SALISBURY PARK NORTH PHASE 1 FLOODPLAIN DEVELOPMENT PERMIT APPLICATION

Prepared for:

Hord Coplan Macht
1800 Wazee Street, Suite 450
Denver, CO 80202

Prepared by:

ICON ENGINEERING

7000 South Yosemite Street, Suite 120 | Centennial, CO 80112
(303) 221-0802 | www.iconeng.com

November 20th, 2024

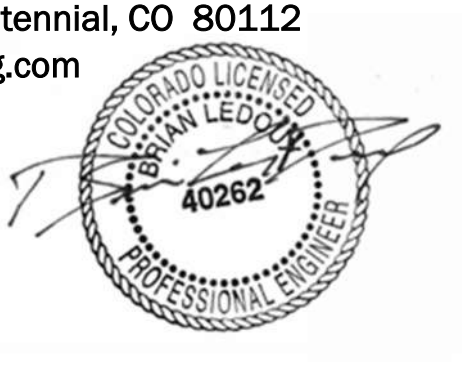


TABLE OF CONTENTS

1.0 Introduction 1
1.1 Purpose 1
1.2 Background and Previous Projects 1
1.3 Site Location 1
1.4 Site Description 1
1.5 Floodplains 3

2.0 Analysis Criteria 4
2.1 Regulations 4
2.2 Drainage Studies, Master Plans, Site Constraints 4

3.0 Topographic Mapping 5
3.1 Existing Topography 5
3.2 Proposed Topography 5

4.0 Hydrology 6
4.1 Peak Flows 6

5.0 Hydraulics 7
5.1 Hydraulic Analysis 7
5.2 Input Parameters 10
5.3 Results 10
5.4 Tie-Ins 10

6.0 Floodplain Mapping 10
6.1 Floodplain Work Map 10

7.0 Conclusions 11
7.1 Compliance with Standards 11

Tables

Table 4.1: Summary of Effective Discharges for Cherry Creek 6
Table 5.1: WSEL Comparison – Salisbury Park North Phase 1 FDP 8
Table 5.2: WSEL Comparison – Salisbury Park North All Phases 9

Figures

Figure 1: Vicinity Map 2

Appendices

A – Town of Parker Floodplain Development Permit Application
B – Effective Floodplain Information
C – Annotated / Proposed Floodplain Information
D – Hydraulic Computations
E – Topographic Workmaps
F – Proposed Salisbury Park North Phase 1 Plans
G – Digital Data

1.0 INTRODUCTION

1.1 Purpose

The purpose of this report and supporting documentation is to request a Floodplain Development Permit (FDP) from the Town of Parker for the Salisbury Park North project. On behalf of Hord Coplan Macht, ICON Engineering is requesting that the Town of Parker review the proposed phase 1 construction at the Salisbury Park North site west of Cherry Creek and issue an FDP. The Town's FDP application can be found in **Appendix A.**

1.2 Background

The September 30, 2005, and March 16, 2016, effective FIRMs and December 2, 2021, Flood Insurance Study (FIS) for the Town of Parker include the effective flood information for this project site. Excerpts from the effective flood information are included in **Appendix B**.

This FDP application is based on the proposed development of the Salisbury Park North – Phase 1 site. The site plan for phase 1 consists of landscaping and grade changes throughout the project site, construction of several sports fields, construction of two parking areas and associated roadways, construction of Park amenities and facilities, and construction of associated water quality amenities, and drainage utilities.

Though this FDP application is for the first phase of construction at the Salisbury Park North site, there are three subsequent phases of this project to be constructed. The floodplain impacts of phases two through four have been studied and are discussed in more detail in **Section 5.0 Hydraulics** of this application.

The Dransfeldt Road Bridge and Channel project, just downstream of the proposed Salisbury Park North project, is currently under construction and a LOMR will be issued upon completion. The Dransfeldt Road CLOMR (Case No. 22-08-051R) modeling was used as pre-project conditions for the Salisbury Park North project, further discussion on this is found in **Section 5.0 Hydraulics** of this application. See **Appendix B** for FEMA CLOMR documentation for the Dransfeldt Road project.

1.3 Site Location

The proposed Salisbury Park North site is located on the west bank of Cherry Creek. The project site is partially within the Zone AE FEMA floodplain. Located entirely within and owned by the Town of Parker, Colorado, the project area is bound by Cherry Creek to the north and east, Salisbury Equestrian Park to the south, and North Motsenbocker Road to the west. The following vicinity map illustrates the project location.

1.4 Site Description

Pre-Project

As previously mentioned, the Dransfeldt Road Bridge and Channel Improvement project is currently under construction to the north of the proposed Salisbury Park North project site. The Salisbury Park North roadway ties into the proposed Dransfeldt Road alignment and has proposed grade changes and water quality features that abut the Dransfeldt Road project grading to the north.


Project Site Location
Proposed Parker Links
Town of Parker
7RZQ RI 3DUNHU /LPLWV
3URSRVHG 6LWH /RFDWLRQ
/HJHQG
+\GUDXOLF 0RGHOLQJ /LPLWV
'UDQVIHOGW 5RDG DQG 7UDLO /LQHZRUN
3DUN ,PSURYPHQWV %RXQGDU\
3DUNHU 7RZQ /LPLWV
6DOLVEXU\ 3DUN 1RUWK 3KDVH
)ORRGSODLQ 'HYHORSPHQW 3HQGLQJ
)ORRGSODLQ $SSOLFD
ICON ENGINEERING
PARKER COLORADO

Additionally, the proposed project will have a roadway alignment and pedestrian promenade that connects to the existing Salisbury Equestrian Park to the south. Barring the Dransfeldt Road project to the north and the Salisbury Equestrian Park to the south, the site is otherwise undeveloped.

Proposed

Hord Coplan Macht and the Town of Parker are proposing multi-sport fields, ball fields, several parking lots and other park amenities within the Phase 1 Salisbury Park North project site. Proposed site plans are detailed in **Appendix F**. The Salisbury Park North Site is partially within the Zone AE designated flood zone with Base Flood Elevations (BFEs) and a floodway, and almost entirely within the Zone X flood zone. The project site is entirely outside of the effective floodway. All phases of the project involve a significant amount of earthwork and phase 1 involves the largest area of earthwork out of all phases. The most noteworthy aspect of the phase 1 grade changes is adding fill on the eastern side of the project site. This fill encroaches on the Zone AE flood zone which causes a rise in the water surface elevation (WSEL) through the project reach. The two proposed structures have finished floor elevations well above two feet above the existing BFEs on the project site which adheres to the town of Parker Title 13 Chapter 13.05.010(e)(2)(b) regulations.

Additional discussion on this modeling approach of the proposed structures is included in **Section 5.0 HYDRAULICS** of this application.

1.5 Floodplains

Cherry Creek is defined as an area of Zone AE 1% A.C. floodplain with base flood elevations (BFEs) and a 1-foot regulatory floodway. The 1-foot regulatory floodway is a variance from the Town of Parker Title 13 Chapter 13.05.010(b) definition of a floodway as the effective floodway in this area is delineated to be 1-foot above the 100-year BFE, more discussion on this variance can be found in **Section 2.1 Regulations** of this application. Areas of 0.2% A.C. flooding are symbolized by Zone X (shaded) designation. The effective floodplain delineations are illustrated in **Figure E.1** in **Appendix E**.

Study Limits

The project site is bound on the southern (upstream) side by FHAD cross section 146 along Cherry Creek and on the northern (downstream) side by FHAD cross section128 AF along Cherry Creek. The Salisbury Park North project does not propose any changes within the Cherry Creek channel but the grade changes on the overbanks will cause acceptable rises (less than 0.5 foot) in the Zone X and Zone AE floodplains through the project reach. Cherry Creek is mapped as Zone AE as shown on Flood Insurance Rate Map (FIRM) panels 08035C0069F and 08035C0182G which are included in **Appendix B**.

2.0 ANALYSIS CRITERIA

2.1 Regulations

A Floodplain Development Permit is requested from the Town of Parker, based on the proposed project resulting in acceptable rises in WSEL (<0.5 feet) compared to pre-project conditions. All Town of Parker Title 13 Chapter 13.05.010 Floodplain regulations have been adhered to for the Salisbury Park North proposed development, barring (e)(2)(b) listed below.

"(b) Definitions

Floodway (regulatory floodway) means the channel of a river or other watercourse and the adjacent land areas that must be reserved in order to discharge the base flood without cumulatively increasing the water surface elevation more than one-half (½) foot (six [6] inches)."

The Town of Parker maintained the 1-foot floodway for the ongoing Cherry Creek Channel Improvement and Dransfeldt Road Extension CLOMR due to potential impacts on adjacent private property, thus, the same standard has been maintained for this project as well.

2.2 Drainage Studies, Master Plans, Site Constraints

Once the Dransfeldt Road project is complete and a LOMR is issued, this will become the effective information for most of the project reach, up to FHAD cross section 140. The effective model for the Dransfeldt Road CLOMR is the 2003 Flood Hazard Area Delineation (FHAD) study of Cherry Creek Corridor – Reservoir to Scott Road. The effective study for the Salisbury Park Phase 1 project upstream of FHAD cross section 140 is the Hess Road LOMR (Case No. 10-08-0769P) completed in 2010. The construction of the Salisbury Park North Phase 1 development along Cherry Creek is consistent with the site constraints.

3.0 TOPOGRAPHIC MAPPING

3.1 Pre-Project Topography

Topographic mapping for the project area was taken from The Dransfeldt Road CLOMR. This mapping is a combination of 2021 survey data by Aztec Consultants, Inc., 2013 USGS LiDAR and proposed project surface for the Dransfeldt Road CLOMR. No additional survey was completed for the Salisbury Park North Project as the Aztec survey covered the entire project site. It is important to note that the detailed survey and Dransfeldt Road CLOMR proposed surface were mapped on local project coordinates and the USGS LiDAR data was in Colorado state plane coordinates. The following formulas can be used to transform the coordinates from state plane to project coordinates:

PROJECT NORTHING = (STATE PLANE NORTHING * 1.0003179891) - 1000000.026'

PROJECT EASTING = (STATE PLANE EASTING * 1.0003179891) - 3000000.031'

The topographic mapping for the floodplain workmaps was prepared with one-foot contour intervals on the NAVD 1988 vertical datum, using the horizontal datum and mapping projection described below:

Projected Coordinate System: NAD83 / Colorado Central (ftUS)
Projection: Lambert_Conformal_Conic
False_Easting: 3000000.0000000
False_Northing: 1000000. 0000000
Central_Meridian: -105.50000000
Standard_Parallel_1: 39.75000000
Standard_Parallel_2: 38.45000000
Latitude_Of_Origin: 37.833333333
Linear Unit: Foot_US

Geographic Coordinate System: GCS_North_American_1983
Datum: D_North_American_1983
Prime Meridian: Greenwich
Angular Unit: Degree

3.2 Proposed Topography

Proposed 1-foot contour grading is presented on the Salisbury Park North – Phase 1 Detailed Grading & Drainage plan sheets in **Appendix F.** The proposed grading is on the local project coordinates, with the proposed floodplain workmaps on the same horizontal and vertical datum and mapping projection as the pre-project floodplain workmap topography.

4.0 HYDROLOGY

4.1 Peak Flows

There are no proposed changes to the effective peak discharges along Cherry Creek as part of this request. Table 4.1 below summarizes the effective discharges (per Dransfeldt Road CLOMR and LOMR no. 10-08-0769P) through the proposed revision area.

Table 4.1: Summary of Effective Discharges for Cherry Creek

Effective Cross Section	2003 FHAD Cross Section	ICON FDP Cross Section	10% A.C. Discharge (cfs)	2% A.C. Discharge (cfs)	1% A.C. Discharge (cfs)	0.2% A.C. Discharge (cfs)
146842.2	146	146936.9	7,033	20,873	33,407	109,400
145613.8	144	145708.5	7,080	21,018	33,658	109,980
145065.8 AL	143	145160.5	7,127	21,163	33,900	110,560
144326.2	142	144420.9	7,173	21,307	34,161	111,140
143060.4 AK	139	143154.0	7,220	21,452	34,412	111,720
142698.9	138	142773.5	7,267	21,597	34,663	112,300
142267.7 AJ	137	142344.6	7,313	21,741	34,915	112,880
N/A	N/A	141463.7	7,360	21,886	35,166	113,460
140831.7	135	140857.7	7,407	22,031	35,417	114,040
N/A	N/A	139505.2	7,453	22,175	35,669	114,620
138860 AG	131	138887.3	7,500	22,320	35,920	115,200
138067.2	129	138067.2	7,547	22,465	36,171	115,780

5.0 HYDRAULICS

5.1 Hydraulic Analysis

Effective Model

The effective hydraulic model for this reach of Cherry Creek comes from the 2010 Hess Road LOMR (Case No. 10-08-0769P).

Duplicate Effective

The effective model was copied and run on ICON engineering equipment in HEC-RAS version 5.0.7 creating the Duplicate Effective model.

Corrected Effective

The Corrected Effective model is an expanded version of the Corrected Effective model from the Dransfeldt Road CLOMR. There were changes to the alignment of cross-sections due to information provided by 2D modeling as well as the addition of four new cross-sections. The Corrected Effective model for Salisbury North goes upstream six cross sections past the extent of the Corrected Effective model for the Dransfeldt Road CLOMR. The additional cross section and centerline geometry upstream of FHAD cross section 140 do not differ from the Duplicate Effective model.

Pre-Project Conditions

The Pre-Project Conditions model is an expanded version of the Dransfeldt Road CLOMR Proposed Conditions (PC) model. The Dransfeldt Road CLOMR PC model has a different centerline alignment for Cherry Creek and the cross-section geometry differs from the Corrected Effective model. There are three additional cross section in the Pre-Project Conditions model. Six cross sections and the associated stream centerline were added to the Dransfeldt Road CLOMR PC modeling such that the modeling would expand upstream beyond the proposed grade changes for Salisbury Park North Phase 1. The additional cross section and centerline geometry upstream of FHAD cross section 140 do not differ from the Duplicate Effective model.

Post-Project Conditions

The Post-Project Conditions model incorporates the proposed grade changes of the Salisbury Park North Phase 1 project. Ineffective flow areas were updated based on the effects of grade changes through the project site. Manning's n-values were adjusted, from 0.060 to 0.055 on the left overbank of cross sections most affected by the proposed grade changes as there is significantly more concrete and general smooth surfaces on these sections versus pre-project conditions. There are no additional cross-sections or changes to centerline geometry between pre- and post-project conditions so a direct comparison can be made between the two models. See Table 5.1 for a comparison in WSEL between all HEC-RAS plans for the Salisbury Park North Phase 1 project

Post-Project Conditions were also modeled for Salisbury Park Phases 2-4, though these phases aren't finalized and this FDP Application is only for Phase 1 – Table 5.2 shows WSEL comparisons for all subsequent phases.

Table 5.1: Water Surface Elevation Comparisons - Salisbury Park North Phase 1 FDP
ICON Engineering Inc.

Location Description	Effective Cross Section	Corrected Effective Cross Section	Pre-Project Conditions Cross Section	Post-Project Conditions Cross Section	Effective Conditions [1]		Duplicate Effective Conditions [2]			Corrected Effective Conditions [3]			Pre-Project Conditions [4]				Post-Project Conditions [5] 10-24-2024 Phase 1			
					Discharge (cfs)	WSEL (NGVD 29)	Discharge (cfs)	WSEL (NGVD 29)	Δ WSEL vs. Effective	Discharge (cfs)	WSEL (NAVD 88)	Δ WSEL vs. Duplicate Effective	Discharge (cfs)	WSEL (NAVD 88)	Δ WSEL vs. Duplicate Effective	Δ WSEL vs. Corrected Effective	Discharge (cfs)	WSEL (NAVD 88)	Δ WSEL vs. Corrected Effective	Δ WSEL vs. Pre-Project
FHAD XS 128 FEMA lettered section AF	137545.3	137545.3	137545.3	137545.3	36171	5828.68	36171	5828.67	-0.01	36171	5828.67	0.00	36171	5828.67	0.00	0.00	36171	5828.67	0.00	0.00
FHAD XS 129	138067.2	138067.2	138067.2	138067.2	36171	5829.69	36171	5829.68	-0.01	36171	5829.49	-0.19	36171	5829.70	**0.02**	**0.21**	36171	5829.70	**0.21**	0.00
FHAD XS 129.6	*138361.5*	138360.5	138360.5	138360.5	--	*5830.70*	--	*5830.69*	0.00	35920	5830.52	-0.17	35920	5830.68	-0.01	**0.16**	35920	5830.68	**0.16**	0.00
FHAD XS 130	138526.8	*138534.2*	*138534.2*	*138534.2*	35920	5831.26	35920	5831.26	0.00	--	*5832.01*	**0.75**	--	*5832.07*	**0.81**	**0.06**	--	*5832.07*	**0.06**	0.00
FHAD XS 130.4	*138672.8*	138658.4	138658.4	138658.4	--	*5832.41*	--	*5832.42*	0.00	35920	5833.08	**0.66**	35920	5833.06	**0.64**	-0.02	35920	5833.06	-0.02	0.00
FHAD XS 131 FEMA lettered section AG	138860	138889.1	138887.3	138887.3	35920	5833.89	35920	5833.90	0.01	35920	5834.83	**0.93**	35920	5833.95	**0.05**	-0.88	35920	5833.95	-0.88	0.00
FHAD XS 131.3	*138977.5*	138996.1	139005.3	139005.3	--	*5834.95*	--	*5834.96*	0.00	35669	5837.00	**2.04**	35669	5835.62	**0.66**	-1.38	35669	5835.62	-1.38	0.00
	139061	*139085.7*	*139079.3*	*139079.3*	35669	5835.71	35669	5835.71	0.00	--	*5837.78*	**2.07**	--	*5836.64*	**0.93**	-1.14	--	*5836.64*	-1.14	0.00
FHAD XS 131.7	*139166.3*	139174	139186.6	139186.6	--	*5835.97*	--	*5835.97*	0.00	35669	5838.54	**2.57**	35669	5838.11	**2.14**	-0.43	35669	5838.11	-0.43	0.00
FHAD XS 132	139262.6	*139302.6*	*139296.2*	*139296.2*	35669	5836.21	35669	5836.21	0.00	--	*5838.79*	**2.58**	--	*5838.43*	**2.22**	-0.37	--	*5838.43*	-0.37	0.00
FHAD XS 132.1	*139299.3*	139341.3	139338.2	139338.2	--	*5836.26*	--	*5836.26*	0.00	35669	5838.87	**2.61**	35669	5838.55	**2.29**	-0.32	35669	5838.55	-0.32	0.00
	139419.6	139470.2	*139457.6*	*139457.6*	--	*5836.43*	--	*5836.43*	0.00	35669	5838.90	**2.47**		*5838.50*	**2.07**	-0.40		*5838.50*	-0.40	0.00
FHAD XS 132.9 Proposed FEMA section AH	*139471.3*	*139530.7*	139505.2	139505.2	--	*5836.50*	--	*5836.50*	0.00	--	*5838.95*	**2.45**	35669	5838.48	**1.98**	-0.47	35669	5838.48	-0.47	0.00
FHAD XS 132 FEMA lettered section AH	139529.7	*139602.4*	*139567*	*139567*	35669	5836.58	35669	5836.58	0.00	--	*5839.01*	**2.43**	--	*5838.75*	**2.17**	-0.26	--	*5838.75*	-0.26	0.00
FHAD XS 133.1	*139585.3*	*139659.3*	139624.0	139624.0	--	*5836.89*	--	*5836.89*	0.00	--	*5839.05*	**2.16**	35417	5838.99	**2.10**	-0.06	35417	5838.99	-0.06	0.00
FHAD XS 133.3	*139755.8*	139847.6	139794.7	139794.7	--	*5837.85*	--	*5837.84*	-0.01	35669	5839.20	**1.36**	35417	5839.63	**1.79**	**0.43**	35417	5839.63	**0.43**	0.00
	139822	*139979.9*	*139942.3*	*139942.3*	35417	5838.22	35417	5838.21	-0.01	--	*5839.70*	**1.49**	--	*5839.81*	**1.60**	**0.11**	--	*5839.81*	**0.11**	0.00
	139908.4	140071.7	*140039.6*	*140039.6*	--	*5838.64*	--	*5838.63*	-0.01	35417	5840.05	**1.42**		*5839.94*	**1.31**	-0.11		*5839.94*	-0.11	0.00
FHAD XS 134	140116.2	*140173.6*	140155.1	140155.1	35417	5839.64	35417	5839.64	0.00	--	*5840.20*	**0.56**	35417	5840.08	**0.44**	-0.12	35417	5840.08	-0.12	0.00
	140186	140276.2	*140233.0*	*140233.0*	--	*5840.02*	--	*5840.02*	0.00	35417	5840.35	**0.33**		*5840.30*	**0.29**	-0.05		*5840.30*	-0.05	0.00
FHAD XS 134.3	140354	*140479.6*	140397.3	140397.3	35417	5840.92	35417	5840.92	0.00	--	*5841.26*	**0.34**	35417	5840.77	-0.15	-0.49	35417	5840.77	-0.49	0.00
FHAD XS 134.5	*140479.6*	140620.5	140533.5	140533.5	--	*5841.44*	--	*5841.44*	0.00	35417	5841.89	**0.45**	35417	5841.24	-0.20	-0.65	35417	5841.24	-0.65	0.00
	140593	*140758.6*	*140658*	*140658*	35417	5841.90	35417	5841.90	0.00	--	*5842.58*	**0.68**	--	*5841.57*	-0.33	-1.01	--	*5841.57*	-1.01	0.00
FHAD XS 135 FEMA lettered section AI	140831.7	*140947.2*	140857.7	140857.7	35417	5842.53	35417	5842.53	0.00	--	5843.53	**1.00**	35417	5842.09	-0.44	-1.44	35417	5842.09	-1.44	0.00
	140896.5	141016	*140918.3*	*140918.3*	--	*5842.71*	--	*5842.71*	0.00	35417	5843.87	**1.16**		*5842.32*	-0.38	-1.55		*5842.32*	-1.55	0.00
FHAD XS 135.3	*141091.3*	*141263.3*	141128.6	141128.6	--	*5843.24*	--	*5843.24*	0.00	--	*5844.37*	**1.13**	35166	5843.14	-0.10	-1.23	35166	5843.14	-1.23	0.00
FHAD XS 135.7	*141409.8*	*141594.8*	141463.7	141463.7	--	*5844.11*	--	*5844.11*	0.00	--	*5845.04*	**0.94**	35166	5844.17	**0.06**	-0.87	35166	5844.17	-0.87	0.00
FHAD XS 136	141564.8	*141752.4*	*141620.7*	*141620.7*	35166	5844.53	35166	5844.53	0.00	--	*5845.36*	**0.83**	--	*5844.76*	**0.23**	-0.61	--	*5844.76*	-0.61	0.00
	141660.6	141854.4	*141722.7*	*141722.7*	--	*5844.86*	--	*5844.86*	0.00	35166	5845.57	**0.71**		*5845.14*	**0.27**	-0.43		*5845.14*	-0.43	0.00
FHAD XS 136.4	*141859.2*	*142070.403*	141938.6	141938.6	--	*5845.55*	--	*5845.55*	0.00	--	*5846.22*	**0.66**	34915	5845.94	**0.39**	-0.28	34915	5845.94	-0.28	0.00
FHAD XS 136.6	*142053*	142241.8	142110.2	142110.2	--	*5846.22*	--	*5846.22*	0.00	34915	5846.73	**0.51**	34915	5846.59	**0.37**	-0.14	34915	5846.77	**0.04**	**0.18**
FHAD XS 137 FEMA lettered section AJ	142267.7	142476.1137	142344.6	142344.6	34915	5846.97	34915	5846.97	0.00	34915	5847.76	**0.79**	34915	5847.71	**0.74**	-0.05	34915	5848.05	**0.29**	**0.34**
FHAD XS 138	142698.9	142905.1138	142773.5	142773.5	34663	5848.44	34663	5848.44	0.00	34663	5848.85	**0.41**	34663	5848.82	**0.38**	-0.03	34663	5849.02	**0.17**	**0.20**
FHAD XS 139 FEMA lettered section AK	143060.4	143285.5139	143154.0	143154.0	34412	5849.42	34412	5849.42	0.00	34412	5849.67	**0.25**	34412	5849.66	**0.24**	-0.01	34412	5849.79	**0.12**	**0.13**
FHAD XS 140	143567.7	143794.014	143662.4	143662.4	34161	5851.53	34161	5851.53	0.00	34161	5851.22	-0.31	34161	5851.22	-0.31	0.00	34161	5851.25	**0.03**	**0.03**
FHAD XS 141	143882.2	144108.5	143976.9	143976.9	34161	5852.88	34161	5852.88	0.00	34161	5852.82	-0.06	34161	5852.82	-0.06	0.00	34161	5852.82	0.00	0.00
FHAD XS 142	144326.2	144552.5	144420.9	144420.9	34161	5854.77	34161	5854.78	0.01	34161	5854.78	0.00	34161	5854.78	0.00	0.00	34161	5854.78	0.00	0.00
FHAD XS 143 FEMA lettered section AL	145065.8	145292.1	145160.5	145160.5	33900	5858.46	33900	5858.46	0.00	33900	5858.45	-0.01	33900	5858.45	-0.01	0.00	33900	5858.45	0.00	0.00
FHAD XS 144	145613.8	145840.1	145708.5	145708.5	33658	5861.75	33658	5861.75	0.00	33658	5861.75	0.00	33658	5861.75	0.00	0.00	33658	5861.75	0.00	0.00
FHAD XS 145 FEMA lettered section AM	146281.2	146507.5	146375.9	146375.9	33407	5864.02	33407	5864.02	0.00	33407	5864.02	0.00	33407	5864.02	0.00	0.00	33407	5864.02	0.00	0.00
FHAD XS 146	146842.2	147068.5	146936.9	146936.9	33407	5865.98	33407	5865.98	0.00	33407	5865.98	0.00	33407	5865.98	0.00	0.00	33407	5865.98	0.00	0.00

138361.5 = Interpolated station

5830.70 = Interpolated elevation

[1] Effective model from Hess Rd CLOMR no. 10-08-0769P (HEC-RAS v.3.1.3 plan name: as-built PPM)

[2] Duplicate Effective model from Dransfeldt Road CLOMR with extended centerline and 6 cross sections upstream of FHAD XS 140 from Hess Rd LOMR (HEC-RAS v.5.0.7 plan name: 01_DE_10-YR/50-YR/100-YR)

[3] Corrected Effective model from Dransfeldt Road CLOMR with extended centerline and 6 cross sections upstream of FHAD XS 140 from Hess Rd LOMR (HEC-RAS v.6.4.1 plan name: 03_CE_10-YR/50-YR/100-YR)

[4] Post-Project model from Dransfeldt Road CLOMR with extended centerline and 6 cross sections upstream of FHAD XS 140 from Hess Rd LOMR(HEC-RAS v.6.4.1 plan name: 05_Pre-Project_10-YR/50-YR/100-YR)

[5] Salisbury Park Post-Project Conditions Model with 08-30-2024 JVA Phase 1 grading (HEC-RAS v.6.4.1 plan name: 48_Post-Project_PH1)

Table 5.2: Water Surface Elevation Comparisons - Salisbury Park North All Phases
ICON Engineering Inc.

Location Description	Effective Cross Section	Corrected Effective Cross Section	Pre-Project Conditions Cross Section	Post-Project Conditions Cross Section	Effective Conditions [1]		Duplicate Effective Conditions [2]			Corrected Effective Conditions [3]			Pre-Project Conditions [4]				Post-Project Conditions [5] 10-24-2024 Phase 1				Post-Project Conditions [6] 10-24-2024 Phase 1 & 2				Post-Project Conditions [7] 10-24-2024 Phase 1, 2 & 3				Post-Project Conditions [8] 10-24-2024 Phase 1, 2, 3 & 4			
					Discharge (cfs)	WSEL (NGVD 29)	Discharge (cfs)	WSEL (NGVD 29)	Δ WSEL vs. Effective	Discharge (cfs)	WSEL (NAVD 88)	Δ WSEL vs. Duplicate Effective	Discharge (cfs)	WSEL (NAVD 88)	Δ WSEL vs. Duplicate Effective	Δ WSEL vs. Corrected Effective	Discharge (cfs)	WSEL (NAVD 88)	Δ WSEL vs. Corrected Effective	Δ WSEL vs. Pre-Project	Discharge (cfs)	WSEL (NAVD 88)	Δ WSEL vs. Corrected Effective	Δ WSEL vs. Pre-Project	Discharge (cfs)	WSEL (NAVD 88)	Δ WSEL vs. Corrected Effective	Δ WSEL vs. Pre-Project	Discharge (cfs)	WSEL (NAVD 88)	Δ WSEL vs. Corrected Effective	Δ WSEL vs. Pre-Project
FHAD XS 128 FEMA lettered section AF	137545.3	137545.3	137545.3	137545.3	36171	5828.68	36171	5828.67	-0.01	36171	5828.67	0.00	36171	5828.67	0.00	0.00	36171	5828.67	0.00	0.00	36171	5828.67	0.00	0.00	36171	5828.67	0.00	0.00	36171	5828.67	0.00	0.00
FHAD XS 129	138067.2	138067.2	138067.2	138067.2	36171	5829.69	36171	5829.68	-0.01	36171	5829.49	-0.19	36171	5829.70	**0.02**	**0.21**	36171	5829.70	**0.21**	0.00	36171	5829.70	**0.21**	0.00	36171	5829.70	**0.21**	0.00	36171	5829.70	**0.21**	0.00
FHAD XS 129.6	*138361.5*	138360.5	138360.5	138360.5	--	*5830.70*	--	*5830.69*	0.00	35920	5830.52	-0.17	35920	5830.68	-0.01	**0.16**	35920	5830.68	**0.16**	0.00	35920	5830.68	**0.16**	0.00	35920	5830.68	**0.16**	0.00	35920	5830.68	**0.16**	0.00
FHAD XS 130	138526.8	*138534.2*	*138534.2*	*138534.2*	35920	5831.26	35920	5831.26	0.00	--	*5832.01*	**0.75**	--	*5832.07*	**0.81**	**0.06**	--	*5832.07*	**0.06**	0.00	--	*5832.07*	**0.06**	0.00	--	*5832.07*	**0.06**	0.00	--	*5832.07*	**0.06**	0.00
FHAD XS 130.4	*138672.8*	138658.4	138658.4	138658.4	--	*5832.41*	--	*5832.42*	0.00	35920	5833.08	**0.66**	35920	5833.06	**0.64**	-0.02	35920	5833.06	-0.02	0.00	35920	5833.06	-0.02	0.00	35920	5833.06	-0.02	0.00	35920	5833.06	-0.02	0.00
FHAD XS 131 FEMA lettered section AG	138860	138889.1	138887.3	138887.3	35920	5833.89	35920	5833.90	0.01	35920	5834.83	**0.93**	35920	5833.95	**0.05**	-0.88	35920	5833.95	-0.88	0.00	35920	5833.95	-0.88	0.00	35920	5833.95	-0.88	0.00	35920	5833.95	-0.88	0.00
FHAD XS 131.3	*138977.5*	138996.1	139005.3	139005.3	--	*5834.95*	--	*5834.96*	0.00	35669	5837.00	**2.04**	35669	5835.62	**0.66**	-1.38	35669	5835.62	-1.38	0.00	35669	5835.62	-1.38	0.00	35669	5835.62	-1.38	0.00	35669	5835.62	-1.38	0.00
	139061	*139085.7*	*139079.3*	*139079.3*	35669	5835.71	35669	5835.71	0.00	--	*5837.78*	**2.07**	--	*5836.64*	**0.93**	-1.14	--	*5836.64*	-1.14	0.00	--	*5836.64*	-1.14	0.00	--	*5836.64*	-1.14	0.00	--	*5836.64*	-1.14	0.00
FHAD XS 131.7	*139166.3*	139174	139186.6	139186.6	--	*5835.97*	--	*5835.97*	0.00	35669	5838.54	**2.57**	35669	5838.11	**2.14**	-0.43	35669	5838.11	-0.43	0.00	35669	5838.11	-0.43	0.00	35669	5838.11	-0.43	0.00	35669	5838.11	-0.43	0.00
FHAD XS 132	139262.6	*139302.6*	*139296.2*	*139296.2*	35669	5836.21	35669	5836.21	0.00	--	*5838.79*	**2.58**	--	*5838.43*	**2.22**	-0.37	--	*5838.43*	-0.37	0.00	--	*5838.43*	-0.37	0.00	--	*5838.43*	-0.37	0.00	--	*5838.43*	-0.37	0.00
FHAD XS 132.1	*139299.3*	139341.3	139338.2	139338.2	--	*5836.26*	--	*5836.26*	0.00	35669	5838.87	**2.61**	35669	5838.55	**2.29**	-0.32	35669	5838.55	-0.32	0.00	35669	5838.55	-0.32	0.00	35669	5838.55	-0.32	0.00	35669	5838.55	-0.32	0.00
	139419.6	139470.2	*139457.6*	*139457.6*	--	*5836.43*	--	*5836.43*	0.00	35669	5838.90	**2.47**		*5838.50*	**2.07**	-0.40		*5838.50*	-0.40	0.00		*5838.50*	-0.40	0.00		*5838.50*	-0.40	0.00		*5838.50*	-0.40	0.00
FHAD XS 132.9 Proposed FEMA section AH	*139471.3*	*139530.7*	139505.2	139505.2	--	*5836.50*	--	*5836.50*	0.00	--	*5838.95*	**2.45**	35669	5838.48	**1.98**	-0.47	35669	5838.48	-0.47	0.00	35669	5838.48	-0.47	0.00	35669	5838.48	-0.47	0.00	35669	5838.48	-0.47	0.00
FHAD XS 132 FEMA lettered section AH	139529.7	*139602.4*	*139567*	*139567*	35669	5836.58	35669	5836.58	0.00	--	*5839.01*	**2.43**	--	*5838.75*	**2.17**	-0.26	--	*5838.75*	-0.26	0.00	--	*5838.75*	-0.26	0.00	--	*5838.75*	-0.26	0.00	--	*5838.75*	-0.26	0.00
FHAD XS 133.1	*139585.3*	*139659.3*	139624.0	139624.0	--	*5836.89*	--	*5836.89*	0.00	--	*5839.05*	**2.16**	35417	5838.99	**2.10**	-0.06	35417	5838.99	-0.06	0.00	35417	5838.99	-0.06	0.00	35417	5838.99	-0.06	0.00	35417	5838.99	-0.06	0.00
FHAD XS 133.3	*139755.8*	139847.6	139794.7	139794.7	--	*5837.85*	--	*5837.84*	-0.01	35669	5839.20	**1.36**	35417	5839.63	**1.79**	**0.43**	35417	5839.63	**0.43**	0.00	35417	5839.63	**0.43**	0.00	35417	5839.63	**0.43**	0.00	35417	5839.63	**0.43**	0.00
	139822	*139979.9*	*139942.3*	*139942.3*	35417	5838.22	35417	5838.21	-0.01	--	*5839.70*	**1.49**	--	*5839.81*	**1.60**	**0.11**	--	*5839.81*	**0.11**	0.00	--	*5839.81*	**0.11**	0.00	--	*5839.81*	**0.11**	0.00	--	*5839.81*	**0.11**	0.00
	139908.4	140071.7	*140039.6*	*140039.6*	--	*5838.64*	--	*5838.63*	-0.01	35417	5840.05	**1.42**		*5839.94*	**1.31**	-0.11		*5839.94*	-0.11	0.00		*5839.94*	-0.11	0.00		*5839.94*	-0.11	0.00		*5839.94*	-0.11	0.00
FHAD XS 134	140116.2	*140173.6*	140155.1	140155.1	35417	5839.64	35417	5839.64	0.00	--	*5840.20*	**0.56**	35417	5840.08	**0.44**	-0.12	35417	5840.08	-0.12	0.00	35417	5840.08	-0.12	0.00	35417	5840.08	-0.12	0.00	35417	5840.08	-0.12	0.00
	140186	140276.2	*140233.0*	*140233.0*	--	*5840.02*	--	*5840.02*	0.00	35417	5840.35	**0.33**		*5840.30*	**0.29**	-0.05		*5840.30*	-0.05	0.00		*5840.30*	-0.05	0.00		*5840.30*	-0.05	0.00		*5840.30*	-0.05	0.00
FHAD XS 134.3	140354	*140479.6*	140397.3	140397.3	35417	5840.92	35417	5840.92	0.00	--	*5841.26*	**0.34**	35417	5840.77	-0.15	-0.49	35417	5840.77	-0.49	0.00	35417	5840.77	-0.49	0.00	35417	5840.77	-0.49	0.00	35417	5840.77	-0.49	0.00
FHAD XS 134.5	*140479.6*	140620.5	140533.5	140533.5	--	*5841.44*	--	*5841.44*	0.00	35417	5841.89	**0.45**	35417	5841.24	-0.20	-0.65	35417	5841.24	-0.65	0.00	35417	5841.24	-0.65	0.00	35417	5841.21	-0.68	-0.03	35417	5841.11	-0.78	-0.13
	140593	*140758.6*	*140658*	*140658*	35417	5841.90	35417	5841.90	0.00	--	*5842.58*	**0.68**	--	*5841.57*	-0.33	-1.01	--	*5841.57*	-1.01	0.00	--	*5841.57*	-1.01	0.00	--	*5841.55*	-1.03	-0.02	--	*5841.52*	-1.06	-0.05
FHAD XS 135 FEMA lettered section AI	140831.7	*140947.2*	140857.7	140857.7	35417	5842.53	35417	5842.53	0.00	--	5843.53	**1.00**	35417	5842.09	-0.44	-1.44	35417	5842.09	-1.44	0.00	35417	5842.09	-1.44	0.00	35417	5842.09	-1.44	0.00	35417	5842.17	-1.36	**0.08**
	140896.5	141016	*140918.3*	*140918.3*	--	*5842.71*	--	*5842.71*	0.00	35417	5843.87	**1.16**		*5842.32*	-0.38	-1.55		*5842.32*	-1.55	0.00		*5842.33*	-1.54	**0.00**		*5842.33*	-1.54	**0.01**		*5842.40*	-1.47	**0.08**
FHAD XS 135.3	*141091.3*	*141263.3*	141128.6	141128.6	--	*5843.24*	--	*5843.24*	0.00	--	*5844.37*	**1.13**	35166	5843.14	-0.10	-1.23	35166	5843.14	-1.23	0.00	35166	5843.16	-1.21	**0.02**	35166	5843.17	-1.20	**0.03**	35166	5843.21	-1.16	**0.07**
FHAD XS 135.7	*141409.8*	*141594.8*	141463.7	141463.7	--	*5844.11*	--	*5844.11*	0.00	--	*5845.04*	**0.94**	35166	5844.17	**0.06**	-0.87	35166	5844.17	-0.87	0.00	35166	5844.15	-0.89	-0.02	35166	5844.15	-0.89	-0.02	35166	5844.19	-0.85	**0.02**
FHAD XS 136	141564.8	*141752.4*	*141620.7*	*141620.7*	35166	5844.53	35166	5844.53	0.00	--	*5845.36*	**0.83**	--	*5844.76*	**0.23**	-0.61	--	*5844.76*	-0.61	0.00	--	*5844.78*	-0.59	**0.02**	--	*5844.78*	-0.59	**0.02**	--	*5844.82*	-0.55	**0.06**
	141660.6	141854.4	*141722.7*	*141722.7*	--	*5844.86*	--	*5844.86*	0.00	35166	5845.57	**0.71**		*5845.14*	**0.27**	-0.43		*5845.14*	-0.43	0.00		*5845.19*	-0.38	**0.05**		*5845.19*	-0.38	**0.05**		*5845.23*	-0.34	**0.09**
FHAD XS 136.4	*141859.2*	*142070.403*	141938.6	141938.6	--	*5845.55*	--	*5845.55*	0.00	--	*5846.22*	**0.66**	34915	5845.94	**0.39**	-0.28	34915	5845.94	-0.28	0.00	34915	5846.05	-0.17	**0.11**	34915	5846.05	-0.17	**0.11**	34915	5846.09	-0.13	**0.15**
FHAD XS 136.6	*142053*	142241.8	142110.2	142110.2	--	*5846.22*	--	*5846.22*	0.00	34915	5846.73	**0.51**	34915	5846.59	**0.37**	-0.14	34915	5846.77	**0.04**	**0.18**	34915	5846.83	**0.10**	**0.24**	34915	5846.83	**0.10**	**0.24**	34915	5846.86	**0.13**	**0.27**
FHAD XS 137 FEMA lettered section AJ	142267.7	142476.1137	142344.6	142344.6	34915	5846.97	34915	5846.97	0.00	34915	5847.76	**0.79**	34915	5847.71	**0.74**	-0.05	34915	5848.05	**0.29**	**0.34**	34915	5848.07	**0.31**	**0.36**	34915	5848.07	**0.31**	**0.36**	34915	5848.06	**0.30**	**0.35**
FHAD XS 138	142698.9	142905.1138	142773.5	142773.5	34663	5848.44	34663	5848.44	0.00	34663	5848.85	**0.41**	34663	5848.82	**0.38**	-0.03	34663	5849.02	**0.17**	**0.20**	34663	5849.02	**0.17**	**0.20**	34663	5849.02	**0.17**	**0.20**	34663	5849.02	**0.17**	**0.20**
FHAD XS 139 FEMA lettered section AK	143060.4	143285.5139	143154.0	143154.0	34412	5849.42	34412	5849.42	0.00	34412	5849.67	**0.25**	34412	5849.66	**0.24**	-0.01	34412	5849.79	**0.12**	**0.13**	34412	5849.79	**0.12**	**0.13**	34412	5849.79	**0.12**	**0.13**	34412	5849.79	**0.12**	**0.13**
FHAD XS 140	143567.7	143794.014	143662.4	143662.4	34161	5851.53	34161	5851.53	0.00	34161	5851.22	-0.31	34161	5851.22	-0.31	0.00	34161	5851.25	**0.03**	**0.03**	34161	5851.25	**0.03**	**0.03**	34161	5851.25	**0.03**	**0.03**	34161	5851.25	**0.03**	**0.03**
FHAD XS 141	143882.2	144108.5	143976.9	143976.9	34161	5852.88	34161	5852.88	0.00	34161	5852.82	-0.06	34161	5852.82	-0.06	0.00	34161	5852.82	0.00	0.00	34161	5852.82	0.00	0.00	34161	5852.82	0.00	0.00	34161	5852.82	0.00	0.00
FHAD XS 142	144326.2	144552.5	144420.9	144420.9	34161	5854.77	34161	5854.78	0.01	34161	5854.78	0.00	34161	5854.78	0.00	0.00	34161	5854.78	0.00	0.00	34161	5854.78	0.00	0.00	34161	5854.78	0.00	0.00	34161	5854.78	0.00	0.00
FHAD XS 143 FEMA lettered section AL	145065.8	145292.1	145160.5	145160.5	33900	5858.46	33900	5858.46	0.00	33900	5858.45	-0.01	33900	5858.45	-0.01	0.00	33900	5858.45	0.00	0.00	33900	5858.45	0.00	0.00	33900	5858.45	0.00	0.00	33900	5858.45	0.00	0.00
FHAD XS 144	145613.8	145840.1	145708.5	145708.5	33658	5861.75	33658	5861.75	0.00	33658	5861.75	0.00	33658	5861.75	0.00	0.00	33658	5861.75	0.00	0.00	33658	5861.75	0.00	0.00	33658	5861.75	0.00	0.00	33658	5861.75	0.00	0.00
FHAD XS 145 FEMA lettered section AM	146281.2	146507.5	146375.9	146375.9	33407	5864.02	33407	5864.02	0.00	33407	5864.02	0.00	33407	5864.02	0.00	0.00	33407	5864.02	0.00	0.00	33407	5864.02	0.00	0.00	33407	5864.02	0.00	0.00	33407	5864.02	0.00	0.00
FHAD XS 146	146842.2	147068.5	146936.9	146936.9	33407	5865.98	33407	5865.98	0.00	33407	5865.98	0.00	33407	5865.98	0.00	0.00	33407	5865.98	0.00	0.00	33407	5865.98	0.00	0.00	33407	5865.98	0.00	0.00	33407	5865.98	0.00	0.00

138361.5 = Interpolated station

5830.70 = Interpolated elevation

[1] Effective model from Hess Rd CLOMR no. 10-08-0769P

[2] Duplicate Effective model from Dransfeldt Road CLOMR with extended centerline and 6 cross sections upstream of FHAD XS 140 from Hess Rd LOMR (HEC-RAS v.5.0.7 plan name: 01_DE_10-YR/50-YR/100-YR)

[3] Corrected Effective model from Dransfeldt Road CLOMR with extended centerline and 6 cross sections upstream of FHAD XS 140 from Hess Rd LOMR (HEC-RAS v.6.4.1 plan name: 03_CE_10-YR/50-YR/100-YR)

[4] Post-Project model from Dransfeldt Road CLOMR with extended centerline and 6 cross sections upstream of FHAD XS 140 from Hess Rd LOMR(HEC-RAS v.6.4.1 plan name: 05_Pre-Project_10-YR/50-YR/100-YR)

[5] Salisbury Park Post-Project Conditions Model with 08-30-2024 JVA Phase 1 grading (HEC-RAS v.6.4.1 plan name: 48_Post-Project_PH1)

[6] Salisbury Park Post-Project Conditions Model with 08-30-2024 JVA Phase 1 & 2 grading (HEC-RAS v.6.4.1 plan name: 49_Post-Project_PH2)

[7] Salisbury Park Post-Project Conditions Model with 08-30-2024 JVA Phase 1, 2 & 3 grading (HEC-RAS v.6.4.1 plan name: 50_Post-Project_PH3)

[8] Salisbury Park Post-Project Conditions Model with 08-30-2024 JVA Phase 1, 2, 3 & 4 grading (HEC-RAS v.6.4.1 plan name: 51_Post-Project_PH4)

5.2 Input Parameters

The hydraulic parameters remain unchanged from the Dransfeldt Road CLOMR or Hess Road LOMR modeling through pre-project conditions. In the Post-Project Conditions model changes were made to the cross-section geometry, ineffective flow areas and manning's n-values through the Salisbury Park North Phase 1 sections as mentioned above.

