Tank 21 which will be a supply for the Green Zone. The exact location of the site has not yet been determined. The second offsite improvement will be the extension and connection of the 16" transmission main from Filing 1 located in Dawson Trails Blvd to the site. The third offsite improvement will be the extension and connection of the 20" transmission main from Filing 1 located in Crystal Valley Pkwy and Gambel Ridge Blvd. The two connections to Filing 1 Infrastructure will loop through the Filing 2 site to the Red Zone tank (Tank 19) located in PL-1.02. The Green Zone transmission mains have not been included in this submittal package.

D. Phasing

The utilities proposed with this Final Utility Report will be completed in one phase. The Overall Utility & Phasing Map for all of Dawson Trails Development can be found in Appendix E. The timeline of each phase is not yet determined. The phasing of the water infrastructure is an approximation and is subject to change based on the developer's discretion and further analysis during final design. The general phasing of the development transpires in a North to South and East to West direction, rising from the Blue, Red, then Green Zone as well as associated infrastructure for each.

E. Demand Categories, Design Criteria

Water consumption demands from Section 4.4.1 Design Demands were used for the Average Day Demands (ADD) and peaking factors as shown in Table 2.1: Water System Design Values from the Town of Castle Rock Water System Design 2018 Criteria Manual.

Table 2.1: Water System Design Values

Criteria	Value
Average Day Demand (ADD) per SFE	265 gallons per day (gpd)
Maximum Daily Demand (MDD) Factor	2.5 times ADD
Peak Hour Demand (PHD) Factor	5.5 times ADD
Minimum Static Pressure with Zero Demand (20% Tank Stage)	48.92 psi
Minimum Static Pressure with Zero Demand (100% Tank Stage)	56.72 psi
Minimum Dynamic Pressures (based on 20% Tank Stage) **Max Daily Demand + Fire Flow** **Peak Hour Demand**	 20 psi 35 psi

The following Single-Family Equivalents were used to calculate water demands.

Table 2.2: Single Family Equivalents

Criteria	Value
Single Family Residential and Duplexes	1.0 / dwelling unit
Multi-family Residential (Townhomes and Apartments)	0.65 / dwelling unit
Industrial / Commercial	3.0 / acre
Schools	Varies
Parks	9.38 SF/acre

Parameters used with the model of the Dawson Trails Water System are now as follows:

- **Average Day Demand (ADD)** is the total water use during a year divided by the number of days in a year (365).
- **Maximum Day Demand (MDD)** is the average demand in the month with the overall highest usage during the year (typically July or August). MDD is used to size water pipelines when combined with fire flows. MDD is also used to size water storage tanks (along with fire flow volumes).
- **Peak Hour Demand (PHD)** is the highest hourly demand occurring during the year. PHD is used to evaluate the required size of distribution pipelines. Known irrigation demands were applied to all junctions for public area irrigation and are consistent with landscaping and irrigation construction documents provided by Norris Design. There are

5 irrigation taps proposed with Filing 2. Four 1.5-inch irrigation taps with a maximum flow rate of 40 gallons per minute and one 1-inch irrigation tap with a maximum flow rate of 18 gallons per minute. See Appendix B for Annual Estimated Irrigation Demands.

In addition to the parameters above, fire flows were analyzed (along with the Maximum Day Demand) as follows:

- **Fire Flow Demand (FFD)** – Fire flow requirements within Town of Castle Rock are dictated by the Town's Fire Department and the latest edition of the International Fire Code (IFC). Fire flow demands (FFD) vary depending on building usage (residential versus commercial), building square footage, and type of building construction which are defined in Appendix B of the IFC. A 50 percent reduction in required fire flow may be allowed for approved residential sprinkler systems, and a 75 percent reduction may be allowed for approved commercial sprinkler systems at the discretion of the Town of Castle Rock Fire Chief. The minimum fire flow for the water distribution system is 1,500 gpm, unless otherwise approved by the Fire Department.

Commercial, schools, and multi-family residential are the only buildings anticipated to have sprinklers within the Dawson Trails development. The specific building square footages, construction type, and usages are not known at this time. For the water model, a fire flow demand of 3,000 gpm was used at all junctions with the potential for these types of development.

F. Water System Modeling and Analysis

The water system was modeled by MSK Consulting, LLC. using InfoWater software. The InfoWater results are included in Appendix B along with a Vicinity Map in Appendix A for the simulation. Simulations were run for the following scenarios:

- Minimum and Maximum Static Pressures with Zero Demand (20% and 100% Tank level)
- Peak Hour Demand (PHD)
- Max Day Demand + Fire Flow (MDD+FF)
- Extended Period Simulation (EPS)

The steady-state simulations (PHD and MDD+FF) were run separately for each pressure zone since booster pump stations and pressure reducing valves will isolate one zone from another. For the EPS scenario, all three pressure zones were modeling concurrently.

Static Pressure with Zero Demand

Prior to applying any demands, the static pressures at each junction were evaluated for two conditions: 20% full tank and 100% full tank. The 20% full condition determines the low static pressure and the 100% full scenario reveals the maximum station pressure. For this analysis, the following tank levels were used:

Table 2.3 Tank Water Levels

Tank	20% Full Elevation	100% Full Elevation
Blue Zone	6490 ft	6508 ft
Red Zone	6662 ft	6680 ft

The majority of the junctions have a static pressure within the required range (43 psi to 125 psi). There are a few junctions in each pressure zone that will need to be raised or lowered during the final design process. Results are provided in Appendix B.

Peak Hour Demand

PHD scenarios were performed on each pressure zone assuming full buildout and the tank levels at 20% full. The PHD factors were applied to average day demands and the model output was evaluated for junction pressure and pipe velocity. A full output is included in Appendix B.

MDD+FF

A maximum day demand plus fire flow (MDD+FF) scenario for each pressure zone was performed. As stated previously, the fire flow demand for all commercial, multi-family, or school development is assumed to be 3,000 gpm. The fire flow for all single-family residential developments is 1,500 gpm. Fire flows were applied during the MDD condition, and all fire hydrant junctions satisfied the CRW's requirement of a minimum of 20 psi residual pressure. A summary of the results is provided below, and complete results are in Appendix B.

Table 2.4 MDD+FF Results

Zone	Lowest Residual Pressure (PSI)
Blue	28.79 (J12)
Red	62.39 (J108)

Extended Period Simulation

An Extended Period Simulation (EPS) was performed to analyze the distribution system during a 24-hour period during a maximum day condition. CRW provided the 24-hour diurnal curve (included in Appendix B) that were applied to the calculated MDD. As stated previously, the EPS scenario evaluated the three (3) pressure zones concurrently. The Green and Red Zone tanks were inputted into the model. The inputs included the total volume at buildout and the tank levels. The booster pump stations included a pump curve to allow for the analysis of discharge flows and pressures.

The EPS scenario provides a complete full day's analysis of the distribution system, including a "tank-filling" situation. It provides the upper end of each pump stations' output and the junction pressures and pipe velocities during those conditions. Generally, the demands in the EPS analysis are lower than either the PHD or MDD+FF scenarios. However, it was included in the water system analysis to provide initial results on the tanks' and booster pump stations' performances. In particular, the Red Zone Booster Pump Station was evaluated because this facility will be responsible for conveying the flows to meet the demands of both the Red and Green Zones. Results from the EPS analysis are included in Appendix B, but they are considered preliminary because pump curves for actual pumps were not used and the tank volumes are for full buildout. A more specific analysis will be performed during the design of each booster pump station and tank.

3. WASTEWATER COLLECTION SYSTEM

A. General

The wastewater collection system will be served with gravity sanitary sewer lines, lift station(s), and force mains operated by the Town of Castle Rock. The main lines will run within the backbone road system and in access roads along the perimeter of the tracts generally running west to east, while the interceptor will be running south to north along the east edge of the site. These runs are graphically shown in the Overall Sanitary Sewer Map in Appendix E. The anticipated total wastewater load for the Site is 4819.9 gallons per minute which includes flows upstream of the interceptor. Table 3.1 includes a synopsis of the different land uses accounted for. The ultimate outfall of the Site is near Plum Creek Parkway and the Interstate-25 Interchange, where the Town will convey the flow into a wastewater collection system. Any future development of the existing water infrastructure needed to serve this site is the responsibility of the developer.

Table 3.1 Land Use Summary Table

	Use	Quantities	Totals
Residential	Multi-Family (DU)	1,240	2,233
	Single Family (DU)	993	
Non-Residential	School (EA)	1	
	Parks (SFE)	0	
	Car Wash (AC)	0	
	Industrial (SF)	0	965,000
	Hotel (SF)	300,000	
	Restaurants (SF)	150,000	
	Retail/ Office (SF)	515,000	

B. Wastewater Collection System

The plan is in general accordance with the Castle Rock Water 2016 Wastewater Master Plan Update. The main discrepancy from the Master Plan is rather than a 15-inch pipe at the downstream end of the interceptor, further analysis concluded that a 24-inch pipe will be needed to accommodate for the density and magnitude of the Site. Additionally, the Town is responsible for reconnecting the sanitary sewer main across Plum Creek Parkway to tie into the existing wastewater collection system. The Town is anticipating upsizing these interceptors to adequately convey the flows of the ultimate buildout. The wastewater collection system serving the Dawson Trails Development will consist of the following:

- 8"/10"/12"/15"/18"/21"/24" gravity sanitary sewer
- Lift station(s)
- Sanitary sewer force main(s)

Routing

As shown in the Overall Wastewater Map for Filing 2, the Site highlights two out of the nine basins designated for the Dawson project. The two (2) basins included in Filing 2 include Basin 4 that intercepts at J-4 and Basin 5 that intercepts at J-5.

Flows generated by Basin 4 load the system at Junction 4.01, then continue downstream based on Planning Areas, varying in densities and therefore loads. Junction 5 then accepts flows from all

flows in the Junction 5 mainline as well as those from the Junction 4 interceptor upstream and so forth. The final load is applied to the system at Junction 9B, where the cumulative flow is conveyed north to the final outfall location. A hydraulic capacity and routing of the proposed pipes was done using a CORE developed spreadsheet. The results of this analysis can be found in Appendix C for Filing 2.

C. Regional and Offsite Improvements

The Town of Castle Rock currently has an existing 12 and 15-inch sanitary sewer gravity mains serving the southwest quadrant of Town and terminates at Territorial Road and Interstate-25. The existing mains will be removed and replaced with a 24-inch sanitary sewer interceptor running north along the west side of the I-25 Frontage Road to Plum Creek Parkway.

D. Phasing

The Overall Utility and Phasing Map can be found in Appendix E. The phasing generally moves in a north to south and east to west direction, in other words a downstream to upstream fashion. The northern portion of the sanitary interceptor bounding the east property line of the site will be constructed initially, while later phased mains and associated upstream interceptor lines will tie into it. Phasing locations and associated planning areas are discussed in Section 2.D of this report and additional phasing information can be found in the Approved PDP in Appendix D.

Phase 1

Phase 1 of the Dawson Trails development will include the design and construction of the sanitary sewer interceptor conveying flows from south to north along the east property boundary of the site, ultimately outfalling into the Town's collection system. The Town is responsible for reconnecting the sanitary line across Plum Creek Parkway and tying into the existing wastewater collection system. The Town is anticipating upsizing these interceptors to adequately serve the future development. Additionally, sanitary mains tying in at Junctions 6, 7, 8, and 9 be built in Phase 1 (See Appendix E in Filing 1 Wastewater Map).

Phase 2

Phase 2 of the Dawson Trails development will consist of gravity main lines running west to east from the construction extents to the downstream stub out of the interceptor line. Any necessary main lines, either by adjacent development or running beneath to the current construction of Dawson Trails Blvd. will be incorporated in this phase. Additionally, sanitary mains tying in at Junctions 4 and 5 shown in the Overall Wastewater Map in Appendix E will be built in Phase 2. A stub out at the upstream end of Junctions 3 and 4's runs should be provided for Phase 3 development. A stub out at the upstream end of Junctions 5's main line should be provided for Phase 4's development.

Phase 3

Phase 3 of the Dawson Trails development will consist of gravity main lines conveying flows west to east south of Phase 2 and complete buildout of any additional mainline within Dawson Trails Blvd. Additionally, sanitary mains tying in at Junctions 1,2, and 3 shown in the Overall Wastewater Map will be built in Phase 3. A stub out at the upstream end Junctions 1 and 2's main lines should be provided for Phase 5 development.

Phase 4

Phase 4 of the Dawson Trails development will include any necessary gravity mainlines conveying flows east and connecting to any existing stub outs constructed in Phase 2 or 3. Stub outs at the upstream end of Junction 3's run for the future force main should be accounted for. A portion of

the force main(s) will be built in this phase with stub outs on both ends to provide connections for Phase 6 development.

Phase 5
Phase 5 of the Dawson Trails development will entail gravity main lines conveying flow east, connecting to existing stub outs at the upstream end of Junctions 1, 2, and 3's main lines constructed in Phase 3. A stub out for Phase 6 at the upstream end of Junction 1 and 2's main line should be constructed. A portion of the force main(s) will be built in this phase, if deemed necessary, with stub outs on both ends to provide connections for Phase 6 development.

Phase 6
Phase 6 of the Dawson Trails development will include gravity mains conveying flows either to the north to the lift station(s) or east to existing sanitary sewer mains, depending on the final grading. A force main conveying flows from the lift station(s) to the existing gravity main on the Site will be constructed. Efforts will be made to minimize the number of lift stations required to service the development as operation and maintenance costs will be assessed. Flows developed from Phase 6 development have been accounted for in both Junction 1 and 3's runs.

E. Demand Categories, Design Criteria

Wastewater demands, were taken from 4.4.1.1 Wastewater System Average Daily Flow (ADF) of the Town of Castle Rock Wastewater Collection Design 2018 Criteria Manual.

Table 3.1 – Wastewater Collection System Evaluation Parameters

Flow Parameters	
Average Daily Flow (ADF)	200 gpd / dwelling unit
Peaking Factor (PF)	PF = 3.65 *[(ADF)^-0.168] Maximum PF = 5
Infiltration and Inflow (I/I)	I/I = 0.1 * ADF
Peak Design Flow (PDF)	PDF = ADF * PF + (I/I)
Gravity Flow Pipe Parameters	
Minimum Pipe Size	8-inch
Manning's Roughness Coefficient	0.011
Minimum Velocity	2.0 ft/s
Maximum Velocity	10.0 ft/s
Maximum Flow in Pipe (d/D)	0.75
Force Main Parameters	
Minimum Pipe Size	4-inch
Minimum Velocity	3.0 ft/s
Maximum Velocity	7.0 ft/s

The following Single-Family Equivalents were used to calculate Sanitary Demands.

Criteria	**Value**
Single Family Residential and Duplexes	1.0 / dwelling unit
Multi-family Residential (Townhomes and Apartments)	0.65 / dwelling unit
Industrial / Commercial	3.0 / acre
Schools	Varies
Parks	No demand

Parameters used with the model of the Dawson Trails collection system are as follows:

- **Average Daily Flow (ADF)** are the total wastewater flows generated in year divided by the number of days in a year (365). Average Daily Flows, or base flows, are contributed to the collection system from residential, industrial, commercial, and schools.
- **Peak Design Flow (PDF)** is the highest hourly demand occurring during the year. These flows were used for the analysis of the sanitary sewer system.

F. Wastewater System Modeling and Analysis

The wastewater system was modeled using an Excel spreadsheet shown in Appendix C. The runs are included in the Overall Sanitary Sewer Map in Appendix C. Preliminary road grades have been designed, therefore sanitary sewer slopes have been analyzed at a slope less than that of its associated roadway grade for a conservative evaluation.

4. CONCLUSIONS

Executive Summary

This Final Utility Report is intended to provide analysis and guidance to ensure the various filings and phases of the development are constructed in accordance with the overall needs and requirements of the development, and that the proposed infrastructure considers the full build-out condition.

The Town of Castle Rock currently does not have any domestic water connections to Dawson Trails. See Filing 1 CD's and Utility report for connections to the Blue Zone from Plum Creek Parkway and East of I-25. The Red and Green Zones will both need to construct new tanks for service. There will be booster pumps and pressure reducing valves connecting the zones to each other.

According to the 2010 Wastewater Master Plan, the existing 12" and 15" will need to be upsized to 15" and 18", respectively. However, the calculations within this report and conversations with the Town concluded that the sanitary sewer needs to be removed and replaced with a 24-inch interceptor based on the density from the Dawson Trails Planned Development Plan, approved in September of 2022.

The developers and design engineers will continue to work closely with the Town of Castle Rock as the various phases of the project are designed and constructed to ensure adequate infrastructure is provided to ultimately serve the full build-out of the development.

Compliance with Master Plans

The proposed water and wastewater layouts presented in the report provide systems which are in substantial conformance with the 2016 and 2017 Master Plan Updates.

Final Utility Report

The layout and design of the water and wastewater system proposed in this report, although in conformance with the Town of Castle Rock Water and Wastewater Collection System Design Criteria Manuals, is general in nature. Once a more refined design for the future development is available, a Final Utility Report shall be prepared and submitted with a final plat and construction drawings for each portion of the development.

REFERENCES

TOCR (Town of Castle Rock). December 4, 2018. Town of Castle Rock Water System Design Criteria Manual.

TOCR (Town of Castle Rock). December 4, 2018. Town of Castle Rock Wastewater Collection System Design Criteria Manual.

TOCR (Town of Castle Rock). 2016, Town of Castle Rock, 2016 Wastewater Master Plan.

TOCR (Town of Castle Rock). 2017. Town of Castle Rock, 2017 Water Master Plan Update.

Dawson Trails Planned Development Plan. September 2022.

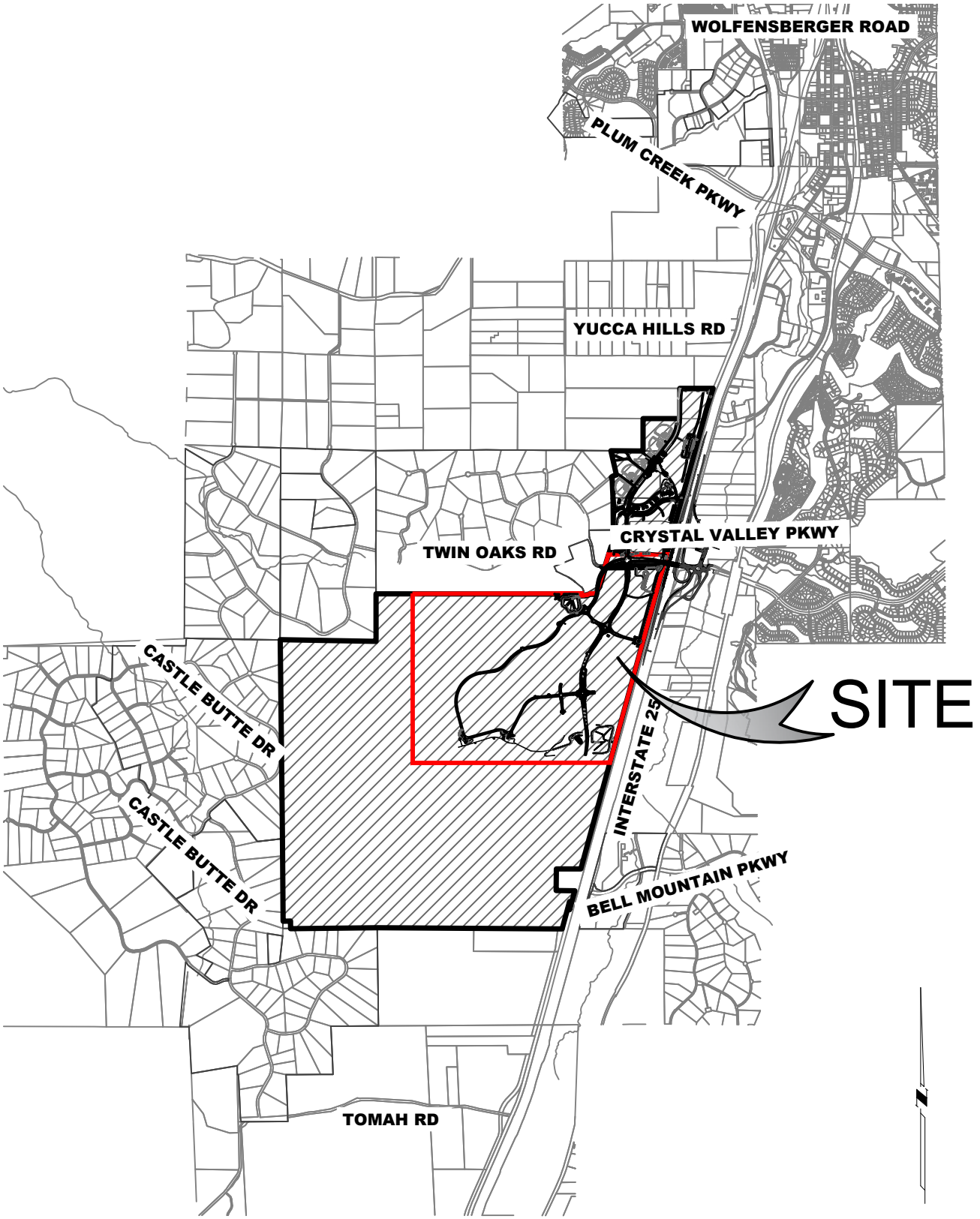
Computer Modeling Programs:

Bentley Systems, Inc., Version 2018. WaterCAD

Excel by Microsoft, Inc.

Appendix A

Figures



0 4,000'

1 inch = 4,000 ft.

DAWSON TRAILS
VICINITY MAP

CREATED BY: CGV DATE: 12/19/2024

SHEET NUMBER 1 OF 1 SHEETS

JOB NUMBER 20-224

12/19/2024 X:\20-224 Dawson\Civil\Reports\Final Utility Report\Vicinity Map\Vicinity Map.dwg, 12/19/2024 6:52:08 AM

Appendix B

Water Modeling / Calculations

Dawson Trails for Westside
Potable Water Model
Water Demands-Phase 1
Date: June 2024
MSK Project #: 52-001-01
Calc'd by: DLT

PRELIMINARY
6/27/24

Assumptions:

Average Day Demand (ADD) per SFE:	265.0 gpd	[7/17/23 Lowered by CRW per ordinance]
Max Day Demand (MDD) Factor:	2.5 x ADD	
Peak Hour Demand (PHD) Factor:	5.5 x ADD	
Irrigation ADD:	3,750 gpd/irrigated acre	

Table B1-1: Potable Water Demands for Phase 1 (w/ Irrigation)

A	B	C	D	E	F	G	H	I	J	K	L
No.	Planning Area	Pressure Zone	Total SFEs	ADD (gpd)	MDD (gpd)	MDD (gpm)	PHD (gpm)	Irrigated Area (ac)	Irrigation ADD (gpd)	Irrigation ADD (gpm)	Junction
1	F-1	Blue	0.0	0	0	0.0	0.0				J28
2	F-1	Blue	0.0	0	0	0.0	0.0				J18
3	F-1	Blue	0.0	0	0	0.0	0.0				J20
4	F-1	Blue	0.0	0	0	0.0	0.0				J20
5	E-1	Blue	0.0	0	0	0.0	0.0				J12
Blue Zone Totals			**0.0**	**0**	**0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	
6	F-2 (Ph. 1)	Red	0.0	0	0	0.0	0.0	2.29	8,595.6	5.97	J10
7	F-2 (Ph. 1)	Red	102.0	27,030	67,575	46.9	103.2				J14
8	F-3 (Ph. 1)	Red	62.5	16,563	41,406	28.8	63.3				J94
9	F-3	Red	0.0	0	0	0.0	0.0				J96
10	B-1 (Ph. 1)	Red	233.0	61,745	154,363	107.2	235.8				J140
11	D (Ph. 1)	Red	274.0	72,610	181,525	126.1	277.3				J98
12	D	Red	0.0	0	0	0.0	0.0				J24
13	D	Red	0.0	0	0	0.0	0.0	0.0	0.0	0.0	J112
14	D	Red	0.0	0	0	0.0	0.0	0.0	0.0	0.0	J114
15	D	Red	0.0	0	0	0.0	0.0	0.0	0.0	0.0	J120
16	D	Red	0.0	0	0	0.0	0.0	0.0	0.0	0.0	J102
17	D	Red	0.0	0	0	0.0	0.0	0.0	0.0	0.0	J58
18	D	Red	0.0	0	0	0.0	0.0	0.0	0.0	0.0	J118
19	C-2	Red	0.0	0	0	0.0	0.0	0.0	0.0	0.0	J108
20	C-2	Red	0.0	0	0	0.0	0.0	0.0	0.0	0.0	J106
21	C-2	Red	0.0	0	0	0.0	0.0	0.0	0.0	0.0	J126
22	C-2	Red	0.0	0	0	0.0	0.0	0.0	0.0	0.0	J124
23	C-2	Red	0.0	0	0	0.0	0.0	0.0	0.0	0.0	J66
24	C-2	Red	0.0	0	0	0.0	0.0	0.0	0.0	0.0	J122
25	G-1	Red	0.0	0	0	0.0	0.0	0.0	0.0	0.0	J110
26	G-1	Red	0.0	0	0	0.0	0.0	0.0	0.0	0.0	J116
27	G-2	Red	0.0	0	0	0.0	0.0	0.0	0.0	0.0	J64
Red Zone Totals			**671.5**	**177,948**	**444,869**	**308.9**	**679.7**	**2.3**	**8,595.6**	**6.0**	
28	B-1	Green	0.0	0	0	0.0	0.0	0.0	0.0	0.0	J134
29	C-2	Green	0.0	0	0	0.0	0.0	0.0	0.0	0.0	J130
30	C-2	Green	0.0	0	0	0.0	0.0	0.0	0.0	0.0	J44
31	C-2	Green	0.0	0	0	0.0	0.0	0.0	0.0	0.0	J74
32	C-1	Green	0.0	0	0	0.0	0.0	0.0	0.0	0.0	J132
33	C-1	Green	0.0	0	0	0.0	0.0	0.0	0.0	0.0	J128
34	C-1	Green	0.0	0	0	0.0	0.0	0.0	0.0	0.0	J42
35	B-2	Green	0.0	0	0	0.0	0.0	0.0	0.0	0.0	J138
36	A	Green	0.0	0	0	0.0	0.0	0.0	0.0	0.0	J136
37	A	Green	0.0	0	0	0.0	0.0	0.0	0.0	0.0	J48
38	A	Green	0.0	0	0	0.0	0.0	0.0	0.0	0.0	J62
Green Zone Totals			**0.0**	**0**	**0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	
Buildout Totals (All Zones)			**671.5**	**177,948**	**444,869**	**308.9**	**679.7**	**2.3**	**8,595.6**	**6.0**	

Note:
1. The development composition in each Planning Area is preliminary and may change.

WESTSIDE PROPERTY

Dawson Trails Scenario #0 - Ph1, Static-no demands, Feed 1 OFF, Feed 2 OFF, PS OFF

Water Model Junction Report

Model Run Date: December 20, 2024

Table B2-1: Water Model Junction Report

							RZ Tank at 20%=6662.0		RZ Tank at 100%=6680.0	
ID	Description (Char)	SFE	Zone (Char)	Phase (Int)	Elevation (ft)	PHD Demand Applied (gpm)	Head (ft)	Pressure (psi)	Head (ft)	Pressure (psi)
J10			Red	1	6,367.00	0.00	295.00	127.82	313.00	135.62
J100			Red	1	6,549.09	0.00	112.91	48.92	130.91	56.72
J102	FH	0.0	Red	1	6,498.44	0.00	163.56	70.87	181.56	78.67
J106	FH	0.0	Red	1	6,492.07	0.00	169.93	73.63	187.93	81.43
J108	FH	0.0	Red	1	6,496.31	0.00	165.69	71.79	183.69	79.59
J14	FH	102.0	Red	1	6,381.00	0.00	281.00	121.75	299.00	129.55
J140	FH	233.0	Red	1	6,467.50	0.00	194.50	84.27	212.50	92.07
J15		0.0	Red	1	6,381.00	0.00	281.00	121.75	299.00	129.55
J16			Red	1	6,350.00	0.00	312.00	135.18	330.00	142.98
J161			Red	1	6,386.00	0.00	276.00	119.58	294.00	127.38
J22			Red	1	6,433.62	0.00	228.38	98.95	246.38	106.75
J24	FH	274.0	Red	1	6,471.80	0.00	190.20	82.41	208.20	90.21
J50			Red	1	6,377.00	0.00	285.00	123.48	303.00	131.28
J54			Red	1	6,425.00	0.00	237.00	102.69	255.00	110.49
J70			Red	1	6,490.00	0.00	172.00	74.52	190.00	82.32
J76	Tank		Red	1	6,646.85	0.00	15.15	6.56	33.15	14.36
J78	Red-Green PS		Red	1	6,607.50	0.00	54.50	23.61	72.50	31.41
J92			Red	1	6,380.00	0.00	282.00	122.18	300.00	129.98
J94	FH	62.5	Red	1	6,395.02	0.00	266.98	115.68	284.98	123.47
J96	FH	0.0	Red	1	6,444.45	0.00	217.55	94.26	235.55	102.06
J98	FH	0.0	Red	1	6,443.18	0.00	218.82	94.81	236.82	102.61
		671.5				0.00				

WESTSIDE PROPERTY

Dawson Trails Scenario #3 - Ph1, SS, PHD, Feed 1 OFF, Feed 2 OFF, PS OFF, RZ Tank=6662.0

Dawson Trails Scenario #4B - Ph1, SS, MDD+FF, Costco FF Alternative (2,150 gpm)

Water Model Junction Report

Model Run Date: Dec 20, 2024

ADD:	265.0	gpd/SFE
MDD:	2.5	x ADD
PHD	5.5	x ADD

Minimum pressure= 6.74

Table B2-2: Water Model Junction Report

[Scenario #3 Results]

		671.5					PHD DMD = 685.6 gpm			
ID	Description (Char)	SFE	Zone (Char)	Phase (Int)	Elevation (ft)	Irrigation ADD (gpm)	PHD Demand Applied (gpm)	PHD + IRR ADD (gpm)	Head (ft)	Pressure (psi)
J10			Red	1	6,367.00	5.97	0.00	**5.97**	6,662.01	127.83
J100			Red	1	6,549.09		0.00	**0.00**	6,662.30	49.05
J102	FH	0.0	Red	1	6,498.44		0.00	**0.00**	6,662.20	70.96
J106	FH	0.0	Red	1	6,492.07		0.00	**0.00**	6,662.19	73.71
J108	FH	0.0	Red	1	6,496.31		0.00	**0.00**	6,662.07	71.82
J14	FH	102.0	Red	1	6,381.00		103.24	**103.24**	6,662.00	121.76
J140	FH	233.0	Red	1	6,467.50		235.83	**235.83**	6,662.08	84.31
J15		0.0	Red	1	6,381.00		0.00	**0.00**	6,662.01	121.76
J16			Red	1	6,350.00		0.00	**0.00**	6,662.01	135.19
J161			Red	1	6,386.00		0.00	**0.00**	6,662.01	119.59
J17		0.0	Blue	1	6,351.40		0.00	**0.00**	6,493.00	61.35
J22			Red	1	6,433.62		0.00	**0.00**	6,661.96	98.94
J24	FH	274.0	Red	1	6,471.80		277.33	**277.33**	6,661.92	82.38
J50			Red	1	6,377.00		0.00	**0.00**	6,662.00	123.49
J54			Red	1	6,425.00		0.00	**0.00**	6,661.99	102.69
J70			Red	1	6,490.00		0.00	**0.00**	6,662.18	74.61
J76	Tank		Red	1	6,646.85		0.00	**0.00**	6,662.40	6.74
J78	Red-Green PS		Red	1	6,607.50		0.00	**0.00**	6,662.36	23.77
J88	Blue-Red PS		Blue	1	6,350.00		0.00	**0.00**	6,493.00	61.96
J92			Red	1	6,380.00		0.00	**0.00**	6,662.01	122.20
J94	FH	62.5	Red	1	6,395.02		63.26	**63.26**	6,662.00	115.68
J96	FH	0.0	Red	1	6,444.45		0.00	**0.00**	6,661.98	94.26
J98	FH	0.0	Red	1	6,443.18		0.00	**0.00**	6,661.98	94.81
		671.5				5.97	679.66	685.63		

WESTSIDE PROPERTY

Dawson Trails Scenario #3 - Ph1, SS, PHD+Irr, Feed 1 OFF, Feed 2 OFF, PS OFF, RZ Tank=6662.0

Dawson Trails Scenario #4B - Ph1, SS, MDD+FF+Irr, Costco FF Alternative (2,150 gpm)

Water Model Pipe Report

Model Run Date: Dec 20, 2024

Max Velocity Criteria =	10	ft/sec
Max Velocity =	0.53	ft/sec
Criteria met?	yes	

Table B2-3: Water Model Pipe Report

[Scenario #3 Results]

								PHD OUTPUT				
ID (Char)	Description (Char)	Zone (Char)	Phase (Int)	From Node	To Node	Length (ft)	Diameter (in)	Roughness	Flow (gpm)	Velocity (ft/s)	Headloss (ft)	HL/1000 (ft/k-ft)	Status
P-1		Red	1	J15	J161	83.66	12	120	99.37	0.28	0	0.04	Open
P-11		Red	1	J50	J16	1,423.65	12	120	-41.25	0.12	0.01	0.01	Open
P-18		Red	1	J76	J78	879.01	24	120	685.64	0.49	0.04	0.05	Open
P-2		Red	1	J10	J16	777.55	24	120	41.25	0.03	0	0	Open
P-29	Zone Bndy	Red	1	J88	J16	126.82	24	120	0.00	0	0	0	Closed
P294	Zone Bndy	Red	1	P1_PH1	J16	64.44	24	120	0.00	0	0	0	Open
P-30		Red	1	J94	J92	930.51	16	120	-123.61	0.2	0.01	0.02	Open
P-31		Red	1	J54	J94	1,101.20	16	120	-93.39	0.15	0.01	0.01	Open
P-32		Red	1	J96	J54	685.74	16	120	-114.88	0.18	0.01	0.01	Open
P-33		Red	1	J98	J96	257.42	16	120	-114.88	0.18	0	0.01	Open
P-35		Red	1	J102	J100	970.07	12	120	-162.45	0.46	0.1	0.1	Open
P-36		Red	1	J106	J102	144.99	12	120	-162.45	0.46	0.01	0.1	Open
P-37		Red	1	J70	J106	87.97	12	120	-162.45	0.46	0.01	0.1	Open
P-38		Red	1	J108	J70	1,096.69	12	120	-162.45	0.46	0.11	0.1	Open
P-39		Red	1	J24	J108	1,454.20	12	120	-162.45	0.46	0.15	0.1	Open
P-4		Red	1	J22	J24	781.22	12	120	114.88	0.33	0.04	0.05	Open
P-40		Red	1	J22	J98	1,043.14	16	120	-114.88	0.18	0.01	0.01	Open
P-66		Red	1	J140	J78	3,778.95	20	120	-523.19	0.53	0.28	0.07	Open
P-67		Red	1	J92	J140	2,723.50	20	120	-287.36	0.29	0.07	0.02	Open
P-68		Red	1	J78	J100	2,188.12	16	120	162.45	0.26	0.05	0.02	Open
P-69		Red	1	J10	J15	1,497.69	24	120	-64.38	0.05	0	0	Open
P-71		Red	1	J15	J92	570.16	24	120	-163.75	0.12	0	0	Open
P-72		Red	1	J161	J14	526.76	12	120	66.32	0.19	0.01	0.02	Open
P-74		Red	1	J14	J50	503.93	12	120	-19.75	0.06	0	0	Open
P-75		Red	1	J94	J161	1,617.47	12	120	-33.04	0.09	0.01	0.01	Open
P-76		Red	1	J50	J54	3,892.99	12	120	21.49	0.06	0.01	0	Open
P-91		Red	1	J10	J14	1,111.51	8	120	17.16	0.11	0.01	0.01	Open
SUPPLY3	Supply 3	Red	1	FEED3	J76	1.00	24	120	685.64	0.49	0	0	Open

WESTSIDE PROPERTY

Dawson Trails Scenario #4A - Ph1, SS, MDD+FF+Irr (standard), Feed 1 OFF, Feed 2 OFF, PS OFF, RZ Tank=6662.0

Water Model Fire Flow Report

Model Run Date: Dec 20, 2024

Table B2-4: Water Model Fire Flow Report

ID	Description (Char)	Junction of Interest	Zone (Char)	Elevation (ft)	Static Demand (gpm)	Static Pressure (psi)	Static Head (ft)	Fire-Flow Demand (gpm)	Residual Pressure (psi)	Hydrant Available Flow (gpm)	Hydrant Pressure at Available Flow (psi)	Pass /Fail
J102	FH	no	Red	6,498.44	0	71.02	6,662.35	3,000	63.71	8,713.01	20	Pass
J106	FH	no	Red	6,492.07	0	73.78	6,662.35	1,500	71.55	8,740.97	20	Pass
J108	FH	no	Red	6,496.31	0	71.93	6,662.32	3,000	62.57	7,720.29	20	Pass
J14	FH	yes	Red	6,381.00	46.93	121.89	6,662.30	2,000	118.94	14,551.32	20	Pass
J140	FH	no	Red	6,467.50	107.2	84.42	6,662.32	1,500	83.51	17,297.46	20	Pass
J24	FH	no	Red	6,471.80	126.06	82.54	6,662.29	3,000	73.66	9,031.96	20	Pass
J94	FH	no	Red	6,395.02	28.75	115.81	6,662.30	3,000	111.07	16,064.20	20	Pass
J96	FH	no	Red	6,444.45	0	94.39	6,662.30	3,000	88.4	12,203.95	20	Pass
J98	FH	no	Red	6,443.18	0	94.95	6,662.30	3,000	88.72	11,994.30	20	Pass

WESTSIDE PROPERTY

Dawson Trails Scenario #3 - Ph1, SS, PHD, Feed 1 OFF, Feed 2 OFF, PS OFF, RZ Tank=6662.0

Dawson Trails Scenario #4B - Ph1, SS, MDD+FF, Costco FF Alternative (2,150 gpm)

Water Model Junction Report

Model Run Date: Dec 20, 2024

Table B2-2: Water Model Junction Report

[Scenario #4B Results]

		671.5				MDD DMD = 2,464.9 gpm			
						MDD + IRR			
ID	Description (Char)	SFE	Zone (Char)	Phase (Int)	Elevation (ft)	MDD Demand Applied (gpm)	ADD (gpm)	Head (ft)	Pressure (psi)
J10			Red	1	6,367.00	0.00	5.97	6,656.66	125.51
J100			Red	1	6,549.09	0.00	0.00	6,661.40	48.66
J102	FH	0.0	Red	1	6,498.44	0.00	0.00	6,660.43	70.19
J106	FH	0.0	Red	1	6,492.07	0.00	0.00	6,660.29	72.89
J108	FH	0.0	Red	1	6,496.31	0.00	0.00	6,659.12	70.54
J14	FH	102.0	Red	1	6,381.00	2196.93	2196.93	6,654.59	118.55
J140	FH	233.0	Red	1	6,467.50	107.20	107.20	6,658.88	82.92
J15		0.0	Red	1	6,381.00	0.00	0.00	6,656.75	119.48
J16			Red	1	6,350.00	0.00	0.00	6,656.64	132.87
J161			Red	1	6,386.00	0.00	0.00	6,656.55	117.23
J17		0.0	Blue	1	6,351.40	0.00	0.00	6,493.00	61.35
J22			Red	1	6,433.62	0.00	0.00	6,657.19	96.88
J24	FH	274.0	Red	1	6,471.80	126.06	126.06	6,657.67	80.54
J50			Red	1	6,377.00	0.00	0.00	6,655.56	120.70
J54			Red	1	6,425.00	0.00	0.00	6,656.89	100.48
J70			Red	1	6,490.00	0.00	0.00	6,660.20	73.75
J76	Tank		Red	1	6,646.85	0.00	0.00	6,662.40	6.74
J78	Red-Green PS		Red	1	6,607.50	0.00	0.00	6,661.93	23.58
J88	Blue-Red PS		Blue	1	6,350.00	0.00	0.00	6,493.00	61.96
J92			Red	1	6,380.00	0.00	0.00	6,656.90	119.98
J94	FH	62.5	Red	1	6,395.02	28.75	28.75	6,656.88	113.46
J96	FH	0.0	Red	1	6,444.45	0.00	0.00	6,657.00	92.10
J98	FH	0.0	Red	1	6,443.18	0.00	0.00	6,657.04	92.67
		671.5				2,458.94	2,464.91		

WESTSIDE PROPERTY

Dawson Trails Scenario #3 - Ph1, SS, PHD+Irr, Feed 1 OFF, Feed 2 OFF, PS OFF, RZ Tank=6662.0

Dawson Trails Scenario #4B - Ph1, SS, MDD+FF+Irr, Costco FF Alternative (2,150 gpm)

Water Model Pipe Report

Model Run Date: Dec 20, 2024

Max Velocity Criteria = 5 ft/sec

Max Velocity = 3.22 ft/sec

Criteria met? yes

Table B2-3: Water Model Pipe Report

[Scenario #4B Results]

									MDD OUTPUT				
ID (Char)	Description (Char)	Zone (Char)	Phase (Int)	From Node	To Node	Length (ft)	Diameter (in)	Roughness	Flow (gpm)	Velocity (ft/s)	Headloss (ft)	HL/1000 (ft/k-ft)	Status
P-1		Red	1	J15	J161	83.66	12	120	898.16	2.55	0.2	2.41	Open
P-11		Red	1	J50	J16	1,423.65	12	120	-481.20	1.37	1.08	0.76	Open
P-18		Red	1	J76	J78	879.01	24	120	2,464.92	1.75	0.47	0.53	Open
P-2		Red	1	J10	J16	777.55	24	120	481.21	0.34	0.02	0.03	Open
P-29	Zone Bndy	Red	1	J88	J16	126.82	24	120	0.00	0	0	0	Closed
P294	Zone Bndy	Red	1	P1_PH1	J16	64.44	24	120	0.00	0	0	0	Open
P-30		Red	1	J94	J92	930.51	16	120	-147.53	0.24	0.02	0.02	Open
P-31		Red	1	J54	J94	1,101.20	16	120	117.08	0.19	0.02	0.01	Open
P-32		Red	1	J96	J54	685.74	16	120	429.98	0.69	0.1	0.15	Open
P-33		Red	1	J98	J96	257.42	16	120	429.98	0.69	0.04	0.15	Open
P-35		Red	1	J102	J100	970.07	12	120	-556.04	1.58	0.96	0.99	Open
P-36		Red	1	J106	J102	144.99	12	120	-556.04	1.58	0.14	0.99	Open
P-37		Red	1	J70	J106	87.97	12	120	-556.04	1.58	0.09	0.99	Open
P-38		Red	1	J108	J70	1,096.69	12	120	-556.04	1.58	1.09	0.99	Open
P-39		Red	1	J24	J108	1,454.20	12	120	-556.04	1.58	1.44	0.99	Open
P-4		Red	1	J22	J24	781.22	12	120	-429.98	1.22	0.48	0.62	Open
P-40		Red	1	J22	J98	1,043.14	16	120	429.98	0.69	0.16	0.15	Open
P-66		Red	1	J140	J78	3,778.95	20	120	-1,908.88	1.95	3.06	0.81	Open
P-67		Red	1	J92	J140	2,723.50	20	120	-1,801.68	1.84	1.98	0.73	Open
P-68		Red	1	J78	J100	2,188.12	16	120	556.04	0.89	0.53	0.24	Open
P-69		Red	1	J10	J15	1,497.69	24	120	-755.98	0.54	0.09	0.06	Open
P-71		Red	1	J15	J92	570.16	24	120	-1,654.14	1.17	0.15	0.26	Open
P-72		Red	1	J161	J14	526.76	12	120	1,134.03	3.22	1.95	3.71	Open
P-74		Red	1	J14	J50	503.93	12	120	-794.10	2.25	0.97	1.92	Open
P-75		Red	1	J94	J161	1,617.47	12	120	235.87	0.67	0.33	0.2	Open
P-76		Red	1	J50	J54	3,892.99	12	120	-312.90	0.89	1.33	0.34	Open
P-91		Red	1	J10	J14	1,111.51	8	120	268.80	1.72	2.07	1.86	Open
SUPPLY3	Supply 3	Red	1	FEED3	J76	1.00	24	120	2,464.92	1.75	0	0.49	Open

WESTSIDE PROPERTY

Dawson Trails Scenario #0 - Buildout, Static-no demands, Feed 1 OFF, Feed 2 OFF, PS OFF,

Water Model Junction Report

Model Run Date: June 29, 2024

Table B2-7: Water Model Junction Report

							Tank at 20%, BZ=6490.0, RZ=6662.0, GZ=6806.0		Tank at 100%, BZ=6508.0, RZ=6618.0, GZ=6824.0			
ID	Description (Char)	SFE	Zone (Char)	Phase (Int)	Elevation (ft)	Demand (gpm)	Head (ft)	Pressure (psi)	Head (ft)	Pressure (psi)	Head (ft)	Pressure (psi)
J10			Red	1	6,367.00	0.00	295.00	127.82	6,367.00	2758.67	313.00	135.62
J100			Red	1	6,549.09	0.00	112.91	48.92	6,549.09	2837.56	130.91	56.72
J102	FH	216.0	Red	1	6,498.44	0.00	163.56	70.87	6,498.44	2815.62	181.56	78.67
J106	FH	102.0	Red	1	6,492.07	0.00	169.93	73.63	6,492.07	2812.86	187.93	81.43
J108	FH	17.0	Red	1	6,496.31	0.00	165.69	71.79	6,496.31	2814.69	183.69	79.59
J110	FH	68.0	Red		6,432.18	0.00	229.82	99.58	6,432.18	2786.91	247.82	107.37
J112	FH	517.0	Red		6,433.00	0.00	229.00	99.22	6,433.00	2787.26	247.00	107.02
J114	FH	688.0	Red		6,460.00	0.00	202.00	87.52	6,460.00	2798.96	220.00	95.32
J116	FH	101.0	Red		6,452.69	0.00	209.31	90.69	6,452.69	2795.79	227.31	98.49
J118	FH	191.0	Red		6,450.00	0.00	212.00	91.85	6,450.00	2794.63	230.00	99.65
J12	FH	20.0	Blue	1	6,370.48	0.00	119.52	51.79	6,370.48	2760.17	137.52	59.58
J120	FH	2.0	Red		6,458.83	0.00	203.17	88.03	6,458.83	2798.45	221.17	95.83
J122	FH	5.0	Red		6,440.00	0.00	222.00	96.19	6,440.00	2790.29	240.00	103.99
J124	FH	189.0	Red		6,515.38	0.00	146.62	63.53	6,515.38	2822.95	164.62	71.33
J126	FH	114.0	Red		6,528.47	0.00	133.53	57.86	6,528.47	2828.63	151.53	65.65
J128	FH	222.0	Green		6,597.16	0.00	208.84	90.49	6,597.16	2858.39	226.84	98.28
J130	FH	169.0	Green		6,593.11	0.00	212.89	92.24	6,593.11	2856.63	230.89	100.04
J132	FH	92.0	Green		6,595.46	0.00	210.54	91.22	6,595.46	2857.65	228.54	99.02
J134	FH	239.0	Green		6,565.00	0.00	241.00	104.42	6,565.00	2844.45	259.00	112.22
J136	FH	333.0	Green		6,679.27	0.00	126.73	54.91	6,679.27	2893.96	144.73	62.71
J138	FH	228.0	Green		6,602.50	0.00	203.50	88.17	6,602.50	2860.70	221.50	95.97
J14	FH	102.0	Red	1	6,381.00	0.00	281.00	121.75	6,381.00	2764.73	299.00	129.55
J140	FH	245.0	Red	1	6,467.50	0.00	194.50	84.27	6,467.50	2802.21	212.50	92.07
J15		0.0	Red	1	6,381.00	0.00	281.00	121.75	6,381.00	2764.73	299.00	129.55
J16			Red	1	6,350.00	0.00	312.00	135.18	6,350.00	2751.30	330.00	142.98
J161			Red	1	6,386.00	0.00	276.00	119.58	6,386.00	2766.90	294.00	127.38
J17			Blue		6,351.40	0.00	138.60	60.05	6,351.40	2751.91	156.60	67.85
J18	FH	4.0	Blue	1	6,370.48	0.00	119.52	51.79	6,370.48	2760.17	137.52	59.58
J20	FH	36.0	Blue		6,352.61	0.00	137.39	59.53	6,352.61	2752.43	155.39	67.33
J22			Red	1	6,433.62	0.00	228.38	98.95	6,433.62	2787.53	246.38	106.75
J24	FH	148.0	Red	1	6,471.80	0.00	190.20	82.41	6,471.80	2804.07	208.20	90.21
J26	FH		Blue		6,320.51	0.00	169.49	73.44	6,320.51	2738.52	187.49	81.23
J28	FH	90.0	Blue		6,341.09	0.00	148.91	64.52	6,341.09	2747.44	166.91	72.32
J42	FH	167.0	Green		6,591.59	0.00	214.41	92.90	6,591.59	2855.97	232.41	100.70
J44	FH	334.0	Green		6,578.02	0.00	227.98	98.78	6,578.02	2850.10	245.98	106.58
J46			Green		6,637.06	0.00	168.94	73.20	6,637.06	2875.68	186.94	81.00
J48	FH	2.0	Green		6,701.21	0.00	104.79	45.40	6,701.21	2903.47	122.79	53.20
J50			Red	1	6,377.00	0.00	285.00	123.48	6,377.00	2763.00	303.00	131.28
J54			Red	1	6,425.00	0.00	237.00	102.69	6,425.00	2783.80	255.00	110.49
J56			Red		6,500.00	0.00	162.00	70.19	6,500.00	2816.29	180.00	77.99
J58	FH	384.0	Red		6,471.27	0.00	190.73	82.64	6,471.27	2803.84	208.73	90.44
J60	Tank		Green		6,806.00	0.00	0.00	0.00	6,806.00	2948.87	18.00	7.80
J62	FH	138.0	Green		6,642.50	0.00	163.50	70.84	6,642.50	2878.03	181.50	78.64
J64	FH	13.0	Red		6,430.00	0.00	232.00	100.52	6,430.00	2785.96	250.00	108.32
J66	FH	25.0	Red		6,492.95	0.00	169.05	73.25	6,492.95	2813.24	187.05	81.04
J68			Red		6,440.00	0.00	222.00	96.19	6,440.00	2790.29	240.00	103.99
J70			Red	1	6,490.00	0.00	172.00	74.52	6,490.00	2811.96	190.00	82.32
J72			Green		6,533.66	0.00	272.34	118.00	6,533.66	2830.88	290.34	125.80
J74	FH	17.0	Green		6,582.76	0.00	223.24	96.72	6,582.76	2852.15	241.24	104.52
J76	RZ Tank		Red	1	6,646.85	0.00	15.15	6.56	6,646.85	2879.92	33.15	14.36
J78	GZBPS		Red	1	6,607.50	0.00	54.50	23.61	6,607.50	2862.87	72.50	31.41
J80			Green		6,607.54	0.00	198.46	85.99	6,607.54	2862.89	216.46	93.79
J82			Green		6,593.54	0.00	212.46	92.05	6,593.54	2856.82	230.46	99.85
J84			Blue	1	6,339.66	0.00	150.34	65.14	6,339.66	2746.82	168.34	72.94
J86			Blue	1	6,286.00	0.00	204.00	88.39	6,286.00	2723.57	222.00	96.19
J88	RZBPS		Blue		6,350.00	0.00	140.00	60.66	6,350.00	2751.30	158.00	68.46
J90			Blue	1	6,346.49	0.00	143.51	62.18	6,346.49	2749.78	161.51	69.98
J92			Red	1	6,380.00	0.00	282.00	122.18	6,380.00	2764.30	300.00	129.98
J94	FH	509.0	Red	1	6,395.02	0.00	266.98	115.68	6,395.02	2770.81	284.98	123.47
J96	FH	678.0	Red	1	6,444.45	0.00	217.55	94.26	6,444.45	2792.22	235.55	102.06
J98	FH	470.0	Red	1	6,443.18	0.00	218.82	94.81	6,443.18	2791.67	236.82	102.61
		6,875.0				0.00						

WESTSIDE PROPERTY

Dawson Trails Scenario #11 - Buildout, SS, PHD+Irr, Feed 1, 3, 4 ON, Feed 2 OFF, RZ and GZ PS OFF, RZ Tank=6662.4

Dawson Trails Scenario #12B - Buildout, SS, MDD+FF+Irr, Costco FF Alternative (2,150 gpm)

Water Model Junction Report

Model Run Date: Dec 20, 2024

ADD:	265.0	gpd/SFE
MDD:	2.5	x ADD
PHD	5.5	x ADD

Table B2-8: Water Model Junction Report

[Scenario #11 Results]

PHD DMD = 7,765.5 gpm

ID	Description (Char)	SFE	Zone (Char)	Phase (Int)	Elevation (ft)	Irrigation ADD (gpm)	PHD Demand Applied (gpm)	PHD + IRR ADD (gpm)	Head (ft)	Pressure (psi)
J10			Red	1	6,367.00	5.97	0.00	**5.97**	6,650.22	122.72
J100			Red	1	6,549.09		0.00	**0.00**	6,651.33	44.30
J102	FH	216.0	Red	1	6,498.44	35.67	218.63	**254.30**	6,646.52	64.16
J106	FH	102.0	Red	1	6,492.07	35.67	103.24	**138.91**	6,646.03	66.71
J108	FH	17.0	Red	1	6,496.31	35.67	17.21	**52.88**	6,645.30	64.56
J110	FH	68.0	Red		6,432.18	35.67	68.83	**104.50**	6,643.91	91.74
J112	FH	517.0	Red		6,433.00	35.67	523.28	**558.95**	6,644.11	91.47
J114	FH	688.0	Red		6,460.00	35.67	696.36	**732.03**	6,640.55	78.23
J116	FH	101.0	Red		6,452.69	35.67	102.23	**137.90**	6,640.51	81.38
J118	FH	191.0	Red		6,450.00	35.67	193.32	**228.99**	6,640.51	82.55
J12	FH	20.0	Blue	1	6,370.48		20.24	**20.24**	6,492.80	53.00
J120	FH	2.0	Red		6,458.83	35.67	2.02	**37.69**	6,640.52	78.73
J122	FH	5.0	Red		6,440.00	35.67	5.06	**40.73**	6,640.65	86.94
J124	FH	189.0	Red		6,515.38	35.67	191.30	**226.97**	6,641.44	54.62
J126	FH	114.0	Red		6,528.47	35.67	115.39	**151.06**	6,641.41	48.94
J128	FH	222.0	Green		6,597.16	23.02	224.70	**247.72**	6,715.14	51.12
J130	FH	169.0	Green		6,593.11	23.02	171.05	**194.07**	6,714.77	52.71
J132	FH	92.0	Green		6,595.46	23.02	93.12	**116.14**	6,714.77	51.70
J134	FH	239.0	Green		6,565.00	23.02	241.90	**264.92**	6,714.91	64.96
J136	FH	333.0	Green		6,679.27	23.02	337.05	**360.07**	6,716.58	16.17
J138	FH	228.0	Green		6,602.50	23.02	230.77	**253.79**	6,720.56	51.16
J14	FH	102.0	Red	1	6,381.00		103.24	**103.24**	6,650.00	116.56
J140	FH	245.0	Red	1	6,467.50		247.98	**247.98**	6,654.12	80.86
J15		0.0	Red	1	6,381.00		0.00	**0.00**	6,650.24	116.66
J16			Red	1	6,350.00		0.00	**0.00**	6,650.21	130.08
J161			Red	1	6,386.00		0.00	**0.00**	6,650.10	114.44
J17			Blue		6,351.40		0.00	**0.00**	6,492.80	61.27
J18	FH	4.0	Blue	1	6,370.48	12.72	4.05	**16.77**	6,492.80	53.00
J20	FH	36.0	Blue		6,352.61		36.44	**36.44**	6,492.80	60.75
J22			Red	1	6,433.62		0.00	**0.00**	6,644.73	91.47
J24	FH	148.0	Red	1	6,471.80		149.80	**149.80**	6,644.81	74.97
J26	FH		Blue		6,320.51		0.00	**0.00**	6,492.80	74.65
J28	FH	90.0	Blue		6,341.09		91.09	**91.09**	6,492.80	65.74
J42	FH	167.0	Green		6,591.59	23.02	169.03	**192.05**	6,717.65	54.62
J44	FH	334.0	Green		6,578.02	23.02	338.06	**361.08**	6,716.14	59.85
J46			Green		6,637.06		0.00	**0.00**	6,725.13	38.16
J48	FH	2.0	Green		6,701.21	23.02	2.02	**25.04**	6,720.95	8.55
J50			Red	1	6,377.00		0.00	**0.00**	6,649.91	118.25
J54			Red	1	6,425.00		0.00	**0.00**	6,647.19	96.28
J56			Red		6,500.00		0.00	**0.00**	6,641.60	61.35
J58	FH	384.0	Red		6,471.27	35.67	388.67	**424.34**	6,640.54	73.35
J60	Tank		Green		6,806.00		0.00	**0.00**	6,805.99	-0.01
J62	FH	138.0	Green		6,642.50	23.02	139.68	**162.70**	6,731.13	38.40
J64	FH	13.0	Red		6,430.00	35.67	13.16	**48.83**	6,640.82	91.35
J66	FH	25.0	Red		6,492.95	35.67	25.30	**60.97**	6,641.41	64.32
J68			Red		6,440.00		0.00	**0.00**	6,643.61	88.23
J70			Red	1	6,490.00		0.00	**0.00**	6,645.80	67.51
J72			Green		6,533.66		0.00	**0.00**	6,717.64	79.72
J74	FH	17.0	Green		6,582.76	23.02	17.21	**40.23**	6,717.64	58.44
J76	RZ Tank		Red	1	6,646.85		0.00	**0.00**	6,662.40	6.74
J78	GZBPS		Red	1	6,607.50		0.00	**0.00**	6,660.40	22.92
J80			Green		6,607.54		0.00	**0.00**	6,714.81	46.48
J82			Green		6,593.54		0.00	**0.00**	6,714.81	52.55
J84			Blue	1	6,339.66		0.00	**0.00**	6,492.84	66.37
J86			Blue	1	6,286.00		0.00	**0.00**	6,493.00	89.69
J88	RZBPS		Blue		6,350.00		0.00	**0.00**	6,492.80	61.88
J90			Blue	1	6,346.49		0.00	**0.00**	6,492.81	63.40
J92			Red	1	6,380.00		0.00	**0.00**	6,650.30	117.12
J94	FH	509.0	Red	1	6,395.02		515.19	**515.19**	6,648.85	109.99
J96	FH	678.0	Red	1	6,444.45		686.24	**686.24**	6,645.49	87.11
J98	FH	470.0	Red	1	6,443.18		475.71	**475.71**	6,645.21	87.54
		6,875.0				806.90	**6,958.55**	**7,765.53**		

WESTSIDE PROPERTY

Dawson Trails Scenario #11 - Buildout, SS, PHD+Irr, Feed 1, 3, 4 ON, Feed 2 OFF, RZ and GZ PS OFF, RZ Tank=6662.4

Dawson Trails Scenario #12B - Buildout, SS, MDD+FF, Costco FF Alternative

Water Model Pipe Report

Model Run Date: Dec 20, 2024

Max Velocity Criteria = 10 ft/sec

Max Velocity = 6.29 ft/sec

Criteria met? yes

Table B2-9: Water Model Pipe Report

[Scenario #11 Results]

									PHD OUTPUT				
ID	Description (Char)	Zone (Char)	Phase (Int)	From Node	To Node	Length (ft)	Diameter (in)	Roughness	Flow (gpm)	Velocity (ft/s)	Headloss (ft)	HL/1000 (ft/k-ft)	Status
P-1		Red	1	J15	J161	83.66	12	120	724.98	2.06	0.14	1.62	Open
P-10		Green		J46	J48	2,269.53	12	120	776.51	2.2	4.18	1.84	Open
P-11		Red	1	J50	J16	1,423.65	12	120	-243.62	0.69	0.31	0.22	Open
P-13		Red		J56	J58	1,156.14	12	120	531.95	1.51	1.06	0.91	Open
P-14		Green		J60	J62	5,824.79	12	120	2,217.81	6.29	74.85	12.85	Open
P-141	Supply 4	Green		T2-GZ	J60	1.00	12	120	0.00	0	0	0.00	Closed
P-15		Red		J64	J66	2,301.39	12	120	-268.08	0.76	0.59	0.26	Open
P-16		Red		J68	J70	2,127.41	12	120	-567.74	1.61	2.19	1.03	Open
P-17		Green		J72	J74	945.67	12	120	0.00	0	0	0	Open
P-18		Red	1	J76	J78	879.01	24	120	5,383.19	3.82	1.99	2.27	Open
P-181	Supply 3	Red		T1-RZ	J76	1.00	24	120	0.00	0	0	0	Closed
P-19		Green		J80	J82	227.74	12	120	0.00	0	0	0	Open
P-2		Red	1	J10	J16	777.55	24	120	243.63	0.17	0.01	0.01	Open
P-20		Blue	1	J84	J86	6,218.83	16	120	-164.53	0.26	0.16	0.03	Open
P-21		Blue		J26	J88	1,436.03	12	120	-8.98	0.03	0	0	Open
P-22		Blue		J28	J90	342.27	12	120	-82.11	0.23	0.01	0.03	Open
P-23		Blue	1	J90	J84	1,172.78	16	120	-164.53	0.26	0.03	0.03	Open
P-24		Blue	1	J18	J90	1,011.16	16	120	-82.43	0.13	0.01	0.01	Open
P-25		Blue		J17	J88	1,707.01	24	120	0.00	0	0	0	Open
P-26		Blue		J88	J20	253.09	16	120	-13.15	0.02	0	0	Open
P-27		Blue	1	J12	J18	1,454.96	12	120	-16.07	0.05	0	0	Open
P-29	Zone Bndy	Red	1	J88	J16	126.82	24	120	0.00	0	0	0	Closed
P-291	Zone Bndy	Blue		J88	P1	68.07	24	120	0.00	0	0	0	Open
P-292	Zone Bndy	Red		P1	J16	61.69	24	120	0.00	0	0	0	Open
P293	Zone Bndy	Blue	1	J88	P1_PH1	64.87	24	120	0.00	0	0	0	Open
P294	Zone Bndy	Red	1	P1_PH1	J16	64.44	24	120	0.00	0	0	0	Open
P-3		Blue		J18	J20	646.08	16	120	49.59	0.08	0	0	Open
P-30		Red	1	J94	J92	930.51	16	120	-1,513.61	2.42	1.45	1.56	Open
P-31		Red	1	J54	J94	1,101.20	16	120	-1,485.05	2.37	1.66	1.51	Open
P-32		Red	1	J96	J54	685.74	16	120	-1,944.94	3.1	1.7	2.48	Open
P-33		Red	1	J98	J96	257.42	16	120	-1,258.70	2.01	0.29	1.11	Open
P-34		Red		J100	J56	2,226.75	12	120	1,239.03	3.51	9.73	4.37	Open
P-35		Red	1	J102	J100	970.07	12	120	-1,326.83	3.76	4.81	4.96	Open
P-36		Red	1	J106	J102	144.99	12	120	-1,072.53	3.04	0.48	3.34	Open
P-37		Red	1	J70	J106	87.97	12	120	-933.62	2.65	0.23	2.59	Open
P-38		Red	1	J108	J70	1,096.69	12	120	-365.88	1.04	0.5	0.46	Open
P-39		Red	1	J24	J108	1,454.20	12	120	-313.00	0.89	0.5	0.34	Open
P-4		Red	1	J22	J24	781.22	12	120	-163.20	0.46	0.08	0.1	Open
P-40		Red	1	J22	J98	1,043.14	16	120	-782.99	1.25	0.48	0.46	Open
P-41		Red		J110	J112	393.61	12	120	-387.24	1.1	0.2	0.51	Open
P-42		Red		J112	J22	233.82	12	120	-946.19	2.68	0.62	2.65	Open
P-43		Red		J68	J110	1,036.73	12	120	-282.74	0.8	0.29	0.28	Open
P-44		Red		J114	J68	1,405.64	12	120	-850.48	2.41	3.06	2.18	Open
P-45		Red		J116	J114	738.3	12	120	-118.45	0.34	0.04	0.06	Open
P-46		Red		J118	J116	148.99	12	120	19.45	0.06	0	0	Open
P-47		Red		J120	J118	481.07	12	120	69.92	0.2	0.01	0.02	Open
P-48		Red		J58	J120	435.82	12	120	107.61	0.31	0.02	0.05	Open
P-49		Red		J122	J118	1,191.76	12	120	178.52	0.51	0.14	0.12	Open
P-5		Blue		J26	J28	227.24	12	120	8.98	0.03	0	0	Open
P-50		Red		J64	J122	917.58	12	120	219.25	0.62	0.16	0.18	Open
P-51		Red		J66	J56	505.3	12	120	-329.05	0.93	0.19	0.38	Open
P-52		Red		J56	J124	323.43	12	120	378.03	1.07	0.16	0.49	Open
P-53	Zone Bndy	Red		J126	J72	384.78	12	120	0.00	0	0	0	Closed
P-54		Red		J124	J126	327.74	12	120	151.06	0.43	0.03	0.09	Open
P-55		Green		J74	J42	355.34	12	120	-40.23	0.11	0	0.01	Open
P-56		Green		J44	J128	1,616.96	12	120	431.45	1.22	1	0.62	Open
P-57		Green		J130	J128	2,911.06	12	120	-183.73	0.52	0.37	0.13	Open
P-58		Green		J132	J130	186.16	12	120	10.34	0.03	0	0	Open
P-59		Green		J80	J132	633.30	12	120	126.48	0.36	0.04	0.06	Open
P-60		Green		J134	J80	1,597.08	12	120	126.48	0.36	0.1	0.06	Open
P-61		Green		J136	J134	3,230.69	12	120	391.40	1.11	1.67	0.52	Open
P-62		Green		J48	J136	2,523.92	12	120	751.47	2.13	4.37	1.73	Open
P-63		Green		J138	J42	948.27	12	120	1,024.81	2.91	2.92	3.08	Open
P-64		Green		J46	J138	985.08	12	120	1,278.60	3.63	4.56	4.63	Open
P-65		Green		J62	J46	538.12	12	120	2,055.11	5.83	6.01	11.16	Open
P-66		Red	1	J140	J78	3,778.95	20	120	-2,817.33	2.88	6.28	1.66	Open
P-661		Red		J78	P2	100.00	12	120	0.00	0	0	0	Open
P-662		Green		P2	J82	100.00	12	120	0.00	0	0	0	Open
P-67		Red	1	J92	J140	2,723.50	20	120	-2,569.35	2.62	3.82	1.4	Open
P-68		Red	1	J78	J100	2,188.12	16	120	2,565.86	4.09	9.07	4.15	Open
P-69		Red	1	J10	J15	1,497.69	24	120	-330.76	0.23	0.02	0.01	Open
P-70		Blue		J12	J88	1,592.12	12	120	-4.17	0.01	0	0	Open
P-71		Red	1	J15	J92	570.16	24	120	-1,055.73	0.75	0.06	0.11	Open
P-72		Red	1	J161	J14	526.76	12	120	238.34	0.68	0.11	0.21	Open
P-74		Red	1	J14	J50	503.93	12	120	216.26	0.61	0.09	0.17	Open
P-75		Red	1	J94	J161	1,617.47	12	120	-486.63	1.38	1.25	0.77	Open
P-76		Red	1	J50	J54	3,892.99	12	120	459.89	1.3	2.72	0.7	Open
P-9		Green		J42	J44	788.06	12	120	792.53	2.25	1.51	1.91	Open
P-91		Red		J10	J14	1,111.51	8	120	81.16	0.52	0.23	0.2	Open
SUPPLY1	Supply 1	Blue	1	FEED1	J86	1.00	16	120	164.53	0.26	0	0	Open
SUPPLY2	Supply 2	Blue		FEED2	J17	887.22	24	120	0.00	0	0	0	Closed
SUPPLY3	Supply 3	Red	1	FEED3	J76	1	24	120	5,383.19	3.82	0	1.95	Open
SUPPLY4	Supply 4	Green		FEED4	J60	1	12	120	2,217.81	6.29	0.01	12.70	Open

WESTSIDE PROPERTY

Dawson Trails Scenario #12A - Buildout, SS, MDD+Irr, Feed 1, 3, 4 ON, Feed 2 OFF, RZ and GZ PS OFF, RZ Tank=6662.4