5.3 Results

See Table 5.1 and 5.2 for WSEL comparison between all HEC-RAS model plans. No insurable structures are negatively impacted due to the proposed Salisbury Park North project. All rises in WSEL are under a half-foot which is within the acceptable tolerance of a rise without applying for a CLOMR.

5.4 Tie-Ins

The downstream Cherry Creek tie-in occurs at FHAD cross section 128. The upstream tie-in occurs at FHAD cross section 146. Both cross sections are duplicate effective hydraulic cross section, known starting water surface elevations, and the effective floodway encroachment stations are used at this location to ensure exact tie-ins.

6.0 FLOODPLAIN MAPPING

6.1 Floodplain Work Map

The effective 1%- and 0.2%-Annual-Chance floodplains and floodway for Cherry Creek is shown on the FIRM included in Appendix B as well as Figure E.1 in Appendix E. For Chery Creek, the proposed 1%- and 0.2%-Annual-Chance floodplain boundaries were delineated from cross section top widths, locations of cross sections along the channel centerline, proposed grading, and existing conditions topography. The proposed regulatory floodway was delineated to match the modeled encroachment stations at hydraulic cross sections, there was no change to the floodway encroachment stationing from pre- to post-project conditions. The floodway is plotted to match the modeled encroachment stations at all locations. A floodplain work map depicting the effective and proposed floodplain and floodway boundaries, as well as the pre-project floodplain, is located in Appendix E. The datum and mapping projection are as described in Section 3.1 and are listed on the workmaps. All elevations shown on the workmaps are presented on vertical datum NAVD 1988.

GIS files of the proposed floodplain and floodway revisions are included in Appendix G. A mapping agreement table is included in Appendix C.

7.0 CONCLUSIONS

The proposed project will cause changes to the FEMA Flood Insurance Rate Map (FIRM) number 08035C0069F and 08035C0182G. The effective dates for these FIRM panels are September 30, 2005, and March 16, 2016, they are panels 69 and 182 of 495 for Douglas County, Colorado and incorporated areas. The impacted community is the Town of Parker, community number 080310.

7.1 Compliance with Standards

FEMA Criteria

In compliance with the Code of Federal Regulations 44, Section 60.3, we certify that the fill within the flood fringe will not cause a rise in BFEs greater than a half foot. Thus, no CLOMR is required for the Salisbury Park North project.

Town of Parker Criteria

The Salisbury Park North Phase 1 project is in compliance with all Title 13 Chapter 13.05.010 regulations from the Town of Parker barring the definition of a Floodway in section (e)(2)(b) listed below.

"(b) Definitions

Floodway (regulatory floodway) means the channel of a river or other watercourse and the adjacent land areas that must be reserved in order to discharge the base flood without cumulatively increasing the water surface elevation more than one-half (½) foot (six [6] inches)."

The Town of Parker maintained the 1-foot floodway for the ongoing Cherry Creek Channel Improvement and Dransfeldt Road Extension CLOMR due to potential impacts on adjacent private property, thus, the same standard has been maintained for this project as well.

APPENDIX A: TOWN OF PARKER FLOODPLAIN DEVELOPMENT PERMIT APPLICATION

FLOODPLAIN DEVELOPMENT PERMIT APPLICATION

Public Works - Stormwater Division
20120 E. Mainstreet
Parker, Colorado 80138
303.840.9546

PERMIT #: _____

DATE: _____

Applicant Information

Owner: Town of Parker	Contractor: ICON Engineering, Inc.
Address: 20120 E Mainstreet	Address: 7000 S Yosemite St STE 120
Parker, CO 80134-7335	Centennial, CO 80112
Phone: 303.805.3276	Phone: 303.221.0802
Contact Name: Brett Collins	Contact Name: Brian LeDoux
Contact Phone and Email:303.805.3276 bcollins@parkerco.gov	Contact Phone and Email: 303.638.2304 bledoux@iconeng.com

Project Information

Project Location/Directions:

The Salisbury Park North Phase 1bound by Cherry Creek to the north and east, Salisbury Equestrian Park to the south, and North Motsenbocker Road to the west.

☐ Bridge/Culvert	☑ Utility Line	☑ Substantial Improvement >50%
☑ New Structure	☐ Structure Addition	☐ Manufactured (Mobile) Home
☑ Non-Residential	☑ Grading/Fill	☐ Channelization
☐ Levee	☑ Trail Construction	☑ Drainage Infrastructure Improvement

Project Description:

Newly constructed park features, including several sports fields, parking, roadways, trail connections, two new structures, drainage and utilities.

Flood Hazard Data

Watercourse Name: Cherry Creek

The proposed project is in the: ☐ Floodway ☑ Floodway Fringe

Flood Zone: ☐ A ☑ AE ☑ X (Shaded) ☐ Other (Specify) _____

Base Flood (1% Annual Chance Flood) Elevation at project site: Varies - see floodplain workmaps

Flood Insurance Rate Map Number: 8035C0069F & 182G Effective: September 30, 2005

*Attach a copy of FIRM with approximate limits of proposed project shown

Elevation required for lowest floor: __Varies_____ Floodproofing: ___N/A_____

Proposal Review Checklist

(Yes)/No	Site development plans are complete/attached and depict flood hazard data
If "No", Explain:	
(Yes)/No	Engineering data and analysis is attached (Signed/Sealed by a Professional Engineer)
If "No", Explain:	
Yes/(No)	Floodway Certificate and data documents no increase in base flood elevation
If "No", Explain: Project is outside of effective floodway	
Yes/(No)	Subdivision proposals minimize flood damage and protect utilities
If "No", Explain: Not applicable to project	
(Yes)/No	Lowest floor elevations are two feet above the base (1% Annual Chance) flood level
If "No", Explain:	
Yes/(No)	Manufactured homes address elevation and anchoring requirements
If "No", Explain: Not applicable to project	
Yes/(No)	Floodproofing certification by a registered Professional Engineer or Architect
If "No", Explain: Not applicable to project	

Structure Information See proposed floodplain workmaps for FFE and BFEs

	Elevation in relation to mean sea level of lowest floor (including basement)*
	Elevation in relation to mean sea level to which structure has been floodproofed*
*If more than one structure, attach list with respective elevations	

Applicant Signature

Property Owner Name: _____ Title: _____
Property Owner Signature (Required): _____ Date: _____
Owner's Designated Agent: Name:_____ Company:_____
Owner's Designated Agent Signature: _____ Date:_____
**Note: Applicant is responsible for obtaining all other applicable federal, state and local permits*

Permit Action

Recommendation for approval Designated Town Authority: _____ Date:_____	
	Permit Approved: The information submitted for the proposed project was reviewed and is in compliance with Town floodplain regulations.
	Permit Denied: The proposed project does not meet Town floodplain regulations
	Variance Granted: A variance was granted from the base (1% Annual Chance) flood elevations established by FEMA consistent with variance requirements fo NFIP regulations Part 60.6 (variance action documentation is attached)
Floodplain Administrator's Signature: _____ Date:_____	
Comments:_____	

APPENDIX B: EFFECTIVE FLOODPLAIN INFORMATION

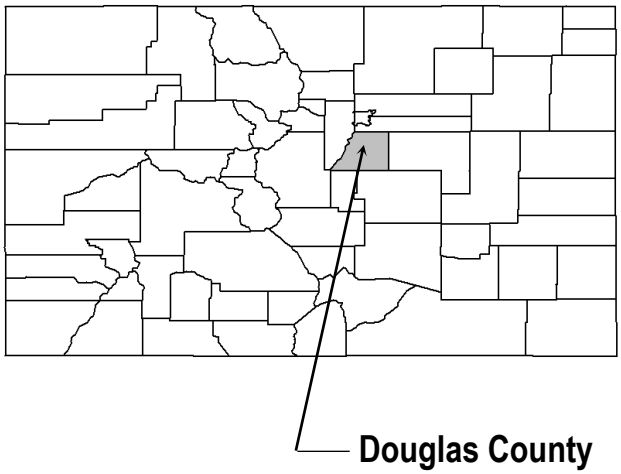
FLOOD INSURANCE STUDY



VOLUME 1 OF 5

DOUGLAS COUNTY, COLORADO
AND INCORPORATED AREAS

Community Name	Community Number
CASTLE PINES, CITY OF	080231
CASTLE ROCK, TOWN OF	080050
DOUGLAS COUNTY (UNINCORPORATED AREAS)	080049
LARKSPUR, TOWN OF	080309
LONE TREE, CITY OF	080319
PARKER, TOWN OF	080310



REVISED
December 2, 2021

Federal Emergency Management Agency

FLOOD INSURANCE STUDY NUMBER
08035CV001E

Table 4: Summary of Discharges (continued)

FLOODING SOURCE AND LOCATION	DRAINAGE AREA (sq. miles)	PEAK DISCHARGES (cfs) 10-YEAR	50-YEAR	100-YEAR	500-YEAR
BIG DRY CREEK TRIBUTARY C					
At Confluence with Big Dry Creek	3.07	*	*	2,400	*
At McArthur Ranch Road	1.63	*	*	1,350	*
At Upstream Limit of Detailed Study	0.12	*	*	250	*
CARPENTER CREEK					
At Denver & Rio Grande Western Railroad	10.1	1,220	2,510	3,350	5,570
At County Road 74	9.4	1,300	2,660	3,530	5,840
CHERRY CREEK					
At County Limits	*	8,950	26,800	43,710	133,200
At Cottonwood Drive	*	8,670	25,940	42,200	129,700
At E-470	*	8,480	25,360	41,200	129,700
At Lincoln Avenue	*	8,100	24,200	39,190	122,740
At West Parker Road	*	7,730	23,040	37,180	118,100
At Stroh Avenue	*	6,610	19,570	31,510	104,200
At Scott Road	*	6,000	17,500	27,120	100,000
At State Highway 86	*	5,500	12,600	19,080	79,000
COTTONWOOD CREEK					
At Inverness Drive South	*	1,293	1,963	2,498	3,662
At Inverness Drive South	*	1,214	1,830	2,336	3,466
At Liberty Boulevard	*	1,214	1,830	2,336	3,466
At E-470 Off Ramp	*	1,123	1,695	2,149	3,179
At E-470	2.4	1,123	1,695	2,149	3,179
At E-470 On Ramp	*	1,123	1,695	2,149	3,179
At Meridian Boulevard	*	1,298	2,177	2,657	3,451
At Pedestrian Bridge	*	304	514	665	1,022
At Golf Cart Bridge	*	304	514	665	1,022
At Meridian Boulevard	*	304	514	665	1,022
At Lincoln Avenue	0.8	304	514	665	1,022
At I-25 (Upstream Limit of Detailed Study)	0.7	185	416	541	863

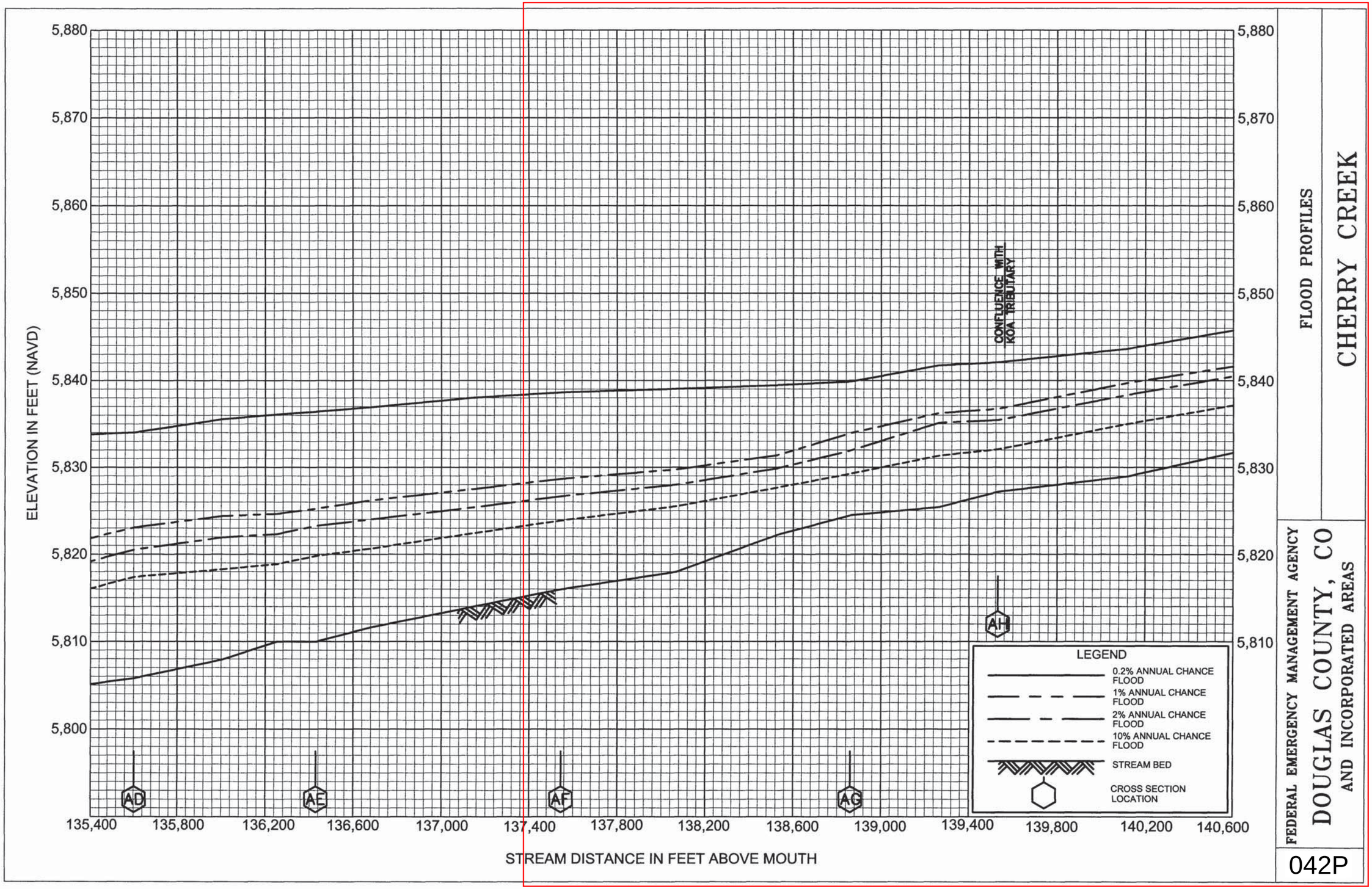
*Data not available

FLOODING SOURCE		FLOODWAY			BASE FLOOD WATER-SURFACE ELEVATION (FEET NAVD)			
CROSS SECTION	DISTANCE[1]	WIDTH (FEET)	SECTION AREA (SQUARE FEET)	MEAN VELOCITY (FEET PER SECOND)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE
Cherry Creek (continued)								
L	119,499	626	5,751	7.1	5,754.3	5,754.3	5,754.3	0.0
M	120,641	648	4,771	8.5	5,757.2	5,757.2	5,757.6	0.4
N	121,333	740	6,106	6.6	5,760.2	5,760.2	5,761.0	0.8
O	121,923	500	4,025	10.0	5,763.8	5,763.8	5,763.8	0.0
P	122,751	480	3,449	11.6	5,766.8	5,766.8	5,767.6	0.8
Q	123,592	405	4,530	8.7	5,771.8	5,771.8	5,772.7	0.9
R	124,887	570	5,324	7.4	5,777.0	5,777.0	5,777.8	0.8
S	126,073	492	3,874	10.1	5,779.8	5,779.8	5,780.5	0.7
T	126,330	497	5,144	7.5	5,782.0	5,782.0	5,782.2	0.2
U	127,590	796	4,063	9.5	5,785.3	5,785.3	5,786.0	0.7
V	128,405	548	3,757	10.2	5,790.8	5,790.8	5,790.9	0.1
W	129,561	377	3,795	10.1	5,799.0	5,799.0	5,799.9	0.9
X	130,779	574	6,462	5.9	5,803.8	5,803.8	5,804.4	0.6
Y	131,933	585	5,037	7.5	5,806.2	5,806.2	5,806.9	0.7
Z	132,970	325	3,724	10.1	5,810.2	5,810.2	5,811.0	0.8
AA	133,384	240	2,397	15.5	5,811.7	5,811.7	5,812.2	0.5
AB	133,547	240	2,898	12.7	5,815.4	5,815.4	5,815.5	0.1
AC	134,530	740	7,430	5.0	5,819.7	5,819.7	5,819.9	0.2
AD	135,602	399	4,279	8.6	5,822.9	5,822.9	5,823.7	0.8
AE	136,429	492	4,616	7.9	5,825.2	5,825.2	5,825.9	0.7
AF	137,545	758	6,541	5.5	5,828.7	5,828.7	5,829.6	0.9
AG	138,860	520	3,274	11.0	5,833.9	5,833.9	5,834.3	0.4
AH	139,530	825	5,653	6.3	5,836.7	5,836.7	5,837.5	0.8
AI	140,832	750	5,534	6.4	5,842.5	5,842.5	5,843.4	0.9
AJ	142,268	1,105	6,442	5.4	5,847.0	5,847.0	5,847.9	0.9

[1] Feet above mouth

FLOODING SOURCE		FLOODWAY			BASE FLOOD WATER-SURFACE ELEVATION (FEET NAVD)			
CROSS SECTION	DISTANCE[1]	WIDTH (FEET)	SECTION AREA (SQUARE FEET)	MEAN VELOCITY (FEET PER SECOND)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE
Cherry Creek (continued)								
AK	143,060	1,120	5,614	6.1	5,849.5	5,849.5	5,850.3	0.8
AL	145,066	495	3,435	9.9	5,858.6	5,858.6	5,859.0	0.4
AM	146,281	515	4,425	7.6	5,864.0	5,864.0	5,864.7	0.7
AN	147,121	1,000	5,802	5.8	5,866.9	5,866.9	5,867.5	0.6
AO	148,101	745	5,160	6.4	5,870.5	5,870.5	5,871.1	0.6
AP	149,230	580	4,097	8.0	5,875.7	5,875.7	5,875.8	0.1
AQ	150,306	511	2,908	11.2	5,879.9	5,879.9	5,880.3	0.4
AR	151,381	510	3,863	8.4	5,886.1	5,886.1	5,886.4	0.3
AS	152,510	705	3,814	8.4	5,891.4	5,891.4	5,891.8	0.4
AT	153,421	771	5,096	6.3	5,896.6	5,896.6	5,896.6	0.0
AU	153,849	564	3,536	9.0	5,897.8	5,897.8	5,897.9	0.1
AV	154,516	609	4,922	6.4	5,901.6	5,901.6	5,902.3	0.7
AW	155,178	404	3,187	9.9	5,903.6	5,903.6	5,904.3	0.7
AX	155,618	297	2,508	12.4	5,906.0	5,906.0	5,906.2	0.2
AY	155,832	272	3,276	9.4	5,909.0	5,909.0	5,909.1	0.1
AZ	156,821	425	3,658	8.4	5,911.3	5,911.3	5,911.3	0.0
BA	157,140	377	3,131	9.8	5,911.7	5,911.7	5,912.1	0.4
BB	157,734	420	3,960	7.7	5,915.1	5,915.1	5,916.0	0.9
BC	158,847	498	3,737	8.1	5,918.5	5,918.5	5,918.7	0.2
BD	160,060	777	5,168	5.8	5,922.2	5,922.2	5,923.0	0.8
BE	161,047	680	4,202	7.1	5,927.0	5,927.0	5,927.7	0.7
BF	162,009	1,133	6,472	4.5	5,930.4	5,930.4	5,931.3	0.9
BG	163,157	567	3,665	7.9	5,936.3	5,936.3	5,937.0	0.7
BH	164,393	750	4,345	6.6	5,942.3	5,942.3	5,943.0	0.7
BI	165,197	524	3,606	7.8	5,946.4	5,946.4	5,947.1	0.7

[1] Feet above mouth



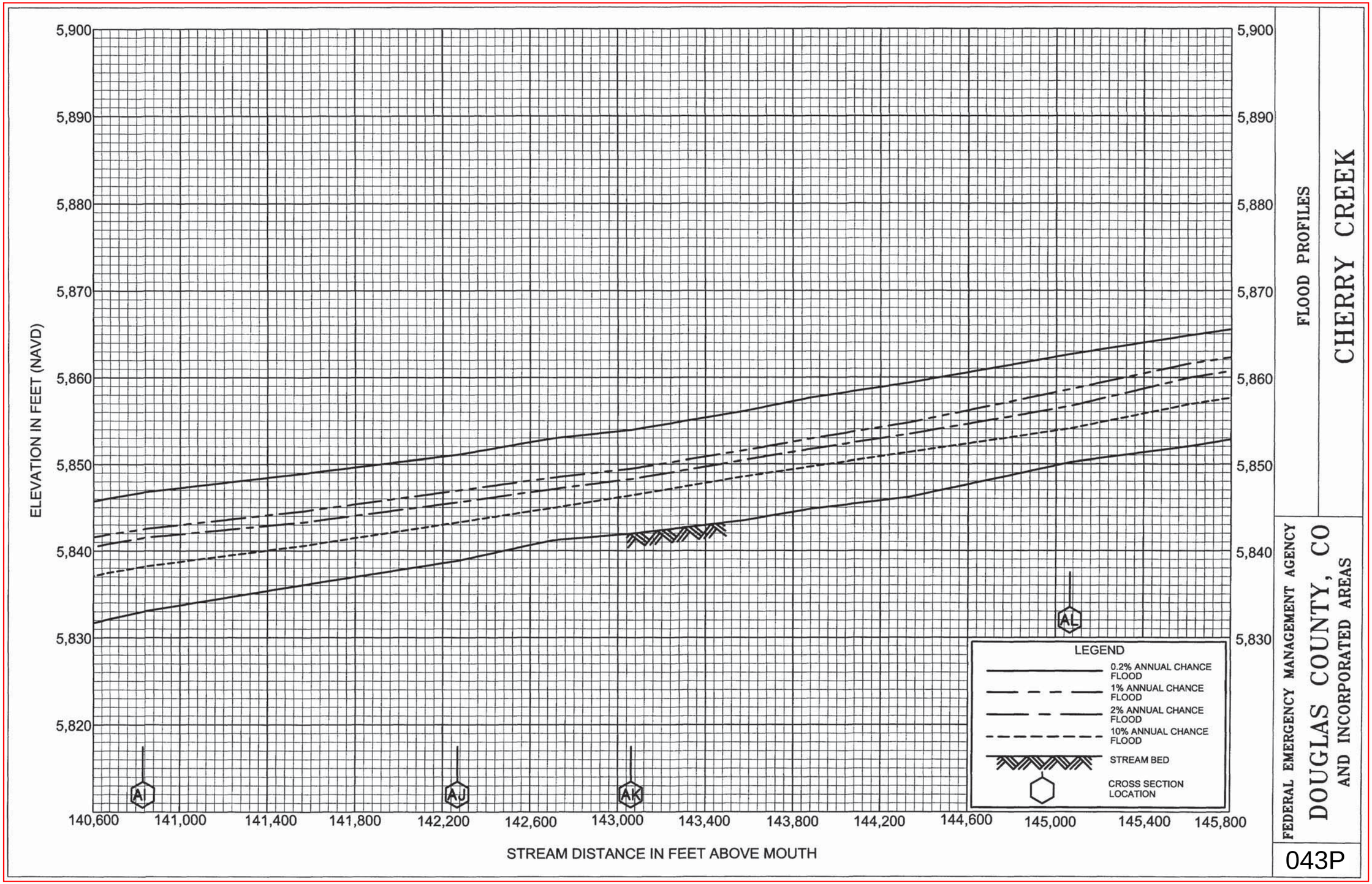
FLOOD PROFILES

CHERRY CREEK

FEDERAL EMERGENCY MANAGEMENT AGENCY

DOUGLAS COUNTY, CO
AND INCORPORATED AREAS

042P



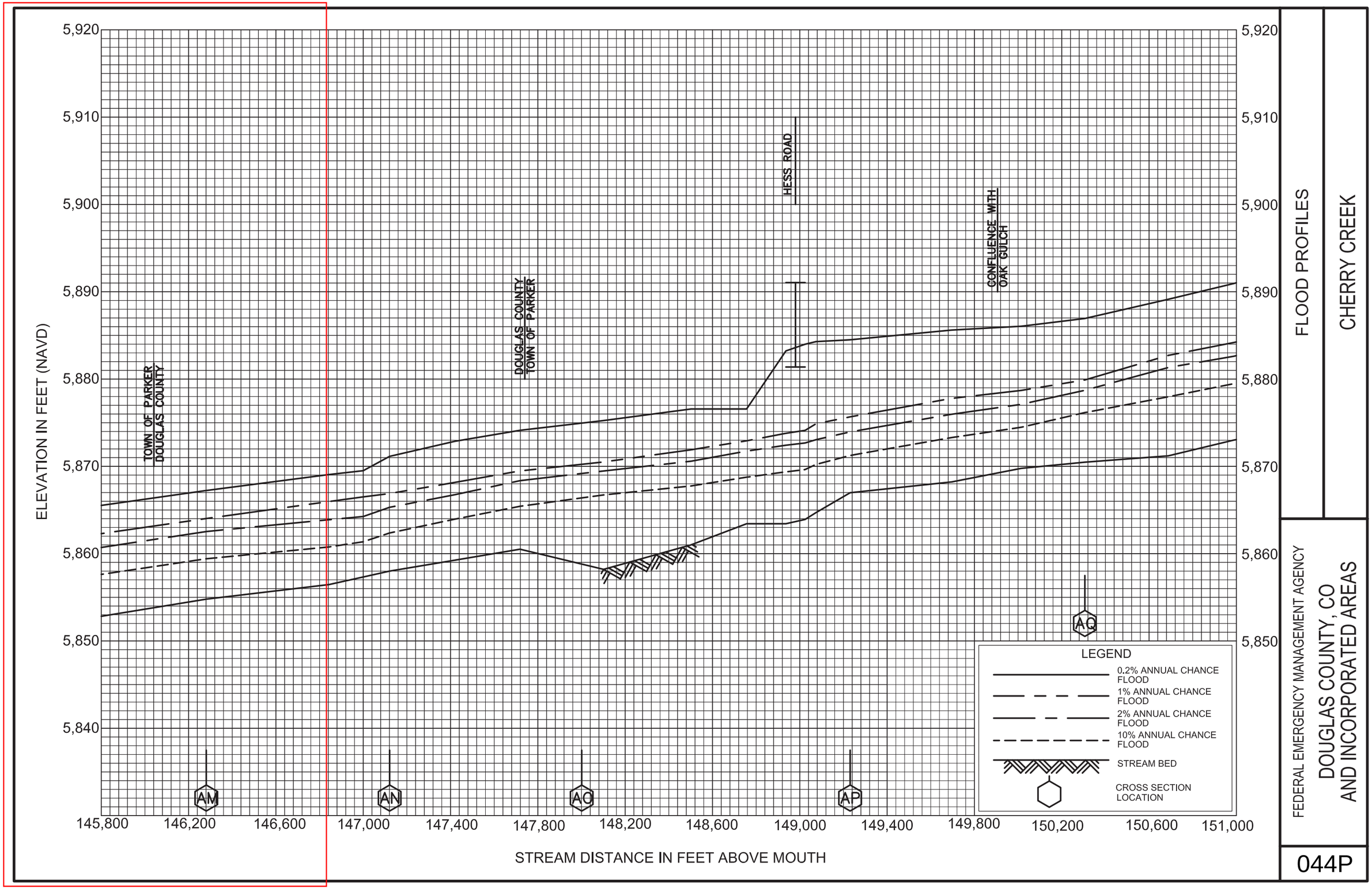
FLOOD PROFILES

CHERRY CREEK

FEDERAL EMERGENCY MANAGEMENT AGENCY

DOUGLAS COUNTY, CO
AND INCORPORATED AREAS

043P



FLOOD PROFILES

CHERRY CREEK

FEDERAL EMERGENCY MANAGEMENT AGENCY

DOUGLAS COUNTY, CO
AND INCORPORATED AREAS

044P

NOTES TO USERS

This map is for use in administering the National Flood Insurance Program. It does not necessarily identify all areas subject to flooding, particularly from local drainage sources of small size. The **community map repository** should be consulted for possible updated or additional flood hazard information.

To obtain more detailed information in areas where **Base Flood Elevations** (BFEs) and/or **floodways** have been determined, users are encouraged to consult the Flood Profiles and Floodway Data and/or Summary of Stillwater Elevations tables contained within the Flood Insurance Study (FIS) report that accompanies this FIRM. Users should be aware that BFEs shown on the FIRM represent rounded whole-foot elevations. These BFEs are intended for flood insurance rating purposes only and should not be used as the sole source of flood elevation information. Accordingly, flood elevation data presented in the FIS report should be utilized in conjunction with the FIRM for purposes of construction and/or floodplain management.

Boundaries of the **floodways** were computed at cross sections and interpolated between cross sections. The floodways were based on hydraulic considerations with regard to requirements of the National Flood Insurance Program. Floodway widths and other pertinent floodway data are provided in the Flood Insurance Study report for this jurisdiction.

Certain areas not in Special Flood Hazard Areas may be protected by **flood control structures**. Refer to Section 2.4 "Flood Protection Measures" of the Flood Insurance Study report for information on flood control structures for this jurisdiction.

The **projection** used in the preparation of this map was Universal Transverse Mercator (UTM) Zone 13. The **horizontal datum** was NAD 83, GRS80 spheroid. Differences in datum, spheroid, projection or State Plane zones used in the production of FIRMs for adjacent jurisdictions may result in slight positional differences in map features across jurisdiction boundaries. These differences do not affect the accuracy of this FIRM.

Flood elevations on this map are referenced to the North American Vertical Datum of 1988 (NAVD 88). These flood elevations must be compared to structure and ground elevations referenced to the same **vertical datum**. An average offset between NAVD 88 and the National Geodetic Vertical Datum of 1929 (NGVD 29) has been computed for each Douglas County flooding source. This offset was then applied to the NGVD 29 flood elevations that were not revised during the creation of this countywide format FIRM. The offsets for each flooding source shown on this FIRM are shown in the Douglas County Vertical Datum Offset Table below. For information regarding conversion between the National Geodetic Vertical Datum of 1929 and the North American Vertical Datum of 1988, visit the National Geodetic Survey website at http://www.ngs.noaa.gov or contact the National Geodetic Survey at the following address:

Spatial Reference System Division
National Geodetic Survey, NOAA
Silver Spring Metro Center
1315 East-West Highway
Silver Spring, Maryland 20910
(301) 713-3191

To obtain current elevation, description, and/or location information for **bench marks** shown on this map, please contact the Information Services Branch of the National Geodetic Survey at **(301) 713-3242**, or visit its website at http://www.ngs.noaa.gov. For information about additional control points maintained by Douglas County, please visit http://www.publicstaging.douglas.co.us/website/control/viewer.htm.

Base map information shown on this FIRM was provided by the Douglas County GIS Department and the Town of Castle Rock GIS Department. Additional input was provided by the City of Lone Tree and Town of Parker. These data are current as of 2003.

This map reflects more detailed and up-to-date **stream channel configurations and floodplain delineations** than those shown on the previous FIRM for this jurisdiction. As a result, the Flood Profiles and Floodway Data tables in the Flood Insurance Study Report (which contains authoritative hydraulic data) may reflect stream channel distances that differ from what is shown on this map. Also, the road to floodplain relationships for unrevised streams may differ from what is shown on previous maps.

Corporate limits shown on this map are based on the best data available at the time of publication. Because changes due to annexations or de-annexations may have occurred after this map was published, map users should contact appropriate community officials to verify current corporate limit locations.

Please refer to the separately printed **Map Index** for an overview map of the county showing the layout of map panels; community map repository addresses; and a Listing of Communities table containing National Flood Insurance Program dates for each community as well as a listing of the panels on which each community is located.

Contact the **FEMA Map Service Center** at 1-800-358-9616 for information on available products associated with this FIRM. Available products may include previously issued Letters of Map Change, a Flood Insurance Study report, and/or digital versions of this map. The Map Service Center may also be reached by Fax at 1-800-358-9620 and its website at http://www.msc.fema.gov.

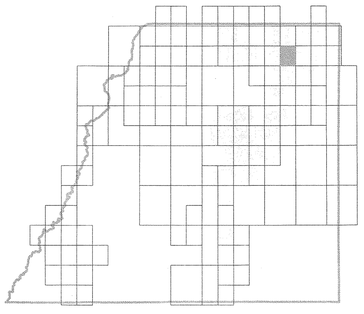
If you have **questions about this map** or questions concerning the National Flood Insurance Program in general, please call **1-877-FEMA MAP** (1-877-336-2627) or visit the FEMA website at http://www.fema.gov.

Douglas County Vertical Datum Offset Table

Flooding Source	Vertical Datum Offset (ft)	Flooding Source	Vertical Datum Offset (ft)
Baldwin Gulch	3.10	Newlin Gulch	3.14
Bayou Gulch	3.22	Plum Creek, Cross Section A to D	3.12
Big Dry Creek Tributary C	3.15	Section 34 Tributary	3.62
Carpenter Creek	3.93	Sellers Gulch	3.43
Cherry Creek, Cross Section BZ to CU	3.23	Sellers Gulch, Unnamed Tributary	3.39
East Plum Creek, Cross Section W to AY	3.26	Sulphur Gulch	3.13
East Plum Creek, Cross Section AZ to CZ	3.49	Tallman Gulch	3.16
East Plum Creek, Cross Section DA to EM	3.71	West Plum Creek, Cross Section W to AM	3.68
Glade Gulch	3.65		
Happy Canyon Creek	3.12		

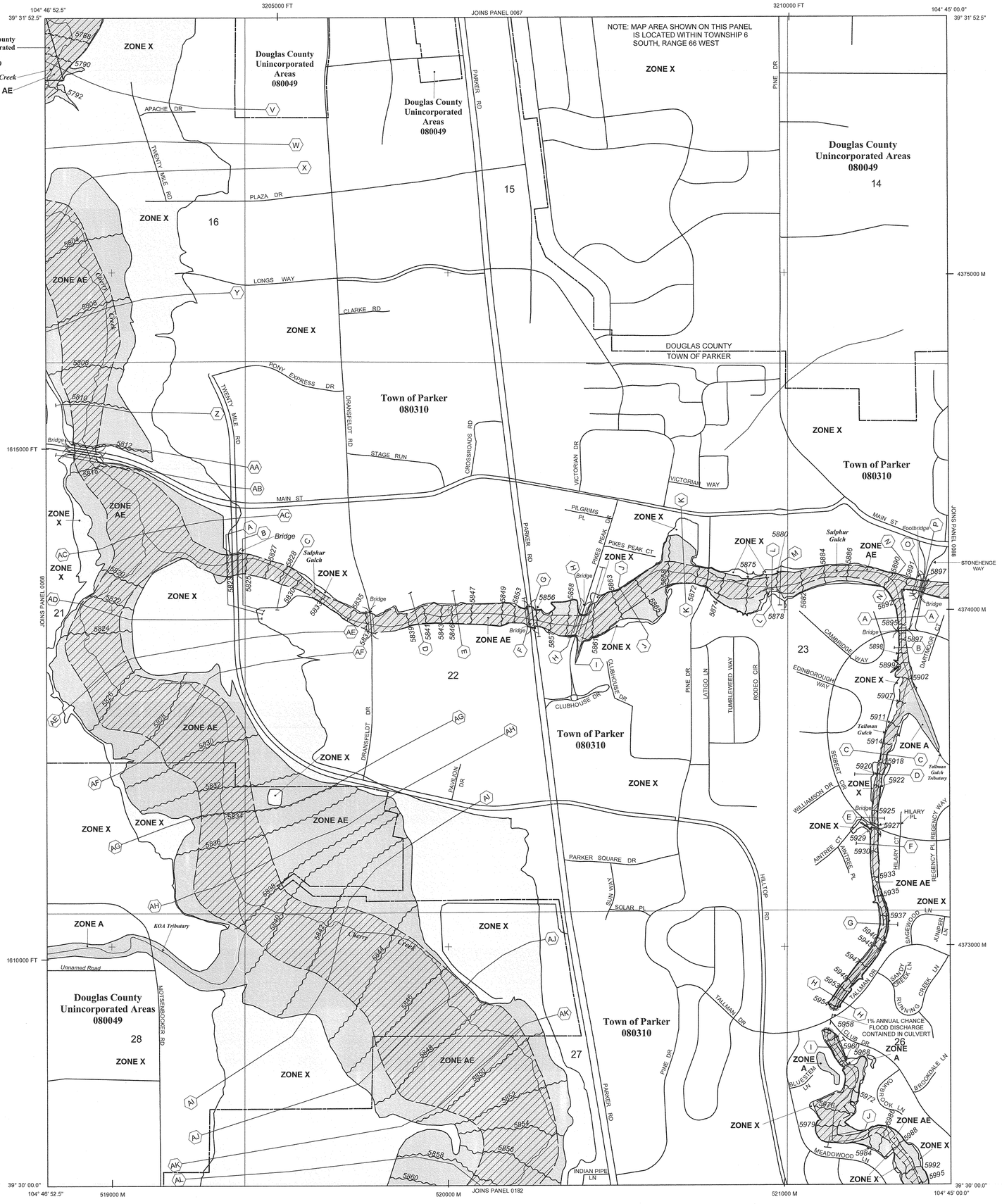
Example: To convert Baldwin Gulch elevations to NAVD 88, 3.10 feet were added to the NGVD 29 elevations.

Panel Location Map



This digital Flood Insurance Rate Map (FIRM) was produced through a cooperative partnership between the State of Colorado Water Conservation Board, the Urban Drainage and Flood Control District, and the Federal Emergency Management Agency (FEMA). The State of Colorado Water Conservation Board and the Urban Drainage and Flood Control District have implemented a long-term approach of floodplain management to reduce the costs associated with flooding. As part of this effort, both the State of Colorado and the Urban Drainage and Flood Control District have joined in Cooperating Technical Partner agreements with FEMA to produce this digital FIRM.

Additional flood hazard information and resources are available from local communities, the Colorado Water Conservation Board, and the Urban Drainage and Flood Control District.



LEGEND

SPECIAL FLOOD HAZARD AREAS (SFHAs) SUBJECT TO INUNDATION BY THE 1% ANNUAL CHANCE FLOOD

The 1% annual chance flood (100-year flood), also known as the base flood, is the flood that has a 1% chance of being equaled or exceeded in any given year. The Special Flood Hazard Area is the area subject to flooding by the 1% annual chance flood. Areas of Special Flood Hazard include Zones A, AE, AH, AO, AR, A99, V, and VE. The Base Flood Elevation is the water-surface elevation of the 1% annual chance flood.

ZONE A	No Base Flood Elevations determined.
ZONE AE	Base Flood Elevations determined.
ZONE AH	Flood depths of 1 to 3 feet (usually areas of ponding); Base Flood Elevations determined.
ZONE AO	Flood depths of 1 to 3 feet (usually sheet flow on sloping terrain); average depths determined. For areas of alluvial fan flooding, velocities also determined.
ZONE AR	Special Flood Hazard Areas formerly protected from the 1% annual chance flood by a flood control system that was subsequently decertified. Zone AR indicates that the former flood control system is being restored to provide protection from the 1% annual chance or greater flood.
ZONE A99	Area to be protected from 1% annual chance flood by a Federal flood protection system under construction; no Base Flood Elevations determined.

FLOODWAY AREAS IN ZONE AE

The floodway is the channel of a stream plus any adjacent floodplain areas that must be kept free of encroachment so that the 1% annual chance flood can be carried without substantial increases in flood heights.

OTHER FLOOD AREAS

ZONE X	Areas of 0.2% annual chance flood; areas of 1% annual chance flood with average depths of less than 1 foot or with drainage areas less than 1 square mile; and areas protected by levees from 1% annual chance flood.

OTHER AREAS

ZONE X	Areas determined to be outside the 0.2% annual chance floodplain.
ZONE D	Areas in which flood hazards are undetermined, but possible.

Floodplain boundary

Floodway boundary

Zone D boundary

Boundary dividing Special Flood Hazard Area zones and boundary dividing Special Flood Hazard Areas of different Base Flood Elevations, flood depths or flood velocities.

513 — Base Flood Elevation line and value; elevation in feet*

(EL 987) — Base Flood Elevation value where uniform within zone; elevation in feet*

*Referenced to the North American Vertical Datum of 1988

(A) — (A) Cross section line

104° 50' 37.5" , 39° 30' 00" — Geographic coordinates referenced to the North American Datum of 1983 (NAD 83), Western Hemisphere

4276000 M — 1000-meter Universal Transverse Mercator grid ticks, zone 13

3180000 FT — 5000-foot ticks: Colorado State Plane coordinate system, central zone (FIPSZONE 502), Lambert Conformal Conic projection

× KK6400 — National Geodetic Survey bench mark (see explanation in Notes to Users section of this FIRM panel

MAP REPOSITORY
Refer to listing of Map Repositories on Map Index

EFFECTIVE DATE OF COUNTYWIDE FLOOD INSURANCE RATE MAP
SEPTEMBER 30, 2005

EFFECTIVE DATE(S) OF REVISION(S) TO THIS PANEL

For community map revision history prior to countywide mapping, refer to the Community Map History table located in the Flood Insurance Study report for this jurisdiction.

To determine if flood insurance is available in this community, contact your insurance agent or call the National Flood Insurance Program at 1-800-638-6620.

MAP SCALE 1" = 500'

250 0 500 1000 FEET

150 0 150 300 METERS

NFIP NATIONAL FLOOD INSURANCE PROGRAM

PANEL 0069F

FIRM

FLOOD INSURANCE RATE MAP

DOUGLAS COUNTY, COLORADO AND INCORPORATED AREAS

PANEL 69 OF 495
(SEE MAP INDEX FOR FIRM PANEL LAYOUT)

CONTAINS

COMMUNITY	NUMBER	PANEL	SUFFIX
DOUGLAS COUNTY	080049	0069	F
PARKER, TOWN OF	080310	0069	F

Notice to User: The **Map Number** shown below should be used when placing map orders; the **Community Number** shown above should be used on insurance applications for the subject community.

MAP NUMBER 08035C0069F

EFFECTIVE DATE: SEPTEMBER 30, 2005

Federal Emergency Management Agency

NOTES TO USERS

This map is for use in administering the National Flood Insurance Program. It does not necessarily identify all areas subject to flooding, particularly from local drainage sources of small size. The **community map repository** should be consulted for possible updated or additional flood hazard information.