Water Model Fire Flow Report

Model Run Date: Dec 20, 2024

Table B2-4A: Water Model Fire Flow Report

ID	Description (Char)	Junction of Interest	Zone (Char)	Elevation (ft)	Static Demand (gpm)	Static Pressure (psi)	Static Head (ft)	Fire-Flow Demand (gpm)	Residual Pressure (psi)	Hydrant Available Flow (gpm)	Hydrant Pressure at Available Flow (psi)	Pass /Fail
J102	FH	no	Red	6,498.44	135.05	69.03	6,657.74	3,000	59.85	8,998.88	20	Pass
J106	FH	no	Red	6,492.07	82.6	71.73	6,657.60	1,500	68.06	9,202.10	20	Pass
J108	FH	no	Red	6,496.31	43.49	69.81	6,657.43	3,000	57.56	7,290.46	20	Pass
J110	FH	no	Red	6,432.18	66.95	97.43	6,657.04	3,000	86.53	10,644.06	20	Pass
J112	FH	no	Red	6,433.00	273.53	97.11	6,657.13	3,000	87.25	11,700.54	20	Pass
J114	FH	no	Red	6,460.00	352.2	84.85	6,655.82	3,000	67.98	7,541.67	20	Pass
J116	FH	no	Red	6,452.69	82.14	87.99	6,655.77	3,000	70.15	7,219.95	20	Pass
J118	FH	no	Red	6,450.00	123.54	89.16	6,655.77	3,000	71.24	7,317.79	20	Pass
J12	FH	no	Blue	6,370.48	9.2	53.06	6,492.95	3,000	28.79	3,565.97	20	Pass
J120	FH	no	Red	6,458.83	36.59	85.34	6,655.77	3,000	66.22	6,644.49	20	Pass
J122	FH	no	Red	6,440.00	37.97	93.5	6,655.79	3,000	71.44	6,406.49	20	Pass
J124	FH	no	Red	6,515.38	122.62	60.94	6,656.02	1,500	53.3	4,779.93	20	Pass
J126	FH	no	Red	6,528.47	88.12	55.26	6,656.01	1,500	46.64	3,914.67	20	Pass
J128	FH	no	Green	6,597.16	125.16	78.92	6,779.29	1,500	31.58	1,883.88	20	Pass
J130	FH	no	Green	6,593.11	100.77	80.62	6,779.18	1,500	31.63	1,850.43	20	Pass
J132	FH	no	Green	6,595.46	65.35	79.61	6,779.18	1,500	30.57	1,792.94	20	Pass
J134	FH	no	Green	6,565.00	132.98	92.82	6,779.23	1,500	43.87	2,125.16	20	Pass
J136	FH	no	Green	6,679.27	176.22	43.52	6,779.72	1,500	-3.65	1,058.46	20	Fail
J138	FH	no	Green	6,602.50	127.92	77.28	6,780.86	1,500	35.17	2,008.38	20	Pass
J14	FH	yes	Red	6,381.00	46.93	120.43	6,658.94	2,000	115.85	14,637.60	20	Pass
J140	FH	no	Red	6,467.50	112.72	83.45	6,660.09	1,500	81.49	17,139.86	20	Pass
J18	FH	no	Blue	6,370.48	14.56	53.06	6,492.95	3,000	32.93	3,959.72	20	Pass
J20	FH	no	Blue	6,352.61	16.56	60.81	6,492.95	3,000	40.2	4,387.75	20	Pass
J24	FH	no	Red	6,471.80	68.09	80.4	6,657.35	3,000	68.79	8,579.42	20	Pass
J26	FH	no	Blue	6,320.51	0	74.72	6,492.95	3,000	53.53	5,055.77	20	Pass
J28	FH	no	Blue	6,341.09	41.41	65.8	6,492.95	3,000	45.29	4,711.25	20	Pass
J42	FH	no	Green	6,591.59	99.85	81.64	6,780.00	1,500	37.39	2,011.05	20	Pass
J44	FH	no	Green	6,578.02	176.68	87.34	6,779.58	1,500	41.79	2,168.42	20	Pass
J48	FH	no	Green	6,701.21	23.94	34.55	6,780.95	3,000	-83.6	647.82	20	Fail
J58	FH	no	Red	6,471.27	212.34	79.95	6,655.78	3,000	60.36	6,366.59	20	Pass
J62	FH	no	Green	6,642.50	86.51	61.29	6,783.95	1,500	25.85	1,767.16	20	Pass
J64	FH	no	Red	6,430.00	41.65	97.85	6,655.83	3,000	74.61	6,387.30	20	Pass
J66	FH	no	Red	6,492.95	47.17	70.65	6,656.00	3,000	50.94	5,539.64	20	Pass
J74	FH	no	Green	6,582.76	30.84	85.46	6,780.00	3,000	-36.16	1,990.73	20	Fail
J94	FH	no	Red	6,395.02	234.18	114.22	6,658.62	3,000	107.38	16,653.36	20	Pass
J96	FH	no	Red	6,444.45	311.93	92.37	6,657.63	3,000	84.29	12,994.37	20	Pass
J98	FH	no	Red	6,443.18	216.23	92.88	6,657.53	3,000	84.62	12,768.64	20	Pass

WESTSIDE PROPERTY

Dawson Trails Scenario #11 - Buildout, SS, PHD+Irr, Feed 1, 3, 4 ON, Feed 2 OFF, RZ and GZ PS OFF, RZ Tank=6662.4

Dawson Trails Scenario #12B - Buildout, SS, MDD+FF+Irr, Costco FF Alternative (2,150 gpm)

Water Model Junction Report

Model Run Date: Dec 20, 2024

Table B2-8: Water Model Junction Report

[Scenario #12B Results]

MDD DMD = 6,120.0 gpm

ID	Description (Char)	SFE	Zone (Char)	Phase (Int)	Elevation (ft)	Irrigation ADD (gpm)	MDD + FF Demand Applied (gpm)	MDD+ FF + IRR ADD (gpm)	Head (ft)	Pressure (psi)
J10			Red	1	6,367.00	5.97	0.00	5.97	6,649.52	122.41
J100			Red	1	6,549.09		0.00	0.00	6,654.94	45.86
J102	FH	216.0	Red	1	6,498.44	35.67	99.38	135.05	6,651.39	66.27
J106	FH	102.0	Red	1	6,492.07	35.67	46.93	82.60	6,650.98	68.85
J108	FH	17.0	Red	1	6,496.31	35.67	7.82	43.49	6,650.06	66.62
J110	FH	68.0	Red		6,432.18	35.67	31.28	66.95	6,649.04	93.97
J112	FH	517.0	Red		6,433.00	35.67	237.86	273.53	6,649.00	93.59
J114	FH	688.0	Red		6,460.00	35.67	316.53	352.20	6,648.88	81.84
J116	FH	101.0	Red		6,452.69	35.67	46.47	82.14	6,648.91	85.02
J118	FH	191.0	Red		6,450.00	35.67	87.87	123.54	6,648.93	86.19
J12	FH	20.0	Blue	1	6,370.48		9.20	9.20	6,492.95	53.06
J120	FH	2.0	Red		6,458.83	35.67	0.92	36.59	6,648.97	82.39
J122	FH	5.0	Red		6,440.00	35.67	2.30	37.97	6,649.02	90.57
J124	FH	189.0	Red		6,515.38	35.67	86.95	122.62	6,649.63	58.17
J126	FH	114.0	Red		6,528.47	35.67	52.45	88.12	6,649.62	52.49
J128	FH	222.0	Green		6,597.16	23.02	102.14	125.16	6,779.29	78.92
J130	FH	169.0	Green		6,593.11	23.02	77.75	100.77	6,779.18	80.62
J132	FH	92.0	Green		6,595.46	23.02	42.33	65.35	6,779.18	79.61
J134	FH	239.0	Green		6,565.00	23.02	109.96	132.98	6,779.23	92.82
J136	FH	333.0	Green		6,679.27	23.02	153.20	176.22	6,779.72	43.52
J138	FH	228.0	Green		6,602.50	23.02	104.90	127.92	6,780.86	77.28
J14	FH	102.0	Red	1	6,381.00		2196.93	2196.93	6,647.31	115.39
J140	FH	245.0	Red	1	6,467.50		112.72	112.72	6,654.19	80.89
J15		0.0	Red	1	6,381.00		0.00	0.00	6,649.62	116.39
J16			Red	1	6,350.00		0.00	0.00	6,649.49	129.77
J161			Red	1	6,386.00		0.00	0.00	6,649.32	114.1
J17			Blue		6,351.40		0.00	0.00	6,492.95	61.33
J18	FH	4.0	Blue	1	6,370.48	12.72	1.84	14.56	6,492.95	53.06
J20	FH	36.0	Blue		6,352.61		16.56	16.56	6,492.95	60.81
J22			Red	1	6,433.62		0.00	0.00	6,649.02	93.33
J24	FH	148.0	Red	1	6,471.80		68.09	68.09	6,649.30	76.91
J26	FH		Blue		6,320.51		0.00	0.00	6,492.95	74.72
J28	FH	90.0	Blue		6,341.09		41.41	41.41	6,492.95	65.8
J42	FH	167.0	Green		6,591.59	23.02	76.83	99.85	6,780.00	81.64
J44	FH	334.0	Green		6,578.02	23.02	153.66	176.68	6,779.58	87.34
J46			Green		6,637.06		0.00	0.00	6,782.19	62.89
J48	FH	2.0	Green		6,701.21	23.02	0.92	23.94	6,780.95	34.55
J50			Red	1	6,377.00		0.00	0.00	6,648.22	117.52
J54			Red	1	6,425.00		0.00	0.00	6,649.04	97.08
J56			Red		6,500.00		0.00	0.00	6,649.68	64.86
J58	FH	384.0	Red		6,471.27	35.67	176.67	212.34	6,649.04	77.03
J60	Tank		Green		6,806.00		0.00	0.00	6,806.00	0
J62	FH	138.0	Green		6,642.50	23.02	63.49	86.51	6,783.95	61.29
J64	FH	13.0	Red		6,430.00	35.67	5.98	41.65	6,649.14	94.95
J66	FH	25.0	Red		6,492.95	35.67	11.50	47.17	6,649.55	67.85
J68			Red		6,440.00		0.00	0.00	6,649.21	90.65
J70			Red	1	6,490.00		0.00	0.00	6,650.76	69.66
J72			Green		6,533.66		0.00	0.00	6,780.00	106.74
J74	FH	17.0	Green		6,582.76	23.02	7.82	30.84	6,780.00	85.46
J76	RZ Tank		Red	1	6,646.85		0.00	0.00	6,662.40	6.74
J78	GZBPS		Red	1	6,607.50		0.00	0.00	6,660.73	23.06
J80			Green		6,607.54		0.00	0.00	6,779.19	74.38
J82			Green		6,593.54		0.00	0.00	6,779.19	80.44
J84			Blue	1	6,339.66		0.00	0.00	6,492.96	66.42
J86			Blue	1	6,286.00		0.00	0.00	6,493.00	89.69
J88	RZBPS		Blue		6,350.00		0.00	0.00	6,492.95	61.94
J90			Blue	1	6,346.49		0.00	0.00	6,492.95	63.46
J92			Red	1	6,380.00		0.00	0.00	6,649.81	116.91
J94	FH	509.0	Red	1	6,395.02		234.18	234.18	6,649.33	110.19
J96	FH	678.0	Red	1	6,444.45		311.93	311.93	6,648.98	88.62
J98	FH	470.0	Red	1	6,443.18		216.23	216.23	6,648.98	89.17
		6,875.0				806.90	5,312.98	6,119.96		

WESTSIDE PROPERTY

Dawson Trails Scenario #11 - Buildout, SS, PHD+Irr, Feed 1, 3, 4 ON, Feed 2 OFF, RZ and GZ PS OFF, RZ Tank=6662.4

Dawson Trails Scenario #12B - Buildout, SS, MDD+FF, Costco FF Alternative

Water Model Pipe Report

Model Run Date: Dec 20, 2024

Max Velocity Criteria = 5 ft/sec

Max Velocity = 3.47 ft/sec

Criteria met? yes

Table B2-9: Water Model Pipe Report

[Scenario #12B Results]

MDD+FF OUTPUT

ID	Description (Char)	Zone (Char)	Phase (Int)	From Node	To Node	Length (ft)	Diameter (in)	Roughness	Flow (gpm)	Velocity (ft/s)	Headloss (ft)	HL/1000 (ft/k-ft)	Status
P-1		Red	1	J15	J161	83.66	12	120	1,116.92	3.17	0.3	3.61	Open
P-10		Green		J46	J48	2,269.53	12	120	402.91	1.14	1.24	0.55	Open
P-11		Red	1	J50	J16	1,423.65	12	120	-526.28	1.49	1.27	0.9	Open
P-13		Red		J56	J58	1,156.14	12	120	408.19	1.16	0.65	0.56	Open
P-14		Green		J60	J62	5,824.79	12	120	1,146.22	3.25	22.05	3.78	Open
P-141	Supply 4	Green		T2-GZ	J60	1.00	12	120	0	0	0	0	Closed
P-15		Red		J64	J66	2,301.39	12	120	-222.16	0.63	0.42	0.18	Open
P-16		Red		J68	J70	2,127.41	12	120	-470.39	1.33	1.55	0.73	Open
P-17		Green		J72	J74	945.67	12	120	0.00	0	0	0	Open
P-18		Red	1	J76	J78	879.01	24	120	4,892.02	3.47	1.67	1.9	Open
P-181	Supply 3	Red		T1-RZ	J76	1.00	24	120	0.00	0	0	0	Closed
P-19		Green		J80	J82	227.74	12	120	0.00	0	0	0	Open
P-2		Red	1	J10	J16	777.55	24	120	526.28	0.37	0.02	0.03	Open
P-20		Blue	1	J84	J86	6,218.83	16	120	-81.73	0.13	0.04	0.01	Open
P-21		Blue		J26	J88	1,436.03	12	120	-2.04	0.01	0	0	Open
P-22		Blue		J28	J90	342.27	12	120	-39.37	0.11	0	0.01	Open
P-23		Blue	1	J90	J84	1,172.78	16	120	-81.73	0.13	0.01	0.01	Open
P-24		Blue	1	J18	J90	1,011.16	16	120	-42.36	0.07	0	0	Open
P-25		Blue		J17	J88	1,707.01	24	120	0.00	0	0	0	Open
P-26		Blue		J88	J20	253.09	16	120	-4.34	0.01	0	0	Open
P-27		Blue	1	J12	J18	1,454.96	12	120	-6.90	0.02	0	0	Open
P-29	Zone Bndy	Red	1	J88	J16	126.82	24	120	0.00	0	0	0	Closed
P-291	Zone Bndy	Blue		J88	P1	68.07	24	120	0.00	0	0	0	Open
P-292	Zone Bndy	Red		P1	J16	61.69	24	120	0.00	0	0	0	Open
P293	Zone Bndy	Blue	1	J88	P1_PH1	64.87	24	120	0.00	0	0	0	Open
P294	Zone Bndy	Red	1	P1_PH1	J16	64.44	24	120	0.00	0	0	0	Open
P-3		Blue		J18	J20	646.08	16	120	20.90	0.03	0	0	Open
P-30		Red	1	J94	J92	930.51	16	120	-838.49	1.34	0.49	0.52	Open
P-31		Red	1	J54	J94	1,101.20	16	120	-570.83	0.91	0.28	0.26	Open
P-32		Red	1	J96	J54	685.74	16	120	-329.09	0.53	0.06	0.09	Open
P-33		Red	1	J98	J96	257.42	16	120	-17.16	0.03	0	0	Open
P-34		Red		J100	J56	2,226.75	12	120	888.27	2.52	5.26	2.36	Open
P-35		Red	1	J102	J100	970.07	12	120	-1,124.85	3.19	3.55	3.65	Open
P-36		Red	1	J106	J102	144.99	12	120	-989.80	2.81	0.42	2.89	Open
P-37		Red	1	J70	J106	87.97	12	120	-907.20	2.57	0.22	2.45	Open
P-38		Red	1	J108	J70	1,096.69	12	120	-436.81	1.24	0.7	0.63	Open
P-39		Red	1	J24	J108	1,454.20	12	120	-393.32	1.12	0.76	0.52	Open
P-4		Red	1	J22	J24	781.22	12	120	-325.23	0.92	0.29	0.37	Open
P-40		Red	1	J22	J98	1,043.14	16	120	199.07	0.32	0.04	0.04	Open
P-41		Red		J110	J112	393.61	12	120	147.37	0.42	0.03	0.08	Open
P-42		Red		J112	J22	233.82	12	120	-126.16	0.36	0.01	0.06	Open
P-43		Red		J68	J110	1,036.73	12	120	214.32	0.61	0.18	0.17	Open
P-44		Red		J114	J68	1,405.64	12	120	-256.07	0.73	0.33	0.24	Open
P-45		Red		J116	J114	738.3	12	120	96.13	0.27	0.03	0.04	Open
P-46		Red		J118	J116	148.99	12	120	178.27	0.51	0.02	0.12	Open
P-47		Red		J120	J118	481.07	12	120	159.26	0.45	0.05	0.1	Open
P-48		Red		J58	J120	435.82	12	120	195.85	0.56	0.06	0.14	Open
P-49		Red		J122	J118	1,191.76	12	120	142.54	0.4	0.1	0.08	Open
P-5		Blue		J26	J28	227.24	12	120	2.04	0.01	0	0	Open
P-50		Red		J64	J122	917.58	12	120	180.51	0.51	0.11	0.12	Open
P-51		Red		J66	J56	505.3	12	120	-269.33	0.76	0.13	0.26	Open
P-52		Red		J56	J124	323.43	12	120	210.74	0.6	0.05	0.16	Open
P-53	Zone Bndy	Red		J126	J72	384.78	12	120	0.00	0	0	0	Closed
P-54		Red		J124	J126	327.74	12	120	88.12	0.25	0.01	0.03	Open
P-55		Green		J74	J42	355.34	12	120	-30.84	0.09	0	0.01	Open
P-56		Green		J44	J128	1,616.96	12	120	221.51	0.63	0.29	0.18	Open
P-57		Green		J130	J128	2,911.06	12	120	-96.35	0.27	0.11	0.04	Open
P-58		Green		J132	J130	186.16	12	120	4.42	0.01	0	0	Open
P-59		Green		J80	J132	633.30	12	120	69.77	0.2	0.01	0.02	Open
P-60		Green		J134	J80	1,597.08	12	120	69.77	0.2	0.03	0.02	Open
P-61		Green		J136	J134	3,230.69	12	120	202.75	0.58	0.49	0.15	Open
P-62		Green		J48	J136	2,523.92	12	120	378.97	1.08	1.23	0.49	Open
P-63		Green		J138	J42	948.27	12	120	528.88	1.5	0.86	0.9	Open
P-64		Green		J46	J138	985.08	12	120	656.80	1.86	1.33	1.35	Open
P-65		Green		J62	J46	538.12	12	120	1,059.71	3.01	1.76	3.27	Open
P-66		Red	1	J140	J78	3,778.95	20	120	-2,878.89	2.94	6.54	1.73	Open
P-661		Red		J78	P2	100.00	12	120	0.00	0	0	0	Open
P-662		Green		P2	J82	100.00	12	120	0.00	0	0	0	Open
P-67		Red	1	J92	J140	2,723.50	20	120	-2,766.17	2.82	4.38	1.61	Open
P-68		Red	1	J78	J100	2,188.12	16	120	2,013.12	3.21	5.79	2.65	Open
P-69		Red	1	J10	J15	1,497.69	24	120	-810.76	0.57	0.1	0.07	Open
P-70		Blue		J12	J88	1,592.12	12	120	-2.30	0.01	0	0	Open
P-71		Red	1	J15	J92	570.16	24	120	-1,927.68	1.37	0.19	0.34	Open
P-72		Red	1	J161	J14	526.76	12	120	1,150.40	3.26	2.01	3.81	Open
P-74		Red	1	J14	J50	503.93	12	120	-768.02	2.18	0.91	1.8	Open
P-75		Red	1	J94	J161	1,617.47	12	120	33.48	0.09	0.01	0.01	Open
P-76		Red	1	J50	J54	3,892.99	12	120	-241.74	0.69	0.83	0.21	Open
P-9		Green		J42	J44	788.06	12	120	398.19	1.13	0.42	0.53	Open
P-91		Red		J10	J14	1,111.51	8	120	278.52	1.78	2.21	1.99	Open
SUPPLY1	Supply 1	Blue	1	FEED1	J86	1.00	16	120	81.73	0.13	0	0	Open
SUPPLY2	Supply 2	Blue		FEED2	J17	887.22	24	120	0.00	0	0	0	Closed
SUPPLY3	Supply 3	Red	1	FEED3	J76	1	24	120	4,892.02	3.47	0	1.95	Open
SUPPLY4	Supply 4	Green		FEED4	J60	1	12	120	1,146.22	3.25	0	3.91	Open

Dawson Trails for Westside

Potable Water Model
Water Model Scenarios Summary
Date: December 2024
MSK Project #: 52-001-01
Calc'd by: DLT

PRELIMINARY
Not for the report
12/20/24

Assumptions:

1. These scenarios are based on the lower ADD value of 265 gpd/SFE requested by CRW to account for the Town's landscaping ordinance.
2. CRW does not want dedicated FF pumps in the RZ BPS. Fire flows will be handled by the tanks.

Summary of Scenario Results

A		B	C	D	E	F	G	H	I	J	K	L	M	N	O	Pass/Fail	Notes
No.	Run	Model Date	Development Area	Model Type	Demand Scenario	Max FF Demand	Red Zone Tank	Red Zone BPS	Blue Zone FEED1	Blue Zone FEED2	ID(s)	Pressure	Pass/Fail	ID(s)	Velocity	Pass?	
0	yes	12/20/24	Phase 1	SS	static - no demands	n/a	online	offline	16", closed	24", closed	n/a	n/a	n/a	n/a	n/a	n/a	
3	yes	12/20/24	Phase 1	SS	PHD+IRR	n/a	online	offline	16", closed	24", closed			see report	n/a	0.53	yes	
4A	yes	12/20/24	Phase 1	SS	MDD+IRR+FF	standard	online	offline	16", closed	24", closed			see report	n/a			Costco (J14) FF=2,000 gpm
4B	yes	12/20/24	Phase 1	SS	MDD+IRR+FF (Costco Alt)	2,150 (J14)	online	offline	16", closed	24", closed			see report	n/a	3.22	yes	Residual pressure at J14 must be 65 psi or higher
11	yes	12/20/24	Buildout	SS	PHD+IRR	n/a	online	offline	16", open	24", closed	n/a	n/a	see report	n/a	n/a	see report	Rez 1, 3, 4 are open. All PS are closed. Rez is closed
12A	yes	12/20/24	Buildout	SS	MDD+IRR+FF	standard	online	offline	16", open	24", closed	n/a	n/a	see report	n/a	n/a	n/a	Costco (J14) FF=2,000 gpm
12B	yes	12/20/24	Buildout	SS	MDD+IRR+FF (Costco Alt)	2,150 (J14)	online	offline	16", open	24", closed	J14	update	see report	n/a	n/a	n/a	Residual pressure at J14 must be 65 psi or higher

Model History:

No.	Date	Changes from Previous Model	Scenarios Run	
6	12/20/24	Add a RZ junction and two 12" RZ pipes. No changes to demands, feeds.	See above	
5	6/30/24	Update pipes/junctions in Phase 1 and BZ feed (only FEED2 for Ph 1). Added irrigation demand to Ph 1 and buildout.	See above	
4	6/8/24	Move J10, added 8" line within Costco area, close 16" FEED, open 24" FEED2	5A	6/10/24: No changes to the tank, pipelines or d
3	10/7/23	Found P-71 was closed in Scenarios 11,12,13; opened and reran. Changed P-293 and P-294 to 24".	11,12,13	
2	9/29/23	Responded to TCR comments on Crystal Valley Connection Submittal by EMK. Added the revised RZBPS location to J-88 and associated BZ and RZ pipe changes. Also increased FEED1 pipe to 16" based on Master Plan.	3,4,5,11,12,13	
1	7/20/23, 7/24/23	Revised RZBPS pumping scenarios to MDD demand over a 12-hour period based on CRW's comments. Reduced ADD to 265 gpd/SFE also based on CRW's comments, which changed MDD and PHD. Revised for both Ph 1 and buildout. Adjusted pipe sizes to meet criteria.	3,4,5,11,12,13	

NORRIS DESIGN
PEOPLE + PLACEMAKING
244 North College Avenue #165
Fort Collins, Colorado 80524
970.409.3414

Dawson Trails Infrastructure North Filing 1

Annual Estimated Irrigation Demand

Area Name	Drip / Low Flow Trees & Shrubs (Acres)	Rotor / Rotary Native Seed (Acres)	Trees in Native Drip / Low Flow Trees & Shrubs (Acres)	Annual Water Use (Gal)	Annual Water Use (Acr/Ft)	Peak Flow Required (GPM)
Dawson Trail North Infra	3.65	0.36	0.52	1,764,077	5.4	61.6
Temporary Irrigation	0.00	6.39	0.00	2,374,543	7.3	82.9
TOTAL	3.65	6.75	0.52	4,138,619	12.70	144.53

Appendix C

Sanitary Calculations

PROJECT: DAWSON TRAILS

12/20/24 Date
CGV Initials

Town of Castle Rock Criteria	Typical ADF/ Unit	Unit Conversions
Single Family Residential and Duplexes	200 GPD/DU	
Multi-Family Residential (Townhomes and Condos)	130 GPD/DU	
Retail/ Offices*	0.1 GPD/SF	
Restaurants*	1.5 GPD/SF	
Hotel**	75 GPD/Room	0.18 GPD/SF
Industrial***	600 GPD/AC	0.01 GPD/SF
Car Wash	5,000 GPD/AC	
Elementary School	3,375 GPD/School	
Parks	200 GPD/SFE	

*Restaurant area anticipated to be 10-15% of the allocated restaurant, retail and office space
**Assuming 115 rooms/ hotel and average 48,000 SF hotel
***Assuming 40% building area

Design Criteria	Slope		Capacity (gpm)	
Pipe (in)	Min	Max	Min	Max
8	0.40%	7.50%	374	1,619
10	0.28%	5.50%	536	2,514
12	0.22%	4.50%	780	3,698
15	0.15%	3.50%	1,224	5,913
18	0.11%	2.50%	1,705	8,126
21	0.09%	2.00%	2,326	10,964
24	0.08%	1.80%	3,131	14,850
27	0.07%	1.50%	4,009	18,559
30	0.06%	1.30%	4,916	22,882

PROJECTED FLOW DETERMINATION

DESIGN POINT						RESIDENTIAL			NON-RESIDENTIAL								PEAK FLOW			INFILTRATION & INFLOW		CUMULATIVE TOTAL FLOW						SEWER DESIGN							
Design Point Location	PLANNING AREA	Phase	Contributing Flow 1	Contributing Flow 2	Contributing Flow 3	Multi Family (DU's)	Single Family (DU's)	Average Daily Flow (GPD)	School (EA.)	Parks (SFE)	Car Wash (AC)	Industrial (Gross SF)	Hotel (Gross SF)	Restaurants (Gross SF)	Retail / Office (Gross SF)	Average Daily Flow (GPD)	Total Average Daily Flow (GPD)	Total Average Flow (gpm)	Peak Hour Flow (gpm)	Infiltration & Inflow (GPD)	Infiltration & Inflow (gpm)	Total Peak Sewage Flow (gpm)	Contributing Flow 1	Contributing Flow 2	Contributing Flow 3	Cumulative Total Peak Flow (gpm)	Cumulative Total Peak Flow (cfs)	Pipe Size (in)	Number of Pipes	Approximate Design Pipe Slope (ft/100 ft)	Min Pipe Slope (ft/100 ft)	Max Pipe Slope (ft/100 ft)	Capacity (gpm) @ 75% depth @ Min Pipe Slope	Capacity (gpm) @ 75% depth @ Max Slope	Capacity @ 75% depth (gpm) @ Design Slope	Capacity Remaining (gpm)	Percent Capacity (75% Max)
						a	b	c	d	dd	ddd	e	ee	f	ff	g	h	i	j	k	m	n	o	p	q	r	rr	s	t	u	w	x	y	z	aa	bb	cc
						Map	Map	130*a + 200*b	Map	Map	Map	Map	Map	Map	Map	3,375*d + 200*dd +5,000*ddd +0.05*e + 0.18*ee + 1.5*f + 0.1*ff	c + g	h/24/60	i * 5	0.1*h	k/(24*60)	j + m	r	r	r	n+o+p+q	r / 0.1337*60									aa - r	
J-4.01	C-1	1B & 2					92	18,400									18,400	12.78	63.89	1,840	1.28	65.2				65.2	0.15	8	1	2.50	0.40	7.50	374	1619	932	867	18%
J-4.02	C-2	1B	J-4.01				34	6,800									6,800	4.72	23.61	680	0.47	24.1	65.2			89.3	0.20	8	1	2.50	0.40	7.50	374	1619	932	843	21%
J-4.03	C-2	1B	J-4.02				83	16,600									16,600	11.53	57.64	1,660	1.15	58.8	89.3			148.1	0.33	8	1	2.50	0.40	7.50	374	1619	932	784	27%
J-4.04	PL-1.04	1B	J-4.03						1							3,375	3,375	2.34	11.72	338	0.23	12.0	148.1			160.1	0.36	8	1	2.00	0.40	7.50	374	1619	834	674	29%
J-4.05	D	1B	J-4.04				133	26,600							10,000	1,000	27,600	19.17	95.83	2,760	1.92	97.8	160.1			257.9	0.57	8	1	2.00	0.40	7.50	374	1619	834	576	38%
J-4.06	D	1B	J-4.05			300	167	72,400									72,400	50.28	251.39	7,240	5.03	256.5	257.9			514.4	1.15	8	1	1.00	0.40	7.50	374	1619	590	75	69%
J-4.07	G-1	1B	J-4.06												200,000	20,000	20,000	13.89	69.44	2,000	1.39	70.9	514.4			585.3	1.30	10	1	1.00	0.28	5.50	536	2514	1,069	484	50%
J-4			J-4.07	J-3																			585.3	2362.8		2948.1	6.57	21	1	0.20	0.09	2.00	2326	10964	3,458	510	67%
J-5.01	PL-1.02	4													60,000	6,000	6,000	4.17	20.83	600	0.42	21.3				21.3	0.05	8	1	0.40	0.40	7.50	374	1619	373	352	16%
J-5.02	B-1	4	J-5.01				185	37,000									37,000	25.69	128.47	3,700	2.57	131.1	21.3			152.4	0.34	8	1	0.40	0.40	7.50	374	1619	373	221	44%
J-5.03	B-1	1B	J-5.02				131	26,200									26,200	18.19	90.97	2,620	1.82	92.8	152.4			245.2	0.55	8	1	2.00	0.40	7.50	374	1619	834	589	36%
J-5.04	B-1	1B	J-5.03				168	33,600									33,600	23.33	116.67	3,360	2.33	119.0	245.2			364.2	0.81	8	1	2.00	0.40	7.50	374	1619	834	470	45%
J-5.05	E-2	1B	J-5.04												95,000	9,500	9,500	6.60	32.99	950	0.66	33.7	364.2			397.9	0.89	8	1	1.50	0.40	7.50	374	1619	722	324	51%
J-5.06	E-2	1B				200		26,000									26,000	18.06	90.28	2,600	1.81	92.1				92.1	0.21	8	1	0.50	0.40	7.50	374	1619	417	325	32%
J-5.07	E-2	1B	J-5.05	J-5.06		200		26,000						150,000	60,000	231,000	257,000	178.47	892.36	25,700	17.85	910.3	397.9	92.1		1400.3	3.12	12	1	0.75	0.22	4.50	780	3698	1,506	105	72%
J-5.08	F-3	1B	J-5.07			540		70,200					300,000		100,000	63,906	134,106	93.13	465.65	13,411	9.31	475.0	1400.3			1875.3	4.18	15	1	1.00	0.15	3.50	1224	5913	3,152	1,277	53%
J-5			J-5.08	J-4																			1875.3	2948.1		4823.4	10.75	21	1	0.50	0.09	2.00	2326	10964	5,467	644	69%

Appendix D

Excerpts

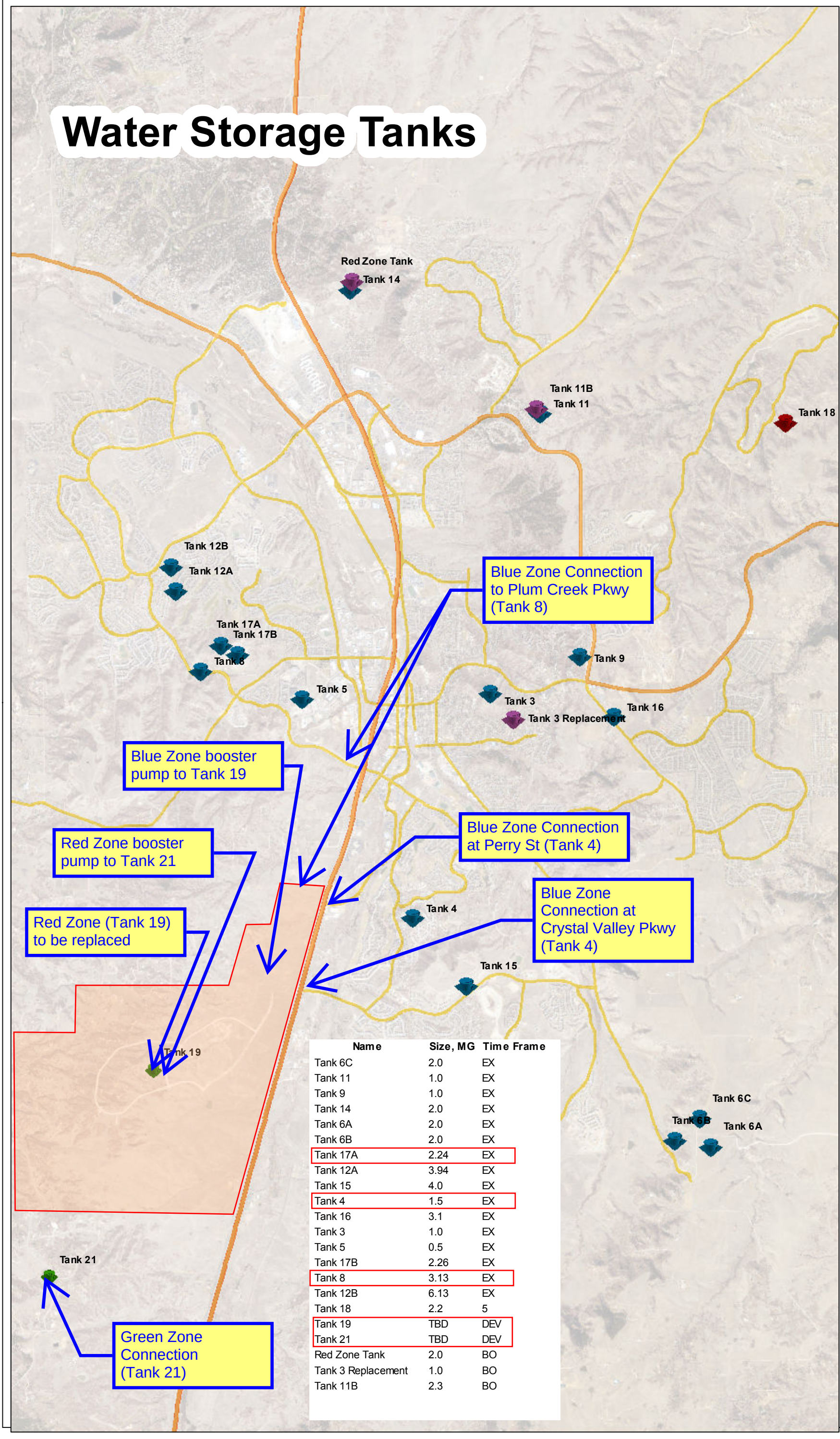
Water Master Plan
2017



Engineering Division

Excerpts from "Water Master Plan 2017"
Prepared by Castle Rock Water

Water Storage Tanks



Name	Size, MG	Time Frame
Tank 6C	2.0	EX
Tank 11	1.0	EX
Tank 9	1.0	EX
Tank 14	2.0	EX
Tank 6A	2.0	EX
Tank 6B	2.0	EX
Tank 17A	2.24	EX
Tank 12A	3.94	EX
Tank 15	4.0	EX
Tank 4	1.5	EX
Tank 16	3.1	EX
Tank 3	1.0	EX
Tank 5	0.5	EX
Tank 17B	2.26	EX
Tank 8	3.13	EX
Tank 12B	6.13	EX
Tank 18	2.2	5
Tank 19	TBD	DEV
Tank 21	TBD	DEV
Red Zone Tank	2.0	BO
Tank 3 Replacement	1.0	BO
Tank 11B	2.3	BO

Figure 3.1

Build-out Planning Numbers

Figure 4.4b

Data through June 30, 2017, please note that these are estimates, and numbers are subject to change

7/27/2017

PD #	Planned Developments (year zoned)	MAXIMUM ZONED UNITS SF	MF	Total	PLATTED (SF) SDP (MF) SF	MF*	Total	Full Growth @100% Build Out SF	MF	Total	COMMENTS
56	Arbors (2002)	38	80	118	0	0	0	38	80	118	Undeveloped, proposed to be developed in conjunction with Hillside
81	Auburn Ridge (2013)	0	289	289	0	289	289	0	289	289	Full development is expected in 2018, pending approved zoning & SDP recordation
2	Brookwood (2003)	72	0	72	72	0	72	72	0	72	Full development is expected
4	Cambridge Heights (2003)	0	100	100	0	0	0	0	100	100	Undeveloped, no dates for activity
5	Castle Highlands (1984)	132	358	490	131	200	331	132	358	490	Project completed, no additional lots are platted.
6	Castle Meadows (1989)	70	218	288	0	0	0	70	218	288	Full development is expected
7, 75, 80, 85, 93	Castle Oaks /Terrain (2002)	1992	775	2767	1696	0	1696	1992	775	2767	Full development is expected
8, 9, 10, 43, 91	Castle Pines Commercial / Promenade (1987)	0	1550	1550	0	1062	1062	0	1550	1550	Project re-entitled by Alberta Corporation. Total MF build-out equals 1018 MF units, not the previously-entitled 1550 MF units.
11	Castle Ridge East (1996)	30	0	30	28	0	28	30	0	30	Project is complete
12 & 53	Castle Rock Estates - Diamond Ridge (1995)	126	0	126	126	0	126	126	0	126	Project is complete
27 & 71 & 74 & 28	CastleviewEstates - The Oaks of Castle Rock (1985)	248	326	574	239	0	239	248	326	574	Full development is expected
62	Castlewood Ranch (1998)	1300	0	1300	1288	0	1288	1300	0	1300	Remaining lots platted for sale, most will be custom homes, full development expected
straight zones, downtown	Central Castle Rock (varies)	1538	883	2421	1522	791	2313	1538	883	2421	Development nearly complete, approximately 20 SF units remaining
88	Covenant At Castle Rock (2014)	58	0	58	58	0	58	58	0	58	Full development is expected
55, 70	Crystal Valley Ranch (2000)	2722	753	3475	1306	0	1306	2722	753	3475	Full development is expected
54	Dawson Ridge (1986)	2447	5453	7900	0	0	0	2447	5453	7900	Project was entitled in the late 1980's. The property has bee vacant since the early 1990's with no specific plans for improvement. All involved with property ownership and development discussions agree that a newland use plan, infrastructure plan, Development Agreement and service plans need to be submitted and approved by Council prior to any development of the site no matter what decision are made on the vesting question
63, 92	Founders Village - Inc. Founders 24 and Bella Mesa (1985)	1754	3667	5421	2634	0	2634	1754	3667	5421	Project is approximately ½ built with the expectation of the entitled 5421 residential units will be constructed.
45, 86	Hazen Moore (2000)	243	0	243	161	0	161	243	0	243	Full development is expected
17	Heckendorf Ranch (1985)	406	224	630	301	0	301	406	224	630	A portion of the property is developed. Full development expected.
90	Hillside (2009)	120	0	120	0	0	0	120	0	120	Full development is expected
19	Lanterns (2003)	1200	0	1200	0	0	0	1200	0	1200	The property was recently entitled for an increase from 548 units to 1200 homes
41	Liberty Village (2004)	1245	0	1245	1212	0	1212	1245	0	1245	Full development is expected
20, 46, 68	Maher Ranch (1988)	2309	100	2409	761	96	857	2309	100	2409	Full development is expected
37, 38, 82, 89	Meadows (1985)	6642	4002	10644	7188	240	7428	6642	4002	10644	The developer consistently states the intent to build the entitled number of lots.
22	Memmen Young Infill (1985)	559	476	1035	0	0	0	559	476	1035	The property is entitled and undeveloped but questions remain whether the entitled density can be reached due to topography, skyline / Ridgeline and presence of cap rock throughout the property.
23 & 24 & 25	Metzler Ranch (1996)	1056	660	1716	727	683	1410	1056	660	1716	It is uncertain at this time if the property will develop to the entitled number of residential homes.
49, 50, 65	Plum Creek (1983)	3025		3025	1177	360	1537	3025	0	3025	There are areas remaining where additional lots could be platte and homes constructed. It is uncertain at this time if or when the remaining lots will be buil
no PD number, downtown map	Plum Creek Ridge (2006)	92	70	162	65	45	110	92	70	162	Full development is expected, MF are Townhomes
29	Plum Creek South (1985)	307	198	505	140	0	140	307	198	505	They are close to completion, approx. 3.5 acres remaining undeveloped on north side of Emerald Drive. Full development is not expectec
60	Red Hawk (1996)	658	268	926	887	0	887	658	268	926	Full development is expected
47, 48	Scott II (1987)	85	220	305	78	220	298	85	220	305	This project is complete
42	Stanbro PD (1987)	32	92	124	0	0	0	32	92	124	Full development is expected
34	Villages at Castle Rock (1981	0	626	626	0	0	0	0	626	626	Full development is expected
58	Wolfensberger - formerly Graham PD (1996)	0	56	56	0	56	56	0	56	56	Full development is expected
40, 33, and 35	Woodlands - Inc. Scott Ranch (1983)	1160	0	1160	551	0	551	1160	0	1160	Lots platted, but not all built Full development is expected
36	Young American (1983)	78	1128	1206	375	186	561	78	1128	1206	Full development is expected
		ZONED UNITS			PLATTED (SF) SDP (MF)						
					* MF counts shows approved by SDF						
		SF	MF	Total	SF	MF*	Total				
	TOTAL UNITS	31,744	22,572	54,316	22,723	4,228	26,951	31,744	22,572	54,316	approximately 1,725 SFA units within SF tots
	POPULATION ESTIMATES	96,502	45,144	141,646	69,078	8,456	77,534	95,294	45,144	140,438	Persons Per Household (3.04-SFD, 2.34-SFA, 2.00-MF)

Tank 6 to Crystal Valley Ranch Transmission

Transmission main from Tank 6 to Crystal Valley Ranch. The project consists of approximately 4,055 feet of 24 inch pipe. The estimated cost for the project is $1,004,000.

Blue Zone - Plum Creek to Frontage Road Transmission

Blue zone transmission main to loop blue zone in I-25 Frontage Rd. The project consists of approximately 5,000 feet of 24 inch pipe. The estimated cost for the project is $1,500,000.

Plum Creek WPF to Tank 12 Transmission

Transmission main from Plum Creek WTP to Tank 12 to accommodate plant expansion. The project consists of approximately 9,700 feet of 12" pipe. The estimated cost for the project is $1,601,000.



WISE Local Infrastructure Phase 1 – Horizontal Directional Drilling (HDD) installation of 36-inch pipeline

WISE Phase 2 Pipeline

27,000 linear feet of 30-36 inch parallel transmission main to move future water supplies. Will parallel the 36-inch WISE Local Infrastructure Phase 1 pipeline being constructed in 2017. Estimated future cost: $16-20 Million.

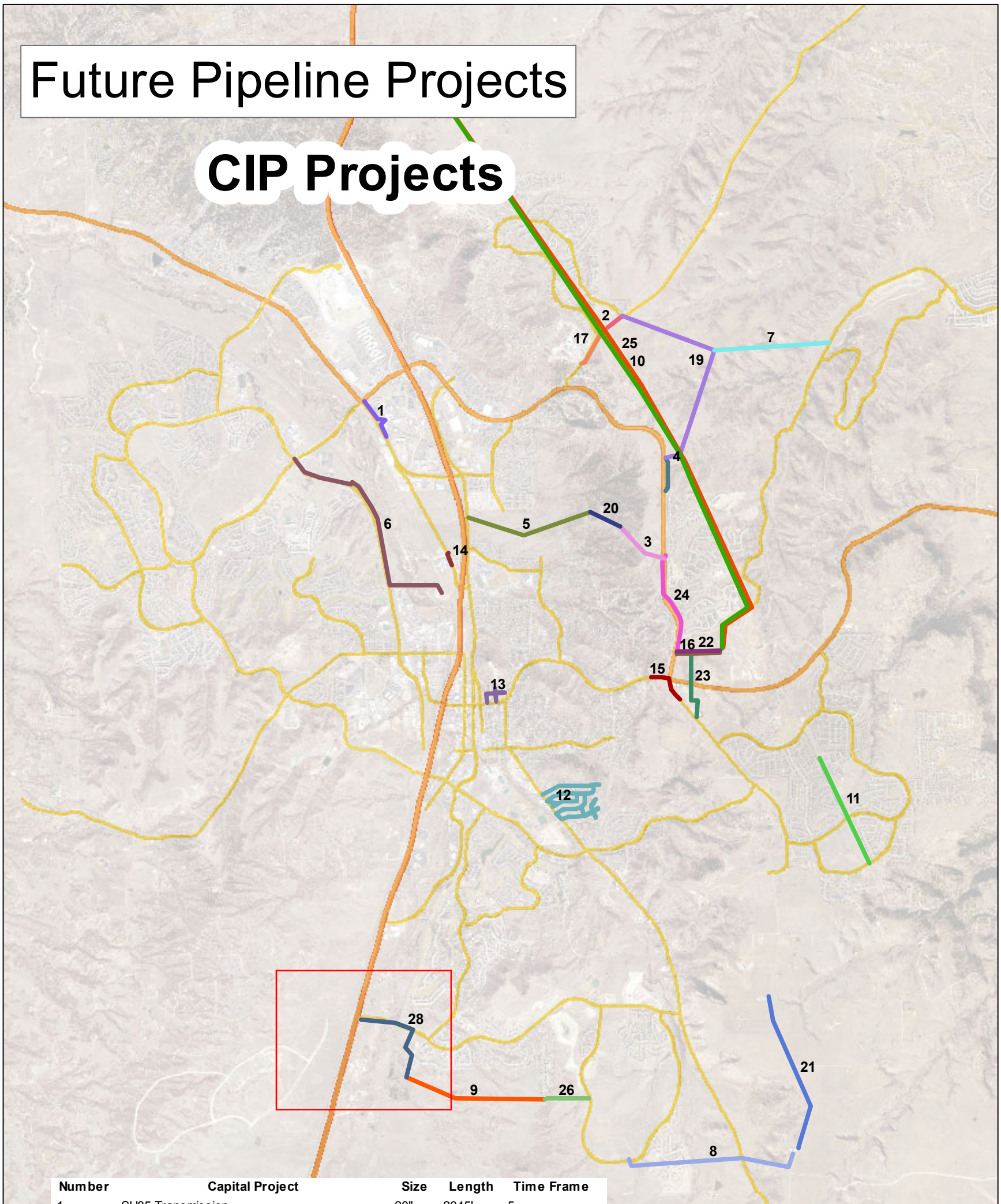
Table 5-1

	D	P	T	U	V	W	Z	AA
1		2018-2022	2023 - 2025	2026 - 2050	2051-2055			
2	**Water Fund Capital Improvement Program**	**Total**	**Total**	**Total**	**Total**	**Total 2018 - 2055**	**Total Capacity**	**Cost Justification**
3								
4	**Water Supply Wells**							
5	Well Redrill	$ 6,000,000	2000000	$ 26,000,000	$ 4,000,000	$ 38,000,000		
6	Repair & Maint Wells (Well Rehab/Replacement)	$4,000,000	$2,400,000	$20,000,000	$4,000,000	$30,400,000		ensure reliability of supply
7	Well Equipment Replacement	$500,000	$300,000	$2,500,000	$500,000	$3,800,000		ensure reliability of supply
8	Building 204 Improvements	$35,000	$0		$0	$35,000		27 year old buildling
10	Crystal Valley Ranch Wells - 1300 GPM ph1	$0	$0	$2,500,000	$0	$2,500,000	1300 gpm	ensure reliability of supply
11	Crystal Valley Ranch Wells - 1250 GPM ph2	$0	$0	$2,500,000	$0	$2,500,000	1250 gpm	ensure reliability of supply
12	Crystal Valley Ranch Wells - 1175 GPM ph3	$0	$0	$2,500,000	$0	$2,500,000	1175 gpm	ensure reliability of supply
13	Lanterns Wells 1500 gpm (raw line?; treat where?)	$3,938,007	$0		$0	$3,938,007	1500 gpm	ensure reliability of supply
15	VFD replacement (Well/ps/tmt plant)	$625,000	$375,000	$3,125,000	$625,000	$4,750,000	NA-no new	replace old, failing VFDs at wells/plant/pumpstations
16	**Treatment**							
18	Meadows Valves and Actuators Filter 5-8	$200,000	$0			$200,000	NC	replacing end of useful life
19	WTP Facility Upgrades	$250,000	$150,000	$1,250,000	$250,000	$1,900,000	NC	ensure reliability of treatment processes
20	WTP Equipment replacement	$500,000	$300,000	$2,500,000	$500,000	$3,800,000	NC	
23	Water Tmt Plant media replacement	$105,000	$105,000	$630,000		$840,000	no change	media has finite life, must be replaced/replenished
24	**Water Storage**							
25	Tank Rehab	$250,000	$150,000	$1,375,000	$250,000	$2,025,000	NC	ensure reliability of storage
26	Liberty Village Yellow Zone Tank (Tank 18) Liberty Village	$3,425,609	$0			$3,425,609	2.2 MG	ensure fire flow storage is in the zone
27	Tank 11B (was Tank 14B) 2.3 MG (Tower Rd)	$0	$0	$3,000,000		$3,000,000	2.3 MG	driven partly by WISE water/Pine Canyons
28	Tank (2.0 MG) Red Zone	$0	$0	$2,800,000		$2,800,000	2.0 MG	driven partly by WISe/future demands
29	Tank 6B Demolition	$250,000	$0			$250,000	-2.0 MG	tank is a liability
30	Tank 3 demolition	$0	$0	$150,000		$150,000	-1.0 MG	demolish old tank; build new
31	Tank 3 Replacement (Reservoir Road)	$0	$0	$1,500,000		$1,500,000	1.0 MG	tank built 1960; end of life
32	Add stairs to Tanks	$60,000	$0			$60,000		safety issue
35	Storage Tank Replacement	$0	$0	$1,500,000	$ 1,500,000	$3,000,000	replace: no net chang	replace aging tank
36	**Water Pumping**							
37	Green Zone Pumping Upgrades Ph1, Phase I (2100 gpm; 45 HP)	$0	$1,000,000			$1,000,000	2100 gpm (phase 1)	move WISE supplies
38	PS Equipment Replacement	$250,000	$150,000	$1,375,000	$275,000	$2,050,000	NC	ensure distribution reliability
39	Blue Zone PS Upsize (replace mid-duty pump, inc 1000 gpm)	$0	$75,000			$75,000	1000 gpm	meet demands
40	Red Zone Pumping Upsize, Ph1 (2245 gpm) 75 HP	$550,000	$0			$550,000	2245 gpm	move WISE supplies
41	Red Zone Pumping Upsize, Ph2 (4170 gpm) 125 HP	$0	$1,000,000			$1,000,000	4170 gpm (2000 addi	move WISE supplies
42	Red Zone Pumping Upsize,Ph3 (14,000 gpm) 425 HP	$0	$0	$1,000,000		$1,000,000	14,000 gpm (10,000 (	move WISE supplies
43	Milestone Pump Statlon PRV Valve	$75,000	$0			$75,000	NC	move WISE supplies
44	Green Zone Pumping Upgrades Phase II (9205 gpm)	$0	$0	$1,500,000		$1,500,000	9205 gpm (additional	move future renewable waters
47	**Transmission & Distribution**							
48	Young American Valve Replacement Program	$160,000	$0			$160,000	NC	
49	Waterline Rehab/Replacement	$1,250,000	$900,000	$7,500,000	$1,500,000	$11,150,000	NC	ensure reliability of distribution
50	Distribution System Upgrades (PRVs, pipelines, etc)	$1,250,000	$750,000	$6,250,000	$1,250,000	$9,500,000	NC	ensure reliability of distribution
51	Craig & Gould North Infrastructure Improvements (FF Issue)	$535,000	$0			$535,000	NC	fire flow issues; aging infrastructure
53	Electric Actuated Valves at Tanks	$225,000	$0			$225,000	NC	improve response to emergency
54	Tank Mixers	$50,000	$0			$50,000	NC	improve water quality
55	Facilitiies Paving Program	$250,000	$150,000	$1,375,000	$275,000	$2,050,000	NC	improve site access
56	Diamond Ridge Pump Station Control Valve	$75,000	$0			$75,000	NC	required to control WISE deliveries
57	Glovers Waterline Replacement phase 1	$374,000	$0			$374,000	NC	replace old pipe
58	Glovers Waterline Replacement phase 2	$363,000	$0			$363,000	NC	replace old pipe
59	Glovers Waterline Replacement phase 2	$594,000	$0			$594,000	NC	replace old pipe
60	Crowfoot Purple Line Upsize	$0	$0	$151,000		$151,000	3133 gpm	required to move WISE waters
61	Canyons South Red Zone Extension	$110,000	$0			$110,000	3133 gpm	Our commitment due to development agreement
62	Crowfoot Red Zone Upsize	$0	$0	$330,000		$330,000	3133 gpm	required to move WISE waters
63	Crowfoot to Crimson Sky (developer 16" or town build 16")	$0	$0	$1,812,000		$1,812,000	11,015 gpm	required to move WISE waters
64	Crimson Sky to Oaks Valve	$0	$0	$1,709,000		$1,709,000	7,050 gpm	required to move WISE waters
65	RWRWTC Tank 16 Transmission Line	$0	$0	$898,000		$898,000	7,050 gpm	required to move future supplies
66	Liggett Rd Upsize	$0	$120,000			$120,000	1371 gpm	required to move future treated water from PCWPF
68	5th Street Red Zone Connection	$0	$150,000			$150,000	1700 gpm	provide red zone surface to area
69	Tank 18 Blue Zone Transmission	$0	$0	$576,000		$576,000	1700 gpm	provide a second loop to Liberty Village
70	South Ridge Rd Transmission, 24"	$0	$0	$1,688,000		$1,688,000	7,050 gpm (10.15 MGD	required to move future supplies
71	Tank 6 to CVR Transmission, 24"	$0	$0	$1,004,000		$1,004,000	7,050 gpm	required to move future supplies
72	Cyrstal Valley Ranch Loop Rd Ph1, 24"	$0	$0	$559,000		$559,000	7,050 gpm	required to move future supplies
73	Crystal Valley Ranch Loop Rd Ph2, 20"	$0	$0	$2,109,000		$2,109,000	4,900 gpm	required to move future supplies
74	Blue Zone - Plum Creek to Frontage Road Transmission, 24"	$0	$0	$1,500,000		$1,500,000	7,050 gpm	required to move future supplies
75	costs could be sooner; dev at least 12")	$0	$0	$1,002,000		$1,002,000	3133 gpm	required to move future supplies
76	Tank 11 to Pine Canyon 20" Pipe (developer 16")	$325,000	$0			$325,000	4900 gpm	required to move future supplies
77	Pine Canyon Red Zone Transmission	$0	$0	$868,000		$868,000	4900 gpm	move WISE/Dominion flows
78	RWTP Red Zone Transmission	$0	$0	$392,000		$392,000	4900 gpm	move WISE/Dominion flows
79	RWTP Green Zone Transmission	$0	$0	$392,000		$392,000	4900 gpm	move WISE/Dominion flows
80	Plum Creek WTP to Tank 12 Transmission	$0	$0	$1,601,000		$1,601,000	1762 gpm	move future treated water to service area
82	Highway 85 Transmission	$703,000	$0			$703,000	4900 gpm	move WISE/Dominion flows
86	Woodlands Founders PRV	$0	$0	$94,000		$94,000	NA	upsize/replace to move more water
87	**Other Projects**							
88	Security Improvements	$200,000	$75,000	$875,000	$175,000	$1,325,000	NA	as needed for security
89	General Facility Upgrades	$375,000	$225,000	$1,875,000	$375,000	$2,850,000	NA	maintain assets
90	SCADA System Capital Improvements	$125,000	$75,000	$750,000	$125,000	$1,075,000	NA	keep up with technology
91	Facilities Capital Replacements (bldg components)	$375,000	$225,000	$1,875,000	$375,000	$2,850,000	NA	maintain assets
96	Admin/Customer Service Building	$1,403,641	$0			$1,403,641	NA	space issues
99	**Total Water Fund**	$29,756,257	$10,675,000	$114,890,000	$15,975,000	$171,296,257		

Excerpts from "Water Master Plan 2017"
Prepared by Castle Rock Water

Future Pipeline Projects

CIP Projects



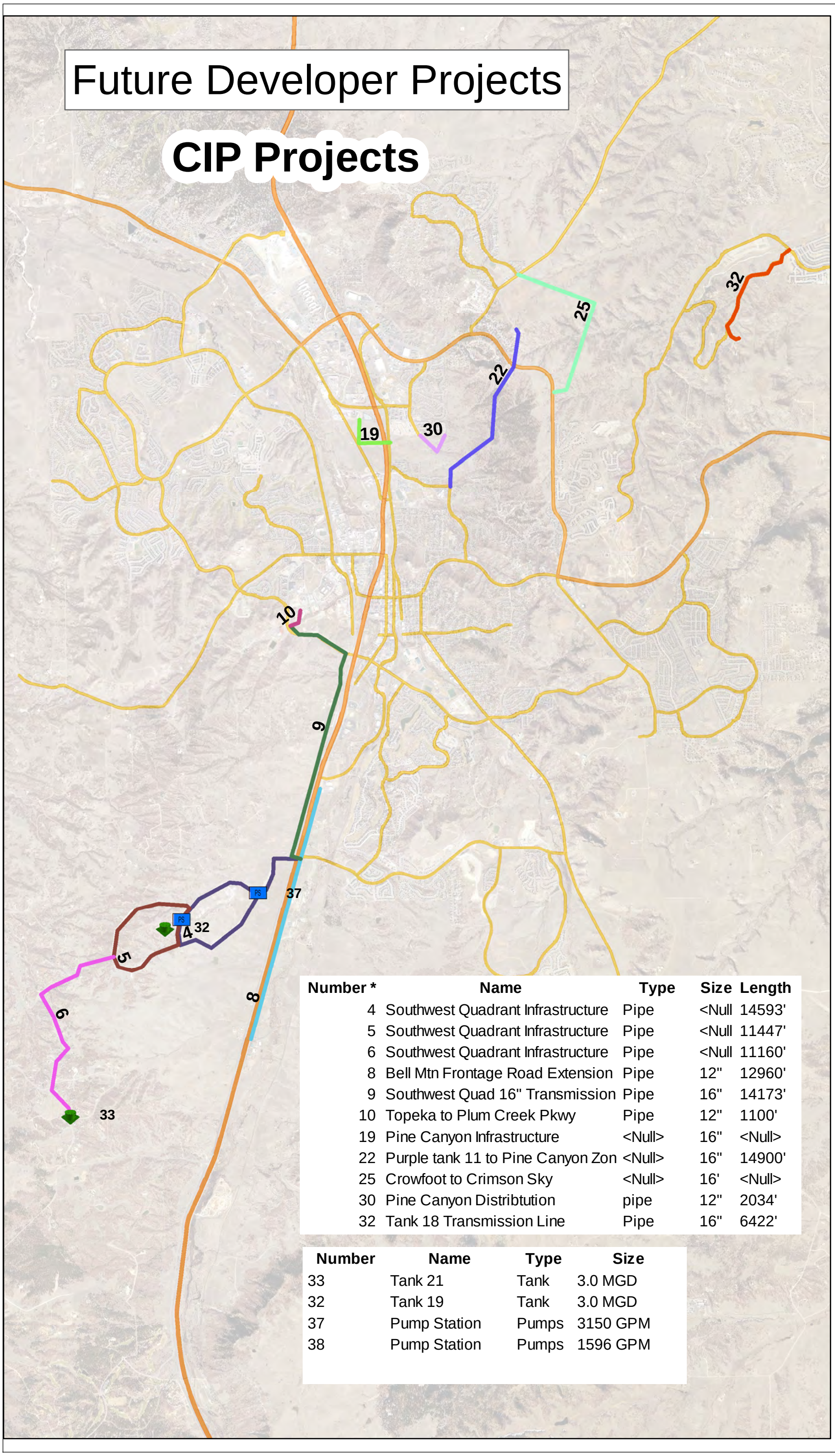
Number	Capital Project	Size	Length	Time Frame
1	SH85 Transmission	20"	2045'	5
10	WISE Pipeline Ph 1	36"	27000'	5
11	Founders Wells Raw Waterline	8"	4820'	5
12	Glovers Waterlines	8	10550	5
13	Craig and Gould North Improvements	8"	1800	5
14	Liggett Road Upsize	12"	600'	10
15	Fifth St. Red Zone Connection	12"	300'	10
16	Red Zone RWRWTC Transmission	20"	1885'	10
17	Crow foot Red Zone Upsize	16"	1965'	10
19	Crow foot to Crimson Sky	16'	9230'	20
2	Crow foot Purple Line Upsize	20"	725'	20
20	Pine Canyon Red Zone Transmission w /PRV	20"	1350'	BO
21	South Ridge Road Transmission	24"	6820'	BO
22	Green Zone RWRWTC Transmission	20"	1885'	BO
23	RWTP to Tank 16 Transmission	24"	3325'	BO
24	Crimson Sky to Oaks	20"	6840'	BO
25	WISE Pipeline Ph 2	30"	27000"	BO
26	Crystal Valley Ranch Loop Road Ph1	24"	1861'	BO
28	Blue Zone Plum Creek to Frontage Rd	24"	5000'	BO
3	Pine Canyon Red Zone Transmission	20"	2400'	BO
4	Part of Crimson Sky to Oaks	16"	1463'	BO
5	Pine Canyon Transmission w /PRV	16"	5510'	BO
6	PCWPF to Tank 12	12"	9700'	BO
7	Tank 18 Blue Zone Transmission	12"	3900'	BO
8	Tank 6 to Crystal Valley Ranch Transmission	24"	4053'	BO
9	Crystal Valley Ranch Loop Rd Ph2 w /PRV	20"	6000'	BO

Excerpts from "Water Master Plan 2017"
Prepared by Castle Rock Water

Figure 5.1

Future Developer Projects

CIP Projects



Number *	Name	Type	Size	Length
4	Southwest Quadrant Infrastructure	Pipe	<Null	14593'
5	Southwest Quadrant Infrastructure	Pipe	<Null	11447'
6	Southwest Quadrant Infrastructure	Pipe	<Null	11160'
8	Bell Mtn Frontage Road Extension	Pipe	12"	12960'
9	Southwest Quad 16" Transmission	Pipe	16"	14173'
10	Topeka to Plum Creek Pkwy	Pipe	12"	1100'
19	Pine Canyon Infrastructure	<Null>	16"	<Null>
22	Purple tank 11 to Pine Canyon Zon	<Null>	16"	14900'
25	Crowfoot to Crimson Sky	<Null>	16'	<Null>
30	Pine Canyon Distribtution	pipe	12"	2034'
32	Tank 18 Transmission Line	Pipe	16"	6422'

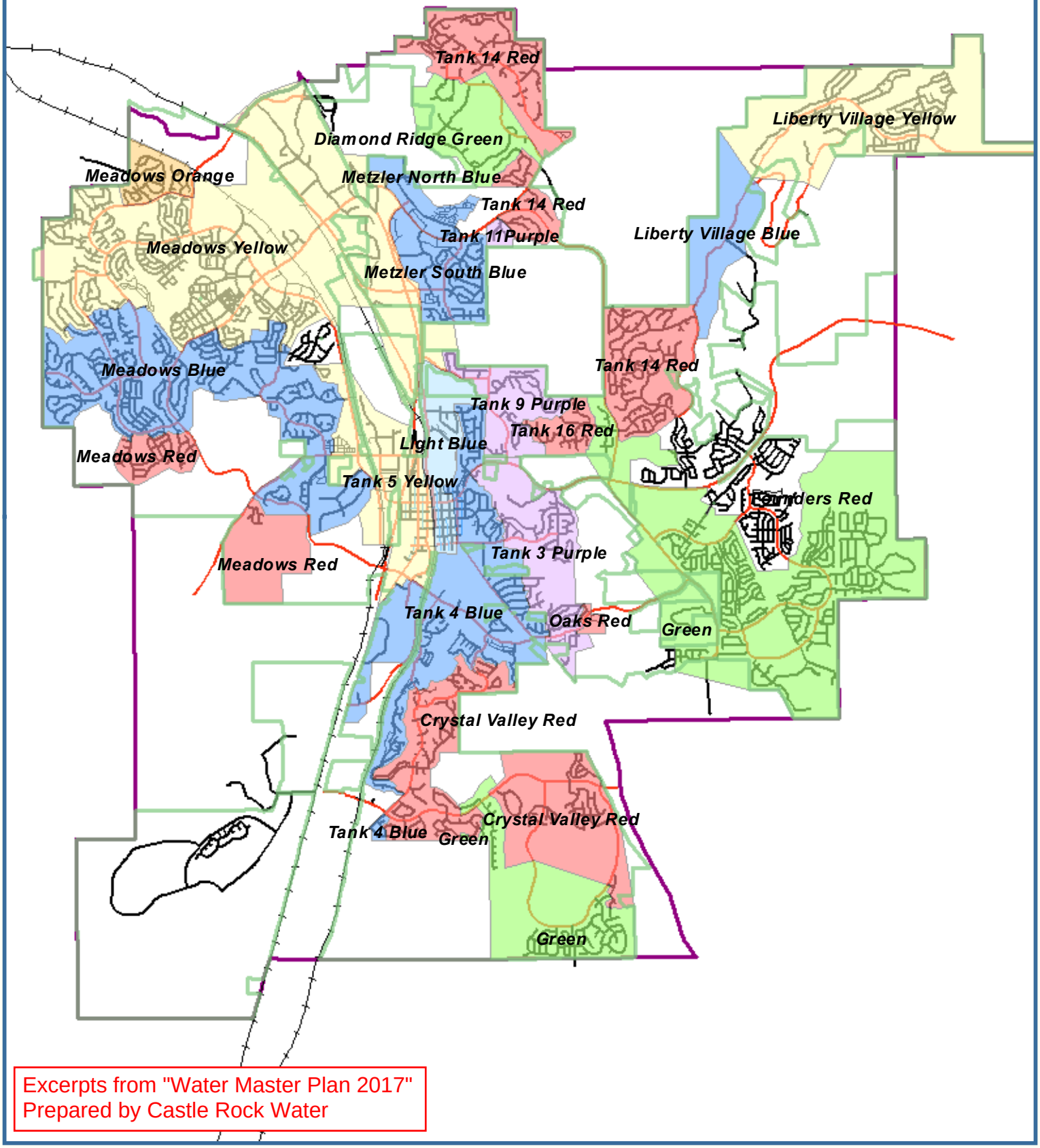
Number	Name	Type	Size
33	Tank 21	Tank	3.0 MGD
32	Tank 19	Tank	3.0 MGD
37	Pump Station	Pumps	3150 GPM
38	Pump Station	Pumps	1596 GPM

Excerpts from "Water Master Plan 2017"
Prepared by Castle Rock Water

Figure 5.3

Pressure Zones

Figure 7.1

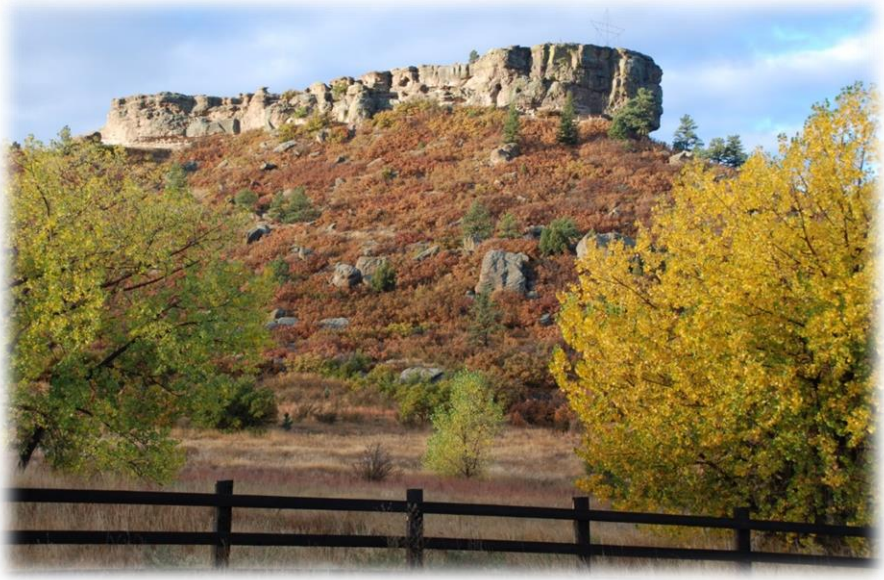


Excerpts from "Water Master Plan 2017"
Prepared by Castle Rock Water

CASTLE ROCK WATER
DISTRIBUTION SYSTEM
PRESSURE ZONES

Wastewater Master Plan

2016



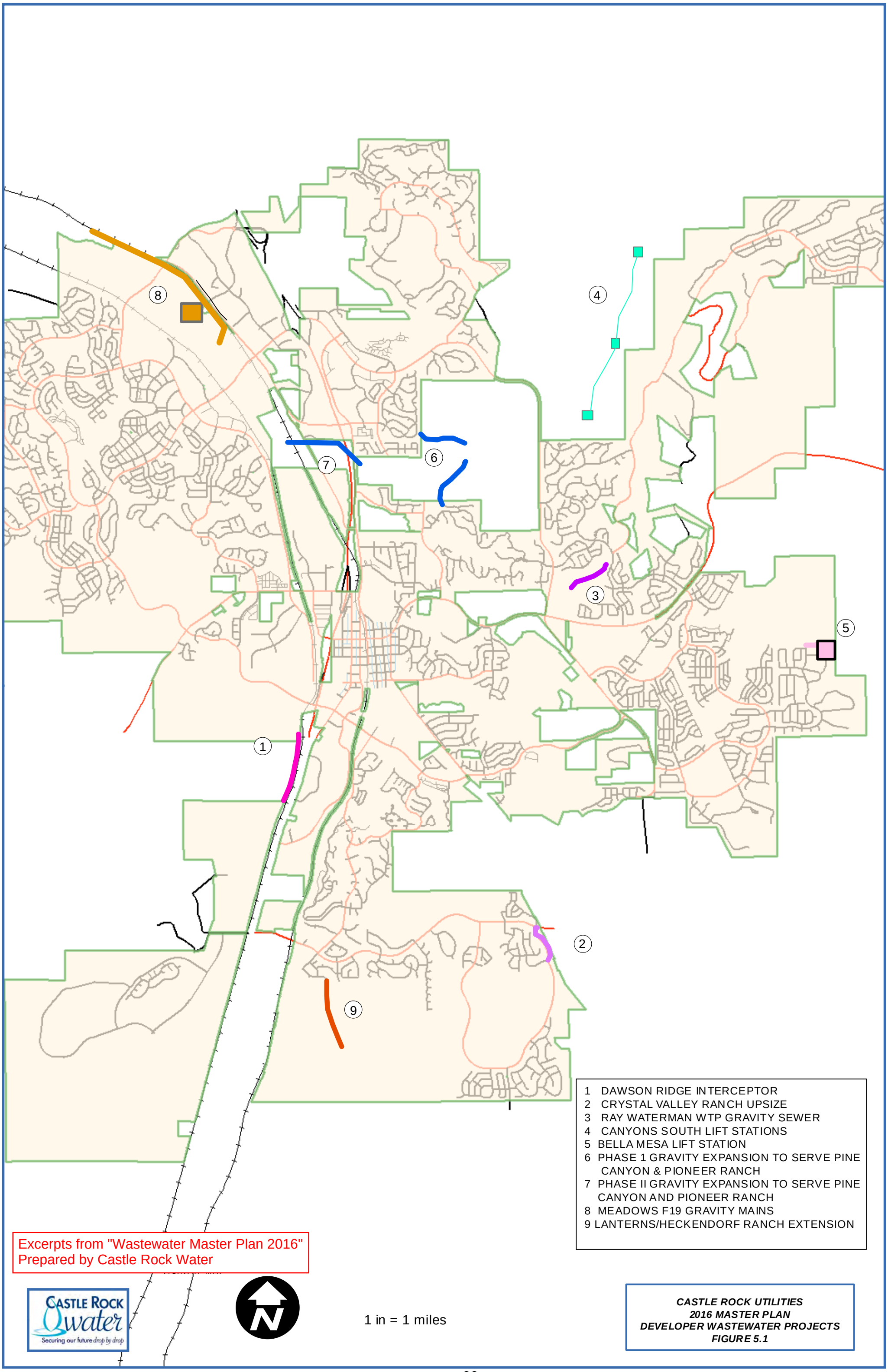
Engineering Division

Excerpts from "Wastewater Master Plan 2016"
Prepared by Castle Rock Water

Table 5-1
Developer Wastewater Projects: 2017-Future

Meadows Highway 85 Sewer Main to Serve Filing 19	8” and larger gravity pipelines to PCWRA; originally identified in previous master plans as a lift station, force main and gravity mains to serve the area
Gravity Expansion at SMH261 – Phase I (to serve Pine Canyon and Pioneer Ranch)	4,270 LF of 8" gravity pipeline
Gravity Expansion at SMH261 – Phase II (to serve Pine Canyon and Pioneer Ranch)	1,700 LF of 10” gravity pipeline
Bella Mesa Lift Station and Force Main (Founders Filing No. 24)	Proposed lift station and associated force mains/gravity mains
Canyons South	Two to three proposed lift stations and associated force and gravity mains
Lanterns Heckendorf Ranch Expansion	New gravity pipelines to serve area
Crystal Valley Ranch Upsize	Upsize 1,900 LF of 12” sewer to 15” (from SMH 6562 to SMH 6351); timing depends on rate of development; conservation efforts could mitigate the need to upsize; project evaluated as development proceeds; modeling will be reevaluated as development in the basin occurs, planning levels change, or new development is added to the service area basin.
Ray Waterman Treatment Plant (RWTP) Gravity Sewer	Development near the Ray Waterman Treatment Plant should install a gravity sewer main that connects to existing downstream gravity sewer. Upon completion of the missing section, the temporary lift station serving the RWTP and the King Soopers/Founders Marketplace shall be abandoned.
Dawson Ridge Interceptor Upsize	Modeling indicates that should Dawson Ridge eventually grow to its fully platted zoning level, 1,400 linear feet of 12 inch sewer will need to be upsized to 15 inch.

Excerpts from "Wastewater Master Plan 2016"
Prepared by Castle Rock Water



1 DAWSON RIDGE INTERCEPTOR
2 CRYSTAL VALLEY RANCH UPSIZE
3 RAY WATERMAN WTP GRAVITY SEWER
4 CANYONS SOUTH LIFT STATIONS
5 BELLA MESA LIFT STATION
6 PHASE 1 GRAVITY EXPANSION TO SERVE PINE CANYON & PIONEER RANCH
7 PHASE II GRAVITY EXPANSION TO SERVE PINE CANYON AND PIONEER RANCH
8 MEADOWS F19 GRAVITY MAINS
9 LANTERNS/HECKENDORF RANCH EXTENSION

Excerpts from "Wastewater Master Plan 2016"
Prepared by Castle Rock Water

CASTLE ROCK Qwater
Securing our future drop by drop

1 in = 1 miles

CASTLE ROCK UTILITIES
2016 MASTER PLAN
DEVELOPER WASTEWATER PROJECTS
FIGURE 5.1

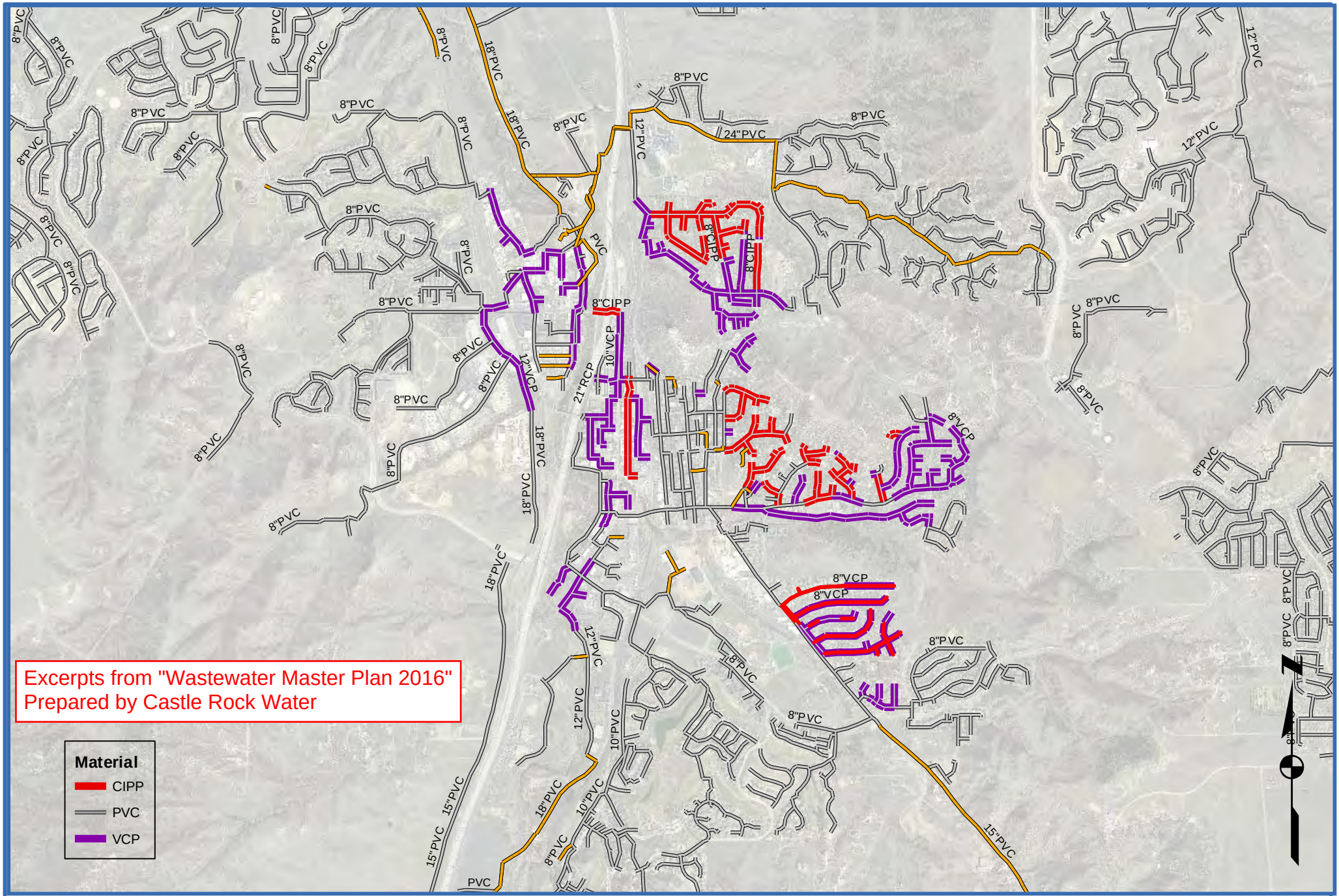


FIGURE 6.1

CASTLE ROCK UTILITIES SEWER PIPE MATERIALS 2016, VCP AND CIPP

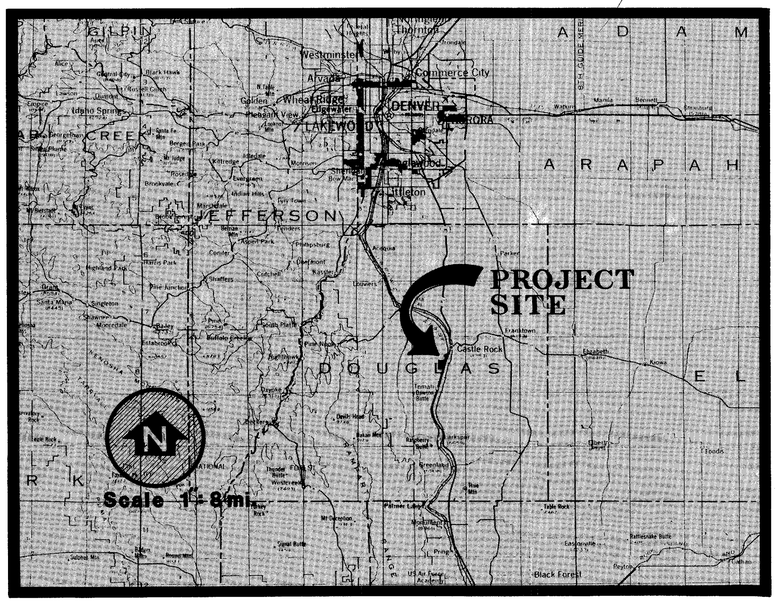
Received
10/20/86

D A W S O N R I D G E

C O N S T R U C T I O N D R A W I N G S

S A N I T A R Y S E W E R T R U N K L I N E

W E L L W A T E R L I N E S



VICINITY MAP

DEVELOPER

Bellamah Community Development

Telephone 303/799-1919
9085 E. Mineral Circle
Suite 330
Englewood, Colorado 80112

ENGINEER

MERRICK

Telep
(303
Post O
Denver
30

Excerpts from "Dawson Ridge Construction Drawings Sanitary Sewer Trunk Line" Prepared by Merrick. Dated 10/20/1986

#C04U017
Dawson Ridge
Sanitary Sewer Trunk Line & Well Water
Merrick
10/20/86

GENERAL NOTES

1. TOWN OF CASTLE ROCK PLAN REVIEW IS ONLY FOR GENERAL CONFORMANCE WITH TOWN OF CASTLE ROCK DESIGN CRITERIA AND THE TOWN CODE. THE TOWN IS NOT RESPONSIBLE FOR THE ACCURACY AND ADEQUACY OF THE DESIGN, OF DIMENSIONS, AND ELEVATIONS WHICH SHALL BE CONFIRMED AND CORRELATED AT THE JOB SITE. THE TOWN OF CASTLE ROCK THROUGH THE APPROVAL OF THIS DOCUMENT ASSUMES NO RESPONSIBILITY OTHER THAN AS STATED ABOVE FOR THE COMPLETENESS AND/OR ACCURACY OF THIS DOCUMENT.

2. ALL MATERIALS, WORKMANSHIP, CONSTRUCTION DETAILS, AND TESTING FOR THE WATER LINE, SANITARY SEWER LINE, AND STORM SEWER LINE CONSTRUCTION SHALL CONFORM TO THE STANDARDS AND SPECIFICATIONS SET FORTH BY THE MOST RECENT STANDARD CONSTRUCTION SPECIFICATIONS FOR THE TOWN OF CASTLE ROCK.

3. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL APPLICABLE CODES, LICENSES, AND PERMITS AS REQUIRED BY THE TOWN OF CASTLE ROCK, COLORADO, AND OTHER AGENCIES.

4. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING STREET CUTTING PERMITS AND FOR RESTORATION OF SURFACING AS REQUIRED BY THE GOVERNING AUTHORITY. THIS SHALL INCLUDE RESTORATION OF EXISTING CONDITIONS ON PRIVATE PROPERTY (IF ANY).

5. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE SAFETY OF THOSE ASSOCIATED WITH THE WORK AND THE GENERAL PUBLIC THROUGHOUT THE DURATION OF THE CONTRACT.

6. THE CONTACTOR SHALL NOTIFY THE TOWN OF CASTLE ROCK, 688-9785, TWENTY-FOUR (24) HOURS PRIOR TO THE BEGINNING OF CONSTRUCTION.

7. THE CONTRACTOR SHALL CALL FOR LOCATION OF ANY EXISTING UTILITIES AT LEAST 48 HOURS PRIOR TO EXCAVATION OR CONSTRUCTION.

8. THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING THE LOCATION OF ALL EXISTING UTILITIES, INCLUDING ANY UTILITIES NOT SHOWN ON THE CONTRACT DRAWINGS.

9. ALL STATIONING IS BASED ON CENTERLINE OF ROADWAYS UNLESS OTHERWISE NOTED.

10. ALL ELEVATIONS ARE FLOWLINE UNLESS OTHERWISE NOTED.

11. STANDARD HANDICAP RAMPS ARE TO BE CONSTRUCTED AT ALL CURB RETURNS AND AT ALL "T" INTERSECTIONS.

WATER LINE AND SANITARY SEWER GENERAL NOTES

1. ALL FIRE HYDRANTS WILL BE LOCATED NOT LESS THAN 3 FEET NOR MORE THAN 8 FEET FROM CURB AND BE UNOBSTRUCTED ON THE STREET SIDE. MINIMUM CLEARANCE ON ALL OTHER SIDES WILL BE 5 FEET.

2. ALL FIRE HYDRANTS MUST BE GRADE STAKED IN THE FIELD, WHENEVER CURB AND GUTTER HAS NOT BEEN INSTALLED.

3. DUCTILE IRON PIPE (CLASS 52 FOR 4" AND 6" AND CLASS 50 FOR 8" AND LARGER) SHALL BE USED FOR WATER LINES.

4. ALL WATER PIPE SHALL BE BEDDED IN CLASS "B" BEDDING

5. A MINIMUM COVER OF 4-1/2 FEET BELOW FINAL GRADE SHALL BE MAINTAINED OVER ALL WATER LINES.

6. WATER LINE MEASUREMENTS ARE FROM CENTER OF APPURTENANCE TO CENTER OF APPURTENANCE.

7. WHEN A WATER MAIN IS DIPPED UNDER A STORM SEWER, PROVIDE A MINIMUM CLEARANCE OF 6" BETWEEN PIPES AND PROVIDE A CONCRETE CRADLE. WHEN A WATER MAIN IS DIPPED UNDER A SANITARY SEWER, PROVIDE A MINIMUM CLEARANCE OF 24" BETWEEN PIPES AND USE CONCRETE ENCASEMENT OF SANITARY SEWER LINE FOR 10' EACH SIDE OF WATER LINE.

8. GATE VALVES AS SHOWN HEREON SHALL BE PLACED WITHIN PAVED AREAS AND SHALL IN NO CASE BE LOCATED WITHIN CONCRETE GUTTERS OR CROSS PANS. ALL VALVES SHALL OPEN BY TURNING RIGHT (CLOCKWISE). TOPS OF VALVE BOXES TO BE ADJUSTED TO FINISH GRADE.

9. POLYVINYL CHLORIDE (PVC) PLASTIC GRAVITY SEWER PIPE CONFORMING TO THE REQUIREMENTS OF ASTM SPECIFICATION D3034-SDR 35 SHALL BE USED FOR ALL SANITARY SEWER MAINS. J-M MANUFACTURING, CERTAINTEED, DIAMOND PLASTICS, VINYL-TECH OR CONTINENTAL PLASTICS ARE APPROVED MANUFACTURERS.

10. ALL PVC JOINTS SHALL BE WATER TIGHT BELL AND SPIGOT TYPE.

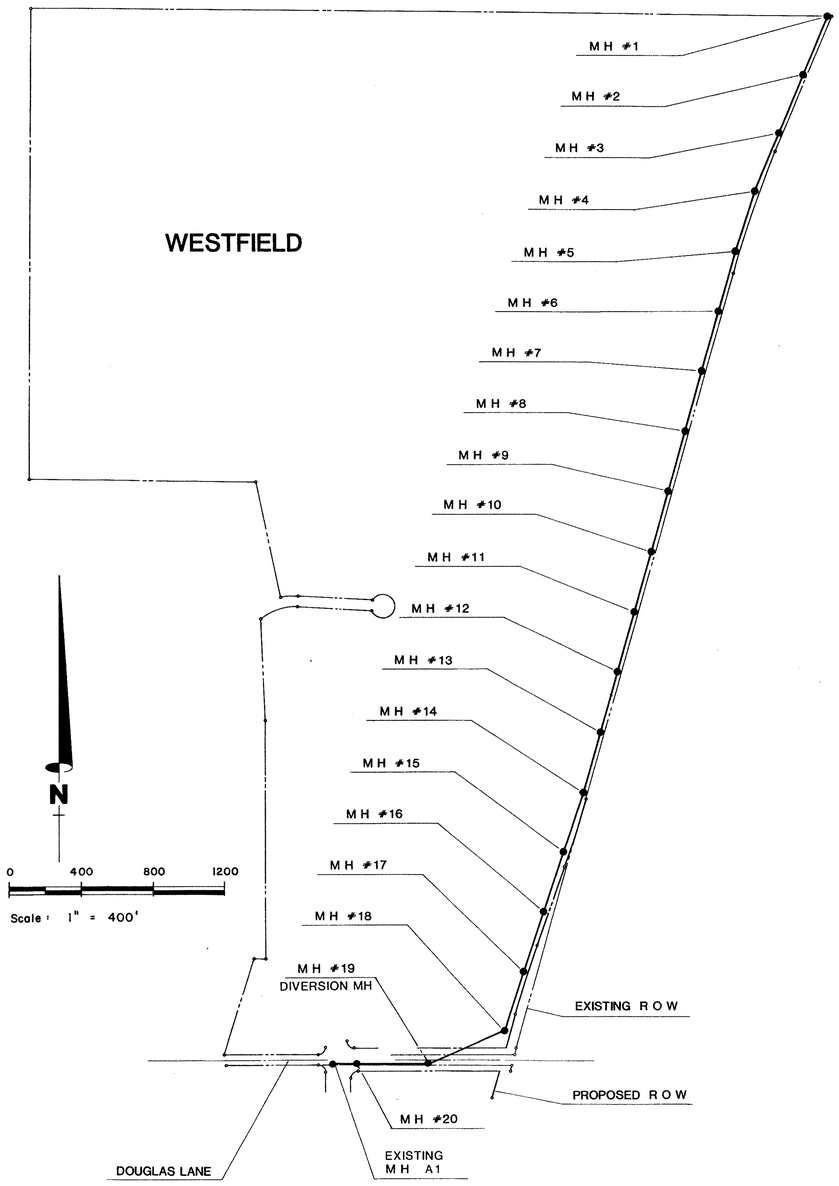
11. ALL SANITARY SEWER PIPE SHALL BE BEDDED IN CLASS "B" BEDDING.

12. SANITARY SEWER MEASUREMENTS ARE FROM CENTER OF MANHOLE TO CENTER OF MANHOLE.

13. MANHOLE CONES SHALL BE ECCENTRIC.

14. MANHOLE RIMS SHALL BE SET 1.0 FOOT BELOW FINISHED RIM ELEVATION AND SHALL BE RAISED TO FINAL GRADE PRIOR TO PAVING, WITH 0-3 BRICK COURSES.

OVERALL SANITARY SEWER



DAWSON RIDGE

SHEET INDEX

SHEET	TITLE
A1	COVER SHEET
A2	GENERAL NOTES, OVERALL SANITARY SEWER, & SHEET INDEX
A3	OVERALL WELL WATER LINES
U1	SANITARY SEWER TRUNK LINE Sta. 0+00 to 10+75
U2	SANITARY SEWER TRUNK LINE Sta.10+75 to 24+55
U3	SANITARY SEWER TRUNK LINE Sta.24+55 to 38+28
U4	SANITARY SEWER TRUNK LINE Sta.38+28 to 52+12
U5	SANITARY SEWER TRUNK LINE Sta.52+12 to 61+25
U6	SANITARY SEWER TRUNK LINE Sta.61+25 to 6[illegible]
W1	WELL WATER LINE TO LARAMIE FOX HILLS & [illegible] WELLS
W2	WELL WATER LINE TO LARAMIE FOX HILLS [illegible]
W3	WELL WATER LINE TO LARAMIE FOX HILLS & [illegible]
W4	WELL WATER LINE TO DAWSON WELL
M1	SANITARY SEWER DETAILS
M2	WATER LINE DETAILS

APPROVED FOR ONE YEAR FROM THIS DATE

Director of P[illegible] — Date 3-26-87

Date 3-26-87

Excerpts from "Dawson Ridge Construction Drawings Sanitary Sewer Trunk Line" Prepared by Merrick. Dated 10/20/1986

MERRICK
Merrick & Company
10855 East Bethany Drive
Denver, CO 303/751-0741

SCALE

Bellamah Community Development
9085 E. Mineral Circle
Suite 250
Englewood, Colorado 80112

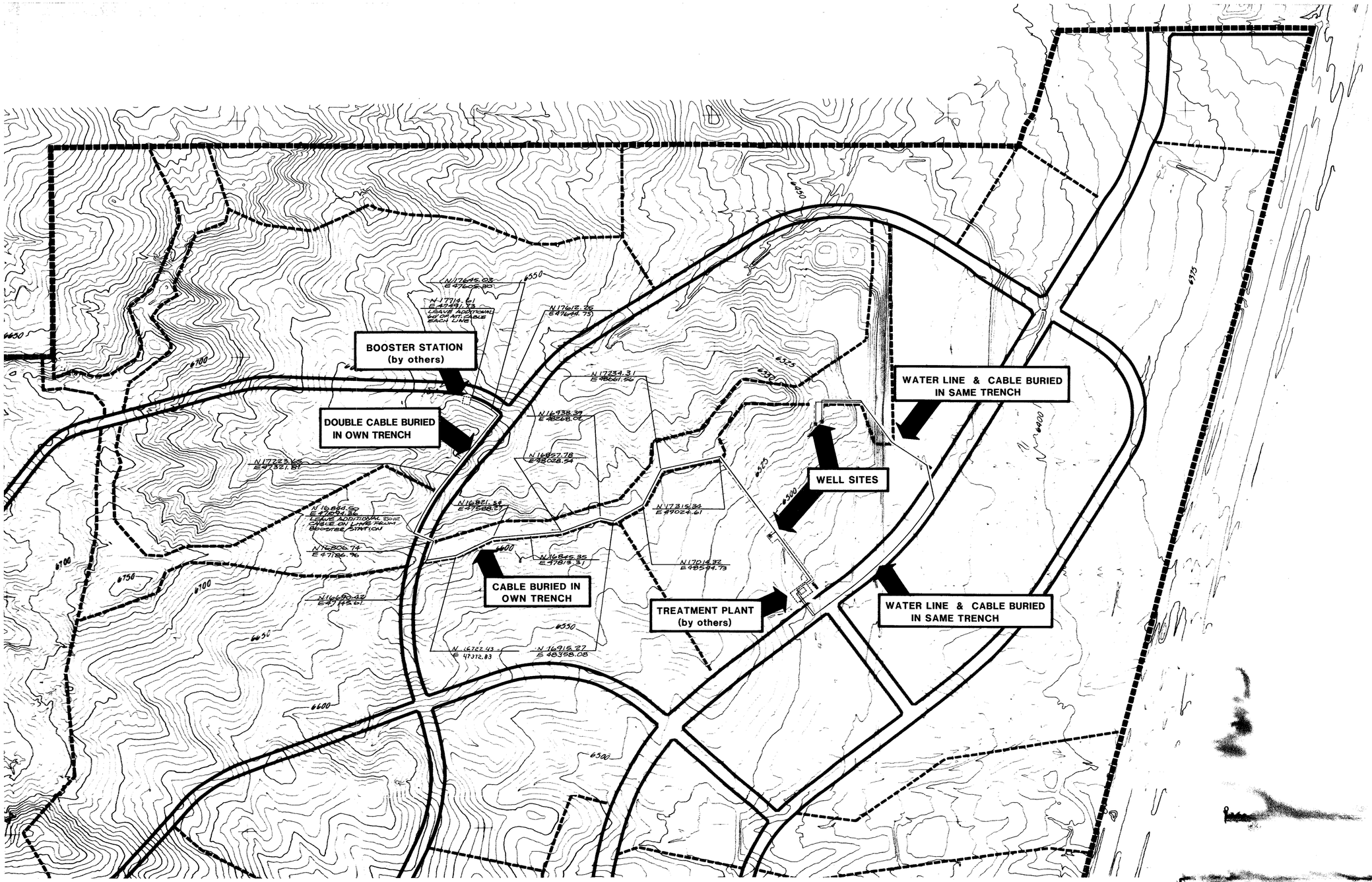
DAWSON RIDGE

REVISION	DATE	APPROVAL

DESIGN
DRAWN Benny
CHECKED
JOB NO 126-5220
DATE

GENERAL NOTES, SHEET INDEX
OVERALL SANITARY SEWER

SHEET A2
OF 15



Excerpts from "Dawson Ridge Construction Drawings Sanitary Sewer Trunk Line" Prepared by Merrick. Dated 10/20/1986

TELEDYNE POST N26624

MERRICK
Merrick & Company
10855 East Bethany Drive
Denver, CO 303/751-0741

SCALE 1" = 300'

Bellamah Community Development
9065 E. Nichard Circle
Suite 230
Englewood, Colorado 80112

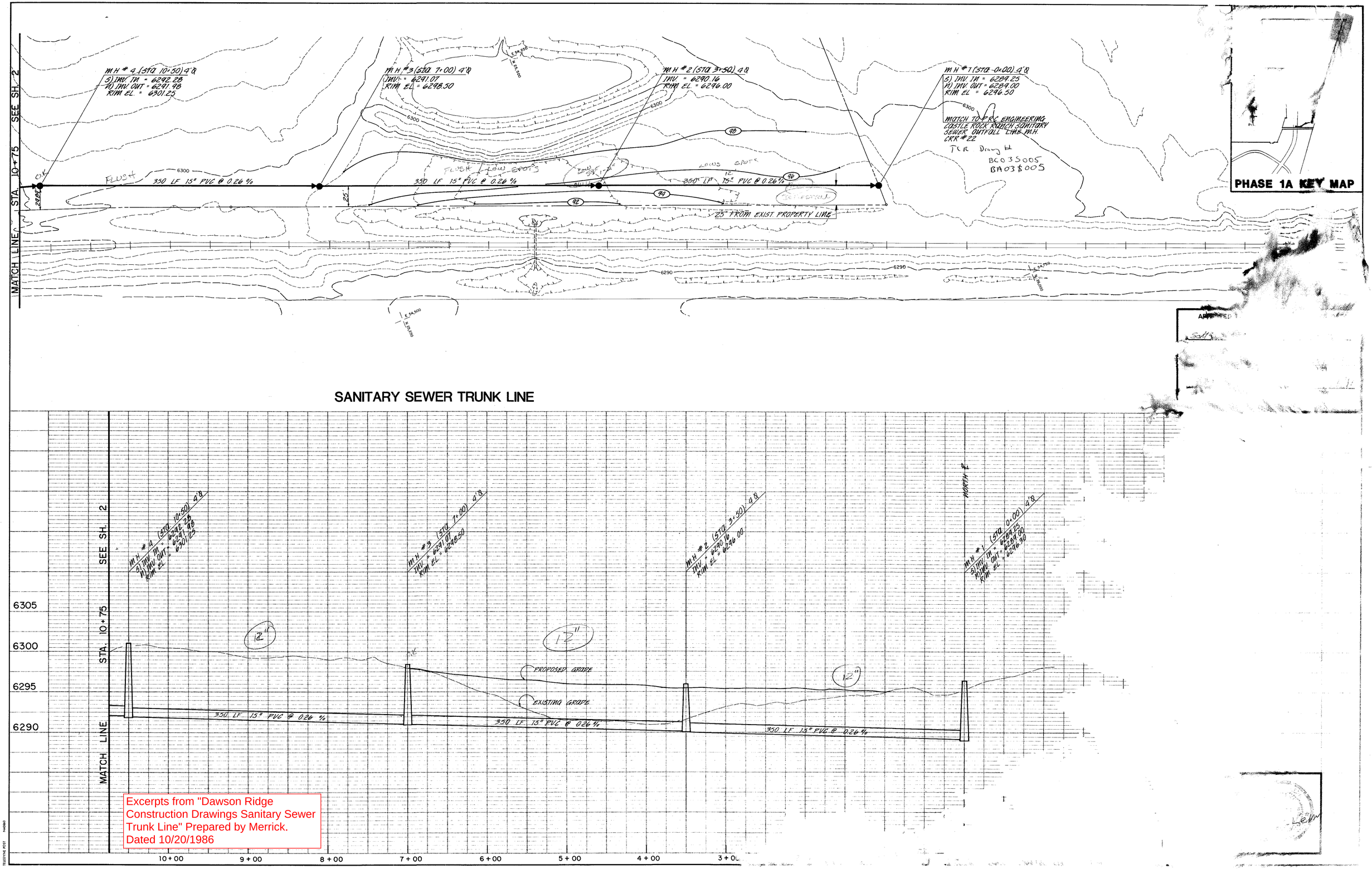
DAWSON RIDGE

DESIGNED
DRAWN
CHECKED
JOB NO 126.3229

OVERALL WATER LINES

SHEET A3
OF 15

SANITARY SEWER TRUNK LINE



Excerpts from "Dawson Ridge Construction Drawings Sanitary Sewer Trunk Line" Prepared by Merrick. Dated 10/20/1986

MERRICK
Merrick & Company
10855 East Bethany Drive
Denver, CO 303/751-0741

SCALE VERT. 1" = 5'
HORIZ. 1" = 50'

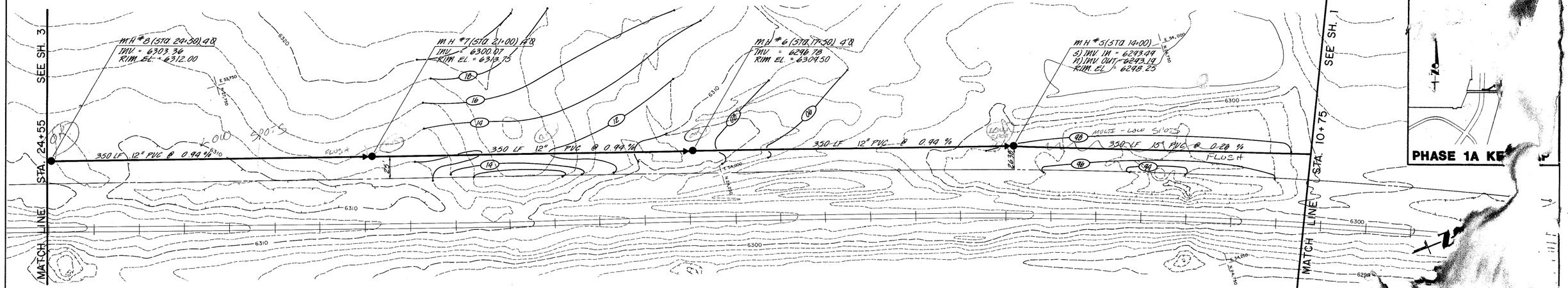
Bellamah Community Development
9083 E. Mineral Circle
Suite 230
Englewood, Colorado 80112

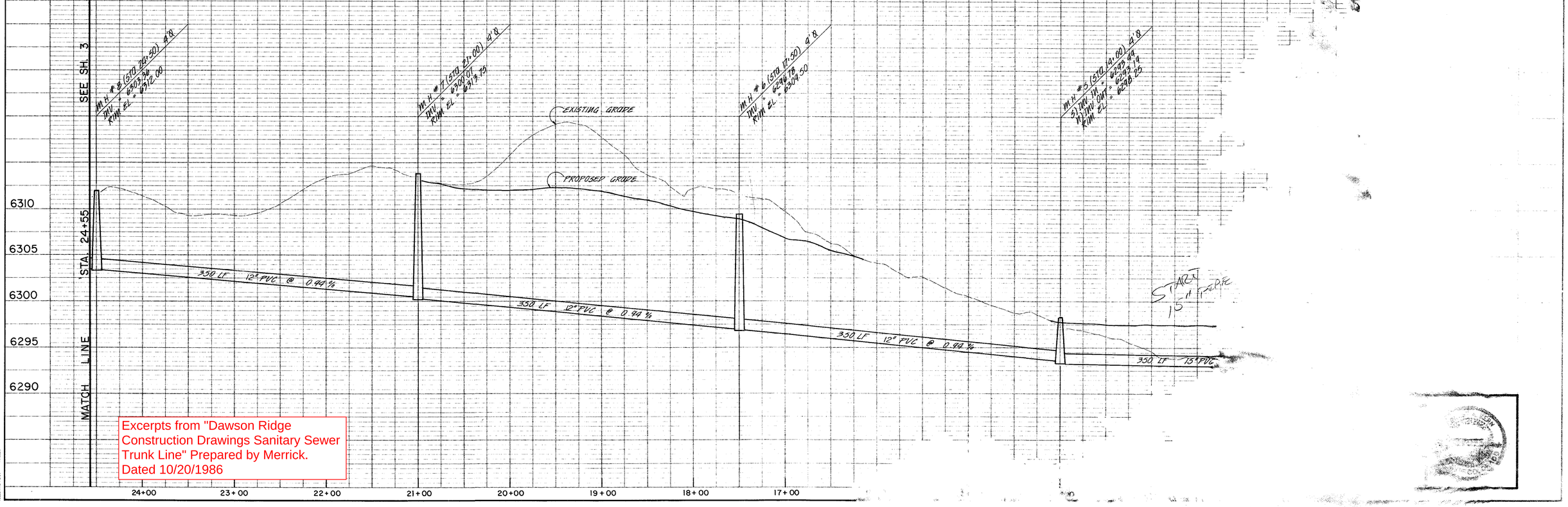
DAWSON RIDGE

DESIGN
DRAWN
CHECKED
JOB NO. 86-3229
DATE

SHEET U1
OF 15

SANITARY SEWER TRUNK LINE





Excerpts from "Dawson Ridge Construction Drawings Sanitary Sewer Trunk Line" Prepared by Merrick. Dated 10/20/1986

TELEDYNE POST N40860

PHASE 1A KE

MERRICK
Merrick & Company
10855 East Bethany Drive
Denver, CO 303/751-0741

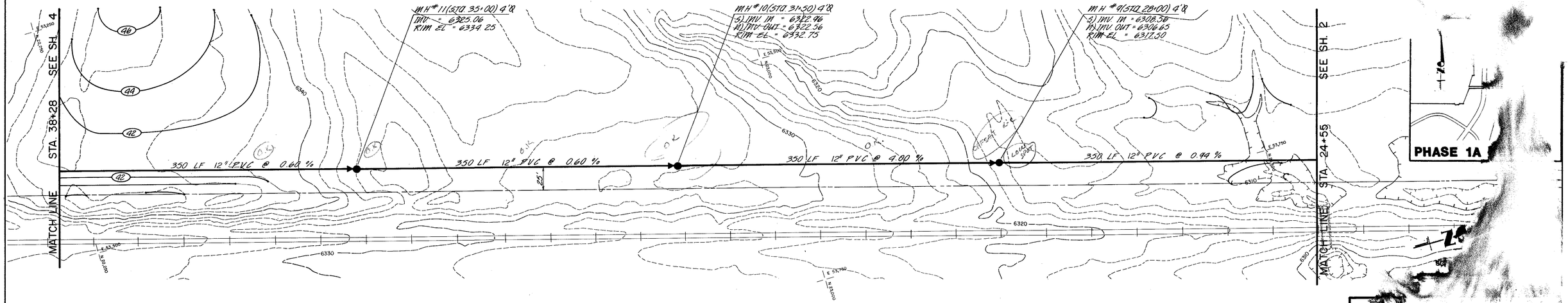
SCALE VERT. 1" = 5'
HORIZ. 1" = 50'

Bellamah Community Development
8085 E. Mineral Circle
Suite 230
Englewood, Colorado 80112

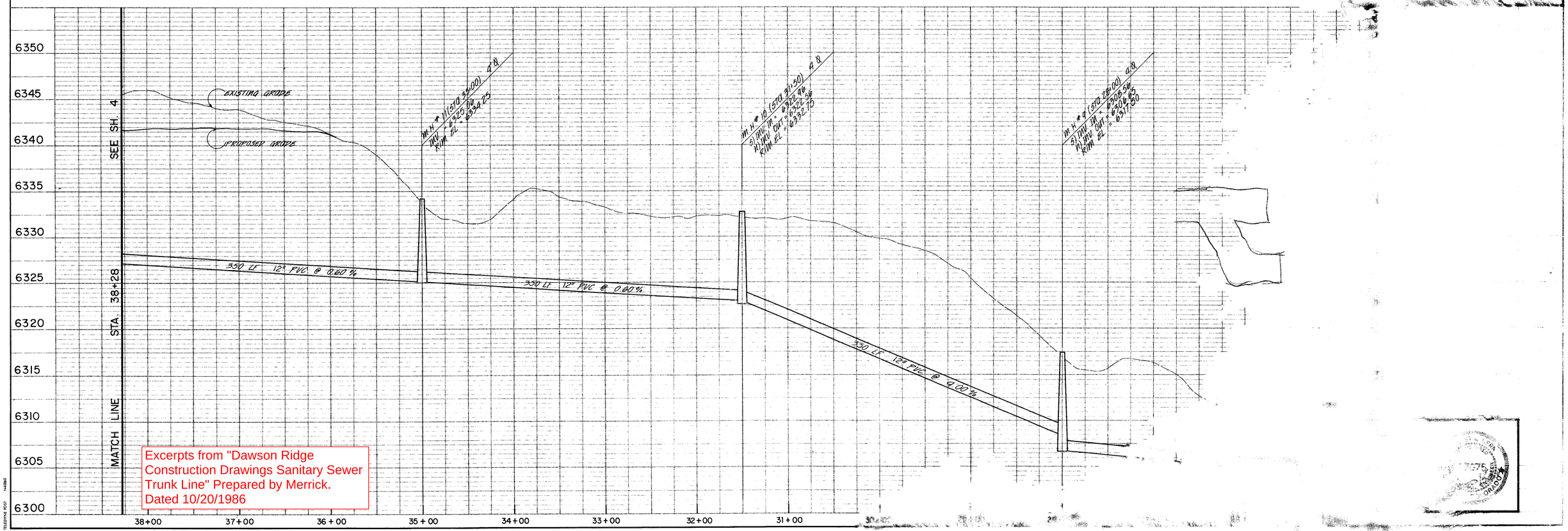
DAWSON RIDGE

DESIGN
DRAWN
CHECK
JOB NO. 122-3224
DATE

SHEET U2
OF 15



SANITARY SEWER TRUNK LINE



Excerpts from "Dawson Ridge Construction Drawings Sanitary Sewer Trunk Line" Prepared by Merrick. Dated 10/20/1986

TELLTALE NO.1 N4080

MERRICK
Merrick & Company
10855 East Bethany Drive
Denver, CO 303/751-0741

SCALE VERT. 1" = 5'
HORIZ. 1" = 50"

Bellamah Community Development
9085 E. Mineral Circle
Suite 210
Englewood, Colorado 80112

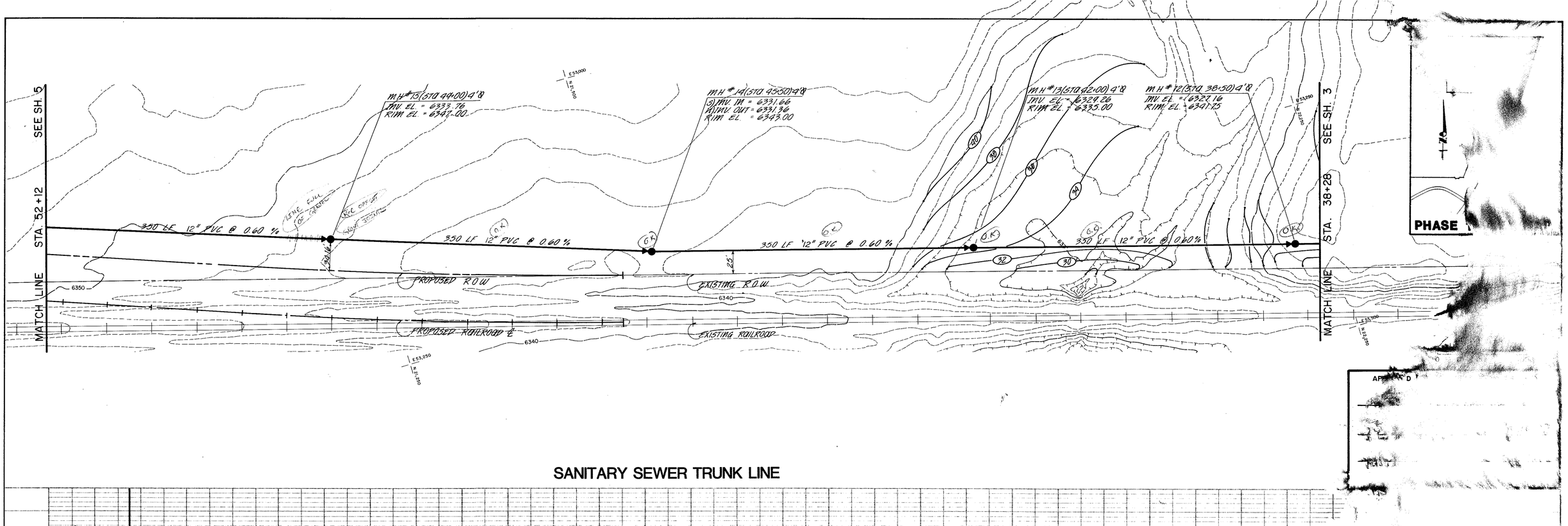
DAWSON RIDGE

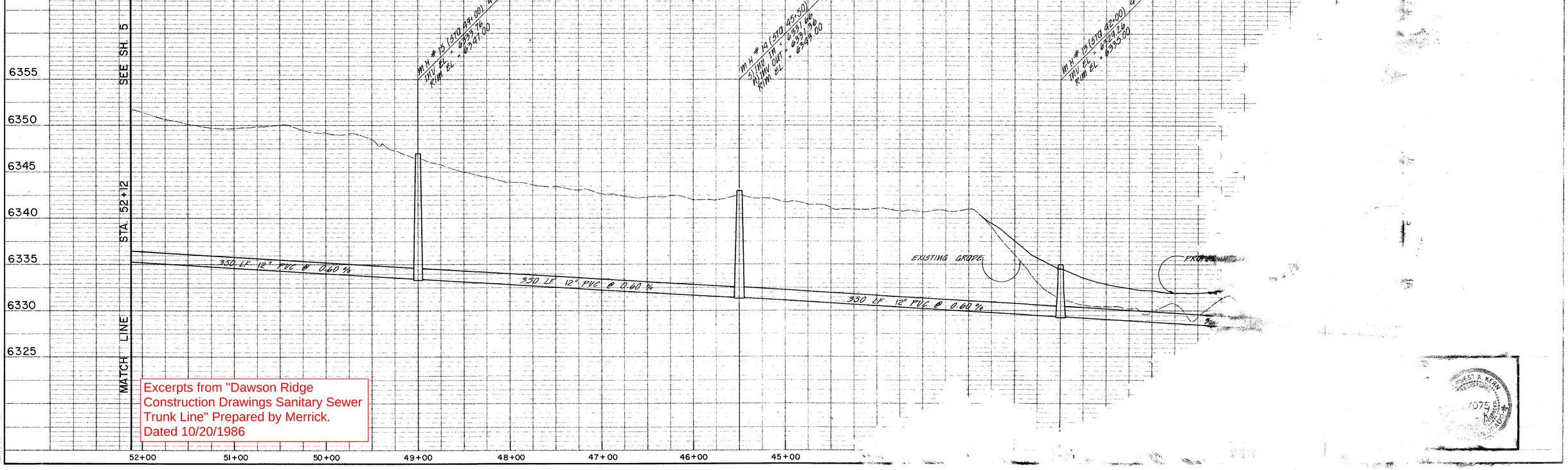
REVISIONS	DATE

JOB NO. 126.5229
DATE

SHEET U3
OF 15

SANITARY SEWER TRUNK LINE





Excerpts from "Dawson Ridge Construction Drawings Sanitary Sewer Trunk Line" Prepared by Merrick. Dated 10/20/1986

ERNEST A. KERN
1975
REGISTERED
PROFESSIONAL ENGINEER
STATE OF COLORADO

TELEDYNE POST N4060

MERRICK
Merrick & Company
10855 East Bethany Drive
Denver, CO 303/751-0741

SCALE VERT. 1" = 5'
HORIZ. 1" = 50'

Bellamah Community Development
Inverness Mineral Circle
Suite 250
Englewood, Colorado 80112

DAWSON RIDGE

DESIGN	DATE	PROJECT NO.
		325.5282

SHEET U4
OF 15

MATCH LINE STA. 61+35 SEE SH. 6

185 LF 12" PVC @ 0.92%

MH #18 (STA. 59+50) 9'Ø
W) INV. IN = 6340.66
N) INV. OUT = 6340.36
RIM EL. = 6356.75

MH #17 (STA. 56+00) 9'Ø
S) INV. IN = 6338.26
N) INV. OUT = 6337.96
RIM EL. = 6351.00

MH #16 (STA. 52+50) 9'Ø
INV. EL. = 6335.86
RIM EL. = 6353.60

350 LF 12" PVC @ 0.60 %

350 LF 12" PVC @ 0.60 %

MATCH LINE STA. 52+12 SEE SH. 4

PROPOSED R O W

PROPOSED RAILROAD ℄

EXISTING R O W

EXISTING RAILROAD

E PROPOSED LINE

SANITARY SEWER TRUNK LINE

PHASE

APPROVED

SEE SHEET 6

MATCH LINE STA. 61+35

EXISTING GRADE

6365
6360
6355
6350
6345
6340
6335

63+00 62+00 61+00 60+00 59+00 58+00 57+00

Excerpts from "Dawson Ridge Construction Drawings Sanitary Sewer Trunk Line" Prepared by Merrick. Dated 10/20/1986

MERRICK
Merrick & Company
10855 East Bethany Drive
Denver, CO 303/751-0741

SCALE VERT. 1" = 5'
HORIZ. 1" = 50'

Bellamah Community Development
9085 E. Mineral Circle
Suite 230
Englewood, Colorado 80112

DAWSON RIDGE

SHEET U5
15

SANITARY SEWER TRUNK LINE

SAW CUT 15" STUB @ MH - PLACE 8" PIPE 15" ABOVE INVERT OF 15" OPENING + GROUT ALL AROUND

INV. = 6362.83 PLUG END

140 L.F. 8" PVC @ 0.45%

100 L.F. 8" PVC @ 1.00%

INV. = 6348.16 PLUG END

13 L.F. 15" PVC @ 2.00%

E. DAWSON RIDGE BLVD.

12" D.I.P. WATER

400 L.F. 15" P.V.C. @ 3.45%

6.75

11.25"

STA. 69+62 EXISTING MH - A1
S) INV. IN = 6361.98
N) INV. IN = 6362.20 (PROPOSED 8")
E) INV. OUT = 6361.78
W) INV IN = 6362.36
RIM EL. = 6373.61

SEE CH2M HILL PLANS OF DOUGLAS LANE INTERCHANGE

MH 2-1 (CH2M HILL PLANS)
MH # 20 (STA 68+21) 9'Ø
W) INV. IN = 6359.16
E) INV OUT = 6359.00
RIM EL. = 6371.70

MH 2-2 (CH2M HILL PLANS)
MH # 19 (STA 64+23) 9'Ø
W) INV. IN = 6345.20
N.E) INV OUT = 6345.00
(E) INV OUT 6345.00 (PLUGGED)
RIM EL. = 6355.89
(SEE DETAIL SHEET M1)

E. DOUGLAS LANE

286 L.F. 12" P.V.C. @ 0.92%

STUB ONE PIPE LENGTH @ 5.20%

STA. 63+66
PROVIDE 55 L.F. OF CONC. ENCASEMENT CENTERED ON WATER LINE

DIVERSION MH
SEE DETAIL SHEET M-1

SEE SH. 5 STA. 61+35 MATCH LINE

EXISTING GRADE

PROPOSED GRADE

PLUG END 100 L.F. OF 8" PVC @ 1.00%

131 L.F. 15" PVC @ 2.00%

400 L.F. 15" PVC @ 3.45%

SEE CH2M HILL PLANS OF DOUGLAS LANE INTERCHANGE FOR FINISHED ROAD ELEVATIONS AND OTHER UTILITIES

PLUG END 140 L.F. OF 8" PVC @ 0.45%

286 L.F. 12" PVC @ 0.92%

DIVERSION MH SEE SHEET M-1

STA. 63+66 PROVIDE 55 L.F. OF CONC. ENCASEMENT CENTERED ON WATER LINE

SEE SH. 5 STA. 61+35 MATCH LINE

6380 6375 6370 6365 6360 6355 6350

69 + 00 68 + 00 67 + 00 66 + 00 65 + 00 64 + 00

PHASE II KEY MAP

APPROV

Excerpts from "Dawson Ridge Construction Drawings Sanitary Sewer Trunk Line" Prepared by Merrick. Dated 10/20/1986

MERRICK
Merrick & Company
10855 East Bethany Drive
Denver, CO 303/751-0741

SCALE VERT. 1" = 5'
HORIZ. 1" = 50'

Bellamah Community Development
9085 E. Mineral Circle
Suite 230
Englewood, Colorado 80112

DAWSON RIDGE

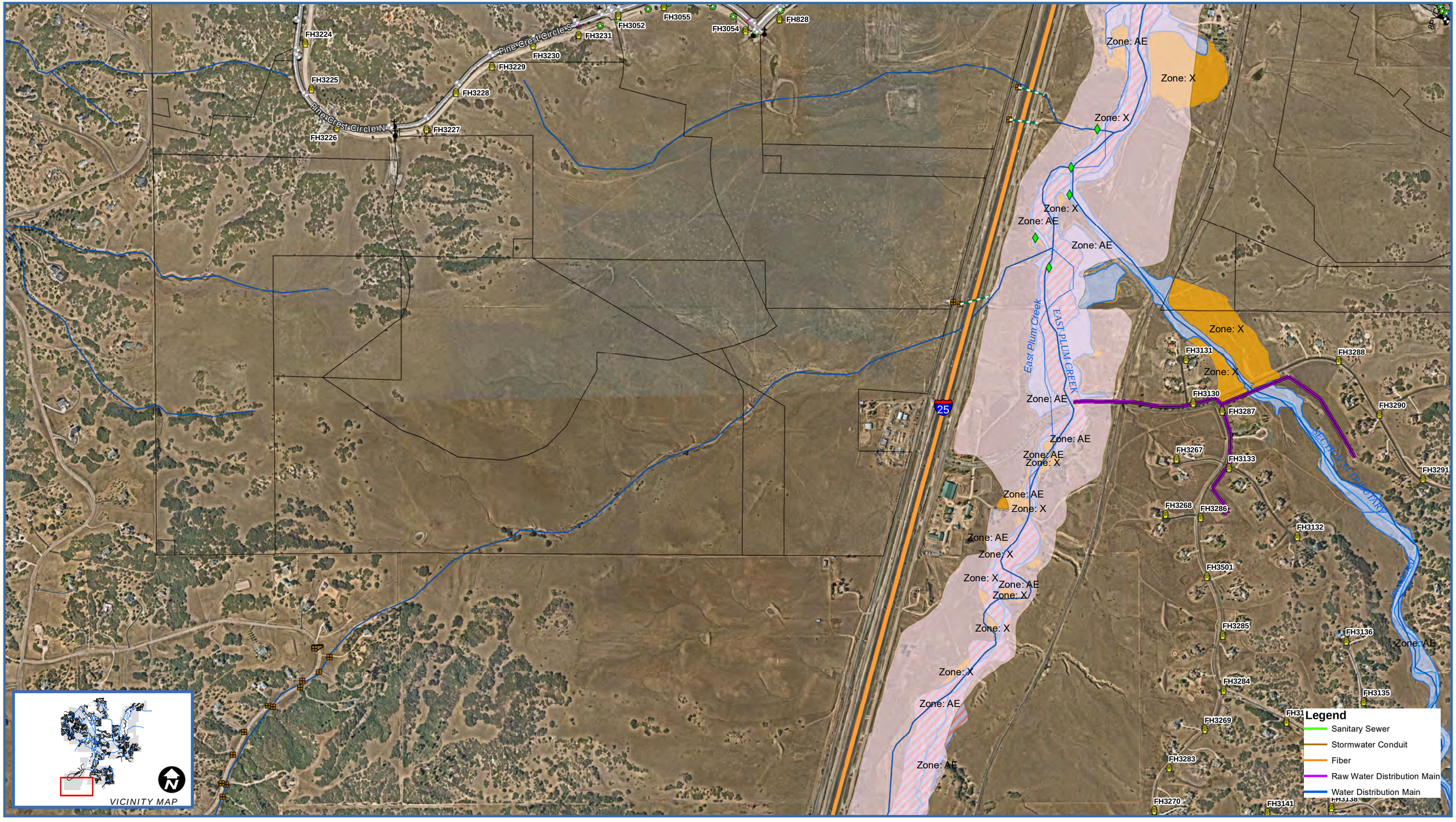
	DATE	REVISION
E. SHEET	7-7-86	
E. CONNECTOR BLVD.	7-7-86	

SANITARY SEWER
Sta. 61+35 to 69+5

SHEET 15

Town of Castle Rock Utility Maps

Attachment F



Castle Rock Qwater — Securing our future drop by drop

0 487.5 975 1,950 2,925 Feet

1 inch = 964 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) 733-6087. Copyright 2019, Town of Castle Rock Utilities Mapping.

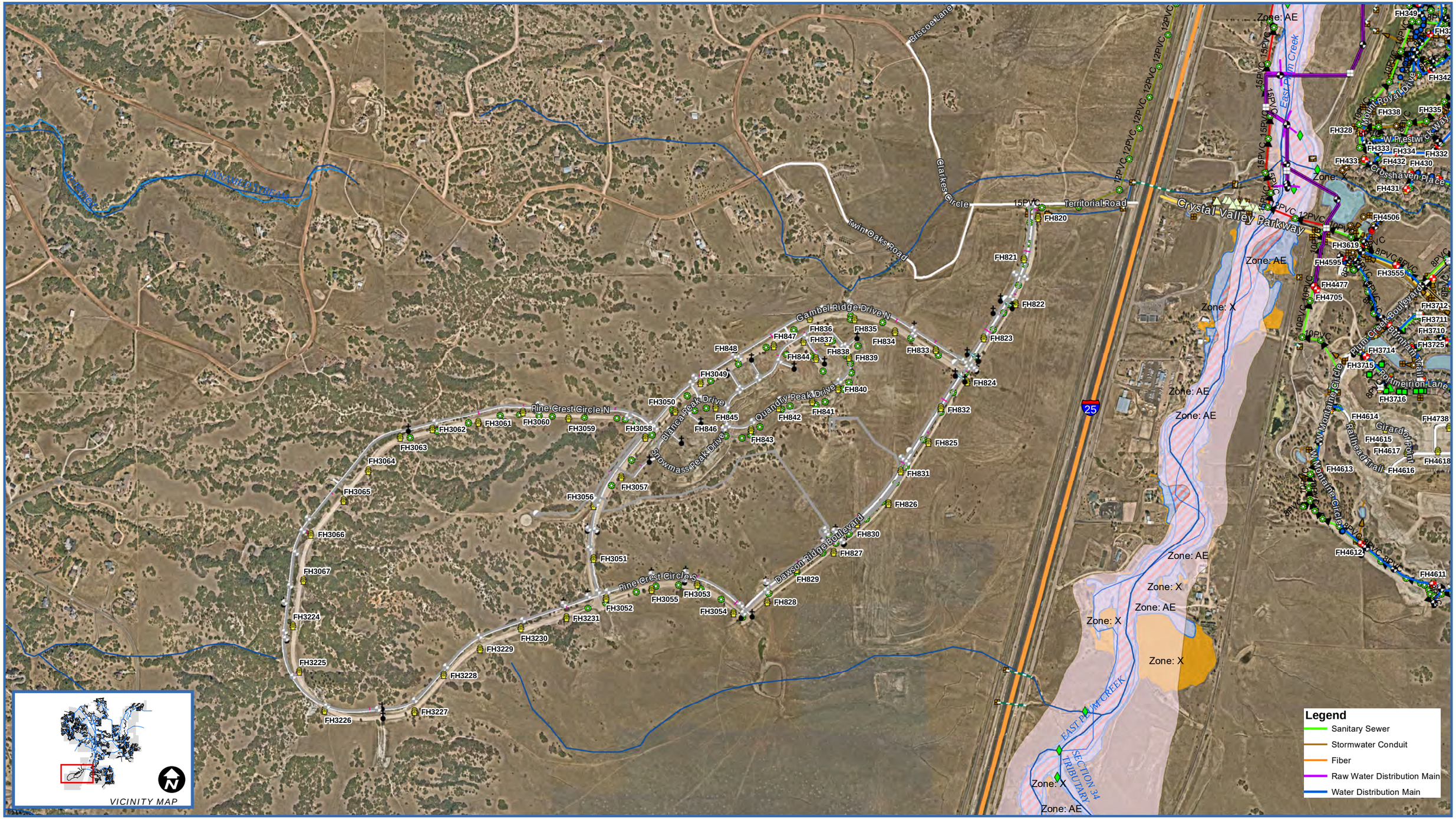
CASTLE ROCK UTILITIES MAP (INTERNAL USE ONLY)

Date: 3/24/2021

Document Path: \\CRSAN1\UTUsers\tclose\Desktop\11x17 LndScp_10.6.mxd

Town of Castle Rock Utility Maps

Attachment G



CASTLE ROCK Qwater
Securing our future drop by drop

0 487.5 975 1,950 2,925 Feet

1 inch = 964 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) 733-6087. Copyright 2019, Town of Castle Rock Utilities Mapping.

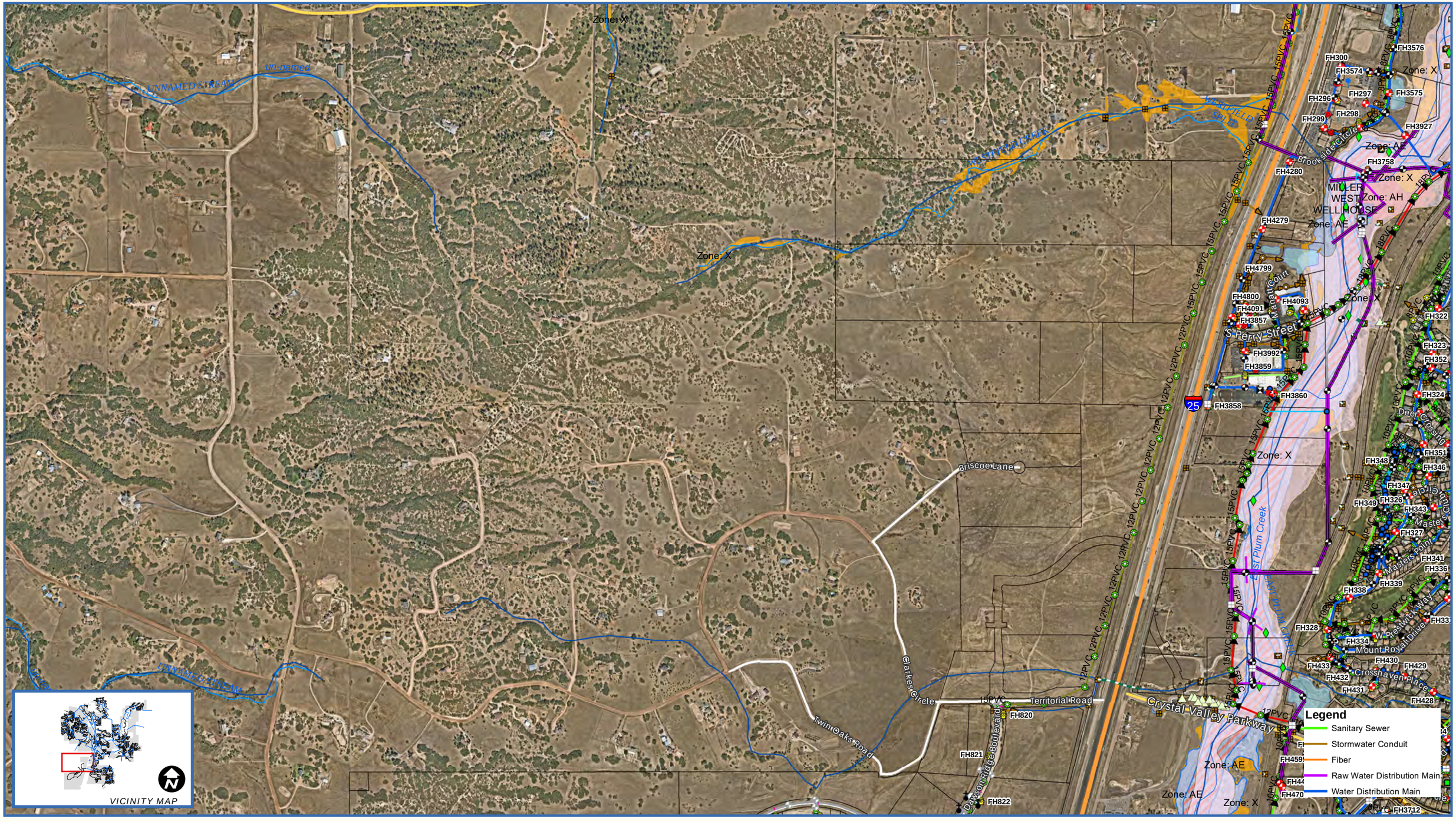
CASTLE ROCK UTILITIES MAP (INTERNAL USE ONLY)

Date: 3/24/2021

Document Path: \\CRSAN1\UTUsers\tclose\Desktop\11x17 LndScp_10.6.mxd

Town of Castle Rock Utility Maps

Attachment H



CASTLE ROCK Qwater
Securing our future drop by drop

0 487.5 975 1,950 2,925 Feet

1 inch = 964 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) 733-6087. Copyright 2019, Town of Castle Rock Utilities Mapping.

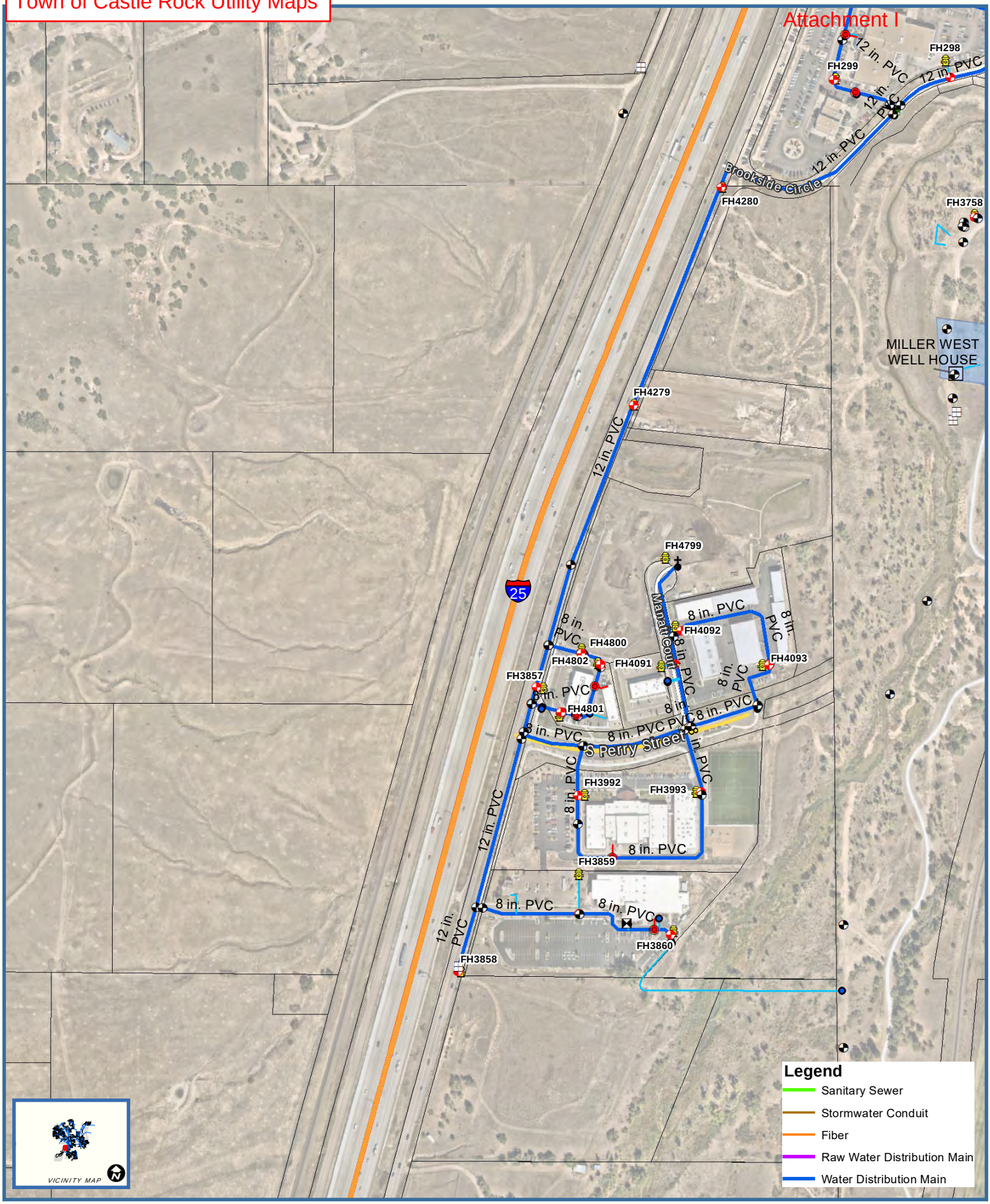
CASTLE ROCK UTILITIES MAP (INTERNAL USE ONLY)

Date: 3/24/2021

Document Path: \\CRSAN1\UTUsers\tclose\Desktop\11x17 LndScp_10.6.mxd

Town of Castle Rock Utility Maps

Attachment I



Legend

- Sanitary Sewer
- Stormwater Conduit
- Fiber
- Raw Water Distribution Main
- Water Distribution Main

VICINITY MAP

CASTLE ROCK Qwater
Securing our future drop by drop

0 210 420 840 Feet

Date: 3/24/2021 1 inch = 417 feet

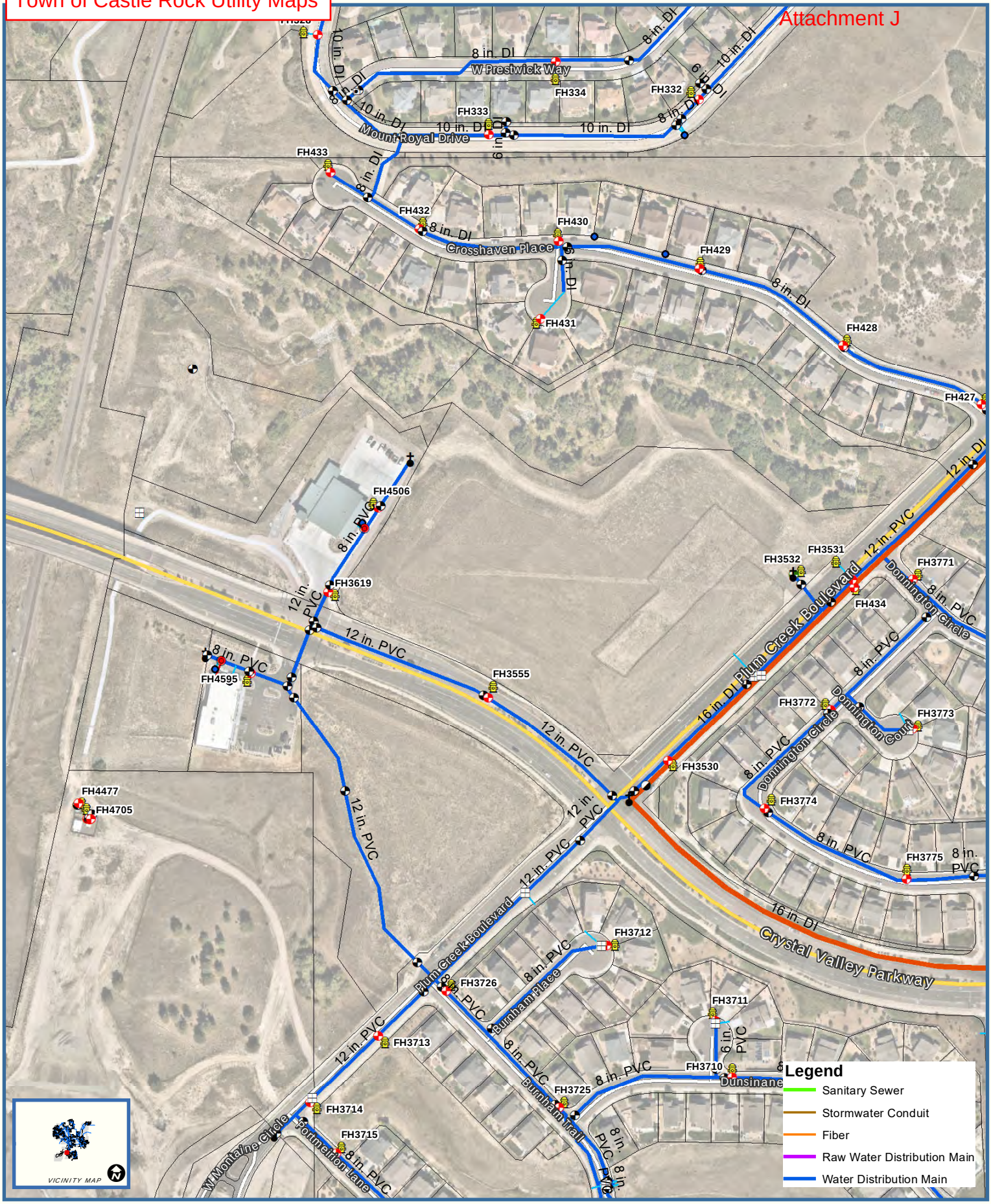
Document Path: J:\GIS\Standard Maps\10.6\Letter Portrait_10.6.mxd

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 2020, Town of Castle Rock Utilities Mapping.