To obtain more detailed information in areas where **Base Flood Elevations** (BFEs) and/or **floodways** have been determined, users are encouraged to consult the Flood Profiles and Floodway Data and/or Summary of Stillwater Elevations tables shown on this FIRM. Users should be aware that BFEs shown on the FIRM represent rounded whole-foot elevations. These BFEs are intended for flood insurance rating purposes only and should not be used as the sole source of flood elevation information. Accordingly, flood elevation data presented in the Flood Profiles and Floodway Data and/or Summary of Stillwater Elevations tables should be utilized in conjunction with the FIRM for purposes of construction and/or floodplain management.

Boundaries of the **floodways** were computed at cross sections and interpolated between cross sections. The floodways were based on hydraulic considerations with regard to requirements of the National Flood Insurance Program. Floodway widths and other pertinent floodway data are provided in the Floodway Data table shown on this FIRM.

The **projection** used in the preparation of this map was Universal Transverse Mercator (UTM) zone 13. The **horizontal datum** was NAD 83, GRS 1980 spheroid. Differences in datum, spheroid, projection or UTM zones used in the production of FIRMs for adjacent jurisdictions may result in slight positional differences in map features across jurisdiction boundaries. These differences do not affect the accuracy of this FIRM.

Flood elevations on this map are referenced to the North American Vertical Datum of 1988. These flood elevations must be compared to structure and ground elevations referenced to the same **vertical datum**. For information regarding conversion between the National Geodetic Vertical Datum of 1929 and the North American Vertical Datum of 1988, visit the National Geodetic Survey website at http://www.ngs.noaa.gov or contact the National Geodetic Survey at the following address:

NGS Information Services
NOAA, N/NGS12
National Geodetic Survey
SSMC-3, #9202
1315 East-West Highway
Silver Spring, Maryland 20910-3282
(301) 713-3242

To obtain current elevation, description, and/or location information for **bench marks** shown on this map, please contact the Information Services Branch of the National Geodetic Survey at **(301) 713- 3242**, or visit its website at http://www.ngs.noaa.gov.

Base map information shown on this FIRM was provided by the Douglas County GIS Department and the Town of Castle Rock GIS Department. Additional input was provided by the City of Lone Tree and Town of Parker. These data are current as of 2010.

Certain areas not in Special Flood Hazard Areas may be protected by **flood control structures**. Refer to Section 2.4 "Flood Protection Measures" of the Flood Insurance Study report for information on flood control structures for this jurisdiction.

The **profile baselines** depicted on this map represent the hydraulic modeling baselines that match the flood profiles in the FIS report. As a result of improved topographic data, the **profile baseline**, in some cases, may deviate significantly from the channel centerline or appear outside the SFHA.

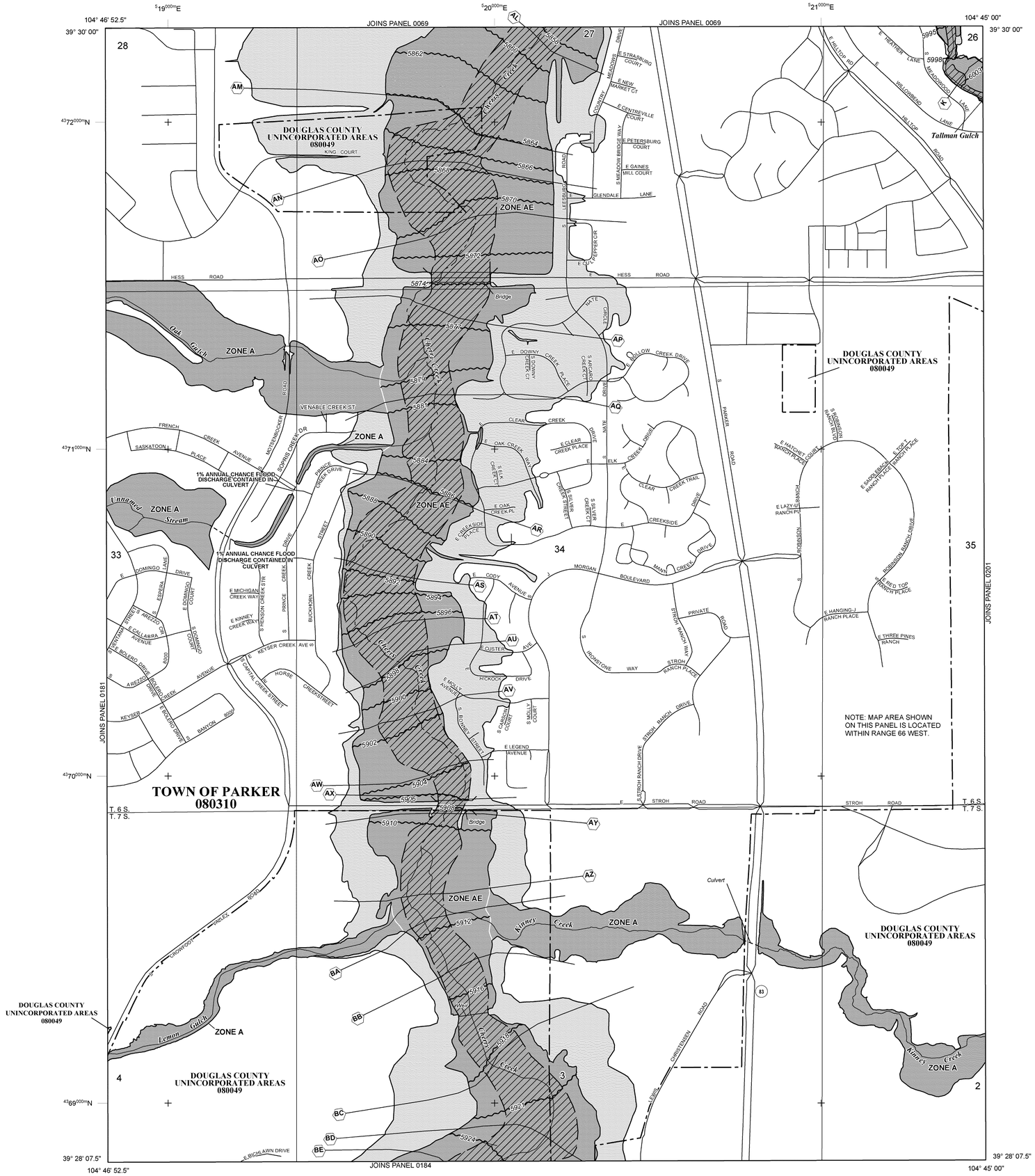
Based on updated topographic information, this map reflects more detailed and up-to-date **stream channel configurations and floodplain delineations** than those shown on the previous FIRM for this jurisdiction. As a result, the Flood Profiles and Floodway Data tables for multiple streams in the Flood Insurance Study Report (which contains authoritative hydraulic data) may reflect stream channel distances that differ from what is shown on the map. Also, the road to floodplain relationships for unrevised streams may differ from what is shown on previous maps.

Corporate limits shown on this map are based on the best data available at the time of publication. Because changes due to annexations or de-annexations may have occurred after this map was published, map users should contact appropriate community officials to verify current corporate limit locations.

Please refer to the separately printed **Map Index** for an overview map of the county showing the layout of map panels; community map repository addresses; and a Listing of Communities table containing National Flood Insurance Program dates for each community as well as a listing of the panels on which each community is located.

For information on available products associated with this FIRM visit the **Map Service Center (MSC)** website at http://msc.fema.gov. Available products may include previously issued Letters of Map Change, a Flood Insurance Study Report, and/or digital versions of this map. Many of these products can be ordered or obtained directly from the MSC website.

If you have **questions about this map,** how to order products, or the National Flood Insurance Program in general, please call the **FEMA Map Information eXchange (FMIX)** at **1-877-FEMA-MAP** (1-877-336-2627) or visit the FEMA website at http://www.fema.gov/business/nfip.



LEGEND

SPECIAL FLOOD HAZARD AREAS (SFHAs) SUBJECT TO INUNDATION BY THE 1% ANNUAL CHANCE FLOOD

The 1% annual chance flood (100-year flood), also known as the base flood, is the flood that has a 1% chance of being equaled or exceeded in any given year. The Special Flood Hazard Area is the area subject to flooding by the 1% annual chance flood. Areas of Special Flood Hazard include Zones A, AE, AH, AO, AR, A99, V, and VE. The Base Flood Elevation is the water-surface elevation of the 1% annual chance flood.

ZONE A	No Base Flood Elevations determined.
ZONE AE	Base Flood Elevations determined.
ZONE AH	Flood depths of 1 to 3 feet (usually areas of ponding); Base Flood Elevations determined.
ZONE AO	Flood depths of 1 to 3 feet (usually sheet flow on sloping terrain); average depths determined. For areas of alluvial fan flooding, velocities also determined.
ZONE AR	Special Flood Hazard Areas formerly protected from the 1% annual chance flood by a flood control system that was subsequently decertified. Zone AR indicates that the former flood control system is being restored to provide protection from the 1% annual chance or greater flood.
ZONE A99	Area to be protected from 1% annual chance flood by a Federal flood protection system under construction; no Base Flood Elevations determined.
ZONE V	Coastal flood zone with velocity hazard (wave action); no Base Flood Elevations determined.
ZONE VE	Coastal flood zone with velocity hazard (wave action); Base Flood Elevations determined.

FLOODWAY AREAS IN ZONE AE

The floodway is the channel of a stream plus any adjacent floodplain areas that must be kept free of encroachment so that the 1% annual chance flood can be carried without substantial increases in flood heights.

OTHER FLOOD AREAS

ZONE X	Areas of 0.2% annual chance flood; areas of 1% annual chance flood with average depths of less than 1 foot or with drainage areas less than 1 square mile; and areas protected by levees from 1% annual chance flood.

OTHER AREAS

ZONE X	Areas determined to be outside the 0.2% annual chance floodplain.
ZONE D	Areas in which flood hazards are undetermined, but possible.

COASTAL BARRIER RESOURCES SYSTEM (CBRS) AREAS

OTHERWISE PROTECTED AREAS (OPAs)

CBRS areas and OPAs are normally located within or adjacent to Special Flood Hazard Areas.

- 1% Annual Chance Floodplain Boundary
- 0.2% Annual Chance Floodplain Boundary
- Floodway boundary
- Zone D boundary
- CBRS and OPA boundary
- Boundary dividing Special Flood Hazard Area Zones and boundary dividing Special Flood Hazard Areas of different Base Flood Elevations, flood depths, or flood velocities.
- 513 — Base Flood Elevation line and value; elevation in feet*
- (EL 987) — Base Flood Elevation value where uniform within zone; elevation in feet*

*Referenced to the North American Vertical Datum of 1988

- A — A — Cross section line
- 23 — 23 — Transect line
- 45° 02' 08", 93° 02' 12" — Geographic coordinates referenced to the North American Datum of 1983 (NAD 83) Western Hemisphere
- $^{4}88^{000m}N$ — 1000-meter Universal Transverse Mercator grid values, zone 13
- DX5510 × — Bench mark (see explanation in Notes to Users section of this FIRM panel)
- M1.5 • — River Mile

MAP REPOSITORIES
Refer to Map Repositories list on Map Index

EFFECTIVE DATE OF COUNTYWIDE FLOOD INSURANCE RATE MAP

SEPTEMBER 30, 2005

EFFECTIVE DATE(S) OF REVISION(S) TO THIS PANEL

MARCH 16, 2016: to update corporate limits, to change base flood elevations, to add base flood elevations, to add special flood hazard areas, to update map format, to add roads and road names, to reflect updated topographic information, to incorporate previously issued letters of map revision.

For community map revision history prior to countywide mapping, refer to the Community Map History table located in the Flood Insurance Study report for this jurisdiction.

To determine if flood insurance is available in this community, contact your insurance agent or call the National Flood Insurance Program at 1-800-638-6620.

MAP SCALE 1" = 500'

250 0 500 1000 FEET
150 0 150 300 METERS

NFIP
NATIONAL FLOOD INSURANCE PROGRAM

PANEL 0182G

FIRM

FLOOD INSURANCE RATE MAP

DOUGLAS COUNTY, COLORADO AND INCORPORATED AREAS

PANEL 182 OF 495
(SEE MAP INDEX FOR FIRM PANEL LAYOUT)

CONTAINS:

COMMUNITY	NUMBER	PANEL	SUFFIX
DOUGLAS COUNTY	080049	0182	G
PARKER, TOWN OF	080310	0182	G

Notice to User: The **Map Number** shown below should be used when placing map orders; the **Community Number** shown above should be used on insurance applications for the subject community.

MAP NUMBER
08035C0182G
MAP REVISED
MARCH 16, 2016

Federal Emergency Management Agency

Federal Emergency Management Agency

Washington, D.C. 20472

CONDITIONAL LETTER OF MAP REVISION
COMMENT DOCUMENT

COMMUNITY INFORMATION		PROPOSED PROJECT DESCRIPTION	BASIS OF CONDITIONAL REQUEST
COMMUNITY	Town of Parker Douglas County Colorado	BRIDGE CHANNELIZATION CHANNEL RELOCATION CULVERT FILL	1D HYDRAULIC ANALYSIS FLOODWAY UPDATED TOPOGRAPHIC DATA
	COMMUNITY NO.: 080310		
IDENTIFIER	Cherry Creek at Dransfeldt Reach A	APPROXIMATE LATITUDE & LONGITUDE: 39.508, -104.774 SOURCE: USGS QUADRANGLE DATUM: NAD 83	

AFFECTED MAP PANELS			
TYPE: FIRM*	NO.: 08035C0069F	DATE: September 30, 2005	* FIRM - Flood Insurance Rate Map

FLOODING SOURCES AND REACH DESCRIPTION See Page 2 for Additional Flooding Sources

Cherry Creek – from approximately 2,130 feet downstream to approximately 3,890 feet upstream of the confluence with KOA Tributary

PROPOSED PROJECT DESCRIPTION

Flooding Source	Proposed Project	Location of Proposed Project
Cherry Creek	New Bridge	Approximately 530 feet upstream of the confluence with KOA Tributary
	Channelization	From approximately 870 feet downstream to approximately 1,490 feet upstream of the confluence with KOA Tributary

SUMMARY OF IMPACTS TO FLOOD HAZARD DATA

Flooding Source	Effective Flooding	Proposed Flooding	Increases	Decreases
Cherry Creek	Floodway	Floodway	Yes	Yes
	Zone AE	Zone AE	Yes	Yes
	BFEs*	BFEs	Yes	Yes
	Zone X (shaded)	Zone X (shaded)	Yes	Yes

* BFEs - Base (1-percent-annual-chance) Flood Elevations

COMMENT

This document provides the Federal Emergency Management Agency's (FEMA's) comment regarding a request for a CLOMR for the project described above. This document is not a final determination; it only provides our comment on the proposed project in relation to the flood hazard information shown on the effective National Flood Insurance Program (NFIP) map. We reviewed the submitted data and the data used to prepare the effective flood hazard information for your community and determined that the proposed project meets the minimum floodplain management criteria of the NFIP. Your community is responsible for approving all floodplain development and for ensuring that all permits required by Federal or State/Commonwealth law have been received. State/Commonwealth, county, and community officials, based on their knowledge of local conditions and in the interest of safety, may set higher standards for construction in the Special Flood Hazard Area (SFHA), the area subject to inundation by the base flood). If the State/Commonwealth, county, or community has adopted more restrictive or comprehensive floodplain management criteria, these criteria take precedence over the minimum NFIP criteria.

This comment is based on the flood data presently available. If you have any questions about this document, please contact the FEMA Mapping and Insurance eXchange (FMIX) toll free at 1-877-336-2627 (1-877-FEMA MAP) or by letter addressed to the LOMC Clearinghouse, 3601 Eisenhower Avenue, Suite 500, Alexandria, VA 22304-6426. Additional Information about the NFIP is available on the FEMA website at https://www.fema.gov/flood-insurance.

Patrick "Rick" F. Sacbibit, P.E., Branch Chief
Engineering Services Branch
Federal Insurance and Mitigation Administration

Federal Emergency Management Agency
Washington, D.C. 20472

CONDITIONAL LETTER OF MAP REVISION
COMMENT DOCUMENT (CONTINUED)

COMMUNITY INFORMATION (CONTINUED)

ADDITIONAL FLOODING SOURCES AFFECTED BY THIS CONDITIONAL REQUEST

FLOODING SOURCE(S) AND REACH DESCRIPTION

Cherry Creek – from approximately 2,130 feet downstream to approximately 3,890 feet upstream of the confluence with KOA Tributary

KOA Tributary – from the confluence with Cherry Creek to approximately 1,040 feet upstream of Motsenbocker Road

PROPOSED PROJECT DESCRIPTION

Flooding Source	Proposed Project	Location of Proposed Project
Cherry Creek	3 New 13.33 ft x 3.5 ft Culvert	Approximately 770 feet upstream of the confluence with KOA Tributary
	Fill Placement	From approximately 380 feet upstream to approximately 770 feet upstream of the confluence with KOA Tributary
KOA Tributary	Channel Relocation	From the confluence with Cherry Creek to approximately 570 feet upstream of Motsenbocker Road
	2 New 10 ft x 6 ft Culvert	At Motsenbocker Road
	New 12 ft x 4 ft Culvert	Approximately 280 feet upstream of the confluence with Cherry Creek

SUMMARY OF IMPACTS TO FLOOD HAZARD DATA

Flooding Source	Effective Flooding	Proposed Flooding	Increases	Decreases
KOA Tributary	Zone A	Zone A	Yes	Yes

* BFEs - Base (1-percent-annual-chance) Flood Elevations

This comment is based on the flood data presently available. If you have any questions about this document, please contact the FEMA Mapping and Insurance eXchange (FMIX) toll free at 1-877-336-2627 (1-877-FEMA MAP) or by letter addressed to the LOMC Clearinghouse, 3601 Eisenhower Avenue, Suite 500, Alexandria, VA 22304-6426. Additional Information about the NFIP is available on the FEMA website at https://www.fema.gov/flood-insurance.

Patrick "Rick" F. Sacbibit, P.E., Branch Chief
Engineering Services Branch
Federal Insurance and Mitigation Administration

Federal Emergency Management Agency
Washington, D.C. 20472

CONDITIONAL LETTER OF MAP REVISION
COMMENT DOCUMENT (CONTINUED)

OTHER COMMUNITIES AFFECTED BY THIS CONDITIONAL REQUEST

CID Number: 080049 **Name:** Douglas County, Colorado

AFFECTED MAP PANELS

TYPE: FIRM NO.: 08035C0069F DATE: September 30, 2005

This comment is based on the flood data presently available. If you have any questions about this document, please contact the FEMA Mapping and Insurance eXchange (FMIX) toll free at 1-877-336-2627 (1-877-FEMA MAP) or by letter addressed to the LOMC Clearinghouse, 3601 Eisenhower Avenue, Suite 500, Alexandria, VA 22304-6426. Additional Information about the NFIP is available on the FEMA website at https://www.fema.gov/flood-insurance.

Patrick "Rick" F. Sacbibit, P.E., Branch Chief
Engineering Services Branch
Federal Insurance and Mitigation Administration

Federal Emergency Management Agency
Washington, D.C. 20472

CONDITIONAL LETTER OF MAP REVISION
COMMENT DOCUMENT (CONTINUED)

COMMUNITY INFORMATION

To determine the changes in flood hazards that will be caused by the proposed project, we compared the hydraulic modeling reflecting the proposed project (referred to as the proposed conditions model) to the hydraulic modeling used to prepare the Flood Insurance Study (FIS) (referred to as the effective model). If the effective model does not provide enough detail to evaluate the effects of the proposed project, an existing conditions model must be developed to provide this detail. This existing conditions model is then compared to the effective model and the proposed conditions model to differentiate the increases or decreases in flood hazards caused by more detailed modeling from the increases or decreases in flood hazards that will be caused by the proposed project.

The table below shows the changes in the BFEs:

BFE Comparison Table

Flooding Source: Cherry Creek		BFE Change (feet)	Location of maximum change
Existing vs. Effective	Maximum increase	3.0	Approximately 520 feet downstream of the confluence with KOA Tributary
	Maximum decrease	0.9	Approximately 1,320 feet downstream of the confluence with KOA Tributary
Proposed vs. Existing	Maximum increase	0.4	Approximately 80 feet upstream of the confluence with KOA Tributary
	Maximum decrease	1.5	Approximately 1,970 feet upstream of the confluence with KOA Tributary
Proposed vs. Effective	Maximum increase	2.4	Approximately 500 feet downstream of the confluence with KOA Tributary
	Maximum decrease	0.7	Approximately 1,320 feet downstream of the confluence with KOA Tributary

Increases due to the proposed project that exceed those permitted under Paragraphs (c)(10) or (d)(3) of Section 60.3 of the NFIP regulations must adhere to Section 65.12 of the NFIP regulations. With this request, your community has complied with all requirements of Paragraph 65.12(a) of the NFIP regulations. Compliance with Paragraph 65.12(b) also is necessary before FEMA can issue a Letter of Map Revision when a community proposes to permit encroachments into the effective regulatory floodway that will cause BFE increases in excess of those permitted under Paragraph 60.3(d)(3).

NFIP regulations Subparagraph 60.3(b)(7) requires communities to ensure that the flood-carrying capacity within the altered or relocated portion of any watercourse is maintained. This provision is incorporated into your community's existing floodplain management ordinances; therefore, responsibility for maintenance of the altered or relocated watercourse, including any related appurtenances such as bridges, culverts, and other drainage structures, rests with your community. We may request that your community submit a description and schedule of maintenance activities necessary to ensure this requirement.

This comment is based on the flood data presently available. If you have any questions about this document, please contact the FEMA Mapping and Insurance eXchange (FMIX) toll free at 1-877-336-2627 (1-877-FEMA MAP) or by letter addressed to the LOMC Clearinghouse, 3601 Eisenhower Avenue, Suite 500, Alexandria, VA 22304-6426. Additional Information about the NFIP is available on the FEMA website at https://www.fema.gov/flood-insurance.

Patrick "Rick" F. Sacbibit, P.E., Branch Chief
Engineering Services Branch
Federal Insurance and Mitigation Administration

Federal Emergency Management Agency
Washington, D.C. 20472

CONDITIONAL LETTER OF MAP REVISION
COMMENT DOCUMENT (CONTINUED)

COMMUNITY INFORMATION

To determine the changes in flood hazards that will be caused by the proposed project, we compared the hydraulic modeling reflecting the proposed project (referred to as the proposed conditions model) to the hydraulic modeling reflecting the existing conditions.

The table below shows the changes in the base flood water-surface elevations (WSELs).

Base Flood WSEL Comparison Table

Flooding Source: KOA Tributary		Base Flood WSEL Change (feet)	Location of maximum change
Proposed vs. Existing	Maximum increase	3.5	Approximately 340 feet upstream of the confluence with Cherry Creek
	Maximum decrease	1.8	Approximately 1,460 feet upstream of the confluence with Cherry Creek

NFIP regulations Subparagraph 60.3(b)(7) requires communities to ensure that the flood-carrying capacity within the altered or relocated portion of any watercourse is maintained. This provision is incorporated into your community's existing floodplain management ordinances; therefore, responsibility for maintenance of the altered or relocated watercourse, including any related appurtenances such as bridges, culverts, and other drainage structures, rests with your community. We may request that your community submit a description and schedule of maintenance activities necessary to ensure this requirement.

This comment is based on the flood data presently available. If you have any questions about this document, please contact the FEMA Mapping and Insurance eXchange (FMIX) toll free at 1-877-336-2627 (1-877-FEMA MAP) or by letter addressed to the LOMC Clearinghouse, 3601 Eisenhower Avenue, Suite 500, Alexandria, VA 22304-6426. Additional Information about the NFIP is available on the FEMA website at https://www.fema.gov/flood-insurance.

Patrick "Rick" F. Sacbibit, P.E., Branch Chief
Engineering Services Branch
Federal Insurance and Mitigation Administration

Federal Emergency Management Agency

Washington, D.C. 20472

CONDITIONAL LETTER OF MAP REVISION
COMMENT DOCUMENT (CONTINUED)

COMMUNITY INFORMATION (CONTINUED)

DATA REQUIRED FOR FOLLOW-UP LOMR

Upon completion of the project, your community must submit the data listed below and request that we make a final determination on revising the effective FIRM and FIS report. If the project is built as proposed and the data below are received, a revision to the FIRM and FIS report would be warranted.

• Detailed application and certification forms must be used for requesting final revisions to the maps. Therefore, when the map revision request for the area covered by this letter is submitted, Form 1, entitled "Overview and Concurrence Form," must be included. A copy of this form may be accessed at https://www.fema.gov/flood-maps/change-your-flood-zone/paper-application-forms/mt-2.

• The detailed application and certification forms listed below may be required if as-built conditions differ from the proposed plans. If required, please submit new forms, which may be accessed at https://www.fema.gov/flood-maps/change-your-flood-zone/paper-application forms/mt-2, or annotated copies of the previously submitted forms showing the revised information.

Form 2, entitled "Riverine Hydrology and Hydraulics Form." Hydraulic analyses for as-built conditions of the base flood, the 10-percent, 2-percent, and 0.2-percent-annual-chance floods, and the regulatory floodway, must be submitted with Form 2.

Form 3, entitled "Riverine Structures Form."

• A certified topographic work map showing the revised and effective base and 0.2-percent-annual-chance floodplain and floodway boundaries. Please ensure that the revised information ties in with the current effective information at the downstream and upstream ends of the revised reach.

• An annotated copy of the FIRM, at the scale of the effective FIRM, that shows the revised base and 0.2-percent-annual-chance floodplain and floodway boundary delineations shown on the submitted work map and how they tie-in to the base and 0.2-percent-annual-chance floodplain and floodway boundary delineations shown on the current effective FIRM at the downstream and upstream ends of the revised reach.

• As-built plans, certified by a registered Professional Engineer, of all proposed project elements.

• A copy of the public notice distributed by your community stating its intent to revise the regulatory floodway, or a signed statement by your community that it has notified all affected property owners and affected adjacent jurisdictions.

• Documentation of the individual legal notices sent to property owners who will be affected by any widening or shifting of the base floodplain and/or any BFE increases along Cherry Creek and KOA Tributary.

This comment is based on the flood data presently available. If you have any questions about this document, please contact the FEMA Mapping and Insurance eXchange (FMIX) toll free at 1-877-336-2627 (1-877-FEMA MAP) or by letter addressed to the LOMC Clearinghouse, 3601 Eisenhower Avenue, Suite 500, Alexandria, VA 22304-6426. Additional Information about the NFIP is available on the FEMA website at https://www.fema.gov/flood-insurance.

Patrick "Rick" F. Sacbibit, P.E., Branch Chief
Engineering Services Branch
Federal Insurance and Mitigation Administration

Federal Emergency Management Agency

Washington, D.C. 20472

CONDITIONAL LETTER OF MAP REVISION
COMMENT DOCUMENT (CONTINUED)

COMMUNITY INFORMATION (CONTINUED)

DATA REQUIRED FOR FOLLOW-UP LOMR (continued)

• FEMA's fee schedule for reviewing and processing requests for conditional and final modifications to published flood information and maps may be accessed at https://www.fema.gov/flood-maps/change-your-flood-zone/status/flood-map-related-fees. The fee at the time of the map revision submittal must be received before we can begin processing the request. Payment of this fee can be made through a check or money order, made payable in U.S. funds to the National Flood Insurance Program, or by credit card (Visa or MasterCard only). Please either forward the payment, along with the revision application, to the following address:

Mile High Flood District
2480 West 26th Avenue, Suite 156-B
Denver, CO 80211

or submit the LOMR using the Online LOMC portal at: https://hazards.fema.gov/femaportal/onlinelomc/signin

After receiving appropriate documentation to show that the project has been completed, FEMA will initiate a revision to the FIRM and FIS report. Because the flood hazard information (i.e., base flood elevations, base flood depths, SFHAs, zone designations, and/or regulatory floodways) will change as a result of the project, a 90-day appeal period will be initiated for the revision, during which community officials and interested persons may appeal the revised flood hazard information based on scientific or technical data.

This comment is based on the flood data presently available. If you have any questions about this document, please contact the FEMA Mapping and Insurance eXchange (FMIX) toll free at 1-877-336-2627 (1-877-FEMA MAP) or by letter addressed to the LOMC Clearinghouse, 3601 Eisenhower Avenue, Suite 500, Alexandria, VA 22304-6426. Additional Information about the NFIP is available on the FEMA website at https://www.fema.gov/flood-insurance.

Patrick "Rick" F. Sacbibit, P.E., Branch Chief
Engineering Services Branch
Federal Insurance and Mitigation Administration

Federal Emergency Management Agency

Washington, D.C. 20472

CONDITIONAL LETTER OF MAP REVISION
COMMENT DOCUMENT (CONTINUED)

COMMUNITY INFORMATION (CONTINUED)

COMMUNITY REMINDERS

We have designated a Consultation Coordination Officer (CCO) to assist your community. The CCO will be the primary liaison between your community and FEMA. For information regarding your CCO, please contact:

Jeanine P. Petterson
Director, Mitigation Division
Federal Emergency Management Agency, Region VIII
Denver Federal Center, Building 710
P.O. Box 25267
Denver, CO 80225-0267
(303) 235-4830

Although a portion of the proposed area of revision is shown on the effective FIRM as located within the Unincorporated Areas of Douglas County, this area has been annexed by the Town of Parker.

This comment is based on the flood data presently available. If you have any questions about this document, please contact the FEMA Mapping and Insurance eXchange (FMIX) toll free at 1-877-336-2627 (1-877-FEMA MAP) or by letter addressed to the LOMC Clearinghouse, 3601 Eisenhower Avenue, Suite 500, Alexandria, VA 22304-6426. Additional Information about the NFIP is available on the FEMA website at https://www.fema.gov/flood-insurance.

Patrick "Rick" F. Sacbibit, P.E., Branch Chief
Engineering Services Branch
Federal Insurance and Mitigation Administration

APPENDIX C: ANNOTATED / PROPOSED FLOODPLAIN INFORMATION

FLOODING SOURCE		FLOODWAY			BASE FLOOD WATER-SURFACE ELEVATION (FEET NAVD)			
CROSS SECTION	DISTANCE[1]	WIDTH (FEET)	SECTION AREA (SQUARE FEET)	MEAN VELOCITY (FEET PER SECOND)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE
Cherry Creek (cont.)								
L	119,499	626	5,751	7.1	5,754.3	5,754.3	5,754.3	0.0
M	120,641	648	4,771	8.5	5,757.2	5,757.2	5,757.6	0.4
N	121,333	740	6,106	6.6	5,760.2	5,760.2	5,761.0	0.8
O	121,923	500	4,025	10.0	5,763.8	5,763.8	5,763.8	0.0
P	122,751	480	3,449	11.6	5,766.8	5,766.8	5,767.6	0.8
Q	123,592	405	4,530	8.7	5,771.8	5,771.8	5,772.7	0.9
R	124,887	570	5,324	7.4	5,777.0	5,777.0	5,777.8	0.8
S	126,073	492	3,874	10.1	5,779.8	5,779.8	5,780.5	0.7
T	126,330	497	5,144	7.5	5,782.0	5,782.0	5,782.2	0.2
U	127,590	796	4,063	9.5	5,785.3	5,785.3	5,786.0	0.7
V	128,405	548	3,757	10.2	5,790.8	5,790.8	5,790.9	0.1
W	129,561	377	3,795	10.1	5,799.0	5,799.0	5,799.9	0.9
X	130,779	574	6,462	5.9	5,803.8	5,803.8	5,804.4	0.6
Y	131,933	585	5,037	7.5	5,806.2	5,806.2	5,806.9	0.7
Z	132,970	325	3,724	10.1	5,810.2	5,810.2	5,811.0	0.8
AA	133,384	240	2,397	15.5	5,811.7	5,811.7	5,812.2	0.5
AB	133,547	240	2,898	12.7	5,815.4	5,815.4	5,815.5	0.1
AC	134,530	740	7,430	5.0	5,819.7	5,819.7	5,819.9	0.2
AD	135,602	399	4,279	8.6	5,822.9	5,822.9	5,823.7	0.8
AE	136,429	492	4,616	7.9	5,825.2	5,825.2	5,825.9	0.7
AF	137,545	758	5,872	6.2	5,828.7	5,828.7	5,828.7	0.0
AG	138,860	428	6,442	12.7	5,834.0	5,834.0	5,834.3	0.3
AH	139,530	474	4,475	8.0	5,838.5	5,838.5	5,839.3	0.8
AI	140,832	599	4,524	7.8	5,842.1	5,842.1	5,842.7	0.6
AJ	142,268	1,165	7,373	4.7	5,848.1	5,848.1	5,848.5	0.4

Proposed Revised Data

[1] Feet above mouth

TABLE 7

FEDERAL EMERGENCY MANAGEMENT AGENCY

DOUGLAS COUNTY, CO AND INCORPORATED AREAS

FLOODWAY DATA

CHERRY CREEK

FLOODING SOURCE		FLOODWAY			BASE FLOOD WATER-SURFACE ELEVATION (FEET NAVD)			
CROSS SECTION	DISTANCE[1]	WIDTH (FEET)	SECTION AREA (SQUARE FEET)	MEAN VELOCITY (FEET PER SECOND)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE
Cherry Creek (cont.)								
AK	143,060	1230	6,513	5.3	5,849.8	5,849.8	5,850.4	0.6
AL	145,066	495	3,193	10.6	5,858.5	5,858.5	5,858.5	0.0
AM	146,281	515	4,454	7.5	5,864.0	5,864.0	5,864.7	0.7
AN	147,121	1000	5,802	5.8	5,866.9	5,866.9	5,867.5	0.6
AO	148,101	745	5,160	6.4	5,870.5	5,870.5	5,871.1	0.6
AP	149,230	580	4,097	8.0	5,875.7	5,875.7	5,875.8	0.1
AQ	150,306	511	2,908	11.2	5,879.9	5,879.9	5,880.3	0.4
AR	151,381	510	3,863	8.4	5,886.1	5,886.1	5,886.4	0.3
AS	152,510	705	3,814	8.4	5,891.4	5,891.4	5,891.8	0.4
AT	153,421	771	5,096	6.3	5,896.6	5,896.6	5,896.6	0.0
AU	153,849	564	3,536	9.0	5,897.8	5,897.8	5,897.9	0.1
AV	154,516	609	4,922	6.4	5,901.6	5,901.6	5,902.3	0.7
AW	155,178	404	3,187	9.9	5,903.6	5,903.6	5,904.3	0.7
AX	155,618	297	2,508	12.4	5,906.0	5,906.0	5,906.2	0.2
AY	155,832	272	3,276	9.4	5,909.0	5,909.0	5,909.1	0.1
AZ	156,821	425	3,658	8.4	5,911.3	5,911.3	5,911.3	0.0
BA	157,140	377	3,131	9.8	5,911.7	5,911.7	5,912.1	0.4
BB	157,734	420	3,960	7.7	5,915.1	5,915.1	5,916.0	0.9
BC	158,847	498	3,737	8.1	5,918.5	5,918.5	5,918.7	0.2
BD	160,060	777	5,168	5.8	5,922.2	5,922.2	5,923.0	0.8
BE	161,047	680	4,202	7.1	5,927.0	5,927.0	5,927.7	0.7
BF	162,009	1133	6,472	4.5	5,930.4	5,930.4	5,931.3	0.9
BG	163,157	567	3,665	7.9	5,936.3	5,936.3	5,937.0	0.7
BH	164,393	750	4,345	6.6	5,942.3	5,942.3	5,943.0	0.7
BI	165,197	524	3,606	7.8	5,946.4	5,946.4	5,947.1	0.7

Proposed Revised Data

[1] Feet above mouth

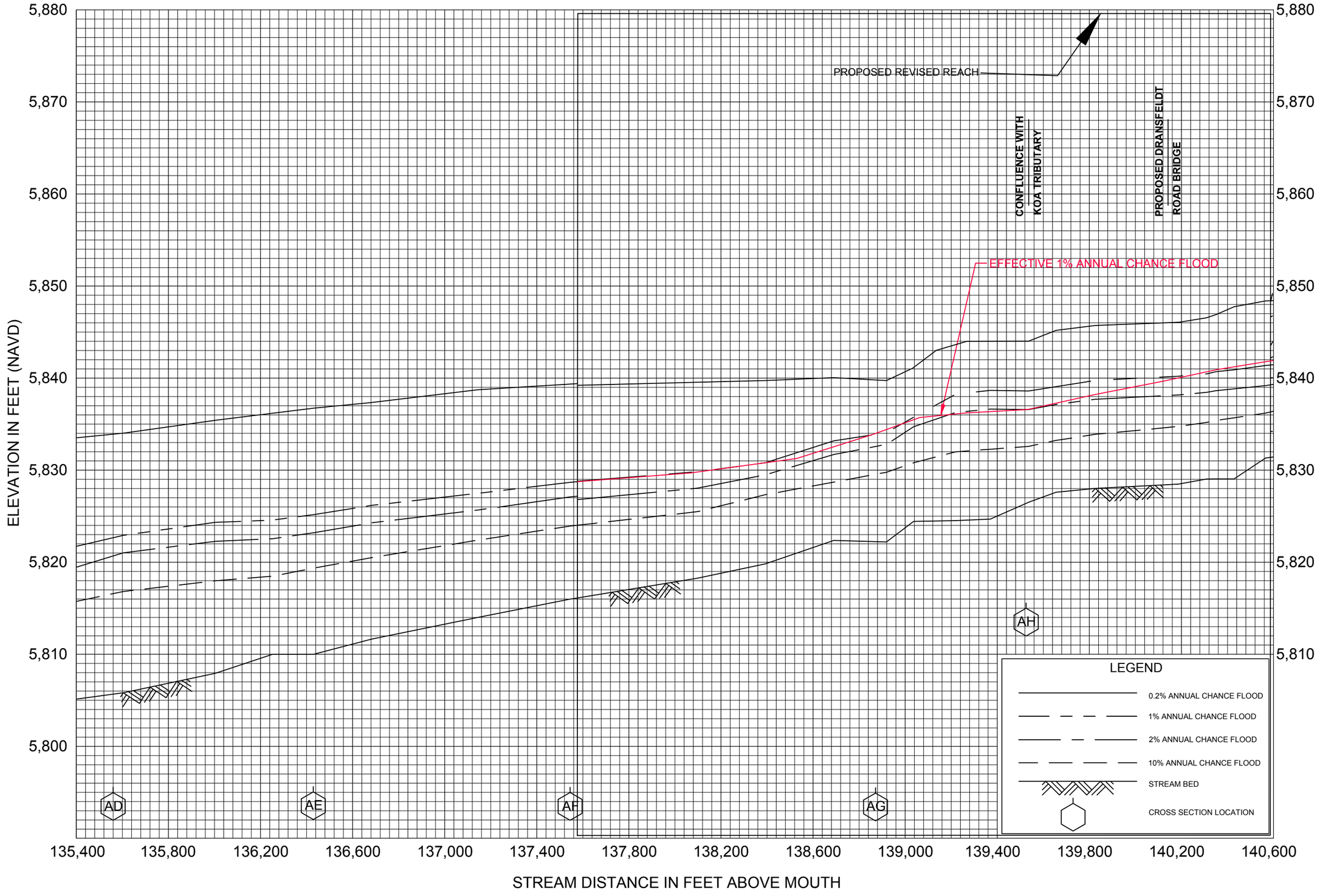
TABLE 7

FEDERAL EMERGENCY MANAGEMENT AGENCY

DOUGLAS COUNTY, CO AND INCORPORATED AREAS

FLOODWAY DATA

CHERRY CREEK



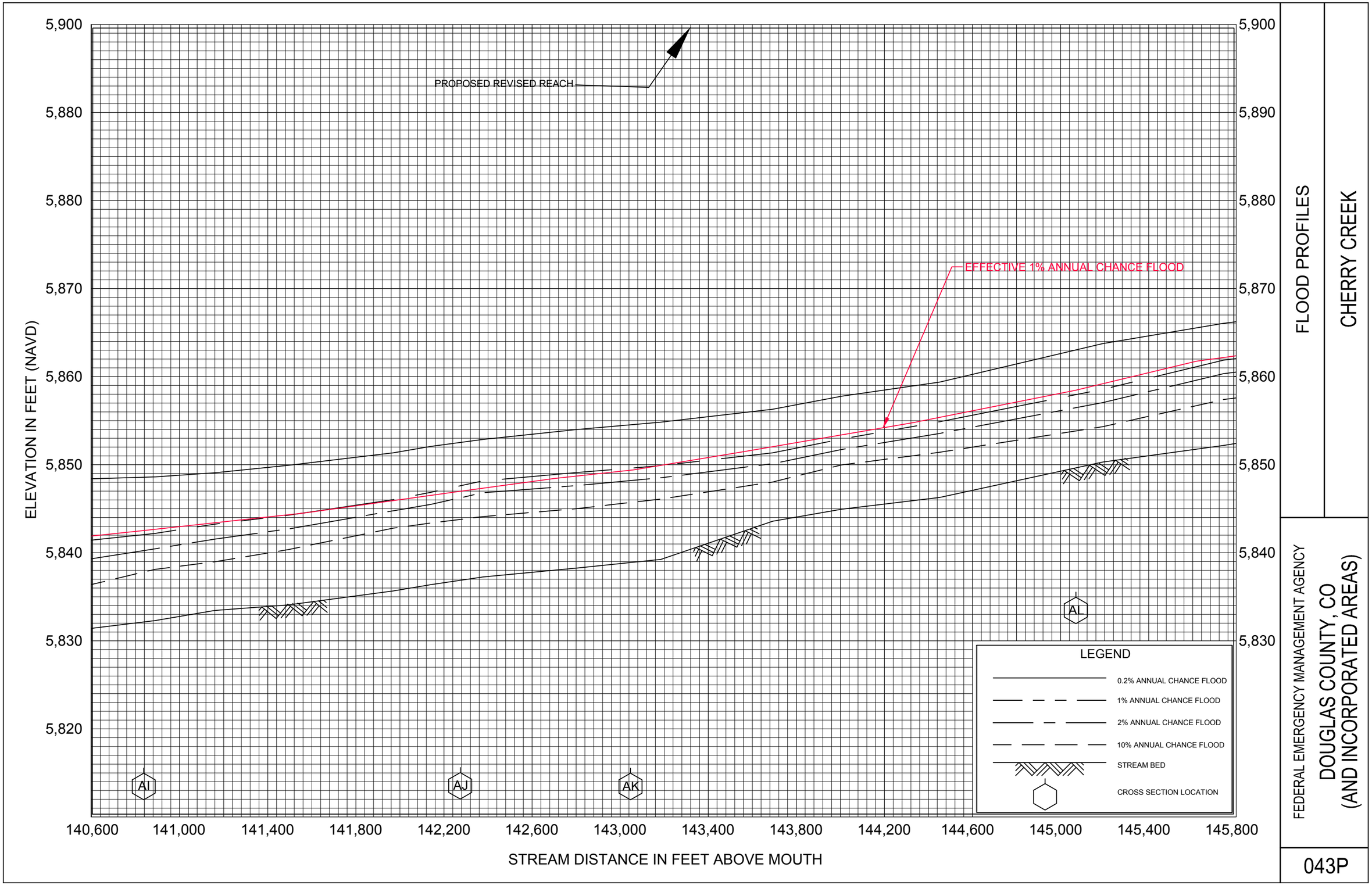
FLOOD PROFILES

CHERRY CREEK

FEDERAL EMERGENCY MANAGEMENT AGENCY

DOUGLAS COUNTY, CO
(AND INCORPORATED AREAS)

042P



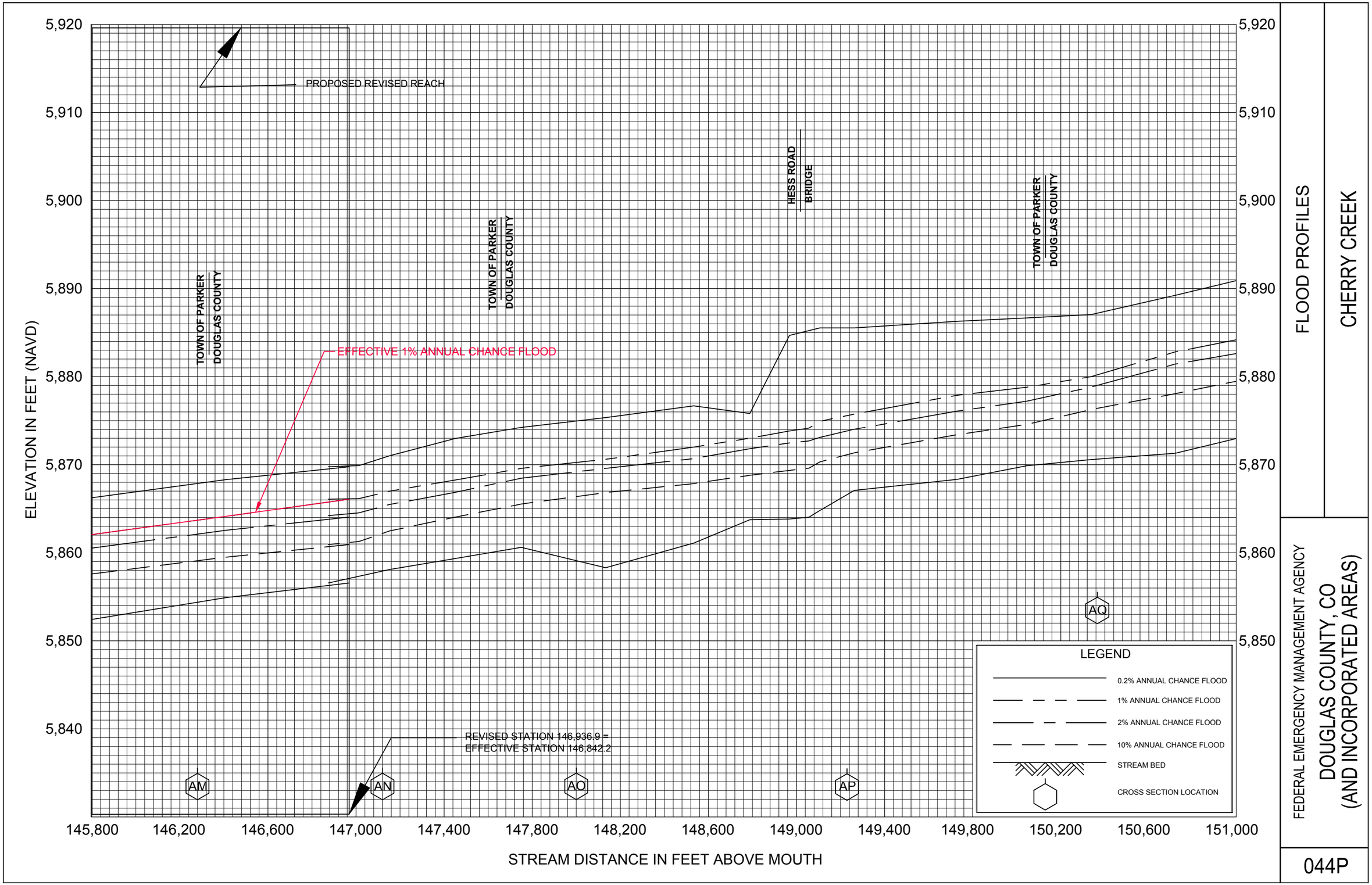
FLOOD PROFILES

CHERRY CREEK

FEDERAL EMERGENCY MANAGEMENT AGENCY

DOUGLAS COUNTY, CO
(AND INCORPORATED AREAS)

043P



FLOOD PROFILES

CHERRY CREEK

FEDERAL EMERGENCY MANAGEMENT AGENCY

DOUGLAS COUNTY, CO
(AND INCORPORATED AREAS)

044P

Legend

- FEMA Effective Cross Sections
- Proposed Zone X
- Proposed Floodway
- Proposed Zone AE

COLORADO LICENSED
BRIAN LEDOUX
40262
2023-10-19
PROFESSIONAL ENGINEER

NFIP
NATIONAL FLOOD INSURANCE PROGRAM

PANEL 0069F

FIRM
FLOOD INSURANCE RATE MAP
DOUGLAS COUNTY, COLORADO
AND INCORPORATED AREAS

PANEL 69 OF 495
(SEE MAP INDEX FOR FIRM PANEL LAYOUT)

CONTAINS

COMMUNITY	NUMBER	PANEL	SUFFIX
DOUGLAS COUNTY	080049	0069	F
PARKER, TOWN OF	080310	0069	F

Notice to User: The **Map Number** shown below should be used when placing map orders; the **Community Number** shown above should be used on insurance applications for the subject community.