CASTLE ROCK UTILITIES MAP (INTERNAL USE ONLY)

Town of Castle Rock Utility Maps

Attachment J



0 135 270 540 Feet

Date: 3/24/2021 1 inch = 269 feet

Document Path: J:\GIS\Standard Maps\10.6\Letter Portrait_10.6.mxd

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 2020, Town of Castle Rock Utilities Mapping.

CASTLE ROCK UTILITIES MAP (INTERNAL USE ONLY)

CONCEPTUAL UTILITY LETTER

FOR

DAWSON TRAILS
TOWN OF CASTE ROCK, COLORADO
PROJECT NO. PDP21-0001

Prepared for:

Dawson Trails I LLC
Dawson Trails II LLC
Westside Property Investment Company, Inc.
4100 E Mississippi Ave, Ste 500
Glendale, CO 80246
Contact: Lawrence Jacobson
Phone: 303-984-9800

Prepared by:

CORE Consultants, Inc.
3473 South Broadway
Englewood, CO 80113
Contact: Kevin Rohrbough, PE
Phone: 303-703-4444
CORE Project Number: 20-224

May 2022

Excerpts from "Concept Utility Letter for Dawson Trails" Prepared by CORE Dated May 2022

I. PROJECT LOCATION AND DESCRIPTION

This Conceptual Utility Letter analyzes the existing and proposed utility infrastructure associated with the development of the Dawson Trails Master Planned Community. Dawson Trails is a proposed Planned Development (PD), consisting of single-family homes, multi-family homes, commercial development, community parks and school sites on approximately 2,061 +/- acres in Castle Rock, Colorado.

Site Location

This Conceptual Utility Letter is prepared for Dawson Trails, hereon referred to as the "Site". The Site is in a part of Sections 15, 21, 22, 27, 28, 29, 32, 33 & 34 of Township 8 South, Range 67 West of the Sixth Principal Meridian, Town of Castle Rock, Douglas County, State of Colorado. The Site is bounded by Interstate 25 to the east, Keene Ranch Filing No. 1 to the west, an undeveloped Douglas County parcel to the south, and the Twin Oaks subdivision to the north. See Appendix B for Vicinity Map.

Description of Property and Land Use

The Site is 2,063.7 ± acres and is generally undeveloped; however, there were previous infrastructure improvements constructed and abandoned in the 1980s. These abandoned improvements include concrete roads, water lines, sanitary sewer lines, storm sewer, and water distribution infrastructure including wells and a tank, all of which may be abandoned in place or removed as part of the proposed development of the Site.

The proposed development of the Site will consist of single-family homes, multi-family homes, commercial use, parks, open space, fire station, school sites and associated infrastructure. Based on Section 4.4.1 of the Town's Water System Design Criteria Manual, the water demand for the entire development will be approximately 7,500 SFE. This number is approximate and may be lower as the project will be developed under a Water Efficiency Plan (WEP).

II. EXISTING WATER SYSTEM

The Site does not currently have an active and operational domestic water system. Portions of an old water system were constructed in the 1980s; however, this infrastructure was never accepted by the Town or put into use. It was abandoned in place and will not be utilized to provide domestic water to the Site.

The Site is included in the Town's water system build-out planning. The Town's Water Master Plan designates the site as PD #54, which accounted for approximately 7,900 residential units. See Figures 4.4a and 4.4b in Appendix A. The proposed development will consist of less units than previously zoned and is in conformance with the Town's Master Plan.

The Site will provide a minimum of two (2) connection points to the Town's existing Water System for the required redundancy and looping. See Appendix A for the Concept Utility Map. The potential connection locations are as follows:

1. A connection to the 12" Blue Zone water main located within Crystal Valley Pkwy on the east side of I-25. This connection may require an extension of the existing 12" water main

Excerpts from "Concept Utility Letter for Dawson Trails" Prepared by CORE Dated May 2022

within Crystal Valley Parkway to the west, below Plum Creek and across the interchange and to provide a future connection on the west side of I-25.
2. A connection to the 12" Blue Zone water main at Perry St. on the east side of I-25. This connection may require a directional bore below the existing railroad tracks and I-25.
3. A connection to the 16" proposed Blue Zone water main in Plum Creek Parkway. Meadows Blue Zone has a slightly higher HGL which will necessitate a PRV along Prairie Hawk to match the Tank 4 Blue Zone HGL. It is anticipated this water line will be constructed within Plum Creek Parkway as part of the Miller's Landing project.

Connections 1 and 2 as identified above are both gravity fed by Tank 4. Tank 4 has limited capacity to serve the development and the capacity will be analyzed during final engineering designs to determine the number of units (SFE's) that can be served by this connection. Connection 3, fed by Tank 8, along with either Connection 1 or 2 will provide the necessary looping to service the buildout of the development.

Water Tanks and Booster Pumps

Tank 4: The Crystal Valley Parkway connection (#1 See above) will utilize Tank 4 (1.51 MG, Blue Zone).

Tank 4: The Perry St. connection (#2 See above) will utilize Tank 4 (1.51 MG, Blue Zone).

Tank 8 & Tank 4: The Plum Creek Parkway connection (#3 See above) will utilize Tank 8 (3.13 MG, Blue Zone) & Tank 4 (1.51 MG, Blue Zone).

Tank 19: Will be reconstructed as part of the proposed development to provide water supply to the proposed Red Zone portions of the Site.

Tank 21: Will be constructed as part of the proposed development to provide water supply to the Green Zone portions of the Site.

Booster Pump 37: Will be relocated and reconstructed as part of the proposed development to boost water from the Blue Zone up to service the Red Zone portions of the development. The developer will coordinate the operation and maintenance costs for this pump station relocation with the Town of Castle Rock.

III. PROPOSED WATER SYSTEM

The Site is generally located within three (3) water pressure zones: Blue, Red, and Green. A portion of the Site is located above the Green Zone within the Tan Zone; however, no development is anticipated in that portion of the Site and no water service will be provided to the Tan Zone. See Appendix A for Concept Utility Map.

As mentioned in Section II, it is anticipated that the proposed water system will make a minimum of two (2) connections to the Town's system to provide looping of the main lines and adequate redundancy. Internal looping within each Planning Area will also be provided with the final design. Due to the geographic location of the Site relative to the Town's adjacent water system, it is anticipated that both connections will be made to the Town's Blue Zone. These connections and proposed water system will generally serve the eastern portion of the Site located in the Blue Zone. The water will be treated by either Meadows WTP, PS Miller WTP, Plum Creek Water Purification Facility, and/or Ray Waterman WTP.

Excerpts from "Concept Utility Letter for Dawson Trails" Prepared by CORE Dated May 2022

The anticipated water demand for the entire development is approximately 7,500 SFE (includes irrigation demand), based on land use demands provided in section 4.4.1 of the Town's Water System Design Criteria Manual. Based on the various land uses and expected SFE's in the three water pressure zones, efforts will be made to reduce the number of booster pumps and Pressure Reducing Valves (PRV) between the different water pressure zones. Infrastructure sizes may need to be increased due to transmission and tank piping alignments during final design. Each planning area will be expected to provide internal looping connections to the backbone water main infrastructure within each pressure zone.

A Water Efficiency Program (WEP) Report has been prepared by AquaSan Network for the development. The Program will provide various efficiencies of the water used on the project. The Program will reduce water demands throughout the project in a manner that is acceptable to the Town as well as the commercial and residential housing industries, while achieving benchmark water use goals in determination of impact fee assessments.

Red Zone
A new Red Zone Water Tank, adjacent to the existing abandoned Tank 19, will be constructed to provide a gravity feed to the Red Zone portions of the Site. The tank will be fed by a proposed Red Zone Booster Pump that will provide redundancy to the Red Zone and interconnect with the Town's Blue Zone through a Pressure Reducing Valve.

Green Zone
The Green Zone, western portion of the Site, will be serviced by an off-site Green Zone Tank, Tank 21, as identified on the Town's Water Master Plan. Due to the required hydraulic water surface elevation required to provide service to the Green Zone, the tank will need to be constructed off-site, to the southwest, so that it has the necessary elevation to serve the Green Zone. The location of the Green Zone tank will be determined during final designs. A water quality analysis will be provided for the green zone tank per Town of Castle Rock's Criteria.

It is anticipated that a booster pump will be constructed near the Red Zone water tank noted above. This will boost the water supply up to the Green Zone and a PRV will connect to the Red Zone to provide additional redundancy.

Any future development of the existing water infrastructure needed to serve this site is the responsibility of the developer. A well site and water treatment facility may be required for this development, based on Town of Castle Rock Water Resources requirements. See the Concept Utility Map for locations in Appendix A. Two ±3 acre well sites and one 6 acre water treatment facility may be required for this development.

IV. EXISTING WASTEWATER SYSTEM

The Site does not currently have an active or operational sanitary sewer wastewater collection system. Portions of an old sanitary system were constructed in the 1980s; however, this infrastructure was never accepted by the Town or put into use. It was abandoned in place and is not anticipated to be utilized to provide wastewater collection to the Site.

An existing 12" Off-Site Sewer Main, upsized to a 15" west of Perry Street and I-25 were constructed to convey flows north of the Site and ultimately connect to the Town's Wastewater collections system near Plum Creek Parkway and the Interstate 25 Interchange.

Excerpts from "Concept Utility Letter for Dawson Trails" Prepared by CORE Dated May 2022

This sewer main was not previously accepted by the Town and has never been utilized. It is anticipated that the off-site sewer main will be inspected and tested to see if it could be restored and accepted by the Town as it is currently constructed. If the main, or portions of the main, are deemed unusable then a new sewer main, or portions of the sewer main will be reconstructed within the existing easement to convey wastewater flows to the north and connect to the Town's collection system.

It is understood that during a part of the Plum Creek Parkway interchange project that the off-site sewer main was temporarily disconnected at Plum Creek Parkway. It is the responsibility of the Town to reconnect this line across Plum Creek Parkway and tie it into the existing downstream wastewater collection system.

Per coordination with the Town, it is noted that the existing wastewater collection system downstream from Plum Creek Parkway will be at or near capacity with the buildout of the development. The Town currently plans to upsize these downstream sanitary sewer mains to provide the additional capacity to serve this region of the Town.

V. PROPOSED WASTEWATER SYSTEM

The Site will be generally served by gravity sanitary sewer mains that will convey the wastewater flows from the west to east and from south to north See Appendix A for Concept Utility Map. The ultimate outfall of the Site is to the North with a connection to the Town's wastewater conveyance system near the Plum Creek Parkway and I-25 Interchange. The anticipated wastewater demand for the entire development is 7,000 SFE, based on land use demands provided in section 4.4.1 of the Town's Wastewater System Design Criteria Manual.

The western portion of the Site slopes from east to west and sanitary sewer flows will not be conveyed via gravity to the main wastewater collection system of the Site. It is anticipated that either one (1) or two (2) sanitary sewer lift stations will be required to serve this portion of the Site. Efforts will be made to minimize the number of Lift Stations required to service the development as operation and maintenance costs will be assessed for lift stations.

The sanitary sewer demands, both on-site and off-site, will be analyzed for the new zoning established with the Planned Development Plan Amendment and sewer mains will be sized according to the Town's standards and criteria.

A Master Utility Study will ultimately be prepared for the development to analyze the various land uses and their locations on the Site to ensure that the backbone infrastructure is sized to handle the build out of the development. Any future development of the existing wastewater infrastructure needed to serve this site is the responsibility of the developer.

Excerpts from "Concept Utility Letter for Dawson Trails" Prepared by CORE Dated May 2022

DAWSON RIDGE

CONCEPT UTILITY MAP

POTENTIAL PLUM CREEK PARKWAY CONNECTION TO 16" WATER (BLUE ZONE)

SEWER CONNECTION TO PLUM CREEK PKWY

PROPOSED PRV

APPROXIMATE ±3 AC WELL SITE

POTENTIAL PERRY ST CONNECTION TO 12" WATER (BLUE ZONE)

RED ZONE BOOSTER PUMP

EXTENSION OF 12" WATER LINE TO PLUM CREEK

GREEN ZONE BOOSTER PUMP

POTENTIAL LIFT STATION LOCATIONS

EXISTING BLUE ZONE STUB

POTENTIAL CONNECTION TO WATER (BLUE ZONE)

RED TANK ELEV=6675

EXISTING RED TANK (TO BE ABANDONED)

EXISTING BOOSTER PUMP TO BE REMOVED

CONNECTION TO GREEN ZONE

*POTENTIAL PUBLIC FACILITY(S)

Excerpts from "Concept Utility Letter for Dawson Trails"
Prepared by CORE
Dated May 2022

APPROXIMATE GREEN ZONE WATER TANK LOCATION (FINAL LOCATION TO BE DETERMINED DURING FINAL DESIGN)

LEGEND

- WATER ZONE TAN 6700+ (NO DEVELOPMENT)
- WATER ZONE GREEN 6700-6537
- WATER ZONE RED 6537-6393
- ZONE BLUE EAST 6389-6221

* PUBLIC FACILITIES INCLUDING, BUT NOT LIMITED TO: FIRE STATION, PUBLIC WORKS SERVICE CENTER, ±6 AC TREATMENT FACILITY, ±3 AC WELL SITE, AND ASSOCIATED STORM WATER FACILITIES. FINAL LOCATIONS WITHIN PL-1.10 TO BE DETERMINED.

0 900' 1,800'

1 inch = 900 ft.

CORE CONSULTANTS. INC.
3473 S. BROADWAY
ENGLEWOOD, CO 80113
303.703.4444
LIVEYOURCORE.COM

LAND DEVELOPMENT
ENERGY
PUBLIC INFRASTUCTURE

DATE: 05/27/22
CREATED BY: JRF
JOB NO. 20-224
SHEET 1

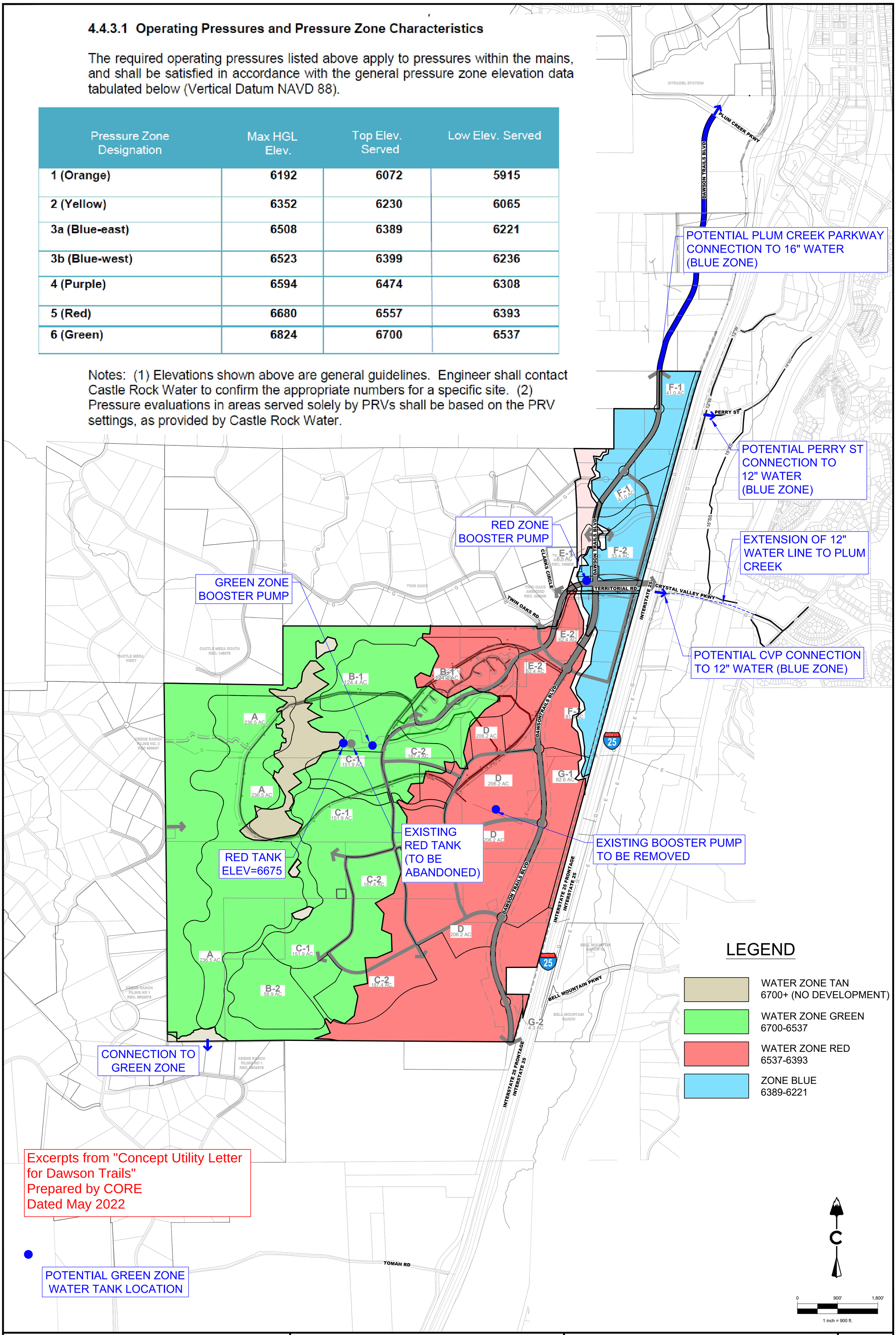
5/27/2022 5:00 PM - X:\20-224 DAWSON\CIVIL\CAD\EXHIBITS\OVERALL\2021-06-02 - CONCEPT UTILITY LETTER MAP\CONCEPT UTILITY MAP.DWG;

4.4.3.1 Operating Pressures and Pressure Zone Characteristics

The required operating pressures listed above apply to pressures within the mains, and shall be satisfied in accordance with the general pressure zone elevation data tabulated below (Vertical Datum NAVD 88).

Pressure Zone Designation	Max HGL Elev.	Top Elev. Served	Low Elev. Served
1 (Orange)	6192	6072	5915
2 (Yellow)	6352	6230	6065
3a (Blue-east)	6508	6389	6221
3b (Blue-west)	6523	6399	6236
4 (Purple)	6594	6474	6308
5 (Red)	6680	6557	6393
6 (Green)	6824	6700	6537

Notes: (1) Elevations shown above are general guidelines. Engineer shall contact Castle Rock Water to confirm the appropriate numbers for a specific site. (2) Pressure evaluations in areas served solely by PRVs shall be based on the PRV settings, as provided by Castle Rock Water.



CORE CONSULTANTS. INC.
3473 S. BROADWAY
ENGLEWOOD, CO 80113
303.703.4444
LIVEYOURCORE.COM

LAND DEVELOPMENT
ENERGY
PUBLIC INFRASTUCTURE

DAWSON RIDGE

WATER SUPPLY ZONES

DATE: 05/27/22
CREATED BY: AM
JOB NO. 20-224
SHEET 1

5/27/2022 4:52 PM : X:\20-224 DAWSON\CIVIL\CAD\EXHIBITS\OVERALL\2021-06-29 - WATER SUPPLY ZONES\WATER SUPPLY ZONES EXHIBIT.DWG;

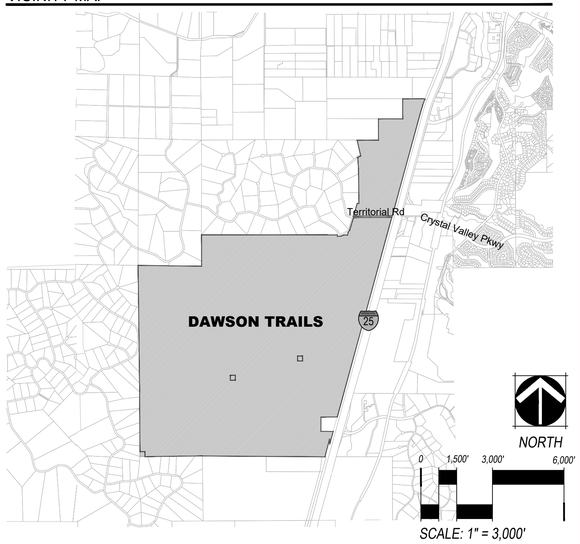
DAWSON TRAILS

PLANNED DEVELOPMENT PLAN AND ZONING REGULATIONS

(AN AMENDMENT TO THE DAWSON RIDGE PRELIMINARY P.U.D SITE PLAN AND A PORTION OF THE WESTFIELD TRADE CENTER PRELIMINARY P.U.D. SITE PLAN)

TWO PARCELS OF LAND BEING ALL OF SECTION 28 AND PORTIONS OF SECTIONS 15, 21, 22, 27, 29, 32, 33 & 34, TOWNSHIP 8 SOUTH, RANGE 67 WEST OF THE SIXTH PRINCIPAL MERIDIAN, TOWN OF CASTLE ROCK, COUNTY OF DOUGLAS, STATE OF COLORADO

VICINITY MAP



SCALE: 1" = 3,000'

SUMMARY TABLE

CHARACTER AREA	PLANNING AREA (6)	LAND USE TYPE (2)	ACREAGE	MAX. DWELLING UNITS	MIN TRANISTION LOT SIZE	MIN. NON-RES AREA (AC)	% OF PROPERTY	MAX BUILDING HEIGHT
WEST	A	SFD	236.5	471	7,700 sf	N/A	11.5%	35'
	B-1	SFD	124.4	484	6,600 sf	N/A	6.0%	35'
	B-2	SFD	58.9	228	6,600 sf	N/A	2.9%	35'
	Totals	N/A	419.8	1,183	N/A	N/A	20.3%	
CENTRAL	C-1	SFD, SFA, MF	151.9	481	N/A	N/A	7.4%	45'
	C-2	SFD, SFA, MF	187.4	908	N/A	N/A	9.1%	50'
	D	SFD, SFA, MF, Non-Res	206.2	1,938	N/A	N/A	10.0%	60'
	Totals	N/A	545.5	3,327	N/A	N/A	26.4%	
EAST	E-1	Non-Res	6.5	N/A	N/A	6.5	0.3%	50'
	E-2	SFD, SFA, MF, Non-Res	62.4	400	N/A	N/A	3.0%	60'
	F-1	SFA, MF, Non-Res	41.0	940	N/A	45	2.0%	75'/90'
	F-2	SFA, MF, Non-Res	33.4		N/A		1.6%	75'/90'
	F-3	SFA, MF, Non-Res	81.9		N/A		4.0%	75'/90'
	G-1	Non-Res	62.6	0	N/A	66.9	3.0%	75'/90'
	G-2	Non-Res	4.3	0	N/A		0.2%	75'/90'
	Totals	N/A	292.1	1,340	N/A	118.4	14.2%	

MAX. DWELLING UNITS - ALL 3 CHARACTER AREAS COMBINED (NOT TO EXCEED)	5,850
MAX. MULTI FAMILY DWELLING UNITS (LOCATED IN C-1, C-2, D, E-2, F-1, F-2, F-3)	2,400
MAX. COMM./NON-RES. SQ. FT. - EAST & CENTRAL CHARACTER AREAS	3,200,000

Planning Areas	1,257.4		60.9%
Open Space (PL-2 & OS)	532.9		25.8%
Public Land Dedication (PL-1)	227.6		11.0%
ROW (Arterial)	45.8		2.2%
TOTAL PROPERTY (Approximately)	2,063.7		100.0%

SHEET INDEX

SHEET 1.....COVER
SHEET 2.....OWNERSHIP CERTIFICATION
SHEET 3-8.....PLANNED DEVELOPMENT PLAN
SHEET 9.....OPEN SPACE, PUBLIC LAND, AND TRAILS PLAN
SHEET 10.....NATURAL FEATURES MAP
SHEET 11.....PHASING PLAN
SHEET 12.....GRADING & DRAINAGE PLAN
SHEET 13.....WILDLAND MANAGEMENT PLAN
SHEET 14-18.....PD ZONING REGULATIONS
SHEET 19.....PD ZONING REGULATION APPENDIX

PURPOSE STATEMENT

THE DAWSON TRAILS PDP IS AN AMENDMENT TO THE DAWSON RIDGE PRELIMINARY P.U.D SITE PLAN AND A PORTION OF THE WESTFIELD TRADE CENTER PRELIMINARY P.U.D. SITE PLAN TO ZONE THE PROPERTY FOR RESIDENTIAL, MIXED USE, COMMERCIAL, INDUSTRIAL, OPEN SPACE, AND PLD.

VESTING

THIS DAWSON TRAILS PLANNED DEVELOPMENT PLAN INCLUSIVE OF THE EMBEDDED PD ZONING REGULATIONS CONSTITUTES A SITE SPECIFIC DEVELOPMENT PLAN PURSUANT TO CHAPTER 17.08 OF THE CASTLE ROCK MUNICIPAL CODE AND §24-68-101, *ET SEQ.*, C.R.S., AND ESTABLISHES VESTED PROPERTY RIGHTS THROUGH DECEMBER 31, 2052, TO UNDERTAKE AND COMPLETE THE DEVELOPMENT AND USE OF THE PROPERTY IN ACCORDANCE WITH THIS PLAN. TOWN COUNCIL MAP APPROVE A ONE TIME TEN-YEAR EXTENSION OF THE VESTING PERIOD, NOT TO EXCEED DECEMBER 31, 2062.

TECHNICAL CRIERIA VARIANCE APPROVAL

TCV22-0031
APPROVED 5/11/2022
APPROVAL ALLOWS FOR REDUCED INTERSECTION SPACING BETWEEN FULL MOVEMENT INTERSECTIONS ALONG DAWSON TRAIL BLVD/PRAIRIE HAWK DR.

PDP STANDARD NOTES

1. THE MINERAL RIGHTS ASSOCIATED WITH THIS PROPERTY HAVE NOT BEEN SEVERED. FOR ANY PORTION THAT HAS BEEN SEVERED, NOTIFICATION OF DEVELOPMENT HEARINGS BEFORE PLANNING COMMISSION AND TOWN COUNCIL MUST BE PROVIDED TO OWNERS OF MINERALS ESTATES.
2. THIS PROPERTY LIES WITHIN FEMA ZONE X, THE UNSHADED AREA OF FIRM MAPS NO. 08035C0282G, 08035C0301G, 08035C0283F, 08035C0284G, AND 08035C0292F, REVISED MARCH 16, 2016. NO STRUCTURES SHALL BE PERMITTED IN THE APPROVED 100-YEAR FLOOD PLAIN. THE SITE ALSO HAS MAJOR DRAINAGEWAYS WITH BASIN AREAS GREATER THAN 130 ACRES ONSITE.
3. THIS PROPERTY IS WITHIN THE TOWN OF CASTLE ROCK BLUE, RED AND GREEN WATER PRESSURE ZONES.
4. ALL-WEATHER (CONCRETE OR ASPHALT) SURFACED ACCESS ROADS CAPABLE OF WITHSTANDING THE IMPOSED LOADS OF FIRE APPARATUS (75,000 LBS.) AND ALL REQUIRED FIRE HYDRANTS SHALL BE INSTALLED AND MADE SERVICEABLE PRIOR TO AND DURING ALL VERTICAL CONSTRUCTION.
5. RIGHT-OF-WAY FOR INGRESS AND EGRESS FOR EMERGENCY VEHICLES IS GRANTED OVER, ACROSS, ON AND THROUGH ANY AND ALL PRIVATE ROADS AND DRIVES.

GENERAL NOTES

1. ALL DEVELOPMENT ASSOCIATED WITH THE DAWSON TRAILS PDP SHALL COMPLY WITH ALL FEDERAL, STATE AND TOWN REGULATIONS REGARDING WILDLIFE INCLUDING THE MIGRATORY BIRD ACT AND BURROWING OWL SURVEY IF REQUIRED.
2. UPDATED SOILS REPORTS SHALL BE SUBMITTED WITH EACH SITE DEVELOPMENT PLAN AND/OR PLAT.
3. ALL EVA ACCESS GATES WILL INCLUDE AN OPTICOM SYSTEM OR OTHER SYSTEM APPROVED BY THE TOWN OF CASTLE ROCK FIRE DEPARTMENT.
4. A WILDLAND/URBAN INTERFACE WILDFIRE VEGETATION MANAGEMENT PLAN (PLAN), OR COMPLIANCE LETTER, IS REQUIRED TO BE SUBMITTED FOR EACH PHASE OF THE PLANNED DEVELOPMENT WITH THE FIRST SDP OR CONSTRUCTION DRAWINGS FOR EVALUATION AND APPROVAL BY THE TOWN OF CASTLE ROCK FIRE DEPARTMENT. THE PLAN SHALL BE DEVELOPED BY A DESIGN PROFESSIONAL FAMILIAR WITH WILDFIRE MITIGATION TECHNIQUES AND STANDARDS. REFER TO SHEET 13 AND THE TOWN OF CASTLE ROCK COMMUNITY WILDFIRE PROTECTION PLAN.
5. FOR PLANNING AREAS F AND G, VERTICAL MIXED-USE, HOSPITALITY, MEDICAL, OFFICE, AND MULTI-FAMILY RESIDENTIAL USES ARE ALLOWED TO HAVE A MAXIMUM HEIGHT OF 90 FEET PER SECTION 6.11 ON SHEET 17.

LEGAL DESCRIPTION

TWO (2) PARCELS OF LAND PORTIONS OF SECTIONS 15, 21, 22, 27, 28, 29, 32, 33 & 34, TOWNSHIP 8 SOUTH, RANGE 67 WEST OF THE SIXTH PRINCIPAL MERIDIAN, TOWN OF CASTLE ROCK, COUNTY OF DOUGLAS, STATE OF COLORADO, BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:

THE BEARINGS FOR THIS DESCRIPTION ARE BASED ON THE NORTH LINE OF THE SOUTH HALF OF THE SOUTH HALF OF SECTION 21, TOWNSHIP 8 SOUTH, RANGE 67 WEST OF THE SIXTH P.M., BEING ASSUMED TO BEAR S89°55'56"E, FROM THE SOUTH 1/16TH CORNER OF SAID SECTIONS 21 & 22, BEING MONUMENTED BY A PIPE WITH A 2" ALUMINUM CAP STAMPED "LS 6935" TO THE SOUTH 1/16TH CORNER OF SAID SECTIONS 20 & 21, BEING MONUMENTED BY A PIPE WITH A 2 INCH ALUMINUM CAP, STAMPED "LS 6935", WITH ALL BEARINGS CONTAINED HEREIN RELATIVE THERETO.

PARCEL 1:

BEGINNING AT THE SOUTH 1/16TH CORNER OF SAID SECTIONS 21 & 22, ALSO BEING A POINT ON THE SOUTH LINE OF TWIN OAKS, A SUBDIVISION PLAT RECORDED AT RECEPTION NO. 161972, IN THE RECORDS OF THE DOUGLAS COUNTY CLERK AND RECORDER'S OFFICE;
THENCE S 89°28'35" E, ALONG THE SOUTH LINE OF SAID TWIN OAKS SUBDIVISION AND ALONG THE NORTH LINE OF THE SOUTH HALF OF THE SOUTH HALF OF SAID SECTION 22, A DISTANCE OF 404.37 FEET TO A POINT ON THE WEST LINE OF THE TWIN OAKS ROAD RIGHT-OF-WAY, AS DEDICATED BY SAID TWIN OAKS SUBDIVISION;
THENCE ALONG THE WEST LINE OF SAID TWIN OAKS DRIVE RIGHT-OF-WAY AND ALONG THE SOUTH LINE OF THE TERRITORIAL ROAD RIGHT-OF-WAY, AS DEDICATED BY SAID TWIN OAKS SUBDIVISION, THE FOLLOWING FOUR (4) COURSES:

1. S 02°01'48" E, A DISTANCE OF 52.10 FEET TO THE SOUTH LINE OF SAID TERRITORIAL ROAD RIGHT-OF-WAY;
2. N 87°58'41" E, A DISTANCE OF 109.24 FEET TO A POINT OF CURVATURE;
3. ALONG THE ARC OF A CURVE TO THE LEFT HAVING A RADIUS OF 245.68 FEET, A CENTRAL ANGLE OF 28°36'44" AND AN ARC LENGTH OF 122.69 FEET;
4. N 59°21'57" E, A DISTANCE OF 23.19 FEET TO A POINT ON THE SOUTH LINE OF SAID TWIN OAKS SUBDIVISION;

THENCE S 89°28'35" E, ALONG SAID SOUTH LINE, A DISTANCE OF 174.31 FEET TO THE SOUTHEAST CORNER OF SAID TWIN OAKS SUBDIVISION;
THENCE N 17°17'13" E, ALONG THE EAST LINE OF SAID TWIN OAKS SUBDIVISION, A DISTANCE OF 139.27 FEET TO A POINT ON THE EAST LINE OF SAID TERRITORIAL ROAD RIGHT-OF-WAY AND A POINT OF NON-TANGENT CURVATURE;
THENCE ALONG THE EAST LINE OF SAID TERRITORIAL ROAD RIGHT-OF-WAY THE FOLLOWING TWO (2) COURSES:

1. ALONG THE ARC OF A NON-TANGENT CURVE TO THE LEFT HAVING A RADIUS OF 198.98 FEET, A CENTRAL ANGLE OF 31°52'19" AND AN ARC LENGTH OF 110.69 FEET, SUBTENDED BY A CHORD OF WHICH BEARS N 33°13'23" E, A DISTANCE OF 109.26 FEET;
2. N 17°17'13" E, A DISTANCE OF 534.55 FEET TO A POINT ON THE SOUTH LINE OF THE TERRITORIAL ROAD RIGHT-OF-WAY AS DEDICATED BY THAT DEED RECORDED AT RECEPTION NO. 8816440, SAID DOUGLAS COUNTY RECORDS;

THENCE N 89°40'41" E, ALONG SAID SOUTH LINE, A DISTANCE OF 1599.61 FEET TO A POINT ON THE WEST LINE OF THE BURLINGTON NORTHERN SANTA FE RAILROAD RIGHT-OF-WAY;
THENCE S 15°17'57" W, ALONG SAID WEST LINE, A DISTANCE OF 8675.32 FEET TO THE NORTHEAST CORNER OF THAT PARCEL OF LAND DESCRIBED IN THAT DEED RECORDED AT RECEPTION NO. 2004131453, SAID DOUGLAS COUNTY RECORDS;
THENCE ALONG THE NORTH, WEST AND SOUTH LINES OF SAID PARCEL, THE FOLLOWING THREE (3) COURSES:

1. S 89°46'16" W, A DISTANCE OF 678.73 FEET;
2. S 00°19'26" W, A DISTANCE OF 600.54 FEET;
3. S 89°29'06" E, A DISTANCE OF 515.85 FEET TO A POINT ON THE WEST LINE OF SAID BURLINGTON NORTHERN SANTA FE RAILROAD RIGHT OF WAY;

THENCE S 15°17'57" W, ALONG SAID WEST LINE, A DISTANCE OF 547.53 FEET TO A POINT ON THE EAST LINE OF THE NORTHEAST QUARTER OF SAID SECTION 33; THENCE N 00°02'14" W, ALONG SAID EAST LINE, A DISTANCE OF 226.55 FEET TO A POINT ON THE WEST LINE OF SAID BURLINGTON NORTHERN SANTA FE RAILROAD RIGHT-OF-WAY;
THENCE S 15°19'54" W, ALONG SAID WEST LINE, A DISTANCE OF 789.53 FEET TO A POINT ON THE SOUTH LINE OF THE NORTH HALF OF SAID SECTION 33;
THENCE N 89°35'18" W, ALONG SAID SOUTH LINE, A DISTANCE OF 5123.28 FEET TO THE EAST QUARTER CORNER OF SAID SECTION 32, ALSO BEING THE NORTHEAST CORNER OF KEENE RANCH FILING NO. 1, A SUBDIVISION PLAT RECORDED AT RECEPTION NO. 9523375, SAID DOUGLAS COUNTY RECORDS;
THENCE S 89°21'58" W, ALONG THE NORTH LINE OF SAID KEENE RANCH FILING NO. 1 AND ALONG THE SOUTH LINE OF THE NORTHEAST QUARTER OF SAID SECTION 32, A DISTANCE OF 2414.68 FEET TO THE SOUTHEAST CORNER OF THAT PARCEL OF LAND DESCRIBED IN THAT DEED RECORDED AT RECEPTION NO. 2004051359, SAID DOUGLAS COUNTY RECORDS; THENCE ALONG THE EAST AND NORTH LINES OF SAID PARCEL OF LAND, THE FOLLOWING TWO (2) COURSES:

1. N 00°19'46" W, A DISTANCE OF 208.73 FEET TO THE NORTHEAST CORNER OF SAID DEED;
2. S 89°21'58" W, A DISTANCE OF 208.73 FEET TO A POINT ON THE WEST LINE OF THE NORTHEAST QUARTER OF SAID SECTION 32, ALSO BEING A POINT ON THE EAST LINE OF SAID KEENE RANCH FILING NO. 1;

THENCE N 00°19'46 W, ALONG THE EAST LINE OF SAID KEENE RANCH FILING NO. 1, ALONG THE EAST LINE OF KEENE RANCH FILING NO. 2, A SUBDIVISION PLAT RECORDED AT RECEPTION NO. 9639479, SAID DOUGLAS COUNTY RECORDS, AND ALONG THE WEST LINE OF THE NORTHEAST QUARTER OF SAID SECTION 32, A DISTANCE OF 2505.72 FEET TO THE NORTH QUARTER CORNER OF SAID SECTION 32;
THENCE N 00°39'34" W, ALONG THE EAST LINE OF SAID KEENE RANCH FILING NO. 2 AND ALONG THE WEST LINE OF THE EAST HALF OF SAID SECTION 29, A DISTANCE OF 5308.62 FEET TO THE NORTH QUARTER CORNER OF SAID SECTION 29, BEING THE NORTHEAST CORNER OF SAID KEENE RANCH FILING NO. 2 PLAT, AND THE SOUTHWEST CORNER OF CASTLE MESA SOUTH, A SUBDIVISION PLAT RECORDED AT RECEPTION NO. 145078, SAID DOUGLAS COUNTY RECORDS;
THENCE S 89°02'42" E, ALONG THE NORTH LINE OF THE EAST HALF OF SAID SECTION 29 AND ALONG THE SOUTH LINE OF SAID CASTLE MESA SOUTH SUBDIVISION, A DISTANCE OF 2661.01 FEET TO THE SOUTHEAST CORNER OF SAID CASTLE MESA SOUTH SUBDIVISION, BEING THE SOUTHWEST CORNER OF SAID SECTION 21;
THENCE N 00°02'04" W, ALONG THE EAST LINE OF SAID CASTLE MESA SOUTH SUBDIVISION AND ALONG THE WEST LINE OF THE SOUTH HALF OF THE SOUTH HALF OF SAID SECTION 21, A DISTANCE OF 1322.70 FEET TO THE SOUTH 1/16TH CORNER OF SAID SECTIONS 20 & 21, BEING THE SOUTHWEST CORNER OF SAID TWIN OAKS SUBDIVISION;
THENCE S 89°55'56" E, ALONG THE SOUTH LINE OF SAID TWIN OAKS SUBDIVISION AND ALONG THE NORTH LINE OF THE SOUTH HALF OF THE SOUTH HALF OF SAID SECTION 21, A DISTANCE OF 5286.17 FEET TO THE POINT OF BEGINNING.

LESS AND EXCEPT THE FOLLOWING TWO (2) PARCELS OF LAND;

TWO (2) PARCELS OF LAND, AS DESCRIBED IN SAID DEED RECORDED AT RECEPTION NO. 2004051359, SAID DOUGLAS COUNTY RECORDS, BEING A PORTION OF THE SOUTH HALF OF SECTION 28, TOWNSHIP 8 SOUTH, RANGE 67 WEST OF THE SIXTH PRINCIPAL MERIDIAN, TOWN OF CASTLE ROCK, COUNTY OF DOUGLAS, STATE OF COLORADO, BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:

THE BEARINGS FOR THESE EXCEPTION PARCELS ARE BASED ON THE SOUTH LINE OF SECTION 28, TOWNSHIP 8 SOUTH, RANGE 67 WEST OF THE SIXTH P.M., BEING ASSUMED TO BEAR S89°47'47"E, FROM THE SOUTHWEST CORNER OF SAID SECTION 28, BEING MONUMENTED BY A 1" PIPE WITH A 2-1/2" ALUMINUM CAP STAMPED "LS 6935" TO THE SOUTHEAST CORNER OF SAID SECTIONS 28, BEING MONUMENTED BY #6 REBAR WITH A 2-1/2" ALUMINUM CAP, STAMPED "LS 6935", WITH ALL BEARINGS CONTAINED HEREIN RELATIVE THERETO.

COMMENCING AT THE SOUTHWEST CORNER OF SAID SECTION 28, THENCE N 65°29'17" E, A DISTANCE OF 1262.53 FEET TO THE POINT OF BEGINNING;
THENCE N 00°45'02" W, A DISTANCE OF 208.73 FEET;
THENCE S 89°47'38" E, A DISTANCE OF 208.73 FEET;
THENCE S 00°45'02" E, A DISTANCE OF 208.73 FEET;
THENCE N 89°47'38" W, A DISTANCE OF 208.73 FEET TO THE POINT OF BEGINNING;

ALSO EXCEPTING THE FOLLOWING PARCEL

COMMENCING AT THE SOUTHEAST CORNER OF SAID SECTION 28, THENCE N 40°06'49" E, A DISTANCE OF 1765.27 FEET TO THE POINT OF BEGINNING;
THENCE N 89°47'47" W, A DISTANCE OF 208.73 FEET;
THENCE N 00°45'11" W, A DISTANCE OF 208.73 FEET;
THENCE S 89°47'47" E, A DISTANCE OF 208.73 FEET;
THENCE S 00°45'11" E, A DISTANCE OF 208.73 FEET TO THE POINT OF BEGINNING;

CONTAINING A NET AREA OF 81,902,811 SQUARE FEET OR 1,880.230 ACRES, MORE OR LESS.

PARCEL 2:

COMMENCING AT THE SOUTH 1/16TH CORNER OF SAID SECTIONS 21 & 22, ALSO BEING A POINT ON THE SOUTH LINE OF TWIN OAKS, A SUBDIVISION PLAT RECORDED AT RECEPTION NO. 161972, IN THE RECORDS OF THE DOUGLAS COUNTY CLERK AND RECORDER'S OFFICE;
THENCE N 53°44'53" E, A DISTANCE OF 1331.13 FEET TO A POINT ON THE EAST LINE OF SAID TWIN OAKS PLAT AND A POINT ON THE NORTH LINE OF THE TERRITORIAL ROAD RIGHT-OF-WAY, AS DEDICATED BY THAT DEED RECORDED AT RECEPTION NO. 8816440, SAID DOUGLAS COUNTY RECORDS AND THE POINT OF BEGINNING;
THENCE ALONG THE EAST LINE OF SAID TWIN OAKS PLAT, THE FOLLOWING THREE (3) COURSES:

1. N 17°17'13" E, A DISTANCE OF 557.93 FEET;
2. S 89°27'27" E, A DISTANCE OF 65.00 FEET;
3. N 00°22'15" W, A DISTANCE OF 1329.37 FEET TO THE SOUTHWEST CORNER OF LOT 3, SAID TWIN OAKS PLAT;

THENCE N 03°03'12" W, ALONG THE WEST LINE OF SAID LOT 3, A DISTANCE OF 567.45 FEET TO THE NORTHWEST CORNER OF SAID LOT 3, BEING A POINT OF CURVATURE ON THE SOUTH LINE OF THE BRISCOE LANE RIGHT-OF-WAY, AS DEDICATED BE SAID TWIN OAKS PLAT;
THENCE ALONG THE PORTIONS OF BRISCOE LANE VACATED BY ORDINANCE NO. 86-24, RECORDED IN BOOK 680 AT PAGE 920, SAID DOUGLAS COUNTY RECORDS THE FOLLOWING TWO (2) COURSES:

1. N 39°55'38" W, A DISTANCE OF 30.00 FEET TO A POINT OF NON-TANGENT CURVATURE;
2. ALONG THE ARC OF A NON-TANGENT CURVE TO THE RIGHT HAVING A RADIUS OF 329.30 FEET, A CENTRAL ANGLE OF 27°16'16" AND AN ARC LENGTH OF 156.74 FEET, SUBTENDED BY A CHORD OF WHICH BEARS N 63°42'30" E, A DISTANCE OF 155.26 FEET;

THENCE N 12°39'22" W, ALONG THE WEST LINE OF LOT 4, SAID TWIN OAKS PLAT, A DISTANCE OF 687.67 FEET TO THE NORTHWEST CORNER OF SAID LOT 4 ALSO BEING THE WEST 1/16TH CORNER OF SAID SECTIONS 15 & 22;
THENCE S 89°31'22" E, ALONG THE SOUTH LINE OF THE SOUTHWEST QUARTER OF SAID SECTION 15, A DISTANCE OF 890.07 FEET TO THE SOUTHWEST CORNER OF THAT PARCEL OF LAND DESCRIBED AS PARCEL E IN THAT DEED RECORDED AT RECEPTION NO. 2019088324, SAID DOUGLAS COUNTY RECORDS;
THENCE ALONG THE WEST AND NORTH LINES OF PARCELS E, F & G THE FOLLOWING FOUR (4) COURSES:

1. N 00°11'34" E, A DISTANCE OF 900.14 FEET;
2. S 89°48'26" E, ALONG THE NORTH LINES OF PARCELS E AND F, A DISTANCE OF 1014.77 FEET TO THE SOUTHWEST CORNER OF THAT PARCEL OF LAND DESCRIBED AS PARCEL G;
3. N 00°11'34" E, A DISTANCE OF 842.72 FEET;
4. S 89°48'26" E, A DISTANCE OF 928.55 FEET TO A POINT ON THE WEST LINE OF THE BURLINGTON NORTHERN SANTA FE RAILROAD RIGHT OF WAY AND A POINT OF NON-TANGENT CURVATURE;

THENCE ALONG THE WEST LINE OF SAID BURLINGTON NORTHERN SANTA FE RAILROAD RIGHT-OF-WAY THE FOLLOWING TWO (2) COURSES:

1. ALONG THE ARC OF A NON-TANGENT CURVE TO THE LEFT HAVING A RADIUS OF 5779.58 FEET, A CENTRAL ANGLE OF 05°35'04" AND AN ARC LENGTH OF 563.33 FEET, SUBTENDED BY A CHORD OF WHICH BEARS S 18°04'54" W, A DISTANCE OF 563.11 FEET;
2. S 15°17'57" W, A DISTANCE OF 4536.04 FEET TO A POINT ON THE NORTH LINE OF SAID TERRITORIAL ROAD RIGHT-OF-WAY;

THENCE S 89°40'41" W, ALONG SAID NORTH LINE, A DISTANCE OF 1628.83 FEET TO THE POINT OF BEGINNING.

CONTAINING AN AREA OF 7,993,235 SQUARE FEET OR 183.499 ACRES, MORE OR LESS.

OVERALL DAWSON RIDGE PROJECT PERIMETER DESCRIPTION CONTAINS AN AREA OF 89,896,046 SQUARE FEET OR 2,063.729 ACRES, MORE OR LESS.

Excerpts from "Concept Utility Letter for Dawson Trails"
Prepared by CORE
Dated May 2022

CHECKED BY: MB, SW
DRAWN BY: DJ, JR

PLANNER/LANDSCAPE ARCHITECT
NORRIS DESIGN
Planning | Landscape Architecture | Branding
1101 Bannock Street
Denver, Colorado 80204
P 303.892.1166
www.norris-design.com

APPLICANT:
WESTSIDE INVESTMENT PARTNERS
4100 E. MISSISSIPPI AVE
SUITE 500
DENVER, CO 80246
303-984-9800

ENGINEER & SURVEYOR:
CORE CONSULTANTS, INC.
LIVEYOURCORE.COM
CORE CONSULTANTS
3473 S. BROADWAY
ENGLEWOOD, CO 80113
303-730-5960

DAWSON TRAILS

DAWSON TRAILS
PLANNED DEVELOPMENT PLAN AND ZONING REGULATIONS
(AN AMENDMENT TO THE DAWSON RIDGE PRELIMINARY P.U.D SITE PLAN AND A PORTION OF THE WESTFIELD TRADE CENTER PERLIMINARY P.U.D. SITE PLAN)

DATE:
PDP-01 07/08/2021
PDP-02 12/03/2021
PDP-03 04/13/2022
PDP-04 05/27/2022

SHEET TITLE:
COVER

SHEET
1 OF 19

DAWSON TRAILS

PLANNED DEVELOPMENT PLAN AND ZONING REGULATIONS

(AN AMENDMENT TO THE DAWSON RIDGE PRELIMINARY P.U.D SITE PLAN AND A PORTION OF THE WESTFIELD TRADE CENTER PRELIMINARY P.U.D. SITE PLAN)

TWO PARCELS OF LAND BEING ALL OF SECTION 28 AND PORTIONS OF SECTIONS 15, 21, 22, 27, 29, 32, 33 & 34, TOWNSHIP 8 SOUTH, RANGE 67 WEST OF THE SIXTH PRINCIPAL MERIDIAN, TOWN OF CASTLE ROCK, COUNTY OF DOUGLAS, STATE OF COLORADO

SUMMARY TABLE

CHARACTER AREA	PLANNING AREA (6)	LAND USE TYPE (2)	ACREAGE	MAX. DWELLING UNITS	MIN TRANISTION LOT SIZE	MIN. NON-RES AREA (AC)	% OF PROPERTY	MAX BUILDING HEIGHT
WEST	A	SFD	236.5	471	7,700 sf	N/A	11.5%	35'
	B-1	SFD	124.4	484	6,600 sf	N/A	6.0%	35'
	B-2	SFD	58.9	228	6,600 sf	N/A	2.9%	35'
	Totals	N/A	419.8	1,183	N/A	N/A	20.3%	
CENTRAL	C-1	SFD, SFA, MF	151.9	481	N/A	N/A	7.4%	45'
	C-2	SFD, SFA, MF	187.4	908	N/A	N/A	9.1%	50'
	D	SFD, SFA, MF, Non-Res	206.2	1,938	N/A	N/A	10.0%	60'
	Totals	N/A	545.5	3,327	N/A	N/A	26.4%	
EAST	E-1	Non-Res	6.5	N/A	N/A	6.5	0.3%	50'
	E-2	SFD, SFA, MF, Non-Res	62.4	400	N/A	N/A	3.0%	60'
	F-1	SFA, MF, Non-Res	41.0	940	N/A	45	2.0%	75'/90'
	F-2	SFA, MF, Non-Res	33.4		N/A		1.6%	75'/90'
	F-3	SFA, MF, Non-Res	81.9		N/A		4.0%	75'/90'
	G-1	Non-Res	62.6	0	N/A	66.9	3.0%	75'/90'
	G-2	Non-Res	4.3	0	N/A		0.2%	75'/90'
	Totals	N/A	292.1	1,340	N/A	118.4	14.2%	

MAX. DWELLING UNITS - ALL 3 CHARACTER AREAS COMBINED (NOT TO EXCEED)	**5,850**
MAX. MULTI FAMILY DWELLING UNITS (LOCATED IN C-1, C-2, D, E-2, F-1, F-2, F-3)	**2,400**
MAX. COMM./NON-RES. SQ. FT. - EAST & CENTRAL CHARACTER AREAS	**3,200,000**

Planning Areas	1,257.4		60.9%
Open Space (PL-2 & OS)	532.9		25.8%
Public Land Dedication (PL-1)	227.6		11.0%
ROW (Arterial)	45.8		2.2%
TOTAL PROPERTY (Approximately)	**2,063.7**		**100.0%**

OPEN SPACE AND PUBLIC LAND SUMMARY

	ACREAGE	% OF TOTAL
PUBLIC LAND		
PL-1 (DEDICATED TO TOWN)	227.6	**11.0%**
OPEN SPACE		
PL-2 (DEDICATED TO TOWN)	462.1	22.4%
OSP (PRIVATE)	70.8	25.8%
SUBTOTAL	*532.9*	*25.8%*
FUTURE OPEN SPACE (1)	215.0	10.4%
OPEN SPACE TOTAL	**747.9**	**36.2%**
OPEN SPACE AND PUBLIC LAND TOTAL	**975.5**	**47.3%**

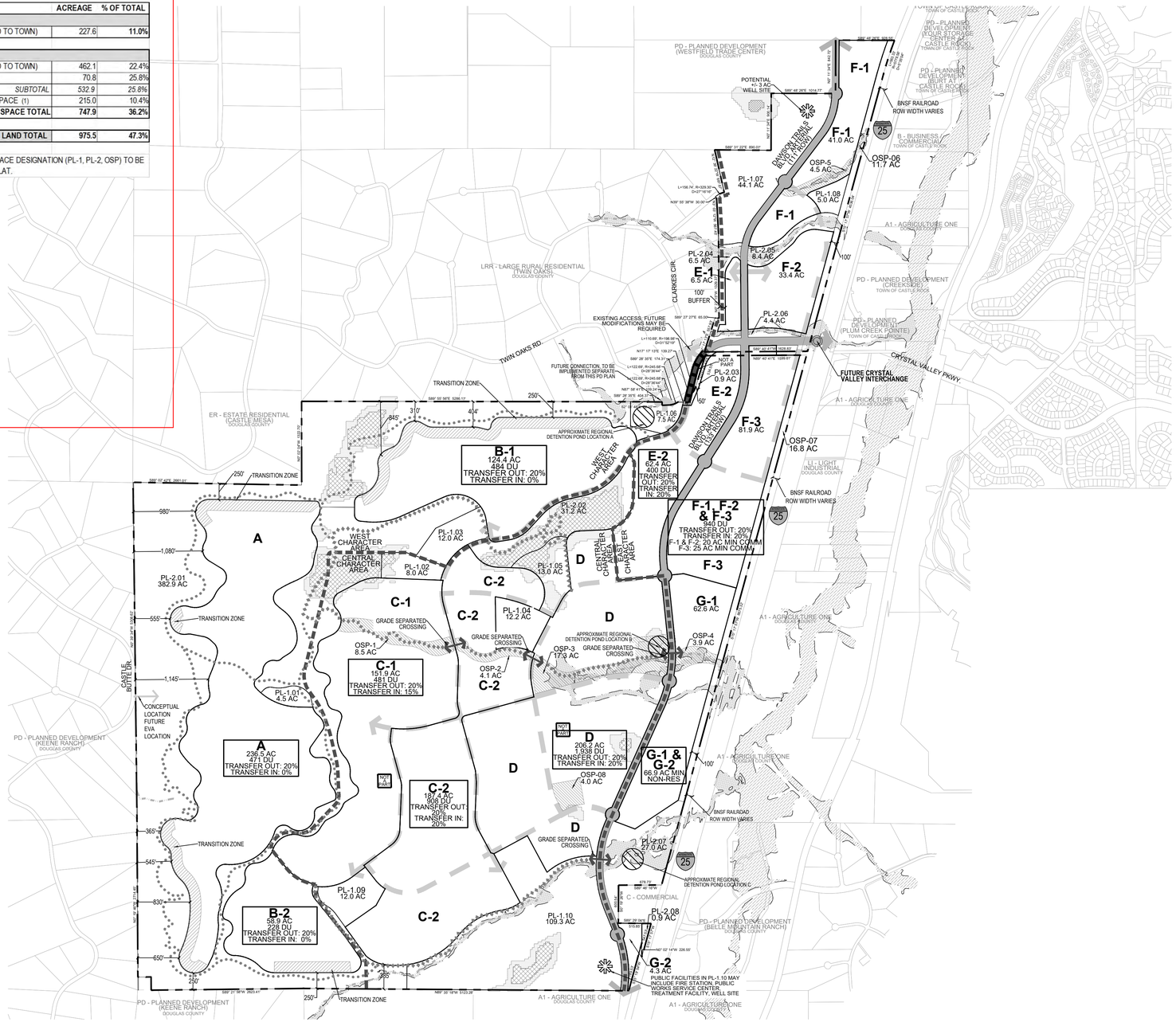
NOTE: (1) FUTURE OPEN SPACE DESIGNATION (PL-1, PL-2, OSP) TO BE DETERMINED AT TIME OF PLAT.

PDP STANDARD NOTES

1. THE MINERAL RIGHTS ASSOCIATED WITH THIS PROPERTY HAVE NOT BEEN SEVERED. FOR ANY PORTION THAT HAS BEEN SEVERED, NOTIFICATION OF DEVELOPMENT HEARINGS BEFORE PLANNING COMMISSION AND TOWN COUNCIL MUST BE PROVIDED TO OWNERS OF MINERALS ESTATES.
2. THIS PROPERTY LIES WITHIN FEMA ZONE X, THE UNSHADED AREA OF FIRM MAPS NO. 08035C0282G, 08035C0301G, 08035C0283F, 08035C0284G, AND 08035C0292F, REVISED MARCH 16, 2016. NO STRUCTURES SHALL BE PERMITTED IN THE APPROVED 100-YEAR FLOOD PLAIN. THE SITE ALSO HAS MAJOR DRAINAGEWAYS WITH BASIN AREAS GREATER THAN 130 ACRES ONSITE.
3. THIS PROPERTY IS WITHIN THE TOWN OF CASTLE ROCK BLUE, RED AND GREEN WATER PRESSURE ZONES.
4. ALL-WEATHER (CONCRETE OR ASPHALT) SURFACED ACCESS ROADS CAPABLE OF WITHSTANDING THE IMPOSED LOADS OF FIRE APPARATUS (75,000 LBS.) AND ALL REQUIRED FIRE HYDRANTS SHALL BE INSTALLED AND MADE SERVICEABLE PRIOR TO AND DURING ALL VERTICAL CONSTRUCTION.
5. RIGHT-OF-WAY FOR INGRESS AND EGRESS FOR EMERGENCY VEHICLES IS GRANTED OVER, ACROSS, ON AND THROUGH ANY AND ALL PRIVATE ROADS AND DRIVES.

GENERAL NOTES

1. ALL DEVELOPMENT ASSOCIATED WITH THE DAWSON TRAILS PDP SHALL COMPLY WITH ALL FEDERAL, STATE AND TOWN REGULATIONS REGARDING WILDLIFE INCLUDING THE MIGRATORY BIRD ACT AND BURROWING OWL SURVEY IF REQUIRED.
2. UPDATED SOILS REPORTS SHALL BE SUBMITTED WITH EACH SITE DEVELOPMENT PLAN AND/OR PLAT.
3. ALL EVA ACCESS GATES WILL INCLUDE AN OPTICOM SYSTEM OR OTHER SYSTEM APPROVED BY THE TOWN OF CASTLE ROCK FIRE DEPARTMENT.
4. A WILDLAND/URBAN INTERFACE WILDFIRE VEGETATION MANAGEMENT PLAN (PLAN), OR COMPLIANCE LETTER, IS REQUIRED TO BE SUBMITTED FOR EACH PHASE OF THE PLANNED DEVELOPMENT WITH THE FIRST SDP OR CDS FOR EVALUATION AND APPROVAL BY THE TOWN OF CASTLE ROCK FIRE DEPARTMENT. THE PLAN SHALL BE DEVELOPED BY A DESIGN PROFESSIONAL FAMILIAR WITH WILDFIRE MITIGATION TECHNIQUES AND STANDARDS. REFER TO SHEET 13 AND THE TOWN OF CASTLE ROCK COMMUNITY WILDFIRE PROTECTION PLAN.
5. FOR PLANNING AREAS F & G, HOSPITALITY, MEDICAL, OFFICE MULTI-FAMILY RESIDENTIAL, AND VERTICAL MIXED-USE ARE ALLOWED TO HAVE A MAXIMUM HEIGHT OF 90 FEET PER SECTION 6.11 ON SHEET 17.



LEGEND

- PROPERTY BOUNDARY
- PLANNING AREA BOUNDARY
- CHARACTER AREA BOUNDARY
- MAJOR DRAINAGEWAY
- TRANSITION ZONE
- MODERATE SKYLINE
- MINOR SKYLINE
- 100 YEAR FLOODPLAIN (TOWN OF CASTLE ROCK)
- PROPOSED ARTERIAL RIGHT OF WAY
- FUTURE COLLECTOR RIGHT OF WAY
- 5' NATURAL SURFACE TRAIL
- 10' HARD SURFACE TRAIL
- 100 YEAR FLOODPLAIN (FEMA)

Excerpts from "Concept Utility Letter for Dawson Trails"
Prepared by CORE
Dated May 2022

CHECKED BY: MB, SW
DRAWN BY: DJ, JR

DAWSON TRAILS PLANNED DEVELOPMENT PLAN | PROJECT NO. PDP21-0001

PLANNER/LANDSCAPE ARCHITECT
NORRIS DESIGN
Planning | Landscape Architecture | Branding
1101 Bannock Street
Denver, Colorado 80204
P 303.892.1166
www.norris-design.com

APPLICANT:
WESTSIDE INVESTMENT PARTNERS
4100 E. MISSISSIPPI AVE
SUITE 500
DENVER, CO 80246
303-984-9800

ENGINEER & SURVEYOR:
CORE CONSULTANTS, INC.
LIVEYOURCORE.COM
CORE CONSULTANTS
3473 S. BROADWAY
ENGLEWOOD, CO 80113
303-730-5960

DAWSON TRAILS

DAWSON TRAILS
PLANNED DEVELOPMENT PLAN AND ZONING REGULATIONS
(AN AMENDMENT TO THE DAWSON RIDGE PRELIMINARY P.U.D SITE PLAN AND A PORTION OF THE WESTFIELD TRADE CENTER PERLIMINARY P.U.D. SITE PLAN)

DATE:
PDP-01 07/08/2021
PDP-02 12/03/2021
PDP-03 04/13/2022
PDP-04 05/27/2022

SHEET TITLE:
OVERALL PD PLAN

SHEET 3 OF 19

DAWSON TRAILS

PLANNED DEVELOPMENT PLAN AND ZONING REGULATIONS

(AN AMENDMENT TO THE DAWSON RIDGE PRELIMINARY P.U.D SITE PLAN AND A PORTION OF THE WESTFIELD TRADE CENTER PRELIMINARY P.U.D. SITE PLAN)

TWO PARCELS OF LAND BEING ALL OF SECTION 28 AND PORTIONS OF SECTIONS 15, 21, 22, 27, 29, 32, 33 & 34, TOWNSHIP 8 SOUTH, RANGE 67 WEST OF THE SIXTH PRINCIPAL MERIDIAN, TOWN OF CASTLE ROCK, COUNTY OF DOUGLAS, STATE OF COLORADO

GENERAL NOTES:

- PHASES MAY BE DEVELOPED IN ANY SEQUENCE OR CONCURRENTLY PROVIDED THAT ALL IMPROVEMENTS ASSIGNED TO OTHER PHASES WHICH ARE NECESSARY TO SERVE THE PHASE(S) WITHIN WHICH DEVELOPMENT IS COMMENCING HAVE EITHER BEEN PREVIOUSLY CONSTRUCTED AND ACCEPTED PER TOWN CRITERIA, OR WILL BE CONSTRUCTED BY THE DEVELOPER OF THE PHASE(S) UNDERGOING DEVELOPMENT. ALL IMPROVEMENTS INCLUDING BUT NOT LIMITED TO ROADWAY, LIGHTING, WATER, SANITARY SEWER, PARKS, TRAILS, ADJACENT DOWNSTREAM DRAINAGE CHANNEL IMPROVEMENTS AND STORMWATER MANAGEMENT FACILITIES MUST BE BUILT.
- THE INTERCHANGE AT TERRITORIAL ROAD, CRYSTAL VALLEY PARKWAY, AND I-25 (CVI) IS A SEPARATE TOWN, COUNTY AND STATE PROJECT. CHANNEL IMPROVEMENTS FOR THE GAMBLE RIDGE MAJOR DRAINAGEWAY ADJACENT TO THE INTERCHANGE WILL BE PART OF THE CVI PROJECT.
- PHASES BEING DEVELOPED IN ANY SEQUENCE OR CONCURRENTLY MAY REQUIRE ADJACENT OR UPSTREAM DRAINAGE CHANNEL IMPROVEMENTS. THIS IS TO BE DETERMINED BY PHASE AND PER THE TOWN'S CRITERIA.
- EASTERN ½ OF DAWSON TRAILS BLVD SOUTH OF THE CVI TO BE CONSTRUCTED BY THE TOWN OF CASTLE ROCK TO THE SOUTHERN LIMIT OF THE PROJECT/ TOWN AS PART OF CVI INTERCHANGE PROJECT.
- DEVELOPER SHALL CONSTRUCT THE WESTERN ½ (AND ANY OTHER NECESSARY ROADWAY IMPROVEMENTS) OF DAWSON TRAILS BLVD PER THE PHASING PLAN. IF PHASE(S) ARE NOT BUILT SEQUENTIALLY, THE FULL SECTION OF DAWSON TRAILS BLVD SHALL BE CONSTRUCTED TO THE LIMITS OF THE PHASE OR SUB-PHASE LEAVING NO PARTIAL ROADWAY SECTIONS BETWEEN THE DEVELOPED AREAS.
- THE FULL ROADWAY SECTION FOR DAWSON TRAILS BLVD, INCLUDING NUMBER OF LANES, TURN LANES, AND LENGTHS SHALL BE DETERMINED BY THE DETAILED TRAFFIC STUDIES FOR THE PROJECT.
- TURNAROUND AREAS PER TOWN CRITERIA SHALL BE PROVIDED WHEN ROADS TERMINATE AT A PHASE LINE OR INTERIM TERMINUS.
- AMENDMENTS TO THIS PHASING PLAN MAY BE APPROVED ADMINISTRATIVELY AS DETERMINED BY THE DEVELOPMENT SERVICES DIRECTOR.
- THE FIRE DEPARTMENT SHALL REVIEW ALL ELEMENTS OF THE EMERGENCY VEHICLE ACCESS ROUTES DURING SITE PLANNING STAGES.
- BASED ON INDIVIDUAL SITE CONFIGURATION OF THE PLANNING AREAS, A PORTION OF A PHASE, OR SUB-PHASE, MAY BE CONSTRUCTED AND DEVELOPED INDEPENDENT OF ALL THE PHASE REQUIREMENTS IF ADEQUATE ROADWAY, DOMESTIC WATER, AND SANITARY SEWER INFRASTRUCTURE ARE PROVIDED.
- REGIONAL PONDS WILL BE CONSTRUCTED PRIOR TO ANY UPSTREAM DEVELOPMENT THAT UTILIZES THE REGIONAL POND FOR WATER QUALITY AND/OR FULL SPECTRUM DETENTION.
- GRADE SEPARATED CROSSING SHALL BE PROVIDED AS SHOWN ON THE PHASING PLAN FOR REGIONAL/ SIGNIFICANT TRAIL CROSSINGS OF ARTERIAL AND MAJOR-COLLECTOR CLASS STREETS.
- ALL ROADWAYS SHALL BE CONSTRUCTED TO THE TOWN STANDARDS.
- THE GREEN/ RED WATER ZONE BOUNDARY SHOWN IS APPROXIMATE AND SUBJECT TO ADJUSTMENTS DETERMINED BY FINAL ENGINEERING AND GRADING OF THE VARIOUS PLANNING AREAS.
- PL-1 & PL-2 AREAS DESIGNATED ON THE PD PLAN SHALL BE DEDICATED WITH EACH SITE DEVELOPMENT PLAN/ PLAT AS PHASED DEVELOPMENT OCCURS WITH THE EXCEPTION OF PL-1.7 & PL1.10 THAT WILL BE DEDICATED AT TIME OF RECORDING OF THE DEVELOPMENT AGREEMENT.
- TRAILS DEPICTED ON THE PD PLAN THAT ARE DESIGNATED FOR CONSTRUCTION BY THE DEVELOPER SHALL BE DESIGNED, ENGINEERED AND CONSTRUCTED WHEN INCLUDED WITHIN EACH SITE DEVELOPMENT PLAN/ PLAT AREA.