MAP NUMBER
08035C0069F

EFFECTIVE DATE:
SEPTEMBER 30, 2005

Federal Emergency Management Agency

ZONE AE
ZONE X
Sulphur Gulch
Bridge
DRANSFELDT DR
PAVILION DR
Town of 080
PARKER
KOA Tributary
Cherry Creek
JOINS PANEL 0182
27

See changes to KOA Tributary Zone A delineation on Dransfeldt Rd CLOMR (Case No. 22-08-0451R)

Figure C1: Annotated FIRM 0069F
Salisbury Park North - Phase 1 - Floodplain Development Permit (FDP) Application

ICON ENGINEERING

hcm

PARKER COLORADO

N

US Feet
0 200 400

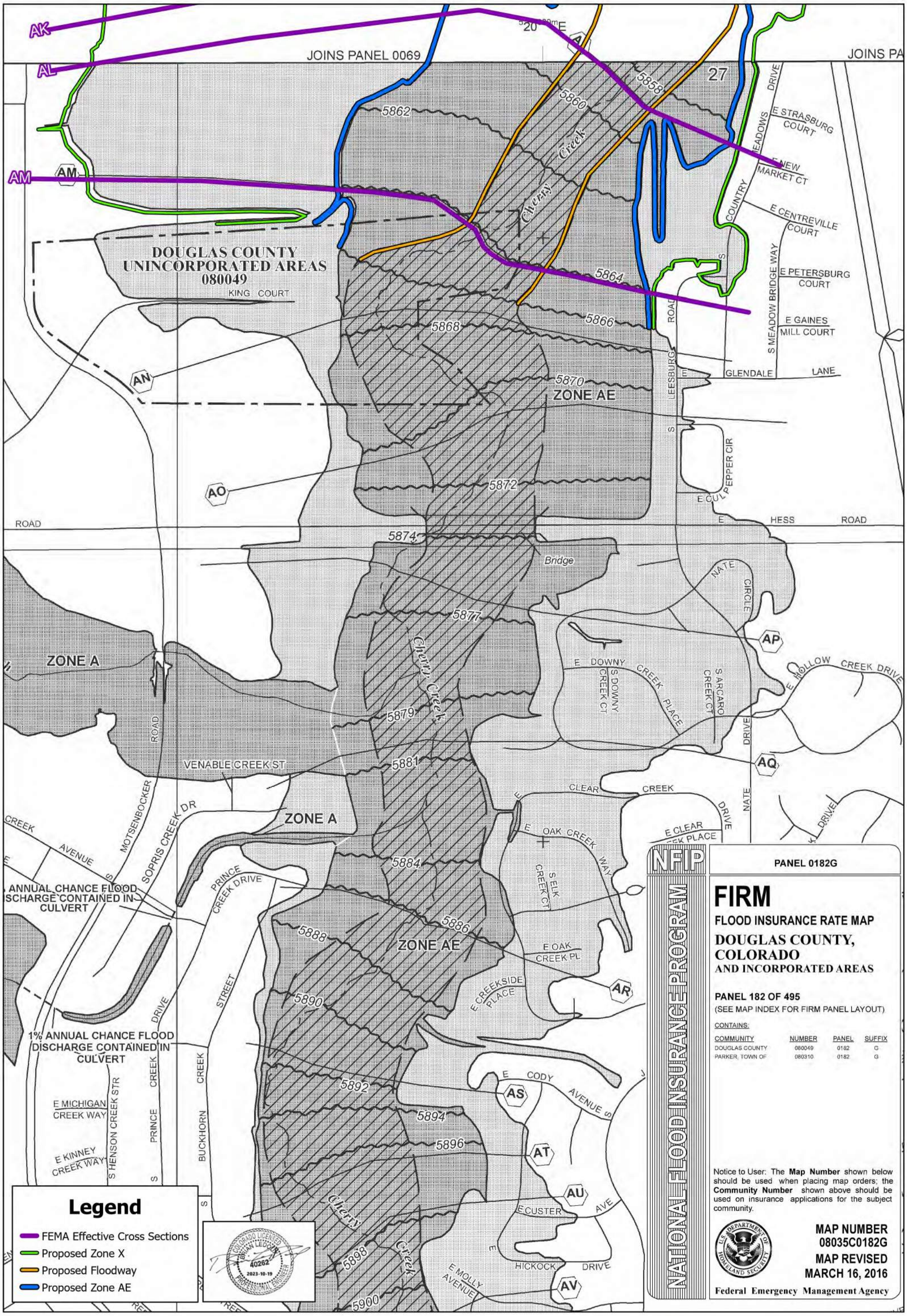


Figure C2: Annotated FIRM 0182G

Salisbury Park North - Phase 1 - Floodplain Development Permit (FDP) Application

ICON ENGINEERING

hcm

PARKER COLORADO

N

US Feet 0 200 400

Table C.1: Map-Model Agreement Table - Cherry Creek

ICON Engineering Inc.

Project Name:	**Salisbury Park North Phase 1**
Flooding: Source	**Cherry Creek**
Model Run:	**48_Post-Project_PH1**

Location Description	Stream Station	Post-Project Conditions Cross Section	Channel Distance (ft)			Cumulative Channel Distance			Base Floodplain Width (ft)			Floodway Width (ft)			Comments
			Model	Map	% Difference	Model	Map	%Difference	Model	Map	Difference (ft)	Model	Map	Difference (ft)	
FHAD XS 128 FEMA lettered section AF	137545.3	137545.3	0.00	0.00	0%	0.00	0.00	0%	1347.08	1357.83	**10.75**	758.02	759.01	0.99	Matches effective floodplain limits
FHAD XS 129	138067.2	138067.2	521.88	521.91	0%	521.88	521.91	0%	1399.59	1402.20	2.61	625.00	624.90	0.10	
FHAD XS 129.6	138360.5	138360.5	293.35	293.37	0%	815.23	815.28	0%	1342.51	1396.24	**53.73**	550.00	550.01	0.01	Matches Dransfeldt Road CLOMR delineation
FHAD XS 130.4	138658.4	138658.4	297.86	297.83	0%	591.21	591.20	0%	1289.91	1289.98	0.07	522.16	522.16	0.00	
FHAD XS 131 FEMA lettered section AG	138887.3	138887.3	228.87	228.87	0%	526.73	526.70	0%	1263.35	1344.35	**81.00**	428.00	428.03	0.03	Matches Dransfeldt Road CLOMR delineation
FHAD XS 131.3	139005.3	139005.3	118.08	118.08	0%	346.95	346.95	0%	1074.92	1280.00	**205.08**	470.00	470.01	0.01	Matches Dransfeldt Road CLOMR delineation
FHAD XS 131.7	139186.6	139186.6	181.27	181.28	0%	299.35	299.36	0%	1249.92	1438.35	**188.43**	499.00	499.01	0.01	Matches Dransfeldt Road CLOMR delineation
FHAD XS 132.1	139338.2	139338.2	151.64	151.65	0%	332.91	332.93	0%	1344.01	1522.69	**178.68**	530.00	530.02	0.02	Matches Dransfeldt Road CLOMR delineation
FHAD XS 132.9	139505.2	139505.2	166.95	166.96	0%	318.59	318.61	0%	1383.27	1556.17	**172.90**	474.00	474.41	0.41	Matches Dransfeldt Road CLOMR delineation
FHAD XS 133.1	139624.0	139624.0	118.77	118.78	0%	285.72	285.74	0%	1247.00	1392.74	**145.74**	595.00	595.04	0.04	Matches Dransfeldt Road CLOMR delineation
FHAD XS 133.3	139794.7	139794.7	170.69	170.33	0%	289.46	289.11	0%	1167.82	1165.43	2.39	768.00	767.94	0.06	
FHAD XS 134 FEMA lettered section AH	140155.1	140155.1	360.41	360.40	0%	531.10	530.73	0%	947.13	942.25	4.88	559.00	559.02	0.02	
FHAD XS 134.3	140397.3	140397.3	242.19	240.14	1%	602.60	600.54	0%	851.52	851.56	0.04	549.00	549.09	0.09	
FHAD XS 134.5	140533.5	140533.5	136.19	140.87	3%	378.38	381.01	1%	1287.78	1247.12	**40.66**	579.00	579.06	0.06	Matches Dransfeldt Road CLOMR delineation
FHAD XS 135 FEMA lettered section AI	140857.7	140857.7	324.25	311.89	4%	460.44	452.76	2%	1070.99	1072.73	1.74	599.00	599.13	0.13	
FHAD XS 135.3	141128.6	141128.6	270.94	269.32	1%	595.19	581.21	2%	1239.01	1239.70	0.69	733.00	733.09	0.09	
FHAD XS 135.7	141463.7	141463.7	335.01	335.00	0%	605.95	604.32	0%	1501.24	1528.18	**26.94**	828.00	828.09	0.09	Perched backwater area not shown in Model
FHAD XS 136.4	141938.6	141938.6	474.94	474.95	0%	809.95	809.95	0%	1402.75	1405.10	2.35	975.00	975.05	0.05	
FHAD XS 136.6	142110.2	142110.2	171.59	171.61	0%	646.53	646.56	0%	1238.12	1234.70	3.42	1015.00	1015.11	0.11	
FHAD XS 137 FEMA lettered section AJ	142344.6	142344.6	234.38	234.38	0%	405.97	405.99	0%	1339.28	1340.12	0.84	1165.00	1165.11	0.11	
FHAD XS 138	142773.5	142773.5	428.95	428.97	0%	663.33	663.35	0%	1791.82	1793.46	1.64	1380.00	1380.00	0.00	
FHAD XS 139 FEMA lettered section AK	143154.0	143154.0	380.44	380.45	0%	809.39	809.42	0%	1608.56	1607.51	1.05	1230.00	1229.93	0.07	
FHAD XS 140	143662.4	143662.4	507.29	508.45	0%	887.73	888.90	0%	1296.10	1294.92	1.18	844.76	844.63	0.13	
FHAD XS 141	143976.9	143976.9	314.45	314.12	0%	821.74	822.57	0%	1187.59	1532.75	**345.16**	762.29	761.65	0.64	Matches effective floodplain limits
FHAD XS 142	144420.9	144420.9	444.04	444.03	0%	758.49	758.15	0%	1535.34	1593.05	**57.71**	784.63	784.52	0.11	Matches effective floodplain limits
FHAD XS 143 FEMA lettered section AL	145160.5	145160.5	739.63	739.45	0%	1183.67	1183.48	0%	2486.06	1762.56	**723.50**	495.00	494.99	0.01	Matches effective floodplain limits
FHAD XS 144	145708.5	145708.5	547.96	547.97	0%	1287.59	1287.42	0%	2932.82	1693.47	**1239.35**	450.00	450.24	0.24	Matches effective floodplain limits
FHAD XS 145 FEMA lettered section AM	146375.9	146375.9	667.37	667.31	0%	1215.33	1215.28	0%	1838.46	1830.74	**7.72**	515.00	515.23	0.23	Matches effective floodplain limits
FHAD XS 146	146936.9	146936.9	561	561.00	0%	1228.37	1228.31	0%	2081.29	1744.46	**336.83**	892.00	891.97	0.03	Matches effective floodplain limits
ACCEPTABLE TOLERANCES =			**+ / - 5% of Model**			**+ / - 5% of Model**			**+ / - 5 Feet**						

APPENDIX D: HYDRAULIC COMPUTATIONS

HEC-RAS Version 4.1.0 Jan 2010
U.S. Army Corps of Engineers
Hydrologic Engineering Center
609 Second Street
Davis, California

```
X     X  XXXXXX    XXXX        XXXX       XX      XXXX
X     X  X        X    X      X   X     X  X    X
X     X  X        X           X   X    X    X   X
XXXXXXX  XXXX     X       XXX  XXXX     XXXXXX    XXXX
X     X  X        X           X  X     X    X       X
X     X  X        X    X      X   X    X    X       X
X     X  XXXXXX    XXXX       X    X   X    X   XXXXX
```

PROJECT DATA
Project Title: Cherry Creek at Hess Road
Project File : CC_HessRd.prj
Run Date and Time: 10/29/2024 12:45:24 PM

Project in English units

PLAN DATA

Plan Title: as-built PPM
Plan File : p:\P\23-018_Salisbury Park\04A_DataReceived\ICON\10-08-0769P LOMR\HEC-RAS 4.0\Superseded 10-04-10\HEC-RAS 3.1.3\CC_HessRd.p09

Geometry Title: as-built PPM
Geometry File : p:\P\23-018_Salisbury Park\04A_DataReceived\ICON\10-08-0769P LOMR\HEC-RAS 4.0\Superseded 10-04-10\HEC-RAS 3.1.3\CC_HessRd.g09

Flow Title : Proposed Flows _ 10-YR/50-YR/100-YR
Flow File : p:\P\23-018_Salisbury Park\04A_DataReceived\ICON\10-08-0769P LOMR\HEC-RAS 4.0\Superseded 10-04-10\HEC-RAS 3.1.3\CC_HessRd.f04

Plan Summary Information:
Number of: Cross Sections = 68 Multiple Openings = 0
Culverts = 0 Inline Structures = 0
Bridges = 1 Lateral Structures = 0

Computational Information
Water surface calculation tolerance = 0.01
Critical depth calculation tolerance = 0.01
Maximum number of iterations = 20
Maximum difference tolerance = 0.3
Flow tolerance factor = 0.001

Computation Options
Critical depth computed only where necessary
Conveyance Calculation Method: At breaks in n values only
Friction Slope Method: Average Conveyance
Computational Flow Regime: Subcritical Flow

Encroachment Data
Equal Conveyance = True
Left Offset = 0
Right Offset = 0

River = Cherry Creek Reach = Main Corridor

RS	Profile	Method	Value1	Value2
155617.850	year	1	1227.93	1546
155178.450	year	1	1150	1554
154852.450	year	1	745	1289
154684.150	year	1	554.21	1134
154515.950	year	1	313.14	922
154218.050	year	1	563.49	1053
153849.450	year	1	596.54	1160.6
153420.950	year	1	222.94	993.6
153082.650	year	1	73.42	838
152510.050	year	1	149.85	855
151956.150	year	1	306.4	1000
151699.450	year	1	556.59	1175
151381.350	year	1	780	1290
151190.250	year	1	1190	1741
150988.450	year	1	1100	1693
150688.050	year	1	1107.49	1662.4
150305.850	year	1	660	1171
150013.950	year	1	860	1380
149696.650	year	1	620	1280
149230.350	year	1	1120	1700
149074.250	year	1	1245	1820
148756.050	year	1	1320	1875
148501.050	year	1	1310	1850
148101.150	year	1	1075	1820
147718.450	year	1	915	1924
147419.*50	year	1	1100	2020
147121.050	year	1	1130	2130
146981.*50	year	1	1300	2040
146842.250	year	1	1461	2353
146281.250	year	1	2475	2990
145613.850	year	1	2650	3100
145065.850	year	1	2975	3470
144326.250	year	1	3055	3839.63
143882.250	year	1	3022.5	3784.79
143567.750	year	1	2976.88	3821.64
143060.450	year	1	2680	3800
142698.950	year	1	2350	3666
142267.750	year	1	1915	3020
141564.850	year	1	1970	2855
140831.750	year	1	1750	2500
140593.*50	year	1	1520	2195
140354.*50	year	1	1160	1890
140116.250	year	1	1020	1599
139822.*50	year	1	750	1500
139529.750	year	1	610	1435
139262.650	year	1	700	1400
139061.*50	year	1	750	1350
138860.050	year	1	830	1350

138526.850 year	1	850	1380
138067.250 year	1	690	1540
137545.350 year	1	661.5	1419.52
137141.450 year	1	481.94	1078.8
136682.050 year	1	235.96	836.94
136429.250 year	1	376.96	868.85
136251.350 year	1	282.75	801.04
136002.450 year	1	200	760
135602.450 year	1	216.3	615.04
135068.250 year	1	367.41	710.21
134948.*50 year	1	411.67	834.98
134828.*50 year	1	430.42	952.48
134708.150 year	1	480	1140
134529.550 year	1	430	1170
134352.150 year	1	350	1090
134105.050 year	1	400	980
133923.250 year	1	329	870
133802.950 year	1	220	730
133666.550 year	1	250	710
133547.250 year	1	178.89	418.89

FLOW DATA

Flow Title: Proposed Flows _ 10-YR/50-YR/100-YR
Flow File : p:\P\23-018_Salisbury Park\04A_DataReceived\ICON\10-08-0769P LOMR\HEC-RAS 4.0\Superseded 10-04-10\HEC-RAS 3.1.3\CC_HessRd.f04

Flow Data (cfs)

River	Reach	RS	10 year	50 year	100 year
Cherry Creek	Main Corridor	155617.8	6613	19571	31145
Cherry Creek	Main Corridor	155178.4	6660	19716	31396
Cherry Creek	Main Corridor	154515.9	6707	19861	31647
Cherry Creek	Main Corridor	153849.4	6753	20005	31899
Cherry Creek	Main Corridor	153082.6	6800	20150	32150
Cherry Creek	Main Corridor	151381.3	6847	20295	32401
Cherry Creek	Main Corridor	150688.0	6893	20439	32653
Cherry Creek	Main Corridor	149696.6	6940	20584	32904
Cherry Creek	Main Corridor	148101.1	6987	20729	33155
Cherry Creek	Main Corridor	147121.0	7033	20873	33407
Cherry Creek	Main Corridor	145613.8	7080	21018	33658
Cherry Creek	Main Corridor	145065.8	7127	21163	33900
Cherry Creek	Main Corridor	144326.2	7173	21307	34161
Cherry Creek	Main Corridor	143060.4	7220	21452	34412
Cherry Creek	Main Corridor	142698.9	7267	21597	34663
Cherry Creek	Main Corridor	142267.7	7313	21741	34915
Cherry Creek	Main Corridor	141564.8	7360	21886	35166
Cherry Creek	Main Corridor	140831.7	7407	22031	35417
Cherry Creek	Main Corridor	139529.7	7453	22175	35669
Cherry Creek	Main Corridor	138860.0	7500	22320	35920
Cherry Creek	Main Corridor	138067.2	7547	22465	36171
Cherry Creek	Main Corridor	136682.0	7593	22009	36423
Cherry Creek	Main Corridor	136251.3	7640	22754	36674
Cherry Creek	Main Corridor	133547.2	7687	22899	36925

Boundary Conditions

River	Reach	Profile	Upstream	Downstream
Cherry Creek	Main Corridor	10 year		Known WS = 5808.03
Cherry Creek	Main Corridor	50 year		Known WS = 5812.65
Cherry Creek	Main Corridor	100 year		Known WS = 5815.29

Profile Output Table - Standard Table 1

Reach	River Sta	Profile	Q Total (cfs)	Min Ch El (ft)	W.S. Elev (ft)	Crit W.S. (ft)	E.G. Elev (ft)	E.G. Slope (ft/ft)	Vel Chnl (ft/s)	Flow Area (sq ft)	Top Width (ft)	Froude # Chl
Main Corridor	133547.2	10 year	7687.00	5799.34	5808.03	5805.84	5808.81	0.003259	7.52	1184.99	206.93	0.51
Main Corridor	133547.2	50 year	22899.00	5799.34	5812.65	5810.06	5814.72	0.004481	12.50	2225.13	238.49	0.65
Main Corridor	133547.2	100 year	36925.00	5799.34	5815.29	5813.20	5818.49	0.005354	15.71	2864.71	555.27	0.74
Main Corridor	133666.5	10 year	7640.00	5799.09	5808.99		5809.19	0.000993	3.93	2550.49	629.15	0.28
Main Corridor	133666.5	50 year	22754.00	5799.09	5815.02		5815.41	0.000805	5.57	4986.96	460.00	0.28
Main Corridor	133666.5	100 year	36674.00	5799.09	5819.20		5819.50	0.000477	5.22	9830.07	788.40	0.23
Main Corridor	133802.9	10 year	7640.00	5799.45	5809.11		5809.37	0.001349	4.50	2334.76	664.70	0.32
Main Corridor	133802.9	50 year	22754.00	5799.45	5815.13		5815.53	0.000897	5.81	5132.39	510.00	0.29
Main Corridor	133802.9	100 year	36674.00	5799.45	5819.28		5819.57	0.000512	5.34	9885.27	782.55	0.23
Main Corridor	133923.2	10 year	7640.00	5799.81	5809.30		5809.55	0.001667	4.45	2283.76	671.08	0.35
Main Corridor	133923.2	50 year	22754.00	5799.81	5815.28		5815.64	0.000878	5.43	5296.59	541.00	0.29
Main Corridor	133923.2	100 year	36674.00	5799.81	5819.34		5819.63	0.000547	5.28	9781.32	832.47	0.24
Main Corridor	134105.0	10 year	7640.00	5800.00	5809.65		5810.03	0.004124	6.08	1926.45	714.74	0.53
Main Corridor	134105.0	50 year	22754.00	5800.00	5815.43		5815.85	0.001428	6.40	4945.03	580.00	0.36
Main Corridor	134105.0	100 year	36674.00	5800.00	5819.47		5819.74	0.000669	5.51	9930.60	872.38	0.26
Main Corridor	134352.1	10 year	7640.00	5802.00	5810.48		5810.74	0.002290	4.29	2034.53	788.08	0.39
Main Corridor	134352.1	50 year	22754.00	5802.00	5815.86		5816.15	0.001062	5.26	5740.14	740.00	0.31
Main Corridor	134352.1	100 year	36674.00	5802.00	5819.67		5819.89	0.000541	4.73	10622.12	1163.56	0.23
Main Corridor	134529.5	10 year	7640.00	5802.00	5810.80		5811.44	0.006085	7.25	1235.85	491.88	0.64
Main Corridor	134529.5	50 year	22754.00	5802.00	5815.95		5816.46	0.001908	6.85	4495.80	740.00	0.41
Main Corridor	134529.5	100 year	36674.00	5802.00	5819.72		5820.03	0.000899	5.96	9044.36	1273.02	0.30
Main Corridor	134708.1	10 year	7640.00	5803.00	5811.87		5812.44	0.006628	6.57	1398.04	531.56	0.64
Main Corridor	134708.1	50 year	22754.00	5803.00	5816.26		5816.86	0.002493	6.98	4092.43	660.00	0.45
Main Corridor	134708.1	100 year	36674.00	5803.00	5819.82		5820.27	0.001232	6.38	7701.30	1233.44	0.34
Main Corridor	134828.*	10 year	7640.00	5803.33	5812.54	5811.78	5813.21	0.006452	7.00	1319.12	448.23	0.65
Main Corridor	134828.*	50 year	22754.00	5803.33	5816.33	5814.39	5817.32	0.003989	8.85	3280.35	522.06	0.57
Main Corridor	134828.*	100 year	36674.00	5803.33	5819.73	5816.11	5820.57	0.002259	8.57	5973.87	771.49	0.46
Main Corridor	134948.*	10 year	7640.00	5803.67	5813.18	5812.42	5814.00	0.006451	7.71	1258.16	458.16	0.66
Main Corridor	134948.*	50 year	22754.00	5803.67	5816.44	5815.36	5818.08	0.006529	11.37	2601.69	423.31	0.73
Main Corridor	134948.*	100 year	36674.00	5803.67	5819.64	5817.08	5821.07	0.003913	11.17	4734.33	592.32	0.60

Main Corridor	135068.2	10 year	7640.00	5804.00	5813.97		5814.82	0.007639	7.84	1220.10	401.39	0.68
Main Corridor	135068.2	50 year	22754.00	5804.00	5816.92		5819.19	0.010371	12.97	2145.95	342.80	0.86
Main Corridor	135068.2	100 year	36674.00	5804.00	5819.76		5821.81	0.006493	13.01	3837.61	468.43	0.73
Main Corridor	135602.4	10 year	7640.00	5805.81	5816.81	5815.37	5817.31	0.003205	6.19	1592.09	474.34	0.48
Main Corridor	135602.4	50 year	22754.00	5805.81	5821.01	5818.14	5821.97	0.003088	8.80	3209.60	398.74	0.51
Main Corridor	135602.4	100 year	36674.00	5805.81	5822.92	5819.95	5824.11	0.003168	10.36	4821.29	545.54	0.54
Main Corridor	136002.4	10 year	7640.00	5807.92	5817.97		5818.31	0.002136	5.12	2005.49	639.80	0.40
Main Corridor	136002.4	50 year	22754.00	5807.92	5822.26		5822.86	0.001864	7.14	4223.98	560.00	0.41
Main Corridor	136002.4	100 year	36674.00	5807.92	5824.32		5825.00	0.001797	7.99	6545.10	757.37	0.41
Main Corridor	136251.3	10 year	7640.00	5810.00	5818.48		5819.05	0.003972	6.20	1401.14	475.91	0.52
Main Corridor	136251.3	50 year	22754.00	5810.00	5822.55		5823.48	0.003004	8.37	3324.12	513.90	0.51
Main Corridor	136251.3	100 year	36674.00	5810.00	5824.57		5825.56	0.002723	9.19	5620.06	851.44	0.50
Main Corridor	136429.2	10 year	7593.00	5810.00	5819.35		5819.86	0.004769	6.92	1616.25	569.71	0.57
Main Corridor	136429.2	50 year	22009.00	5810.00	5823.19		5824.11	0.003944	9.49	3288.08	491.89	0.58
Main Corridor	136429.2	100 year	36423.00	5810.00	5825.16		5826.15	0.003773	10.68	5530.40	795.95	0.59
Main Corridor	136682.0	10 year	7593.00	5811.64	5820.50		5820.95	0.003668	5.98	1696.88	624.79	0.50
Main Corridor	136682.0	50 year	22009.00	5811.64	5824.28		5824.96	0.002673	7.73	3849.42	600.98	0.48
Main Corridor	136682.0	100 year	36423.00	5811.64	5826.17		5826.94	0.002573	8.72	6092.96	818.06	0.49
Main Corridor	137141.4	10 year	7547.00	5814.00	5822.39		5822.91	0.005105	6.85	1699.35	730.29	0.59
Main Corridor	137141.4	50 year	22465.00	5814.00	5825.66		5826.44	0.003975	8.76	3603.85	596.86	0.57
Main Corridor	137141.4	100 year	36171.00	5814.00	5827.47		5828.22	0.003291	9.31	6234.14	977.62	0.54
Main Corridor	137545.3	10 year	7547.00	5816.00	5823.93		5824.15	0.002111	4.27	2397.26	904.49	0.38
Main Corridor	137545.3	50 year	22465.00	5816.00	5827.08		5827.53	0.002064	6.18	4670.67	758.02	0.41
Main Corridor	137545.3	100 year	36171.00	5816.00	5828.68		5829.16	0.001899	6.83	7776.98	1348.78	0.41
Main Corridor	138067.2	10 year	7547.00	5818.00	5825.35		5825.75	0.006665	6.36	1773.77	853.96	0.64
Main Corridor	138067.2	50 year	22465.00	5818.00	5828.24		5828.92	0.004812	8.35	3847.60	850.00	0.61
Main Corridor	138067.2	100 year	36171.00	5818.00	5829.69		5830.27	0.003726	8.51	6975.49	1398.69	0.55
Main Corridor	138526.8	10 year	7500.00	5822.23	5827.70		5828.06	0.004311	4.82	1582.00	506.97	0.47
Main Corridor	138526.8	50 year	22320.00	5822.23	5830.26		5831.23	0.005495	7.97	2905.70	530.00	0.58
Main Corridor	138526.8	100 year	35920.00	5822.23	5831.26		5832.61	0.006866	9.89	5201.48	1551.77	0.66
Main Corridor	138860.0	10 year	7500.00	5824.50	5829.46		5830.23	0.009465	7.08	1059.20	322.63	0.69
Main Corridor	138860.0	50 year	22320.00	5824.50	5832.45		5833.91	0.011222	9.70	2326.13	520.00	0.79
Main Corridor	138860.0	100 year	35920.00	5824.50	5833.89	5833.50	5835.44	0.010324	10.34	4351.35	1463.43	0.78
Main Corridor	139061.*	10 year	7453.00	5824.96	5830.82		5831.17	0.002535	4.76	1708.12	589.89	0.42
Main Corridor	139061.*	50 year	22175.00	5824.96	5834.23		5834.90	0.002435	6.91	3684.23	600.00	0.45
Main Corridor	139061.*	100 year	35669.00	5824.96	5835.71		5836.35	0.002196	7.42	7458.98	1840.82	0.44
Main Corridor	139262.6	10 year	7453.00	5825.42	5831.35		5831.63	0.002001	4.20	1876.32	850.47	0.37
Main Corridor	139262.6	50 year	22175.00	5825.42	5834.78		5835.35	0.001960	6.26	4010.27	700.00	0.40
Main Corridor	139262.6	100 year	35669.00	5825.42	5836.21		5836.76	0.001818	6.78	7926.61	2206.14	0.40
Main Corridor	139529.7	10 year	7453.00	5827.19	5832.08		5832.53	0.005919	5.39	1381.89	756.78	0.54
Main Corridor	139529.7	50 year	22175.00	5827.19	5835.36		5836.19	0.004391	7.47	3347.53	825.00	0.52
Main Corridor	139529.7	100 year	35669.00	5827.19	5836.58		5837.70	0.005146	9.09	5397.57	2275.05	0.58
Main Corridor	139822.*	10 year	7407.00	5828.08	5833.65		5834.17	0.005135	5.75	1294.51	379.35	0.52
Main Corridor	139822.*	50 year	22031.00	5828.08	5836.66		5837.67	0.005178	8.47	3177.43	718.41	0.57
Main Corridor	139822.*	100 year	35417.00	5828.08	5838.22		5839.18	0.004486	9.05	6527.13	2433.28	0.55
Main Corridor	140116.2	10 year	7407.00	5828.96	5835.51		5836.10	0.008586	6.18	1199.43	445.44	0.66
Main Corridor	140116.2	50 year	22031.00	5828.96	5838.35		5839.56	0.007399	8.80	2506.17	488.35	0.68
Main Corridor	140116.2	100 year	35417.00	5828.96	5839.64		5840.82	0.006286	9.12	5684.24	2269.21	0.65
Main Corridor	140354.*	10 year	7407.00	5830.31	5836.72		5837.13	0.002486	5.15	1529.13	659.77	0.42
Main Corridor	140354.*	50 year	22031.00	5830.31	5839.83		5840.63	0.002817	7.71	3636.18	689.90	0.49
Main Corridor	140354.*	100 year	35417.00	5830.31	5840.92		5841.90	0.003399	9.24	7189.02	2395.06	0.55
Main Corridor	140593.*	10 year	7407.00	5831.67	5837.38		5837.73	0.002533	4.77	1604.31	546.81	0.42
Main Corridor	140593.*	50 year	22031.00	5831.67	5840.56		5841.28	0.002637	7.15	3608.77	640.09	0.47
Main Corridor	140593.*	100 year	35417.00	5831.67	5841.90		5842.61	0.002523	7.82	7839.46	2417.84	0.47
Main Corridor	140831.7	10 year	7407.00	5833.02	5838.05	5836.46	5838.38	0.002884	4.62	1676.41	635.15	0.43
Main Corridor	140831.7	50 year	22031.00	5833.02	5841.31	5838.84	5841.89	0.002339	6.43	3979.26	735.45	0.43
Main Corridor	140831.7	100 year	35417.00	5833.02	5842.53	5840.57	5843.20	0.002509	7.44	7534.38	2574.45	0.46
Main Corridor	141564.8	10 year	7360.00	5836.08	5840.54	5839.72	5841.07	0.004784	6.18	1555.63	780.81	0.56
Main Corridor	141564.8	50 year	21886.00	5836.08	5843.30	5842.59	5844.30	0.004892	9.03	3447.14	883.55	0.62
Main Corridor	141564.8	100 year	35166.00	5836.08	5844.53	5843.19	5845.33	0.003900	9.04	6291.08	2225.64	0.57
Main Corridor	142267.7	10 year	7313.00	5838.86	5843.31	5841.77	5843.53	0.003121	4.70	2299.06	928.81	0.45
Main Corridor	142267.7	50 year	21741.00	5838.86	5846.29	5844.67	5846.80	0.003241	7.27	4700.81	1105.00	0.51
Main Corridor	142267.7	100 year	34915.00	5838.86	5846.97	5844.49	5847.52	0.003490	8.07	7034.80	1442.83	0.53
Main Corridor	142698.9	10 year	7267.00	5841.20	5845.15	5844.83	5845.99	0.011356	7.33	992.94	1037.09	0.81
Main Corridor	142698.9	50 year	21597.00	5841.20	5847.75	5845.85	5848.18	0.003343	6.33	4905.16	1316.00	0.49
Main Corridor	142698.9	100 year	34663.00	5841.20	5848.44	5845.85	5848.81	0.002699	6.22	8150.71	1808.99	0.46
Main Corridor	143060.4	10 year	7220.00	5841.97	5847.23	5845.95	5847.39	0.001841	3.69	2922.63	1510.86	0.35
Main Corridor	143060.4	50 year	21452.00	5841.97	5848.92	5847.95	5849.56	0.004347	7.36	4054.17	1120.00	0.57
Main Corridor	143060.4	100 year	34412.00	5841.97	5849.42	5848.35	5850.09	0.004764	8.19	6376.08	1604.41	0.60
Main Corridor	143567.7	10 year	7173.00	5843.47	5848.40	5847.43	5848.58	0.003949	4.17	2306.17	1077.29	0.48
Main Corridor	143567.7	50 year	21307.00	5843.47	5850.97	5849.16	5851.49	0.003933	6.74	3982.85	844.76	0.53
Main Corridor	143567.7	100 year	34161.00	5843.47	5851.53	5849.61	5852.15	0.004473	7.75	6021.57	1314.36	0.58
Main Corridor	143882.2	10 year	7173.00	5844.84	5849.76	5849.27	5850.09	0.007499	5.75	1775.55	917.43	0.65
Main Corridor	143882.2	50 year	21307.00	5844.84	5852.19	5850.84	5852.90	0.006030	8.16	3433.95	762.29	0.65
Main Corridor	143882.2	100 year	34161.00	5844.84	5852.88	5851.65	5853.84	0.007436	9.96	4862.15	1198.26	0.75
Main Corridor	144326.2	10 year	7173.00	5846.18	5851.33		5851.60	0.002625	4.55	2033.46	825.74	0.42
Main Corridor	144326.2	50 year	21307.00	5846.18	5853.80		5854.39	0.003129	6.94	3942.47	784.63	0.49
Main Corridor	144326.2	100 year	34161.00	5846.18	5854.77		5855.67	0.004168	8.89	5395.34	1533.46	0.59
Main Corridor	145065.8	10 year	7127.00	5850.20	5854.19		5854.79	0.008181	6.29	1204.44	498.82	0.59
Main Corridor	145065.8	50 year	21163.00	5850.20	5856.86		5858.30	0.009906	10.03	2388.55	495.00	0.71
Main Corridor	145065.8	100 year	33900.00	5850.20	5858.46		5859.89	0.008455	10.79	4532.97	2478.83	0.68
Main Corridor	145613.8	10 year	7080.00	5852.07	5857.30		5857.67	0.003608	4.91	1453.70	468.09	0.48
Main Corridor	145613.8	50 year	21018.00	5852.07	5860.44		5861.29	0.003349	7.41	2859.43	450.00	0.52
Main Corridor	145613.8	100 year	33658.00	5852.07	5861.75		5862.82	0.003649	8.76	5256.04	2932.68	0.56

Main Corridor	146281.2	10 year	7033.00	5854.80	5859.39		5859.65	0.002463	4.14	1720.19	551.16	0.40
Main Corridor	146281.2	50 year	20873.00	5854.80	5862.56		5863.18	0.002365	6.31	3337.65	515.00	0.43
Main Corridor	146281.2	100 year	33407.00	5854.80	5864.02		5864.98	0.002915	8.01	4990.30	1838.46	0.50
Main Corridor	146842.2	10 year	7033.00	5856.46	5860.82	5859.15	5860.98	0.002173	3.49	2414.87	810.69	0.33
Main Corridor	146842.2	50 year	20873.00	5856.46	5864.11	5861.29	5864.62	0.002717	6.12	3982.13	785.34	0.42
Main Corridor	146842.2	100 year	33407.00	5856.46	5865.98	5861.80	5866.35	0.001706	5.71	8064.22	2081.06	0.34
Main Corridor	146981.*	10 year	7033.00	5857.23	5861.17	5860.36	5861.77	0.008676	6.21	1151.96	429.12	0.62
Main Corridor	146981.*	50 year	20873.00	5857.23	5864.42	5862.87	5865.38	0.005764	8.19	3017.15	731.32	0.57
Main Corridor	146981.*	100 year	33407.00	5857.23	5866.04	5864.70	5867.08	0.005246	9.10	5581.82	1777.92	0.57
Main Corridor	147121.0	10 year	7033.00	5858.00	5862.37	5861.16	5862.79	0.005868	5.33	1501.45	555.99	0.50
Main Corridor	147121.0	50 year	20873.00	5858.00	5865.38	5863.44	5866.17	0.005490	7.72	3707.85	1000.00	0.53
Main Corridor	147121.0	100 year	33407.00	5858.00	5866.89	5864.87	5867.79	0.005345	8.75	6145.17	1709.33	0.54
Main Corridor	147419.*	10 year	6987.00	5859.25	5863.95	5862.71	5864.49	0.005384	5.93	1272.35	460.95	0.53
Main Corridor	147419.*	50 year	20729.00	5859.25	5866.77	5865.87	5867.73	0.005405	8.57	3327.19	908.77	0.59
Main Corridor	147419.*	100 year	33155.00	5859.25	5868.16	5867.25	5869.04	0.004614	8.99	6107.98	1784.13	0.56
Main Corridor	147718.4	10 year	6987.00	5860.51	5865.43	5864.27	5865.88	0.003829	5.75	1533.16	587.22	0.51
Main Corridor	147718.4	50 year	20729.00	5860.51	5868.37	5866.88	5868.95	0.002960	7.32	4252.83	1009.00	0.49
Main Corridor	147718.4	100 year	33155.00	5860.51	5869.48	5867.86	5870.03	0.002743	7.78	7160.52	1795.87	0.48
Main Corridor	148101.1	10 year	6987.00	5858.20	5866.73	5864.67	5866.93	0.001939	3.61	2010.62	611.76	0.32
Main Corridor	148101.1	50 year	20729.00	5858.20	5869.47	5866.74	5869.97	0.002496	5.84	3976.41	745.00	0.40
Main Corridor	148101.1	100 year	33155.00	5858.20	5870.50	5868.22	5871.27	0.003451	7.55	5542.46	1638.89	0.48
Main Corridor	148501.0	10 year	6940.00	5861.00	5867.75	5866.50	5868.07	0.004161	4.64	1605.00	589.44	0.45
Main Corridor	148501.0	50 year	20584.00	5861.00	5870.59	5868.65	5871.37	0.004412	7.27	3008.71	540.00	0.52
Main Corridor	148501.0	100 year	32904.00	5861.00	5871.90	5869.93	5872.80	0.004353	8.23	4760.18	1424.95	0.53
Main Corridor	148756.0	10 year	6940.00	5863.65	5868.69		5868.97	0.002984	4.32	1705.62	540.56	0.40
Main Corridor	148756.0	50 year	20584.00	5863.65	5871.72		5872.35	0.003154	6.61	3381.77	555.00	0.45
Main Corridor	148756.0	100 year	32904.00	5863.65	5872.90		5873.91	0.004219	8.51	4400.84	1363.33	0.53
Main Corridor	148965.8		Bridge									
Main Corridor	149074.2	10 year	6940.00	5864.70	5870.21	5869.19	5870.57	0.005094	4.95	1533.17	583.01	0.50
Main Corridor	149074.2	50 year	20584.00	5864.70	5873.00	5871.07	5873.74	0.004555	7.22	3112.14	575.00	0.53
Main Corridor	149074.2	100 year	32904.00	5864.70	5874.83	5872.46	5875.73	0.004064	8.17	4619.96	1315.12	0.52
Main Corridor	149230.3	10 year	6940.00	5866.98	5871.25	5870.50	5871.64	0.006777	5.30	1459.10	603.60	0.57
Main Corridor	149230.3	50 year	20584.00	5866.98	5873.92	5872.29	5874.72	0.005583	7.59	2985.27	580.00	0.58
Main Corridor	149230.3	100 year	32904.00	5866.98	5875.64	5873.54	5876.73	0.005564	9.11	4345.94	950.41	0.60
Main Corridor	149696.6	10 year	6940.00	5868.22	5873.30	5871.88	5873.55	0.003203	4.37	1836.23	615.46	0.44
Main Corridor	149696.6	50 year	20584.00	5868.22	5875.97	5873.81	5876.65	0.003769	7.24	3349.22	660.00	0.54
Main Corridor	149696.6	100 year	32904.00	5868.22	5877.78	5874.89	5878.52	0.003207	8.03	5678.97	1056.89	0.52
Main Corridor	150013.9	10 year	6893.00	5869.77	5874.48		5874.99	0.006367	5.86	1237.56	507.64	0.62
Main Corridor	150013.9	50 year	20439.00	5869.77	5877.11		5878.21	0.005759	8.71	2554.44	520.00	0.66
Main Corridor	150013.9	100 year	32653.00	5869.77	5878.69		5879.83	0.004734	9.35	4680.49	1119.78	0.62
Main Corridor	150305.8	10 year	6893.00	5870.48	5876.16		5876.67	0.005311	6.09	1329.96	467.18	0.58
Main Corridor	150305.8	50 year	20439.00	5870.48	5878.71		5880.29	0.007828	10.56	2142.72	413.58	0.77
Main Corridor	150305.8	100 year	32653.00	5870.48	5879.90		5881.81	0.008145	12.20	3292.65	637.49	0.81
Main Corridor	150688.0	10 year	6893.00	5871.20	5877.97		5878.61	0.004814	6.48	1153.13	498.43	0.57
Main Corridor	150688.0	50 year	20439.00	5871.20	5881.32		5882.39	0.004057	8.92	2854.81	554.91	0.58
Main Corridor	150688.0	100 year	32653.00	5871.20	5882.71		5884.04	0.004448	10.47	4309.96	756.02	0.62
Main Corridor	150988.4	10 year	6847.00	5873.01	5879.47		5880.32	0.006494	8.28	1155.60	543.24	0.68
Main Corridor	150988.4	50 year	20295.00	5873.01	5882.61		5883.78	0.005516	10.75	2910.71	591.79	0.68
Main Corridor	150988.4	100 year	32401.00	5873.01	5884.19		5885.39	0.005017	11.59	4569.54	784.34	0.67
Main Corridor	151190.2	10 year	6847.00	5874.00	5880.81		5881.19	0.002671	5.62	1673.43	486.44	0.44
Main Corridor	151190.2	50 year	20295.00	5874.00	5883.84		5884.73	0.003636	8.92	3158.48	551.00	0.55
Main Corridor	151190.2	100 year	32401.00	5874.00	5885.20		5886.33	0.004272	10.72	4940.15	997.09	0.61
Main Corridor	151381.3	10 year	6847.00	5874.00	5881.30		5881.88	0.004148	6.84	1441.96	536.62	0.54
Main Corridor	151381.3	50 year	20295.00	5874.00	5884.47		5885.56	0.004492	9.92	2887.25	510.00	0.61
Main Corridor	151381.3	100 year	32401.00	5874.00	5886.05		5887.12	0.004090	10.66	5065.68	1033.60	0.60
Main Corridor	151699.4	10 year	6800.00	5876.00	5883.01	5882.31	5884.08	0.010862	8.40	879.30	396.27	0.75
Main Corridor	151699.4	50 year	20150.00	5876.00	5886.20		5887.52	0.007534	10.30	2668.60	618.41	0.69
Main Corridor	151699.4	100 year	32150.00	5876.00	5887.54		5889.06	0.007739	11.76	4446.93	1073.44	0.72
Main Corridor	151956.1	10 year	6800.00	5877.27	5884.85		5885.34	0.002623	6.04	1561.77	656.03	0.45
Main Corridor	151956.1	50 year	20150.00	5877.27	5887.89		5888.71	0.003081	8.71	3582.26	693.60	0.52
Main Corridor	151956.1	100 year	32150.00	5877.27	5889.35		5890.31	0.003314	10.01	5317.98	895.98	0.55
Main Corridor	152510.0	10 year	6800.00	5880.00	5886.87		5887.60	0.006851	6.87	1017.75	322.41	0.64
Main Corridor	152510.0	50 year	20150.00	5880.00	5889.78		5891.35	0.007394	10.44	2414.31	705.15	0.72
Main Corridor	152510.0	100 year	32150.00	5880.00	5891.15		5893.18	0.007916	12.44	3499.16	757.34	0.78
Main Corridor	153082.6	10 year	6800.00	5882.00	5890.55	5890.39	5891.55	0.006996	8.53	1100.15	589.15	0.70
Main Corridor	153082.6	50 year	20150.00	5882.00	5893.55		5894.55	0.005126	9.98	3282.96	764.58	0.64
Main Corridor	153082.6	100 year	32150.00	5882.00	5895.20		5896.27	0.004716	11.11	5344.15	1191.24	0.64
Main Corridor	153420.9	10 year	6753.00	5884.00	5892.37		5892.74	0.002011	5.37	1934.86	831.85	0.39
Main Corridor	153420.9	50 year	20005.00	5884.00	5895.03		5895.72	0.002821	8.16	3873.44	770.66	0.49
Main Corridor	153420.9	100 year	31899.00	5884.00	5896.63		5897.39	0.002816	9.14	6239.28	1208.36	0.51
Main Corridor	153849.4	10 year	6753.00	5886.00	5893.30		5894.21	0.005381	7.88	1033.98	410.03	0.62
Main Corridor	153849.4	50 year	20005.00	5886.00	5896.08		5897.67	0.006424	11.57	2525.36	564.06	0.73
Main Corridor	153849.4	100 year	31899.00	5886.00	5897.57		5899.40	0.006679	13.27	4179.17	992.72	0.77
Main Corridor	154218.0	10 year	6707.00	5888.00	5895.36		5896.18	0.005524	7.64	1141.13	503.75	0.63
Main Corridor	154218.0	50 year	19861.00	5888.00	5898.35		5899.77	0.005775	10.89	2505.92	474.13	0.69
Main Corridor	154218.0	100 year	31647.00	5888.00	5899.94		5901.40	0.005343	11.88	4150.37	734.64	0.69
Main Corridor	154515.9	10 year	6707.00	5888.00	5896.82		5897.27	0.002584	5.89	1654.45	636.96	0.44
Main Corridor	154515.9	50 year	19861.00	5888.00	5900.17		5900.86	0.002584	8.06	3654.57	608.86	0.48
Main Corridor	154515.9	100 year	31647.00	5888.00	5901.62		5902.51	0.003016	9.63	5229.31	804.40	0.53
Main Corridor	154684.1	10 year	6660.00	5890.74	5897.41		5897.82	0.003641	6.01	1575.82	520.54	0.50
Main Corridor	154684.1	50 year	19716.00	5890.74	5900.68		5901.41	0.003380	8.37	3333.86	579.79	0.53
Main Corridor	154684.1	100 year	31396.00	5890.74	5902.25		5903.13	0.003709	9.93	5363.09	988.90	0.58
Main Corridor	154852.4	10 year	6660.00	5891.76	5897.94	5897.40	5898.61	0.004615	7.16	1340.66	582.99	0.57
Main Corridor	154852.4	50 year	19716.00	5891.76	5901.08	5899.91	5902.26	0.004836	10.24	2769.37	523.87	0.64

Main Corridor	154852.4	100 year	31396.00	5891.76	5902.79	5901.04	5903.88	0.003966	10.56	4572.37	994.34	0.60
Main Corridor	155178.4	10 year	6660.00	5892.22	5899.32	5897.49	5899.88	0.003463	6.12	1208.36	579.04	0.50
Main Corridor	155178.4	50 year	19716.00	5892.22	5902.42	5900.90	5903.71	0.004462	9.73	2431.44	402.59	0.61
Main Corridor	155178.4	100 year	31396.00	5892.22	5903.47	5902.69	5905.77	0.006862	13.13	2924.81	1124.73	0.78
Main Corridor	155617.8	10 year	6613.00	5894.00	5900.94		5901.80	0.005059	7.69	987.63	679.23	0.61
Main Corridor	155617.8	50 year	19571.00	5894.00	5904.22		5906.29	0.006678	12.37	1910.19	302.65	0.76
Main Corridor	155617.8	100 year	31145.00	5894.00	5906.01		5909.11	0.007949	15.37	2460.72	1087.64	0.85

HEC-RAS HEC-RAS 6.4.1 June 2023
U.S. Army Corps of Engineers
Hydrologic Engineering Center
609 Second Street
Davis, California

```
X     X  XXXXXX    XXXX        XXXX       XX      XXXX
X     X  X        X    X      X   X     X  X    X
X     X  X        X           X   X    X    X   X
XXXXXXX  XXXX     X       XXX  XXXX     XXXXXX    XXXX
X     X  X        X           X  X     X    X       X
X     X  X        X    X      X   X    X    X       X
X     X  XXXXXX    XXXX       X    X   X    X   XXXXX
```

PROJECT DATA
Project Title: Salisbury_Park_Cherry_Creek
Project File : SPN.prj
Run Date and Time: 10/31/2024 10:19:00 AM

Project in English units

Project Description:
Salisbury Park Hydraulic Modeling
ICON Engineering Inc. 2023

Previous
(un-numbered plans) Dransfeldt Road CLOMR description:

Project Name:
Dransfeldt Road Extension
Client: Town of Parker
Stream: Cherry
Creek
Community: Town of Parker, CO and Douglas County, CO
Upstream Limit:
1438+82.3 (FHAD Section 141)
Downstream Limit: 1362+51.3 (FHAD Section
124)
HEC-RAS version: 5.0.7

Topographic Contours:
The base mapping is a
combination of LiDAR flown in October 2013 and survey collected in April 2018
and supplemented with survey in November 2019. The horizontal projection is
local project coordinates modified from NAD83 (2011) Colorado State Plane (US
Feet). The vertical datum is NAVD88.
Survey and supplemental survey of the
channel and structures was obtained from Aztec Surveying, Inc. The survey
includes 1-foot contours. Project coordinates are modified Colorado State Plane
Central Zone NAD '83(2011) coordinates. The following equations are used to
convert State Plan coordinates to the project coordinates:
PROJECT NORTHING =
(STATE PLANE NORTHING * 1.0003179891) - 1000000.026'
PROJECT EASTING = (STATE
PLANE EASTING * 1.0003179891) - 3000000.031'

Coordinate System: Project
Coordinates (US Feet)
Vertical datum: NAVD88

Project Engineer (Modeler):
Taylor Hogan
Project Manager: Tracy Bolger
Muller Engineering
Company
January 24, 2023

PLAN DATA

Plan Title: 01_DE_10-YR/50-YR/100-YR
Plan File : p:\P\23-018_Salisbury Park\09_Hydraulics\FDP_HEC-RAS\SPN.p01

Geometry Title: Duplicate_10-YR/50-YR/100-YR Geom
Geometry File : p:\P\23-018_Salisbury Park\09_Hydraulics\FDP_HEC-RAS\SPN.g01

Flow Title : Duplicate_10-YR/50-YR/100-YR
Flow File : p:\P\23-018_Salisbury Park\09_Hydraulics\FDP_HEC-RAS\SPN.f03

Plan Summary Information:
Number of: Cross Sections = 23 Multiple Openings = 0
Culverts = 0 Inline Structures = 0
Bridges = 0 Lateral Structures = 0

Computational Information
Water surface calculation tolerance = 0.01
Critical depth calculation tolerance = 0.01
Maximum number of iterations = 20
Maximum difference tolerance = 0.3
Flow tolerance factor = 0.001

Computation Options
Critical depth computed only where necessary
Conveyance Calculation Method: At breaks in n values only
Friction Slope Method: Average Conveyance
Computational Flow Regime: Subcritical Flow

FLOW DATA

Flow Title: Duplicate_10-YR/50-YR/100-YR

Flow File : p:\P\23-018_Salisbury Park\09_Hydraulics\FDP_HEC-RAS\SPN.f03

Flow Data (cfs)

River	Reach	RS	10-YR	50-YR	100-YR
Cherry Creek	Main Corridor	146842.2	7033	20873	33407
Cherry Creek	Main Corridor	145613.8	7080	21018	33658
Cherry Creek	Main Corridor	145065.8	7127	21163	33900
Cherry Creek	Main Corridor	144326.2	7173	21307	34161
Cherry Creek	Main Corridor	143060.4	7220	21452	34412
Cherry Creek	Main Corridor	142698.9	7267	21597	34663
Cherry Creek	Main Corridor	142267.7	7313	21741	34915
Cherry Creek	Main Corridor	141564.8	7360	21886	35166
Cherry Creek	Main Corridor	140831.7	7407	22031	35417
Cherry Creek	Main Corridor	139529.7	7453	22175	35669
Cherry Creek	Main Corridor	138860.0	7500	22320	35920
Cherry Creek	Main Corridor	138067.2	7547	22465	36171

Boundary Conditions

River	Reach	Profile	Upstream	Downstream
Cherry Creek	Main Corridor	10-YR		Known WS = 5823.89
Cherry Creek	Main Corridor	50-YR		Known WS = 5826.68
Cherry Creek	Main Corridor	100-YR		Known WS = 5828.67

Profile Output Table - Standard Table 1

Reach	River Sta	Profile	Q Total (cfs)	Min Ch El (ft)	W.S. Elev (ft)	Crit W.S. (ft)	E.G. Elev (ft)	E.G. Slope (ft/ft)	Vel Chnl (ft/s)	Flow Area (sq ft)	Top Width (ft)	Froude # Chl
Main Corridor	137545.3 128 AF	50-YR	22465.00	5816.00	5826.68	5824.31	5827.08	0.002148	6.11	5272.93	1129.80	0.42
Main Corridor	138067.2 129	50-YR	22465.00	5818.00	5827.90		5828.47	0.005010	8.19	4530.26	1344.43	0.61
Main Corridor	138526.8 130	50-YR	22320.00	5822.23	5829.98		5830.92	0.005913	8.00	3451.30	1061.69	0.60
Main Corridor	138860.0 131 AG	50-YR	22320.00	5824.50	5832.48	5832.01	5833.78	0.012327	9.23	2614.85	979.78	0.81
Main Corridor	139061.*	50-YR	22175.00	5824.96	5834.17		5834.71	0.002130	6.43	4789.79	1591.50	0.42
Main Corridor	139262.6 132	50-YR	22175.00	5825.42	5834.66		5835.10	0.001714	5.79	5003.03	1557.64	0.38
Main Corridor	139529.7 133 AH	50-YR	22175.00	5827.19	5835.07		5835.99	0.005135	7.84	3274.00	1050.58	0.56
Main Corridor	139822.*	50-YR	22031.00	5828.08	5836.61		5837.49	0.004806	8.12	3615.21	972.77	0.55
Main Corridor	140116.2 134	50-YR	22031.00	5828.96	5838.24	5837.08	5839.23	0.006889	8.03	3048.09	1489.95	0.65
Main Corridor	140354.*	50-YR	22031.00	5830.31	5839.49	5837.89	5840.33	0.003248	8.03	4056.78	1866.53	0.52
Main Corridor	140593.*	50-YR	22031.00	5831.67	5840.40		5841.04	0.002560	6.93	4420.79	1920.84	0.46
Main Corridor	140831.7 135 AI	50-YR	22031.00	5833.02	5841.06	5838.84	5841.66	0.002552	6.56	4269.16	1560.47	0.45
Main Corridor	141564.8 136	50-YR	21886.00	5836.08	5843.15	5842.23	5843.82	0.003879	7.91	4442.95	1297.94	0.55
Main Corridor	142267.7 137 AJ	50-YR	21741.00	5838.86	5845.63	5843.91	5846.06	0.003491	7.02	5125.91	1397.24	0.52
Main Corridor	142698.9 138	50-YR	21597.00	5841.20	5847.12	5845.78	5847.40	0.002926	5.45	5828.64	1659.12	0.45
Main Corridor	143060.4 139 AK	50-YR	21452.00	5841.97	5848.23	5847.52	5848.80	0.005246	7.35	4473.66	1579.71	0.61
Main Corridor	143567.7 140	50-YR	21307.00	5843.47	5850.44	5848.74	5850.84	0.003841	6.21	4623.31	1230.41	0.52
Main Corridor	143882.2	50-YR	21307.00	5844.84	5851.68	5850.65	5852.36	0.007197	8.32	3560.23	977.72	0.71
Main Corridor	144326.2	50-YR	21307.00	5846.18	5853.45		5854.09	0.003788	7.39	3998.16	1244.18	0.54
Main Corridor	145065.8	50-YR	21163.00	5850.20	5856.95		5858.16	0.008560	9.42	2915.29	1945.79	0.66
Main Corridor	145613.8	50-YR	21018.00	5852.07	5860.22		5861.07	0.003580	7.49	3090.51	2134.77	0.53
Main Corridor	146281.2	50-YR	20873.00	5854.80	5862.44		5863.02	0.002365	6.23	3635.89	1193.61	0.43
Main Corridor	146842.2	50-YR	20873.00	5856.46	5863.95	5860.74	5864.24	0.001801	4.90	5226.94	1024.71	0.34

HEC-RAS HEC-RAS 6.4.1 June 2023
U.S. Army Corps of Engineers
Hydrologic Engineering Center
609 Second Street
Davis, California

```
X     X  XXXXXX    XXXX        XXXX       XX      XXXX
X     X  X        X    X      X   X     X  X    X
X     X  X        X           X   X    X    X   X
XXXXXXX  XXXX     X       XXX  XXXX     XXXXXX    XXXX
X     X  X        X           X  X     X    X       X
X     X  X        X    X      X   X    X    X       X
X     X  XXXXXX    XXXX       X    X   X    X   XXXXX
```

PROJECT DATA
Project Title: Salisbury_Park_Cherry_Creek
Project File : SPN.prj
Run Date and Time: 10/31/2024 12:28:33 PM

Project in English units

Project Description:
Salisbury Park Hydraulic Modeling
ICON Engineering Inc. 2023

Previous
(un-numbered plans) Dransfeldt Road CLOMR description:

Project Name:
Dransfeldt Road Extension
Client: Town of Parker
Stream: Cherry
Creek
Community: Town of Parker, CO and Douglas County, CO
Upstream Limit:
1438+82.3 (FHAD Section 141)
Downstream Limit: 1362+51.3 (FHAD Section
124)
HEC-RAS version: 5.0.7

Topographic Contours:
The base mapping is a
combination of LiDAR flown in October 2013 and survey collected in April 2018
and supplemented with survey in November 2019. The horizontal projection is
local project coordinates modified from NAD83 (2011) Colorado State Plane (US
Feet). The vertical datum is NAVD88.
Survey and supplemental survey of the
channel and structures was obtained from Aztec Surveying, Inc. The survey
includes 1-foot contours. Project coordinates are modified Colorado State Plane
Central Zone NAD '83(2011) coordinates. The following equations are used to
convert State Plan coordinates to the project coordinates:
PROJECT NORTHING =
(STATE PLANE NORTHING * 1.0003179891) - 1000000.026'
PROJECT EASTING = (STATE
PLANE EASTING * 1.0003179891) - 3000000.031'

Coordinate System: Project
Coordinates (US Feet)
Vertical datum: NAVD88

Project Engineer (Modeler):
Taylor Hogan
Project Manager: Tracy Bolger
Muller Engineering
Company
January 24, 2023

PLAN DATA

Plan Title: 03_CE_10-YR/50-YR/100-YR
Plan File : p:\P\23-018_Salisbury Park\09_Hydraulics\FDP_HEC-RAS\SPN.p06

Geometry Title: Corrected_Eff_10-YR/50-YR/100-YR Geom
Geometry File : p:\P\23-018_Salisbury Park\09_Hydraulics\FDP_HEC-RAS\SPN.g03

Flow Title : Corrected_Eff_10-YR/50-YR/100-YR
Flow File : p:\P\23-018_Salisbury Park\09_Hydraulics\FDP_HEC-RAS\SPN.f02

Plan Summary Information:
Number of: Cross Sections = 26 Multiple Openings = 0
Culverts = 0 Inline Structures = 0
Bridges = 0 Lateral Structures = 0

Computational Information
Water surface calculation tolerance = 0.01
Critical depth calculation tolerance = 0.01
Maximum number of iterations = 20
Maximum difference tolerance = 0.3
Flow tolerance factor = 0.001

Computation Options
Critical depth computed only where necessary
Conveyance Calculation Method: At breaks in n values only
Friction Slope Method: Average Conveyance
Computational Flow Regime: Subcritical Flow

FLOW DATA

Flow Title: Corrected_Eff_10-YR/50-YR/100-YR

Flow File : p:\P\23-018_Salisbury Park\09_Hydraulics\FDP_HEC-RAS\SPN.f02

Flow Data (cfs)

River	Reach	RS	10-YR	50-YR	100-YR
Cherry Creek	Cherry Creek	147068.5	7033	20873	33407
Cherry Creek	Cherry Creek	145840.1	7080	21018	33658
Cherry Creek	Cherry Creek	145292.1	7127	21163	33900
Cherry Creek	Cherry Creek	144552.5	7173	21307	34161
Cherry Creek	Cherry Creek	143285.5	7220	21452	34412
Cherry Creek	Cherry Creek	142905.1	7267	21597	34663
Cherry Creek	Cherry Creek	142476.1	7313	21741	34915
Cherry Creek	Cherry Creek	141854.4	7360	21886	35166
Cherry Creek	Cherry Creek	141016.0	7407	22031	35417
Cherry Creek	Cherry Creek	139847.6	7453	22175	35669
Cherry Creek	Cherry Creek	138889.1	7500	22320	35920
Cherry Creek	Cherry Creek	138067.2	7547	22465	36171

Boundary Conditions

River	Reach	Profile	Upstream	Downstream
Cherry Creek	Cherry Creek	10-YR		Known WS = 5823.89
Cherry Creek	Cherry Creek	50-YR		Known WS = 5826.68
Cherry Creek	Cherry Creek	100-YR		Known WS = 5828.67

Profile Output Table - Standard Table 1

Reach	River Sta	Profile	Q Total (cfs)	Min Ch El (ft)	W.S. Elev (ft)	Crit W.S. (ft)	E.G. Elev (ft)	E.G. Slope (ft/ft)	Vel Chnl (ft/s)	Flow Area (sq ft)	Top Width (ft)	Froude # Chl
Cherry Creek	137545.3 128 AF	50-YR	22465.00	5816.00	5826.68	5824.31	5827.08	0.002148	6.11	5272.93	1129.80	0.42
Cherry Creek	138067.2 129	50-YR	22465.00	5818.15	5827.67		5828.53	0.007055	10.58	3965.30	1243.30	0.74
Cherry Creek	138360.5	50-YR	22320.00	5819.70	5829.34	5828.71	5830.56	0.006336	9.14	2960.79	1048.65	0.69
Cherry Creek	138658.4	50-YR	22320.00	5822.24	5831.48		5832.19	0.004619	7.03	3992.19	1225.47	0.52
Cherry Creek	138889.1	50-YR	22320.00	5822.91	5833.19	5833.19	5834.95	0.012707	11.19	2551.78	1006.97	0.86
Cherry Creek	138996.1	50-YR	22175.00	5823.20	5834.47	5834.47	5836.62	0.009609	12.08	2281.44	872.32	0.79
Cherry Creek	139174.0	50-YR	22175.00	5823.77	5836.83		5837.21	0.001013	5.13	5565.02	1581.96	0.30
Cherry Creek	139341.3	50-YR	22175.00	5824.51	5837.15		5837.36	0.000627	3.98	7112.14	1770.50	0.23
Cherry Creek	139470.2	50-YR	22175.00	5824.89	5837.15	5833.69	5837.52	0.001394	5.60	5458.55	1296.55	0.34
Cherry Creek	139847.6	50-YR	22175.00	5827.36	5837.63	5834.64	5838.21	0.002108	6.50	3895.18	960.36	0.42
Cherry Creek	140071.7	50-YR	22031.00	5828.35	5837.99	5835.59	5838.83	0.003064	7.62	3175.14	791.78	0.50
Cherry Creek	140276.2	50-YR	22031.00	5829.09	5838.35	5838.29	5840.23	0.009149	11.87	2497.24	955.41	0.84
Cherry Creek	140620.5	50-YR	22031.00	5830.73	5841.31	5839.88	5842.08	0.002786	7.65	4228.18	1511.76	0.48
Cherry Creek	141016.0	50-YR	22031.00	5831.93	5842.45	5839.40	5842.84	0.001494	5.75	5493.56	1212.49	0.36
Cherry Creek	141854.4	50-YR	21886.00	5834.22	5843.97	5842.79	5844.70	0.004618	8.53	4358.81	1360.93	0.60
Cherry Creek	142241.8	50-YR	21741.00	5836.28	5845.42	5843.68	5845.96	0.004022	8.19	4825.05	1331.78	0.56
Cherry Creek	142476.1 137 AJ	50-YR	21741.00	5837.15	5846.38	5843.97	5846.70	0.002161	6.03	5924.78	1393.19	0.41
Cherry Creek	142905.1 138	50-YR	21597.00	5838.16	5847.41	5845.78	5847.67	0.002531	5.23	6093.27	1686.58	0.42
Cherry Creek	143285.5 139 AK	50-YR	21452.00	5839.15	5848.34	5846.29	5848.66	0.003105	5.76	5472.45	1577.58	0.47
Cherry Creek	143794.0 140	50-YR	21307.00	5843.47	5850.01	5848.74	5850.52	0.005540	6.96	4099.61	1202.82	0.61
Cherry Creek	144108.5	50-YR	21307.00	5844.84	5851.63	5850.65	5852.33	0.007486	8.42	3515.47	972.69	0.72
Cherry Creek	144552.5	50-YR	21307.00	5846.18	5853.45		5854.10	0.003774	7.38	4004.11	1245.82	0.54
Cherry Creek	145292.1	50-YR	21163.00	5850.20	5856.95	5855.83	5858.16	0.008575	9.42	2912.91	1943.92	0.66
Cherry Creek	145840.1	50-YR	21018.00	5852.07	5860.22		5861.07	0.003578	7.49	3091.63	2135.41	0.53
Cherry Creek	146507.5	50-YR	20873.00	5854.80	5862.44		5863.02	0.002365	6.23	3635.89	1193.61	0.43
Cherry Creek	147068.5	50-YR	20873.00	5856.46	5863.95	5860.74	5864.24	0.001801	4.90	5226.94	1024.71	0.34

HEC-RAS HEC-RAS 6.4.1 June 2023
U.S. Army Corps of Engineers
Hydrologic Engineering Center
609 Second Street
Davis, California

```
X     X  XXXXXX    XXXX        XXXX       XX      XXXX
X     X  X        X    X       X   X     X  X    X
X     X  X        X            X   X    X    X   X
XXXXXXX  XXXX     X       XXX  XXXX     XXXXXX    XXXX
X     X  X        X            X  X     X    X        X
X     X  X        X    X       X   X    X    X        X
X     X  XXXXXX    XXXX        X    X   X    X   XXXXX
```

PROJECT DATA
Project Title: Salisbury_Park_Cherry_Creek
Project File : SPN.prj
Run Date and Time: 11/4/2024 1:18:03 PM

Project in English units

Project Description:
Salisbury Park Hydraulic Modeling
ICON Engineering Inc. 2023

Previous
(un-numbered plans) Dransfeldt Road CLOMR description:

Project Name:
Dransfeldt Road Extension
Client: Town of Parker
Stream: Cherry
Creek
Community: Town of Parker, CO and Douglas County, CO
Upstream Limit:
1438+82.3 (FHAD Section 141)
Downstream Limit: 1362+51.3 (FHAD Section
124)
HEC-RAS version: 5.0.7

Topographic Contours:
The base mapping is a
combination of LiDAR flown in October 2013 and survey collected in April 2018
and supplemented with survey in November 2019. The horizontal projection is
local project coordinates modified from NAD83 (2011) Colorado State Plane (US
Feet). The vertical datum is NAVD88.
Survey and supplemental survey of the
channel and structures was obtained from Aztec Surveying, Inc. The survey
includes 1-foot contours. Project coordinates are modified Colorado State Plane
Central Zone NAD '83(2011) coordinates. The following equations are used to
convert State Plan coordinates to the project coordinates:
PROJECT NORTHING =
(STATE PLANE NORTHING * 1.0003179891) - 1000000.026'
PROJECT EASTING = (STATE
PLANE EASTING * 1.0003179891) - 3000000.031'

Coordinate System: Project
Coordinates (US Feet)
Vertical datum: NAVD88

Project Engineer (Modeler):
Taylor Hogan
Project Manager: Tracy Bolger
Muller Engineering
Company
January 24, 2023

PLAN DATA

Plan Title: 05_Pre-Project_10-YR/50-YR/100-YR
Plan File : p:\P\23-018_Salisbury Park\09_Hydraulics\FDP_HEC-RAS\SPN.p02

Geometry Title: Pre-Project_10-YR/50-YR/100-YR Geom
Geometry File : p:\P\23-018_Salisbury Park\09_Hydraulics\FDP_HEC-RAS\SPN.g04

Flow Title : Pre-Project_10-YR/50-YR/100-YR
Flow File : p:\P\23-018_Salisbury Park\09_Hydraulics\FDP_HEC-RAS\SPN.f01

Plan Description:
Proposed Conditions Model
Project Name: Dransfeldt Road Extension
Client:
Town of Parker
Stream: Cherry Creek
Community:Town of Parker, CO and Douglas
County, CO
HEC-RAS version: 5.0.7

Coordinate System: Project Coordinates
(US Feet)

Plan Summary Information:
Number of: Cross Sections = 29 Multiple Openings = 0
Culverts = 0 Inline Structures = 0
Bridges = 1 Lateral Structures = 0

Computational Information
Water surface calculation tolerance = 0.01
Critical depth calculation tolerance = 0.01
Maximum number of iterations = 20
Maximum difference tolerance = 0.3

```
    Flow tolerance factor               =  0.001

Computation Options
    Critical depth computed only where necessary
    Conveyance Calculation Method: At breaks in n values only
    Friction Slope Method:         Average Conveyance
    Computational Flow Regime:     Subcritical Flow



FLOW DATA

Flow Title: Pre-Project_10-YR/50-YR/100-YR
Flow File : p:\P\23-018_Salisbury Park\09_Hydraulics\FDP_HEC-RAS\SPN.f01

Flow Data (cfs)

  River           Reach           RS                  10-YR           50-YR          100-YR
  Cherry Creek    Cherry Creek    146936.9             7033           20873           33407
  Cherry Creek    Cherry Creek    145708.5             7080           21018           33658
  Cherry Creek    Cherry Creek    145160.5             7127           21163           33900
  Cherry Creek    Cherry Creek    144420.9             7173           21307           34161
  Cherry Creek    Cherry Creek    143154.0             7220           21452           34412
  Cherry Creek    Cherry Creek    142773.5             7267           21597           34663
  Cherry Creek    Cherry Creek    142344.6             7313           21741           34915
  Cherry Creek    Cherry Creek    141463.7             7360           21886           35166
  Cherry Creek    Cherry Creek    140857.7             7407           22031           35417
  Cherry Creek    Cherry Creek    139505.2             7453           22175           35669
  Cherry Creek    Cherry Creek    138887.3             7500           22320           35920
  Cherry Creek    Cherry Creek    138067.2             7547           22465           36171


Boundary Conditions

  River           Reach           Profile                     Upstream                Downstream

  Cherry Creek    Cherry Creek    10-YR                                           Known WS = 5823.89
  Cherry Creek    Cherry Creek    50-YR                                           Known WS = 5826.68
  Cherry Creek    Cherry Creek    100-YR                                          Known WS = 5828.67


Profile Output Table - Standard Table 1

  Reach           River Sta                   Profile    Q Total    Min Ch El   W.S. Elev   Crit W.S.   E.G. Elev   E.G. Slope   Vel Chnl   Flow Area   Top Width   Froude # Chl
                                                           (cfs)        (ft)        (ft)        (ft)        (ft)       (ft/ft)     (ft/s)     (sq ft)       (ft)

  Cherry Creek    137545.3 128 (AF)           50-YR     22465.00     5816.00     5826.68     5824.31     5827.08     0.002148       6.11     5272.93     1129.80          0.42
  Cherry Creek    138067.2 129                50-YR     22465.00     5818.15     5827.92                 5828.66     0.005832       9.87     4233.26     1202.91          0.68
  Cherry Creek    138360.5 129.6              50-YR     22320.00     5819.70     5829.36     5828.53     5830.65     0.006493       9.28     2848.57     1167.03          0.70
  Cherry Creek    138658.4 130.4              50-YR     22320.00     5822.24     5831.58                 5832.25     0.004324       6.87     4114.08     1233.75          0.51
  Cherry Creek    138887.3 131 (AG)           50-YR     22320.00     5822.07     5832.68     5832.68     5835.13     0.011943      12.96     2073.74      734.54          0.87
  Cherry Creek    139005.3 131.3              50-YR     22175.00     5824.40     5834.60     5833.19     5836.07     0.004766      10.25     2868.95      889.53          0.64
  Cherry Creek    139186.6 131.7              50-YR     22175.00     5824.40     5836.14     5831.95     5836.59     0.001377       5.50     4550.96     1029.59          0.34
  Cherry Creek    139338.2 132.1              50-YR     22175.00     5824.56     5836.52     5832.47     5836.77     0.000860       4.41     6149.07     1150.35          0.27
  Cherry Creek    139505.2 132.9              50-YR     22175.00     5826.40     5836.47     5833.58     5837.17     0.003191       6.84     3641.65     1114.24          0.45
  Cherry Creek    139624.0 133.1              50-YR     22031.00     5827.48     5837.02     5833.79     5837.51     0.002271       5.84     4393.38     1048.94          0.38
  Cherry Creek    139794.7 133.3              50-YR     22031.00     5827.90     5837.58     5833.63     5837.85     0.001205       4.17     5360.59      946.68          0.28
  Cherry Creek    140155.1 133.9              50-YR     22031.00     5828.36     5838.05     5835.30     5838.55     0.002355       5.81     4043.52      791.21          0.40
  Cherry Creek    140296.9                              Bridge
  Cherry Creek    140397.3 134.3              50-YR     22031.00     5828.93     5838.72     5836.18     5839.28     0.002389       6.14     3846.92      802.48          0.43
  Cherry Creek    140533.5 134.5              50-YR     22031.00     5833.70     5839.07     5837.72     5839.78     0.003987       7.03     3702.42     1081.44          0.54
  Cherry Creek    140857.7 135.1              50-YR     22031.00     5833.70     5840.35     5838.68     5841.10     0.003971       7.00     3367.58      942.56          0.54
  Cherry Creek    141128.6 135.3              50-YR     21886.00     5833.70     5841.44     5839.84     5842.07     0.003275       7.01     4183.29     1083.66          0.50
  Cherry Creek    141463.7 135.7              50-YR     21886.00     5833.98     5842.61     5841.81     5843.32     0.005169       7.66     3911.81     1180.97          0.61
  Cherry Creek    141938.6 136.4              50-YR     21741.00     5835.56     5844.62     5842.52     5845.06     0.003517       6.51     4965.76     1403.09          0.51
  Cherry Creek    142110.2 136.6              50-YR     21741.00     5836.28     5845.27     5843.95     5845.86     0.004575       8.49     4623.95     1325.30          0.60
  Cherry Creek    142344.6 137 (AJ)           50-YR     21741.00     5837.15     5846.33     5843.97     5846.65     0.002242       6.10     5851.36     1391.29          0.42
  Cherry Creek    142773.5 138                50-YR     21597.00     5838.16     5847.40     5844.96     5847.66     0.002582       5.22     6068.58     1684.50          0.43
  Cherry Creek    143154.0 139 (AK)           50-YR     21452.00     5839.15     5848.34     5846.29     5848.66     0.003112       5.70     5472.45     1577.58          0.47
  Cherry Creek    143662.4 140                50-YR     21307.00     5843.47     5850.01     5848.74     5850.52     0.005537       6.96     4100.20     1202.98          0.61
  Cherry Creek    143976.9                    50-YR     21307.00     5844.84     5851.63     5850.65     5852.33     0.007486       8.42     3515.47      972.69          0.72
  Cherry Creek    144420.9                    50-YR     21307.00     5846.18     5853.45                 5854.10     0.003774       7.38     4004.11     1245.82          0.54
  Cherry Creek    145160.5                    50-YR     21163.00     5850.20     5856.95     5855.83     5858.16     0.008575       9.42     2912.91     1943.92          0.66
  Cherry Creek    145708.5                    50-YR     21018.00     5852.07     5860.22                 5861.07     0.003578       7.49     3091.63     2135.41          0.53
  Cherry Creek    146375.9                    50-YR     20873.00     5854.80     5862.44                 5863.02     0.002365       6.23     3635.89     1193.61          0.43
  Cherry Creek    146936.9                    50-YR     20873.00     5856.46     5863.95     5860.74     5864.24     0.001801       4.90     5226.94     1024.71          0.34
```

HEC-RAS HEC-RAS 6.4.1 June 2023
U.S. Army Corps of Engineers
Hydrologic Engineering Center
609 Second Street
Davis, California

```
X     X  XXXXXX    XXXX        XXXX       XX      XXXX
X     X  X        X    X       X   X     X  X    X
X     X  X        X            X   X    X    X   X
XXXXXXX  XXXX     X       XXX  XXXX     XXXXXX    XXXX
X     X  X        X            X  X     X    X       X
X     X  X        X    X       X   X    X    X       X
X     X  XXXXXX    XXXX        X    X   X    X   XXXXX
```

PROJECT DATA
Project Title: Salisbury_Park_Cherry_Creek
Project File : SPN.prj
Run Date and Time: 11/7/2024 5:13:27 PM

Project in English units

Project Description:
Salisbury Park Hydraulic Modeling
ICON Engineering Inc. 2023

Previous
(un-numbered plans) Dransfeldt Road CLOMR description:

Project Name:
Dransfeldt Road Extension
Client: Town of Parker
Stream: Cherry
Creek
Community: Town of Parker, CO and Douglas County, CO
Upstream Limit:
1438+82.3 (FHAD Section 141)
Downstream Limit: 1362+51.3 (FHAD Section
124)
HEC-RAS version: 5.0.7

Topographic Contours:
The base mapping is a
combination of LiDAR flown in October 2013 and survey collected in April 2018
and supplemented with survey in November 2019. The horizontal projection is
local project coordinates modified from NAD83 (2011) Colorado State Plane (US
Feet). The vertical datum is NAVD88.
Survey and supplemental survey of the
channel and structures was obtained from Aztec Surveying, Inc. The survey
includes 1-foot contours. Project coordinates are modified Colorado State Plane
Central Zone NAD '83(2011) coordinates. The following equations are used to
convert State Plan coordinates to the project coordinates:
PROJECT NORTHING =
(STATE PLANE NORTHING * 1.0003179891) - 1000000.026'
PROJECT EASTING = (STATE
PLANE EASTING * 1.0003179891) - 3000000.031'

Coordinate System: Project
Coordinates (US Feet)
Vertical datum: NAVD88

Project Engineer (Modeler):
Taylor Hogan
Project Manager: Tracy Bolger
Muller Engineering
Company
January 24, 2023

PLAN DATA

Plan Title: 48_Post-Project_PH1
Plan File : p:\P\23-018_Salisbury Park\09_Hydraulics\FDP_HEC-RAS\SPN.p48

Geometry Title: 48_Post-Project_PH1
Geometry File : p:\P\23-018_Salisbury Park\09_Hydraulics\FDP_HEC-RAS\SPN.g48

Flow Title : 48_Post-Project_w_Dransfeldt
Flow File : p:\P\23-018_Salisbury Park\09_Hydraulics\FDP_HEC-RAS\SPN.f46

Plan Description:
Previous Dransfeldt CLOMR Plan description:
Proposed Conditions Model
Project
Name: Dransfeldt Road Extension
Client: Town of Parker
Stream: Cherry
Creek
Community:Town of Parker, CO and Douglas County, CO
HEC-RAS version:
5.0.7

Coordinate System: Project Coordinates (US Feet)