PHASE 1A:

- PHASE 1A SHALL BE CONSTRUCTED PRIOR TO ANY OTHER PHASE
- DEVELOPER TO CONSTRUCT WESTERN ½ (AND ANY OTHER NECESSARY ROADWAY IMPROVEMENTS) OF DAWSON TRAILS BLVD TO END OF PHASE OR SUBPHASE
- DEVELOPER TO CONSTRUCT EASTERN ½ OF DAWSON TRAILS BLVD, AND GRADE THE FULL SECTION, FROM NORTH OF CVI TO PLUM CREEK PWKY PURSUANT AND SUBJECT TO THE TERMS OF THE DEVELOPMENT AGREEMENT
- SANITARY SEWER CONNECTION TO PLUM CREEK PKWY NORTH OF CVI WITH PROPOSED NEW SANITARY INTERCEPTOR
- SANITARY SEWER INTERCEPTOR ALONG EASTERN PROPERTY LINE TO THE LIMITS REQUIRED TO SERVE PHASE OR SUBPHASE
- STORM WITHIN DAWSON TRAILS BLVD TO END OF PHASE OR SUBPHASE
- WATER MAIN (BLUE ZONE) MINIMUM 2 POINTS OF CONNECTION TO TOWN'S EXISTING SYSTEM
- WATER BOOSTER PUMP TO RED ZONE
- WATER MAIN (RED ZONE) ALONG DAWSON TRAILS BLVD TO END OF PHASE OR SUBPHASE
- WATER MAIN (RED ZONE) TO ONSITE RED ZONE WATER TANK 19
- RED ZONE WATER TANK 19
- STORM FACILITIES ASSOCIATED WITH PHASE OR SUBPHASE INCLUDING REGIONAL POND A AND B
- A PORTION OF GAMBLE RIDGE TRIBUTARY CHANNEL WEST OF DAWSON TRAILS BLVD & NORTH OF CRYSTAL VALLEY PWKY.
- TRAILS WITHIN PHASE OR SUBPHASE
- COMPLETE THE INTERNAL STREET, STORM, SANITARY, & WATER SYSTEMS WITHIN PHASE OR SUBPHASE AS SHOWN ON THE CONSTRUCTION PLANS
- CRYSTAL VALLEY PARKWAY/TERRITORIAL ROADWAY AND INTERCHANGE, INCLUDING A PORTION OF GAMBLE RIDGE TRIBUTARY, SHALL BE CONSTRUCTED BY OTHERS
- CHANNEL IMPROVEMENTS WITHIN PHASE OR SUBPHASE AS SHOWN ON THE CONSTRUCTION PLANS

PHASE 1B:

- DEVELOPER TO CONSTRUCT WESTERN ½ (AND ANY OTHER NECESSARY ROADWAY IMPROVEMENTS) OF DAWSON TRAILS BLVD TO END OF PHASE OR SUBPHASE IF NOT PREVIOUSLY IMPROVED
- SANITARY & STORM WITHIN DAWSON TRAILS BLVD TO END OF PHASE OR SUBPHASE
- SANITARY SEWER INTERCEPTOR ALONG EASTERN PROPERTY LINE TO THE LIMITS REQUIRED TO SERVE PHASE OR SUBPHASE
- WATER MAIN (RED ZONE) ALONG DAWSON TRAILS BLVD TO END OF PHASE OR SUBPHASE
- STORM FACILITIES ASSOCIATED WITH PHASE OR SUBPHASE
- NORTH DAWSON TRIBUTARY CHANNEL IMPROVEMENTS WITHIN LIMITS OF PHASE 1B IF NOT PREVIOUSLY IMPROVED
- TRAILS WITHIN PHASE OR SUBPHASE
- COMPLETE THE INTERNAL STREET, STORM, SANITARY, & WATER SYSTEMS WITHIN PHASE OR SUBPHASE AS SHOWN ON THE CONSTRUCTION PLANS

PHASE 2A:

- DEVELOPER TO CONSTRUCT WESTERN ½ (AND ANY OTHER NECESSARY ROADWAY IMPROVEMENTS) OF DAWSON TRAILS BLVD TO END OF PHASE OR SUBPHASE IF NOT PREVIOUSLY IMPROVED
- TRAILS WITHIN PHASE OR SUBPHASE
- COMPLETE THE INTERNAL STREET, STORM, SANITARY, & WATER SYSTEMS WITHIN PHASE OR SUBPHASE AS SHOWN ON THE CONSTRUCTION PLANS
- SANITARY & STORM FACILITIES ASSOCIATED WITH PHASE OR SUBPHASE

PHASE 2B:

- DEVELOPER TO CONSTRUCT WESTERN ½ (AND ANY OTHER NECESSARY ROADWAY IMPROVEMENTS) OF DAWSON TRAILS BLVD TO END OF PHASE OR SUBPHASE IF NOT PREVIOUSLY IMPROVED
- SANITARY & STORM WITHIN DAWSON TRAILS BLVD TO END OF PHASE OR SUBPHASE
- SANITARY SEWER INTERCEPTOR ALONG EASTERN PROPERTY LINE TO THE LIMITS REQUIRED TO SERVE PHASE OR SUBPHASE
- TRAILS WITHIN PHASE OR SUBPHASE
- COMPLETE THE INTERNAL STREET, STORM, SANITARY, & WATER SYSTEMS WITHIN PHASE OR SUBPHASE AS SHOWN ON THE CONSTRUCTION PLANS
- STORM FACILITIES ASSOCIATED WITH PHASE OR SUBPHASE
- NORTH DAWSON TRIBUTARY CHANNEL IMPROVEMENTS WITHIN LIMITS OF PHASE 2B IF NOT PREVIOUSLY IMPROVED
- CHANNEL IMPROVEMENTS WITHIN PHASE OR SUBPHASE AS SHOWN ON THE CONSTRUCTION PLANS

PHASE 2C:

- DEVELOPER TO CONSTRUCT WESTERN ½ (AND ANY OTHER NECESSARY ROADWAY IMPROVEMENTS) OF DAWSON TRAILS BLVD TO END OF PHASE OR SUBPHASE IF NOT PREVIOUSLY IMPROVED
- SANITARY & STORM WITHIN DAWSON TRAILS BLVD. TO END OF PHASE OR SUBPHASE
- SANITARY SEWER INTERCEPTOR ALONG EASTERN PROPERTY LINE TO THE LIMITS REQUIRED TO SERVE PHASE OR SUBPHASE
- TRAILS WITHIN PHASE OR SUBPHASE
- COMPLETE THE INTERNAL STREET, STORM, SANITARY, & WATER SYSTEMS WITHIN PHASE OR SUBPHASE AS SHOWN ON THE CONSTRUCTION PLANS
- STORM FACILITIES ASSOCIATED WITH PHASE OR SUBPHASE
- NORTH DAWSON TRIBUTARY CHANNEL IMPROVEMENTS WITHIN LIMITS OF PHASE 2B IF NOT PREVIOUSLY IMPROVED
- CHANNEL IMPROVEMENTS WITHIN PHASE OR SUBPHASE AS SHOWN ON THE CONSTRUCTION PLANS

PHASE 3A:

- DEVELOPER TO CONSTRUCT WESTERN ½ (AND ANY OTHER NECESSARY ROADWAY IMPROVEMENTS) OF DAWSON TRAILS BLVD TO END OF PHASE OR SUBPHASE IF NOT PREVIOUSLY IMPROVED
- SANITARY & STORM WITHIN DAWSON TRAILS BLVD TO END OF PHASE OR SUBPHASE
- TRAILS WITHIN PHASE OR SUBPHASE
- COMPLETE THE INTERNAL STREET, STORM, SANITARY, & WATER SYSTEMS WITHIN PHASE OR SUBPHASE AS SHOWN ON THE CONSTRUCTION PLANS
- STORM FACILITIES ASSOCIATED WITH PHASE OR SUBPHASE
- GAMBLE RIDGE TRIBUTARY CHANNEL IMPROVEMENTS WITHIN LIMITS OF PHASE 3A & ASSOCIATED TRIBUTARIES IF NOT PREVIOUSLY IMPROVED

PHASE 3B:

- DEVELOPER TO CONSTRUCT WESTERN ½ (AND ANY OTHER NECESSARY ROADWAY IMPROVEMENTS) OF DAWSON TRAILS BLVD TO END OF PHASE OR SUBPHASE IF NOT PREVIOUSLY IMPROVED
- SANITARY & STORM WITHIN DAWSON TRAILS BLVD TO END OF PHASE OR SUBPHASE
- TRAILS WITHIN PHASE OR SUBPHASE
- COMPLETE THE INTERNAL STREET, STORM, SANITARY, & WATER SYSTEMS WITHIN PHASE OR SUBPHASE AS SHOWN ON THE CONSTRUCTION PLANS
- STORM FACILITIES ASSOCIATED WITH PHASE OR SUBPHASE
- GAMBLE RIDGE NORTH TRIBUTARY CHANNEL IMPROVEMENTS WITHIN LIMITS OF PHASE 3B IF NOT PREVIOUSLY IMPROVED

PHASE 3C:

- DEVELOPER TO CONSTRUCT WESTERN ½ (AND ANY OTHER NECESSARY ROADWAY IMPROVEMENTS) OF DAWSON TRAILS BLVD TO END OF PHASE OR SUBPHASE IF NOT PREVIOUSLY IMPROVED
- IF NOT PREVIOUSLY IMPROVED
- DAWSON TRAILS BLVD TO END OF PHASE OR SUBPHASE IF NOT PREVIOUSLY CONSTRUCTED IN PHASE 3B
- SANITARY & STORM WITHIN DAWSON TRAILS BLVD TO END OF PHASE OR SUBPHASE
- TRAILS WITHIN PHASE OR SUBPHASE
- PUBLIC LAND IMPROVEMENTS BY THE TOWN OF CASTLE ROCK
- NORTH GAMBLE RIDGE TRIBUTARY CHANNEL IMPROVEMENTS EAST OF DAWSON TRAILS BLVD

PHASE 4A:

- DEVELOPER TO CONSTRUCT WESTERN ½ (AND ANY OTHER NECESSARY ROADWAY IMPROVEMENTS) OF DAWSON TRAILS BLVD TO END OF PHASE OR SUBPHASE IF NOT PREVIOUSLY IMPROVED
- SANITARY & STORM WITHIN DAWSON TRAILS BLVD TO END OF PHASE OR SUBPHASE
- SANITARY SEWER INTERCEPTOR ALONG EASTERN PROPERTY LINE TO THE LIMITS REQUIRED TO SERVE PHASE OR SUBPHASE
- WATER MAIN (RED ZONE) ALONG DAWSON TRAILS BLVD TO END OF PHASE OR SUBPHASE
- TRAILS WITHIN PHASE OR SUBPHASE
- COMPLETE THE INTERNAL STREET, STORM, SANITARY, & WATER SYSTEMS WITHIN PHASE OR SUBPHASE AS SHOWN ON THE CONSTRUCTION PLANS
- STORM FACILITIES ASSOCIATED WITH PHASE OR SUBPHASE REGIONAL POND C
- SOUTH DAWSON TRIBUTARY CHANNEL IMPROVEMENTS WITHIN LIMITS OF PHASE 4A IF NOT PREVIOUSLY IMPROVED

PHASE 4B:

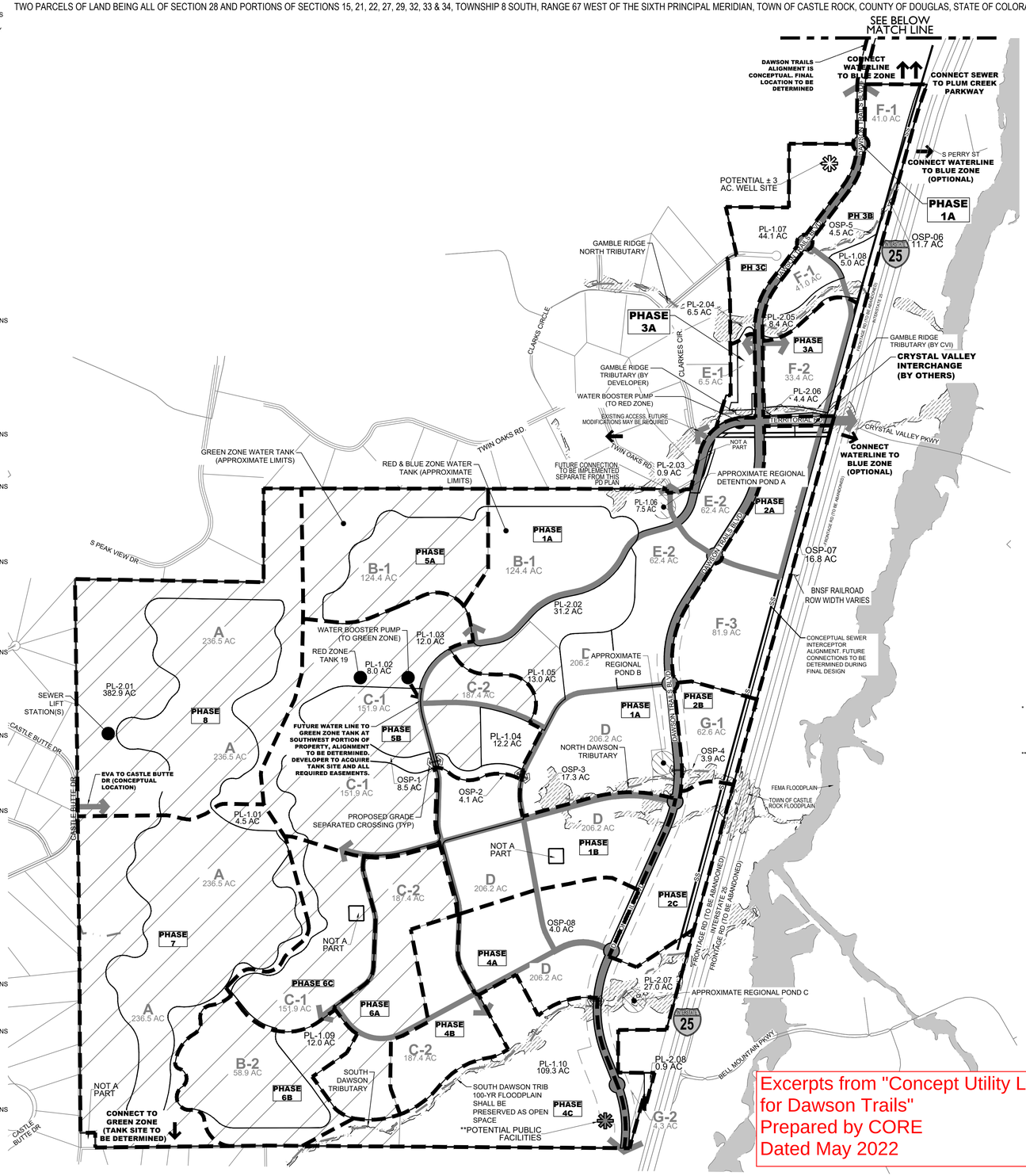
- COMPLETE THE INTERNAL STREET, STORM, SANITARY, & WATER SYSTEMS WITHIN PHASE OR SUBPHASE AS SHOWN ON THE CONSTRUCTION PLANS
- SOUTH DAWSON TRIBUTARY CHANNEL IMPROVEMENTS ADJACENT TO PHASE OR SUBPHASE AS SHOWN ON THE CONSTRUCTION PLANS.
- STORM FACILITIES ASSOCIATED WITH PHASE OR SUBPHASE
- TRAILS WITHIN PHASE OR SUBPHASE
- GAMBLE RIDGE TRIBUTARY CHANNEL IMPROVEMENTS WITHIN LIMITS OF PHASE 4B & ASSOCIATED TRIBUTARIES IF NOT PREVIOUSLY IMPROVED

PHASE 4C:

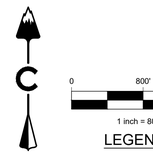
- DEVELOPER TO CONSTRUCT WESTERN ½ (AND ANY OTHER NECESSARY ROADWAY IMPROVEMENTS) OF DAWSON TRAILS BLVD TO END OF PHASE OR SUBPHASE IF NOT PREVIOUSLY IMPROVED
- TRAILS WITHIN PHASE OR SUBPHASE
- COMPLETE THE INTERNAL STREET, STORM, SANITARY, & WATER SYSTEMS WITHIN PHASE OR SUBPHASE AS SHOWN ON THE CONSTRUCTION PLANS
- STORM FACILITIES ASSOCIATED WITH PHASE OR SUBPHASE
- SOUTH DAWSON TRIBUTARY CHANNEL IMPROVEMENTS WITHIN PHASE OR SUBPHASE IF NOT PREVIOUSLY IMPROVED
- SOUTH DAWSON TRIBUTARY 100-YEAR FLOODPLAIN SHALL BE PRESERVED AS OPEN SPACE

*PHASE 5A:

- WATER CONNECTION TO OFFSITE GREEN ZONE TANK 21
- WATER MAIN (GREEN ZONE) FROM TANK 21 TO PHASE 5A
- WATER BOOSTER PUMP (GREEN ZONE)
- TRAILS WITHIN PHASE OR SUBPHASE
- COMPLETE THE INTERNAL STREET, STORM, SANITARY, & WATER SYSTEMS WITHIN PHASE OR SUBPHASE AS SHOWN ON THE CONSTRUCTION PLANS
- STORM FACILITIES ASSOCIATED WITH PHASE OR SUBPHASE



Excerpts from "Concept Utility Letter for Dawson Trails"
Prepared by CORE
Dated May 2022



LEGEND

- PLANNING AREA BOUNDARY
- PHASE BOUNDARY
- MAJOR DRAINAGEWAY
- SS SEWER INTERTCEPTOR
- GREEN ZONE WATER TANK (APPROXIMATE LIMITS)
- RED & BLUE ZONE WATER TANK (APPROXIMATE LIMITS)
- UTILITY ARROW
- PROPOSED REGIONAL POND
- PROPOSED GRADE SEPARATED CROSSING AREA
- POTENTIAL ±3 AC. WELL SITE
- **POTENTIAL PUBLIC FACILITIES
- 100-YEAR FEMA FLOODPLAIN
- 100-YEAR TOWN FLOODPLAIN
- TRAFFIC LIGHT CONTROLLED INTERSECTION
- ROUNDABOUT INTERSECTION

*PHASE 5B:

- TRAILS WITHIN PHASE OR SUBPHASE
- COMPLETE THE INTERNAL STREET, STORM, SANITARY, & WATER SYSTEMS WITHIN PHASE OR SUBPHASE AS SHOWN ON THE CONSTRUCTION PLANS.
- GREEN PRESSURE ZONE WATER TANK AND BOOSTER PUMPS NOTED IN PHASE 5A WILL BE REQUIRED TO BE CONSTRUCTED
- STORM FACILITIES ASSOCIATED WITH PHASE OR SUBPHASE

*PHASE 6A:

- TRAILS WITHIN PHASE OR SUBPHASE
- COMPLETE THE INTERNAL STREET, STORM, SANITARY, & WATER SYSTEMS WITHIN PHASE OR SUBPHASE AS SHOWN ON THE CONSTRUCTION PLANS
- GREEN ZONE WATER TANK AND BOOSTER PUMPS NOTED IN PHASE 5A WILL BE REQUIRED TO BE CONSTRUCTED
- STORM FACILITIES ASSOCIATED WITH PHASE OR SUBPHASE

*PHASE 6B:

- TRAILS WITHIN PHASE OR SUBPHASE
- COMPLETE THE INTERNAL STREET, STORM, SANITARY, & WATER SYSTEMS WITHIN PHASE OR SUBPHASE AS SHOWN ON THE CONSTRUCTION PLANS
- GREEN ZONE WATER TANK AND BOOSTER PUMPS NOTED IN PHASE 5A WILL BE REQUIRED TO BE CONSTRUCTED
- STORM FACILITIES ASSOCIATED WITH PHASE OR SUBPHASE
- SOUTH DAWSON CHANNEL IMPROVEMENTS ADJACENT TO PHASE OR SUBPHASE IF NOT PREVIOUSLY IMPROVED.

*PHASE 7:

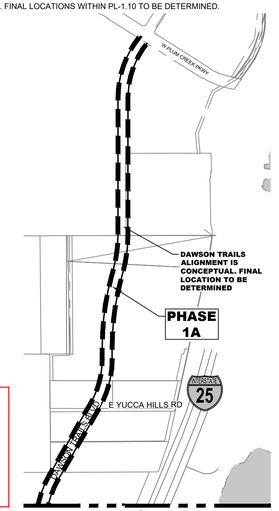
- SANITARY SEWER LIFT STATIONS (IF REQUIRED)
- TRAILS WITHIN PHASE OR SUBPHASE
- COMPLETE THE INTERNAL STREET, STORM, SANITARY, & WATER SYSTEMS WITHIN PHASE OR SUBPHASE AS SHOWN ON THE CONSTRUCTION PLANS
- GREEN ZONE WATER TANK AND BOOSTER PUMPS NOTED IN PHASE 5A WILL BE REQUIRED TO BE CONSTRUCTED
- STORM FACILITIES ASSOCIATED WITH PHASE OR SUBPHASE

*PHASE 8:

- SANITARY SEWER LIFT STATION(S) (IF REQUIRED)
- TRAILS WITHIN PHASE OR SUBPHASE
- COMPLETE THE INTERNAL STREET, STORM, SANITARY, & WATER SYSTEMS WITHIN PHASE OR SUBPHASE AS SHOWN ON THE CONSTRUCTION PLANS
- GREEN ZONE WATER TANK AND BOOSTER PUMPS NOTED IN PHASE 5A WILL BE REQUIRED TO BE CONSTRUCTED
- STORM FACILITIES ASSOCIATED WITH PHASE OR SUBPHASE
- EMERGENCY VEHICLE ACCESS (EVA) CONNECTION TO CASTLE BUTTE DRIVE IF NOT PREVIOUSLY CONSTRUCTED

* IF IT IS DETERMINED THAT A GREEN ZONE TANK IS NEEDED, OTHER THAN PLANNING AREAS B-1 AND C-2, NO OVERLOT GRADING PERMITS FOR DEVELOPMENT WITHIN THE AREA TO BE SERVED BY THE GREEN ZONE TANK WILL BE ISSUED UNTIL SUCH TIME AS THE OWNER PURCHASES ANY NECESSARY LAND AND/OR EASEMENTS FOR THE POTENTIAL GREEN ZONE TANK & ASSOCIATED TRANSMISSION LINE(S), & BEGINS CONSTRUCTION OF THE GREEN ZONE TANK.

** PUBLIC FACILITIES INCLUDING, BUT NOT LIMITED TO: FIRE STATION, PUBLIC WORKS SERVICE CENTER, ±6 AC TREATMENT FACILITY, ±3 AC WELL SITE, AND ASSOCIATED STORM WATER FACILITIES. FINAL LOCATIONS WITHIN PL-1.10 TO BE DETERMINED.



MATCH LINE SEE ABOVE

NORRIS DESIGN
Planning | Landscape Architecture | Branding
1101 Bannock Street
Denver, Colorado 80204
P 303.892.1166
www.norris-design.com

APPLICANT:
WESTSIDE INVESTMENT PARTNERS
4100 E. MISSISSIPPI AVE
SUITE 500
DENVER, CO 80246
303-984-9800

ENGINEER & SURVEYOR:
CORE CONSULTANTS, INC.
LIVEYOURCORE.COM
CORE CONSULTANTS
3473 S. BROADWAY
ENGLEWOOD, CO 80113
303-730-5960

DAWSON TRAILS

DAWSON TRAILS
PLANNED DEVELOPMENT PLAN AND ZONING REGULATIONS
(AN AMENDMENT TO THE DAWSON RIDGE PRELIMINARY P.U.D SITE PLAN AND A PORTION OF THE WESTFIELD TRADE CENTER PERLIMINARY P.U.D. SITE PLAN)

NOT FOR CONSTRUCTION

DATE:
PDP-01 07/08/2021
PDP-02 12/03/2021
PDP-03 04/13/2022
PDP-04 05/27/2022

DRAFT

SHEET TITLE:
PHASING PLAN

SHEET
11 OF 18

CHECKED BY: MB, SW
DRAWN BY: DJ, JR

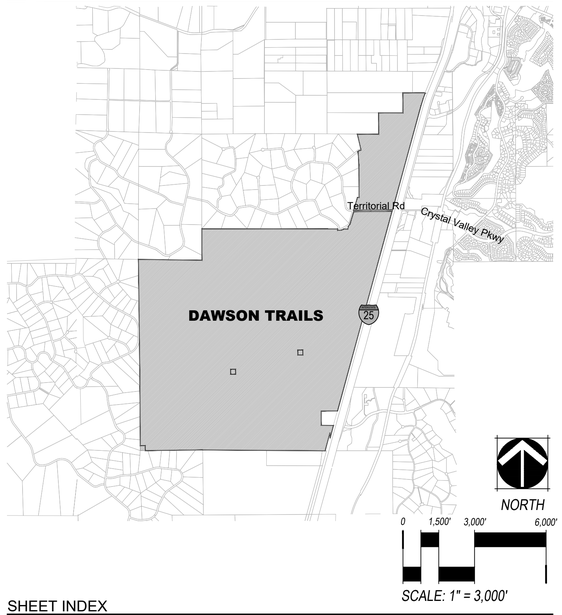
DAWSON TRAILS

PLANNED DEVELOPMENT PLAN AND ZONING REGULATIONS

(AN AMENDMENT TO THE DAWSON RIDGE PRELIMINARY P.U.D SITE PLAN AND A PORTION OF THE WESTFIELD TRADE CENTER PRELIMINARY P.U.D. SITE PLAN)

TWO PARCELS OF LAND BEING ALL OF SECTION 28 AND PORTIONS OF SECTIONS 15, 21, 22, 27, 29, 32, 33 & 34, TOWNSHIP 8 SOUTH, RANGE 67 WEST OF THE SIXTH PRINCIPAL MERIDIAN, TOWN OF CASTLE ROCK, COUNTY OF DOUGLAS, STATE OF COLORADO

VICINITY MAP



SHEET INDEX

SHEET 1.....COVER
SHEET 2.....OWNERSHIP CERTIFICATION
SHEET 3-8.....PLANNED DEVELOPMENT PLAN
SHEET 9.....OPEN SPACE, PUBLIC LAND, AND TRAILS PLAN
SHEET 10.....NATURAL FEATURES MAP
SHEET 11.....PHASING PLAN
SHEET 12.....GRADING & DRAINAGE PLAN
SHEET 13.....WILDLAND MANAGEMENT PLAN
SHEET 14-18.....PD ZONING REGULATIONS
SHEET 19.....ARCHITECTURAL DESIGN STANDARDS
SHEET 20.....SIGN DESIGN STANDARDS

PURPOSE STATEMENT

THE DAWSON TRAILS PDP IS AN AMENDMENT TO THE DAWSON RIDGE PRELIMINARY P.U.D SITE PLAN AND A PORTION OF THE WESTFIELD TRADE CENTER PRELIMINARY P.U.D. SITE PLAN TO ZONE THE PROPERTY FOR RESIDENTIAL, MIXED USE, COMMERCIAL, INDUSTRIAL, OPEN SPACE, AND PLD.

VESTING

THIS DAWSON TRAILS PLANNED DEVELOPMENT PLAN INCLUSIVE OF THE EMBEDDED PD ZONING REGULATIONS CONSTITUTES A SITE SPECIFIC DEVELOPMENT PLAN PURSUANT TO CHAPTER 17.08 OF THE CASTLE ROCK MUNICIPAL CODE AND §24-68-101, *ET SEQ.*, C.R.S., AND ESTABLISHES VESTED PROPERTY RIGHTS THROUGH DECEMBER 31, 2052, TO UNDERTAKE AND COMPLETE THE DEVELOPMENT AND USE OF THE PROPERTY IN ACCORDANCE WITH THIS PLAN. TOWN COUNCIL MAY APPROVE A ONE TIME TEN-YEAR EXTENSION OF THE VESTING PERIOD, NOT TO EXCEED DECEMBER 31, 2062.

TECHNICAL CRITERIA VARIANCE APPROVAL

TCV22-0031
APPROVED 5/11/2022
APPROVAL ALLOWS FOR REDUCED INTERSECTION SPACING BETWEEN FULL MOVEMENT INTERSECTIONS ALONG DAWSON TRAIL BLVD/PRAIRIE HAWK DR.

LEGAL DESCRIPTION

TWO (2) PARCELS OF LAND IN PORTIONS OF SECTIONS 15, 21, 22, 27, 28, 29, 32, 33 & 34, TOWNSHIP 8 SOUTH, RANGE 67 WEST OF THE SIXTH PRINCIPAL MERIDIAN, TOWN OF CASTLE ROCK, COUNTY OF DOUGLAS, STATE OF COLORADO, BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:

THE BEARINGS FOR THIS DESCRIPTION ARE BASED ON THE NORTH LINE OF THE SOUTH HALF OF THE SOUTH HALF OF SECTION 21, TOWNSHIP 8 SOUTH, RANGE 67 WEST OF THE SIXTH P.M., BEING ASSUMED TO BEAR S89°55'56"E, FROM THE SOUTH 1/16TH CORNER OF SAID SECTIONS 21 & 22, BEING MONUMENTED BY A 1" DIAMETER PIPE WITH A 2" DIAMETER ALUMINUM CAP STAMPED "LS 6935" TO THE SOUTH 1/16TH CORNER OF SAID SECTIONS 20 & 21, BEING MONUMENTED BY A 1" DIAMETER PIPE WITH A 2" DIAMETER ALUMINUM CAP, STAMPED "LS 6935", WITH ALL BEARINGS CONTAINED HEREIN RELATIVE THERETO.

PARCEL 1:
BEGINNING AT THE SOUTH 1/16TH CORNER OF SAID SECTIONS 21 & 22, ALSO BEING A POINT ON THE SOUTH LINE OF TWIN OAKS, A SUBDIVISION PLAT RECORDED AT RECEPTION NO. 161972, IN THE RECORDS OF THE DOUGLAS COUNTY CLERK AND RECORDER'S OFFICE;
THENCE S 89°28'35" E, ALONG THE SOUTH LINE OF SAID TWIN OAKS SUBDIVISION AND ALONG THE NORTH LINE OF THE SOUTH HALF OF THE SOUTH HALF OF SAID SECTION 22, A DISTANCE OF 404.37 FEET TO A POINT ON THE WEST LINE OF THE TWIN OAKS ROAD RIGHT-OF-WAY, AS DEDICATED BY SAID TWIN OAKS SUBDIVISION;
THENCE ALONG THE WEST LINE OF SAID TWIN OAKS DRIVE RIGHT-OF-WAY AND ALONG THE SOUTH LINE OF THE TERRITORIAL ROAD RIGHT-OF-WAY, AS DEDICATED BY SAID TWIN OAKS SUBDIVISION, THE FOLLOWING FOUR (4) COURSES:

1. S 02°01'48" E, A DISTANCE OF 52.10 FEET TO THE SOUTH LINE OF SAID TERRITORIAL ROAD RIGHT-OF-WAY;
2. N 87°58'41" E, A DISTANCE OF 109.24 FEET TO A POINT OF CURVATURE;
3. ALONG THE ARC OF A CURVE TO THE LEFT HAVING A RADIUS OF 245.68 FEET, A CENTRAL ANGLE OF 28°36'44" AND AN ARC LENGTH OF 122.69 FEET;
4. N 59°21'57" E, A DISTANCE OF 23.19 FEET TO A POINT ON THE SOUTH LINE OF SAID TWIN OAKS SUBDIVISION;

THENCE S 89°28'35" E, ALONG SAID SOUTH LINE, A DISTANCE OF 174.31 FEET TO THE SOUTHEAST CORNER OF SAID TWIN OAKS SUBDIVISION;
THENCE N 17°17'13" E, ALONG THE EAST LINE OF SAID TWIN OAKS SUBDIVISION, A DISTANCE OF 139.27 FEET TO A POINT ON THE EAST LINE OF SAID TERRITORIAL ROAD RIGHT-OF-WAY AND A POINT OF NON-TANGENT CURVATURE;
THENCE ALONG THE EAST LINE OF SAID TERRITORIAL ROAD RIGHT-OF-WAY THE FOLLOWING TWO (2) COURSES:

1. ALONG THE ARC OF A NON-TANGENT CURVE TO THE LEFT HAVING A RADIUS OF 198.98 FEET, A CENTRAL ANGLE OF 31°52'19" AND AN ARC LENGTH OF 110.69 FEET, SUBTENDED BY A CHORD OF WHICH BEARS N 33°13'23" E, A DISTANCE OF 109.26 FEET;
2. N 17°17'13" E, A DISTANCE OF 534.55 FEET TO A POINT ON THE SOUTH LINE OF THE TERRITORIAL ROAD RIGHT-OF-WAY AS DEDICATED BY THAT DEED RECORDED AT RECEPTION NO. 8816440, SAID DOUGLAS COUNTY RECORDS;

THENCE N 89°40'41" E, ALONG SAID SOUTH LINE, A DISTANCE OF 1599.61 FEET TO A POINT ON THE WEST LINE OF THE BURLINGTON NORTHERN SANTA FE RAILROAD RIGHT-OF-WAY;
THENCE S 15°17'57" W, ALONG SAID WEST LINE, A DISTANCE OF 8675.32 FEET TO THE NORTHEAST CORNER OF THAT PARCEL OF LAND DESCRIBED IN THAT DEED RECORDED AT RECEPTION NO. 2004131453, SAID DOUGLAS COUNTY RECORDS;
THENCE ALONG THE NORTH, WEST AND SOUTH LINES OF SAID PARCEL, THE FOLLOWING THREE (3) COURSES:

1. S 89°46'16" W, A DISTANCE OF 678.73 FEET;
2. S 00°19'26" W, A DISTANCE OF 600.54 FEET;
3. S 89°29'06" E, A DISTANCE OF 515.85 FEET TO A POINT ON THE WEST LINE OF SAID BURLINGTON NORTHERN SANTA FE RAILROAD RIGHT OF WAY;

THENCE S 15°17'57" W, ALONG SAID WEST LINE, A DISTANCE OF 547.53 FEET TO A POINT ON THE EAST LINE OF THE NORTHEAST QUARTER OF SAID SECTION 33; THENCE N 00°02'14" W, ALONG SAID EAST LINE, A DISTANCE OF 226.55 FEET TO A POINT ON THE WEST LINE OF SAID BURLINGTON NORTHERN SANTA FE RAILROAD RIGHT-OF-WAY;
THENCE S 15°19'54" W, ALONG SAID WEST LINE, A DISTANCE OF 789.53 FEET TO A POINT ON THE SOUTH LINE OF THE NORTH HALF OF SAID SECTION 33;
THENCE N 89°35'18" W, ALONG SAID SOUTH LINE, A DISTANCE OF 5123.28 FEET TO THE EAST QUARTER CORNER OF SAID SECTION 32, ALSO BEING THE NORTHEAST CORNER OF KEENE RANCH FILING NO. 1, A SUBDIVISION PLAT RECORDED AT RECEPTION NO. 9523375, SAID DOUGLAS COUNTY RECORDS;
THENCE S 89°21'58" W, ALONG THE NORTH LINE OF SAID KEENE RANCH FILING NO. 1 AND ALONG THE SOUTH LINE OF THE NORTHEAST QUARTER OF SAID SECTION 32, A DISTANCE OF 2414.66 FEET TO THE SOUTHEAST CORNER OF THAT PARCEL OF LAND DESCRIBED IN THAT DEED RECORDED AT RECEPTION NO. 2004051359, SAID DOUGLAS COUNTY RECORDS; THENCE ALONG THE EAST AND NORTH LINES OF SAID PARCEL OF LAND, THE FOLLOWING TWO (2) COURSES:

1. N 00°23'12" W, A DISTANCE OF 208.86 FEET TO THE NORTHEAST CORNER OF SAID DEED;
2. S 89°18'57" W, A DISTANCE OF 208.54 FEET TO A POINT ON THE WEST LINE OF THE NORTHEAST QUARTER OF SAID SECTION 32, ALSO BEING A POINT ON THE EAST LINE OF SAID KEENE RANCH FILING NO. 1;

THENCE N 00°19'46 W, ALONG THE EAST LINE OF SAID KEENE RANCH FILING NO. 1, ALONG THE EAST LINE OF KEENE RANCH FILING NO. 2, A SUBDIVISION PLAT RECORDED AT RECEPTION NO. 9639479, SAID DOUGLAS COUNTY RECORDS, AND ALONG THE WEST LINE OF THE NORTHEAST QUARTER OF SAID SECTION 32, A DISTANCE OF 2505.77 FEET TO THE NORTH QUARTER CORNER OF SAID SECTION 32;
THENCE N 00°39'34" W, ALONG THE EAST LINE OF SAID KEENE RANCH FILING NO. 2 AND ALONG THE WEST LINE OF THE EAST HALF OF SAID SECTION 29, A DISTANCE OF 5308.62 FEET TO THE NORTH QUARTER CORNER OF SAID SECTION 29, BEING THE NORTHEAST CORNER OF SAID KEENE RANCH FILING NO. 2 PLAT, AND THE SOUTHWEST CORNER OF CASTLE MESA SOUTH, A SUBDIVISION PLAT RECORDED AT RECEPTION NO. 145078, SAID DOUGLAS COUNTY RECORDS;
THENCE S 89°02'42" E, ALONG THE NORTH LINE OF THE EAST HALF OF SAID SECTION 29 AND ALONG THE SOUTH LINE OF SAID CASTLE MESA SOUTH SUBDIVISION, A DISTANCE OF 2661.01 FEET TO THE SOUTHEAST CORNER OF SAID CASTLE MESA SOUTH SUBDIVISION, BEING THE SOUTHWEST CORNER OF SAID SECTION 21;
THENCE N 00°02'04" W, ALONG THE EAST LINE OF SAID CASTLE MESA SOUTH SUBDIVISION AND ALONG THE WEST LINE OF THE SOUTH HALF OF THE SOUTH HALF OF SAID SECTION 21, A DISTANCE OF 1322.70 FEET TO THE SOUTH 1/16TH CORNER OF SAID SECTIONS 20 & 21, BEING THE SOUTHWEST CORNER OF SAID TWIN OAKS SUBDIVISION;
THENCE S 89°55'56" E, ALONG THE SOUTH LINE OF SAID TWIN OAKS SUBDIVISION AND ALONG THE NORTH LINE OF THE SOUTH HALF OF THE SOUTH HALF OF SAID SECTION 21, A DISTANCE OF 5286.17 FEET TO THE POINT OF BEGINNING.

LESS AND EXCEPT THE FOLLOWING THREE (3) PARCELS OF LAND:

TWO (2) PARCELS OF LAND, AS DESCRIBED IN SAID DEED RECORDED AT RECEPTION NO. 2004051359, SAID DOUGLAS COUNTY RECORDS, BEING A PORTION OF THE SOUTH HALF OF SECTION 28, TOWNSHIP 8 SOUTH, RANGE 67 WEST OF THE SIXTH PRINCIPAL MERIDIAN, TOWN OF CASTLE ROCK, COUNTY OF DOUGLAS, STATE OF COLORADO, BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:

THE BEARINGS FOR THESE EXCEPTION PARCELS ARE BASED ON THE SOUTH LINE OF SECTION 28, TOWNSHIP 8 SOUTH, RANGE 67 WEST OF THE SIXTH P.M., BEING ASSUMED TO BEAR S89°47'47"E, FROM THE SOUTHWEST CORNER OF SAID SECTION 28, BEING MONUMENTED BY A 1" PIPE WITH A 2-1/2" ALUMINUM CAP STAMPED "LS 6935" TO THE SOUTHEAST CORNER OF SAID SECTIONS 28, BEING MONUMENTED BY #6 REBAR WITH A 2-1/2" ALUMINUM CAP, STAMPED "LS 6935", WITH ALL BEARINGS CONTAINED HEREIN RELATIVE THERETO.

COMMENCING AT THE SOUTHWEST CORNER OF SAID SECTION 28, THENCE N 65°29'53" E, A DISTANCE OF 1262.04 FEET TO THE POINT OF BEGINNING;
THENCE N 00°37'44" W, A DISTANCE OF 208.93 FEET;
THENCE S 89°47'24" E, A DISTANCE OF 208.72 FEET;
THENCE S 00°40'40" E, A DISTANCE OF 208.93 FEET;
THENCE N 89°47'27" W, A DISTANCE OF 208.90 FEET TO THE POINT OF BEGINNING;

ALSO EXCEPTING THE FOLLOWING PARCEL

COMMENCING AT THE SOUTHEAST CORNER OF SAID SECTION 28, THENCE N 40°06'19" W, A DISTANCE OF 1765.57 FEET TO THE POINT OF BEGINNING;
THENCE N 89°46'42" W, A DISTANCE OF 208.73 FEET;
THENCE N 00°45'11" W, A DISTANCE OF 208.19 FEET;
THENCE S 89°55'33" E, A DISTANCE OF 208.72 FEET;
THENCE S 00°45'12" E, A DISTANCE OF 208.73 FEET TO THE POINT OF BEGINNING;

LESS AND EXCEPT THE FOLLOWING PARCEL OF LAND:

A TRACT OR PARCEL OF LAND NO. RW-20 OF THE DEPARTMENT OF TRANSPORTATION, STATE OF COLORADO PROJECT NO. 17638 CONTAINING 8,259 SQ. FT. (0.190 ACRES), MORE OR LESS, BEING PART OF TRACT A OF DAWSON RIDGE FILING A, LOCATED IN THE NE 1/4 OF THE SW 1/4 AND SE 1/4 OF THE SW 1/4 IN SECTION 22, TOWNSHIP 8 SOUTH, RANGE 67 WEST, OF THE SIXTH PRINCIPAL MERIDIAN, IN DOUGLAS COUNTY, COLORADO, SAID TRACT OR PARCEL BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:

COMMENCING AT THE SOUTHWEST CORNER OF SAID SECTION 22, THENCE N. 49°50'55" E., A DISTANCE OF 1,964.79 FEET TO THE WEST LINE OF SAID TRACT A, SAID POINT ALSO BEING THE TRUE POINT OF BEGINNING;

1. THENCE, ALONG SAID WEST LINE, ON THE ARC OF A CURVE TO THE LEFT, A RADIUS OF 1,730.00 FEET, A CENTRAL ANGLE OF 21°44'56", A DISTANCE OF 656.69 FEET, (A CHORD BEARING OF N. 10°32'52" E., A DISTANCE OF 652.76 FEET);
2. THENCE, CONTINUING ALONG SAID WEST LINE, N. 00°17'07" W., A DISTANCE OF 114.23 FEET;
3. THENCE, CONTINUING ALONG SAID WEST LINE, ON THE ARC OF A CURVE TO THE LEFT, A RADIUS OF 31.00 FEET, A CENTRAL ANGLE OF 86°19'08", A DISTANCE OF 46.71 FEET, (A CHORD BEARING OF N. 47°10'54" W., A DISTANCE OF 42.41 FEET);
4. THENCE, CONTINUING ALONG SAID WEST LINE, N. 00°17'07" W., A DISTANCE OF 10.00 FEET TO THE INTERSECTION OF THE SOUTH RIGHT-OF-WAY LINE OF TERRITORIAL ROAD AND THE WEST RIGHT-OF-WAY LINE OF DAWSON RIDGE BOULEVARD;
5. THENCE, ALONG SAID WEST RIGHT-OF-WAY LINE, ON THE ARC OF A CURVE TO THE RIGHT, A RADIUS OF 41.00 FEET, A CENTRAL ANGLE OF 86°47'35", A DISTANCE OF 62.11 FEET, (A CHORD BEARING S. 46°55'52" E., A DISTANCE OF 56.34 FEET);
6. THENCE, CONTINUING ALONG SAID WEST RIGHT-OF-WAY LINE, S. 00°17'07" E., A DISTANCE OF 114.52 FEET;
7. THENCE, CONTINUING ALONG SAID WEST RIGHT-OF-WAY LINE, ON THE ARC OF A CURVE TO THE RIGHT, A RADIUS OF 1,740.00 FEET, A CENTRAL ANGLE OF 21°39'02", A DISTANCE OF 657.50 FEET, (A CHORD BEARING S. 10°29'54" W., A DISTANCE OF 653.59 FEET);
8. THENCE N. 85°14'11" W., A DISTANCE OF 10.44 FEET, MORE OR LESS, TO THE TRUE POINT OF BEGINNING.

BASIS OF BEARINGS: ALL BEARINGS ARE BASED ON A LINE BETWEEN THE SOUTHWEST CORNER OF SECTION 22, (BEING A 2.5" ALUMINUM CAP STAMPED "LS 6935 1988") AND THE WEST 1/4 CORNER OF SECTION 22 (BEING A SET 2.5" ALUMINUM CAP STAMPED "WOOLPERT T8S-R67W 1/4 S21 S22 PLS 38486 2018") AS BEING N. 02°26'33" W.

AND LESS AND EXCEPT THAT RETAINED RIGHT- OF-WAY OVER A PORTION OF DAWSON RIDGE BOULEVARD AS DESCRIBED IN ORDINANCE NO. 2021-020 RECORDED OCTOBER 6, 2021 AT RECEPTION NO. 2021114404 .

AND LESS AND EXCEPT THOSE RIGHTS-OF-WAY DEDICATED TO THE TOWN OF CASTLE ROCK DESCRIBED IN THOSE DEEDS RECORDED AT RECEPTION NO. 2022020177 AND 2022020178, SAID DOUGLAS COUNTY RECORDS;

PARCEL 2:
COMMENCING AT THE SOUTH 1/16TH CORNER OF SAID SECTIONS 21 & 22, ALSO BEING A POINT ON THE SOUTH LINE OF TWIN OAKS, A SUBDIVISION PLAT RECORDED AT RECEPTION NO. 161972, IN THE RECORDS OF THE DOUGLAS COUNTY CLERK AND RECORDER'S OFFICE;
THENCE N 53°44'53" E, A DISTANCE OF 1331.13 FEET TO A POINT ON THE EAST LINE OF SAID TWIN OAKS PLAT AND A POINT ON THE NORTH LINE OF THE TERRITORIAL ROAD RIGHT-OF-WAY, AS DEDICATED BY THAT DEED RECORDED AT RECEPTION NO. 8816440, SAID DOUGLAS COUNTY RECORDS AND THE POINT OF BEGINNING;

THENCE ALONG THE EAST LINE OF SAID TWIN OAKS PLAT, THE FOLLOWING THREE (3) COURSES:

1. N 17°17'13" E, A DISTANCE OF 557.93 FEET;
2. S 89°27'27" E, A DISTANCE OF 65.00 FEET;
3. N 00°22'15" W, A DISTANCE OF 1329.37 FEET TO THE SOUTHWEST CORNER OF LOT 3, SAID TWIN OAKS PLAT;

THENCE N 03°03'12" W, ALONG THE WEST LINE OF SAID LOT 3, A DISTANCE OF 567.45 FEET TO THE NORTHWEST CORNER OF SAID LOT 3, BEING A POINT OF CURVATURE ON THE SOUTH LINE OF THE BRISCOE LANE RIGHT-OF-WAY, AS DEDICATED BY SAID TWIN OAKS PLAT;
THENCE ALONG THE PORTIONS OF BRISCOE LANE VACATED BY ORDINANCE NO. 86-24, RECORDED IN BOOK 680 AT PAGE 920, SAID DOUGLAS COUNTY RECORDS THE FOLLOWING TWO (2) COURSES:

1. N 39°55'38" W, A DISTANCE OF 30.00 FEET TO A POINT OF NON-TANGENT CURVATURE;
2. ALONG THE ARC OF A NON-TANGENT CURVE TO THE RIGHT HAVING A RADIUS OF 329.30 FEET, A CENTRAL ANGLE OF 27°16'16" AND AN ARC LENGTH OF 156.74 FEET, SUBTENDED BY A CHORD OF WHICH BEARS N 63°42'30" E, A DISTANCE OF 155.26 FEET;

THENCE N 12°39'22" W, ALONG THE WEST LINE OF LOT 4, SAID TWIN OAKS PLAT, A DISTANCE OF 687.67 FEET TO THE NORTHWEST CORNER OF SAID LOT 4 ALSO BEING THE WEST 1/16TH CORNER OF SAID SECTIONS 15 & 22;
THENCE S 89°31'22" E, ALONG THE SOUTH LINE OF THE SOUTHWEST QUARTER OF SAID SECTION 15, A DISTANCE OF 890.07 FEET TO THE SOUTHWEST CORNER OF THAT PARCEL OF LAND DESCRIBED AS PARCEL E IN THAT DEED RECORDED AT RECEPTION NO. 2019088324, SAID DOUGLAS COUNTY RECORDS;
THENCE ALONG THE WEST AND NORTH LINES OF PARCELS E, F & G THE FOLLOWING FOUR (4) COURSES:

1. N 00°11'34" E, A DISTANCE OF 900.14 FEET;
2. S 89°48'26" E, ALONG THE NORTH LINES OF PARCELS E AND F, A DISTANCE OF 1014.77 FEET TO THE SOUTHWEST CORNER OF THAT PARCEL OF LAND DESCRIBED AS PARCEL G;
3. N 00°11'34" E, A DISTANCE OF 842.72 FEET;
4. S 89°48'26" E, A DISTANCE OF 928.55 FEET TO A POINT ON THE WEST LINE OF THE BURLINGTON NORTHERN SANTA FE RAILROAD RIGHT OF WAY AND A POINT OF NON-TANGENT CURVATURE;

THENCE ALONG THE WEST LINE OF SAID BURLINGTON NORTHERN SANTA FE RAILROAD RIGHT-OF-WAY THE FOLLOWING TWO (2) COURSES:

1. ALONG THE ARC OF A NON-TANGENT CURVE TO THE LEFT HAVING A RADIUS OF 5779.58 FEET, A CENTRAL ANGLE OF 05°35'04" AND AN ARC LENGTH OF 563.33 FEET, SUBTENDED BY A CHORD OF WHICH BEARS S 18°04'54" W, A DISTANCE OF 563.11 FEET;
2. S 15°17'57" W, A DISTANCE OF 4536.04 FEET TO A POINT ON THE NORTH LINE OF SAID TERRITORIAL ROAD RIGHT-OF-WAY;

THENCE S 89°40'41" W, ALONG SAID NORTH LINE, A DISTANCE OF 1628.83 FEET TO THE POINT OF BEGINNING.

LESS AND EXCEPT THOSE PARCELS OF LAND DESCRIBED AS RW-18 AND RW-18A IN THAT DEED RECORDED AT RECEPTION NO. 2021056802.

SUMMARY TABLE

CHARACTER AREA	PLANNING AREA	LAND USE TYPE	ACREAGE	MAX. DWELLING UNITS	MIN TRANSITION LOT SIZE	MIN. NON-RES AREA (AC)	% OF PROPERTY	MAX BUILDING HEIGHT (1)
WEST	A	SFD	236.5	471	7,700 sf	N/A	11.5%	35'
	B-1	SFD	124.4	484	6,600 sf	N/A	6.0%	35'
	B-2	SFD	58.9	228	6,600 sf	N/A	2.9%	35'
	Totals	N/A	419.8	1,183	N/A	N/A	20.3%	
CENTRAL	C-1	SFD, SFA, MF	151.9	481	N/A	N/A	7.4%	45'
	C-2	SFD, SFA, MF	187.4	908	N/A	N/A	9.1%	50'
	D	SFD, SFA, MF, Non-Res	206.2	1,938	N/A	N/A	10.0%	60'
	Totals	N/A	545.5	3,327	N/A	N/A	26.4%	
EAST	E-1	Non-Res	6.5	N/A	N/A	6.5	0.3%	50'
	E-2	SFD, SFA, MF, Non-Res	62.4	400	N/A	N/A	3.0%	60'
	F-1	SFA, MF, Non-Res	41.0	940	N/A	45	2.0%	75'/90' (1)
	F-2	SFA, MF, Non-Res	33.4		N/A		1.6%	75'/90' (1)
	F-3	SFA, MF, Non-Res	81.9		N/A		4.0%	75'/90' (1)
	G-1	Non-Res	62.6	0	N/A	66.9	3.0%	75'/90' (1)
	G-2	Non-Res	4.3	0	N/A		0.2%	75'/90' (1)
	Totals	N/A	292.1	1,340	N/A	118.4	14.2%	

MAX. DWELLING UNITS - ALL 3 CHARACTER AREAS COMBINED (NOT TO EXCEED)	5,850
MAX. MULTI FAMILY DWELLING UNITS (LOCATED IN C-1, C-2, D, E-2, F-1, F-2, F-3)	2,400
MAX. COMM./NON-RES. SQ. FT. - EAST & CENTRAL CHARACTER AREAS	3,200,000

PLANNING AREAS	1,257.4		60.9%
OPEN SPACE (PL-2 & OS)	533.0		25.8%
PUBLIC LAND DEDICATION (PL-1)	227.6		11.0%
ROW (ARTERIAL)	45.7		2.2%
TOTAL PROPERTY (APPROXIMATELY)	2,063.7		100.0%

LAND USE SUMMARY NOTE:
1.) FOR PLANNING AREAS F AND G, VERTICAL MIXED-USE, HOSPITALITY, MEDICAL, OFFICE, AND MULTI-FAMILY RESIDENTIAL USES ARE ALLOWED TO HAVE A MAXIMUM HEIGHT OF 90 FEET PER SECTION 6.11 ON SHEET 17.

PDP STANDARD NOTES

1. A SMALL PORTION OF THE MINERAL RIGHTS ASSOCIATED WITH THIS PROPERTY HAVE BEEN SEVERED. FOR THE SMALL PORTION OF SEVERED MINERAL RIGHTS, A WAIVER OF NOTICE BY SUCH HOLDER HAS BEEN RECEIVED AS A PART OF THE AMENDMENT.
2. THIS PROPERTY LIES WITHIN FEMA ZONE X, THE UNSHADED AREA OF FIRM MAPS NO. 08035C0282G, 08035C0301G, 08035C0283F, 08035C0284G, AND 08035C0292F, REVISED MARCH 16, 2016. NO STRUCTURES SHALL BE PERMITTED IN THE APPROVED 100-YEAR FLOOD PLAIN. THE SITE ALSO HAS MAJOR DRAINAGEWAYS WITH BASIN AREAS GREATER THAN 130 ACRES ONSITE.
3. THIS PROPERTY IS WITHIN THE TOWN OF CASTLE ROCK BLUE, RED AND GREEN WATER PRESSURE ZONES.
4. ALL-WEATHER (CONCRETE OR ASPHALT) SURFACED ACCESS ROADS CAPABLE OF WITHSTANDING THE IMPOSED LOADS OF FIRE APPARATUS (75,000 LBS.) AND ALL REQUIRED FIRE HYDRANTS SHALL BE INSTALLED AND MADE SERVICEABLE PRIOR TO AND DURING ALL VERTICAL CONSTRUCTION.
5. RIGHT-OF-WAY FOR INGRESS AND EGRESS FOR EMERGENCY VEHICLES IS GRANTED OVER, ACROSS, ON AND THROUGH ANY AND ALL PRIVATE ROADS AND DRIVES.

GENERAL NOTES

1. ALL DEVELOPMENT ASSOCIATED WITH THE DAWSON TRAILS PDP SHALL COMPLY WITH ALL FEDERAL, STATE AND TOWN REGULATIONS REGARDING WILDLIFE INCLUDING THE MIGRATORY BIRD ACT AND BURROWING OWL SURVEY IF REQUIRED.
2. UPDATED SOILS REPORTS SHALL BE SUBMITTED WITH EACH SITE DEVELOPMENT PLAN AND/OR PLAT.
3. ALL EVA ACCESS GATES WILL INCLUDE AN OPTICOM SYSTEM OR OTHER SYSTEM APPROVED BY THE TOWN OF CASTLE ROCK FIRE DEPARTMENT.
4. A WILDLAND/URBAN INTERFACE WILDFIRE VEGETATION MANAGEMENT PLAN (PLAN), OR COMPLIANCE LETTER, IS REQUIRED TO BE SUBMITTED FOR EACH PHASE OF THE PLANNED DEVELOPMENT WITH THE FIRST SDP OR CONSTRUCTION DRAWINGS FOR EVALUATION AND APPROVAL BY THE TOWN OF CASTLE ROCK FIRE DEPARTMENT. THE PLAN SHALL BE DEVELOPED BY A DESIGN PROFESSIONAL FAMILIAR WITH WILDFIRE MITIGATION TECHNIQUES AND STANDARDS. REFER TO SHEET 13 AND THE TOWN OF CASTLE ROCK COMMUNITY WILDFIRE PROTECTION PLAN.

CHECKED BY: MB, SW
DRAWN BY: DJ, JR

PLANNER/LANDSCAPE ARCHITECT
NORRIS DESIGN
Planning | Landscape Architecture | Branding
1101 Bannock Street
Denver, Colorado 80204
P 303.892.1166
www.norris-design.com

APPLICANT:
WESTSIDE INVESTMENT PARTNERS
4100 E. MISSISSIPPI AVE
SUITE 500
DENVER, CO 80246
303-984-9800

ENGINEER & SURVEYOR:
CORE CONSULTANTS INC.
LIVEYOURCORE.COM
CORE CONSULTANTS
3473 S. BROADWAY
ENGLEWOOD, CO 80113
303-730-5960

DAWSON TRAILS

DAWSON TRAILS
PLANNED DEVELOPMENT PLAN AND ZONING REGULATIONS
(AN AMENDMENT TO THE DAWSON RIDGE PRELIMINARY P.U.D SITE PLAN AND A PORTION OF THE WESTFIELD TRADE CENTER PRELIMINARY P.U.D. SITE PLAN)

DATE:
PDP-01 07/08/2021
PDP-02 12/03/2021
PDP-03 04/13/2022
PDP-04 05/27/2022
PDP-05 06/09/2022

SHEET TITLE:
COVER

SHEET
1 OF 20

DAWSON TRAILS

PLANNED DEVELOPMENT PLAN AND ZONING REGULATIONS

(AN AMENDMENT TO THE DAWSON RIDGE PRELIMINARY P.U.D SITE PLAN AND A PORTION OF THE WESTFIELD TRADE CENTER PRELIMINARY P.U.D. SITE PLAN)

TWO PARCELS OF LAND BEING ALL OF SECTION 28 AND PORTIONS OF SECTIONS 15, 21, 22, 27, 29, 32, 33 & 34, TOWNSHIP 8 SOUTH, RANGE 67 WEST OF THE SIXTH PRINCIPAL MERIDIAN, TOWN OF CASTLE ROCK, COUNTY OF DOUGLAS, STATE OF COLORADO

GENERAL NOTES:

- PHASES MAY BE DEVELOPED IN ANY SEQUENCE OR CONCURRENTLY PROVIDED THAT ALL IMPROVEMENTS ASSIGNED TO OTHER PHASES WHICH ARE NECESSARY TO SERVE THE PHASE(S) WITHIN WHICH DEVELOPMENT IS COMMENCING HAVE EITHER BEEN PREVIOUSLY CONSTRUCTED AND ACCEPTED PER TOWN CRITERIA, OR WILL BE CONSTRUCTED BY THE DEVELOPER OF THE PHASE(S) UNDERGOING DEVELOPMENT. ALL IMPROVEMENTS INCLUDING BUT NOT LIMITED TO ROADWAY, LIGHTING, WATER, SANITARY SEWER, PARKS, TRAILS, ADJACENT DOWNSTREAM DRAINAGE CHANNEL IMPROVEMENTS AND STORMWATER MANAGEMENT FACILITIES MUST BE BUILT.
- THE INTERCHANGE AT TERRITORIAL ROAD, CRYSTAL VALLEY PARKWAY, AND I-25 (CVI) IS A SEPARATE TOWN, COUNTY AND STATE PROJECT. CHANNEL IMPROVEMENTS FOR THE GAMBLE RIDGE MAJOR DRAINAGEWAY ADJACENT TO THE INTERCHANGE WILL BE PART OF THE CVI PROJECT.
- PHASES BEING DEVELOPED IN ANY SEQUENCE OR CONCURRENTLY MAY REQUIRE ADJACENT OR UPSTREAM DRAINAGE CHANNEL IMPROVEMENTS. THIS IS TO BE DETERMINED BY PHASE AND PER THE TOWN'S CRITERIA.
- EASTERN ½ OF DAWSON TRAILS BLVD SOUTH OF THE CVI TO BE CONSTRUCTED BY THE TOWN OF CASTLE ROCK TO THE SOUTHERN LIMIT OF THE PROJECT/ TOWN AS PART OF CVI INTERCHANGE PROJECT.
- DEVELOPER TO CONSTRUCT EASTERN ½ OF DAWSON TRAILS BLVD, AND GRADE THE FULL SECTION, FROM THE NORTHERN PROJECT BOUNDARY TO PLUM CREEK PKWY WHEN TRAFFIC VOLUMES ON CRYSTAL VALLEY PARKWAY, WEST OF THE INTERCHANGE REACH 25,000 VPD, PURSUANT AND SUBJECT TO THE TERMS OF THE DEVELOPMENT AGREEMENT.
- DEVELOPER TO CONSTRUCT WESTERN ½ OF DAWSON TRAILS BLVD TO COMPLETE ROADWAY SECTION, WHEN TRAFFIC VOLUMES ON DAWSON TRAILS BLVD NORTH OF THE PROJECT BOUNDARY REACH 12,000 VEHICLES PER DAY PURSUANT AND SUBJECT TO THE TERMS OF THE DEVELOPMENT AGREEMENT.
- TURNAROUND AREAS PER TOWN CRITERIA SHALL BE PROVIDED WHEN ROADS TERMINATE AT A PHASE LINE OR INTERIM TERMINUS.
- AMENDMENTS TO THIS PHASING PLAN MAY BE APPROVED ADMINISTRATIVELY AS DETERMINED BY THE DEVELOPMENT SERVICES DIRECTOR.
- THE FIRE DEPARTMENT SHALL REVIEW ALL ELEMENTS OF THE EMERGENCY VEHICLE ACCESS ROUTES DURING SITE PLANNING STAGES.
- DEVELOPER SHALL CONSTRUCT THE WESTERN ½ (AND ANY OTHER NECESSARY ROADWAY IMPROVEMENTS) OF DAWSON TRAILS BLVD PER THE PHASING PLAN. IF PHASE(S) ARE NOT BUILT SEQUENTIALLY, THE FULL SECTION OF DAWSON TRAILS BLVD SHALL BE CONSTRUCTED TO THE LIMITS OF THE PHASE OR SUB-PHASE LEAVING NO PARTIAL ROADWAY SECTIONS BETWEEN THE DEVELOPED AREAS.
- THE FULL ROADWAY SECTION FOR DAWSON TRAILS BLVD, INCLUDING NUMBER OF LANES, TURN LANES, AND LENGTHS SHALL BE DETERMINED BY THE DETAILED TRAFFIC STUDIES FOR THE PROJECT.
- DEVELOPER SHALL CONSTRUCT THE WEST ½ OF DAWSON TRAILS BLVD BETWEEN THE NORTHERN PROJECT BOUNDARY AND PLUM CREEK PARKWAY WHEN TRAFFIC VOLUMES ON THIS SECTION REACH 12,000 VPD.
- BASED ON INDIVIDUAL SITE CONFIGURATION OF THE PLANNING AREAS, A PORTION OF A PHASE, OR SUB-PHASE, MAY BE CONSTRUCTED AND DEVELOPED INDEPENDENT OF ALL THE PHASE REQUIREMENTS IF ADEQUATE ROADWAY, DOMESTIC WATER, AND SANITARY SEWER INFRASTRUCTURE ARE PROVIDED.
- REGIONAL PONDS WILL BE CONSTRUCTED PRIOR TO ANY UPSTREAM DEVELOPMENT THAT UTILIZES THE REGIONAL POND FOR WATER QUALITY AND/OR FULL SPECTRUM DETENTION.
- GRADE SEPARATED CROSSING SHALL BE PROVIDED AS SHOWN ON THE PHASING PLAN FOR REGIONAL/ SIGNIFICANT TRAIL CROSSINGS OF ARTERIAL AND MAJOR-COLLECTOR CLASS STREETS.
- ALL ROADWAYS SHALL BE CONSTRUCTED TO THE TOWN STANDARDS.
- THE GREEN/ RED WATER ZONE BOUNDARY SHOWN IS APPROXIMATE AND SUBJECT TO ADJUSTMENTS DETERMINED BY FINAL ENGINEERING AND GRADING OF THE VARIOUS PLANNING AREAS.
- PL-1 & PL-2 AREAS DESIGNATED ON THE PD PLAN SHALL BE DEDICATED WITH EACH SITE DEVELOPMENT PLAN/ PLAT AS PHASED DEVELOPMENT OCCURS WITH THE EXCEPTION OF PL-1.7 & PL1.10 THAT WILL BE DEDICATED AT TIME OF RECORDING OF THE DEVELOPMENT AGREEMENT.
- TRAILS DEPICTED ON THE PD PLAN THAT ARE DESIGNATED FOR CONSTRUCTION BY THE DEVELOPER SHALL BE DESIGNED, ENGINEERED AND CONSTRUCTED WHEN INCLUDED WITHIN EACH SITE DEVELOPMENT PLAN/ PLAT AREA.

PHASE 1A:

- PHASE 1A SHALL BE CONSTRUCTED PRIOR TO ANY OTHER PHASE
- DEVELOPER TO CONSTRUCT WESTERN ½ (AND ANY OTHER NECESSARY ROADWAY IMPROVEMENTS) OF DAWSON TRAILS BLVD SOUTH OF CVI TO END OF PHASE OR SUBPHASE
- DEVELOPER TO CONSTRUCT FULL ROADWAY SECTION OF DAWSON TRAILS BLVD NORTH OF CVI TO THE NORTHERN PROJECT BOUNDARY
- SANITARY SEWER CONNECTION TO PLUM CREEK PKWY NORTH OF CVI WITH PROPOSED NEW SANITARY INTERCEPTOR
- SANITARY SEWER INTERCEPTOR ALONG EASTERN PROPERTY LINE TO THE LIMITS REQUIRED TO SERVE PHASE OR SUBPHASE
- STORM WITHIN DAWSON TRAILS BLVD TO END OF PHASE OR SUBPHASE
- WATER MAIN (BLUE ZONE) MINIMUM 2 POINTS OF CONNECTION TO TOWN'S EXISTING SYSTEM
- WATER BOOSTER PUMP TO RED ZONE
- WATER MAIN (RED ZONE) ALONG DAWSON TRAILS BLVD TO END OF PHASE OR SUBPHASE
- WATER MAIN (RED ZONE) TO ONSITE RED ZONE WATER TANK 19
- RED ZONE WATER TANK 19
- STORM FACILITIES ASSOCIATED WITH PHASE OR SUBPHASE INCLUDING REGIONAL POND A AND B
- A PORTION OF GAMBLE RIDGE TRIBUTARY CHANNEL WEST OF DAWSON TRAILS BLVD & NORTH OF CRYSTAL VALLEY PWKY.
- TRAILS WITHIN PHASE OR SUBPHASE
- COMPLETE THE INTERNAL STREET, STORM, SANITARY, & WATER SYSTEMS WITHIN PHASE OR SUBPHASE AS SHOWN ON THE CONSTRUCTION PLANS
- CRYSTAL VALLEY PARKWAY/TERRITORIAL ROADWAY AND INTERCHANGE, INCLUDING A PORTION OF GAMBLE RIDGE TRIBUTARY, SHALL BE CONSTRUCTED BY OTHERS
- CHANNEL IMPROVEMENTS WITHIN PHASE OR SUBPHASE AS SHOWN ON THE CONSTRUCTION PLANS

PHASE 1B:

- DEVELOPER TO CONSTRUCT WESTERN ½ (AND ANY OTHER NECESSARY ROADWAY IMPROVEMENTS) OF DAWSON TRAILS BLVD TO END OF PHASE OR SUBPHASE IF NOT PREVIOUSLY IMPROVED
- SANITARY & STORM WITHIN DAWSON TRAILS BLVD TO END OF PHASE OR SUBPHASE
- SANITARY SEWER INTERCEPTOR ALONG EASTERN PROPERTY LINE TO THE LIMITS REQUIRED TO SERVE PHASE OR SUBPHASE
- WATER MAIN (RED ZONE) ALONG DAWSON TRAILS BLVD TO END OF PHASE OR SUBPHASE
- STORM FACILITIES ASSOCIATED WITH PHASE OR SUBPHASE
- NORTH DAWSON TRIBUTARY CHANNEL IMPROVEMENTS WITHIN LIMITS OF PHASE 1B IF NOT PREVIOUSLY IMPROVED
- TRAILS WITHIN PHASE OR SUBPHASE
- COMPLETE THE INTERNAL STREET, STORM, SANITARY, & WATER SYSTEMS WITHIN PHASE OR SUBPHASE AS SHOWN ON THE CONSTRUCTION PLANS

PHASE 2A:

- DEVELOPER TO CONSTRUCT WESTERN ½ (AND ANY OTHER NECESSARY ROADWAY IMPROVEMENTS) OF DAWSON TRAILS BLVD TO END OF PHASE OR SUBPHASE IF NOT PREVIOUSLY IMPROVED
- TRAILS WITHIN PHASE OR SUBPHASE
- COMPLETE THE INTERNAL STREET, STORM, SANITARY, & WATER SYSTEMS WITHIN PHASE OR SUBPHASE AS SHOWN ON THE CONSTRUCTION PLANS
- SANITARY & STORM FACILITIES ASSOCIATED WITH PHASE OR SUBPHASE

PHASE 2B:

- DEVELOPER TO CONSTRUCT WESTERN ½ (AND ANY OTHER NECESSARY ROADWAY IMPROVEMENTS) OF DAWSON TRAILS BLVD TO END OF PHASE OR SUBPHASE IF NOT PREVIOUSLY IMPROVED
- SANITARY & STORM WITHIN DAWSON TRAILS BLVD TO END OF PHASE OR SUBPHASE
- SANITARY SEWER INTERCEPTOR ALONG EASTERN PROPERTY LINE TO THE LIMITS REQUIRED TO SERVE PHASE OR SUBPHASE
- TRAILS WITHIN PHASE OR SUBPHASE
- COMPLETE THE INTERNAL STREET, STORM, SANITARY, & WATER SYSTEMS WITHIN PHASE OR SUBPHASE AS SHOWN ON THE CONSTRUCTION PLANS
- STORM FACILITIES ASSOCIATED WITH PHASE OR SUBPHASE
- NORTH DAWSON TRIBUTARY CHANNEL IMPROVEMENTS WITHIN LIMITS OF PHASE 2B IF NOT PREVIOUSLY IMPROVED
- CHANNEL IMPROVEMENTS WITHIN PHASE OR SUBPHASE AS SHOWN ON THE CONSTRUCTION PLANS

PHASE 2C:

- DEVELOPER TO CONSTRUCT WESTERN ½ (AND ANY OTHER NECESSARY ROADWAY IMPROVEMENTS) OF DAWSON TRAILS BLVD TO END OF PHASE OR SUBPHASE IF NOT PREVIOUSLY IMPROVED
- SANITARY & STORM WITHIN DAWSON TRAILS BLVD. TO END OF PHASE OR SUBPHASE
- SANITARY SEWER INTERCEPTOR ALONG EASTERN PROPERTY LINE TO THE LIMITS REQUIRED TO SERVE PHASE OR SUBPHASE
- TRAILS WITHIN PHASE OR SUBPHASE
- COMPLETE THE INTERNAL STREET, STORM, SANITARY, & WATER SYSTEMS WITHIN PHASE OR SUBPHASE AS SHOWN ON THE CONSTRUCTION PLANS
- STORM FACILITIES ASSOCIATED WITH PHASE OR SUBPHASE
- NORTH DAWSON TRIBUTARY CHANNEL IMPROVEMENTS WITHIN LIMITS OF PHASE 2B IF NOT PREVIOUSLY IMPROVED
- CHANNEL IMPROVEMENTS WITHIN PHASE OR SUBPHASE AS SHOWN ON THE CONSTRUCTION PLANS

PHASE 3A:

- DEVELOPER TO CONSTRUCT WESTERN ½ (AND ANY OTHER NECESSARY ROADWAY IMPROVEMENTS) OF DAWSON TRAILS BLVD TO END OF PHASE OR SUBPHASE IF NOT PREVIOUSLY IMPROVED
- SANITARY & STORM WITHIN DAWSON TRAILS BLVD TO END OF PHASE OR SUBPHASE
- TRAILS WITHIN PHASE OR SUBPHASE
- COMPLETE THE INTERNAL STREET, STORM, SANITARY, & WATER SYSTEMS WITHIN PHASE OR SUBPHASE AS SHOWN ON THE CONSTRUCTION PLANS
- STORM FACILITIES ASSOCIATED WITH PHASE OR SUBPHASE
- GAMBLE RIDGE TRIBUTARY CHANNEL IMPROVEMENTS WITHIN LIMITS OF PHASE 3A & ASSOCIATED TRIBUTARIES IF NOT PREVIOUSLY IMPROVED
- GAMBLE RIDGE NORTH TRIBUTARY CHANNEL IMPROVEMENTS WITHIN LIMITS OF PHASE 3A IF NOT PREVIOUSLY IMPROVED

PHASE 3B:

- DEVELOPER TO CONSTRUCT WESTERN ½ (AND ANY OTHER NECESSARY ROADWAY IMPROVEMENTS) OF DAWSON TRAILS BLVD TO END OF PHASE OR SUBPHASE IF NOT PREVIOUSLY IMPROVED
- SANITARY & STORM WITHIN DAWSON TRAILS BLVD TO END OF PHASE OR SUBPHASE
- TRAILS WITHIN PHASE OR SUBPHASE
- COMPLETE THE INTERNAL STREET, STORM, SANITARY, & WATER SYSTEMS WITHIN PHASE OR SUBPHASE AS SHOWN ON THE CONSTRUCTION PLANS
- STORM FACILITIES ASSOCIATED WITH PHASE OR SUBPHASE
- GAMBLE RIDGE NORTH TRIBUTARY CHANNEL IMPROVEMENTS WITHIN LIMITS OF PHASE 3B IF NOT PREVIOUSLY IMPROVED

PHASE 3C:

- DEVELOPER TO CONSTRUCT WESTERN ½ (AND ANY OTHER NECESSARY ROADWAY IMPROVEMENTS) OF DAWSON TRAILS BLVD TO END OF PHASE OR SUBPHASE IF NOT PREVIOUSLY IMPROVED
- DAWSON TRAILS BLVD TO END OF PHASE OR SUBPHASE IF NOT PREVIOUSLY CONSTRUCTED IN PHASE 3B
- SANITARY & STORM WITHIN DAWSON TRAILS BLVD TO END OF PHASE OR SUBPHASE
- TRAILS WITHIN PHASE OR SUBPHASE
- PUBLIC LAND IMPROVEMENTS BY THE TOWN OF CASTLE ROCK
- NORTH GAMBLE RIDGE TRIBUTARY CHANNEL IMPROVEMENTS EAST OF DAWSON TRAILS BLVD

PHASE 4A:

- DEVELOPER TO CONSTRUCT WESTERN ½ (AND ANY OTHER NECESSARY ROADWAY IMPROVEMENTS) OF DAWSON TRAILS BLVD TO END OF PHASE OR SUBPHASE IF NOT PREVIOUSLY IMPROVED
- SANITARY & STORM WITHIN DAWSON TRAILS BLVD TO END OF PHASE OR SUBPHASE
- SANITARY SEWER INTERCEPTOR ALONG EASTERN PROPERTY LINE TO THE LIMITS REQUIRED TO SERVE PHASE OR SUBPHASE
- WATER MAIN (RED ZONE) ALONG DAWSON TRAILS BLVD TO END OF PHASE OR SUBPHASE
- TRAILS WITHIN PHASE OR SUBPHASE
- COMPLETE THE INTERNAL STREET, STORM, SANITARY, & WATER SYSTEMS WITHIN PHASE OR SUBPHASE AS SHOWN ON THE CONSTRUCTION PLANS
- STORM FACILITIES ASSOCIATED WITH PHASE OR SUBPHASE REGIONAL POND C
- SOUTH DAWSON TRIBUTARY CHANNEL IMPROVEMENTS WITHIN LIMITS OF PHASE 4A IF NOT PREVIOUSLY IMPROVED

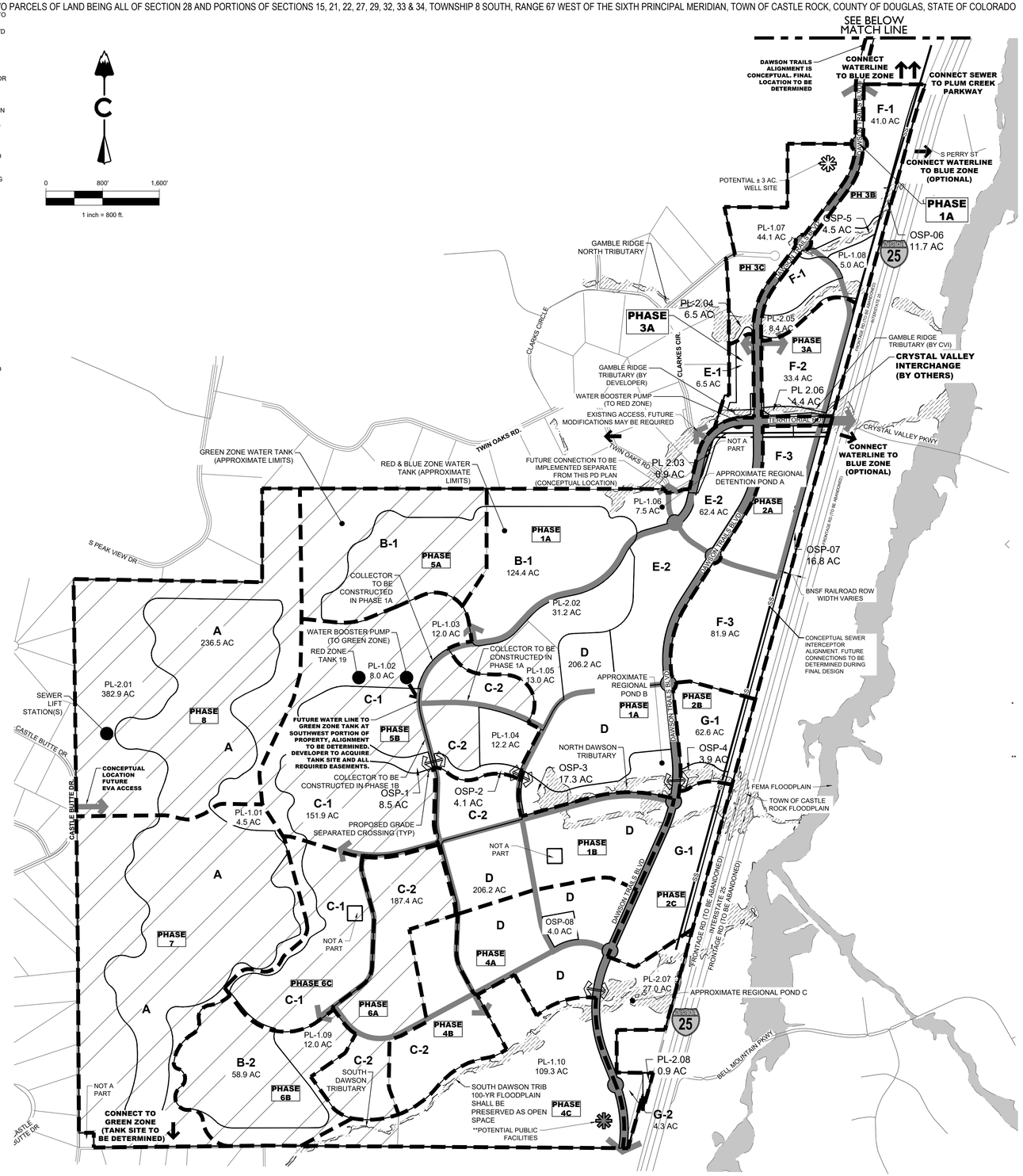
PHASE 4B:

- COMPLETE THE INTERNAL STREET, STORM, SANITARY, & WATER SYSTEMS WITHIN PHASE OR SUBPHASE AS SHOWN ON THE CONSTRUCTION PLANS
- SOUTH DAWSON TRIBUTARY CHANNEL IMPROVEMENTS ADJACENT TO PHASE OR SUBPHASE AS SHOWN ON THE CONSTRUCTION PLANS.
- STORM FACILITIES ASSOCIATED WITH PHASE OR SUBPHASE
- TRAILS WITHIN PHASE OR SUBPHASE
- GAMBLE RIDGE TRIBUTARY CHANNEL IMPROVEMENTS WITHIN LIMITS OF PHASE 4B & ASSOCIATED TRIBUTARIES IF NOT PREVIOUSLY IMPROVED

PHASE 4C:

- DEVELOPER TO CONSTRUCT WESTERN ½ (AND ANY OTHER NECESSARY ROADWAY IMPROVEMENTS) OF DAWSON TRAILS BLVD TO END OF PHASE OR SUBPHASE IF NOT PREVIOUSLY IMPROVED
- TRAILS WITHIN PHASE OR SUBPHASE
- COMPLETE THE INTERNAL STREET, STORM, SANITARY, & WATER SYSTEMS WITHIN PHASE OR SUBPHASE AS SHOWN ON THE CONSTRUCTION PLANS
- STORM FACILITIES ASSOCIATED WITH PHASE OR SUBPHASE
- SOUTH DAWSON TRIBUTARY CHANNEL IMPROVEMENTS WITHIN PHASE OR SUBPHASE IF NOT PREVIOUSLY IMPROVED
- SOUTH DAWSON TRIBUTARY 100-YEAR FLOODPLAIN SHALL BE PRESERVED AS OPEN SPACE

CHECKED BY: MB, SW
DRAWN BY: DJ, JR



LEGEND

- PLANNING AREA BOUNDARY
- PHASE BOUNDARY
- MAJOR DRAINAGEWAY
- SEWER INTERTCEPTOR
- GREEN ZONE WATER TANK (APPROXIMATE LIMITS)
- RED & BLUE ZONE WATER TANK (APPROXIMATE LIMITS)
- UTILITY ARROW
- PROPOSED REGIONAL POND
- PROPOSED GRADE SEPARATED CROSSING AREA
- POTENTIAL ±3 AC. WELL SITE
- **POTENTIAL PUBLIC FACILITIES
- 100-YEAR FEMA FLOODPLAIN
- 100-YEAR TOWN FLOODPLAIN
- TRAFFIC LIGHT CONTROLLED INTERSECTION
- ROUNDABOUT INTERSECTION

*PHASE 5A:

- WATER CONNECTION TO OFFSITE GREEN ZONE TANK 21
- WATER MAIN (GREEN ZONE) FROM TANK 21 TO PHASE 5A
- WATER BOOSTER PUMP (GREEN ZONE)
- TRAILS WITHIN PHASE OR SUBPHASE
- COMPLETE THE INTERNAL STREET, STORM, SANITARY, & WATER SYSTEMS WITHIN PHASE OR SUBPHASE AS SHOWN ON THE CONSTRUCTION PLANS
- STORM FACILITIES ASSOCIATED WITH PHASE OR SUBPHASE

*PHASE 5B:

- TRAILS WITHIN PHASE OR SUBPHASE
- COMPLETE THE INTERNAL STREET, STORM, SANITARY, & WATER SYSTEMS WITHIN PHASE OR SUBPHASE AS SHOWN ON THE CONSTRUCTION PLANS.
- GREEN PRESSURE ZONE WATER TANK AND BOOSTER PUMPS NOTED IN PHASE 5A WILL BE REQUIRED TO BE CONSTRUCTED
- STORM FACILITIES ASSOCIATED WITH PHASE OR SUBPHASE

*PHASE 6A:

- TRAILS WITHIN PHASE OR SUBPHASE
- COMPLETE THE INTERNAL STREET, STORM, SANITARY, & WATER SYSTEMS WITHIN PHASE OR SUBPHASE AS SHOWN ON THE CONSTRUCTION PLANS
- GREEN ZONE WATER TANK AND BOOSTER PUMPS NOTED IN PHASE 5A WILL BE REQUIRED TO BE CONSTRUCTED
- STORM FACILITIES ASSOCIATED WITH PHASE OR SUBPHASE

*PHASE 6B:

- TRAILS WITHIN PHASE OR SUBPHASE
- COMPLETE THE INTERNAL STREET, STORM, SANITARY, & WATER SYSTEMS WITHIN PHASE OR SUBPHASE AS SHOWN ON THE CONSTRUCTION PLANS
- GREEN ZONE WATER TANK AND BOOSTER PUMPS NOTED IN PHASE 5A WILL BE REQUIRED TO BE CONSTRUCTED
- STORM FACILITIES ASSOCIATED WITH PHASE OR SUBPHASE
- SOUTH DAWSON CHANNEL IMPROVEMENTS ADJACENT TO PHASE OR SUBPHASE IF NOT PREVIOUSLY IMPROVED.

*PHASE 7:

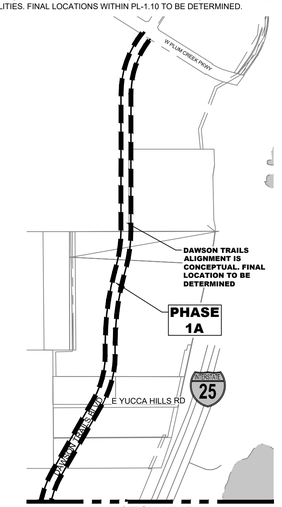
- SANITARY SEWER LIFT STATIONS (IF REQUIRED)
- TRAILS WITHIN PHASE OR SUBPHASE
- COMPLETE THE INTERNAL STREET, STORM, SANITARY, & WATER SYSTEMS WITHIN PHASE OR SUBPHASE AS SHOWN ON THE CONSTRUCTION PLANS
- GREEN ZONE WATER TANK AND BOOSTER PUMPS NOTED IN PHASE 5A WILL BE REQUIRED TO BE CONSTRUCTED
- STORM FACILITIES ASSOCIATED WITH PHASE OR SUBPHASE

*PHASE 8:

- SANITARY SEWER LIFT STATION(S) (IF REQUIRED)
- TRAILS WITHIN PHASE OR SUBPHASE
- COMPLETE THE INTERNAL STREET, STORM, SANITARY, & WATER SYSTEMS WITHIN PHASE OR SUBPHASE AS SHOWN ON THE CONSTRUCTION PLANS
- GREEN ZONE WATER TANK AND BOOSTER PUMPS NOTED IN PHASE 5A WILL BE REQUIRED TO BE CONSTRUCTED
- STORM FACILITIES ASSOCIATED WITH PHASE OR SUBPHASE
- EMERGENCY VEHICLE ACCESS (EVA) CONNECTION TO CASTLE BUTTE DRIVE IF NOT PREVIOUSLY CONSTRUCTED

* IF IT IS DETERMINED THAT A GREEN ZONE TANK IS NEEDED, OTHER THAN PHASE 1A AND PLANNING AREA C-2, NO OVERLOT GRADING AND ASSOCIATED INFRASTRUCTURE PERMITS FOR DEVELOPMENT WITHIN THE AREA TO BE SERVED BY THE GREEN ZONE TANK WILL BE ISSUED UNTIL SUCH TIME AS THE OWNER PURCHASES ANY NECESSARY LAND AND/OR EASEMENTS FOR THE POTENTIAL GREEN ZONE TANK & ASSOCIATED TRANSMISSION LINE(S), & BEGINS CONSTRUCTION OF THE GREEN ZONE TANK.

** PUBLIC FACILITIES INCLUDING, BUT NOT LIMITED TO: FIRE STATION, PUBLIC WORKS SERVICE CENTER, ±6 AC TREATMENT FACILITY, ±3 AC WELL SITE, AND ASSOCIATED STORM WATER FACILITIES. FINAL LOCATIONS WITHIN PL-1.10 TO BE DETERMINED.



NORRIS DESIGN
Planning | Landscape Architecture | Branding
1101 Bannock Street
Denver, Colorado 80204
P 303.892.1166
www.norris-design.com

APPLICANT:
WESTSIDE INVESTMENT PARTNERS
4100 E. MISSISSIPPI AVE
SUITE 500
DENVER, CO 80246
303-984-9800

ENGINEER & SURVEYOR:
CORE CONSULTANTS, INC.
LIVEYOURCORE.COM
CORE CONSULTANTS
3473 S. BROADWAY
ENGLEWOOD, CO 80113
303-730-5960

DAWSON TRAILS

DAWSON TRAILS
PLANNED DEVELOPMENT PLAN AND ZONING REGULATIONS
(AN AMENDMENT TO THE DAWSON RIDGE PRELIMINARY P.U.D SITE PLAN AND A PORTION OF THE WESTFIELD TRADE CENTER PERLIMINARY P.U.D. SITE PLAN)

NOT FOR CONSTRUCTION

DATE:
PDP-01 07/08/2021
PDP-02 12/03/2021
PDP-03 04/13/2022
PDP-04 05/27/2022
PDP-05 06/09/2022

SHEET TITLE:
PHASING PLAN

SHEET
11 OF 20

Appendix E

Maps

0 700' 1,400'

1 inch = 700 ft.

LEGEND

- PROPOSED SANITARY
- PROPOSED SANITARY FORCE MAIN
- PROPOSED WATER
- PROPOSED WATER TRANSMISSION LINE
- PHASE 1
- PHASE 2
- PHASE 3
- PHASE 4
- PHASE 5
- PHASE 6
- BOOSTER PUMP (COLOR VARIES BY ZONE)
- PROPOSED TANK
- PRESSURE REDUCTION VALVE (PRV)
- LIFT STATION
- SANITARY FLOW DIRECTION ARROW
- PHASE

PLUM CREEK PKWY

CONNECT TO EXISTING WATER LINE PROVIDED BY TANK 8

PD - PLANNED DEVELOPMENT (PLUM CREEK WE TOWN OF CASTLE R TOWN OF CASTLE RO

PD - PLANNED DEVELOPMENT (YOUR STORAGE CENTER AT CASTLE ROCK) TOWN OF CASTLE ROCI

PD - PLANNED DEVELOPMENT (BURT AT CASTLE ROCK) TOWN OF CASTLE ROCK

PD - PLANNED DEVELOPMENT (WESTFIELD TRADE CENTER) DOUGLAS COUNTY

PRV

F-1

B - BUSINESS / COMMERCIAL TOWN OF CASTLE ROCK

OSP-06

OSP-5

PL-1.08

A1 - AGRICULTURE ONE DOUGLAS COUNTY

PUMP HOUSE

PL-1.07

F-1

PL-2.04

PL-2.05

1

WATER BOOSTER PUMP (BLUE TO RED ZONE)

PD - PLANNED DEVELOPMENT (CREEKSIDE) TOWN OF CASTLE ROCK

LRR - LARGE RURAL RESIDENTIAL (TWIN OAKS) DOUGLAS COUNTY

F-2

E-1

PL 2.06

PD - PLANNED DEVELOPMENT (PLUM CREEK POINTE) TOWN OF CASTLE ROCK

FUTURE CRYSTAL VALLEY INTERCHANGE

E-2

A1 - AGRICULTURE ONE DOUGLAS COUNTY

ER - ESTATE RESIDENTIAL (CASTLE MESA) DOUGLAS COUNTY

B-1

PL-1.06

OSP-07

F-3

LI - LIGHT INDUSTRIAL DOUGLAS COUNTY

B-1

B-1

4

E-2

PL-2.02

PL-1.03

PL-2.01

A

RED ZONE TANK 19 @ ±6656 HGL

PL-1.05

D

2

F-3

PL-1.02

C-2

C-1

PL-1.04

D

D

G-1

A1 - AGRICULTURE ONE DOUGLAS COUNTY

OSP-2

OSP-3

OSP-4

PL-1.01

OSP-1

C-2

NOT A PART

D

INTERSTATE 25

A1 - AGRICULTURE ONE DOUGLAS COUNTY

C-1

NOT A PART

G-1

6

A

5

C-1

3

DAWSON TRAILS BLVD

C - COMMERCIAL

C-2

PL-1.10

PD - PLANNED DEVELOPMENT (BELLE MOUNTAIN RANCH) DOUGLAS COUNTY

PL-1.09

PL-2.08

G-2

CONNECT TO GREEN ZONE TANK 21 @ ±6800 HGL (SITE TO BE DETERMINED)

A1 - AGRICULTURE ONE DOUGLAS COUNTY

A1 - AGRICULTURE ONE DOUGLAS COUNTY

CORE CONSULTANTS. INC.
3473 S. BROADWAY
ENGLEWOOD, CO 80113
303.703.4444
LIVEYOURCORE.COM

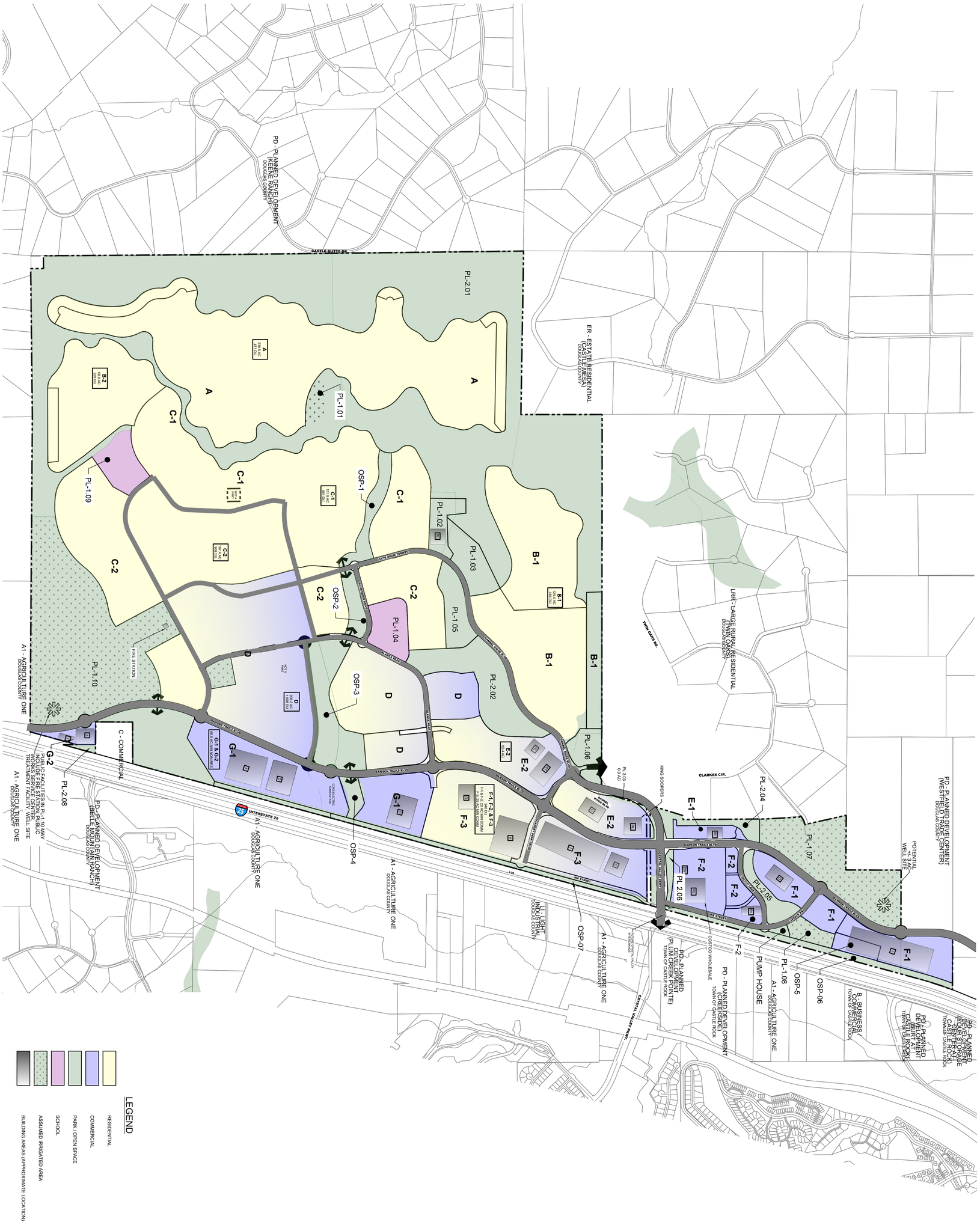
LAND DEVELOPMENT
ENERGY
PUBLIC INFRASTUCTURE

DAWSON TRAILS

OVERALL UTILITY & PHASING MAP

DATE: 8/20/2024
CREATED BY: CGV
JOB NO. 20-224
SHEET 1 OF 5

2022-08-15 (9:38 AM) Tony Yuan X:\20-224 Dawson\Civil\Reports_Overall\Utility\Master Utility Report\E - Utility Maps PHASING MAP.dwg



SHEET 2 OF 5	DAWSON TRAILS	LAND USE MAP	CORE CONSULTANTS, INC. 3473 S. BROADWAY ENGLEWOOD, CO 80113 303.703.4444 LIVEYOURCORE.COM
JOB NO. 20-224			LAND DEVELOPMENT ENERGY PUBLIC INFRASTUCTURE
CREATED BY: TY			
DATE: 8/19/2024			



JUNCTION TABLE				
JUNCTION	RESIDENTIAL (GPD)	NON-RESIDENTIAL	TOTAL PEAK FLOW (GPM)	CUMULATIVE TOTAL PEAK
J-4.01	18,400	-	65	65
J-4.02	6,800	-	24	89
J-4.03	16,600	-	59	148
J-4.04	-	3,375	12	160
J-4.05	26,600	1,000	98	258
J-4.06	72,400	-	257	514
J-4.07	-	20,000	71	585
J-4	-	-	-	2,948
J-5.01	-	6,000	21	21
J-5.02	37,000	-	131	152
J-5.03	26,200	-	93	245
J-5.04	33,600	-	119	364
J-5.05	-	9,500	34	398
J-5.06	26,000	-	92	92
J-5.07	26,000	231,000	910	1,400
J-5.08	70,200	63,906	475	1,875
J-5	-	-	-	4,823

SUMMARY TABLE			
	USE	QUANITIES	TOTALS
RESIDENTIAL	MULTIFAMILY (DU)	1,240	2,233
	SINGLE FAMILY (DU)	993	
NON-RESIDENTIAL	SCHOOL (EA)	1	
	PARKS (SFE)	-	
	CAR WASH (AC)	-	
	INDUSTRIAL (SF)	-	
	HOTEL (SF)	300,000	975,000
	RESTAURANTS (SF)	150,000	
	RETAIL/ OFFICE (SF)	525,000	

NOTES:

1. SEE APPENDIX C FOR DETAILED SANITARY SEWER CALCULATIONS

LEGEND

- BASIN 1
- BASIN 2
- BASIN 3
- BASIN 4
- BASIN 5

LEGEND

- 8" PROPOSED SANITARY
- 10" PROPOSED SANITARY
- 12" PROPOSED SANITARY
- 15" PROPOSED SANITARY
- 18" PROPOSED SANITARY
- 21" PROPOSED SANITARY
- 24" PROPOSED SANITARY
- 27" PROPOSED SANITARY
- FORCE MAIN SANITARY
- FLOW DIRECTION ARROW
- HIGH POINT
- LOW POINT
- SANITARY JUNCTION
- SANITARY INPUT PT.
- LIFT STATION

EMK CONSULTANTS, INC.
ENGINEERING SURVEYING
LAND DEVELOPMENT
SERVICES AND SOLUTIONS
7006 SOUTH ALTON WAY, BLDG. F
CENTENNIAL, COLORADO 80112-2019
(303)694-1520
www.EMKcc.com

OVERALL WASTEWATER MAP (1 OF 1)

DAWSON TRAILS

8/15/2024

CREATED BY: CGV

JOB NO. 20-224

SHEET 1 OF 1

2022-10-10 (4:13 PM) David.Ott By Report:\\EMKDEN\EMK_X\20-224 Dawson\Civil\Reports\Final Utility Report\Wastewater Drawings OVERALL WASTEWATER MAP-F1.dwg

0 800' 1,600'

1 inch = 800 ft.

LEGEND

- WATER ZONE GREEN (TANK 6700 - 6537)
- WATER ZONE RED (TANK 6557 - 6393)
- WATER ZONE BLUE (TANK 6389 - 6221)
- PROPOSED GREEN ZONE WATER LINE
- PROPOSED RED ZONE WATER LINE
- PROPOSED BLUE ZONE WATER LINE
- EXISTING BLUE ZONE WATER LINE
- TRANSMISSION LINE (COLOR VARIES BY ZONE)
- BOOSTER PUMP (COLOR VARIES BY ZONE)
- WATER DEMAND PT. (COLOR VARIES BY ZONE)
- PROPOSED TANK (COLOR VARIES BY ZONE)
- PRV (COLOR VARIES PER ZONE)

PLUM CREEK PKWY

CONNECT TO EXISTING WATER LINE PROVIDED BY TANK 8

PRV

F-1 20.0 AC

OSP-06 11.8 AC

PERRY ST

OSP-5 4.5 AC

RES: 0 SFE
NON-RES: 90 SFE
TOTAL: 90 SFE

DAWSON TRAILS BLVD

RES: 0 SFE
NON-RES: 4 SFE
TOTAL: 4 SFE

F-1 6.3 AC

PL-1.08 5.0 AC

RES: 0 SFE
NON-RES: 3 SFE
TOTAL: 3 SFE

PL-1.07 44.1 AC

RES: 0 SFE
NON-RES: 33 SFE
TOTAL: 33 SFE

PUMP HOUSE 0.73 AC

F-1 11 AC

PL-2.04 7.0 AC

PL-2.05 7.2 AC

COSTCO LANE

E-1 0.53 AC

F-2 3.7 AC

CLARKES CIR.

RES: 0 SFE
NON-RES: 20 SFE
TOTAL: 20 SFE

F-2 2 AC

F-2 19.7 AC

RES: 0 SFE
NON-RES: 102 SFE
TOTAL: 102 SFE

F-2 3.6 AC

CONNECT TO EXISTING WATER LINE PROVIDED BY TANK 4

E-1 5.1 AC

PL-2.06 4.4 AC

IKE STREET

CRYSTAL VALLEY PKWY

CRYSTAL VALLEY PKWY.

TWIN OAKS RD.

FUTURE CRYSTAL VALLEY INTERCHANGE

E-2 63.3 AC

RES: 400 SFE
NON-RES: 70 SFE
TOTAL: 470 SFE

RES: 403 SFE
NON-RES: 106 SFE
TOTAL: 509 SFE

OSP-07 16.8 AC

F-3 81.9 AC

PL-1.06 7.5 AC

RES: 245 SFE
NON-RES: 0 SFE
TOTAL: 245 SFE

B1 124.4 AC

RES: 239 SFE
NON-RES: 0 SFE
TOTAL: 239 SFE

GAMBEL RIDGE BLVD

E-2 63.3 AC

RES: 400 SFE
NON-RES: 70 SFE
TOTAL: 470 SFE

RES: 537 SFE
NON-RES: 141 SFE
TOTAL: 678 SFE

QUANDRY PEAK DRIVE

IKE STREET

F-1, F-2, & F-3
940 DU
F-1 & F-2: 20 AC MIN COMM
F-3: 25 AC MIN COMM

WATER BOOSTER PUMP (RED TO GREEN ZONE)

PL-1.03 12.0 AC

PL-2.02 31.2 AC

D 206.2 AC

RES: 133 SFE
NON-RES: 15 SFE
TOTAL: 148 SFE

F-3 81.9 AC

A

PL-2.01 382.9 AC

RES: 333 SFE
NON-RES: 0 SFE
TOTAL: 333 SFE

PL-1.02 8.0 AC

PL-1.05 13.0 AC

C-2 31.7 AC

BLANCA PEAK PKWY

RES: 467 SFE
NON-RES: 50 SFE
TOTAL: 517 SFE

RES: 0 SFE
NON-RES: 68 SFE
TOTAL: 68 SFE

G-1 62.6 AC

RED ZONE TANK 19 @ ±6656 HGL

RES: 92 SFE
NON-RES: 0 SFE
TOTAL: 92 SFE

RES: 169 SFE
NON-RES: 0 SFE
TOTAL: 169 SFE

RES: 0 SFE
NON-RES: 17 SFE
TOTAL: 17 SFE

PL-1.04 12.2 AC

C-1

D 206.2 AC

D 206.2 AC

DAWSON TRAILS BLVD

SCHROEDER DRIVE

OSP-1 8.5 AC

OSP-3 16.1 AC

OSP-4 3.9 AC

CORE ELECTRIC SUBSTATION

C-1 151.9 AC 481 DU

OSP-2 7.3 AC

RES: 102 SFE
NON-RES: 0 SFE
TOTAL: 102 SFE

C-2

PL-1.01 4.5 AC

RES: 0 SFE
NON-RES: 2 SFE
TOTAL: 2 SFE

RES: 195 SFE
NON-RES: 21 SFE
TOTAL: 216 SFE

D 206.2 AC 1,938 DU

RES: 222 SFE
NON-RES: 0 SFE
TOTAL: 222 SFE

RES: 622 SFE
NON-RES: 66 SFE
TOTAL: 688 SFE

G-1 & G-2
66.9 AC MIN
NON-RES

A 236.5 AC 471 DU

C-1

NOT A PART

D

OSP-08 4.0 AC

RES: 0 SFE
NON-RES: 2 SFE
TOTAL: 2 SFE

G-1

RES: 0 SFE
NON-RES: 101 SFE
TOTAL: 101 SFE

INTERSTATE 25

C-2 187.4 AC 908 DU

RES: 348 SFE
NON-RES: 36 SFE
TOTAL: 384 SFE

RES: 173 SFE
NON-RES: 18 SFE
TOTAL: 191 SFE

RES: 138 SFE
NON-RES: 0 SFE
TOTAL: 138 SFE

RES: 167 SFE
NON-RES: 0 SFE
TOTAL: 167 SFE

RES: 334 SFE
NON RES: 0 SFE
TOTAL: 334 SFE

RES: 114 SFE
NON-RES: 0 SFE
TOTAL: 114 SFE

RES: 189 SFE
NON-RES: 0 SFE
TOTAL: 189 SFE

RES: 0 SFE
NON-RES: 25 SFE
TOTAL: 25 SFE

RES: 0 SFE
NON-RES: 5 SFE
TOTAL: 5 SFE

RES: 228 SFE
NON-RES: 0 SFE
TOTAL: 228 SFE

B-2 58.9 AC 228 DU

RES: 0 SFE
NON-RES: 17 SFE
TOTAL: 17 SFE

PL-1.09 12.0 AC

C-2

PL-1.10 109.3 AC

RES: 0 SFE
NON-RES: 13 SFE
SFE: 13 UNITS

PL-2.08 0.9 AC

G-2 4.3 AC

CONNECT TO GREEN ZONE TANK 21 @ ±6800 HGL (SITE TO BE DETERMINED)

CASTLE BUTTE DR.

CORE	CORE CONSULTANTS. INC. 3473 S. BROADWAY ENGLEWOOD, CO 80113 303.703.4444 LIVEYOURCORE.COM	LAND DEVELOPMENT ENERGY PUBLIC INFRASTUCTURE	DAWSON TRAILS

OVERALL WATER MAP

DATE: 8/21/2024
CREATED BY: CGV
JOB NO. 20-224
SHEET 3 OF 5

2021-09-11 (4:36 PM) Tony Yuan X:\20-224 Dawson\CivilReports_Overall\Utility\Master Utility Report\E - Utility Maps OVERALL WATER MAP.dwg

N

Legend

- Junction

TYPE

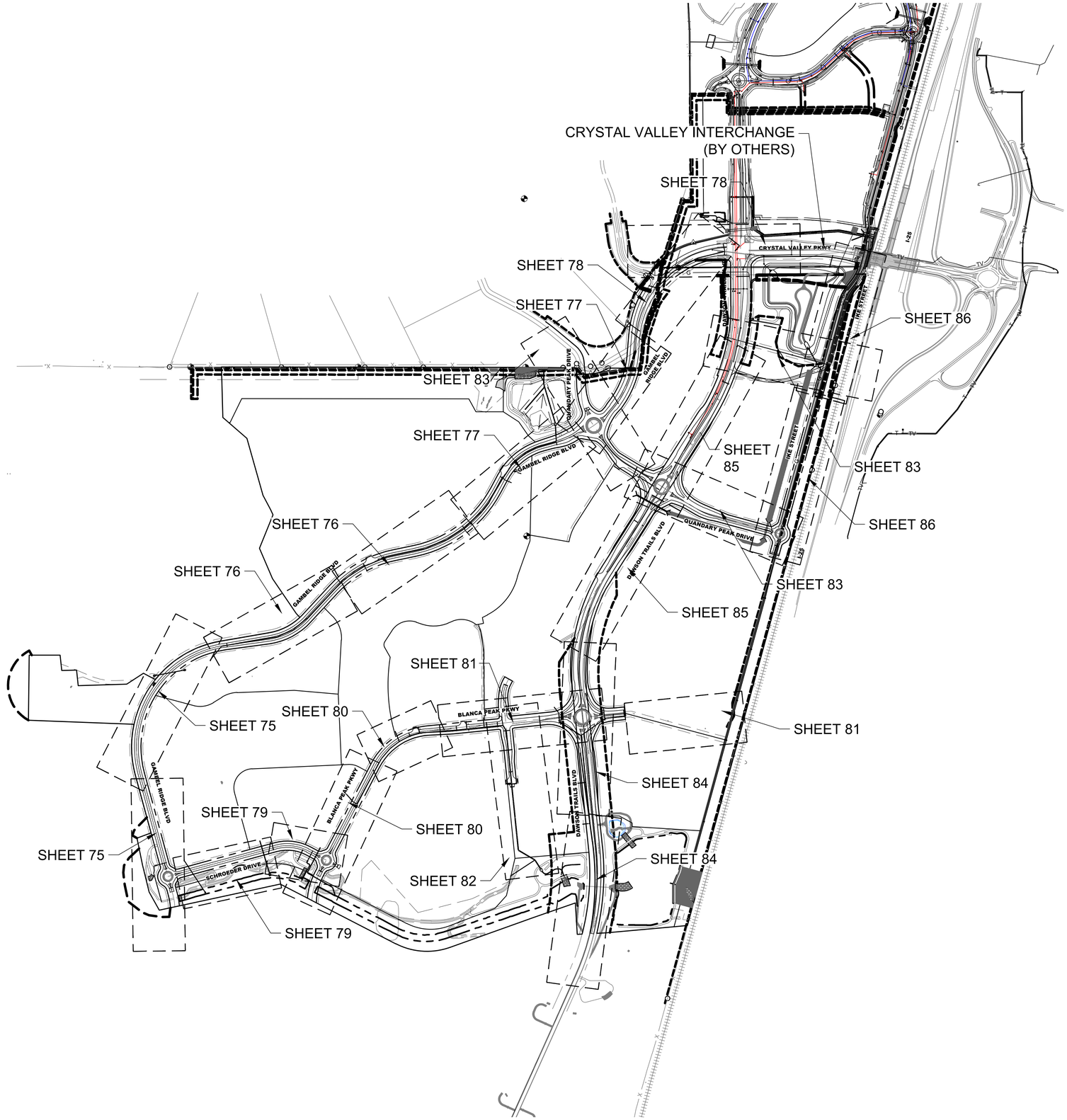
- Active
- Domain
- Inactive
- Pipe
- Active
- Domain
- Inactive

ZONE

- Blue
- Red
- P-ROW
- P-PlanningArea
- E-Bndry

SUPPLY1
FEED1
P-20
J84
P-23
J90
P-22
J28
J26
P-24
P-21
J18
P-3
P-27
J20
P-2
P-70
J10
P-25
J12
P-69
P-91
P-11
J15
P-72
P-74
SUPPLY2
FEED2
J14
J50
J17
P-71
P-73
J92
P-30
P-67
J94
P-76
J140
P-31
J54
P-32
J96
P-33
J98
P-40
J134
P-61
P-60
P-66
P-79
FEED3
P-181
P-18
J80
J82
J76
J78
J136
P-58
J132
J130
P-68
P-62
J48
J108
P-39
J24
P-4
J22
J112
J110
P-41
P-43
P-38
J68
P-16
J70
P-36
J102
J106
P-35
J100
P-57
J128
P-34
P-44
J114
P-45
P-10
P-56
J44
P-48
P-47
J118
J120
J58
P-13
P-49
J62
P-65
J46
P-64
J42
P-9
P-55
P-52
J56
P-51
J66
P-15
J74
P-17
P-53
J126
J72
J122
P-50
J64
P-14
J60
FEED4

MSK consulting 7157 S. Andes Cir Centennial, CO 80016 303-903-0918	PRELIMINARY	WESTSIDE INVESTMENT PARTNERS
		DAWSON TRAILS
		FIGURE B1
		PHASE 1 WATER DISTRIBUTION SYSTEM MODEL
		PIPE & JUNCTION ID
		DECEMBER 2024 / JN: 52-001-01



BASIS OF BEARINGS

SEE COVER SHEET FOR BASIS OF BEARINGS & BENCHMARK.

PROFESSIONAL ENGINEER CERTIFICATION

I HEREBY AFFIRM THAT THESE FINAL CONSTRUCTION PLANS WERE PREPARED UNDER MY DIRECT SUPERVISION, IN ACCORDANCE WITH ALL APPLICABLE TOWN OF CASTLE ROCK AND STATE OF COLORADO STANDARDS AND STATUTES, RESPECTIVELY; AND THAT I AM FULLY RESPONSIBLE FOR ALL DESIGN AND REVISIONS RELATIVE TO SAID PLANS.

GARY A. WALTER DATE

STATE OF COLORADO # 42246

TOWN APPROVAL BLOCK

TOWN OF CASTLE ROCK APPROVAL
PLANS ARE HEREBY APPROVED FOR ONE YEAR FROM DATE OF DEVELOPMENT SERVICES APPROVAL.

APPROVED BY:

DEVELOPMENT SERVICES DATE

EMK CONSULTANTS, INC.
ENGINEERING SURVEYING
LAND DEVELOPMENT
SERVICES AND SOLUTIONS
7006 SOUTH ALTON WAY, BLDG. F
CENTENNIAL, COLORADO 80112-2019
(303)694-1520
www.EMKC.com

Know what's below. Call before you dig. 811

#	REVISION DESCRIPTION	DATE	BY
1	1ST SUBMITTAL	10/31/23	JF
2	2ND SUBMITTAL	8/23/24	BG
3	3RD SUBMITTAL	12/23/24	GW
4	4TH SUBMITTAL	4/30/25	GW

DAWSON TRAILS - FILING 2 INFRASTRUCTURE

CASTLE ROCK, COLORADO

CONSTRUCTION DOCUMENTS
OVERALL UTILITY PLAN INDEX

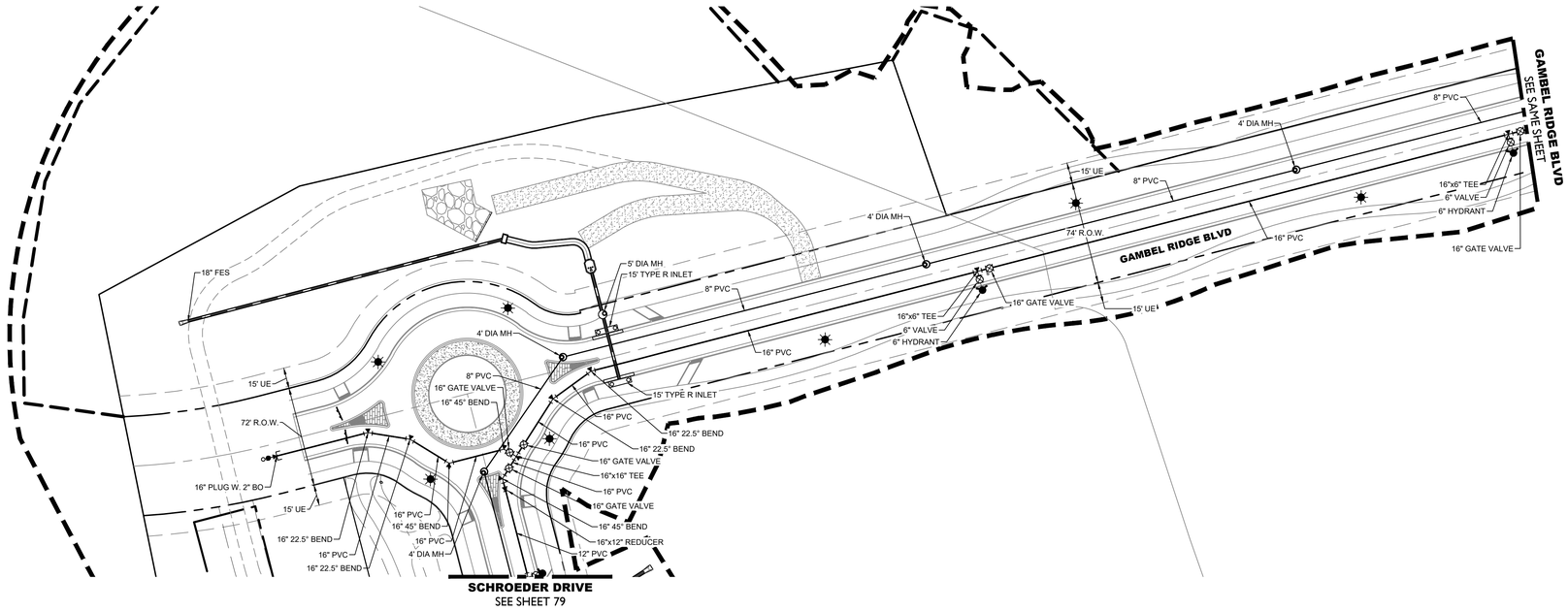
WESTSIDE

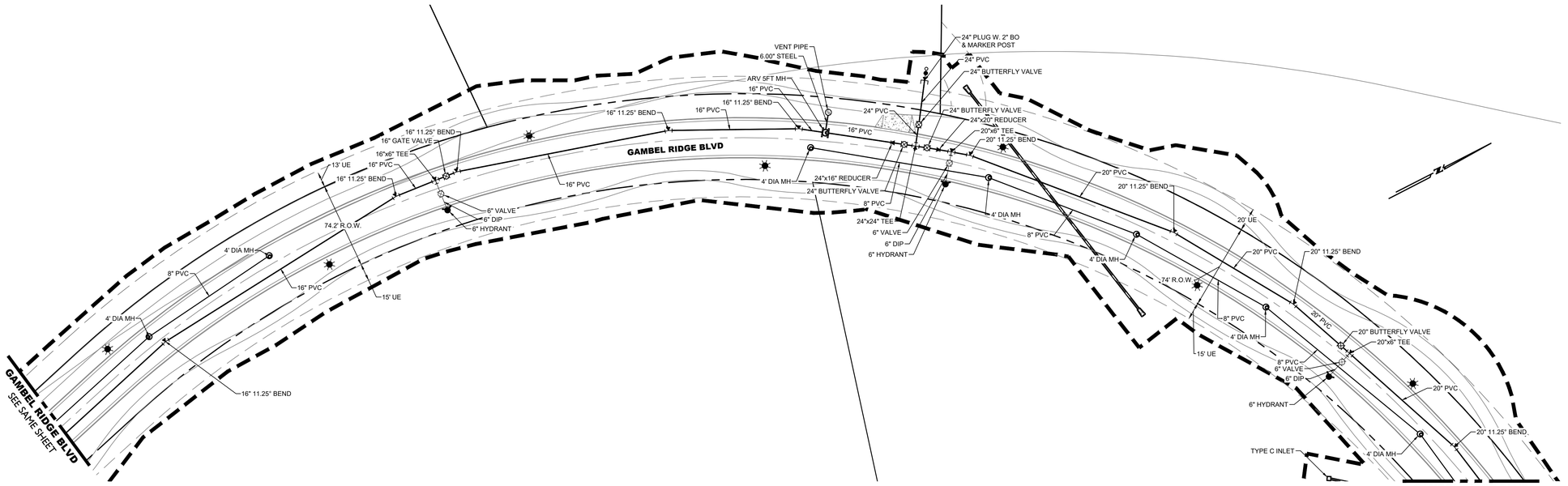
DESIGNED BY: DO
DRAWN BY: DL
CHECKED BY: GAW

JOB NO. 13466.00

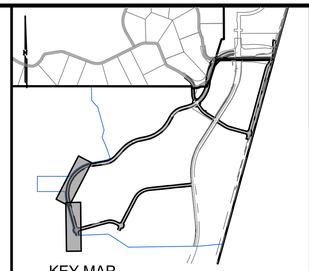
SHEET 74 OF 301

4/30/2025 3:59 PM X:\20-224 Dawson\Civil\CAD\Plans\INFRA11\CDs OVERALL UTILITY PLAN INDEX.dwg





NOTES:
1. ALL STUB OUTS AND TEMPORARY BLOW OFFS ARE TO BE FULLY RESTRAINED BACK TO THE TEE OR CROSS.



0 50' 100'

1 inch = 50 ft.

LEGEND

- EASEMENT
- RIGHT OF WAY (R.O.W.)
- CENTERLINE
- LIMITS OF CONSTRUCTION
- EXISTING CURB & GUTTER
- PROPOSED CURB & GUTTER
- PROPOSED IRRIGATION & STUB OUT
- PROPOSED STORM & STUB OUT
- PROPOSED SANITARY & STUB OUT
- PROPOSED WATER & STUB OUT
- EXISTING IRRIGATION & STUB OUT
- EXISTING STORM & STUB OUT
- EXISTING SANITARY & STUB OUT
- EXISTING WATER & STUB OUT
- FUTURE IRRIGATION & STUB OUT
- FUTURE SANITARY & STUB OUT
- FUTURE STORM & STUB OUT
- FUTURE WATER & STUB OUT
- IRRIGATION SERVICE
- SANITARY SERVICE
- WATER SERVICE
- BLOCK NUMBER (1 2 3 4)
- STREET LIGHT POLES (EXISTING / PROPOSED)
- POWER POLES
- GUY WIRE
- SANITARY MANHOLES
- SANITARY CLEAN OUT
- WATER VALVES
- BEND AND THRUST BLOCK
- FIRE HYDRANTS
- WATERLINE REDUCER
- WATER STUB WITH BLOW OFF
- AIR RELEASE VALVE MH & VENT PIPE
- STORM MANHOLES
- STORM INLETS
- FES, FOREBAY, & TRICKLE CHANNEL
- OUTLET STRUCTURE
- CRUSHER FINES MAINTENANCE ACCESS
- RIPRAP
- EXISTING ELECTRIC
- EXISTING TELEPHONE
- EXISTING FIBER OPTIC
- EXISTING GAS
- EXISTING OVER HEAD ELECTRIC
- STORM UNDERDRAIN
- 100 YEAR FLOODPLAIN
- WETLAND

NOTES:

1. MAXIMUM DEFLECTION FOR THE WATER MAINS SHALL NOT EXCEED ONE-HALF OF THE MANUFACTURER'S MAXIMUM ALLOWABLE DEFLECTION OR 1 DEGREE, WHICHEVER IS LESS.

BASIS OF BEARINGS

SEE COVER SHEET FOR BASIS OF BEARINGS & BENCHMARK.

PROFESSIONAL ENGINEER CERTIFICATION

I HEREBY AFFIRM THAT THESE FINAL CONSTRUCTION PLANS WERE PREPARED UNDER MY DIRECT SUPERVISION, IN ACCORDANCE WITH ALL APPLICABLE TOWN OF CASTLE ROCK AND STATE OF COLORADO STANDARDS AND STATUTES, RESPECTIVELY; AND THAT I AM FULLY RESPONSIBLE FOR ALL DESIGN AND REVISIONS RELATIVE TO SAID PLANS.

GARY A. WALTER — DATE

STATE OF COLORADO # 42246

TOWN APPROVAL BLOCK

TOWN OF CASTLE ROCK APPROVAL
PLANS ARE HEREBY APPROVED FOR ONE YEAR FROM DATE OF DEVELOPMENT SERVICES APPROVAL.

APPROVED BY:

DEVELOPMENT SERVICES — DATE

EMK CONSULTANTS, INC.
ENGINEERING SURVEYING
LAND DEVELOPMENT
SERVICES AND SOLUTIONS
7006 SOUTH ALTON WAY, BLDG. F
CENTENNIAL, COLORADO 80112-2019
(303)694-1520
www.EMKc.com

Know what's below. Call before you dig. 811

#	REVISION DESCRIPTION	DATE	BY
1	1ST SUBMITTAL	10/31/23	JF
2	2ND SUBMITTAL	8/23/24	BG
3	3RD SUBMITTAL	12/23/24	GW
4	4TH SUBMITTAL	4/30/25	GW

DAWSON TRAILS - FILING 2 INFRASTRUCTURE

CASTLE ROCK, COLORADO

CONSTRUCTION DOCUMENTS
OVERALL UTILITY PLAN (1 OF 12)

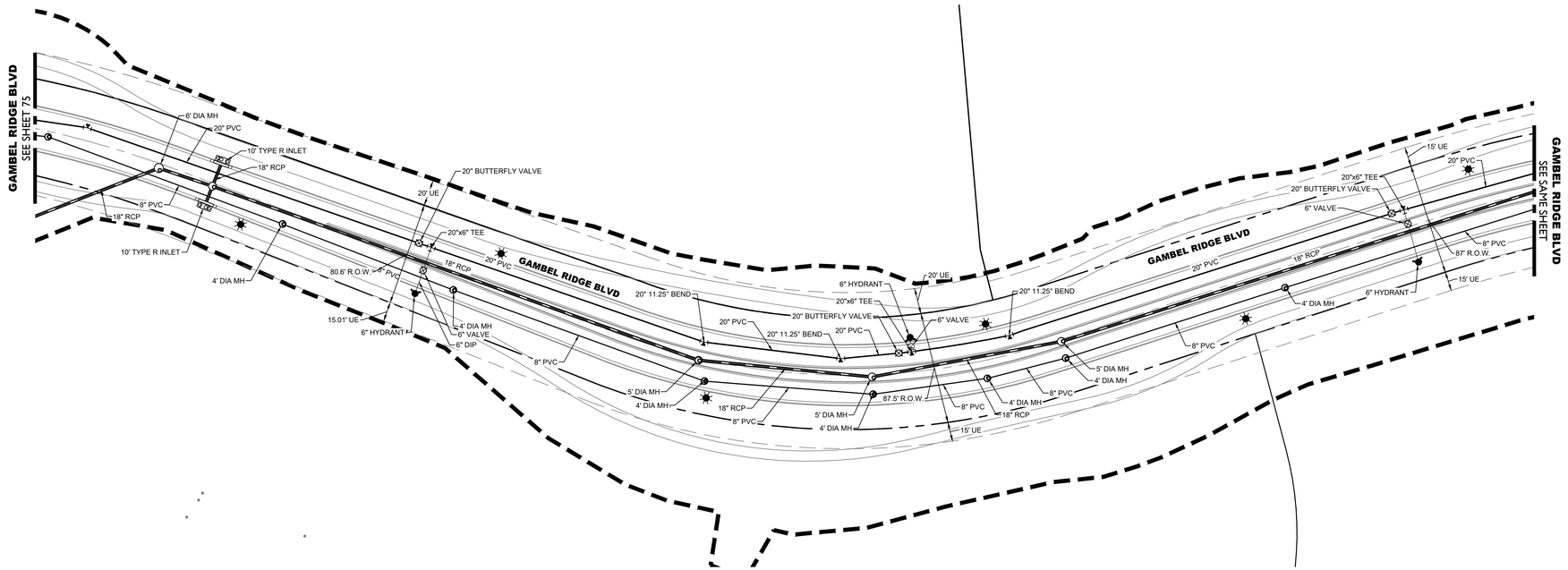
WESTSIDE

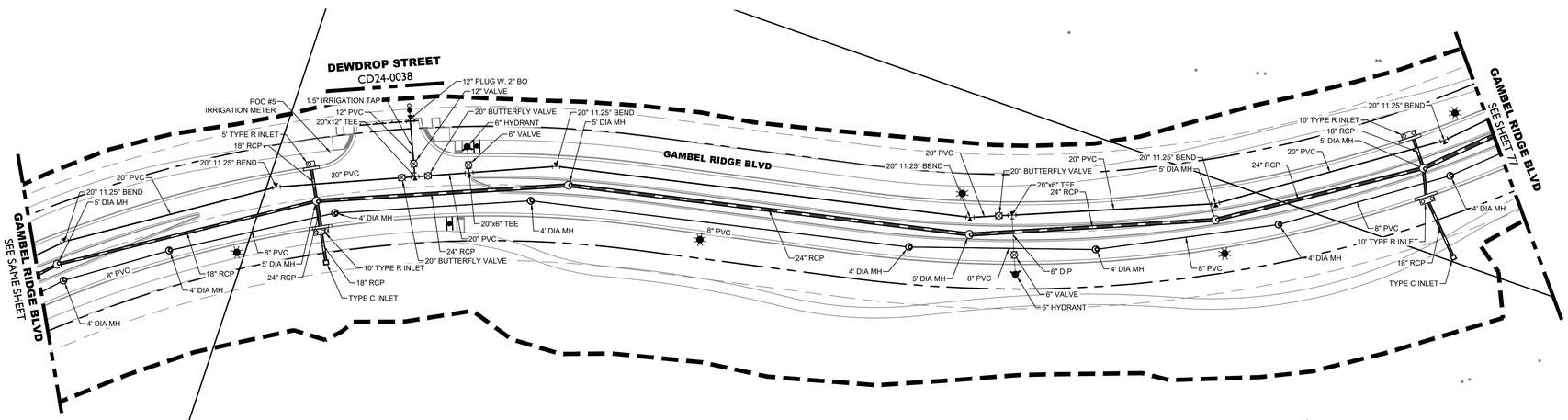
DESIGNED BY: DO
DRAWN BY: DL
CHECKED BY: GAW

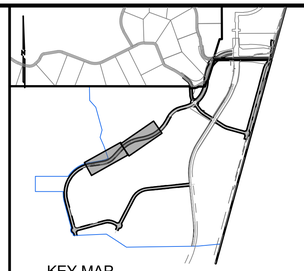
JOB NO. 13466.00

SHEET 75 OF 301

4/30/2025 4:01 PM X:\20-224 Dawson\Civil\CAD\Plans\INFRA11CDs OVERALL UTILITY PLAN.dwg







KEY MAP
SCALE: 1" = 2000'

0 50' 100'
1 inch = 50 ft.

LEGEND

- EASEMENT
- RIGHT OF WAY (R.O.W.)
- CENTERLINE
- LIMITS OF CONSTRUCTION
- EXISTING CURB & GUTTER
- PROPOSED CURB & GUTTER
- PROPOSED IRRIGATION & STUB OUT
- PROPOSED STORM & STUB OUT
- PROPOSED SANITARY & STUB OUT
- PROPOSED WATER & STUB OUT
- EXISTING IRRIGATION & STUB OUT
- EXISTING STORM & STUB OUT
- EXISTING SANITARY & STUB OUT
- EXISTING WATER & STUB OUT
- FUTURE IRRIGATION & STUB OUT
- FUTURE SANITARY & STUB OUT
- FUTURE STORM & STUB OUT
- FUTURE WATER & STUB OUT
- IRRIGATION SERVICE
- SANITARY SERVICE
- WATER SERVICE
- BLOCK NUMBER (EXISTING ① ② ③ ④ / PROPOSED)
- STREET LIGHT POLES
- POWER POLES
- GUY WIRE
- SANITARY MANHOLES
- SANITARY CLEAN OUT
- WATER VALVES
- BEND AND THRUST BLOCK
- FIRE HYDRANTS
- WATERLINE REDUCER
- WATER STUB WITH BLOW OFF
- AIR RELEASE VALVE MH & VENT PIPE
- STORM MANHOLES
- STORM INLETS
- FES, FOREBAY, & TRICKLE CHANNEL
- OUTLET STRUCTURE
- CRUSHER FINES MAINTENANCE ACCESS
- RIPRAP
- EXISTING ELECTRIC
- EXISTING TELEPHONE
- EXISTING FIBER OPTIC
- EXISTING GAS
- EXISTING OVER HEAD ELECTRIC
- STORM UNDERDRAIN
- 100 YEAR FLOODPLAIN
- WETLAND

NOTES:

1. MAXIMUM DEFLECTION FOR THE WATER MAINS SHALL NOT EXCEED ONE-HALF OF THE MANUFACTURER'S MAXIMUM ALLOWABLE DEFLECTION OR 1 DEGREE, WHICHEVER IS LESS.

BASIS OF BEARINGS

SEE COVER SHEET FOR BASIS OF BEARINGS & BENCHMARK.

PROFESSIONAL ENGINEER CERTIFICATION

I HEREBY AFFIRM THAT THESE FINAL CONSTRUCTION PLANS WERE PREPARED UNDER MY DIRECT SUPERVISION, IN ACCORDANCE WITH ALL APPLICABLE TOWN OF CASTLE ROCK AND STATE OF COLORADO STANDARDS AND STATUTES, RESPECTIVELY; AND THAT I AM FULLY RESPONSIBLE FOR ALL DESIGN AND REVISIONS RELATIVE TO SAID PLANS.

GARY A. WALTER — DATE
STATE OF COLORADO # 42246

TOWN APPROVAL BLOCK

TOWN OF CASTLE ROCK APPROVAL
PLANS ARE HEREBY APPROVED FOR ONE YEAR FROM DATE OF DEVELOPMENT SERVICES APPROVAL.

APPROVED BY:

DEVELOPMENT SERVICES — DATE

EMK CONSULTANTS, INC.
ENGINEERING & SURVEYING
LAND DEVELOPMENT
SERVICES AND SOLUTIONS
7006 SOUTH ALTON WAY, BLDG. F
CENTENNIAL, COLORADO 80112-2019
(303)694-1520
www.EMKc.com

Know what's below. Call before you dig. 811

#	REVISION DESCRIPTION	DATE	BY
1	1ST SUBMITTAL	10/31/23	JF
2	2ND SUBMITTAL	8/23/24	BG
3	3RD SUBMITTAL	12/23/24	GW
4	4TH SUBMITTAL	4/30/25	GW

DAWSON TRAILS - FILING 2 INFRASTRUCTURE

CASTLE ROCK, COLORADO

CONSTRUCTION DOCUMENTS
OVERALL UTILITY PLAN (2 OF 12)

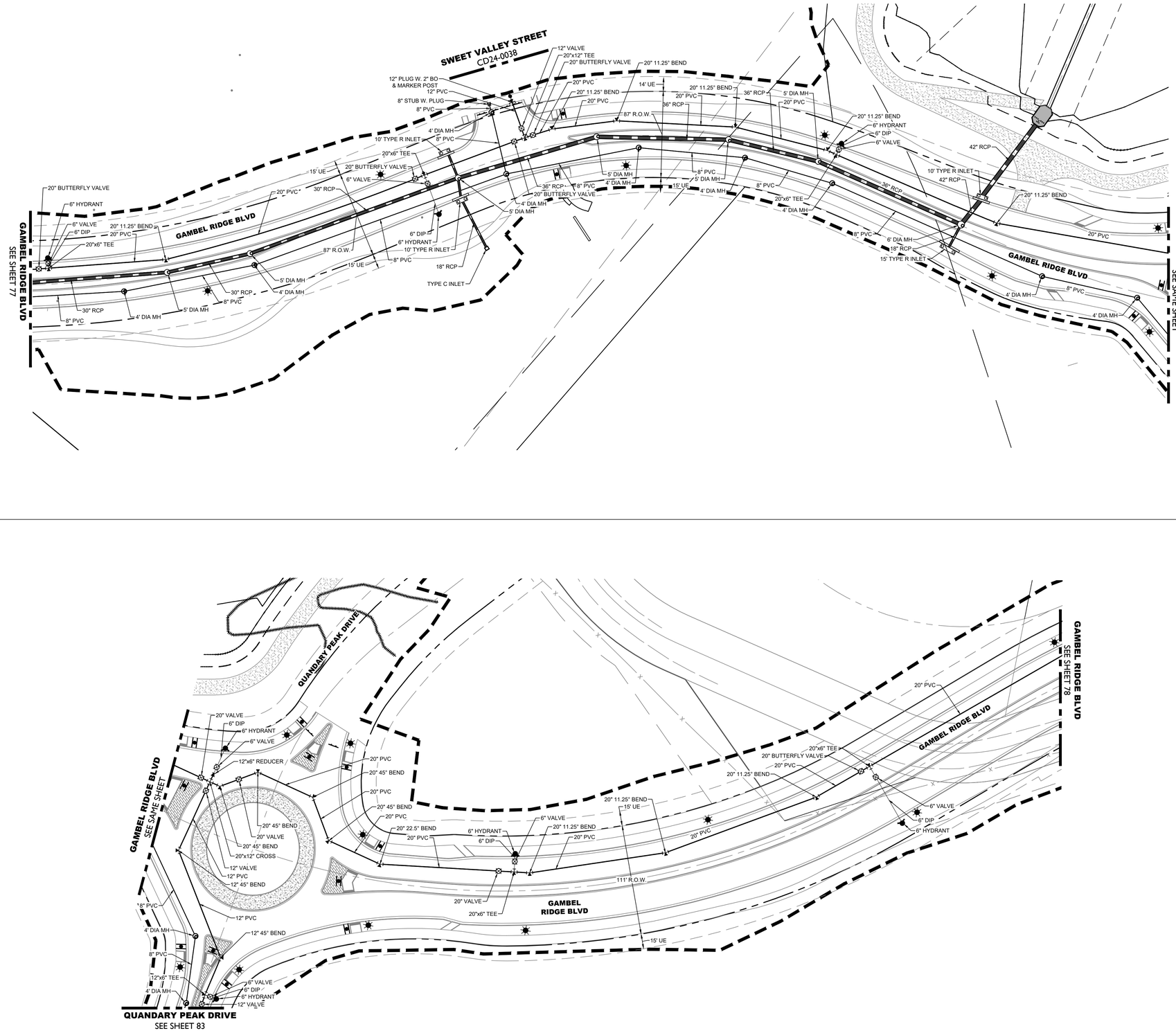
WESTSIDE

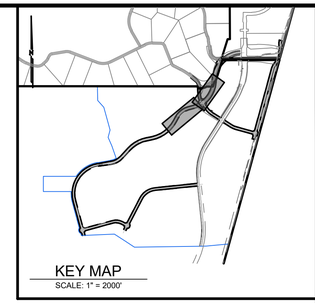
DESIGNED BY: DO
DRAWN BY: DL
CHECKED BY: GAW

JOB NO. 13466.00

SHEET 76 OF 301

4/30/2025 4:01 PM X:\20-224 Dawson\Civil\CAD\Plans\INFRA11CDs OVERALL UTILITY PLAN.dwg





0 50' 100'

1 inch = 50 ft.

LEGEND

- EASEMENT
- RIGHT OF WAY (R.O.W.)
- CENTERLINE
- LIMITS OF CONSTRUCTION
- EXISTING CURB & GUTTER
- PROPOSED CURB & GUTTER
- PROPOSED IRRIGATION & STUB OUT
- PROPOSED STORM & STUB OUT
- PROPOSED SANITARY & STUB OUT
- PROPOSED WATER & STUB OUT
- IRR — EXISTING IRRIGATION & STUB OUT
- EXISTING STORM & STUB OUT
- SS — EXISTING SANITARY & STUB OUT
- W — EXISTING WATER & STUB OUT
- IRR — FUTURE IRRIGATION & STUB OUT
- SS — FUTURE SANITARY & STUB OUT
- FUTURE STORM & STUB OUT
- W — FUTURE WATER & STUB OUT
- IRRIGATION SERVICE
- SANITARY SERVICE
- WATER SERVICE
- ① ② ③ ④ BLOCK NUMBER
- EXISTING / PROPOSED
- STREET LIGHT POLES
- POWER POLES
- GUY WIRE
- SANITARY MANHOLES
- SANITARY CLEAN OUT
- WATER VALVES
- BEND AND THRUST BLOCK
- FIRE HYDRANTS
- WATERLINE REDUCER
- WATER STUB WITH BLOW OFF
- AIR RELEASE VALVE MH & VENT PIPE
- STORM MANHOLES
- STORM INLETS
- FES, FOREBAY, & TRICKLE CHANNEL
- OUTLET STRUCTURE
- CRUSHER FINES MAINTENANCE ACCESS
- RIPRAP
- E — EXISTING ELECTRIC
- T — EXISTING TELEPHONE
- FO — EXISTING FIBER OPTIC
- G — EXISTING GAS
- OH — EXISTING OVER HEAD ELECTRIC
- STORM UNDERDRAIN
- 100 YEAR FLOODPLAIN
- WETLAND

NOTES:

1. MAXIMUM DEFLECTION FOR THE WATER MAINS SHALL NOT EXCEED ONE-HALF OF THE MANUFACTURER'S MAXIMUM ALLOWABLE DEFLECTION OR 1 DEGREE, WHICHEVER IS LESS.

BASIS OF BEARINGS

SEE COVER SHEET FOR BASIS OF BEARINGS & BENCHMARK.

PROFESSIONAL ENGINEER CERTIFICATION

I HEREBY AFFIRM THAT THESE FINAL CONSTRUCTION PLANS WERE PREPARED UNDER MY DIRECT SUPERVISION, IN ACCORDANCE WITH ALL APPLICABLE TOWN OF CASTLE ROCK AND STATE OF COLORADO STANDARDS AND STATUTES, RESPECTIVELY, AND THAT I AM FULLY RESPONSIBLE FOR ALL DESIGN AND REVISIONS RELATIVE TO SAID PLANS.

GARY A. WALTER — DATE

STATE OF COLORADO # 42246

TOWN APPROVAL BLOCK

TOWN OF CASTLE ROCK APPROVAL
PLANS ARE HEREBY APPROVED FOR ONE YEAR FROM DATE OF DEVELOPMENT SERVICES APPROVAL.