2024-10-24
Phase 1 grading incorporated

Plan Summary Information:
Number of: Cross Sections = 29 Multiple Openings = 0
Culverts = 0 Inline Structures = 0
Bridges = 1 Lateral Structures = 0

```
Computational Information
    Water surface calculation tolerance  =  0.01
    Critical depth calculation tolerance =  0.01
    Maximum number of iterations         =  20
    Maximum difference tolerance         =  0.3
    Flow tolerance factor                =  0.001

Computation Options
    Critical depth computed only where necessary
    Conveyance Calculation Method: At breaks in n values only
    Friction Slope Method:         Average Conveyance
    Computational Flow Regime:     Subcritical Flow

Encroachment Data
   Equal Conveyance = True
   Left Offset      =        0
   Right Offset     =        0

River = Cherry Creek     Reach = Cherry Creek
RS      Profile           Method  Value1  Value2
146936.9FW                     1    1461    2353
146375.9FW                     1    2475    2990
145708.5FW                     1    2650    3100
145160.5FW                     1    2975    3470
144420.9FW                     1    3055 3839.63
143976.9FW                     1  3022.5 3784.79
143662.4FW                     1 2976.88 3821.64
143154.0FW                     1    2600    3830
142773.5FW                     1    2300    3680
142344.6FW                     1    1875    3040
142110.2FW                     1    1875    2890
141938.6FW                     1    1825    2800
141463.7FW                     1    1875    2703
141128.6FW                     1    1875    2608
140857.7FW                     1    1883    2482
140533.5FW                     1    1575    2154
140397.3FW                     1    1277    1826
140155.1FW                     1    1214    1773
139794.7FW                     1     642    1410
139624.0FW                     1     725    1320
139505.2FW                     1     936    1410
139338.2FW                     1     855    1385
139186.6FW                     1     886    1385
139005.3FW                     1     895    1365
138887.3FW                     1     910    1338
138658.4FW                     1  932.22 1454.38
138360.5FW                     1     850    1400
138067.2FW                     1     800    1425
137545.3FW                     1   661.5 1419.52



FLOW DATA

Flow Title: 48_Post-Project_w_Dransfeldt
Flow File : p:\P\23-018_Salisbury Park\09_Hydraulics\FDP_HEC-RAS\SPN.f46

Flow Data (cfs)

  River          Reach          RS                100-YR            FW          10-YR          50-YR
  Cherry Creek   Cherry Creek   146936.9           33407          33407           7033          20873
  Cherry Creek   Cherry Creek   145708.5           33658          33658           7080          21018
  Cherry Creek   Cherry Creek   145160.5           33900          33900           7127          21163
  Cherry Creek   Cherry Creek   144420.9           34161          34161           7173          21307
  Cherry Creek   Cherry Creek   143154.0           34412          34412           7220          21452
  Cherry Creek   Cherry Creek   142773.5           34663          34663           7267          21597
  Cherry Creek   Cherry Creek   142344.6           34915          34915           7313          21741
  Cherry Creek   Cherry Creek   141463.7           35166          35166           7360          21886
  Cherry Creek   Cherry Creek   140857.7           35417          35417           7407          22031
  Cherry Creek   Cherry Creek   139505.2           35669          35669           7453          22175
  Cherry Creek   Cherry Creek   138887.3           35920          35920           7500          22320
  Cherry Creek   Cherry Creek   138067.2           36171          36171           7547          22465


Boundary Conditions

  River          Reach          Profile                    Upstream              Downstream

  Cherry Creek   Cherry Creek   100-YR                                       Known WS = 5828.67
  Cherry Creek   Cherry Creek   FW                                           Known WS = 5828.67
  Cherry Creek   Cherry Creek   10-YR                                        Known WS = 5823.89
  Cherry Creek   Cherry Creek   50-YR                                        Known WS = 5826.68

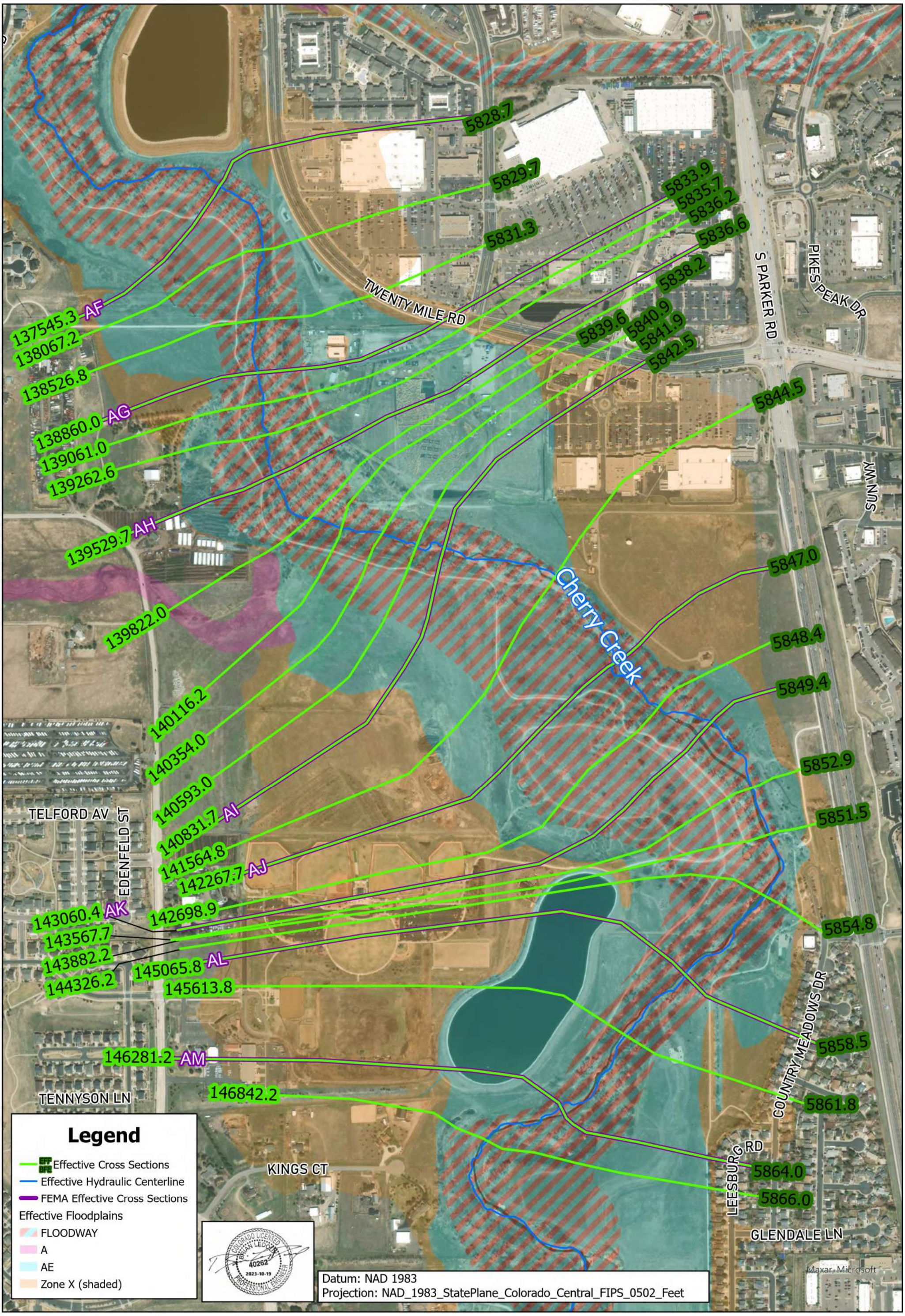

Profile Output Table - Standard Table 1

  Reach          River Sta                  Profile    Q Total   Min Ch El   W.S. Elev   Crit W.S.   E.G. Elev   E.G. Slope   Vel Chnl   Flow Area   Top Width   Froude # Chl
                                                          (cfs)        (ft)        (ft)        (ft)        (ft)      (ft/ft)     (ft/s)     (sq ft)        (ft)

  Cherry Creek   137545.3 128 (AF)          FW       36171.00     5816.00     5828.67     5825.51     5829.39     0.002574       7.87     5872.47      758.02          0.47
  Cherry Creek   138067.2 129               FW       36171.00     5818.15     5829.97                 5831.36     0.006461      12.46     4336.94      625.00          0.75
  Cherry Creek   138360.5 129.6             FW       35920.00     5819.70     5831.51                 5833.26     0.005668      10.80     3576.56      550.00          0.69
  Cherry Creek   138658.4 130.4             FW       35920.00     5822.24     5833.68                 5834.88     0.004931       8.78     4089.45      522.16          0.55
  Cherry Creek   138887.3 131 (AG)          FW       35920.00     5822.07     5834.28     5833.67     5836.91     0.010887      13.28     2927.18      428.00          0.85
  Cherry Creek   139005.3 131.3             FW       35669.00     5824.40     5835.65     5835.65     5838.88     0.008641      14.98     2819.36      470.00          0.87
  Cherry Creek   139186.6 131.7             FW       35669.00     5824.40     5838.94     5833.54     5839.65     0.001401       6.77     5324.93      499.00          0.36
  Cherry Creek   139338.2 132.1             FW       35669.00     5824.56     5839.21     5833.72     5839.86     0.001263       6.45     5628.67      530.00          0.34
  Cherry Creek   139505.2 132.9             FW       35669.00     5826.40     5839.25     5835.26     5840.28     0.002913       8.15     4474.59      474.00          0.46
  Cherry Creek   139624.0 133.1             FW       35417.00     5827.48     5839.88     5835.43     5840.60     0.002040       6.92     5481.72      595.00          0.38
  Cherry Creek   139794.7 133.3             FW       35417.00     5827.90     5840.60     5834.75     5840.94     0.000939       4.68     7622.84      768.00          0.26
  Cherry Creek   140155.1 133.9             FW       35417.00     5828.36     5840.88     5836.62     5841.60     0.002003       6.83     5188.56      559.00          0.40
  Cherry Creek   140296.9                              Bridge
  Cherry Creek   140397.3 134.3             FW       35417.00     5828.93     5841.48     5837.56     5842.28     0.002006       7.19     4932.43      549.00          0.42
  Cherry Creek   140533.5 134.5             FW       35417.00     5833.70     5841.71     5838.92     5842.71     0.003018       8.05     4473.82      579.00          0.51
  Cherry Creek   140857.7 135.1             FW       35417.00     5833.70     5842.73     5839.99     5843.69     0.003003       7.84     4523.62      599.00          0.50
  Cherry Creek   141128.6 135.3             FW       35166.00     5833.70     5843.63     5841.07     5844.49     0.002931       8.15     5203.90      733.00          0.50
  Cherry Creek   141463.7 135.7             FW       35166.00     5833.98     5844.59     5843.10     5845.66     0.004675       9.14     4746.95      828.00          0.61
  Cherry Creek   141938.6 136.4             FW       34915.00     5835.56     5846.61     5844.90     5847.41     0.003707       8.32     5459.93      975.00          0.55
  Cherry Creek   142110.2 136.6             FW       34915.00     5836.28     5847.32     5845.97     5848.19     0.004368      10.00     5502.51     1015.00          0.61
  Cherry Creek   142344.6 137 (AJ)          FW       34915.00     5837.15     5848.48     5844.66     5848.93     0.001993       6.96     7373.03     1165.00          0.42
  Cherry Creek   142773.5 138               FW       34663.00     5838.16     5849.42     5847.24     5849.88     0.002610       6.68     7373.54     1380.00          0.46
```

Cherry Creek	143154.0 139 (AK)	FW	34412.00	5839.15	5850.36	5848.42	5850.93	0.003236	7.41	6512.74	1230.00	0.51
Cherry Creek	143662.4 140	FW	34161.00	5843.47	5852.01	5850.20	5852.90	0.005244	8.82	4863.90	844.76	0.63
Cherry Creek	143976.9	FW	34161.00	5844.84	5853.53	5851.95	5854.60	0.006626	10.03	4450.46	762.29	0.71
Cherry Creek	144420.9	FW	34161.00	5846.18	5855.38		5856.23	0.003422	8.42	5179.56	784.63	0.53
Cherry Creek	145160.5	FW	33900.00	5850.20	5858.49		5860.54	0.010686	12.16	3193.41	495.00	0.76
Cherry Creek	145708.5	FW	33658.00	5852.07	5862.43		5863.70	0.003477	9.05	3756.79	450.00	0.55
Cherry Creek	146375.9	FW	33407.00	5854.80	5864.73		5865.62	0.002331	7.58	4454.16	515.00	0.45
Cherry Creek	146936.9	FW	33407.00	5856.46	5866.37	5862.64	5866.98	0.002319	6.86	5966.11	892.00	0.40

APPENDIX E: TOPOGRAPHIC WORKMAPS

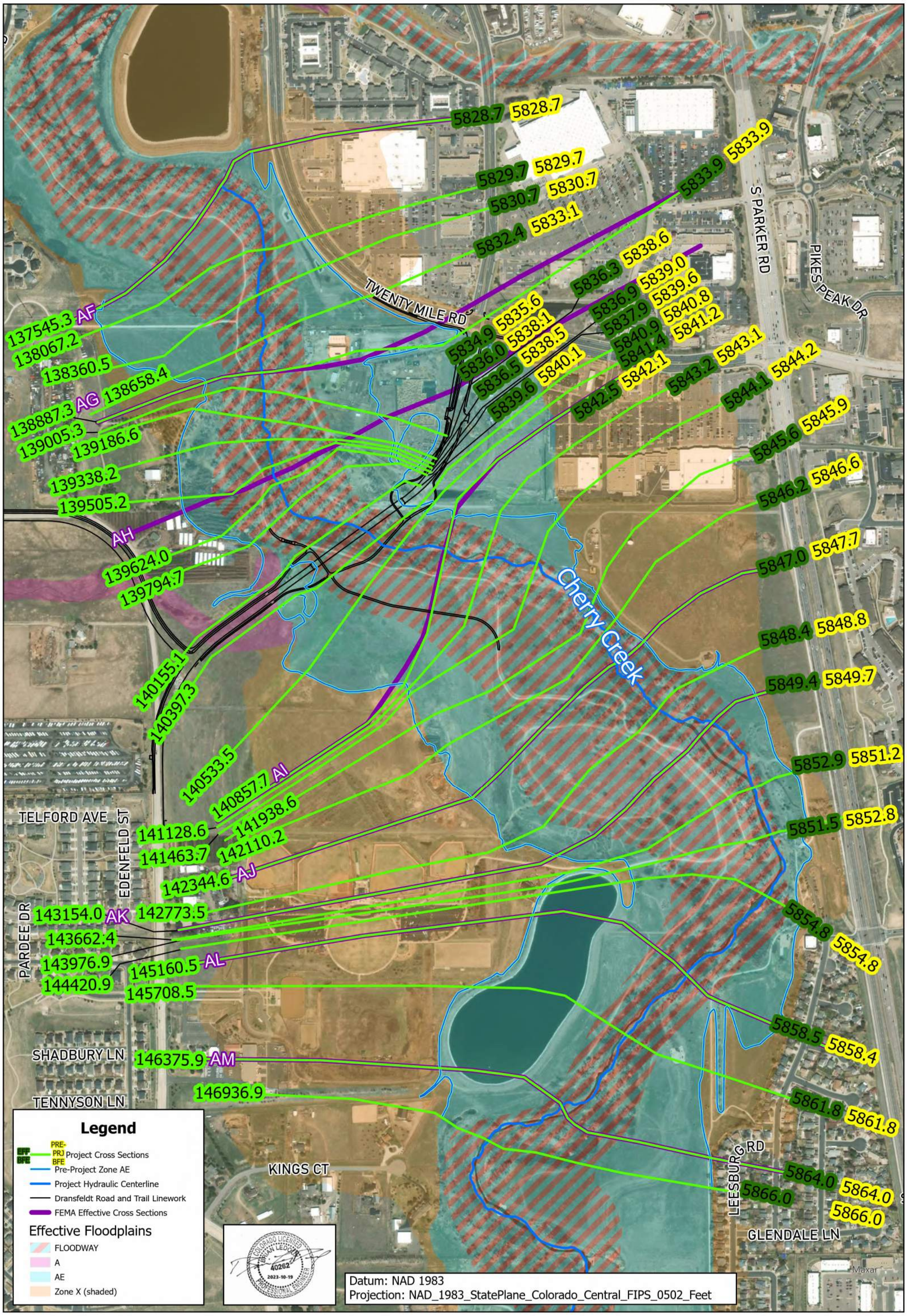


ICON ENGINEERING

Figure E.1: Effective Floodplains

Salisbury Park North - Phase 1 - Floodplain Development Permit (FDP) Application

hcm PARKER COLORADO



ICON ENGINEERING

Figure E.2: Effective Floodplain vs. Pre-Project

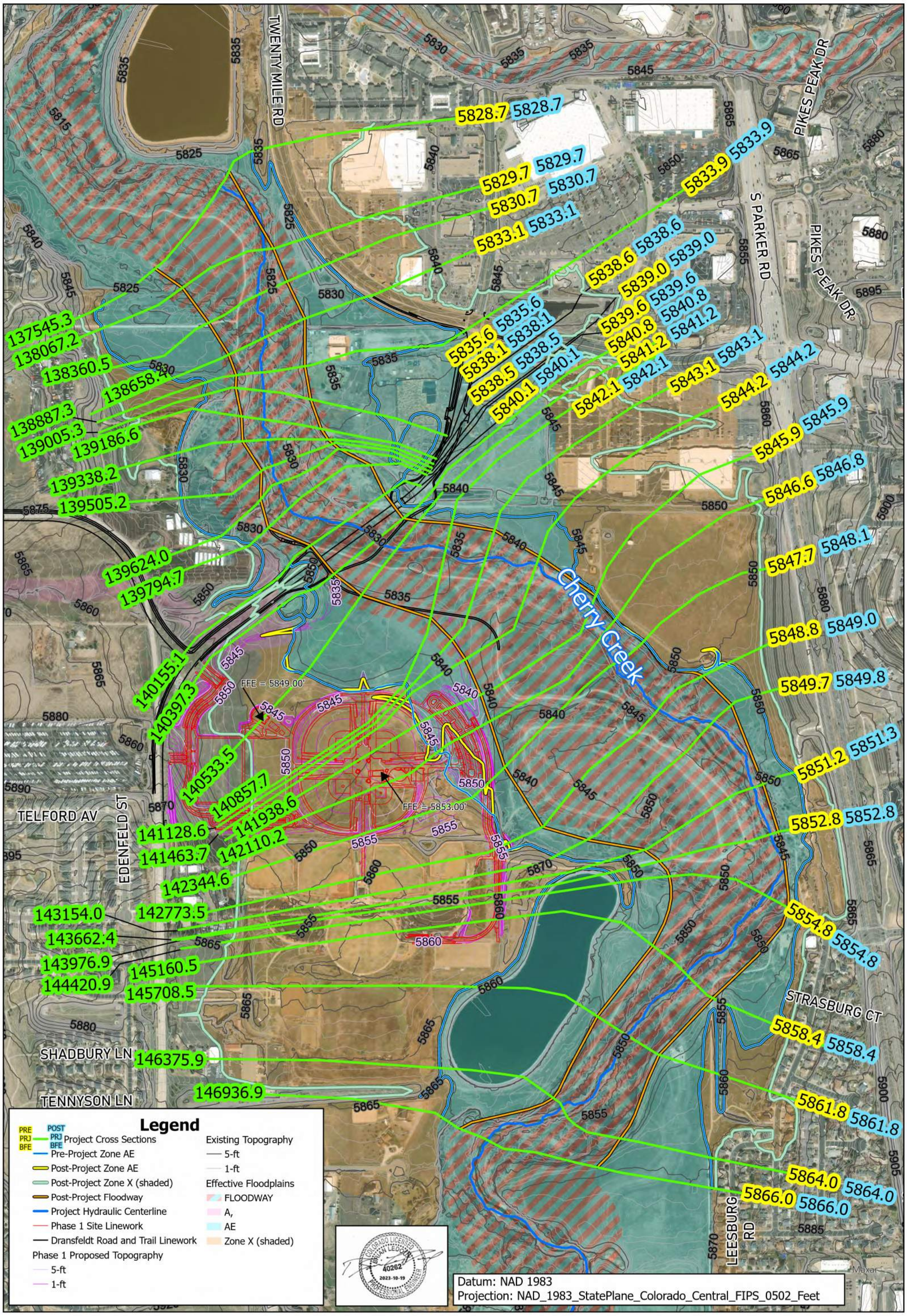
Salisbury Park North - Phase 1 - Floodplain Development Permit (FDP) Application

hcm PARKER COLORADO

N

US Feet

0 200 400



ICON ENGINEERING

Figure E.3: Pre-Project vs. Post-Project Floodplains with Topography

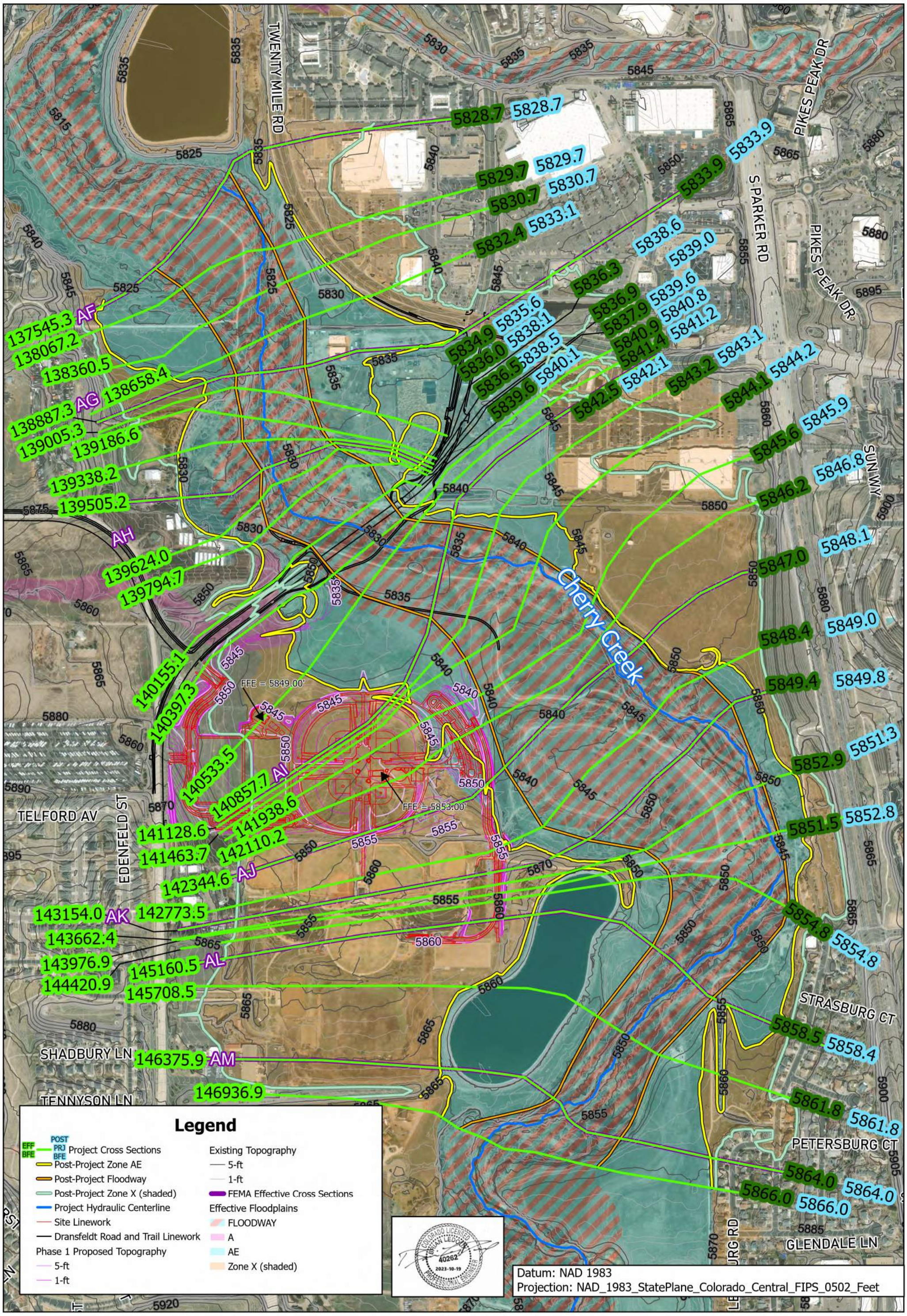
Salisbury Park North - Phase 1 - Floodplain Development Permit (FDP) Application

hcm PARKER COLORADO

N

US Feet

0 200 400



ICON ENGINEERING

Figure E.4: Effective Floodplain vs. Post-Project Floodplains with Topography

Salisbury Park North - Phase 1 - Floodplain Development Permit (FDP) Application

hcm PARKER COLORADO

APPENDIX F: PROPOSED SALISBURY PARK NORTH PHASE 1 PLANS

THE LINE SHOWN ABOVE IS EXACTLY 1" WHEN PLOTTED AT 24x36 SHEETS ORIGINAL PAGE SIZE

THE SQUARES ABOVE ARE COLOR, WITH BLACK AND WHITE LETTERS, APPROXIMATELY

C1-110

C1-111

C1-112

C1-113

C1-114

C1-115

C1-116

C1-117

C1-118

C1-119

C1-120

C1-121

C1-122

C1-123

C1-124

C1-125

C1-126

C1-127

DRANSFELDT RD
ROW VARIES

MOTSENBOCKER RD
ROW VARIES

COMMUNITY HUB BLDG
FFE=5849.00'

HQ BLDG
FFE=5853.00'

LIMITS OF PROPOSED
100-YR FLOODPLAIN

LIMITS OF EXISTING
100-YR FLOODPLAIN

MATCHLINE – SEE THIS SHEET

MATCHLINE – SEE THIS SHEET

GLAND PKWY

GRADING AND DRAINAGE NOTES:

1. CONTRACTOR TO FIELD VERIFY ALL EXISTING UNDERGROUND UTILITIES PRIOR TO CONSTRUCTION. REFER TO GENERAL NOTES FOR UTILITY LOCATION AND PROTECTION.
2. CONTRACTOR TO POTHOLE EXISTING UTILITIES AT PROPOSED UTILITY CROSSINGS IN ROW PRIOR TO CONSTRUCTION.
3. REFER TO HORIZONTAL CONTROL PLAN FOR FURTHER INFORMATION PERTAINING TO CURB & GUTTER, CHASES, AND DRAINAGE PANS.
4. CONTRACTOR IS RESPONSIBLE FOR RESTORING ALL DISTURBED AREAS TO THEIR ORIGINAL CONDITIONS.
5. ALL SPOT ELEVATIONS ARE TO FINISHED GRADE OR FLOWLINE UNLESS OTHERWISE SPECIFIED.
6. IF WALL IS SHOWN, TG DENOTES THE FINISHED GRADE ADJACENT TO THE HIGH SIDE OF THE WALL. BG DENOTES THE FINISHED GRADE ADJACENT TO THE LOW SIDE OF THE WALL. REFER TO ARCH PLANS/DETAILS FOR WALL ELEVATIONS BEYOND THE ADJACENT FINISHED GRADES (EXPOSED WALL, CAP/FOOTER, ETC.)

100 0 100 200
SCALE IN FEET

hord | coplan | macht
LANDSCAPE ARCHITECT / ARCHITECT
1800 Wazee St., Suite 450
Denver, CO 80202
p. 303.607.0977

CIVIL ENGINEER / STRUCTURAL ENGINEER
JVA Incorporated
1675 Larimer Street, #500
Denver, CO 80202
p. 303.444.1951

ELECTRICAL ENGINEER
Ackerman Engineering, Inc.
3000 Youngfield Street, #264
Wheat Ridge, CO 80215
p. 303.278.7297

IRRIGATION
Avocet Irrigation
11757 W. Ken Caryl Ave., Suite F-509
Littleton, CO 80127
p. 303.986.2175

MECHANICAL ENGINEER
ENVISION Mechanical Engineers, Inc.
9777 Pyramid Court, #260
Englewood, CO 80112
p. 303.688.0223

Town of Parker
SALISBURY PARK NORTH - PHASE 1
1700 MOTSENBOCKER RD
PARKER, CO 80134

hord | coplan | macht
ARCHITECTURE
LANDSCAPE ARCHITECTURE
PLANNING
INTERIOR DESIGN

Δ	DATE	DESCRIPTION

Project Number:	223072.00
Sheet Issue Date:	2024-10-04
Drawn By:	AMF/MGG/MJS
Checked By:	WTP/CWK/CFG

Drawing
PHASE 1 OVERALL GRADING & DRAINAGE PLAN

C1-100

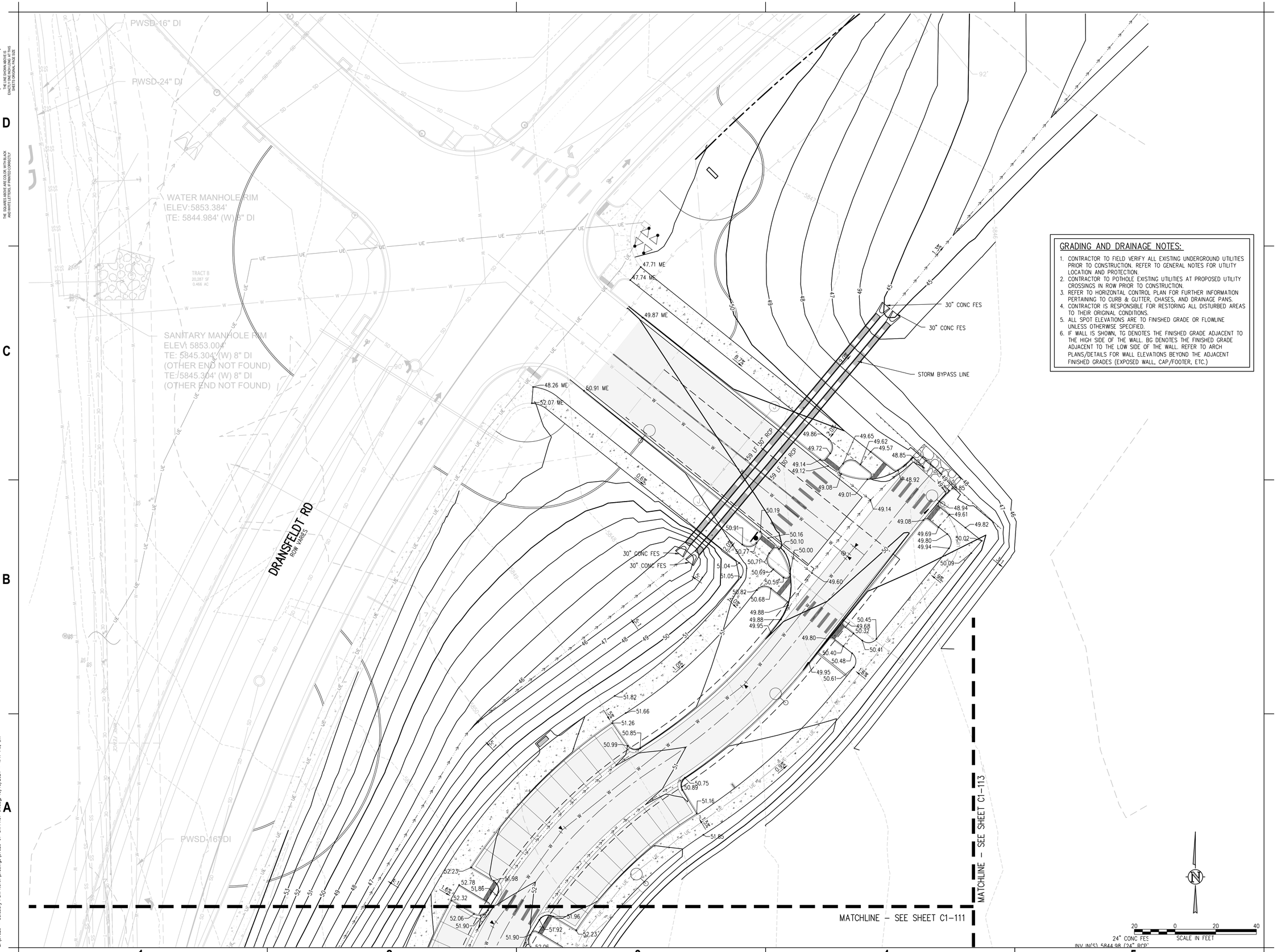
60% CONSTRUCTION DOCUMENTS

© Hord Coplan Macht, Inc.

Q:\3752c – Salisbury Park North\Drawings\3752c-01-GRPPHS1-00.dwg, 10/18/2024 - 4:45 PM, MJS

THE LINE SHOWN ABOVE IS EXACTLY 1" WHEN PLOTTED AT 24x36 SHEETS ORIGINAL PAGE SIZE

THE SQUARES ABOVE ARE COLOR, WITH BLACK AND WHITE LETTERS, FOR PRINTS CORRECTLY



GRADING AND DRAINAGE NOTES:

1. CONTRACTOR TO FIELD VERIFY ALL EXISTING UNDERGROUND UTILITIES PRIOR TO CONSTRUCTION. REFER TO GENERAL NOTES FOR UTILITY LOCATION AND PROTECTION.
2. CONTRACTOR TO POTHOLE EXISTING UTILITIES AT PROPOSED UTILITY CROSSINGS IN ROW PRIOR TO CONSTRUCTION.
3. REFER TO HORIZONTAL CONTROL PLAN FOR FURTHER INFORMATION PERTAINING TO CURB & GUTTER, CHASES, AND DRAINAGE PANS.
4. CONTRACTOR IS RESPONSIBLE FOR RESTORING ALL DISTURBED AREAS TO THEIR ORIGINAL CONDITIONS.
5. ALL SPOT ELEVATIONS ARE TO FINISHED GRADE OR FLOWLINE UNLESS OTHERWISE SPECIFIED.
6. IF WALL IS SHOWN, TG DENOTES THE FINISHED GRADE ADJACENT TO THE HIGH SIDE OF THE WALL. BG DENOTES THE FINISHED GRADE ADJACENT TO THE LOW SIDE OF THE WALL. REFER TO ARCH PLANS/DETAILS FOR WALL ELEVATIONS BEYOND THE ADJACENT FINISHED GRADES (EXPOSED WALL, CAP/FOOTER, ETC.)

20 0 20 40
SCALE IN FEET

hord | coplan | macht
LANDSCAPE ARCHITECT / ARCHITECT
1800 Wazee St., Suite 450
Denver, CO 80202
p. 303.607.0977

CIVIL ENGINEER / STRUCTURAL ENGINEER
JVA Incorporated
1675 Larimer Street, #500
Denver, CO 80202
p. 303.444.1951

ELECTRICAL ENGINEER
Ackerman Engineering, Inc.
3000 Youngfield Street, #264
Wheat Ridge, CO 80215
p. 303.278.7297

IRRIGATION
Avocet Irrigation
11757 W. Ken Caryl Ave., Suite F-509
Littleton, CO 80127
p. 303.986.2175

MECHANICAL ENGINEER
ENVISION Mechanical Engineers, Inc.
9777 Pyramid Court, #260
Englewood, CO 80112
p. 303.668.0223

Town of Parker
SALISBURY PARK NORTH - PHASE 1
1700 MOTSENBOCKER RD
PARKER, CO 80134

hord | coplan | macht
ARCHITECTURE
LANDSCAPE ARCHITECTURE
PLANNING
INTERIOR DESIGN

Δ	DATE	DESCRIPTION

Project Number:	223072.00
Sheet Issue Date:	2024-10-04
Drawn By:	AMF/MGG/MJS
Checked By:	WTP/CWK/CFG

Drawing
PHASE 1 DETAILED GRADING & DRAINAGE PLAN

C1-110

60% CONSTRUCTION DOCUMENTS

© Hord Coplan Macht, Inc.

Q:\3752c – Salisbury Park North\Drawings\3752c–01–GRPHIS1–01.dwg, 10/18/2024 – 4:47 PM, WTP

THE LINE SHOWN ABOVE IS ENTIRELY YELLOW WHEN PLOTTING SHEETS ORIGINAL PAGE SIZE

THE SQUARES ABOVE ARE COLOR, WITH BLACK ANTI-WILLETTING, PRINTS CORRECTLY

MATCHLINE – SEE SHEET C1–110

MATCHLINE – SEE SHEET C1–113

MATCHLINE – SEE SHEET C1–114

MATCHLINE – SEE SHEET C1–112

GRADING AND DRAINAGE NOTES:

1. CONTRACTOR TO FIELD VERIFY ALL EXISTING UNDERGROUND UTILITIES PRIOR TO CONSTRUCTION. REFER TO GENERAL NOTES FOR UTILITY LOCATION AND PROTECTION.
2. CONTRACTOR TO POTHOLE EXISTING UTILITIES AT PROPOSED UTILITY CROSSINGS IN ROW PRIOR TO CONSTRUCTION.
3. REFER TO HORIZONTAL CONTROL PLAN FOR FURTHER INFORMATION PERTAINING TO CURB & GUTTER, CHASES, AND DRAINAGE PANS.
4. CONTRACTOR IS RESPONSIBLE FOR RESTORING ALL DISTURBED AREAS TO THEIR ORIGINAL CONDITIONS.
5. ALL SPOT ELEVATIONS ARE TO FINISHED GRADE OR FLOWLINE UNLESS OTHERWISE SPECIFIED.
6. IF WALL IS SHOWN, TG DENOTES THE FINISHED GRADE ADJACENT TO THE HIGH SIDE OF THE WALL. BG DENOTES THE FINISHED GRADE ADJACENT TO THE LOW SIDE OF THE WALL. REFER TO ARCH PLANS/DETAILS FOR WALL ELEVATIONS BEYOND THE ADJACENT FINISHED GRADES (EXPOSED WALL, CAP/FOOTER, ETC.)

30" CONC FES

30" CONC FES

670 LF 30" RCP

663 LF 30" RCP

270 LF 15" PERF HDPE

SD CLEANOUT
RIM 5852.91

SYNTHETIC TURF
FLAT DRAIN (TYP)

SYNTHETIC TURF
MULTI-USE FIELDS
(RE: LSCAPE)

0.5%

2.0%

SCALE IN FEET
20 0 20 40

hord | coplan | macht
LANDSCAPE ARCHITECT / ARCHITECT
1800 Wazee St., Suite 450
Denver, CO 80202
p. 303.607.0977

CIVIL ENGINEER / STRUCTURAL ENGINEER
JVA Incorporated
1675 Larimer Street, #500
Denver, CO 80202
p. 303.444.1951

ELECTRICAL ENGINEER
Ackerman Engineering, Inc.
3000 Youngfield Street, #264
Wheat Ridge, CO 80215
p. 303.278.7297

IRRIGATION
Avocet Irrigation
11757 W. Ken Caryl Ave., Suite F-509
Littleton, CO 80127
p. 303.986.2175

MECHANICAL ENGINEER
ENVISION Mechanical Engineers, Inc.
9777 Pyramid Court, #260
Englewood, CO 80112
p. 303.688.0223

Town of Parker
SALISBURY PARK NORTH - PHASE 1
1700 MOTSENBOCKER RD
PARKER, CO 80134

hord | coplan | macht
ARCHITECTURE
LANDSCAPE ARCHITECTURE
PLANNING
INTERIOR DESIGN

Δ	DATE	DESCRIPTION

Project Number:	223072.00
Sheet Issue Date:	2024-10-04
Drawn By:	AMF/MGG/MJS
Checked By:	WTP/CWK/CFG

Drawing

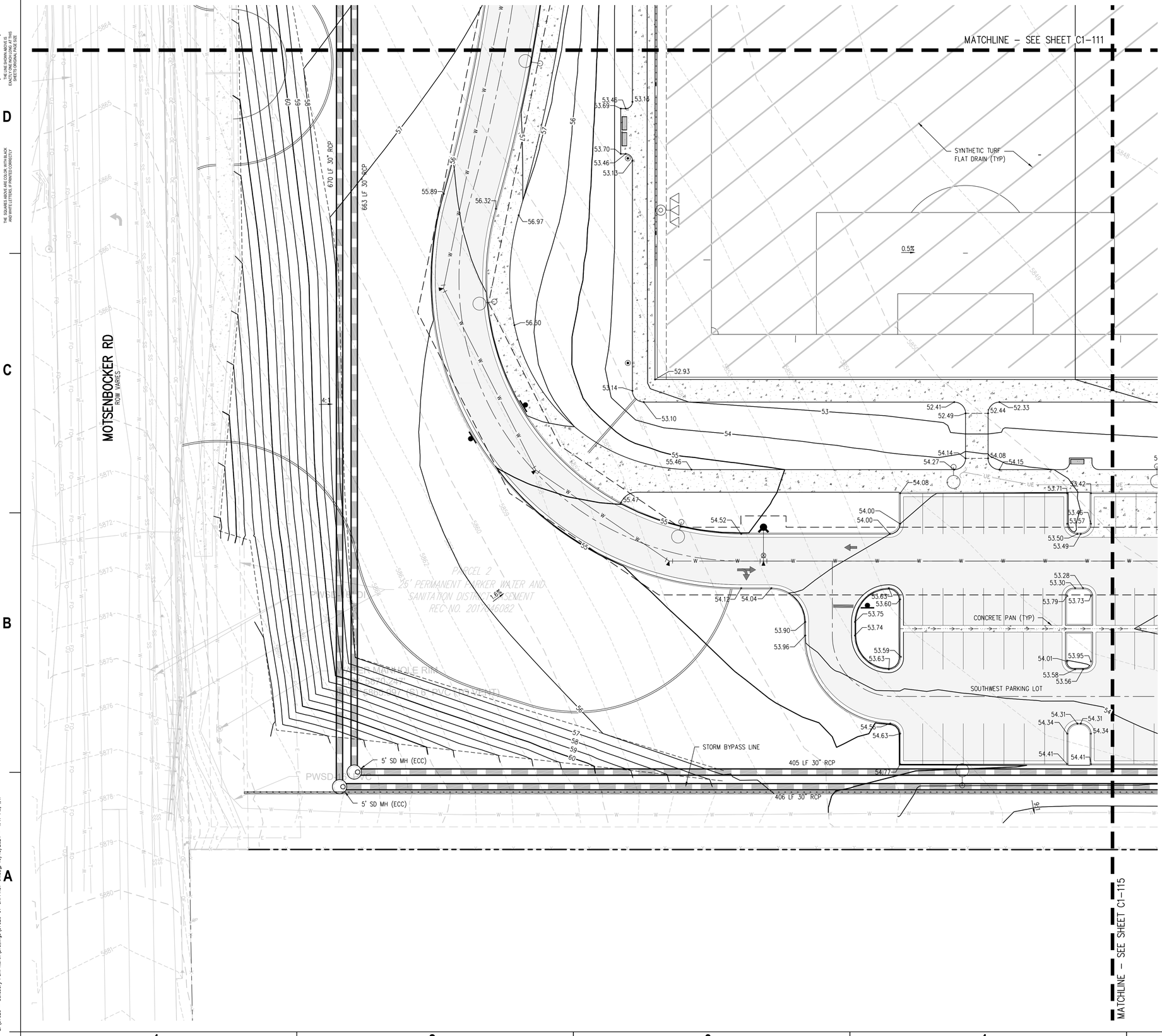
PHASE 1 DETAILED GRADING & DRAINAGE PLAN

C1-111

60% CONSTRUCTION DOCUMENTS

© Hord Coplan Macht, Inc.

Q:\3752c – Salisbury Park North\Drawings\3752c-01-GRPPHS1-01.dwg, 10/18/2024 - 4:47 PM, WTP



GRADING AND DRAINAGE NOTES:

1. CONTRACTOR TO FIELD VERIFY ALL EXISTING UNDERGROUND UTILITIES PRIOR TO CONSTRUCTION. REFER TO GENERAL NOTES FOR UTILITY LOCATION AND PROTECTION.
2. CONTRACTOR TO POTHOLE EXISTING UTILITIES AT PROPOSED UTILITY CROSSINGS IN ROW PRIOR TO CONSTRUCTION.
3. REFER TO HORIZONTAL CONTROL PLAN FOR FURTHER INFORMATION PERTAINING TO CURB & GUTTER, CHASES, AND DRAINAGE PANS.
4. CONTRACTOR IS RESPONSIBLE FOR RESTORING ALL DISTURBED AREAS TO THEIR ORIGINAL CONDITIONS.
5. ALL SPOT ELEVATIONS ARE TO FINISHED GRADE OR FLOWLINE UNLESS OTHERWISE SPECIFIED.
6. IF WALL IS SHOWN, TG DENOTES THE FINISHED GRADE ADJACENT TO THE HIGH SIDE OF THE WALL. BG DENOTES THE FINISHED GRADE ADJACENT TO THE LOW SIDE OF THE WALL. REFER TO ARCH PLANS/DETAILS FOR WALL ELEVATIONS BEYOND THE ADJACENT FINISHED GRADES (EXPOSED WALL, CAP/FOOTER, ETC.)

hord | coplan | macht
LANDSCAPE ARCHITECT / ARCHITECT
1800 Wazee St., Suite 450
Denver, CO 80202
p. 303.607.0977

CIVIL ENGINEER / STRUCTURAL ENGINEER
JVA Incorporated
1675 Larimer Street, #500
Denver, CO 80202
p. 303.444.1951

ELECTRICAL ENGINEER
Ackerman Engineering, Inc.
3000 Youngfield Street, #264
Wheat Ridge, CO 80215
p. 303.278.7297

IRRIGATION
Avocet Irrigation
11757 W. Ken Caryl Ave., Suite F-509
Littleton, CO 80127
p. 303.986.2175

MECHANICAL ENGINEER
ENVISION Mechanical Engineers, Inc.
9777 Pyramid Court, #260
Englewood, CO 80112
p. 303.668.0223

Town of Parker
SALISBURY PARK NORTH - PHASE 1
1700 MOTSENBOCKER RD
PARKER, CO 80134

hord | coplan | macht
ARCHITECTURE
LANDSCAPE ARCHITECTURE
PLANNING
INTERIOR DESIGN

Δ	DATE	DESCRIPTION

Project Number:	223072.00
Sheet Issue Date:	2024-10-04
Drawn By:	AMF/MGG/MJS
Checked By:	WTP/CWK/CFG

Drawing
PHASE 1 DETAILED GRADING & DRAINAGE PLAN

C1-112

60% CONSTRUCTION DOCUMENTS

© Hord Coplan Macht, Inc.

THE LINE SHOWN ABOVE IS EXACTLY 1" WHEN PLOTTED ON ANSI D SHEETS ORIGINAL PAGE SIZE

THE SQUARES ABOVE ARE COLOR, WITH BLACK AND WHITE LETTERS, FOR PRINTED CLARITY

Q:\3752c – Salisbury Park North\Drawings\3752c-01-GRPPHS1-01.dwg, 10/18/2024 - 4:47 PM, WTP

THE LINE SHOWN ABOVE IS EXACTLY 1" WHEN PLOTTED AT FULL SHEETS ORIGINAL PAGE SIZE

THE SQUARES ABOVE ARE COLOR, WITH BLACK AND WHITE LETTERS, IF PRINTED CORRECTLY

GRADING AND DRAINAGE NOTES:

1. CONTRACTOR TO FIELD VERIFY ALL EXISTING UNDERGROUND UTILITIES PRIOR TO CONSTRUCTION. REFER TO GENERAL NOTES FOR UTILITY LOCATION AND PROTECTION.
2. CONTRACTOR TO POTHOLE EXISTING UTILITIES AT PROPOSED UTILITY CROSSINGS IN ROW PRIOR TO CONSTRUCTION.
3. REFER TO HORIZONTAL CONTROL PLAN FOR FURTHER INFORMATION PERTAINING TO CURB & GUTTER, CHASES, AND DRAINAGE PANS.
4. CONTRACTOR IS RESPONSIBLE FOR RESTORING ALL DISTURBED AREAS TO THEIR ORIGINAL CONDITIONS.
5. ALL SPOT ELEVATIONS ARE TO FINISHED GRADE OR FLOWLINE UNLESS OTHERWISE SPECIFIED.
6. IF WALL IS SHOWN, TG DENOTES THE FINISHED GRADE ADJACENT TO THE HIGH SIDE OF THE WALL. BG DENOTES THE FINISHED GRADE ADJACENT TO THE LOW SIDE OF THE WALL. REFER TO ARCH PLANS/DETAILS FOR WALL ELEVATIONS BEYOND THE ADJACENT FINISHED GRADES (EXPOSED WALL, CAP/FOOTER, ETC.)