APPROVED BY:

DEVELOPMENT SERVICES — DATE

EMK CONSULTANTS, INC.
ENGINEERING SURVEYING
LAND DEVELOPMENT
SERVICES AND SOLUTIONS
7006 SOUTH ALTON WAY, BLDG. F
CENTENNIAL, COLORADO 80112-2019
(303)694-1520
www.EMKc.com

Know what's below. Call before you dig. 811

#	REVISION DESCRIPTION	DATE	BY
1	1ST SUBMITTAL	10/31/23	JF
2	2ND SUBMITTAL	8/23/24	BG
3	3RD SUBMITTAL	12/23/24	GW
4	4TH SUBMITTAL	4/30/25	GW

DAWSON TRAILS - FILING 2 INFRASTRUCTURE

CASTLE ROCK, COLORADO

CONSTRUCTION DOCUMENTS
OVERALL UTILITY PLAN (3 OF 12)

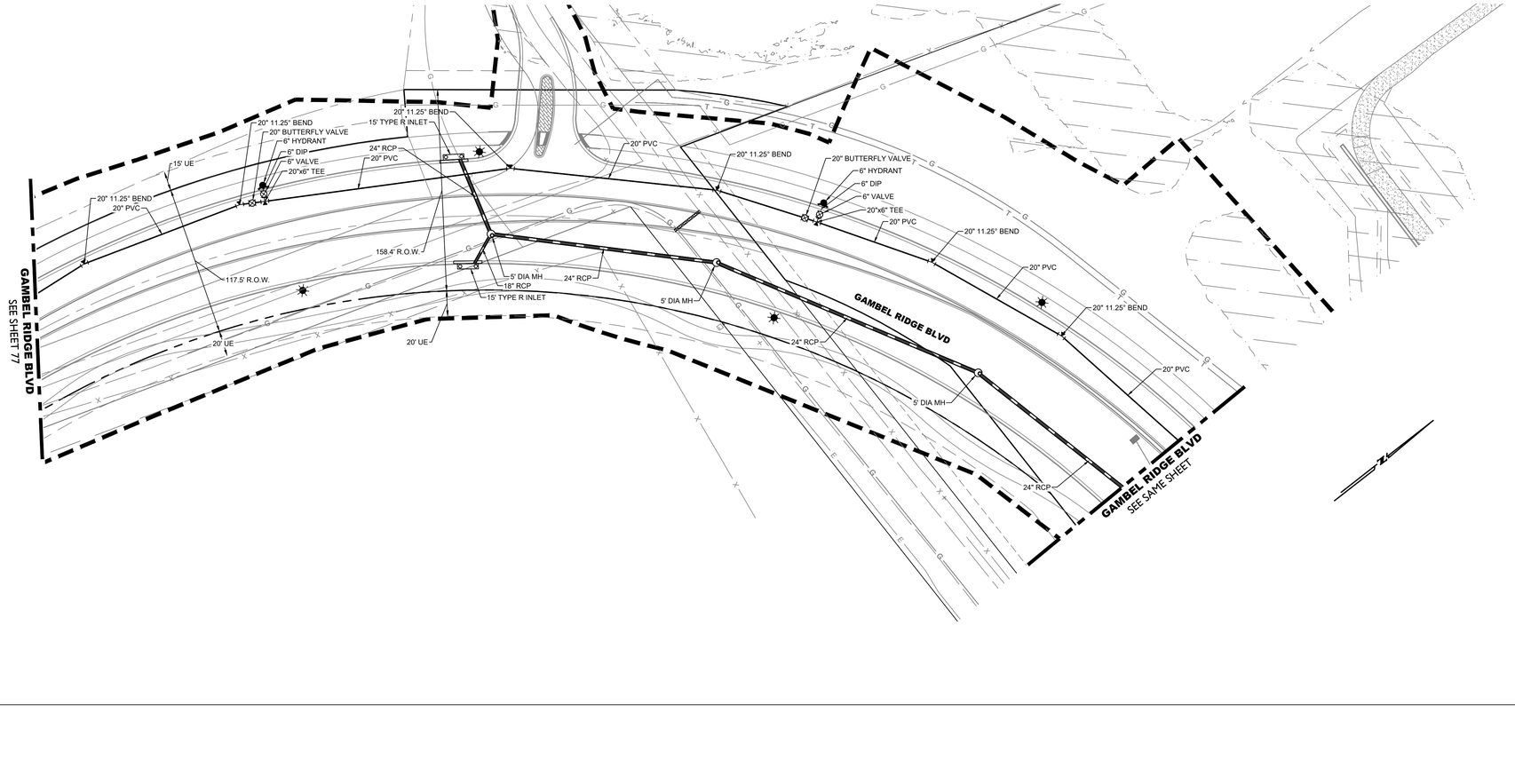
WESTSIDE

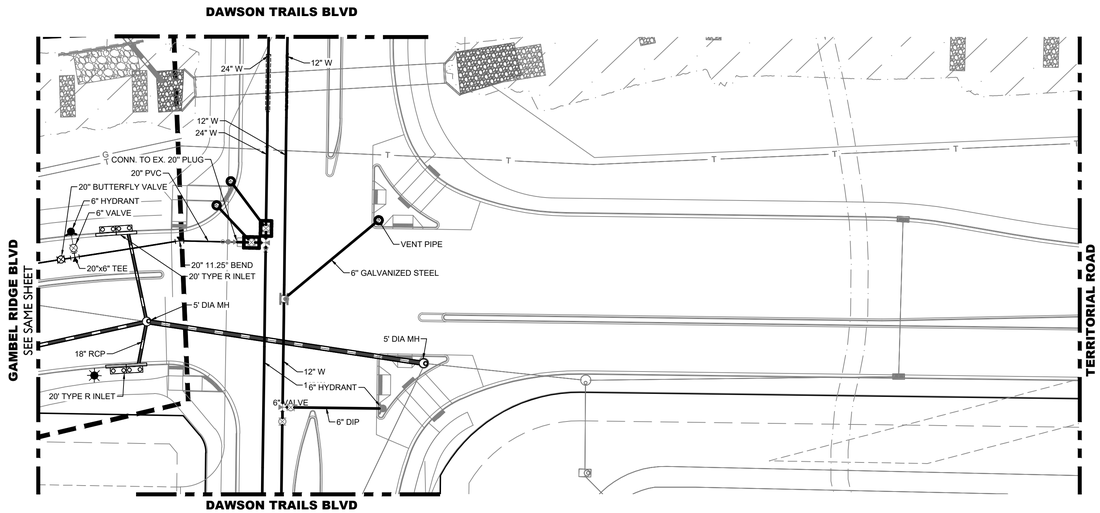
DESIGNED BY: DO
DRAWN BY: DL
CHECKED BY: GAW

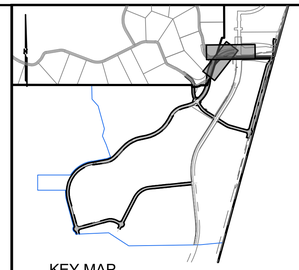
JOB NO. 13466.00

SHEET 77 OF 301

4/30/2025 4:01 PM X:\20-224 Dawson\Civil\CAD\Plans\INFRA11CDs OVERALL UTILITY PLAN.dwg







KEY MAP
SCALE: 1" = 2000'

0 50' 100'

1 inch = 50 ft.

LEGEND

- EASEMENT
- RIGHT OF WAY (R.O.W.)
- CENTERLINE
- LIMITS OF CONSTRUCTION
- EXISTING CURB & GUTTER
- PROPOSED CURB & GUTTER
- PROPOSED IRRIGATION & STUB OUT
- PROPOSED STORM & STUB OUT
- PROPOSED SANITARY & STUB OUT
- PROPOSED WATER & STUB OUT
- EXISTING IRRIGATION & STUB OUT
- EXISTING STORM & STUB OUT
- EXISTING SANITARY & STUB OUT
- EXISTING WATER & STUB OUT
- FUTURE IRRIGATION & STUB OUT
- FUTURE SANITARY & STUB OUT
- FUTURE STORM & STUB OUT
- FUTURE WATER & STUB OUT
- IRRIGATION SERVICE
- SANITARY SERVICE
- WATER SERVICE
- BLOCK NUMBER (EXISTING 1 2 3 4 / PROPOSED)
- STREET LIGHT POLES
- POWER POLES
- GUY WIRE
- SANITARY MANHOLES
- SANITARY CLEAN OUT
- WATER VALVES
- BEND AND THRUST BLOCK
- FIRE HYDRANTS
- WATERLINE REDUCER
- WATER STUB WITH BLOW OFF
- AIR RELEASE VALVE MH & VENT PIPE
- STORM MANHOLES
- STORM INLETS
- FES, FOREBAY, & TRICKLE CHANNEL
- OUTLET STRUCTURE
- CRUSHER FINES MAINTENANCE ACCESS
- RIPRAP
- EXISTING ELECTRIC
- EXISTING TELEPHONE
- EXISTING FIBER OPTIC
- EXISTING GAS
- EXISTING OVER HEAD ELECTRIC
- STORM UNDERDRAIN
- 100 YEAR FLOODPLAIN
- WETLAND

NOTES:

1. MAXIMUM DEFLECTION FOR THE WATER MAINS SHALL NOT EXCEED ONE-HALF OF THE MANUFACTURER'S MAXIMUM ALLOWABLE DEFLECTION OR 1 DEGREE, WHICHEVER IS LESS.

BASIS OF BEARINGS

SEE COVER SHEET FOR BASIS OF BEARINGS & BENCHMARK.

PROFESSIONAL ENGINEER CERTIFICATION

I HEREBY AFFIRM THAT THESE FINAL CONSTRUCTION PLANS WERE PREPARED UNDER MY DIRECT SUPERVISION, IN ACCORDANCE WITH ALL APPLICABLE TOWN OF CASTLE ROCK AND STATE OF COLORADO STANDARDS AND STATUTES, RESPECTIVELY, AND THAT I AM FULLY RESPONSIBLE FOR ALL DESIGN AND REVISIONS RELATIVE TO SAID PLANS.

GARY A. WALTER — DATE

STATE OF COLORADO # 42246

TOWN APPROVAL BLOCK

TOWN OF CASTLE ROCK APPROVAL
PLANS ARE HEREBY APPROVED FOR ONE YEAR FROM DATE OF DEVELOPMENT SERVICES APPROVAL.

APPROVED BY:

DEVELOPMENT SERVICES — DATE

NOTES:
1. CONTRACTOR SHALL PROVIDE A MINIMUM SEVENTY TWO (72) HOURS' NOTICE TO THE ON-SITE TCR CONSTRUCTION INSPECTOR, (720) 733-2200, PRIOR TO MAKING ANY CONNECTIONS OR TIE-INS TO EXISTING WATER, SANITARY SEWER, AND/OR STORM SEWER SYSTEMS PROVIDED THAT THE UTILITY TIE-IN DOES NOT DISRUPT SERVICE TO EXISTING CR WATER CUSTOMERS. IF THE TIE-IN REQUIRES A LINE SHUTDOWN, OR WILL DISRUPT UTILITY SERVICE, THEN CONTRACTOR SHALL PROVID EA MINIMUM OF THREE (3) WEEKS' NOTICE TO THE TCR CONSTRUCTION INSPECTOR TO ALLOW TIME FOR CR WATER TO PROVIDE WRITTEN NOTIFICATION TO EXISTING CUSTOMERS AFFECTED BY THE TIE-IN. ALL TOWN UTILITY TIE-INS MUST BE APPROVED BY CR WATER PRIOR TO COMMENCING WORK.
2. A CASTLE ROCK TIME AND MATERIALS UTILITY PERMIT WILL BE REQUIRED WHERE SITE WILL TIE INTO OR CROSS CRITICAL INFRASTRUCTURE. TMU PERMIT FEES PER THE TMU COST ESTIMATE WILL BE REQUIRED TO BE PAID PRIOR TO CONSTRUCTION.

EMK CONSULTANTS, INC.
ENGINEERING & SURVEYING
LAND DEVELOPMENT
SERVICES AND SOLUTIONS
7006 SOUTH ALTON WAY, BLDG F
CENTENNIAL, COLORADO 80112-2019
(303)694-1520
www.EMKC.com

Know what's below. Call before you dig. 811

#	REVISION DESCRIPTION	DATE	BY
1	1ST SUBMITTAL	10/31/23	JF
2	2ND SUBMITTAL	8/23/24	BG
3	3RD SUBMITTAL	12/23/24	GW
4	4TH SUBMITTAL	4/30/25	GW

DAWSON TRAILS - FILING 2 INFRASTRUCTURE

CASTLE ROCK, COLORADO

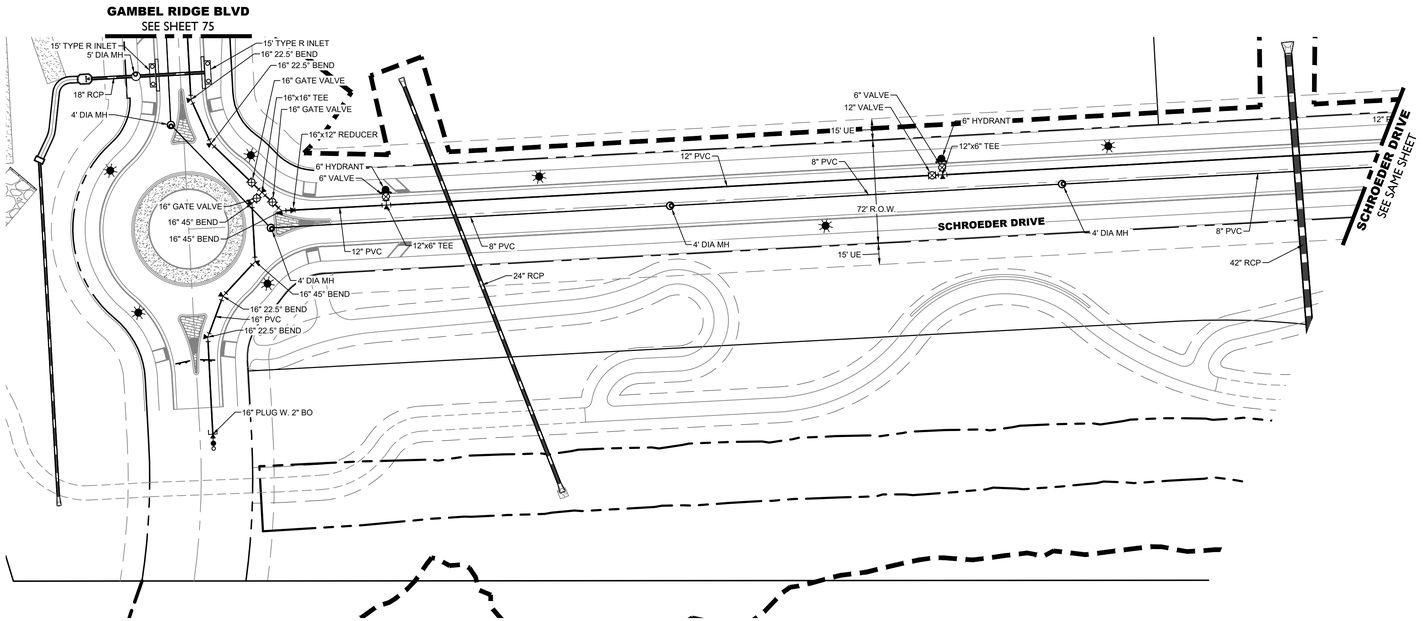
CONSTRUCTION DOCUMENTS
OVERALL UTILITY PLAN (4 OF 12)

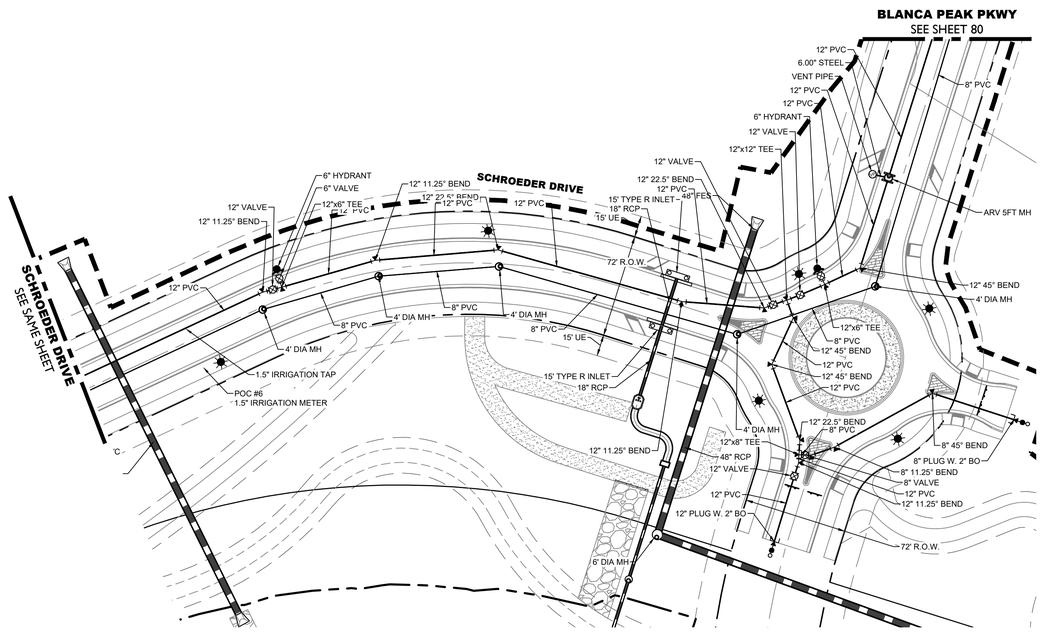
WESTSIDE

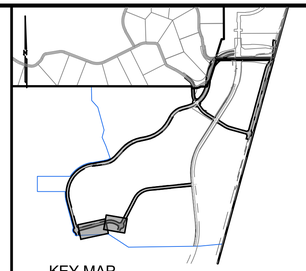
DESIGNED BY: DO
DRAWN BY: DL
CHECKED BY: GAW

JOB NO. 13466.00

SHEET 78 OF 301







0 50' 100'

1 inch = 50 ft.

LEGEND

- EASEMENT
- RIGHT OF WAY (R.O.W.)
- CENTERLINE
- LIMITS OF CONSTRUCTION
- EXISTING CURB & GUTTER
- PROPOSED CURB & GUTTER
- PROPOSED IRRIGATION & STUB OUT
- PROPOSED STORM & STUB OUT
- PROPOSED SANITARY & STUB OUT
- PROPOSED WATER & STUB OUT
- IRR — EXISTING IRRIGATION & STUB OUT
- EXISTING STORM & STUB OUT
- SS — EXISTING SANITARY & STUB OUT
- W — EXISTING WATER & STUB OUT
- IRR — FUTURE IRRIGATION & STUB OUT
- SS — FUTURE SANITARY & STUB OUT
- FUTURE STORM & STUB OUT
- W — FUTURE WATER & STUB OUT
- IRRIGATION SERVICE
- SANITARY SERVICE
- WATER SERVICE
- ① ② ③ ④ — BLOCK NUMBER

EXISTING / PROPOSED

- STREET LIGHT POLES
- POWER POLES
- GUY WIRE
- SANITARY MANHOLES
- SANITARY CLEAN OUT
- WATER VALVES
- BEND AND THRUST BLOCK
- FIRE HYDRANTS
- WATERLINE REDUCER
- WATER STUB WITH BLOW OFF
- AIR RELEASE VALVE MH & VENT PIPE
- STORM MANHOLES
- STORM INLETS
- FES, FOREBAY, & TRICKLE CHANNEL
- OUTLET STRUCTURE
- CRUSHER FINES MAINTENANCE ACCESS
- RIPRAP
- E — EXISTING ELECTRIC
- T — EXISTING TELEPHONE
- FO — EXISTING FIBER OPTIC
- G — EXISTING GAS
- OH — EXISTING OVER HEAD ELECTRIC
- STORM UNDERDRAIN
- 100 YEAR FLOODPLAIN
- WETLAND

NOTES:

1. MAXIMUM DEFLECTION FOR THE WATER MAINS SHALL NOT EXCEED ONE-HALF OF THE MANUFACTURER'S MAXIMUM ALLOWABLE DEFLECTION OR 1 DEGREE, WHICHEVER IS LESS.

BASIS OF BEARINGS

SEE COVER SHEET FOR BASIS OF BEARINGS & BENCHMARK.

PROFESSIONAL ENGINEER CERTIFICATION

I HEREBY AFFIRM THAT THESE FINAL CONSTRUCTION PLANS WERE PREPARED UNDER MY DIRECT SUPERVISION, IN ACCORDANCE WITH ALL APPLICABLE TOWN OF CASTLE ROCK AND STATE OF COLORADO STANDARDS AND STATUTES, RESPECTIVELY, AND THAT I AM FULLY RESPONSIBLE FOR ALL DESIGN AND REVISIONS RELATIVE TO SAID PLANS.

GARY A. WALTER DATE

STATE OF COLORADO # 42246

TOWN APPROVAL BLOCK

TOWN OF CASTLE ROCK APPROVAL
PLANS ARE HEREBY APPROVED FOR ONE YEAR FROM DATE OF DEVELOPMENT SERVICES APPROVAL.

APPROVED BY:

DEVELOPMENT SERVICES DATE

EMK CONSULTANTS, INC.
ENGINEERING & SURVEYING
LAND DEVELOPMENT
SERVICES AND SOLUTIONS
7006 SOUTH ALTON WAY, BLDG. F
CENTENNIAL, COLORADO 80112-2019
(303)694-1520
www.EMKcc.com

Know what's below. Call before you dig. 811

#	REVISION DESCRIPTION	DATE	BY
1	1ST SUBMITTAL	10/31/23	JF
2	2ND SUBMITTAL	8/23/24	BG
3	3RD SUBMITTAL	12/23/24	GW
4	4TH SUBMITTAL	4/30/25	GW

DAWSON TRAILS - FILING 2 INFRASTRUCTURE

CASTLE ROCK, COLORADO

CONSTRUCTION DOCUMENTS
OVERALL UTILITY PLAN (5 OF 12)

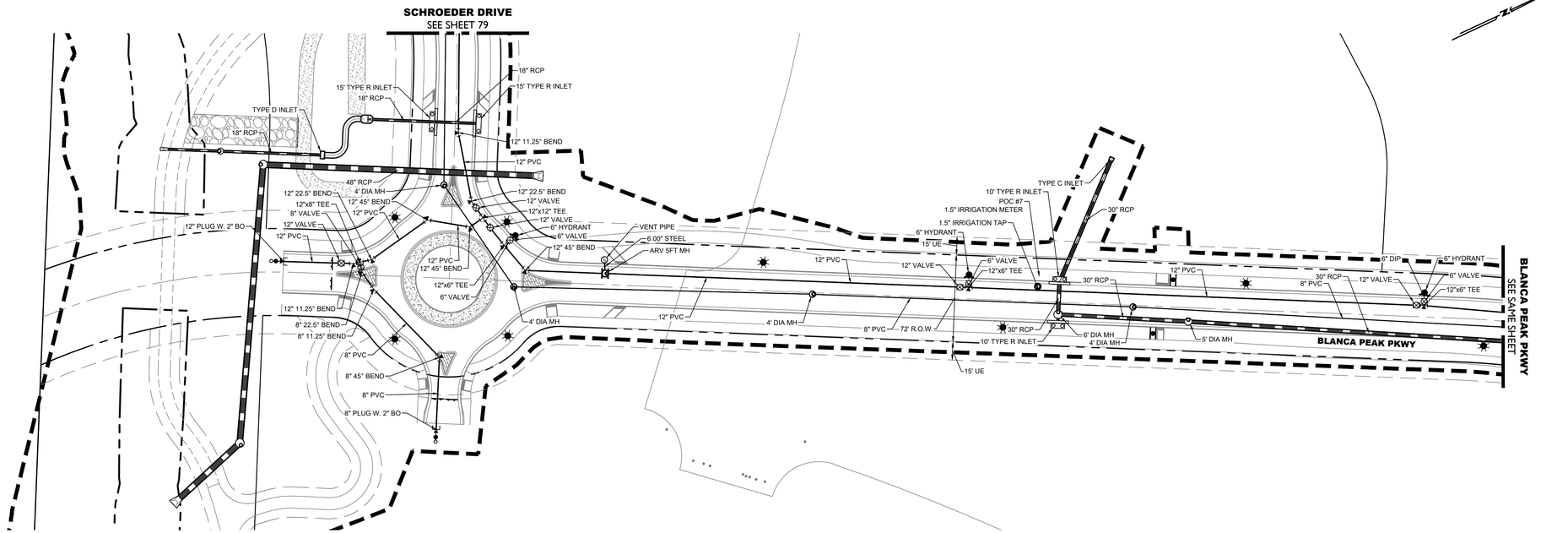
WESTSIDE

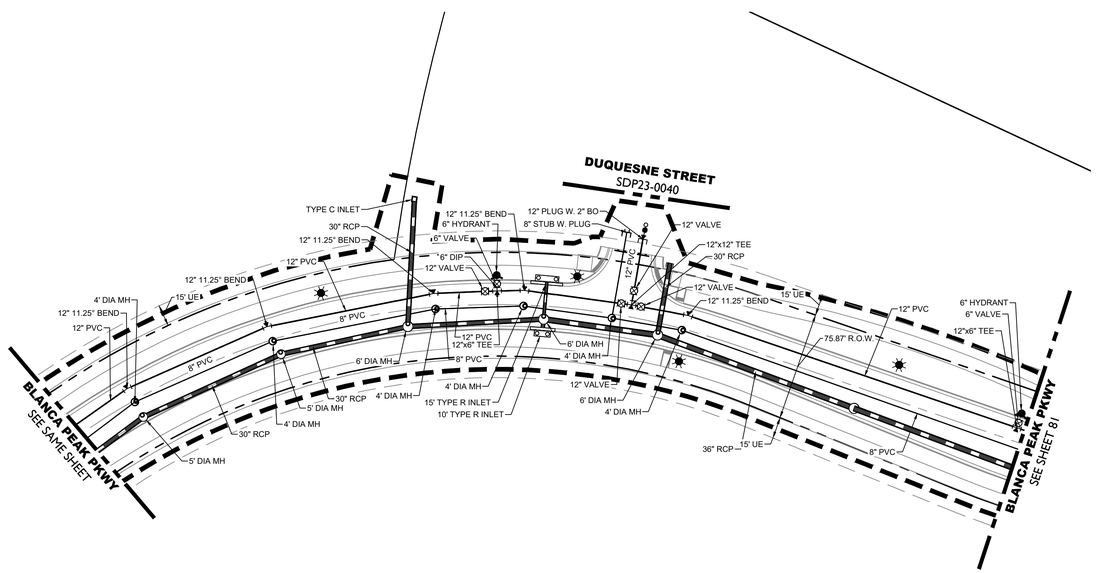
DESIGNED BY: DO
DRAWN BY: DL
CHECKED BY: GAW

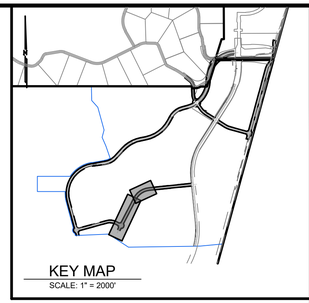
JOB NO. 13466.00

SHEET 79 OF 301

4/30/2025 4:13 PM X:\20-224 Dawson\Civil\CAD\Plans\INFRA11CDs OVERALL UTILITY PLAN.dwg







0 50' 100'

1 inch = 50 ft.

LEGEND

- EASEMENT
- RIGHT OF WAY (R.O.W.)
- CENTERLINE
- LIMITS OF CONSTRUCTION
- EXISTING CURB & GUTTER
- PROPOSED CURB & GUTTER
- PROPOSED IRRIGATION & STUB OUT
- PROPOSED STORM & STUB OUT
- PROPOSED SANITARY & STUB OUT
- PROPOSED WATER & STUB OUT
- IRR — EXISTING IRRIGATION & STUB OUT
- EXISTING STORM & STUB OUT
- SS — EXISTING SANITARY & STUB OUT
- W — EXISTING WATER & STUB OUT
- IRR — FUTURE IRRIGATION & STUB OUT
- SS — FUTURE SANITARY & STUB OUT
- FUTURE STORM & STUB OUT
- W — FUTURE WATER & STUB OUT
- IRRIGATION SERVICE
- SANITARY SERVICE
- WATER SERVICE
- ① ② ③ ④ BLOCK NUMBER
- EXISTING / PROPOSED — STREET LIGHT POLES
- POWER POLES
- GUY WIRE
- SANITARY MANHOLES
- SANITARY CLEAN OUT
- WATER VALVES
- BEND AND THRUST BLOCK
- FIRE HYDRANTS
- WATERLINE REDUCER
- WATER STUB WITH BLOW OFF
- AIR RELEASE VALVE MH & VENT PIPE
- STORM MANHOLES
- STORM INLETS
- FES, FOREBAY, & TRICKLE CHANNEL
- OUTLET STRUCTURE
- CRUSHER FINES MAINTENANCE ACCESS
- RIPRAP
- E — EXISTING ELECTRIC
- T — EXISTING TELEPHONE
- FO — EXISTING FIBER OPTIC
- G — EXISTING GAS
- OH — EXISTING OVER HEAD ELECTRIC
- STORM UNDERDRAIN
- 100 YEAR FLOODPLAIN
- WETLAND

NOTES:

1. MAXIMUM DEFLECTION FOR THE WATER MAINS SHALL NOT EXCEED ONE-HALF OF THE MANUFACTURER'S MAXIMUM ALLOWABLE DEFLECTION OR 1 DEGREE, WHICHEVER IS LESS.

BASIS OF BEARINGS

SEE COVER SHEET FOR BASIS OF BEARINGS & BENCHMARK.

PROFESSIONAL ENGINEER CERTIFICATION

I HEREBY AFFIRM THAT THESE FINAL CONSTRUCTION PLANS WERE PREPARED UNDER MY DIRECT SUPERVISION, IN ACCORDANCE WITH ALL APPLICABLE TOWN OF CASTLE ROCK AND STATE OF COLORADO STANDARDS AND STATUTES, RESPECTIVELY; AND THAT I AM FULLY RESPONSIBLE FOR ALL DESIGN AND REVISIONS RELATIVE TO SAID PLANS.

GARY A. WALTER — DATE

STATE OF COLORADO # 42246

TOWN APPROVAL BLOCK

TOWN OF CASTLE ROCK APPROVAL
PLANS ARE HEREBY APPROVED FOR ONE YEAR FROM DATE OF DEVELOPMENT SERVICES APPROVAL.

APPROVED BY:

DEVELOPMENT SERVICES — DATE

EMK CONSULTANTS, INC.
ENGINEERING SURVEYING
LAND DEVELOPMENT
SERVICES AND SOLUTIONS
7006 SOUTH ALTON WAY, BLDG. F
CENTENNIAL, COLORADO 80112-2019
(303)694-1520
www.EMKc.com

Know what's below. Call before you dig. 811

#	REVISION DESCRIPTION	DATE	BY
1	1ST SUBMITTAL	10/31/23	JF
2	2ND SUBMITTAL	8/23/24	BG
3	3RD SUBMITTAL	12/23/24	GW
4	4TH SUBMITTAL	4/30/25	GW

DAWSON TRAILS - FILING 2 INFRASTRUCTURE

CASTLE ROCK, COLORADO

CONSTRUCTION DOCUMENTS
OVERALL UTILITY PLAN (6 OF 12)

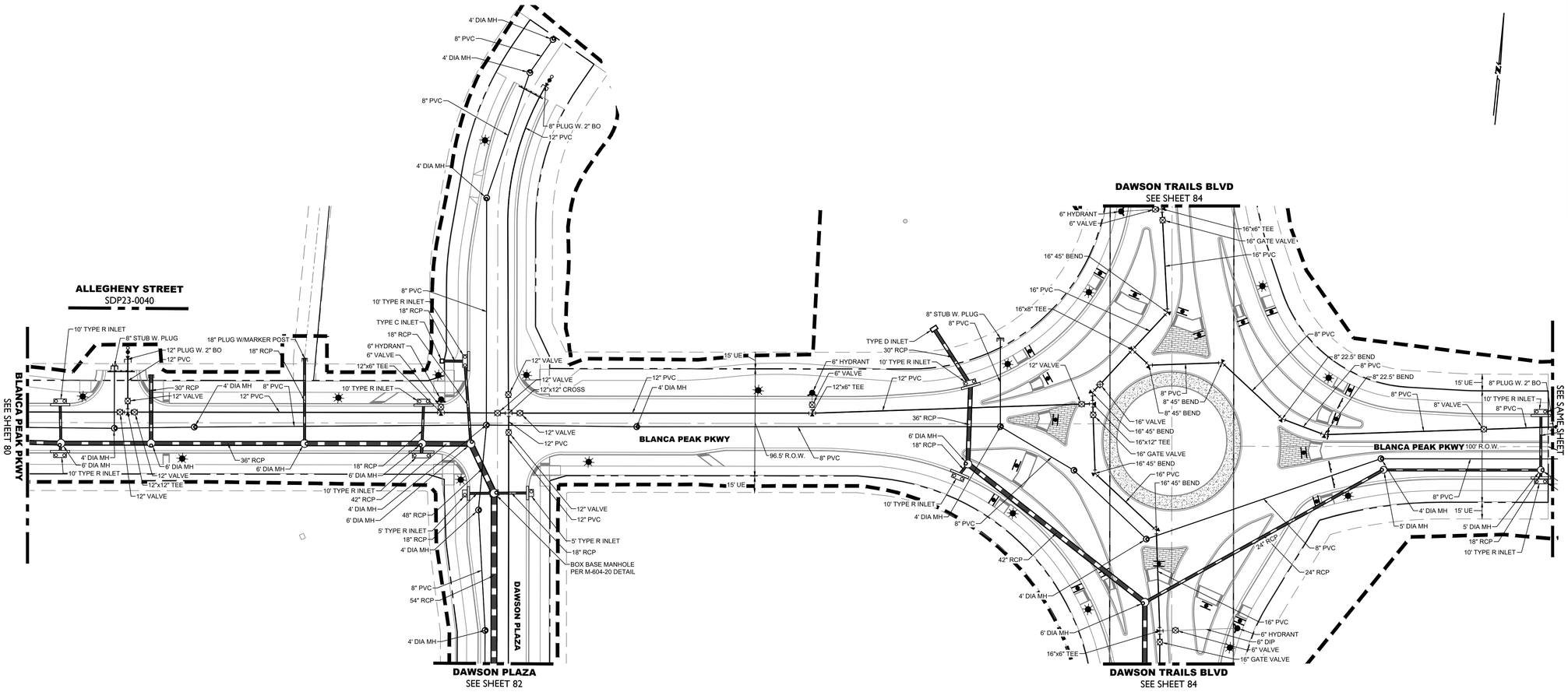
WESTSIDE

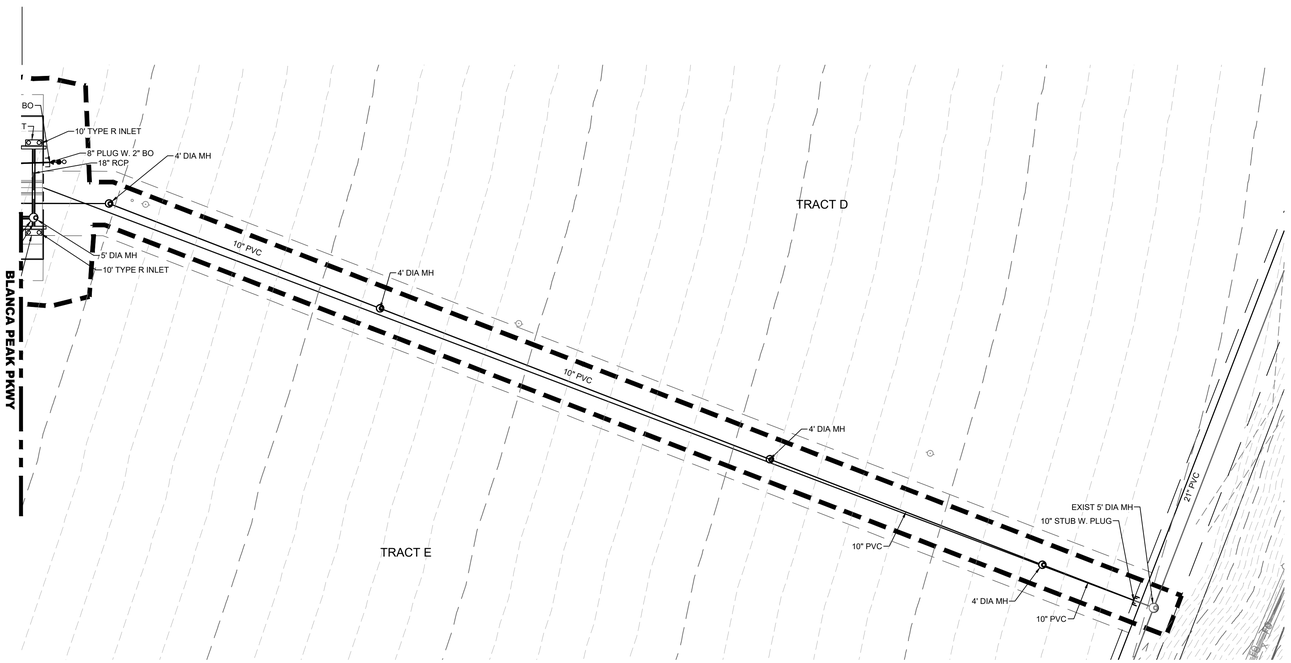
DESIGNED BY: DO
DRAWN BY: DL
CHECKED BY: GAW

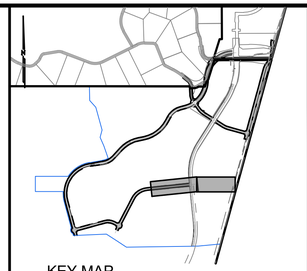
JOB NO. 13466.00

SHEET 80 OF 301

4/30/2025 4:07 PM X:\20-224 Dawson\Civil\CAD\Plans\INFRA11CDs OVERALL UTILITY PLAN.dwg







0 50' 100'

1 inch = 50 ft.

LEGEND

- EASEMENT
- RIGHT OF WAY (R.O.W.)
- CENTERLINE
- LIMITS OF CONSTRUCTION
- EXISTING CURB & GUTTER
- PROPOSED CURB & GUTTER
- PROPOSED IRRIGATION & STUB OUT
- PROPOSED STORM & STUB OUT
- PROPOSED SANITARY & STUB OUT
- PROPOSED WATER & STUB OUT
- IRR — EXISTING IRRIGATION & STUB OUT
- EXISTING STORM & STUB OUT
- SS — EXISTING SANITARY & STUB OUT
- W — EXISTING WATER & STUB OUT
- IRR — FUTURE IRRIGATION & STUB OUT
- SS — FUTURE SANITARY & STUB OUT
- FUTURE STORM & STUB OUT
- W — FUTURE WATER & STUB OUT
- IRRIGATION SERVICE
- SANITARY SERVICE
- WATER SERVICE
- BLOCK NUMBER (EXISTING ① ② ③ ④ / PROPOSED)
- STREET LIGHT POLES
- POWER POLES
- GUY WIRE
- SANITARY MANHOLES
- SANITARY CLEAN OUT
- WATER VALVES
- BEND AND THRUST BLOCK
- FIRE HYDRANTS
- WATERLINE REDUCER
- WATER STUB WITH BLOW OFF
- AIR RELEASE VALVE MH & VENT PIPE
- STORM MANHOLES
- STORM INLETS
- FES, FOREBAY, & TRICKLE CHANNEL
- OUTLET STRUCTURE
- CRUSHER FINES MAINTENANCE ACCESS
- RIPRAP
- E — EXISTING ELECTRIC
- T — EXISTING TELEPHONE
- FO — EXISTING FIBER OPTIC
- G — EXISTING GAS
- OH — EXISTING OVER HEAD ELECTRIC
- STORM UNDERDRAIN
- 100 YEAR FLOODPLAIN
- WETLAND

NOTES:

1. MAXIMUM DEFLECTION FOR THE WATER MAINS SHALL NOT EXCEED ONE-HALF OF THE MANUFACTURER'S MAXIMUM ALLOWABLE DEFLECTION OR 1 DEGREE, WHICHEVER IS LESS.

BASIS OF BEARINGS

SEE COVER SHEET FOR BASIS OF BEARINGS & BENCHMARK.

NOTES:

1. ALL MANHOLES LOCATED OUTSIDE DEDICATED STREET RIGHT-OF-WAY SHALL BE CONSTRUCTED WITH A LOCKING-TYPE COVER. MANHOLE RING SHALL BE BOLTED TO THE MANHOLE CONE AND THE MANHOLE LID SHALL BE RAISED IN ACCORDANCE WITH TOCR STANDARD DETAIL SS-3.
2. ALL STUB OUTS AND TEMPORARY BLOW OFFS ARE TO BE FULLY RESTRAINED BACK TO THE TEE OR CROSS.
3. CONTRACTOR SHALL PROVIDE A MINIMUM SEVENTY TWO (72) HOURS' NOTICE TO THE ON-SITE TCR CONSTRUCTION INSPECTOR, (720) 733-2200, PRIOR TO MAKING ANY CONNECTIONS OR TIE-INS TO EXISTING WATER, SANITARY SEWER, AND/OR STORM SEWER SYSTEMS PROVIDED THAT THE UTILITY TIE-IN DOES NOT DISRUPT SERVICE TO EXISTING CR WATER CUSTOMERS. IF THE TIE-IN REQUIRES A LINE SHUTDOWN, OR WILL DISRUPT UTILITY SERVICE, THEN CONTRACTOR SHALL PROVIDE A MINIMUM OF THREE (3) WEEKS' NOTICE TO THE TCR CONSTRUCTION INSPECTOR TO ALLOW TIME FOR CR WATER TO PROVIDE WRITTEN NOTIFICATION TO EXISTING CUSTOMERS AFFECTED BY THE TIE-IN. ALL TOWN UTILITY TIE-INS MUST BE APPROVED BY CR WATER PRIOR TO COMMENCING WORK.
4. A CASTLE ROCK TIME AND MATERIALS UTILITY PERMIT WILL BE REQUIRED WHERE SITE WILL TIE INTO OR CROSS CRITICAL INFRASTRUCTURE. TMU PERMIT FEES PER THE TMU COST ESTIMATE WILL BE REQUIRED TO BE PAID PRIOR TO CONSTRUCTION.

PROFESSIONAL ENGINEER CERTIFICATION

I HEREBY AFFIRM THAT THESE FINAL CONSTRUCTION PLANS WERE PREPARED UNDER MY DIRECT SUPERVISION, IN ACCORDANCE WITH ALL APPLICABLE TOWN OF CASTLE ROCK AND STATE OF COLORADO STANDARDS AND STATUTES, RESPECTIVELY; AND THAT I AM FULLY RESPONSIBLE FOR ALL DESIGN AND REVISIONS RELATIVE TO SAID PLANS.

GARY A. WALTER — DATE

STATE OF COLORADO # 42246

TOWN APPROVAL BLOCK

TOWN OF CASTLE ROCK APPROVAL
PLANS ARE HEREBY APPROVED FOR ONE YEAR FROM DATE OF DEVELOPMENT SERVICES APPROVAL.

APPROVED BY:

DEVELOPMENT SERVICES — DATE

EMK CONSULTANTS, INC.
ENGINEERING SURVEYING
LAND DEVELOPMENT
SERVICES AND SOLUTIONS
7006 SOUTH ALTON WAY, BLDG. F
CENTENNIAL, COLORADO 80112-2019
(303)694-1520
www.EMKc.com

Know what's below. Call before you dig. 811

#	REVISION DESCRIPTION	DATE	BY
1	1ST SUBMITTAL	10/31/23	JF
2	2ND SUBMITTAL	8/23/24	BG
3	3RD SUBMITTAL	12/23/24	GW
4	4TH SUBMITTAL	4/30/25	GW

DAWSON TRAILS - FILING 2 INFRASTRUCTURE

CASTLE ROCK, COLORADO

CONSTRUCTION DOCUMENTS
OVERALL UTILITY PLAN (7 OF 12)

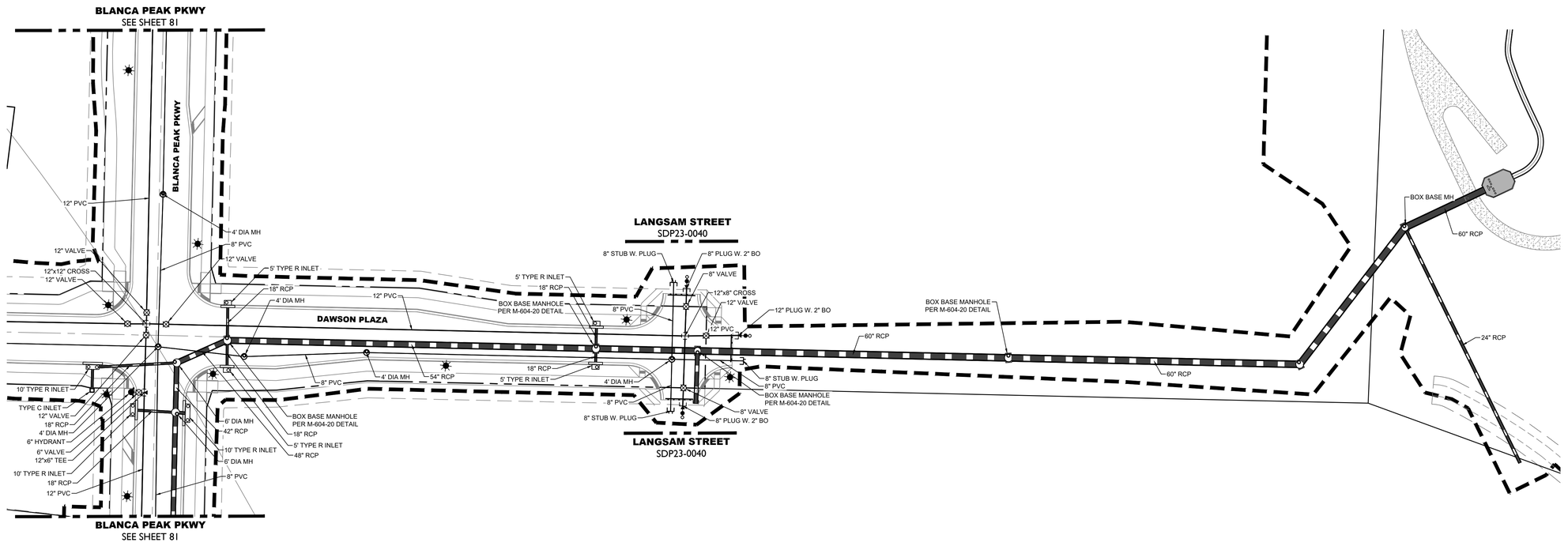
WESTSIDE

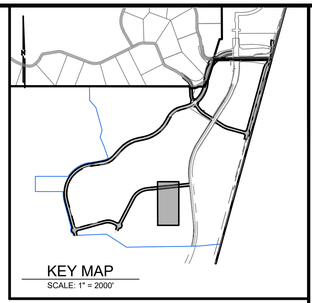
DESIGNED BY: DO
DRAWN BY: DL
CHECKED BY: GAW

JOB NO. 13466.00

SHEET 81 OF 301

4/30/2025 4:14 PM X:\20-224 Dawson\Civil\CAD\Plans\INFRA1\CDs OVERALL UTILITY PLAN.dwg





0 50' 100'

1 inch = 50 ft.

LEGEND

- EASEMENT
- RIGHT OF WAY (R.O.W.)
- CENTERLINE
- LIMITS OF CONSTRUCTION
- EXISTING CURB & GUTTER
- PROPOSED CURB & GUTTER
- PROPOSED IRRIGATION & STUB OUT
- PROPOSED STORM & STUB OUT
- PROPOSED SANITARY & STUB OUT
- PROPOSED WATER & STUB OUT
- EXISTING IRRIGATION & STUB OUT
- EXISTING STORM & STUB OUT
- EXISTING SANITARY & STUB OUT
- EXISTING WATER & STUB OUT
- FUTURE IRRIGATION & STUB OUT
- FUTURE SANITARY & STUB OUT
- FUTURE STORM & STUB OUT
- FUTURE WATER & STUB OUT
- IRRIGATION SERVICE
- SANITARY SERVICE
- WATER SERVICE
- BLOCK NUMBER (EXISTING / PROPOSED)
- STREET LIGHT POLES
- POWER POLES
- GUY WIRE
- SANITARY MANHOLES
- SANITARY CLEAN OUT
- WATER VALVES
- BEND AND THRUST BLOCK
- FIRE HYDRANTS
- WATERLINE REDUCER
- WATER STUB WITH BLOW OFF
- AIR RELEASE VALVE MH & VENT PIPE
- STORM MANHOLES
- STORM INLETS
- FES, FOREBAY, & TRICKLE CHANNEL
- OUTLET STRUCTURE
- CRUSHER FINES MAINTENANCE ACCESS
- RIPRAP
- E — EXISTING ELECTRIC
- T — EXISTING TELEPHONE
- FO — EXISTING FIBER OPTIC
- G — EXISTING GAS
- OH — EXISTING OVER HEAD ELECTRIC
- STORM UNDERDRAIN
- 100 YEAR FLOODPLAIN
- WETLAND

NOTES:

1. MAXIMUM DEFLECTION FOR THE WATER MAINS SHALL NOT EXCEED ONE-HALF OF THE MANUFACTURER'S MAXIMUM ALLOWABLE DEFLECTION OR 1 DEGREE, WHICHEVER IS LESS.

BASIS OF BEARINGS

SEE COVER SHEET FOR BASIS OF BEARINGS & BENCHMARK.

PROFESSIONAL ENGINEER CERTIFICATION

I HEREBY AFFIRM THAT THESE FINAL CONSTRUCTION PLANS WERE PREPARED UNDER MY DIRECT SUPERVISION, IN ACCORDANCE WITH ALL APPLICABLE TOWN OF CASTLE ROCK AND STATE OF COLORADO STANDARDS AND STATUTES, RESPECTIVELY; AND THAT I AM FULLY RESPONSIBLE FOR ALL DESIGN AND REVISIONS RELATIVE TO SAID PLANS.

GARY A. WALTER — DATE

STATE OF COLORADO # 42246

TOWN APPROVAL BLOCK

TOWN OF CASTLE ROCK APPROVAL
PLANS ARE HEREBY APPROVED FOR ONE YEAR FROM DATE OF DEVELOPMENT SERVICES APPROVAL.

APPROVED BY:

DEVELOPMENT SERVICES — DATE

EMK CONSULTANTS, INC.
ENGINEERING SURVEYING
LAND DEVELOPMENT
SERVICES AND SOLUTIONS
7006 SOUTH ALTON WAY, BLDG. F
CENTENNIAL, COLORADO 80112-2019
(303)694-1520
www.EMKcc.com

Know what's below. Call before you dig. 811

#	REVISION DESCRIPTION	DATE	BY
1	1ST SUBMITTAL	10/31/23	JF
2	2ND SUBMITTAL	8/23/24	BG
3	3RD SUBMITTAL	12/23/24	GW
4	4TH SUBMITTAL	4/30/25	GW

DAWSON TRAILS - FILING 2 INFRASTRUCTURE

CASTLE ROCK, COLORADO

CONSTRUCTION DOCUMENTS
OVERALL UTILITY PLAN (8 OF 12)

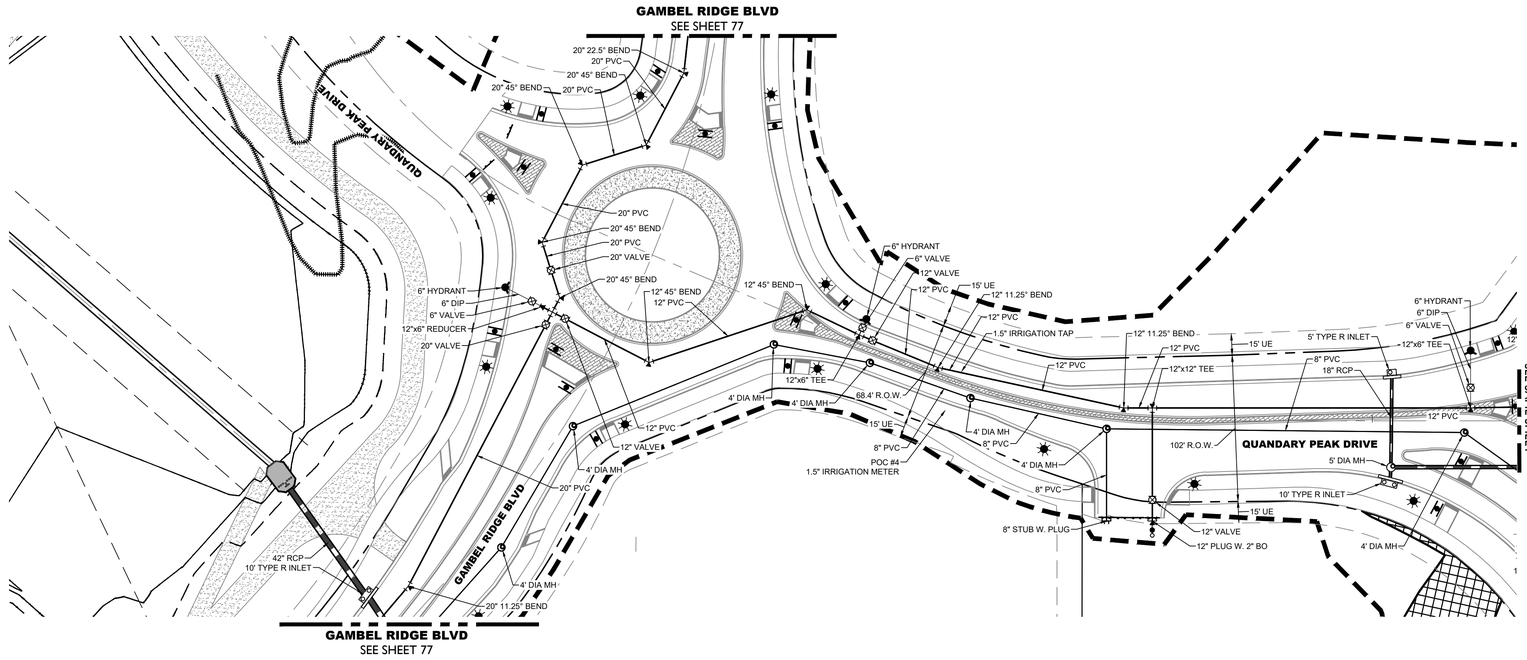
WESTSIDE

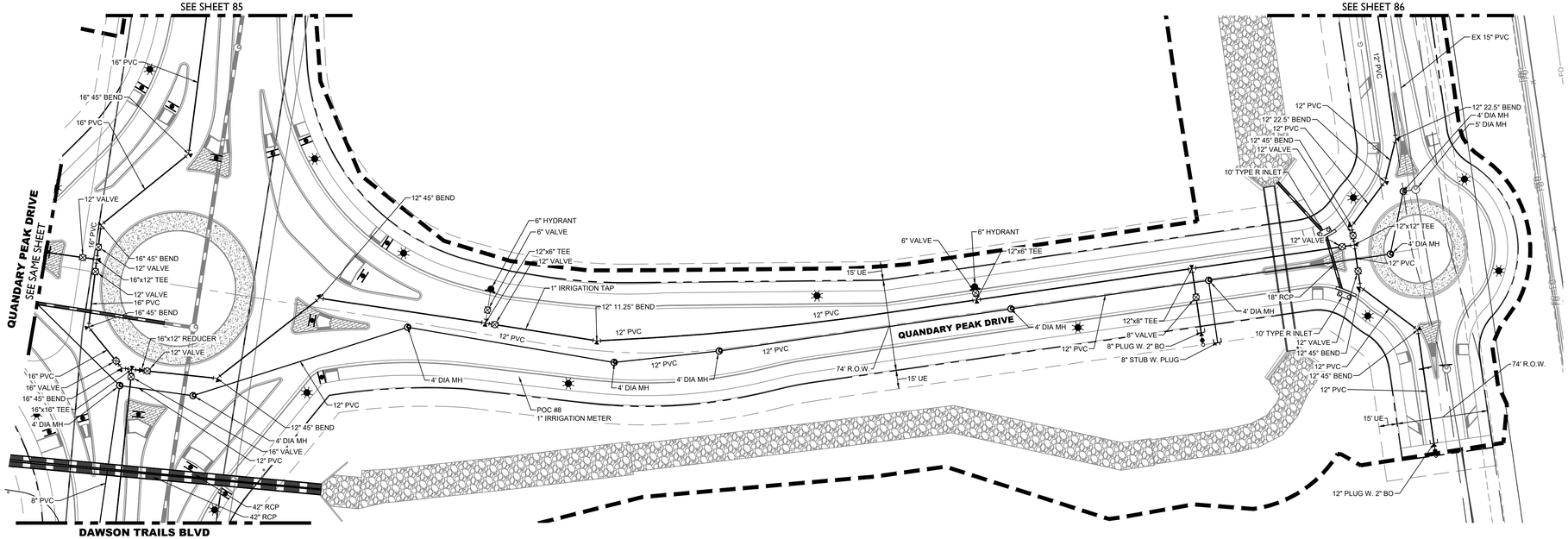
DESIGNED BY: DO
DRAWN BY: DL
CHECKED BY: GAW

JOB NO. 13466.00

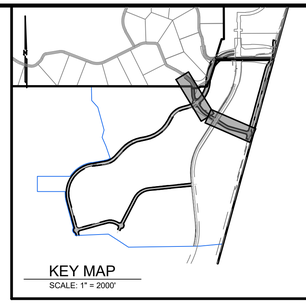
SHEET 82 OF 301

4/30/2025 4:03 PM X:\20-224 Dawson\Civil\CAD\Plans\INFRA1\CDs OVERALL UTILITY PLAN.dwg





NOTES:
1. ALL STUB OUTS AND TEMPORARY BLOW OFFS ARE TO BE FULLY RESTRAINED BACK TO THE TEE OR CROSS.



0 50' 100'

1 inch = 50 ft.

LEGEND

- EASEMENT
- RIGHT OF WAY (R.O.W.)
- CENTERLINE
- LIMITS OF CONSTRUCTION
- EXISTING CURB & GUTTER
- PROPOSED CURB & GUTTER
- PROPOSED IRRIGATION & STUB OUT
- PROPOSED STORM & STUB OUT
- PROPOSED SANITARY & STUB OUT
- PROPOSED WATER & STUB OUT
- IRR — EXISTING IRRIGATION & STUB OUT
- EXISTING STORM & STUB OUT
- SS — EXISTING SANITARY & STUB OUT
- W — EXISTING WATER & STUB OUT
- IRR — FUTURE IRRIGATION & STUB OUT
- SS — FUTURE SANITARY & STUB OUT
- FUTURE STORM & STUB OUT
- W — FUTURE WATER & STUB OUT
- IRRIGATION SERVICE
- SANITARY SERVICE
- WATER SERVICE
- BLOCK NUMBER
- STREET LIGHT POLES (EXISTING / PROPOSED)
- POWER POLES
- GUY WIRE
- SANITARY MANHOLES
- SANITARY CLEAN OUT
- WATER VALVES
- BEND AND THRUST BLOCK
- FIRE HYDRANTS
- WATERLINE REDUCER
- WATER STUB WITH BLOW OFF
- AIR RELEASE VALVE MH & VENT PIPE
- STORM MANHOLES
- STORM INLETS
- FES, FOREBAY, & TRICKLE CHANNEL
- OUTLET STRUCTURE
- CRUSHER FINES MAINTENANCE ACCESS
- RIPRAP
- E — EXISTING ELECTRIC
- T — EXISTING TELEPHONE
- FO — EXISTING FIBER OPTIC
- G — EXISTING GAS
- OH — EXISTING OVER HEAD ELECTRIC
- STORM UNDERDRAIN
- 100 YEAR FLOODPLAIN
- WETLAND

NOTES:

1. MAXIMUM DEFLECTION FOR THE WATER MAINS SHALL NOT EXCEED ONE-HALF OF THE MANUFACTURER'S MAXIMUM ALLOWABLE DEFLECTION OR 1 DEGREE, WHICHEVER IS LESS.

BASIS OF BEARINGS

SEE COVER SHEET FOR BASIS OF BEARINGS & BENCHMARK.

PROFESSIONAL ENGINEER CERTIFICATION

I HEREBY AFFIRM THAT THESE FINAL CONSTRUCTION PLANS WERE PREPARED UNDER MY DIRECT SUPERVISION, IN ACCORDANCE WITH ALL APPLICABLE TOWN OF CASTLE ROCK AND STATE OF COLORADO STANDARDS AND STATUTES, RESPECTIVELY, AND THAT I AM FULLY RESPONSIBLE FOR ALL DESIGN AND REVISIONS RELATIVE TO SAID PLANS.

GARY A. WALTER — DATE

STATE OF COLORADO # 42246

TOWN APPROVAL BLOCK

TOWN OF CASTLE ROCK APPROVAL
PLANS ARE HEREBY APPROVED FOR ONE YEAR FROM DATE OF DEVELOPMENT SERVICES APPROVAL.

APPROVED BY:

DEVELOPMENT SERVICES — DATE

EMK CONSULTANTS, INC.
ENGINEERING SURVEYING
LAND DEVELOPMENT
SERVICES AND SOLUTIONS
7006 SOUTH ALTON WAY, BLDG. F
CENTENNIAL, COLORADO 80112-2019
(303)694-1520
www.EMKc.com

Know what's below. Call before you dig. 811

#	REVISION DESCRIPTION	DATE	BY
1	1ST SUBMITTAL	10/31/23	JF
2	2ND SUBMITTAL	8/23/24	BG
3	3RD SUBMITTAL	12/23/24	GW
4	4TH SUBMITTAL	4/30/25	GW

DAWSON TRAILS - FILING 2 INFRASTRUCTURE

CASTLE ROCK, COLORADO

CONSTRUCTION DOCUMENTS
OVERALL UTILITY PLAN (9 OF 12)

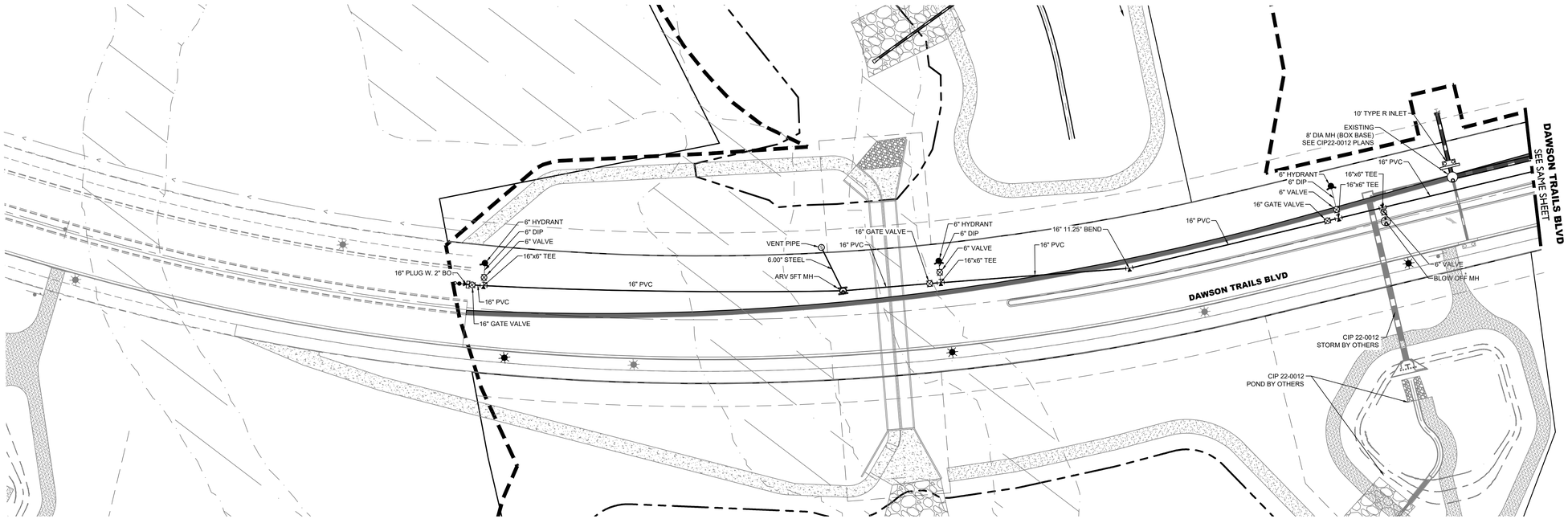
WESTSIDE

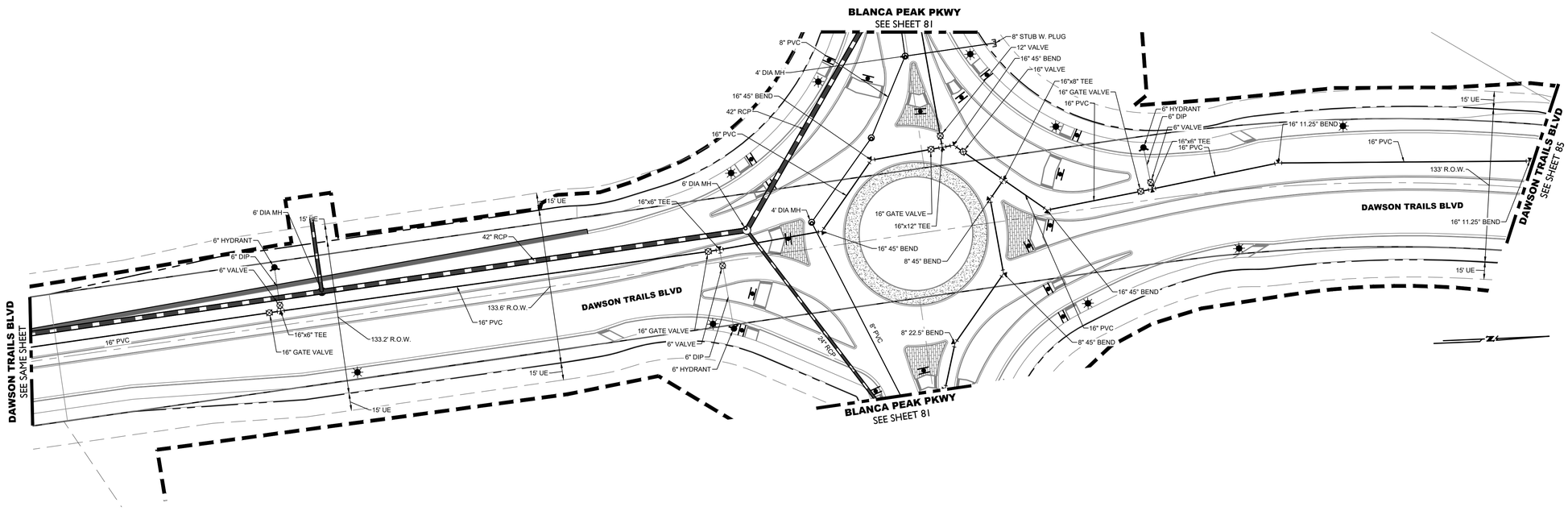
DESIGNED BY: DO
DRAWN BY: DL
CHECKED BY: GAW

JOB NO. 13466.00

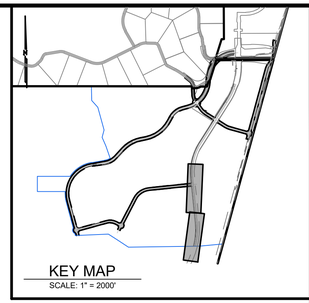
SHEET 83 OF 301

4/30/2025 4:04 PM X:\20-224 Dawson\Civil\CAD\Plans\INFRA11CDs OVERALL UTILITY PLAN.dwg





NOTES:
1. ALL STUB OUTS AND TEMPORARY BLOW OFFS ARE TO BE FULLY RESTRAINED BACK TO THE TEE OR CROSS.



0 50' 100'

1 inch = 50 ft.

LEGEND

- EASEMENT
- RIGHT OF WAY (R.O.W.)
- CENTERLINE
- LIMITS OF CONSTRUCTION
- EXISTING CURB & GUTTER
- PROPOSED CURB & GUTTER
- PROPOSED IRRIGATION & STUB OUT
- PROPOSED STORM & STUB OUT
- PROPOSED SANITARY & STUB OUT
- PROPOSED WATER & STUB OUT
- IRR — EXISTING IRRIGATION & STUB OUT
- SS — EXISTING STORM & STUB OUT
- W — EXISTING SANITARY & STUB OUT
- IRR — EXISTING WATER & STUB OUT
- SS — FUTURE IRRIGATION & STUB OUT
- W — FUTURE SANITARY & STUB OUT
- FUTURE STORM & STUB OUT
- FUTURE WATER & STUB OUT
- IRRIGATION SERVICE
- SANITARY SERVICE
- WATER SERVICE
- 1 2 3 4 — BLOCK NUMBER

EXISTING / PROPOSED

- STREET LIGHT POLES
- POWER POLES
- GUY WIRE
- SANITARY MANHOLES
- SANITARY CLEAN OUT
- WATER VALVES
- BEND AND THRUST BLOCK
- FIRE HYDRANTS
- WATERLINE REDUCER
- WATER STUB WITH BLOW OFF
- AIR RELEASE VALVE MH & VENT PIPE
- STORM MANHOLES
- STORM INLETS
- FES, FOREBAY, & TRICKLE CHANNEL
- OUTLET STRUCTURE
- CRUSHER FINES MAINTENANCE ACCESS
- RIPRAP
- E — EXISTING ELECTRIC
- T — EXISTING TELEPHONE
- FO — EXISTING FIBER OPTIC
- G — EXISTING GAS
- OH — EXISTING OVER HEAD ELECTRIC
- STORM UNDERDRAIN
- 100 YEAR FLOODPLAIN
- WETLAND

NOTES:

1. MAXIMUM DEFLECTION FOR THE WATER MAINS SHALL NOT EXCEED ONE-HALF OF THE MANUFACTURER'S MAXIMUM ALLOWABLE DEFLECTION OR 1 DEGREE, WHICHEVER IS LESS.

BASIS OF BEARINGS

SEE COVER SHEET FOR BASIS OF BEARINGS & BENCHMARK.

PROFESSIONAL ENGINEER CERTIFICATION

I HEREBY AFFIRM THAT THESE FINAL CONSTRUCTION PLANS WERE PREPARED UNDER MY DIRECT SUPERVISION, IN ACCORDANCE WITH ALL APPLICABLE TOWN OF CASTLE ROCK AND STATE OF COLORADO STANDARDS AND STATUTES, RESPECTIVELY, AND THAT I AM FULLY RESPONSIBLE FOR ALL DESIGN AND REVISIONS RELATIVE TO SAID PLANS.

GARY A. WALTER — DATE

STATE OF COLORADO # 42246

TOWN APPROVAL BLOCK

TOWN OF CASTLE ROCK APPROVAL
PLANS ARE HEREBY APPROVED FOR ONE YEAR FROM DATE OF DEVELOPMENT SERVICES APPROVAL.

APPROVED BY:

DEVELOPMENT SERVICES — DATE

EMK CONSULTANTS, INC.
ENGINEERING & SURVEYING
LAND DEVELOPMENT
SERVICES AND SOLUTIONS
7006 SOUTH ALTON WAY, BLDG. F
CENTENNIAL, COLORADO 80112-2019
(303)694-1520
www.EMKc.com

Know what's below. Call before you dig. 811

#	REVISION DESCRIPTION	DATE	BY
1	1ST SUBMITTAL	10/31/23	JF
2	2ND SUBMITTAL	8/23/24	BG
3	3RD SUBMITTAL	12/23/24	GW
4	4TH SUBMITTAL	4/30/25	GW

DAWSON TRAILS - FILING 2 INFRASTRUCTURE

CASTLE ROCK, COLORADO

CONSTRUCTION DOCUMENTS
OVERALL UTILITY PLAN (10 OF 12)

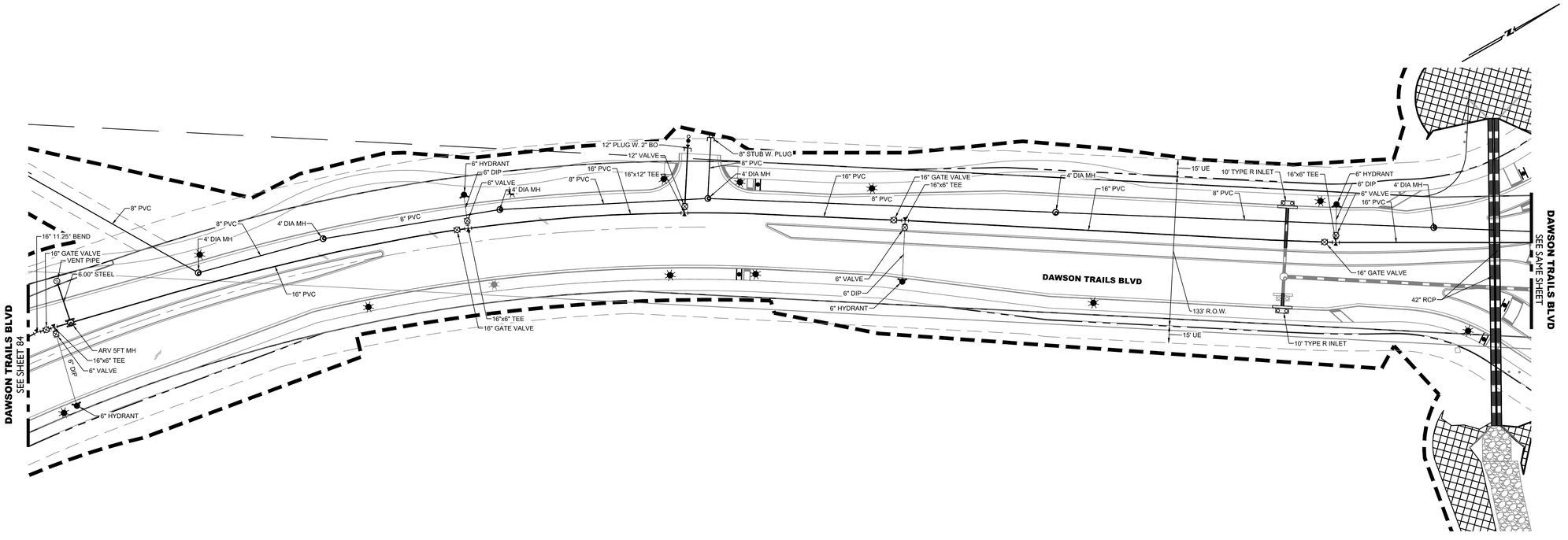
WESTSIDE

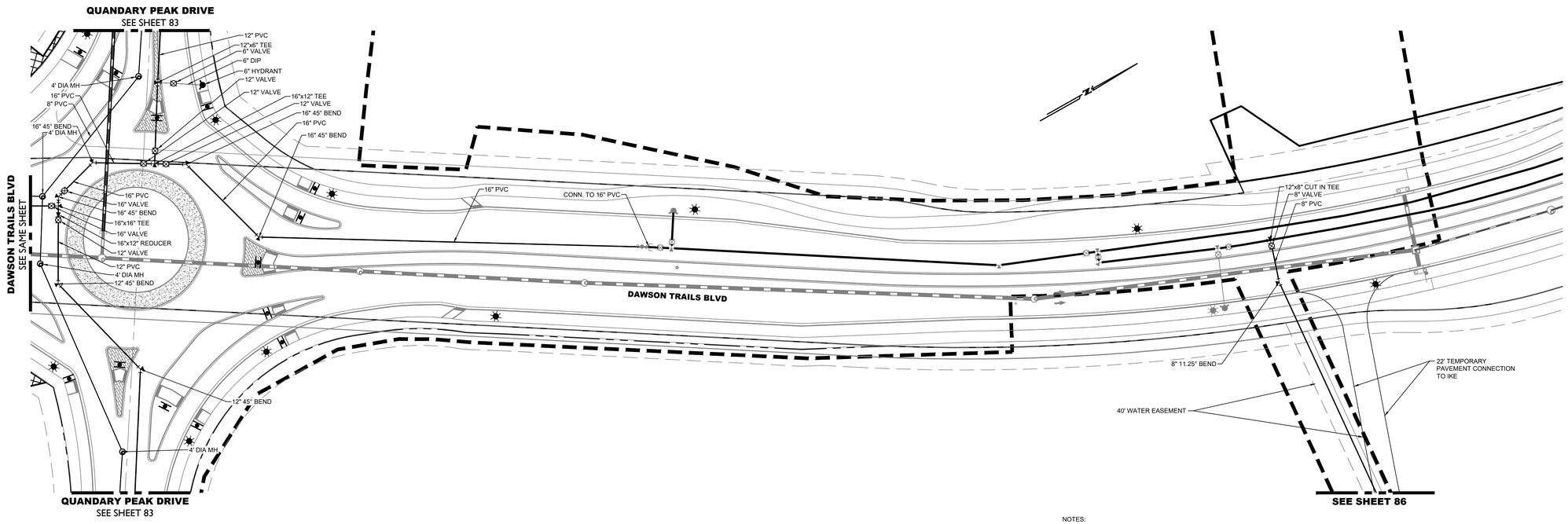
DESIGNED BY: DO
DRAWN BY: DL
CHECKED BY: GAW

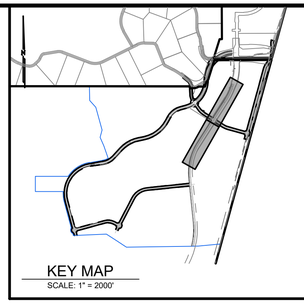
JOB NO. 13466.00

SHEET 84 OF 301

4/30/2025 4:13 PM X:\20-224 Dawson\Civil\CAD\Plans\INFRA11CDs OVERALL UTILITY PLAN.dwg







0 50' 100'

1 inch = 50 ft.

LEGEND

- EASEMENT
- RIGHT OF WAY (R.O.W.)
- CENTERLINE
- LIMITS OF CONSTRUCTION
- EXISTING CURB & GUTTER
- PROPOSED CURB & GUTTER
- PROPOSED IRRIGATION & STUB OUT
- PROPOSED STORM & STUB OUT
- PROPOSED SANITARY & STUB OUT
- PROPOSED WATER & STUB OUT
- IRR — EXISTING IRRIGATION & STUB OUT
- EXISTING STORM & STUB OUT
- SS — EXISTING SANITARY & STUB OUT
- W — EXISTING WATER & STUB OUT
- IRR — FUTURE IRRIGATION & STUB OUT
- SS — FUTURE SANITARY & STUB OUT
- FUTURE STORM & STUB OUT
- W — FUTURE WATER & STUB OUT
- IRRIGATION SERVICE
- SANITARY SERVICE
- WATER SERVICE
- ① ② ③ ④ — BLOCK NUMBER

EXISTING / PROPOSED

- STREET LIGHT POLES
- POWER POLES
- GUY WIRE
- SANITARY MANHOLES
- SANITARY CLEAN OUT
- WATER VALVES
- BEND AND THRUST BLOCK
- FIRE HYDRANTS
- WATERLINE REDUCER
- WATER STUB WITH BLOW OFF
- AIR RELEASE VALVE MH & VENT PIPE
- STORM MANHOLES
- STORM INLETS
- FES, FOREBAY, & TRICKLE CHANNEL
- OUTLET STRUCTURE
- CRUSHER FINES MAINTENANCE ACCESS
- RIPRAP
- E — EXISTING ELECTRIC
- T — EXISTING TELEPHONE
- FO — EXISTING FIBER OPTIC
- G — EXISTING GAS
- OH — EXISTING OVER HEAD ELECTRIC
- STORM UNDERDRAIN
- 100 YEAR FLOODPLAIN
- WETLAND

NOTES:

1. MAXIMUM DEFLECTION FOR THE WATER MAINS SHALL NOT EXCEED ONE-HALF OF THE MANUFACTURER'S MAXIMUM ALLOWABLE DEFLECTION OR 1 DEGREE, WHICHEVER IS LESS.

BASIS OF BEARINGS

SEE COVER SHEET FOR BASIS OF BEARINGS & BENCHMARK.

PROFESSIONAL ENGINEER CERTIFICATION

I HEREBY AFFIRM THAT THESE FINAL CONSTRUCTION PLANS WERE PREPARED UNDER MY DIRECT SUPERVISION, IN ACCORDANCE WITH ALL APPLICABLE TOWN OF CASTLE ROCK AND STATE OF COLORADO STANDARDS AND STATUTES, RESPECTIVELY, AND THAT I AM FULLY RESPONSIBLE FOR ALL DESIGN AND REVISIONS RELATIVE TO SAID PLANS.

GARY A. WALTER — DATE

STATE OF COLORADO # 42246

TOWN APPROVAL BLOCK

TOWN OF CASTLE ROCK APPROVAL
PLANS ARE HEREBY APPROVED FOR ONE YEAR FROM DATE OF DEVELOPMENT SERVICES APPROVAL.

APPROVED BY:

DEVELOPMENT SERVICES — DATE

NOTES:
1. CONTRACTOR SHALL PROVIDE A MINIMUM SEVENTY TWO (72) HOURS' NOTICE TO THE ON-SITE TCR CONSTRUCTION INSPECTOR, (720) 733-2200, PRIOR TO MAKING ANY CONNECTIONS OR TIE-INS TO EXISTING WATER, SANITARY SEWER, AND/OR STORM SEWER SYSTEMS PROVIDED THAT THE UTILITY TIE-IN DOES NOT DISRUPT SERVICE TO EXISTING CR WATER CUSTOMERS. IF THE TIE-IN REQUIRES A LINE SHUTDOWN, OR WILL DISRUPT UTILITY SERVICE, THEN CONTRACTOR SHALL PROVID EA MINIMUM OF THREE (3) WEEKS' NOTICE TO THE TCR CONSTRUCTION INSPECTOR TO ALLOW TIME FOR CR WATER TO PROVIDE WRITTEN NOTIFICATION TO EXISTING CUSTOMERS AFFECTED BY THE TIE-IN. ALL TOWN UTILITY TIE-INS MUST BE APPROVED BY CR WATER PRIOR TO COMMENCING WORK.
2. A CASTLE ROCK TIME AND MATERIALS UTILITY PERMIT WILL BE REQUIRED WHERE SITE WILL TIE INTO OR CROSS CRITICAL INFRASTRUCTURE. TMU PERMIT FEES PER THE TMU COST ESTIMATE WILL BE REQUIRED TO BE PAID PRIOR TO CONSTRUCTION.

EMK CONSULTANTS, INC.
ENGINEERING & SURVEYING
LAND DEVELOPMENT
SERVICES AND SOLUTIONS
7006 SOUTH ALTON WAY, BLDG. F
CENTENNIAL, COLORADO 80112-2019
(303)694-1520
www.EMKcc.com

Know what's below. Call before you dig. 811

#	REVISION DESCRIPTION	DATE	BY
1	1ST SUBMITTAL	10/31/23	JF
2	2ND SUBMITTAL	8/23/24	BG
3	3RD SUBMITTAL	12/23/24	GW
4	4TH SUBMITTAL	4/30/25	GW

DAWSON TRAILS - FILING 2 INFRASTRUCTURE

CASTLE ROCK, COLORADO

CONSTRUCTION DOCUMENTS
OVERALL UTILITY PLAN (11 OF 12)

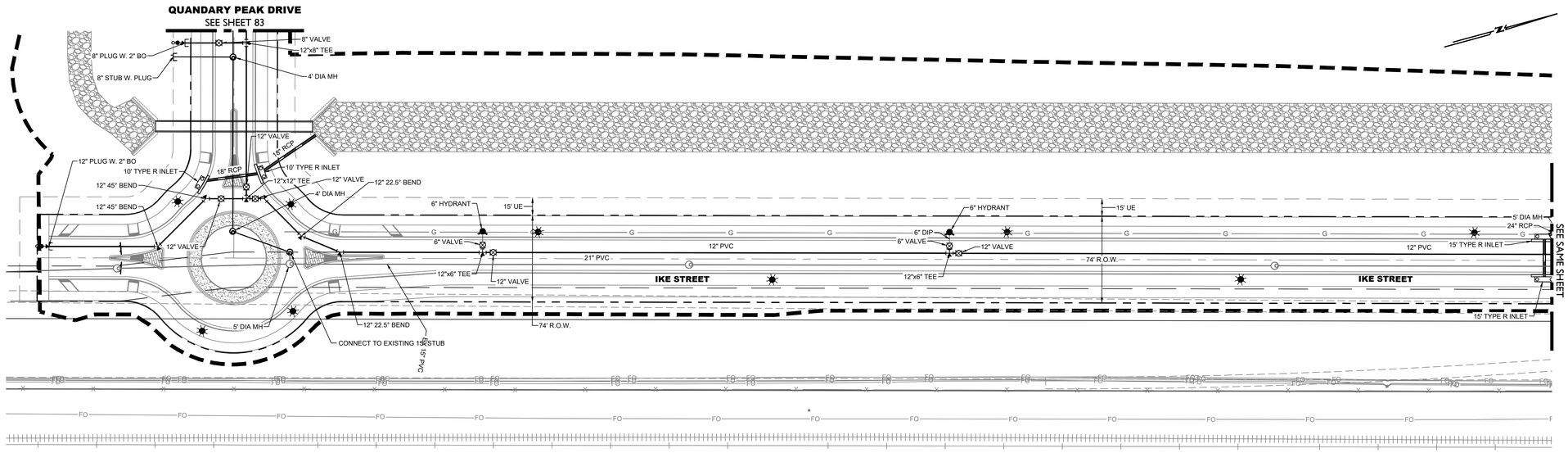
WESTSIDE

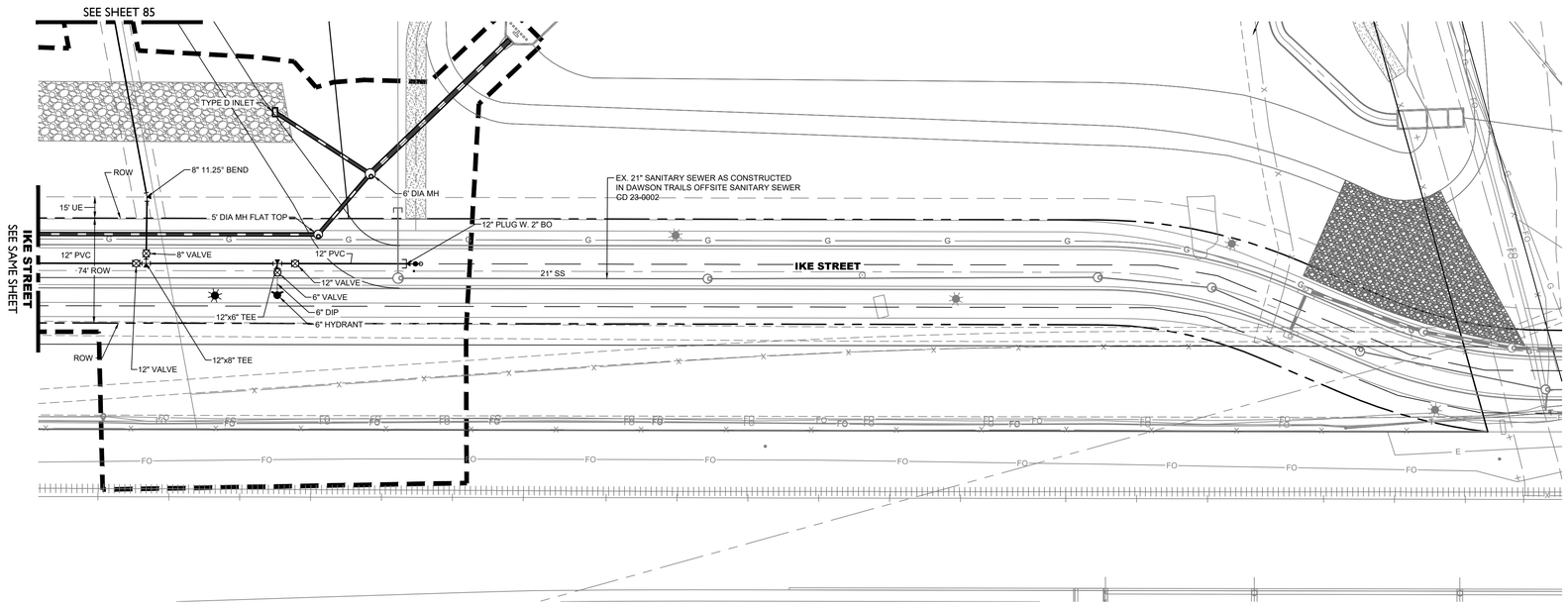
DESIGNED BY: DO
DRAWN BY: DL
CHECKED BY: GAW

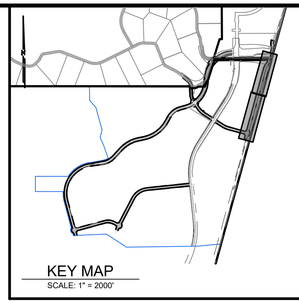
JOB NO. 13466.00

SHEET 85 OF 301

4/30/2025 4:16 PM X:\20-224 Dawson\Civil\CAD\Plans\INFRA11CDs OVERALL UTILITY PLAN.dwg







0 50' 100'

1 inch = 50 ft.

LEGEND

- EASEMENT
- RIGHT OF WAY (R.O.W.)
- CENTERLINE
- LIMITS OF CONSTRUCTION
- EXISTING CURB & GUTTER
- PROPOSED CURB & GUTTER
- PROPOSED IRRIGATION & STUB OUT
- PROPOSED STORM & STUB OUT
- PROPOSED SANITARY & STUB OUT
- PROPOSED WATER & STUB OUT
- IRR — EXISTING IRRIGATION & STUB OUT
- EXISTING STORM & STUB OUT
- SS — EXISTING SANITARY & STUB OUT
- W — EXISTING WATER & STUB OUT
- IRR — FUTURE IRRIGATION & STUB OUT
- SS — FUTURE SANITARY & STUB OUT
- FUTURE STORM & STUB OUT
- W — FUTURE WATER & STUB OUT
- IRRIGATION SERVICE
- SANITARY SERVICE
- WATER SERVICE
- BLOCK NUMBER (1 2 3 4)

EXISTING / PROPOSED

- STREET LIGHT POLES
- POWER POLES
- GUY WIRE
- SANITARY MANHOLES
- SANITARY CLEAN OUT
- WATER VALVES
- BEND AND THRUST BLOCK
- FIRE HYDRANTS
- WATERLINE REDUCER
- WATER STUB WITH BLOW OFF
- AIR RELEASE VALVE MH & VENT PIPE
- STORM MANHOLES
- STORM INLETS
- FES, FOREBAY, & TRICKLE CHANNEL
- OUTLET STRUCTURE
- CRUSHER FINES MAINTENANCE ACCESS
- RIPRAP
- E — EXISTING ELECTRIC
- T — EXISTING TELEPHONE
- FO — EXISTING FIBER OPTIC
- G — EXISTING GAS
- OH — EXISTING OVER HEAD ELECTRIC
- STORM UNDERDRAIN
- 100 YEAR FLOODPLAIN
- WETLAND

NOTES:

1. MAXIMUM DEFLECTION FOR THE WATER MAINS SHALL NOT EXCEED ONE-HALF OF THE MANUFACTURER'S MAXIMUM ALLOWABLE DEFLECTION OR 1 DEGREE, WHICHEVER IS LESS.

BASIS OF BEARINGS

SEE COVER SHEET FOR BASIS OF BEARINGS & BENCHMARK.

PROFESSIONAL ENGINEER CERTIFICATION

I HEREBY AFFIRM THAT THESE FINAL CONSTRUCTION PLANS WERE PREPARED UNDER MY DIRECT SUPERVISION, IN ACCORDANCE WITH ALL APPLICABLE TOWN OF CASTLE ROCK AND STATE OF COLORADO STANDARDS AND STATUTES, RESPECTIVELY, AND THAT I AM FULLY RESPONSIBLE FOR ALL DESIGN AND REVISIONS RELATIVE TO SAID PLANS.

GARY A. WALTER — DATE

STATE OF COLORADO # 42246

TOWN APPROVAL BLOCK

TOWN OF CASTLE ROCK APPROVAL
PLANS ARE HEREBY APPROVED FOR ONE YEAR FROM DATE OF DEVELOPMENT SERVICES APPROVAL.

APPROVED BY:

DEVELOPMENT SERVICES — DATE

NOTES:

1. CONTRACTOR SHALL PROVIDE A MINIMUM SEVENTY TWO (72) HOURS' NOTICE TO THE ON-SITE TCR CONSTRUCTION INSPECTOR, (720) 733-2200, PRIOR TO MAKING ANY CONNECTIONS OR TIE-INS TO EXISTING WATER, SANITARY SEWER, AND/OR STORM SEWER SYSTEMS PROVIDED THAT THE UTILITY TIE-IN DOES NOT DISRUPT SERVICE TO EXISTING CR WATER CUSTOMERS. IF THE TIE-IN REQUIRES A LINE SHUTDOWN, OR WILL DISRUPT UTILITY SERVICE, THEN CONTRACTOR SHALL PROVID EA MINIMUM OF THREE (3) WEEKS' NOTICE TO THE TCR CONSTRUCTION INSPECTOR TO ALLOW TIME FOR CR WATER TO PROVIDE WRITTEN NOTIFICATION TO EXISTING CUSTOMERS AFFECTED BY THE TIE-IN. ALL TOWN UTILITY TIE-INS MUST BE APPROVED BY CR WATER PRIOR TO COMMENCING WORK.
2. A CASTLE ROCK TIME AND MATERIALS UTILITY PERMIT WILL BE REQUIRED WHERE SITE WILL TIE INTO OR CROSS CRITICAL INFRASTRUCTURE. TMU PERMIT FEES PER THE TMU COST ESTIMATE WILL BE REQUIRED TO BE PAID PRIOR TO CONSTRUCTION.
3. ALL STUB OUTS AND TEMPORARY BLOW OFFS ARE TO BE FULLY RESTRAINED BACK TO THE TEE OR CROSS.

EMK CONSULTANTS, INC.
ENGINEERING SURVEYING
LAND DEVELOPMENT
SERVICES AND SOLUTIONS
7006 SOUTH ALTON WAY, BLDG. F
CENTENNIAL, COLORADO 80112-2019
(303)694-1520
www.EMKcc.com

Know what's below. Call before you dig. 811

#	REVISION DESCRIPTION	DATE	BY
1	1ST SUBMITTAL	10/31/23	JF
2	2ND SUBMITTAL	8/23/24	BG
3	3RD SUBMITTAL	12/23/24	GW
4	4TH SUBMITTAL	4/30/25	GW

DAWSON TRAILS - FILING 2 INFRASTRUCTURE

CASTLE ROCK, COLORADO

CONSTRUCTION DOCUMENTS
OVERALL UTILITY PLAN (12 OF 12)

WESTSIDE

DESIGNED BY: DO
DRAWN BY: DL
CHECKED BY: GAW

JOB NO. 13466.00

SHEET 86 OF 301

4/30/2025 4:12 PM X:\20-224 Dawson\Civil\CAD\Plans\INFRA11\CDs OVERALL UTILITY PLAN.dwg

IRRIGATION SYSTEM HYDRAULICS - POC #4

Irrigation System Hydraulic Worksheet - POC #4

Project Name:	Dawson Trails Infrastructure - South POC #4 Controller D					**Date:**	April 23, 2025			
Project Location:	1-1/2" Water meter located on south side of Quandary Peak Drive, approximately 230-Feet Southeast of Gambel Ridge Boulevard & Quandary Peak Drive intersection.									
Prepared by:	Jason Naughtin					**Current TOCR Registration #**	19-3239			
Tap Size	1.50 "				**Source of Pressure**	12" main in Quandary Peak Drive				
Static Water Pressure:	101 psi									
Hydraulic Grade At Zone:					**Company**	Norris Design				

	Ft. of Copper		Pipe Size (")	Pipe Material	Friction Loss (from chart)		Flow (GPM)	Loss/Gain (PSI)
Service Line (tap to meter):	22	LF	1.50	K Copper	6.63	/100 FT	40	1.46
Water Meter:			1.50		1.00		40	1.00
Service Line (meter to backflow):	5	LF	1.50	K Copper	6.63	/100 FT	40	0.33
Backflow:			1.50		12		40	12.00
Master Valve:			1.50		2		40	2.00
Pressure Required at Head:								45
Lateral Allowance:								4.50
Control Valve Allowance:								3.50

Mainline Allowances:

Length of Mainline	Pipe Material	Size		Gals.					
2,290 LF	CL200BE	2.00 "	@	40 GPM	Looped	0.26	/100 FT		6.05
814 LF	CL200BE	2.00 "	@	40 GPM	Non-looped	0.95	/100 FT		7.76

Elevation:

	Tap elevation	6,421'			High/Low:	6,430'	3.90

Green shading indicates required information you must provide

Total System requirements (PSI)	***87.50***
Available System Pressure (PSI)	***100.99***

Town of Castle Rock provides a minimum of 43 psi

Total irrigated area for tap # 4 ***is*** 118,050 ***sq. ft.***

IRRIGATION SYSTEM HYDRAULICS - POC #5

Irrigation System Hydraulic Worksheet - POC #5

Project Name:	Dawson Trails Infrastructure - South POC #5 Controller E					**Date:**	April 23, 2025			
Project Location:	1-1/2" Water meter located on West side of Gambel Ridge Boulevard, approximately 40-Feet West of Gambel Ridge Boulevard & Quandary Peak Drive intersection.									
Prepared by:	Jason Naughtin					**Current TOCR Registration #**	19-3239			
Tap Size	1.50 "				**Source of Pressure**	12" main in Gambel Ridge Blvd.				
Static Water Pressure:	57 psi									
Hydraulic Grade At Zone:					**Company**	Norris Design				

	Ft. of Copper		Pipe Size (")	Pipe Material	Friction Loss (from chart)		Flow (GPM)	Loss/Gain (PSI)
Service Line (tap to meter):	61	LF	1.50	K Copper	6.63	/100 FT	40	4.05
Water Meter:			1.50		1.00		40	1.00
Service Line (meter to backflow):	5	LF	1.50	K Copper	6.63	/100 FT	40	0.33
Backflow:			1.50		12		40	12.00
Master Valve:			1.50		2		40	2.00
Pressure Required at Head:								45
Lateral Allowance:								4.50
Control Valve Allowance:								3.50

Mainline Allowances:

Length of Mainline	Pipe Material	Size		Gals.					
7,182 LF	CL200BE	2.50 "	@	40 GPM	Looped	0.10	/100 FT		7.49
	CL200BE	2.50 "	@	40 GPM	Non-looped	0.38	/100 FT		0.00

Elevation:

	Tap elevation	6,523'			High/Low:	6,610'	37.67

Green shading indicates required information you must provide

Total System requirements (PSI)	***117.54***
Available System Pressure (PSI)	***56.83***

Town of Castle Rock provides a minimum of 43 psi

Total irrigated area for tap # 5 ***is*** 155,950 ***sq. ft.***

IRRIGATION SYSTEM HYDRAULICS - POC #6

Irrigation System Hydraulic Worksheet - POC #6

Project Name:	Dawson Trails Infrastructure - South POC #6 Controller F					**Date:**	April 23, 2025			
Project Location:	1-1/2" Water meter located on South side of Schroeder Drive, approximately 470-Feet West of Schroeder Drive & Blanca Peak Parkway intersection.									
Prepared by:	Jason Naughtin					**Current TOCR Registration #**	19-3239			
Tap Size	1.50 "				**Source of Pressure**	12" main in Schroeder Drive				
Static Water Pressure:	56 psi									
Hydraulic Grade At Zone:					**Company**	Norris Design				

	Ft. of Copper		Pipe Size (")	Pipe Material	Friction Loss (from chart)		Flow (GPM)	Loss/Gain (PSI)
Service Line (tap to meter):	30	LF	1.50	K Copper	6.63	/100 FT	40	1.99
Water Meter:			1.50		1.00		40	1.00
Service Line (meter to backflow):	5	LF	1.50	K Copper	6.63	/100 FT	40	0.33
Backflow:			1.50		12		40	12.00
Master Valve:			1.50		2		40	2.00
Pressure Required at Head:								45
Lateral Allowance:								4.50
Control Valve Allowance:								3.50

Mainline Allowances:

Length of Mainline	Pipe Material	Size		Gals.					
850 LF	CL200BE	2.00 "	@	40 GPM	Non-looped	0.95	/100 FT		8.11
	CL200BE	1.50 "	@	40 GPM	Looped	0.78	/100 FT		0.00

Elevation:

	Tap elevation	6,517'			High/Low:	6,547'	12.99

Green shading indicates required information you must provide

Total System requirements (PSI)	***91.42***
Available System Pressure (PSI)	***55.97***

Town of Castle Rock provides a minimum of 43 psi

Total irrigated area for tap # 6 ***is*** 118,050 ***sq. ft.***

IRRIGATION SYSTEM HYDRAULICS - POC #7

Irrigation System Hydraulic Worksheet - POC #7

Project Name:	Dawson Trails Infrastructure - South POC #7 Controller G					**Date:**	April 23, 2025			
Project Location:	1-1/2" Water meter located on West side of Blanca Peak Pkwy, approximately 490-Feet North of Blanca Peak Parkway & Schroeder Drive intersection.									
Prepared by:	Jason Naughtin					**Current TOCR Registration #**	19-3239			
Tap Size	1.50 "				**Source of Pressure**	12" main in Blanca Peak Pkwy				
Static Water Pressure:	63 psi									
Hydraulic Grade At Zone:					**Company**	Norris Design				

	Ft. of Copper		Pipe Size (")	Pipe Material	Friction Loss (from chart)		Flow (GPM)	Loss/Gain (PSI)
Service Line (tap to meter):	12	LF	1.50	K Copper	1.84	/100 FT	20	0.22
Water Meter:			1.50		1.00		20	1.00
Service Line (meter to backflow):	5	LF	1.50	K Copper	1.84	/100 FT	20	0.09
Backflow:			1.00		12		20	12.00
Master Valve:			1.00		2		20	2.00
Pressure Required at Head:								30
Lateral Allowance:								3.00
Control Valve Allowance:								3.00

Mainline Allowances:

Length of Mainline	Pipe Material	Size		Gals.					
385 LF	CL200BE	1.50 "	@	20 GPM	Non-looped	0.78	/100 FT		3.01
	CL200BE	2.00 "	@	20 GPM	Non-looped	0.26	/100 FT		0.00

Elevation:

	Tap elevation	6,501'			High/Low:	6,506'	2.17

Green shading indicates required information you must provide

Total System requirements (PSI)	***56.48***
Available System Pressure (PSI)	***62.80***

Town of Castle Rock provides a minimum of 43 psi

Total irrigated area for tap # 7 ***is*** 134,170 ***sq. ft.***

IRRIGATION SYSTEM HYDRAULICS - POC #8

Irrigation System Hydraulic Worksheet - POC #8

Project Name:	Dawson Trails Infrastructure - South POC #8 Controller H					**Date:**	April 23, 2025			
Project Location:	1" Water meter located on south side of Quandary Peak Drive, approximately 270-Feet East of Dawson Trails Blvd. and Quandary Peak Drive intersection.									
Prepared by:	Jason Naughtin					**Current TOCR Registration #**	19-3239			
Tap Size	1.00 "				**Source of Pressure**	12" main in Quandary Peak Drive				
Static Water Pressure:	105 psi									
Hydraulic Grade At Zone:					**Company**	Norris Design				

	Ft. of Copper		Pipe Size (")	Pipe Material	Friction Loss (from chart)		Flow (GPM)	Loss/Gain (PSI)
Service Line (tap to meter):	38	LF	1.00	K Copper	10.47	/100 FT	18	3.98
Water Meter:			1.00		1.00		18	1.00
Service Line (meter to backflow):	5	LF	1.00	K Copper	10.47	/100 FT	18	0.52
Backflow:			1.50		12		18	12.00
Master Valve:			1.50		2		18	2.00
Pressure Required at Head:								45
Lateral Allowance:								4.50
Control Valve Allowance:								3.00

Mainline Allowances:

Length of Mainline	Pipe Material	Size		Gals.					
910 LF	CL200BE	1.50 "	@	18 GPM	Non-looped	0.64	/100 FT		5.84
2,680 LF	CL200BE	1.50 "	@	18 GPM	Looped	0.18	/100 FT		4.77

Elevation:

	Tap elevation	6,404'			High/Low:	6,359'	-19.49

Green shading indicates required information you must provide

Total System requirements (PSI)	***63.13***
Available System Pressure (PSI)	***105.37***

Town of Castle Rock provides a minimum of 43 psi

Total irrigated area for tap # 8 ***is*** 84,950 ***sq. ft.***

NORRIS DESIGN
PEOPLE + PLACEMAKING
NORRIS-DESIGN.COM
1101 BANNOCK STREET
DENVER, CO 80204
P 303.892.1166

Know what's below. Call before you dig. 811

#	REVISION DESCRIPTION	DATE	BY
1	1ST SUBMITTAL	10/27/23	AL
2	2ND SUBMITTAL	08/23/24	AL
3	3RD SUBMITTAL	12/20/24	AL
4	4TH SUBMITTAL	04/30/25	AL

DAWSON TRAILS - FILING 2 INFRASTRUCTURE
CASTLE ROCK, COLORADO
CONSTRUCTION DOCUMENTS

I HEREBY AFFIRM THAT THESE FINAL CONSTRUCTION PLANS WERE PREPARED UNDER MY DIRECT SUPERVISION, IN ACCORDANCE WITH ALL APPLICABLE TOWN OF CASTLE ROCK AND STATE OF COLORADO STANDARDS AND STATUTES, RESPECTIVELY; AND THAT I AM FULLY RESPONSIBLE FOR ALL DESIGN AND REVISIONS RELATIVE TO SAID PLANS.

STACEY WEAKS, PLA 04/30/2025
STATE OF COLORADO LICENSE L.A. #: LA.0000609

TOWN OF CASTLE ROCK APPROVAL

PLANS ARE HEREBY APPROVED FOR ONE YEAR FROM DATE OF DEVELOPMENT SERVICES APPROVAL.

APPROVED BY:

DEVELOPMENT SERVICES DATE

WESTSIDE

DESIGNED BY: AL,CB
DRAWN BY: AL,AN
CHECKED BY: SW,CB

IRRIGATION CHARTS

SHEET 248 OF 301

JASON NAUGHTIN TOCR #19-3239

IRRIGATION POC CHART / ZONE DATA - CONTROLLER 'D'

IRRIGATION CHART - CONTROLLER 'D'

Registered Professional: Jason Naughtin | Registration #: 19-3239 | Date: 4/30/2025
Company Name: Norris Design | Address: 1101 Bannock St., Denver, CO 80204
Phone: 303.892.1166 | Email: jnaughtin@norris-design.com | Clock Make: Rain Bird | Model: ESP-LXIVMP

Sequence	Zone	Hydrozone (Very Low <5" Low 5-10" Medium 10-15" High >15")	Plant Type (Turf, Native, Shrubs, Perennials, Trees, Annuals, etc.)	Head Type (Rotors, Sprays, Bubblers, Drip, SDI, etc.)	Nozzle (Nozzle/Emitter size)	App. Rate (inches/hour)	GPM (Per Zone and/or Seq.)	Inches/Month (Average May - September)	Run Time (Minutes/ Month)	Run Time (Minutes Every Third Day)	Water Usage (Gallons per month)
1	D1	Low	Shrub	Drip	0.5, 1.0 gph	0.60	5.0	2	200	20	1000
	D5	Low	Shrub	Drip	0.5, 1.0 gph	0.60	5.0	2			1000
	D6	Low	Shrub	Drip	0.5, 1.0 gph	0.60	5.0	2			1000
	D16	Low	Shrub	Drip	0.5, 1.0 gph	0.60	5.0	2			1000
	D17	Low	Shrub	Drip	0.5, 1.0 gph	0.60	5.0	2			1000
	D23	Low	Shrub	Drip	0.5, 1.0 gph	0.60	5.0	2			1000
							30.00				
2	D25	Low	Shrub	Drip	0.5, 1.0 gph	0.60	5.0	2	200	20	1000
	D29	Low	Shrub	Drip	0.5, 1.0 gph	0.60	5.0	2			1000
	D30	Low	Shrub	Drip	0.5, 1.0 gph	0.60	5.0	2			1000
	D33	Low	Shrub	Drip	0.5, 1.0 gph	0.60	5.0	2			1000
	D36	Low	Shrub	Drip	0.5, 1.0 gph	0.60	5.0	2			1000
	D37	Low	Shrub	Drip	0.5, 1.0 gph	0.60	5.0	2			1000
							30.00				
3	D3	Low	Trees	Drip	0.9 gph	0.60	3.0	2	200	20	600
	D7	Low	Trees	Drip	0.9 gph	0.60	3.0	2			600
	D15	Low	Trees	Drip	0.9 gph	0.60	4.0	2			800
	D18	Low	Trees	Drip	0.9 gph	0.60	3.0	2			600
	D21	Low	Trees	Drip	0.9 gph	0.60	3.5	2			700
	D24	Low	Trees	Drip	0.9 gph	0.60	3.0	2			600
	D27	Low	Trees	Drip	0.9 gph	0.60	3.5	2			700
	D32	Low	Trees	Drip	0.9 gph	0.60	3.0	2			600
	D35	Low	Trees	Drip	0.9 gph	0.60	3.5	2			700
							29.50				
4	D4	Low	Native	RB RVAN Rotary	14, 18, 24	0.62	20.9	2	194	19	4053
	D31	Low	Native	RB RVAN Rotary	14, 18, 24	0.62	20.0	2			3875
							40.96				
5	D8	Low	Native	RB RVAN Rotary	14, 18, 24	0.62	22.6	2	194	19	4366
	D11	Low	Native	RB RVAN Rotary	14, 18, 24	0.62	10.8	2			2081
							33.31				
6	D14	Low	Native	RB RVAN Rotary	14, 18, 24	0.62	10.2	2	194	19	1974
	D19	Low	Native	RB RVAN Rotary	14, 18, 24	0.62	21.4	2			4146
							31.62				
7	D22	Low	Native	RB RVAN Rotary	14, 18, 24	0.62	20.2	2	194	19	3908
	D26	Low	Native	RB RVAN Rotary	14, 18, 24	0.62	20.2	2			3910
							40.39				
8	D34	Low	Native	RB RVAN Rotary	14, 18, 24	0.62	21.1	2	194	19	4076
							21.06				
9	D2	Low	Native	RB 5000 Rotor	#4	0.44	40.1	2	273	27	10936
							40.10				
10	D9	Low	Native	RB 5000 Rotor	#4	0.44	34.2	2	273	27	9314
							34.15				
11	D10	Low	Native	RB 5000 Rotor	#4	0.44	36.1	2	273	27	9843
							36.09				
12	D12	Low	Native	RB 5000 Rotor	#4	0.44	37.3	2	273	27	10173
							37.30				
13	D13	Low	Native	RB 5000 Rotor	#4	0.44	40.1	2	273	27	10936
							40.10				
14	D20	Low	Native	RB 5000 Rotor	#4	0.44	20.1	2	273	27	5468
							20.05				
								Total	**3,204**	**320**	**106,958**
									Min/Month	**Min/cycle**	**Gallons/Month**

IRRIGATION POC CHART / ZONE DATA - CONTROLLER 'E'

IRRIGATION CHART - CONTROLLER 'E'

Registered Professional: Jason Naughtin | Registration #: 19-3239 | Date: 4/30/2025
Company Name: Norris Design | Address: 1101 Bannock St., Denver, CO 80204
Phone: 303.892.1166 | Email: jnaughtin@norris-design.com | Clock Make: Rain Bird | Model: ESP-LXIVMP

Sequence	Zone	Hydrozone (Very Low <5" Low 5-10" Medium 10-15" High >15")	Plant Type (Turf, Native, Shrubs, Perennials, Trees, Annuals, etc.)	Head Type (Rotors, Sprays, Bubblers, Drip, SDI, etc.)	Nozzle (Nozzle/Emitter size)	App. Rate (inches/hour)	GPM (Per Zone and/or Seq.)	Inches/Month (Average May - September)	Run Time (Minutes/ Month)	Run Time (Minutes Every Third Day)	Water Usage (Gallons per month)
1	E2	Low	Shrub	Drip	0.5, 1.0 gph	0.60	5.0	2	200	20	1000
	E7	Low	Shrub	Drip	0.5, 1.0 gph	0.60	5.0	2			1000
	E12	Low	Shrub	Drip	0.5, 1.0 gph	0.60	5.0	2			1000
	E15	Low	Shrub	Drip	0.5, 1.0 gph	0.60	5.0	2			1000
	E18	Low	Shrub	Drip	0.5, 1.0 gph	0.60	5.0	2			1000
	E21	Low	Shrub	Drip	0.5, 1.0 gph	0.60	5.0	2			1000
	E24	Low	Shrub	Drip	0.5, 1.0 gph	0.60	5.0	2			1000
							35.00				
2	E27	Low	Shrub	Drip	0.5, 1.0 gph	0.60	5.0	2	200	20	1000
	E32	Low	Shrub	Drip	0.5, 1.0 gph	0.60	5.0	2			1000
	E38	Low	Shrub	Drip	0.5, 1.0 gph	0.60	5.0	2			1000
	E42	Low	Shrub	Drip	0.5, 1.0 gph	0.60	5.0	2			1000
	E46	Low	Shrub	Drip	0.5, 1.0 gph	0.60	5.0	2			1000
	E49	Low	Shrub	Drip	0.5, 1.0 gph	0.60	5.0	2			1000
	E53	Low	Shrub	Drip	0.5, 1.0 gph	0.60	5.0	2			1000
							35.00				
3	E3	Low	Trees	Drip	0.9 gph	0.60	4.5	2	200	20	900
	E6	Low	Trees	Drip	0.9 gph	0.60	4.0	2			800
	E9	Low	Trees	Drip	0.9 gph	0.60	5.5	2			1100
	E13	Low	Trees	Drip	0.9 gph	0.60	5.0	2			1000
	E17	Low	Trees	Drip	0.9 gph	0.60	5.0	2			1000
	E22	Low	Trees	Drip	0.9 gph	0.60	5.0	2			1000
	E26	Low	Trees	Drip	0.9 gph	0.60	5.0	2			1000
							34.00				
4	E30	Low	Trees	Drip	0.9 gph	0.60	4.5	2	200	20	900
	E33	Low	Trees	Drip	0.9 gph	0.60	6.0	2			1200
	E37	Low	Trees	Drip	0.9 gph	0.60	4.0	2			800
	E45	Low	Trees	Drip	0.9 gph	0.60	5.0	2			1000
	E41	Low	Trees	Drip	0.9 gph	0.60	3.5	2			700
	E50	Low	Trees	Drip	0.9 gph	0.60	5.0	2			1000
	E52	Low	Trees	Drip	0.9 gph	0.60	3.0	2			600
							31.00				
5	E1	Low	Native	RB RVAN Rotary	14, 18, 24	0.62	12.4	2	194	19	2406
	E8	Low	Native	RB RVAN Rotary	14, 18, 24	0.62	27.1	2			5247
							39.54				
6	E4	Low	Native	RB RVAN Rotary	14, 18, 24	0.62	22.2	2	194	19	4301
	E11	Low	Native	RB RVAN Rotary	14, 18, 24	0.62	17.6	2			3414
							39.86				
7	E10	Low	Native	RB RVAN Rotary	14, 18, 24	0.62	33.3	2	194	19	6449
	E19	Low	Native	RB RVAN Rotary	14, 18, 24	0.62	5.5	2			1055
							38.77				
8	E16	Low	Native	RB RVAN Rotary	14, 18, 24	0.62	30.1	2	194	19	5818
	E20	Low	Native	RB RVAN Rotary	14, 18, 24	0.62	9.8	2			1895
							39.85				
9	E5	Low	Native	RB RVAN Rotary	14, 18, 24	0.62	19.1	2	194	19	3701
	E48	Low	Native	RB RVAN Rotary	14, 18, 24	0.62	20.4	2			3952
							39.54				
10	E14	Low	Native	RB RVAN Rotary	14, 18, 24	0.62	21.8	2	194	19	4223
	E47	Low	Native	RB RVAN Rotary	14, 18, 24	0.62	17.6	2			3412
							39.45				
11	E23	Low	Native	RB RVAN Rotary	14, 18, 24	0.62	25.6	2	194	19	4953
	E43	Low	Native	RB RVAN Rotary	14, 18, 24	0.62	14.5	2			2808
							40.10				
12	E25	Low	Native	RB RVAN Rotary	14, 18, 24	0.62	16.2	2	194	19	3128
	E36	Low	Native	RB RVAN Rotary	14, 18, 24	0.62	17.4	2			3362
							33.53				
13	E28	Low	Native	RB RVAN Rotary	14, 18, 24	0.62	15.9	2	194	19	3072
	E35	Low	Native	RB RVAN Rotary	14, 18, 24	0.62	22.0	2			4250
							37.83				
14	E29	Low	Native	RB RVAN Rotary	14, 18, 24	0.62	26.3	2	194	19	5085
	E39	Low	Native	RB RVAN Rotary	14, 18, 24	0.62	11.4	2			2210
							37.69				
15	E31	Low	Native	RB RVAN Rotary	14, 18, 24	0.62	31.8	2	194	19	6161
							31.83				
16	E34	Low	Native	RB RVAN Rotary	14, 18, 24	0.62	9.4	2	194	19	1812
	E51	Low	Native	RB RVAN Rotary	14, 18, 24	0.62	30.2	2			5849
							39.58				
17	E44	Low	Native	RB RVAN Rotary	14, 18, 24	0.62	28.7	2	194	19	5553
	E54	Low	Native	RB RVAN Rotary	14, 18, 24	0.62	10.1	2			1949
							38.76				
18	E40	Low	Native	RB RVAN Rotary	14, 18, 24	0.62	16.1	2	194	19	3112
							16.08				
								Total	**3,510**	**351**	**126,176**
									Min/Month	**Min/cycle**	**Gallons/Month**

JASON NAUGHTIN TOCR #19-3239

I HEREBY AFFIRM THAT THESE FINAL CONSTRUCTION PLANS WERE PREPARED UNDER MY DIRECT SUPERVISION, IN ACCORDANCE WITH ALL APPLICABLE TOWN OF CASTLE ROCK AND STATE OF COLORADO STANDARDS AND STATUTES, RESPECTIVELY; AND THAT I AM FULLY RESPONSIBLE FOR ALL DESIGN AND REVISIONS RELATIVE TO SAID PLANS.

STACEY WEAKS, PLA 04/30/2025
STATE OF COLORADO LICENSE L.A. #: LA.0000609

TOWN OF CASTLE ROCK APPROVAL

PLANS ARE HEREBY APPROVED FOR ONE YEAR FROM DATE OF DEVELOPMENT SERVICES APPROVAL.

APPROVED BY:

DEVELOPMENT SERVICES DATE

NORRIS DESIGN
PEOPLE + PLACEMAKING
NORRIS-DESIGN.COM
1101 BANNOCK STREET
DENVER, CO 80204
P 303.892.1166

Know what's below. Call before you dig. 811

#	REVISION DESCRIPTION	DATE	BY
1	1ST SUBMITTAL	10/27/23	AL
2	2ND SUBMITTAL	08/23/24	AL
3	3RD SUBMITTAL	12/20/24	AL
4	4TH SUBMITTAL	04/30/25	AL

DAWSON TRAILS - FILING 2 INFRASTRUCTURE
CASTLE ROCK, COLORADO
CONSTRUCTION DOCUMENTS

WESTSIDE

DESIGNED BY: AL,CB
DRAWN BY: AL,AN
CHECKED BY: SW,CB

IRRIGATION CHARTS

SHEET
249 OF 301

IRRIGATION POC CHART / ZONE DATA - CONTROLLER 'F'

IRRIGATION CHART - CONTROLLER 'F'

Registered Professional: Jason Naughtin | Registration #: 19-3239 | Date: 4/30/2025
Company Name: Norris Design | Address: 1101 Bannock St., Denver, CO 80204
Phone: 303.892.1166 | Email: jnaughtin@norris-design.com | Clock Make: Rain Bird | Model: ESP-LXIVMP

Sequence	Zone	Hydrozone (Very Low <5" Low 5-10" Medium 10-15" High >15")	Plant Type (Turf, Native, Shrubs, Perennials, Trees, Annuals, etc.)	Head Type (Rotors, Sprays, Bubblers, Drip, SDI, etc.)	Nozzle (Nozzle/Emitter size)	App. Rate (inches/hour)	GPM (Per Zone and/or Seq.)	Inches/Month (Average May - September)	Run Time (Minutes/ Month)	Run Time (Minutes Every Third Day)	Water Usage (Gallons per month)
1	F3	Low	Shrub	Drip	0.5, 1.0 gph	0.60	5.0	2	200	20	1000
	F5	Low	Shrub	Drip	0.5, 1.0 gph	0.60	5.0	2			1000
	F9	Low	Shrub	Drip	0.5, 1.0 gph	0.60	5.0	2			1000
	F12	Low	Shrub	Drip	0.5, 1.0 gph	0.60	5.0	2			1000
	F14	Low	Shrub	Drip	0.5, 1.0 gph	0.60	5.0	2			1000
	F22	Low	Shrub	Drip	0.5, 1.0 gph	0.60	5.0	2			1000
	F26	Low	Shrub	Drip	0.5, 1.0 gph	0.60	5.0	2			1000
							35.00				
2	F2	Low	Trees	Drip	0.9 gph	0.60	2.5	2	200	20	500
	F6	Low	Trees	Drip	0.9 gph	0.60	4.0	2			800
	F11	Low	Trees	Drip	0.9 gph	0.60	7.5	2			1500
	F17	Low	Trees	Drip	0.9 gph	0.60	7.0	2			1400
	F20	Low	Trees	Drip	0.9 gph	0.60	3.0	2			600
	F25	Low	Trees	Drip	0.9 gph	0.60	7.0	2			1400
							31.00				
3	F1	Low	Native	Toro Precision Spray	#8, 10, 12, 15	1.00	16.3	2	120	12	1958
	F16	Low	Native	Toro Precision Spray	#8, 10, 12, 15	1.00	22.4	2			2693
							38.76				
4	F4	Low	Native	Toro Precision Spray	#8, 10, 12, 15	1.00	25.3	2	120	12	3034
	F21	Low	Native	Toro Precision Spray	#8, 10, 12, 15	1.00	14.3	2			1714
							39.56				
5	F10	Low	Native	RB RVAN Rotary	14, 18, 24	0.62	21.3	2	194	19	4115
							21.26				
6	F7	Low	Native	RB 5000 Rotor	#4	0.44	39.4	2	273	27	10751
							39.42				
7	F8	Low	Native	RB 5000 Rotor	#4	0.44	26.4	2	273	27	7189
							26.36				
8	F13	Low	Native	RB 5000 Rotor	#4	0.44	38.7	2	273	27	10541
							38.65				
9	F15	Low	Native	RB 5000 Rotor	#4	0.44	40.2	2	273	27	10975
							40.24				
10	F18	Low	Native	RB 5000 Rotor	#4	0.44	40.1	2	273	27	10936
							40.10				
11	F19	Low	Native	RB 5000 Rotor	#4	0.44	36.3	2	273	27	9908
							36.33				
12	F23	Low	Native	RB 5000 Rotor	#4	0.44	40.1	2	273	27	10936
							40.10				
13	F24	Low	Native	RB 5000 Rotor	#4	0.44	33.2	2	273	27	9065
							33.24				
14	F27	Low	Native	RB 5000 Rotor	#4	0.44	40.3	2	273	27	10977
							40.25				
								Total	**3288**	**329**	**117992**
									Min/Month	**Min/cycle**	**Gallons/Month**

IRRIGATION POC CHART / ZONE DATA - CONTROLLER 'G'

IRRIGATION CHART - CONTROLLER 'G'

Registered Professional: Jason Naughtin | Registration #: 19-3239 | Date: 4/30/2025
Company Name: Norris Design | Address: 1101 Bannock St., Denver, CO 80204
Phone: 303.892.1166 | Email: jnaughtin@norris-design.com | Clock Make: Rain Bird | Model: ESP-LXIVMP

Sequence	Zone	Hydrozone (Very Low <5" Low 5-10" Medium 10-15" High >15")	Plant Type (Turf, Native, Shrubs, Perennials, Trees, Annuals, etc.)	Head Type (Rotors, Sprays, Bubblers, Drip, SDI, etc.)	Nozzle (Nozzle/Emitter size)	App. Rate (inches/hour)	GPM (Per Zone and/or Seq.)	Inches/Month (Average May - September)	Run Time (Minutes/ Month)	Run Time (Minutes Every Third Day)	Water Usage (Gallons per month)
1	G3	Low	Trees	Drip	0.9 gph	0.60	3.5	2	200	20	700
	G7	Low	Trees	Drip	0.9 gph	0.60	5.0	2			1000
	G13	Low	Trees	Drip	0.9 gph	0.60	3.5	2			700
	G32	Low	Trees	Drip	0.9 gph	0.60	3.0	2			600
	G36	Low	Trees	Drip	0.9 gph	0.60	2.5	2			500
	G40	Low	Trees	Drip	0.9 gph	0.60	4.0	2			800
							21.50				
2	G4	Low	Shrub	Drip	0.5, 1.0 gph	0.60	5.0	2	200	20	1000
	G12	Low	Shrub	Drip	0.5, 1.0 gph	0.60	5.0	2			1000
	G14	Low	Shrub	Drip	0.5, 1.0 gph	0.60	5.0	2			1000
	G16	Low	Shrub	Drip	0.5, 1.0 gph	0.60	5.0	2			1000
	G17	Low	Shrub	Drip	0.5, 1.0 gph	0.60	5.0	2			1000
	G18	Low	Shrub	Drip	0.5, 1.0 gph	0.60	5.0	2			1000
	G34	Low	Shrub	Drip	0.5, 1.0 gph	0.60	5.0	2			1000
							35.00				
3	G19	Low	Shrub	Drip	0.5, 1.0 gph	0.60	5.0	2	200	20	1000
	G20	Low	Shrub	Drip	0.5, 1.0 gph	0.60	5.0	2			1000
	G21	Low	Shrub	Drip	0.5, 1.0 gph	0.60	5.0	2			1000
	G22	Low	Shrub	Drip	0.5, 1.0 gph	0.60	5.0	2			1000
	G23	Low	Shrub	Drip	0.5, 1.0 gph	0.60	5.0	2			1000
	G24	Low	Shrub	Drip	0.5, 1.0 gph	0.60	5.0	2			1000
	G42	Low	Shrub	Drip	0.5, 1.0 gph	0.60	5.0	2			1000
							35.00				
4	G25	Low	Shrub	Drip	0.5, 1.0 gph	0.60	5.0	2	200	20	1000
	G26	Low	Shrub	Drip	0.5, 1.0 gph	0.60	5.0	2			1000
	G27	Low	Shrub	Drip	0.5, 1.0 gph	0.60	5.0	2			1000
	G28	Low	Shrub	Drip	0.5, 1.0 gph	0.60	5.0	2			1000
	G29	Low	Shrub	Drip	0.5, 1.0 gph	0.60	5.0	2			1000
	G30	Low	Shrub	Drip	0.5, 1.0 gph	0.60	5.0	2			1000
	G8	Low	Shrub	Drip	0.5, 1.0 gph	0.60	5.0	2			1000
							35.00				
5	G11	Low	Native	Toro Precision Spray	#8, 10, 12, 15	1.00	11.5	2	120	12	1380
	G6	Low	Native	Toro Precision Spray	#8, 10, 12, 15	1.00	14.3	2			1714
	G10	Low	Native	Toro Precision Spray	#8, 10, 12, 15	1.00	11.5	2			1380
							37.28				
6	G5	Low	Native	Toro Precision Spray	#8, 10, 12, 15	1.00	9.1	2	120	12	1090
	G9	Low	Native	Toro Precision Spray	#8, 10, 12, 15	1.00	14.3	2			1714
	G33	Low	Native	Toro Precision Spray	#8, 10, 12, 15	1.00	14.3	2			1714
							37.64				
7	G37	Low	Native	Toro Precision Spray	#8, 10, 12, 15	1.00	17.0	2	120	12	2040
	G39	Low	Native	Toro Precision Spray	#8, 10, 12, 15	1.00	9.6	2			1151
	G41	Low	Native	Toro Precision Spray	#8, 10, 12, 15	1.00	13.3	2			1591
							39.85				
8	G1	Low	Native	Toro Precision Spray	#8, 10, 12, 15	1.00	11.4	2	120	12	1362
	G2	Low	Native	Toro Precision Spray	#8, 10, 12, 15	1.00	8.0	2			956
	G31	Low	Native	Toro Precision Spray	#8, 10, 12, 15	1.00	8.2	2			979
	G15	Low	Native	Toro Precision Spray	#8, 10, 12, 15	1.00	7.2	2			868
							34.71				
9	G35	Low	Native	Toro Precision Spray	#8, 10, 12, 15	1.00	16.3	2	120	12	1956
							16.30				
								Total	**1,400**	**140**	**45,194**
									Min/Month	**Min/cycle**	**Gallons/Month**

IRRIGATION POC CHART / ZONE DATA - CONTROLLER 'H'

IRRIGATION CHART - CONTROLLER 'H'

Registered Professional: Jason Naughtin | Registration #: 19-3239 | Date: 4/30/2025
Company Name: Norris Design | Address: 1101 Bannock St., Denver, CO 80204
Phone: 303.892.1166 | Email: jnaughtin@norris-design.com | Clock Make: Rain Bird | Model: ESP-LXIVMP

Sequence	Zone	Hydrozone (Very Low <5" Low 5-10" Medium 10-15" High >15")	Plant Type (Turf, Native, Shrubs, Perennials, Trees, Annuals, etc.)	Head Type (Rotors, Sprays, Bubblers, Drip, SDI, etc.)	Nozzle (Nozzle/Emitter size)	App. Rate (inches/hour)	GPM (Per Zone and/or Seq.)	Inches/Month (Average May - September)	Run Time (Minutes/ Month)	Run Time (Minutes Every Third Day)	Water Usage (Gallons per month)
1	H1	Low	Shrub	Drip	0.5, 1.0 gph	0.60	5.0	2	200	20	1000
	H2	Low	Shrub	Drip	0.5, 1.0 gph	0.60	5.0	2			1000
	H3	Low	Shrub	Drip	0.5, 1.0 gph	0.60	5.0	2			1000
							15.00				
2	H7	Low	Shrub	Drip	0.5, 1.0 gph	0.60	5.0	2	200	20	1000
	H12	Low	Shrub	Drip	0.5, 1.0 gph	0.60	5.0	2			1000
	H15	Low	Shrub	Drip	0.5, 1.0 gph	0.60	5.0	2			1000
							15.00				
3	H17	Low	Shrub	Drip	0.5, 1.0 gph	0.60	5.0	2	200	20	1000
	H19	Low	Shrub	Drip	0.5, 1.0 gph	0.60	5.0	2			1000
	H20	Low	Shrub	Drip	0.5, 1.0 gph	0.60	5.0	2			1000
							15.00				
4	H21	Low	Shrub	Drip	0.5, 1.0 gph	0.60	5.0	2	200	20	1000
	H22	Low	Shrub	Drip	0.5, 1.0 gph	0.60	5.0	2			1000
	H23	Low	Shrub	Drip	0.5, 1.0 gph	0.60	5.0	2			1000
							15.00				
5	H24	Low	Shrub	Drip	0.5, 1.0 gph	0.60	5.0	2	200	20	1000
	H25	Low	Shrub	Drip	0.5, 1.0 gph	0.60	5.0	2			1000
	H26	Low	Shrub	Drip	0.5, 1.0 gph	0.60	5.0	2			1000
							15.00				
6	H27	Low	Shrub	Drip	0.5, 1.0 gph	0.60	5.0	2	200	20	1000
	H5	Low	Trees	Drip	0.9 gph	0.60	5.5	2			1100
	H8	Low	Trees	Drip	0.9 gph	0.60	2.5	2			500
							13.00				
7	H14	Low	Trees	Drip	0.9 gph	0.60	8.0	2	200	20	1600
	H18	Low	Trees	Drip	0.9 gph	0.60	5.5	2			1100
	H11	Low	Trees	Drip	0.9 gph	0.60	3.5	2			700
							17.00				
8	H4	Low	Native	Toro Precision Spray	#8, 10, 12, 15	1.00	14.3	2	120	12	1716
							14.30				
9	H6	Low	Native	Toro Precision Spray	#8, 10, 12, 15	1.00	11.2	2	120	12	1344
							11.20				
10	H9	Low	Native	Toro Precision Spray	#8, 10, 12, 15	1.00	13.3	2	120	12	1596
							13.30				
11	H10	Low	Native	Toro Precision Spray	#8, 10, 12, 15	1.00	13.3	2	120	12	1596
							13.30				
12	H13	Low	Native	Toro Precision Spray	#8, 10, 12, 15	1.00	11.2	2	120	12	1344
							11.20				
13	H16	Low	Native	Toro Precision Spray	#8, 10, 12, 15	1.00	14.3	2	120	12	1716
							14.30				
								Total	**2,120**	**212**	**30,312**
									Min/Month	**Min/cycle**	**Gallons/Month**

JASON NAUGHTIN TOCR #19-3239

NORRIS DESIGN
PEOPLE + PLACEMAKING
NORRIS-DESIGN.COM
1101 BANNOCK STREET
DENVER, CO 80204
P 303.892.1166

Know what's below. Call before you dig. 811

#	REVISION DESCRIPTION	DATE	BY
1	1ST SUBMITTAL	10/27/23	AL
2	2ND SUBMITTAL	08/23/24	AL
3	3RD SUBMITTAL	12/20/24	AL
4	4TH SUBMITTAL	04/30/25	AL

DAWSON TRAILS - FILING 2 INFRASTRUCTURE
CASTLE ROCK, COLORADO
CONSTRUCTION DOCUMENTS

I HEREBY AFFIRM THAT THESE FINAL CONSTRUCTION PLANS WERE PREPARED UNDER MY DIRECT SUPERVISION, IN ACCORDANCE WITH ALL APPLICABLE TOWN OF CASTLE ROCK AND STATE OF COLORADO STANDARDS AND STATUTES, RESPECTIVELY; AND THAT I AM FULLY RESPONSIBLE FOR ALL DESIGN AND REVISIONS RELATIVE TO SAID PLANS.

STACEY WEAKS, PLA 04/30/2025
STATE OF COLORADO LICENSE L.A. #: LA.0000609

TOWN OF CASTLE ROCK APPROVAL

PLANS ARE HEREBY APPROVED FOR ONE YEAR FROM DATE OF DEVELOPMENT SERVICES APPROVAL.

APPROVED BY:

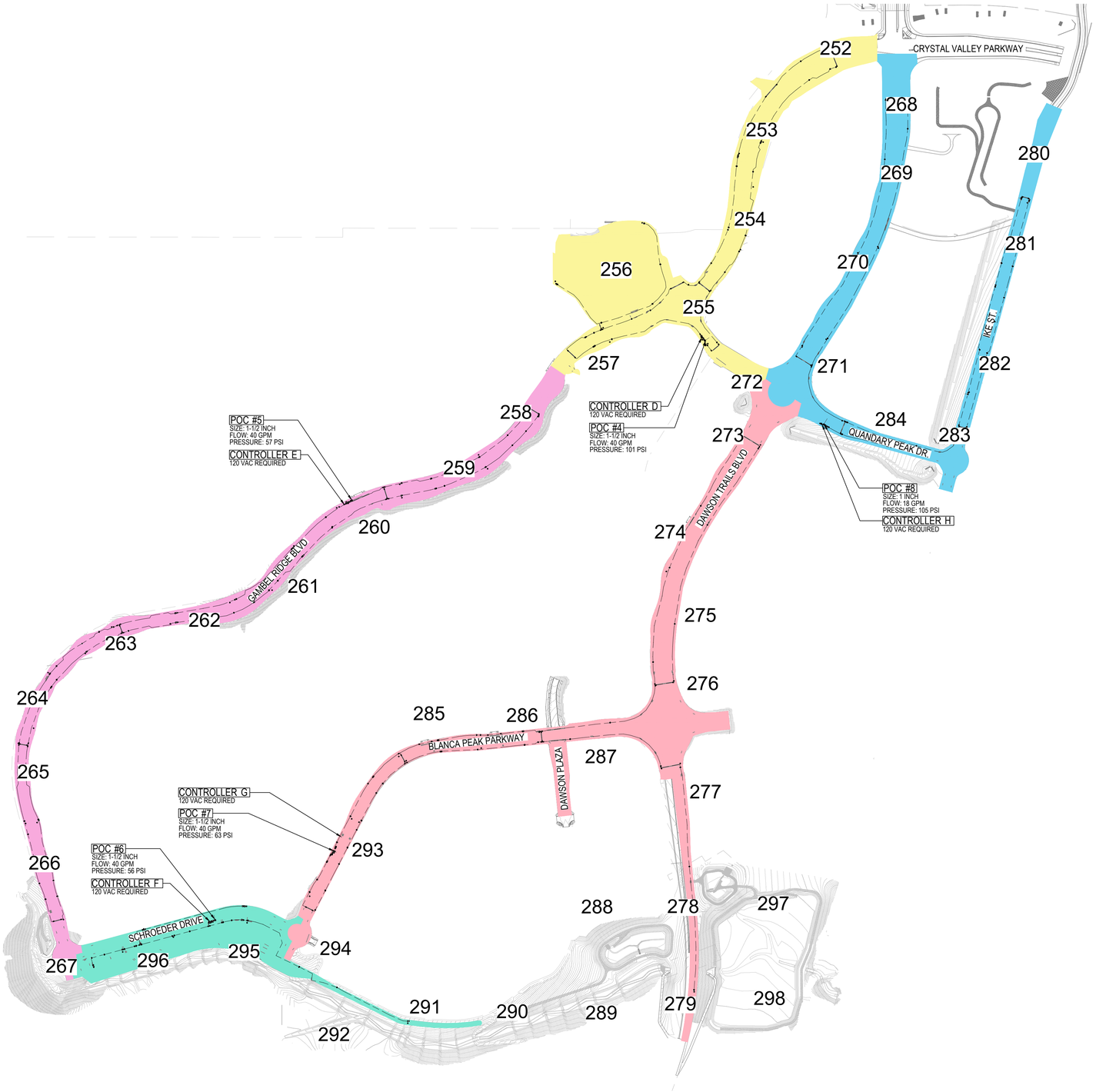
DEVELOPMENT SERVICES DATE

WESTSIDE

DESIGNED BY: AL,CB
DRAWN BY: AL,AN
CHECKED BY: SW,CB

IRRIGATION CHARTS

SHEET 248 OF 301



0 150 300 600

NORTH

SCALE 1" = 300'

JASON NAUGHTIN TOCR #19-3239

I HEREBY AFFIRM THAT THESE FINAL CONSTRUCTION PLANS WERE PREPARED UNDER MY DIRECT SUPERVISION, IN ACCORDANCE WITH ALL APPLICABLE TOWN OF CASTLE ROCK AND STATE OF COLORADO STANDARDS AND STATUTES, RESPECTIVELY; AND THAT I AM FULLY RESPONSIBLE FOR ALL DESIGN AND REVISIONS RELATIVE TO SAID PLANS.

STACEY WEAKS, PLA 04/30/2025
STATE OF COLORADO LICENSE L.A. #: LA.0000609

TOWN OF CASTLE ROCK APPROVAL

PLANS ARE HEREBY APPROVED FOR ONE YEAR FROM DATE OF DEVELOPMENT SERVICES APPROVAL.

APPROVED BY:

DEVELOPMENT SERVICES DATE

NORRIS DESIGN
PEOPLE + PLACEMAKING
NORRIS-DESIGN.COM
1101 BANNOCK STREET
DENVER, CO 80204
P 303.892.1166

Know what's below. Call before you dig. 811

#	REVISION DESCRIPTION	DATE	BY
1	1ST SUBMITTAL	10/27/23	AL
2	2ND SUBMITTAL	08/23/24	AL
3	3RD SUBMITTAL	12/20/24	AL
4	4TH SUBMITTAL	04/30/25	AL

DAWSON TRAILS - FILING 2 INFRASTRUCTURE
CASTLE ROCK, COLORADO
CONSTRUCTION DOCUMENTS

WESTSIDE

DESIGNED BY: AL,CB
DRAWN BY: AL,AN
CHECKED BY: SW,CB

OVERALL IRRIGATION

SHEET
251 OF 301