MATCHLINE – SEE SHEET C1–110

MATCHLINE – SEE SHEET C1–111

MATCHLINE – SEE SHEET C1–116

MATCHLINE – SEE SHEET C1–117

MATCHLINE – SEE SHEET C1–114

24" CONC FES
INV IN(S) 5844.98 (24" RCP)

136 LF 24" RCP

1.4%

0.5%

1.0%

1.3%

49.42

51.07

51.41

51.56

50.59

50.43

50.18

20 0 20 40
SCALE IN FEET

hord | coplan | macht
LANDSCAPE ARCHITECT / ARCHITECT
1800 Wazee St., Suite 450
Denver, CO 80202
p. 303.607.0977

CIVIL ENGINEER / STRUCTURAL ENGINEER
JVA Incorporated
1675 Larimer Street, #500
Denver, CO 80202
p. 303.444.1951

ELECTRICAL ENGINEER
Ackerman Engineering, Inc.
3000 Youngfield Street, #264
Wheat Ridge, CO 80215
p. 303.278.7297

IRRIGATION
Avocet Irrigation
11757 W. Ken Caryl Ave., Suite F-509
Littleton, CO 80127
p. 303.986.2175

MECHANICAL ENGINEER
ENVISION Mechanical Engineers, Inc.
9777 Pyramid Court, #260
Englewood, CO 80112
p. 303.668.0223

Town of Parker
SALISBURY PARK NORTH - PHASE 1
1700 MOTSENBOCKER RD
PARKER, CO 80134

hord | coplan | macht
ARCHITECTURE
LANDSCAPE ARCHITECTURE
PLANNING
INTERIOR DESIGN

Δ	DATE	DESCRIPTION

Project Number:	223072.00
Sheet Issue Date:	2024-10-04
Drawn By:	AMF/MGG/MJS
Checked By:	WTP/CWK/CFG

Drawing
PHASE 1 DETAILED GRADING & DRAINAGE PLAN

C1-113

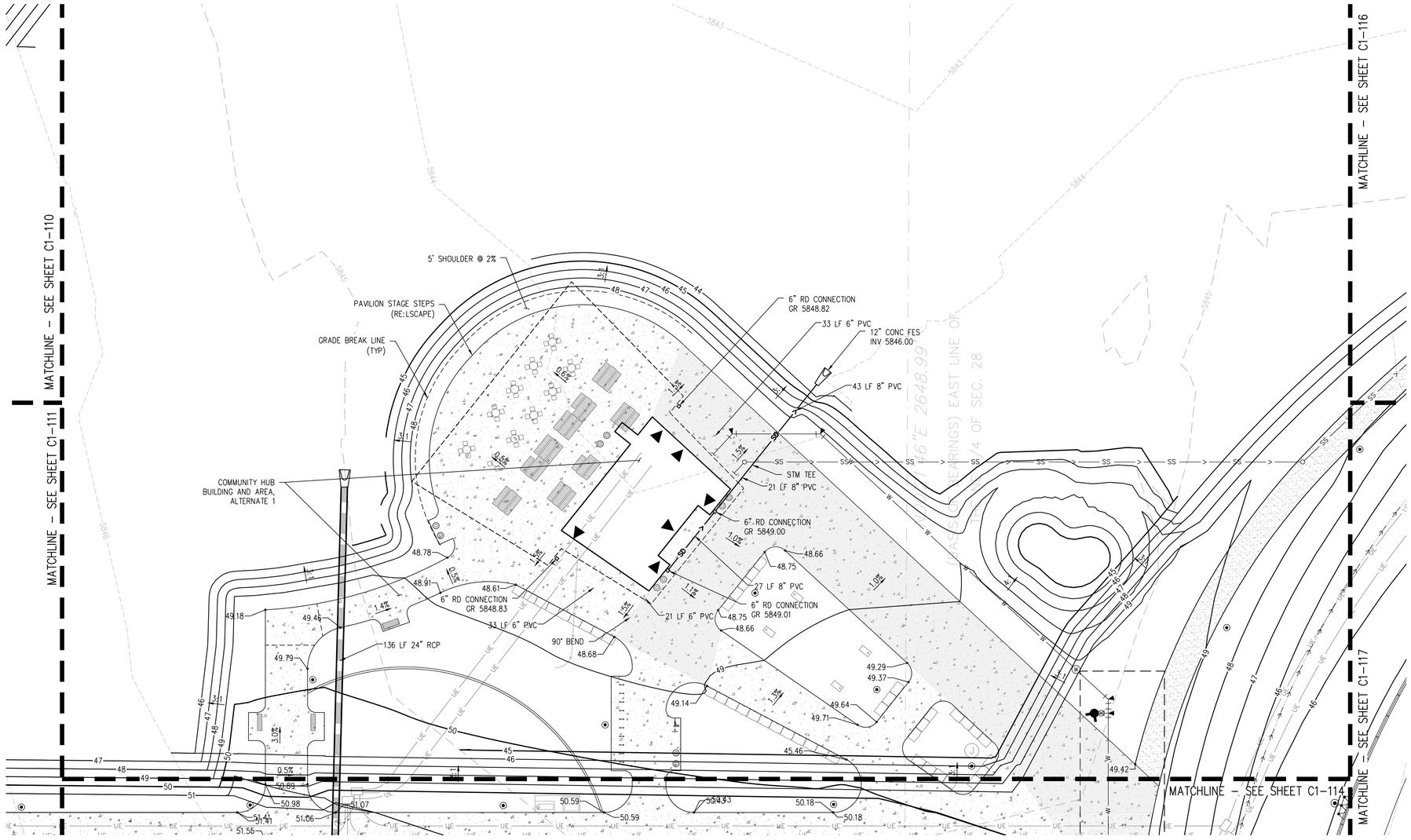
60% CONSTRUCTION DOCUMENTS

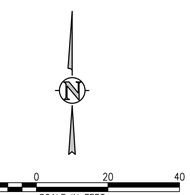
© Hord Coplan Macht, Inc.

Q:\3752c – Salisbury Park North\Drawings\3752c-01-GRPPHS1-01.dwg, 10/15/2024 – 4:48 PM, WTP

GRADING AND DRAINAGE NOTES:

1. CONTRACTOR TO FIELD VERIFY ALL EXISTING UNDERGROUND UTILITIES PRIOR TO CONSTRUCTION. REFER TO GENERAL NOTES FOR UTILITY LOCATION AND PROTECTION.
2. CONTRACTOR TO POTHOLE EXISTING UTILITIES AT PROPOSED UTILITY CROSSINGS IN ROW PRIOR TO CONSTRUCTION.
3. REFER TO HORIZONTAL CONTROL PLAN FOR FURTHER INFORMATION PERTAINING TO CURB & GUTTER, CHASES, AND DRAINAGE PANS.
4. CONTRACTOR IS RESPONSIBLE FOR RESTORING ALL DISTURBED AREAS TO THEIR ORIGINAL CONDITIONS.
5. ALL SPOT ELEVATIONS ARE TO FINISHED GRADE OR FLOWLINE UNLESS OTHERWISE SPECIFIED.
6. IF WALL IS SHOWN, TG DENOTES THE FINISHED GRADE ADJACENT TO THE HIGH SIDE OF THE WALL. BG DENOTES THE FINISHED GRADE ADJACENT TO THE LOW SIDE OF THE WALL. REFER TO ARCH PLANS/DETAILS FOR WALL ELEVATIONS BEYOND THE ADJACENT FINISHED GRADES (EXPOSED WALL, CAP/FOOTER, ETC.)





hord | coplan | macht
LANDSCAPE ARCHITECT / ARCHITECT
1800 Wazee St., Suite 450
Denver, CO 80202
p. 303.607.0977

CIVIL ENGINEER / STRUCTURAL ENGINEER
JVA Incorporated
1675 Larimer Street, #500
Denver, CO 80202
p. 303.444.1951

ELECTRICAL ENGINEER
Ackerman Engineering, Inc.
3000 Youngfield Street, #264
Wheat Ridge, CO 80215
p. 303.278.7297

IRRIGATION
Avocet Irrigation
11757 W. Ken Caryl Ave., Suite F-509
Littleton, CO 80127
p. 303.986.2175

MECHANICAL ENGINEER
ENVISION Mechanical Engineers, Inc.
9777 Pyramid Court, #260
Englewood, CO 80112
p. 303.668.0223

Town of Parker
SALISBURY PARK NORTH - PHASE 1
1700 MOTSENBOCKER RD
PARKER, CO 80134

hord | coplan | macht
ARCHITECTURE
LANDSCAPE ARCHITECTURE
PLANNING
INTERIOR DESIGN

Δ	DATE	DESCRIPTION

Project Number:	223072.00
Sheet Issue Date:	2024-10-04
Drawn By:	AMF/MGG/MJS
Checked By:	WTP/CWK/CFG

Drawing

PHASE 1 DETAILED GRADING AD DRAINAGE PLAN ALTERNATE 1

C1-113A

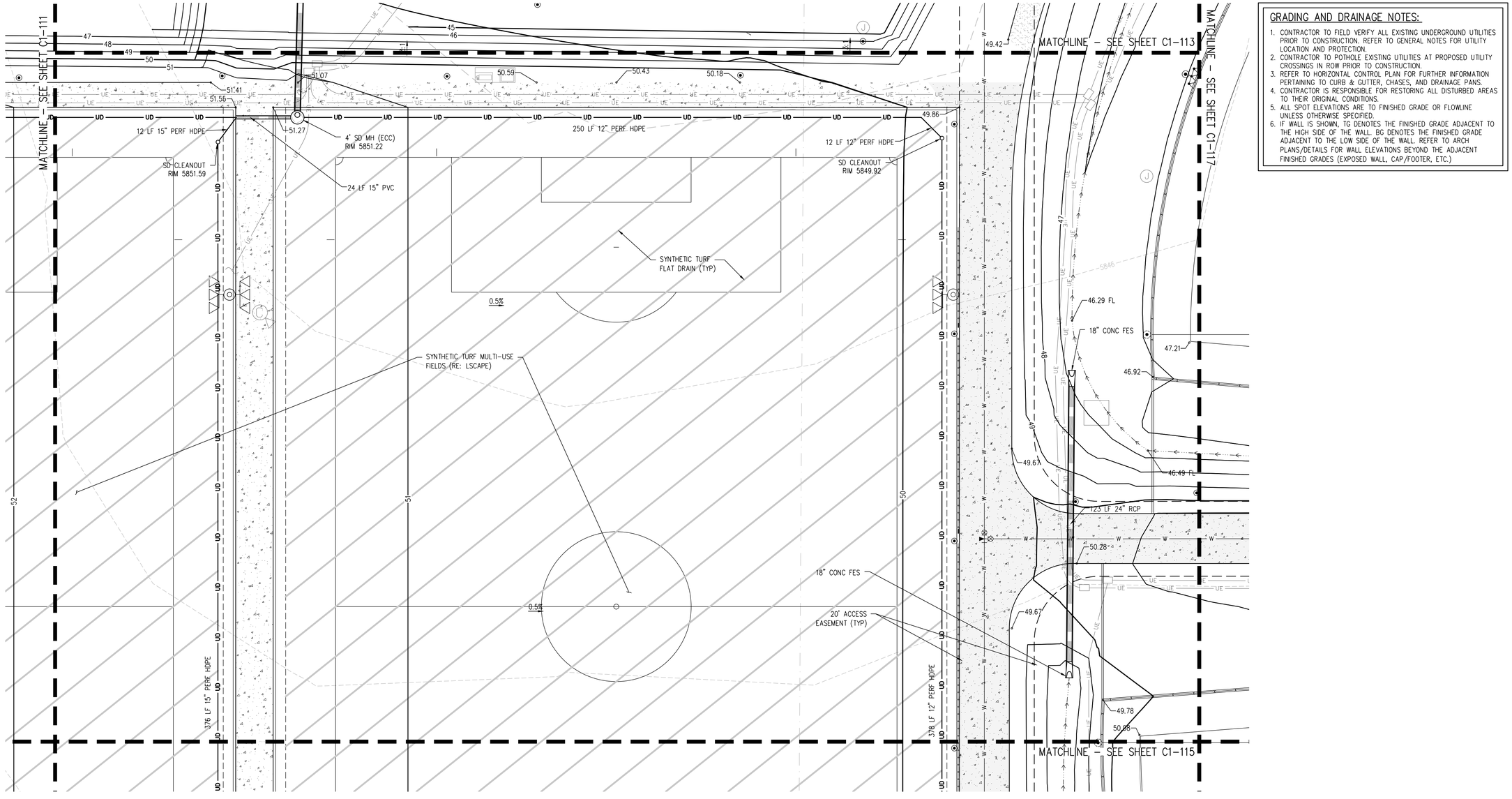
60% CONSTRUCTION DOCUMENTS

© Hord Coplan Macht, Inc.

THE LINE SHOWN ABOVE IS EXACTLY ONE INCH LONG ON ARCH D SHEETS ORIGINAL PAGE SIZE

THE SQUARES ABOVE ARE COLOR, WITH BLACK AND WHITE LETTERS, IF PRINTED CORRECTLY

Q:\3752c - Salisbury Park North\Drawings\3752c-01-GRPPHS1-01.dwg, 10/18/2024 - 4:48 PM, WTP



GRADING AND DRAINAGE NOTES:

1. CONTRACTOR TO FIELD VERIFY ALL EXISTING UNDERGROUND UTILITIES PRIOR TO CONSTRUCTION. REFER TO GENERAL NOTES FOR UTILITY LOCATION AND PROTECTION.
2. CONTRACTOR TO POTHOLE EXISTING UTILITIES AT PROPOSED UTILITY CROSSINGS IN ROW PRIOR TO CONSTRUCTION.
3. REFER TO HORIZONTAL CONTROL PLAN FOR FURTHER INFORMATION PERTAINING TO CURB & GUTTER, CHASES, AND DRAINAGE PANS.
4. CONTRACTOR IS RESPONSIBLE FOR RESTORING ALL DISTURBED AREAS TO THEIR ORIGINAL CONDITIONS.
5. ALL SPOT ELEVATIONS ARE TO FINISHED GRADE OR FLOWLINE UNLESS OTHERWISE SPECIFIED.
6. IF WALL IS SHOWN, TG DENOTES THE FINISHED GRADE ADJACENT TO THE HIGH SIDE OF THE WALL. BG DENOTES THE FINISHED GRADE ADJACENT TO THE LOW SIDE OF THE WALL. REFER TO ARCH PLANS/DETAILS FOR WALL ELEVATIONS BEYOND THE ADJACENT FINISHED GRADES (EXPOSED WALL, CAP/FOOTER, ETC.)

N

20 0 20 40
SCALE IN FEET

hord | coplan | macht
LANDSCAPE ARCHITECT / ARCHITECT
1800 Wazee St., Suite 450
Denver, CO 80202
p. 303.607.0977

CIVIL ENGINEER / STRUCTURAL ENGINEER
JVA Incorporated
1675 Larimer Street, #500
Denver, CO 80202
p. 303.444.1951

ELECTRICAL ENGINEER
Ackerman Engineering, Inc.
3000 Youngfield Street, #264
Wheat Ridge, CO 80215
p. 303.278.7297

IRRIGATION
Avocet Irrigation
11757 W. Ken Caryl Ave., Suite F-509
Littleton, CO 80127
p. 303.986.2175

MECHANICAL ENGINEER
ENVISION Mechanical Engineers, Inc.
9777 Pyramid Court, #260
Englewood, CO 80112
p. 303.688.0223

Town of Parker
SALISBURY PARK NORTH - PHASE 1
1700 MOTSENBOCKER RD
PARKER, CO 80134

hord | coplan | macht
ARCHITECTURE
LANDSCAPE ARCHITECTURE
PLANNING
INTERIOR DESIGN

Δ	DATE	DESCRIPTION

Project Number:	223072.00
Sheet Issue Date:	2024-10-04
Drawn By:	AMF/MGG/MJS
Checked By:	WTP/CWK/CFG

Drawing
PHASE 1 DETAILED GRADING & DRAINAGE PLAN

C1-114

60% CONSTRUCTION DOCUMENTS

© Hord Coplan Macht, Inc.

THE LINE SHOWN ABOVE IS EQUAL TO 1" ON ALL DRAWINGS SHEETS ORIGINAL PAGE SIZE

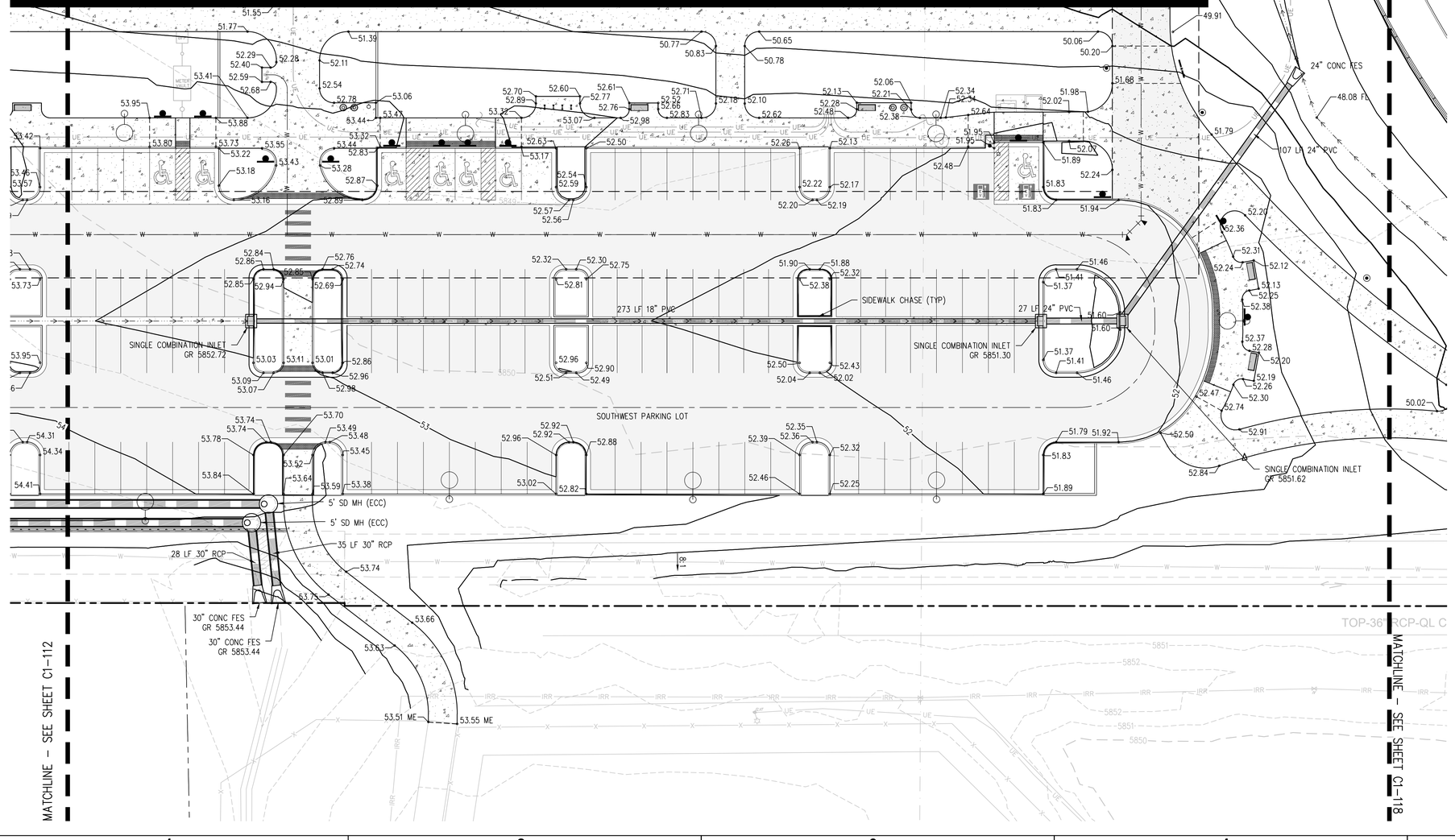
THE SQUARES ABOVE ARE COLOR, WITH BLACK AND WHITE FILTERS, A PRINTS CORRECTLY

Q:\3752c - Salisbury Park North\Drawings\3752c--01--GRPPHS1-01.dwg, 10/18/2024 - 4:48 PM, WTP

THE LINE SHOWN ABOVE IS EQUAL TO 1" WHEN PLOTTING SHEETS ORIGINAL PAGE SIZE

THE SQUARES ABOVE ARE COLOR, WITH BLACK ANYTHING ELSE IS A PRINTING ERROR

MATCHLINE – SEE SHEET C1-114



GRADING AND DRAINAGE NOTES:

1. CONTRACTOR TO FIELD VERIFY ALL EXISTING UNDERGROUND UTILITIES PRIOR TO CONSTRUCTION. REFER TO GENERAL NOTES FOR UTILITY LOCATION AND PROTECTION.
2. CONTRACTOR TO POTHOLE EXISTING UTILITIES AT PROPOSED UTILITY CROSSINGS IN ROW PRIOR TO CONSTRUCTION.
3. REFER TO HORIZONTAL CONTROL PLAN FOR FURTHER INFORMATION PERTAINING TO CURB & GUTTER, CHASES, AND DRAINAGE PANS.
4. CONTRACTOR IS RESPONSIBLE FOR RESTORING ALL DISTURBED AREAS TO THEIR ORIGINAL CONDITIONS.
5. ALL SPOT ELEVATIONS ARE TO FINISHED GRADE OR FLOWLINE UNLESS OTHERWISE SPECIFIED.
6. IF WALL IS SHOWN, TG DENOTES THE FINISHED GRADE ADJACENT TO THE HIGH SIDE OF THE WALL. BG DENOTES THE FINISHED GRADE ADJACENT TO THE LOW SIDE OF THE WALL. REFER TO ARCH PLANS/DETAILS FOR WALL ELEVATIONS BEYOND THE ADJACENT FINISHED GRADES (EXPOSED WALL, CAP/FOOTER, ETC.)

SCALE IN FEET: 20 0 20 40

hord | coplan | macht
LANDSCAPE ARCHITECT / ARCHITECT
1800 Wazee St., Suite 450
Denver, CO 80202
p. 303.607.0977

CIVIL ENGINEER / STRUCTURAL ENGINEER
JVA Incorporated
1675 Larimer Street, #500
Denver, CO 80202
p. 303.444.1951

ELECTRICAL ENGINEER
Ackerman Engineering, Inc.
3000 Youngfield Street, #264
Wheat Ridge, CO 80215
p. 303.278.7297

IRRIGATION
Avocet Irrigation
11757 W. Ken Caryl Ave., Suite F-509
Littleton, CO 80127
p. 303.986.2175

MECHANICAL ENGINEER
ENVISION Mechanical Engineers, Inc.
9777 Pyramid Court, #260
Englewood, CO 80112
p. 303.668.0223

Town of Parker
SALISBURY PARK NORTH - PHASE 1
1700 MOTSENBOCKER RD
PARKER, CO 80134

hord | coplan | macht
ARCHITECTURE
LANDSCAPE ARCHITECTURE
PLANNING
INTERIOR DESIGN

Δ	DATE	DESCRIPTION

Project Number:	223072.00
Sheet Issue Date:	2024-10-04
Drawn By:	AMF/MGG/MJS
Checked By:	WTP/CWK/CFG

Drawing
PHASE 1 DETAILED GRADING & DRAINAGE PLAN

C1-115

60% CONSTRUCTION DOCUMENTS

© Hord Coplan Macht, Inc.

Q:\3752c – Salisbury Park North\Drawings\3752c-01-GRPPHS1-01.dwg, 10/18/2024 – 4:49 PM, WTP

THE LINE SHOWN ABOVE IS EQUAL TO ONE INCH ON ALL SHEETS ORIGINAL PAGE SIZE

THE SQUARES ABOVE ARE COLOR, WITH BLACK AND WHITE LETTERS, IF PRINTED CORRECTLY

GRADING AND DRAINAGE NOTES:

1. CONTRACTOR TO FIELD VERIFY ALL EXISTING UNDERGROUND UTILITIES PRIOR TO CONSTRUCTION. REFER TO GENERAL NOTES FOR UTILITY LOCATION AND PROTECTION.
2. CONTRACTOR TO POTHOLE EXISTING UTILITIES AT PROPOSED UTILITY CROSSINGS IN ROW PRIOR TO CONSTRUCTION.
3. REFER TO HORIZONTAL CONTROL PLAN FOR FURTHER INFORMATION PERTAINING TO CURB & GUTTER, CHASES, AND DRAINAGE PANS.
4. CONTRACTOR IS RESPONSIBLE FOR RESTORING ALL DISTURBED AREAS TO THEIR ORIGINAL CONDITIONS.
5. ALL SPOT ELEVATIONS ARE TO FINISHED GRADE OR FLOWLINE UNLESS OTHERWISE SPECIFIED.
6. IF WALL IS SHOWN, TG DENOTES THE FINISHED GRADE ADJACENT TO THE HIGH SIDE OF THE WALL. BG DENOTES THE FINISHED GRADE ADJACENT TO THE LOW SIDE OF THE WALL. REFER TO ARCH PLANS/DETAILS FOR WALL ELEVATIONS BEYOND THE ADJACENT FINISHED GRADES (EXPOSED WALL, CAP/FOOTER, ETC.)

MATCHLINE – SEE SHEET C1–119

MATCHLINE – SEE SHEET C1–113

MATCHLINE – SEE SHEET C1–117

OUTLET STRUCTURE
GR 5845.44

24" CONC FES

45.72 FL

44.59 FL

46.05

46.33

46.93

47.25

LOT 1
2,979,152 SF
68.392 AC

SCALE IN FEET
20 0 20 40

hord | coplan | macht
LANDSCAPE ARCHITECT / ARCHITECT
1800 Wazee St., Suite 450
Denver, CO 80202
p. 303.607.0977

CIVIL ENGINEER / STRUCTURAL ENGINEER
JVA Incorporated
1675 Larimer Street, #500
Denver, CO 80202
p. 303.444.1951

ELECTRICAL ENGINEER
Ackerman Engineering, Inc.
3000 Youngfield Street, #264
Wheat Ridge, CO 80215
p. 303.278.7297

IRRIGATION
Avocet Irrigation
11757 W. Ken Caryl Ave., Suite F-509
Littleton, CO 80127
p. 303.986.2175

MECHANICAL ENGINEER
ENVISION Mechanical Engineers, Inc.
9777 Pyramid Court, #260
Englewood, CO 80112
p. 303.668.0223

Town of Parker
SALISBURY PARK NORTH - PHASE 1
1700 MOTSENBOCKER RD
PARKER, CO 80134

hord | coplan | macht
ARCHITECTURE
LANDSCAPE ARCHITECTURE
PLANNING
INTERIOR DESIGN

Δ	DATE	DESCRIPTION

Project Number:	223072.00
Sheet Issue Date:	2024-10-04
Drawn By:	AMF/MGG/MJS
Checked By:	WTP/CWK/CFG

Drawing
PHASE 1 DETAILED GRADING & DRAINAGE PLAN

C1-116

60% CONSTRUCTION DOCUMENTS

© Hord Coplan Macht, Inc.

THE LINE SHOWN ABOVE IS EQUAL TO ONE INCH ON ALL SHEETS ORIGINAL PAGE SIZE

THE SQUARES ABOVE ARE COLOR, WITH BLACK AND WHITE LETTERS, IF PRINTED CORRECTLY

MATCHLINE – SEE SHEET C1–113

MATCHLINE – SEE SHEET C1–114

MATCHLINE – SEE SHEET C1–116

MATCHLINE – SEE SHEET C1–120

MATCHLINE – SEE SHEET C1–118

BALLFIELD
(RE: LSCAPE)

SIDEWALK CHASE

18" TALL WALL (RE: LSCAPE)

188 LF 8" TRENCH DRAIN

NULL STRUCTURE
INV OUT(E) 5847.44 (4" PVC)

49 LF 4" PVC

6" RD CONNECTION
GR 5850.61
17 LF 6" PVC

6" RD CONNECTION
GR 5850.66

120 LF 4" PVC

78 LF 4" PVC

19 LF 12" PVC

91 LF 4" PVC

112 LF 8" TRENCH DRAIN

18" TALL WALL (RE: LSCAPE)

HQ BLDG
FFE=5853.00' (ARCH 100'-0")

GRADING AND DRAINAGE NOTES:

1. CONTRACTOR TO FIELD VERIFY ALL EXISTING UNDERGROUND UTILITIES PRIOR TO CONSTRUCTION. REFER TO GENERAL NOTES FOR UTILITY LOCATION AND PROTECTION.
2. CONTRACTOR TO POTHOLE EXISTING UTILITIES AT PROPOSED UTILITY CROSSINGS IN ROW PRIOR TO CONSTRUCTION.
3. REFER TO HORIZONTAL CONTROL PLAN FOR FURTHER INFORMATION PERTAINING TO CURB & GUTTER, CHASES, AND DRAINAGE PANS.
4. CONTRACTOR IS RESPONSIBLE FOR RESTORING ALL DISTURBED AREAS TO THEIR ORIGINAL CONDITIONS.
5. ALL SPOT ELEVATIONS ARE TO FINISHED GRADE OR FLOWLINE UNLESS OTHERWISE SPECIFIED.
6. IF WALL IS SHOWN, TG DENOTES THE FINISHED GRADE ADJACENT TO THE HIGH SIDE OF THE WALL. BG DENOTES THE FINISHED GRADE ADJACENT TO THE LOW SIDE OF THE WALL. REFER TO ARCH PLANS/DETAILS FOR WALL ELEVATIONS BEYOND THE ADJACENT FINISHED GRADES (EXPOSED WALL, CAP/FOOTER, ETC.)

SCALE IN FEET
20 0 20 40

hord | coplan | macht
LANDSCAPE ARCHITECT / ARCHITECT
1800 Wazee St., Suite 450
Denver, CO 80202
p. 303.607.0977

CIVIL ENGINEER / STRUCTURAL ENGINEER
JVA Incorporated
1675 Larimer Street, #500
Denver, CO 80202
p. 303.444.1951

ELECTRICAL ENGINEER
Ackerman Engineering, Inc.
3000 Youngfield Street, #264
Wheat Ridge, CO 80215
p. 303.278.7297

IRRIGATION
Avocet Irrigation
11757 W. Ken Caryl Ave., Suite F-509
Littleton, CO 80127
p. 303.986.2175

MECHANICAL ENGINEER
ENVISION Mechanical Engineers, Inc.
9777 Pyramid Court, #260
Englewood, CO 80112
p. 303.688.0223

Town of Parker
SALISBURY PARK NORTH - PHASE 1
1700 MOTSENBOCKER RD
PARKER, CO 80134

hord | coplan | macht
ARCHITECTURE
LANDSCAPE ARCHITECTURE
PLANNING
INTERIOR DESIGN

Δ	DATE	DESCRIPTION

Project Number:	223072.00
Sheet Issue Date:	2024-10-04
Drawn By:	AMF/MGG/MJS
Checked By:	WTP/CWK/CFG

Drawing
PHASE 1 DETAILED GRADING & DRAINAGE PLAN

C1-117

60% CONSTRUCTION DOCUMENTS

© Hord Coplan Macht, Inc.

Q:\3752c – Salisbury Park North\Drawings\3752c–01–GRPPHS1–01.dwg, 10/18/2024 – 4:49 PM, WTP

THE LINE SHOWN ABOVE IS EXACTLY 1" WHEN PLOTTED ON ANSI D SHEETS ORIGINAL PAGE SIZE

THE SQUARES ABOVE ARE COLOR, WITH BLACK AND WHITE LETTERS, FOR PRINTS CORRECTLY

MATCHLINE – SEE SHEET C1-117

MATCHLINE – SEE SHEET C1-119

GRADING AND DRAINAGE NOTES:

1. CONTRACTOR TO FIELD VERIFY ALL EXISTING UNDERGROUND UTILITIES PRIOR TO CONSTRUCTION. REFER TO GENERAL NOTES FOR UTILITY LOCATION AND PROTECTION.
2. CONTRACTOR TO POTHOLE EXISTING UTILITIES AT PROPOSED UTILITY CROSSINGS IN ROW PRIOR TO CONSTRUCTION.
3. REFER TO HORIZONTAL CONTROL PLAN FOR FURTHER INFORMATION PERTAINING TO CURB & GUTTER, CHASES, AND DRAINAGE PANS.
4. CONTRACTOR IS RESPONSIBLE FOR RESTORING ALL DISTURBED AREAS TO THEIR ORIGINAL CONDITIONS.
5. ALL SPOT ELEVATIONS ARE TO FINISHED GRADE OR FLOWLINE UNLESS OTHERWISE SPECIFIED.
6. IF WALL IS SHOWN, TG DENOTES THE FINISHED GRADE ADJACENT TO THE HIGH SIDE OF THE WALL. BG DENOTES THE FINISHED GRADE ADJACENT TO THE LOW SIDE OF THE WALL. REFER TO ARCH PLANS/DETAILS FOR WALL ELEVATIONS BEYOND THE ADJACENT FINISHED GRADES (EXPOSED WALL, CAP/FOOTER, ETC.)

MATCHLINE – SEE SHEET C1-121

MATCHLINE – SEE SHEET C1-122

BALLFIELD
(RE: LSCAPE)

PARCEL 3
25' PERMANENT FARMER WATER AND SANITATION DISTRICT EASEMENT
REC NO. 2017046082

STORM MANHOLE RIM
ELEV:5854.644'
INV OUT: 5846.334' (S) 36" RCP
NO FLOW

STORM MANHOLE RIM
ELEV:5852.875'
INV IN: 5847.375' (W) 36" RCP
INV OUT: 5847.325' (S) 36" RCP
NO FLOW

STORM MANHOLE RIM
ELEV:5852.775'
INV IN: 5847.925' (S) 36" RCP

PWSD-16" PVC

TOP-36" RCP-QL C

TOP-36" RCP

TOP-36" RCP

ONC TES

N INLET

48.08 FL

50.76 FL

49.58 FL

48.77 FL

51.84 51.80 51.74 51.43 50.94 50.76 50.66 50.69 FL 50.49 50.57 50.75 50.78 50.62 50.88 50.08 50.02 49.89 50.02 50.61 49.79 52.37 53.85 53.99 54.01 54.25 54.19 54.32 54.20 54.05 49.30 49.11 53.50 53.39 ???.??? ???.???

20 0 20 40
SCALE IN FEET

hord | coplan | macht
LANDSCAPE ARCHITECT / ARCHITECT
1800 Wazee St., Suite 450
Denver, CO 80202
p. 303.607.0977

CIVIL ENGINEER / STRUCTURAL ENGINEER
JVA Incorporated
1675 Larimer Street, #500
Denver, CO 80202
p. 303.444.1951

ELECTRICAL ENGINEER
Ackerman Engineering, Inc.
3000 Youngfield Street, #264
Wheat Ridge, CO 80215
p. 303.278.7297

IRRIGATION
Avocet Irrigation
11757 W. Ken Caryl Ave., Suite F-509
Littleton, CO 80127
p. 303.986.2175

MECHANICAL ENGINEER
ENVISION Mechanical Engineers, Inc.
9777 Pyramid Court, #260
Englewood, CO 80112
p. 303.668.0223

Town of Parker
SALISBURY PARK NORTH - PHASE 1
1700 MOTSENBOCKER RD
PARKER, CO 80134

hord | coplan | macht
ARCHITECTURE
LANDSCAPE ARCHITECTURE
PLANNING
INTERIOR DESIGN

Δ	DATE	DESCRIPTION

Project Number:	223072.00
Sheet Issue Date:	2024-10-04
Drawn By:	AMF/MGG/MJS
Checked By:	WTP/CWK/CFG

Drawing
PHASE 1 DETAILED GRADING & DRAINAGE PLAN

C1-118

60% CONSTRUCTION DOCUMENTS

© Hord Coplan Macht, Inc.

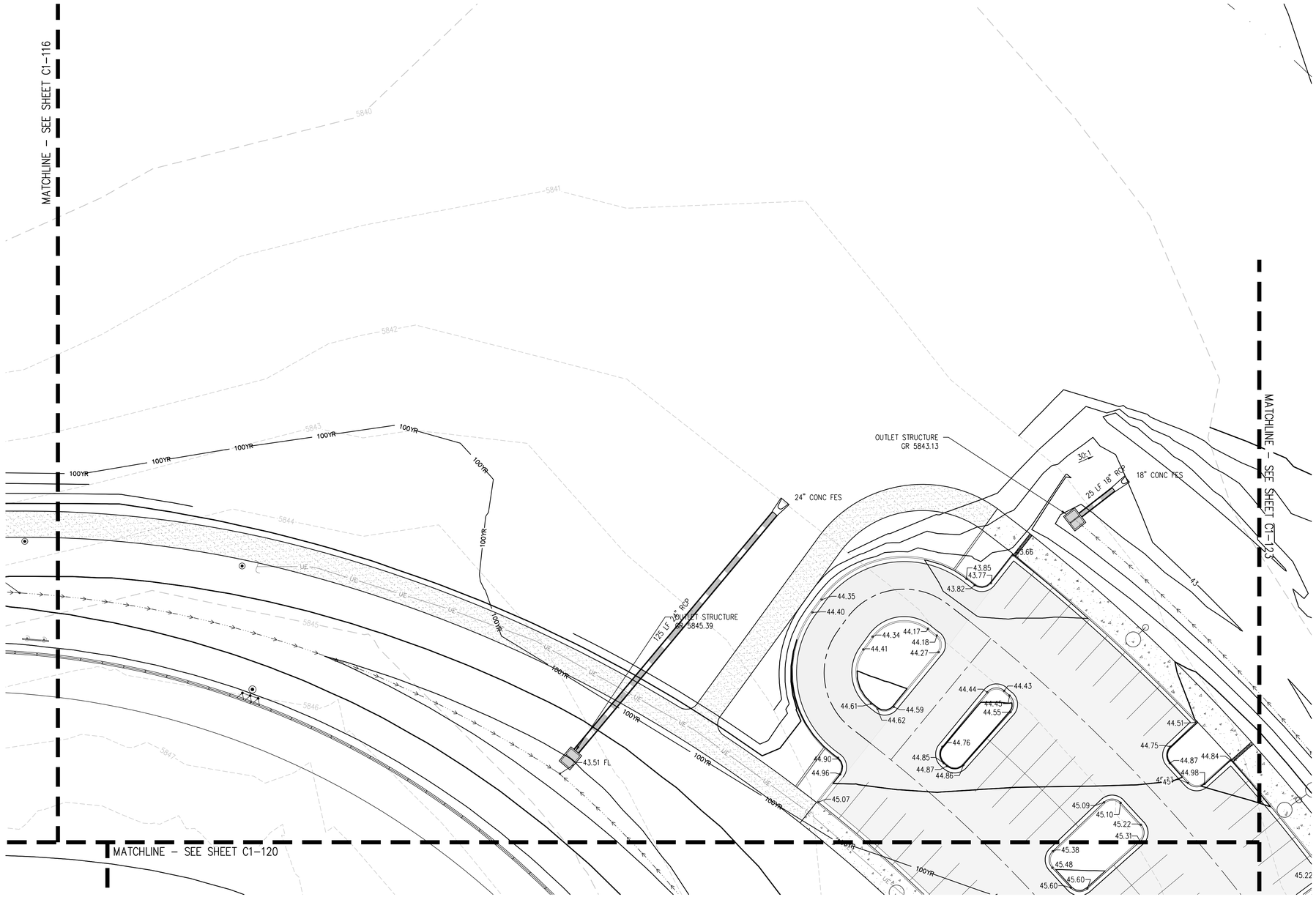
Q:\3752c – Salisbury Park North\Drawings\3752c-01-GRPPHS1-01.dwg, 10/18/2024 - 4:49 PM, WTP

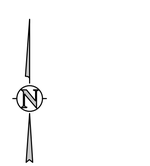
THE LINE SHOWN ABOVE IS EQUAL TO 1" WHEN PLOTTED ON 22X36 SHEETS ORIGINAL PAGE SIZE

THE SQUARES ABOVE ARE COLOR, WITH BLACK AND WHITE LETTERS, FOR PRINTS CORRECTLY

GRADING AND DRAINAGE NOTES:

1. CONTRACTOR TO FIELD VERIFY ALL EXISTING UNDERGROUND UTILITIES PRIOR TO CONSTRUCTION. REFER TO GENERAL NOTES FOR UTILITY LOCATION AND PROTECTION.
2. CONTRACTOR TO POTHOLE EXISTING UTILITIES AT PROPOSED UTILITY CROSSINGS IN ROW PRIOR TO CONSTRUCTION.
3. REFER TO HORIZONTAL CONTROL PLAN FOR FURTHER INFORMATION PERTAINING TO CURB & GUTTER, CHASES, AND DRAINAGE PANS.
4. CONTRACTOR IS RESPONSIBLE FOR RESTORING ALL DISTURBED AREAS TO THEIR ORIGINAL CONDITIONS.
5. ALL SPOT ELEVATIONS ARE TO FINISHED GRADE OR FLOWLINE UNLESS OTHERWISE SPECIFIED.
6. IF WALL IS SHOWN, TG DENOTES THE FINISHED GRADE ADJACENT TO THE HIGH SIDE OF THE WALL. BG DENOTES THE FINISHED GRADE ADJACENT TO THE LOW SIDE OF THE WALL. REFER TO ARCH PLANS/DETAILS FOR WALL ELEVATIONS BEYOND THE ADJACENT FINISHED GRADES (EXPOSED WALL, CAP/FOOTER, ETC.)





20 0 20 40
SCALE IN FEET

hord | coplan | macht
LANDSCAPE ARCHITECT / ARCHITECT
1800 Wazee St., Suite 450
Denver, CO 80202
p. 303.607.0977

CIVIL ENGINEER / STRUCTURAL ENGINEER
JVA Incorporated
1675 Larimer Street, #500
Denver, CO 80202
p. 303.444.1951

ELECTRICAL ENGINEER
Ackerman Engineering, Inc.
3000 Youngfield Street, #264
Wheat Ridge, CO 80215
p. 303.278.7297

IRRIGATION
Avocet Irrigation
11757 W. Ken Caryl Ave., Suite F-509
Littleton, CO 80127
p. 303.986.2175

MECHANICAL ENGINEER
ENVISION Mechanical Engineers, Inc.
9777 Pyramid Court, #260
Englewood, CO 80112
p. 303.668.0223

Town of Parker
SALISBURY PARK NORTH - PHASE 1
1700 MOTSENBOCKER RD
PARKER, CO 80134

hord | coplan | macht
ARCHITECTURE
LANDSCAPE ARCHITECTURE
PLANNING
INTERIOR DESIGN

Δ	DATE	DESCRIPTION

Project Number:	223072.00
Sheet Issue Date:	2024-10-04
Drawn By:	AMF/MGG/MJS
Checked By:	WTP/CWK/CFG

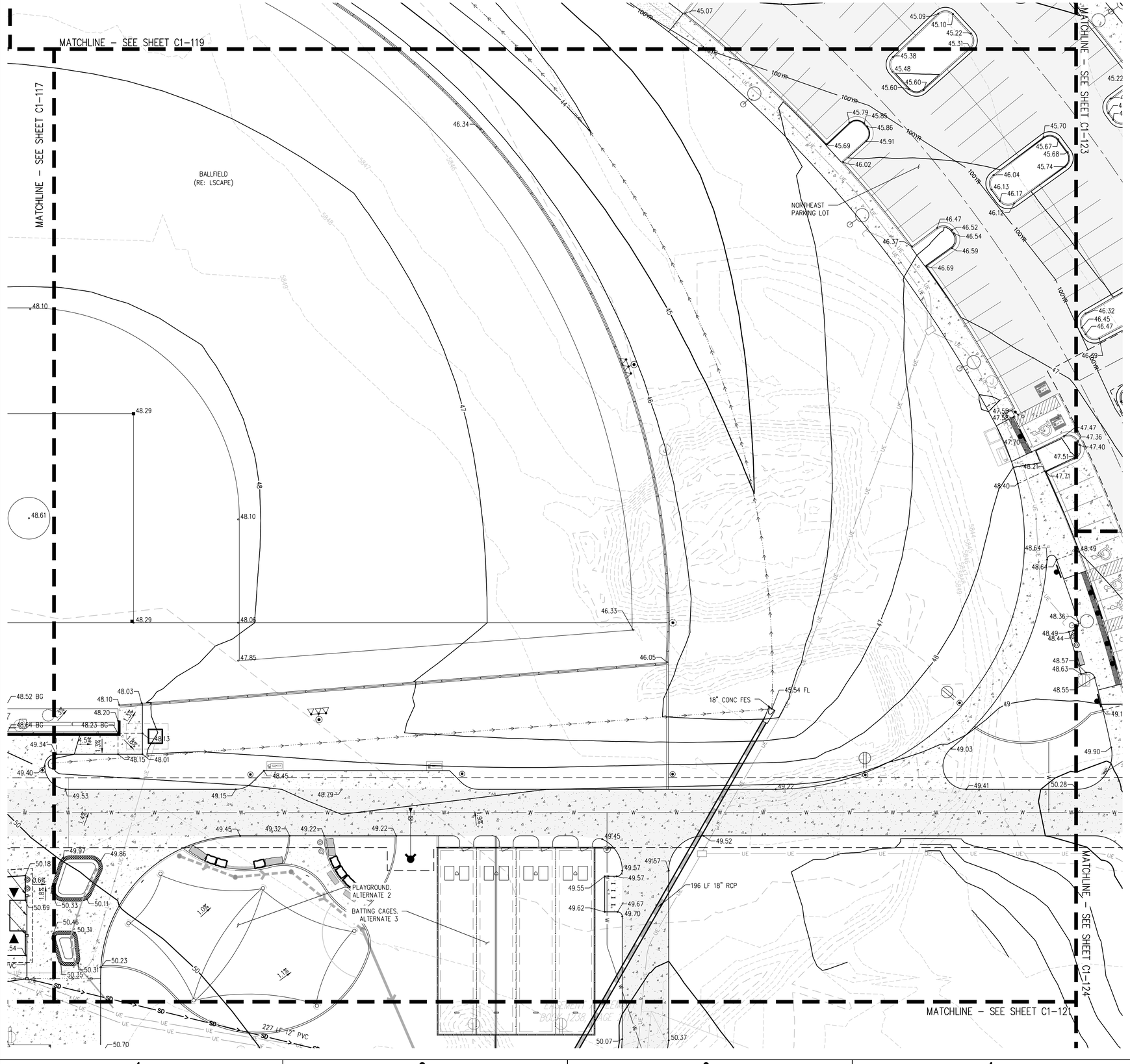
Drawing
PHASE 1 DETAILED GRADING & DRAINAGE PLAN

C1-119

60% CONSTRUCTION DOCUMENTS

© Hord Coplan Macht, Inc.

Q:\3752c – Salisbury Park North\Drawings\3752c–01–GRPHS1–01.dwg, 10/18/2024 – 4:50 PM, WTP



GRADING AND DRAINAGE NOTES:

1. CONTRACTOR TO FIELD VERIFY ALL EXISTING UNDERGROUND UTILITIES PRIOR TO CONSTRUCTION. REFER TO GENERAL NOTES FOR UTILITY LOCATION AND PROTECTION.
2. CONTRACTOR TO POTHOLE EXISTING UTILITIES AT PROPOSED UTILITY CROSSINGS IN ROW PRIOR TO CONSTRUCTION.
3. REFER TO HORIZONTAL CONTROL PLAN FOR FURTHER INFORMATION PERTAINING TO CURB & GUTTER, CHASES, AND DRAINAGE PANS.
4. CONTRACTOR IS RESPONSIBLE FOR RESTORING ALL DISTURBED AREAS TO THEIR ORIGINAL CONDITIONS.
5. ALL SPOT ELEVATIONS ARE TO FINISHED GRADE OR FLOWLINE UNLESS OTHERWISE SPECIFIED.
6. IF WALL IS SHOWN, TG DENOTES THE FINISHED GRADE ADJACENT TO THE HIGH SIDE OF THE WALL. BG DENOTES THE FINISHED GRADE ADJACENT TO THE LOW SIDE OF THE WALL. REFER TO ARCH PLANS/DETAILS FOR WALL ELEVATIONS BEYOND THE ADJACENT FINISHED GRADES (EXPOSED WALL, CAP/FOOTER, ETC.)

hord | coplan | macht
LANDSCAPE ARCHITECT / ARCHITECT
1800 Wazee St., Suite 450
Denver, CO 80202
p. 303.607.0977

CIVIL ENGINEER / STRUCTURAL ENGINEER
JVA Incorporated
1675 Larimer Street, #500
Denver, CO 80202
p. 303.444.1951

ELECTRICAL ENGINEER
Ackerman Engineering, Inc.
3000 Youngfield Street, #264
Wheat Ridge, CO 80215
p. 303.278.7297

IRRIGATION
Avocet Irrigation
11757 W. Ken Caryl Ave., Suite F-509
Littleton, CO 80127
p. 303.986.2175

MECHANICAL ENGINEER
ENVISION Mechanical Engineers, Inc.
9777 Pyramid Court, #260
Englewood, CO 80112
p. 303.688.0223

Town of Parker
SALISBURY PARK NORTH - PHASE 1
1700 MOTSENBOCKER RD
PARKER, CO 80134

hord | coplan | macht
ARCHITECTURE
LANDSCAPE ARCHITECTURE
PLANNING
INTERIOR DESIGN

Δ	DATE	DESCRIPTION

Project Number:	223072.00
Sheet Issue Date:	2024-10-04
Drawn By:	AMF/MGG/MJS
Checked By:	WTP/CWK/CFG

Drawing
PHASE 1 DETAILED GRADING & DRAINAGE PLAN

C1-120

60% CONSTRUCTION DOCUMENTS

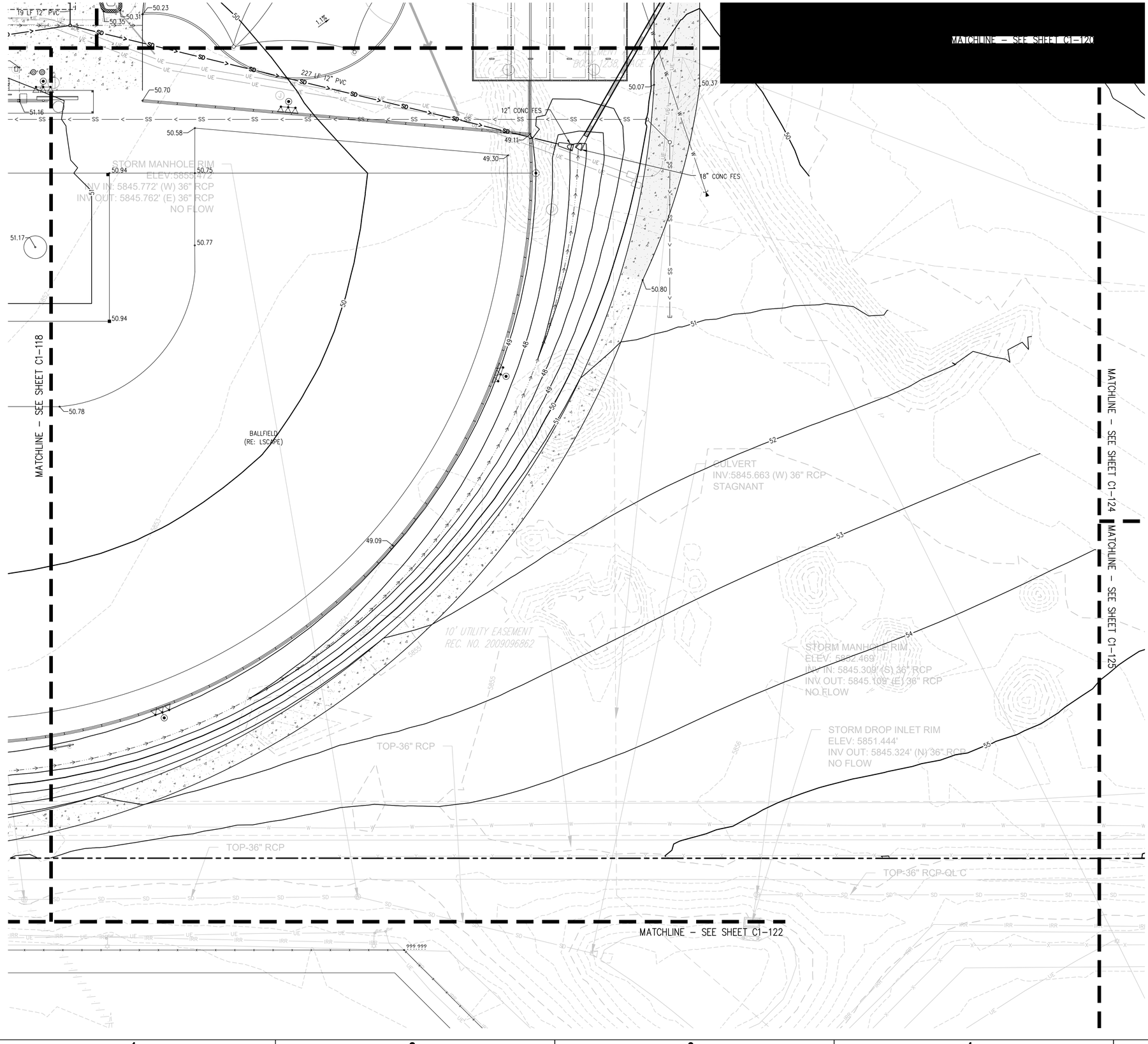
© Hord Coplan Macht, Inc.

SCALE IN FEET: 20 0 20 40

THE LINE SHOWN ABOVE IS EXACTLY 1" WHEN PLOTTED AT 24x36 SHEETS ORIGINAL PAGE SIZE

THE SQUARES ABOVE ARE COLOR, WITH BLACK AND WHITE LETTERS, FOR IDENTIFICATION

Q:\37526 – Salisbury Park North\Drawings\37526-01-GRPPHS1-01.dwg, 10/18/2024 – 4:50 PM, WTP



GRADING AND DRAINAGE NOTES:

1. CONTRACTOR TO FIELD VERIFY ALL EXISTING UNDERGROUND UTILITIES PRIOR TO CONSTRUCTION. REFER TO GENERAL NOTES FOR UTILITY LOCATION AND PROTECTION.
2. CONTRACTOR TO POTHOLE EXISTING UTILITIES AT PROPOSED UTILITY CROSSINGS IN ROW PRIOR TO CONSTRUCTION.
3. REFER TO HORIZONTAL CONTROL PLAN FOR FURTHER INFORMATION PERTAINING TO CURB & GUTTER, CHASES, AND DRAINAGE PANS.
4. CONTRACTOR IS RESPONSIBLE FOR RESTORING ALL DISTURBED AREAS TO THEIR ORIGINAL CONDITIONS.
5. ALL SPOT ELEVATIONS ARE TO FINISHED GRADE OR FLOWLINE UNLESS OTHERWISE SPECIFIED.
6. IF WALL IS SHOWN, TG DENOTES THE FINISHED GRADE ADJACENT TO THE HIGH SIDE OF THE WALL. BG DENOTES THE FINISHED GRADE ADJACENT TO THE LOW SIDE OF THE WALL. REFER TO ARCH PLANS/DETAILS FOR WALL ELEVATIONS BEYOND THE ADJACENT FINISHED GRADES (EXPOSED WALL, CAP/FOOTER, ETC.)

THE LINE SHOWN ABOVE IS ONE INCH WHEN PLOTTED ON ANSI D SHEETS ORIGINAL PAGE SIZE

THE SQUARES ABOVE ARE C/O/R, WITH BLACK AND WHITE LETTERS, RESPECTIVELY

hord | coplan | macht
LANDSCAPE ARCHITECT / ARCHITECT
1800 Wazee St., Suite 450
Denver, CO 80202
p. 303.607.0977

CIVIL ENGINEER / STRUCTURAL ENGINEER
JVA Incorporated
1675 Larimer Street, #500
Denver, CO 80202
p. 303.444.1951

ELECTRICAL ENGINEER
Ackerman Engineering, Inc.
3000 Youngfield Street, #264
Wheat Ridge, CO 80215
p. 303.278.7297

IRRIGATION
Avocet Irrigation
11757 W. Ken Caryl Ave., Suite F-509
Littleton, CO 80127
p. 303.986.2175

MECHANICAL ENGINEER
ENVISION Mechanical Engineers, Inc.
9777 Pyramid Court, #260
Englewood, CO 80112
p. 303.688.0223

Town of Parker
SALISBURY PARK NORTH - PHASE 1
1700 MOTSENBOCKER RD
PARKER, CO 80134

hord | coplan | macht
ARCHITECTURE
LANDSCAPE ARCHITECTURE
PLANNING
INTERIOR DESIGN

Δ	DATE	DESCRIPTION

Project Number:	223072.00
Sheet Issue Date:	2024-10-04
Drawn By:	AMF/MGG/MJS
Checked By:	WTP/CWK/CFG

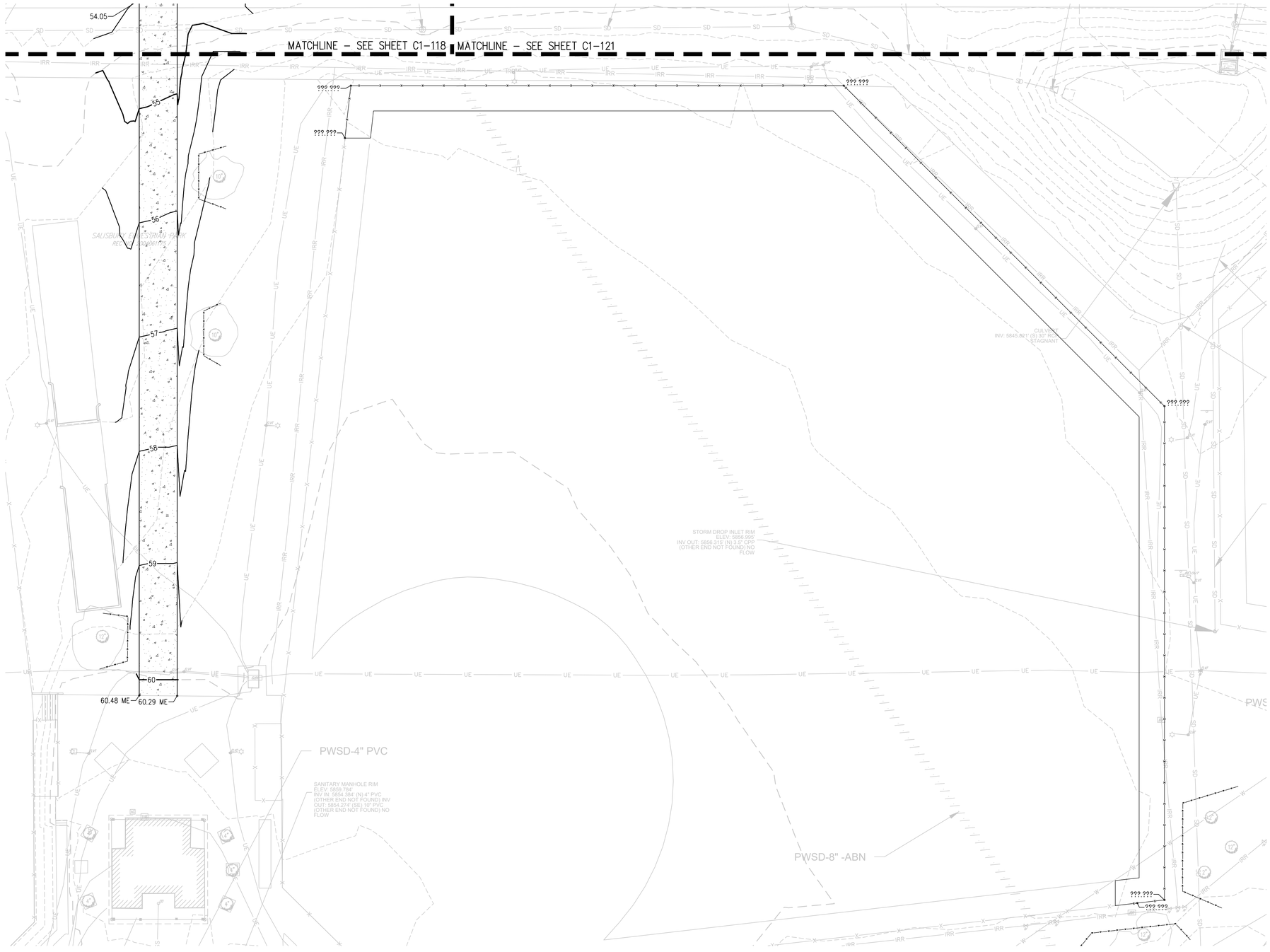
Drawing
PHASE 1 DETAILED GRADING & DRAINAGE PLAN

C1-121

60% CONSTRUCTION DOCUMENTS

© Hord Coplan Macht, Inc.

Q:\3752c – Salisbury Park North\Drawings\3752c-01-GRPPHS1-01.dwg, 10/19/2024 – 4:50 PM, WTP



GRADING AND DRAINAGE NOTES:

1. CONTRACTOR TO FIELD VERIFY ALL EXISTING UNDERGROUND UTILITIES PRIOR TO CONSTRUCTION. REFER TO GENERAL NOTES FOR UTILITY LOCATION AND PROTECTION.
2. CONTRACTOR TO POTHOLE EXISTING UTILITIES AT PROPOSED UTILITY CROSSINGS IN ROW PRIOR TO CONSTRUCTION.
3. REFER TO HORIZONTAL CONTROL PLAN FOR FURTHER INFORMATION PERTAINING TO CURB & GUTTER, CHASES, AND DRAINAGE PANS.
4. CONTRACTOR IS RESPONSIBLE FOR RESTORING ALL DISTURBED AREAS TO THEIR ORIGINAL CONDITIONS.
5. ALL SPOT ELEVATIONS ARE TO FINISHED GRADE OR FLOWLINE UNLESS OTHERWISE SPECIFIED.
6. IF WALL IS SHOWN, TG DENOTES THE FINISHED GRADE ADJACENT TO THE HIGH SIDE OF THE WALL. BG DENOTES THE FINISHED GRADE ADJACENT TO THE LOW SIDE OF THE WALL. REFER TO ARCH PLANS/DETAILS FOR WALL ELEVATIONS BEYOND THE ADJACENT FINISHED GRADES (EXPOSED WALL, CAP/FOOTER, ETC.)

N

20 0 20 40
SCALE IN FEET

THE LINE SHOWN ABOVE IS EXACTLY 1 INCH LONG ON 22x34 SHEETS ORIGINAL PAGE SIZE

THE SQUARES ABOVE ARE COLOR, WITH BLACK ANYWHERE ELSE PRINTS CORRECTLY

hord | coplan | macht
LANDSCAPE ARCHITECT / ARCHITECT
1800 Wazee St., Suite 450
Denver, CO 80202
p. 303.607.0977

CIVIL ENGINEER / STRUCTURAL ENGINEER
JVA Incorporated
1675 Larimer Street, #500
Denver, CO 80202
p. 303.444.1951

ELECTRICAL ENGINEER
Ackerman Engineering, Inc.
3000 Youngfield Street, #264
Wheat Ridge, CO 80215
p. 303.278.7297

IRRIGATION
Avocet Irrigation
11757 W. Ken Caryl Ave., Suite F-509
Littleton, CO 80127
p. 303.986.2175

MECHANICAL ENGINEER
ENVISION Mechanical Engineers, Inc.
9777 Pyramid Court, #260
Englewood, CO 80112
p. 303.688.0223

Town of Parker
SALISBURY PARK NORTH - PHASE 1
1700 MOTSENBOCKER RD
PARKER, CO 80134

hord | coplan | macht

ARCHITECTURE

LANDSCAPE ARCHITECTURE

PLANNING

INTERIOR DESIGN

Δ	DATE	DESCRIPTION

Project Number:	223072.00
Sheet Issue Date:	2024-10-04
Drawn By:	AMF/MGG/MJS
Checked By:	WTP/CWK/CFG

Drawing

PHASE 1 DETAILED GRADING & DRAINAGE PLAN

C1-122

60% CONSTRUCTION DOCUMENTS

© Hord Coplan Macht, Inc.

Q:\3752c – Salisbury Park North\Drawings\3752c–01–GRPPHS1–01.dwg, 10/18/2024 – 4:50 PM, WTP

GRADING AND DRAINAGE NOTES:

1. CONTRACTOR TO FIELD VERIFY ALL EXISTING UNDERGROUND UTILITIES PRIOR TO CONSTRUCTION. REFER TO GENERAL NOTES FOR UTILITY LOCATION AND PROTECTION.
2. CONTRACTOR TO POTHOLE EXISTING UTILITIES AT PROPOSED UTILITY CROSSINGS IN ROW PRIOR TO CONSTRUCTION.
3. REFER TO HORIZONTAL CONTROL PLAN FOR FURTHER INFORMATION PERTAINING TO CURB & GUTTER, CHASES, AND DRAINAGE PANS.
4. CONTRACTOR IS RESPONSIBLE FOR RESTORING ALL DISTURBED AREAS TO THEIR ORIGINAL CONDITIONS.
5. ALL SPOT ELEVATIONS ARE TO FINISHED GRADE OR FLOWLINE UNLESS OTHERWISE SPECIFIED.
6. IF WALL IS SHOWN, TG DENOTES THE FINISHED GRADE ADJACENT TO THE HIGH SIDE OF THE WALL. BG DENOTES THE FINISHED GRADE ADJACENT TO THE LOW SIDE OF THE WALL. REFER TO ARCH PLANS/DETAILS FOR WALL ELEVATIONS BEYOND THE ADJACENT FINISHED GRADES (EXPOSED WALL, CAP/FOOTER, ETC.)

MATCHLINE – SEE SHEET C1-119

MATCHLINE – SEE SHEET C1-120

MATCHLINE – SEE SHEET C1-124

EAST LINE OF THE W 1/2 NW 1/4 OF SEC. 27

PWSD 12" PVC BASED ON SOUND CHECK

18" CONC FES

58 LF 18" RCP

OUTLET STRUCTURE
GR 5842.69

DOUBLE COMBINATION INLET
GR 5844.65

24 LF 15" RCP

DOUBLE COMBINATION INLET
GR 5844.66

15" CONC FES

82:1

WIDE NON-EXCLUSIVE STORM DRAIN EASEMENT BOOK 2270, PAGE 688

UNPLATTED
REC. NO. 2007021306

REC. NO.
2007021306

100YR

SCALE IN FEET: 20 0 20 40

hord | coplan | macht
LANDSCAPE ARCHITECT / ARCHITECT
1800 Wazee St., Suite 450
Denver, CO 80202
p. 303.607.0977

CIVIL ENGINEER / STRUCTURAL ENGINEER
JVA Incorporated
1675 Larimer Street, #500
Denver, CO 80202
p. 303.444.1951

ELECTRICAL ENGINEER
Ackerman Engineering, Inc.
3000 Youngfield Street, #264
Wheat Ridge, CO 80215
p. 303.278.7297

IRRIGATION
Avocet Irrigation
11757 W. Ken Caryl Ave., Suite F-509
Littleton, CO 80127
p. 303.986.2175

MECHANICAL ENGINEER
ENVISION Mechanical Engineers, Inc.
9777 Pyramid Court, #260
Englewood, CO 80112
p. 303.688.0223

Town of Parker
SALISBURY PARK NORTH - PHASE 1
1700 MOTSENBOCKER RD
PARKER, CO 80134

hord | coplan | macht
ARCHITECTURE
LANDSCAPE ARCHITECTURE
PLANNING
INTERIOR DESIGN

Δ	DATE	DESCRIPTION

Project Number:	223072.00
Sheet Issue Date:	2024-10-04
Drawn By:	AMF/MGG/MJS
Checked By:	WTP/CWK/CFG

Drawing
PHASE 1 DETAILED GRADING & DRAINAGE PLAN

C1-123

60% CONSTRUCTION DOCUMENTS

© Hord Coplan Macht, Inc.

THE LINE SHOWN ABOVE IS EXACTLY ONE INCH LONG ON ALL SHEETS ORIGINAL PAGE SIZE

THE SQUARES ABOVE ARE COLOR, WITH BLACK AND WHITE LETTERS, IF PRINTED CORRECTLY

Q:\3752c – Salisbury Park North\Drawings\3752c–01–GRPHS1–01.dwg, 10/18/2024 – 4:50 PM, WTP

THE LINE SHOWN ABOVE IS 1" ON ORIGINAL DRAWINGS SHEETS ORIGINAL PAGE SIZE

THE SQUARES ABOVE ARE COLOR, WITH BLACK AND WHITE LETTERS, FOR PRINTING CONTROL

MATCHLINE – SEE SHEET C1–123

MATCHLINE – SEE SHEET C1–120

MATCHLINE – SEE SHEET C1–121

MATCHLINE – SEE SHEET C1–125

GRADING AND DRAINAGE NOTES:

1. CONTRACTOR TO FIELD VERIFY ALL EXISTING UNDERGROUND UTILITIES PRIOR TO CONSTRUCTION. REFER TO GENERAL NOTES FOR UTILITY LOCATION AND PROTECTION.
2. CONTRACTOR TO POTHOLE EXISTING UTILITIES AT PROPOSED UTILITY CROSSINGS IN ROW PRIOR TO CONSTRUCTION.
3. REFER TO HORIZONTAL CONTROL PLAN FOR FURTHER INFORMATION PERTAINING TO CURB & GUTTER, CHASES, AND DRAINAGE PANS.
4. CONTRACTOR IS RESPONSIBLE FOR RESTORING ALL DISTURBED AREAS TO THEIR ORIGINAL CONDITIONS.
5. ALL SPOT ELEVATIONS ARE TO FINISHED GRADE OR FLOWLINE UNLESS OTHERWISE SPECIFIED.
6. IF WALL IS SHOWN, TG DENOTES THE FINISHED GRADE ADJACENT TO THE HIGH SIDE OF THE WALL. BG DENOTES THE FINISHED GRADE ADJACENT TO THE LOW SIDE OF THE WALL. REFER TO ARCH PLANS/DETAILS FOR WALL ELEVATIONS BEYOND THE ADJACENT FINISHED GRADES (EXPOSED WALL, CAP/FOOTER, ETC.)

DOES A PEDESTRIAN LIGHT NEED TO BE MOVED HERE FROM PHASE 2?

15" CONC FES

DOUBLE COMBINATION INLET
GR 5847.52

SALISBURY PARK SOUTH ACCESS

59 LF 15" RCP

18" CONC FES

110 LF 18" RCP

18" CONC FES

30' WIDE NON-EXCLUSIVE WATER MAIN EASEMENT BOOK 1238, PAGE 2115

CULVERT
INV: 5841.713' (S) 36" RCP
STAGNANT

STORM MANHOLE RIM
ELEV:5846.939'
INV IN: 5842.139' (S) 36" RCP
INV OUT: 5842.069' (N) 36" RCP
NO FLOW

TOP-36" RCP

EXIST. MH
RIM: 5851.27

PWSD-12" PVC BASED ON SOUND CHECK

SCALE IN FEET
20 0 20 40

hord | coplan | macht
LANDSCAPE ARCHITECT / ARCHITECT
1800 Wazee St., Suite 450
Denver, CO 80202
p. 303.607.0977

CIVIL ENGINEER / STRUCTURAL ENGINEER
JVA Incorporated
1675 Larimer Street, #500
Denver, CO 80202
p. 303.444.1951

ELECTRICAL ENGINEER
Ackerman Engineering, Inc.
3000 Youngfield Street, #264
Wheat Ridge, CO 80215
p. 303.278.7297

IRRIGATION
Avocet Irrigation
11757 W. Ken Caryl Ave., Suite F-509
Littleton, CO 80127
p. 303.986.2175

MECHANICAL ENGINEER
ENVISION Mechanical Engineers, Inc.
9777 Pyramid Court, #260
Englewood, CO 80112
p. 303.668.0223

Town of Parker
SALISBURY PARK NORTH - PHASE 1
1700 MOTSENBOCKER RD
PARKER, CO 80134

hord | coplan | macht
ARCHITECTURE
LANDSCAPE ARCHITECTURE
PLANNING
INTERIOR DESIGN

Δ	DATE	DESCRIPTION

Project Number:	223072.00
Sheet Issue Date:	2024-10-04
Drawn By:	AMF/MGG/MJS
Checked By:	WTP/CWK/CFG

Drawing
PHASE 1 DETAILED GRADING & DRAINAGE PLAN

C1-124

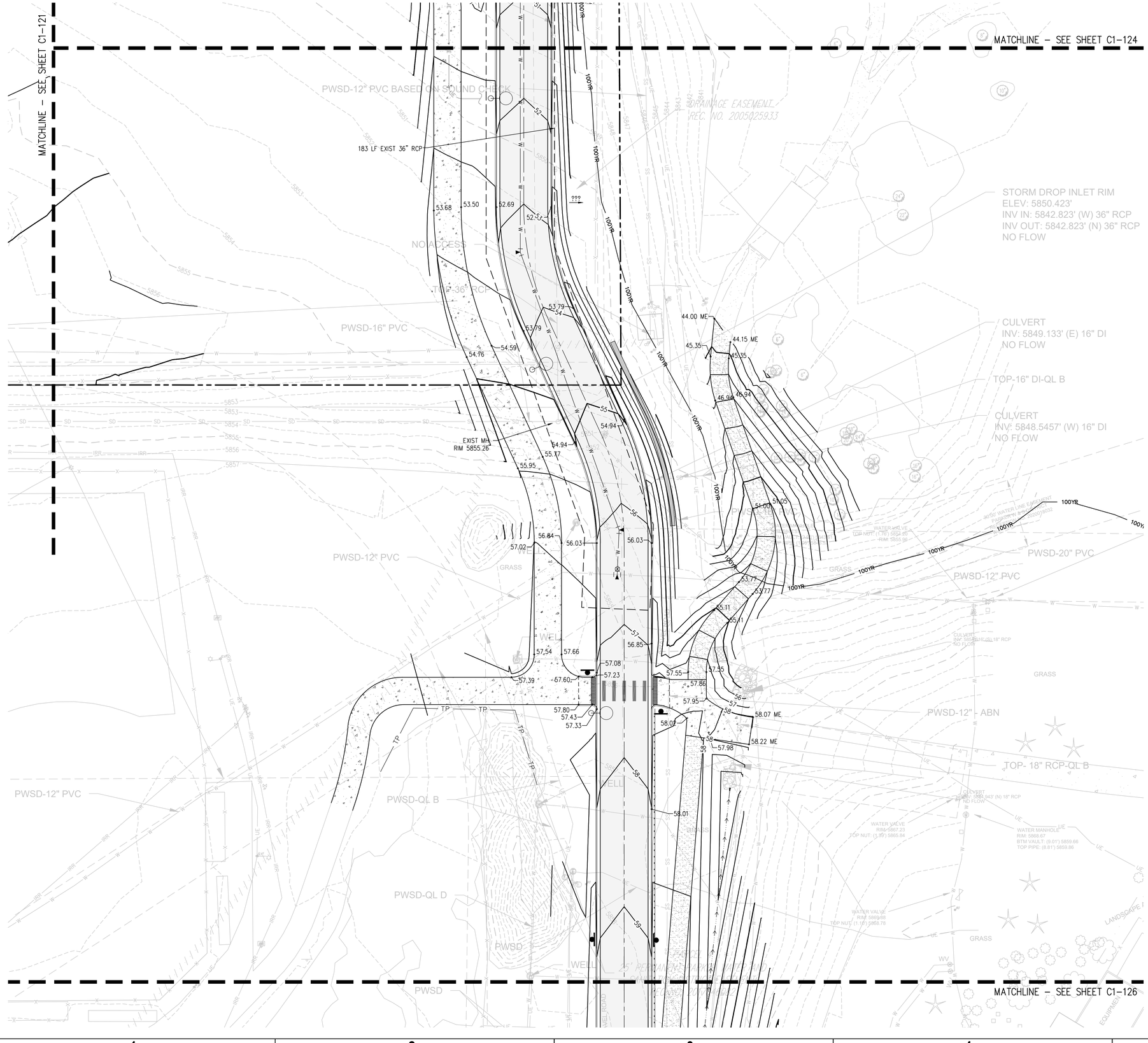
60% CONSTRUCTION DOCUMENTS

© Hord Coplan Macht, Inc.

Q:\3752c – Salisbury Park North\Drawings\3752c–01–GRPPHS1–01.dwg, 10/18/2024 – 4:51 PM, WTP

THE LINE SHOWN ABOVE IS EQUAL TO 1" ON ALL DRAWINGS SHEETS ORIGINAL PAGE SIZE

THE SQUARES ABOVE ARE COLOR, WITH BLACK AND WHITE FILTERS, AS PRINTED CORRECTLY



GRADING AND DRAINAGE NOTES:

1. CONTRACTOR TO FIELD VERIFY ALL EXISTING UNDERGROUND UTILITIES PRIOR TO CONSTRUCTION. REFER TO GENERAL NOTES FOR UTILITY LOCATION AND PROTECTION.
2. CONTRACTOR TO POTHOLE EXISTING UTILITIES AT PROPOSED UTILITY CROSSINGS IN ROW PRIOR TO CONSTRUCTION.
3. REFER TO HORIZONTAL CONTROL PLAN FOR FURTHER INFORMATION PERTAINING TO CURB & GUTTER, CHASES, AND DRAINAGE PANS.
4. CONTRACTOR IS RESPONSIBLE FOR RESTORING ALL DISTURBED AREAS TO THEIR ORIGINAL CONDITIONS.
5. ALL SPOT ELEVATIONS ARE TO FINISHED GRADE OR FLOWLINE UNLESS OTHERWISE SPECIFIED.
6. IF WALL IS SHOWN, TG DENOTES THE FINISHED GRADE ADJACENT TO THE HIGH SIDE OF THE WALL. BG DENOTES THE FINISHED GRADE ADJACENT TO THE LOW SIDE OF THE WALL. REFER TO ARCH PLANS/DETAILS FOR WALL ELEVATIONS BEYOND THE ADJACENT FINISHED GRADES (EXPOSED WALL, CAP/FOOTER, ETC.)

hord | coplan | macht
LANDSCAPE ARCHITECT / ARCHITECT
1800 Wazee St., Suite 450
Denver, CO 80202
p. 303.607.0977

CIVIL ENGINEER / STRUCTURAL ENGINEER
JVA Incorporated
1675 Larimer Street, #500
Denver, CO 80202
p. 303.444.1951

ELECTRICAL ENGINEER
Ackerman Engineering, Inc.
3000 Youngfield Street, #264
Wheat Ridge, CO 80215
p. 303.278.7297

IRRIGATION
Avocet Irrigation
11757 W. Ken Caryl Ave., Suite F-509
Littleton, CO 80127
p. 303.986.2175

MECHANICAL ENGINEER
ENVISION Mechanical Engineers, Inc.
9777 Pyramid Court, #260
Englewood, CO 80112
p. 303.688.0223

Town of Parker
SALISBURY PARK NORTH - PHASE 1
1700 MOTSENBOCKER RD
PARKER, CO 80134

hord | coplan | macht
ARCHITECTURE
LANDSCAPE ARCHITECTURE
PLANNING
INTERIOR DESIGN

Δ	DATE	DESCRIPTION

Project Number:	223072.00
Sheet Issue Date:	2024-10-04
Drawn By:	AMF/MGG/MJS
Checked By:	WTP/CWK/CFG

Drawing
PHASE 1 DETAILED GRADING & DRAINAGE PLAN

C1-125

60% CONSTRUCTION DOCUMENTS

© Hord Coplan Macht, Inc.

Q:\3752c – Salisbury Park North\Drawings\3752c-01-GRPPHS1-01.dwg, 10/8/2024 – 4:51 PM, WTP

THE LINE SHOWN ABOVE IS EQUAL TO 1" ON ALL SHEETS ORIGINAL PAGE SIZE

THE SQUARES ABOVE ARE COLOR, WITH BLACK AND WHITE LETTERS, PRINTED CORRECTLY

MATCHLINE – SEE SHEET C1-125

MATCHLINE – SEE SHEET C1-127

GRADING AND DRAINAGE NOTES:

1. CONTRACTOR TO FIELD VERIFY ALL EXISTING UNDERGROUND UTILITIES PRIOR TO CONSTRUCTION. REFER TO GENERAL NOTES FOR UTILITY LOCATION AND PROTECTION.
2. CONTRACTOR TO POTHOLE EXISTING UTILITIES AT PROPOSED UTILITY CROSSINGS IN ROW PRIOR TO CONSTRUCTION.
3. REFER TO HORIZONTAL CONTROL PLAN FOR FURTHER INFORMATION PERTAINING TO CURB & GUTTER, CHASES, AND DRAINAGE PANS.
4. CONTRACTOR IS RESPONSIBLE FOR RESTORING ALL DISTURBED AREAS TO THEIR ORIGINAL CONDITIONS.
5. ALL SPOT ELEVATIONS ARE TO FINISHED GRADE OR FLOWLINE UNLESS OTHERWISE SPECIFIED.
6. IF WALL IS SHOWN, TG DENOTES THE FINISHED GRADE ADJACENT TO THE HIGH SIDE OF THE WALL. BG DENOTES THE FINISHED GRADE ADJACENT TO THE LOW SIDE OF THE WALL. REFER TO ARCH PLANS/DETAILS FOR WALL ELEVATIONS BEYOND THE ADJACENT FINISHED GRADES (EXPOSED WALL, CAP/FOOTER, ETC.)

hord | coplan | macht
LANDSCAPE ARCHITECT / ARCHITECT
1800 Wazee St., Suite 450
Denver, CO 80202
p. 303.607.0977

CIVIL ENGINEER / STRUCTURAL ENGINEER
JVA Incorporated
1675 Larimer Street, #500
Denver, CO 80202
p. 303.444.1951

ELECTRICAL ENGINEER
Ackerman Engineering, Inc.
3000 Youngfield Street, #264
Wheat Ridge, CO 80215
p. 303.278.7297

IRRIGATION
Avocet Irrigation
11757 W. Ken Caryl Ave., Suite F-509
Littleton, CO 80127
p. 303.986.2175

MECHANICAL ENGINEER
ENVISION Mechanical Engineers, Inc.
9777 Pyramid Court, #260
Englewood, CO 80112
p. 303.688.0223

Town of Parker
SALISBURY PARK NORTH - PHASE 1
1700 MOTSENBOCKER RD
PARKER, CO 80134

hord | coplan | macht

ARCHITECTURE
LANDSCAPE ARCHITECTURE
PLANNING
INTERIOR DESIGN

Δ	DATE	DESCRIPTION

Project Number:	223072.00
Sheet Issue Date:	2024-10-04
Drawn By:	AMF/MGG/MJS
Checked By:	WTP/CWK/CFG

Drawing
PHASE 1 DETAILED GRADING & DRAINAGE PLAN

C1-126

60% CONSTRUCTION DOCUMENTS

© Hord Coplan Macht, Inc.

SCALE IN FEET: 20 0 20 40

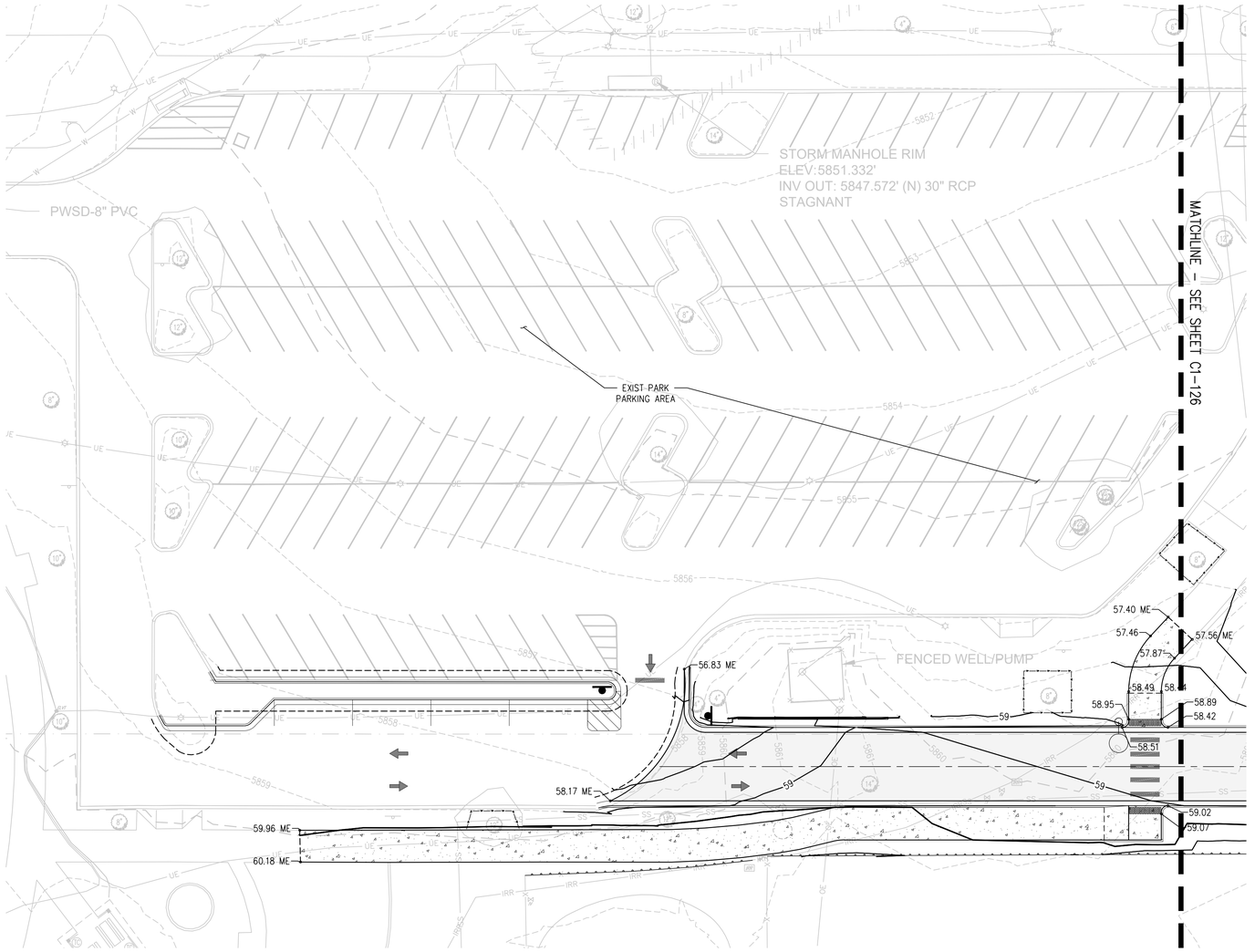
Q:\3752c – Salisbury Park North\Drawings\3752c–01–GRPPR01–01.dwg, 10/18/2024 – 4:51 PM, WTP

THE LINE SHOWN ABOVE IS EQUAL TO ONE INCH ON ALL SHEETS ORIGINAL PAGE SIZE

THE SQUARES ABOVE ARE COLOR, WITH BLACK AND WHITE LETTERS, FOR PDF CONVERTS

GRADING AND DRAINAGE NOTES:

1. CONTRACTOR TO FIELD VERIFY ALL EXISTING UNDERGROUND UTILITIES PRIOR TO CONSTRUCTION. REFER TO GENERAL NOTES FOR UTILITY LOCATION AND PROTECTION.
2. CONTRACTOR TO POTHOLE EXISTING UTILITIES AT PROPOSED UTILITY CROSSINGS IN ROW PRIOR TO CONSTRUCTION.
3. REFER TO HORIZONTAL CONTROL PLAN FOR FURTHER INFORMATION PERTAINING TO CURB & GUTTER, CHASES, AND DRAINAGE PANS.
4. CONTRACTOR IS RESPONSIBLE FOR RESTORING ALL DISTURBED AREAS TO THEIR ORIGINAL CONDITIONS.
5. ALL SPOT ELEVATIONS ARE TO FINISHED GRADE OR FLOWLINE UNLESS OTHERWISE SPECIFIED.
6. IF WALL IS SHOWN, TG DENOTES THE FINISHED GRADE ADJACENT TO THE HIGH SIDE OF THE WALL. BG DENOTES THE FINISHED GRADE ADJACENT TO THE LOW SIDE OF THE WALL. REFER TO ARCH PLANS/DETAILS FOR WALL ELEVATIONS BEYOND THE ADJACENT FINISHED GRADES (EXPOSED WALL, CAP/FOOTER, ETC.)



hord | coplan | macht
LANDSCAPE ARCHITECT / ARCHITECT
1800 Wazee St., Suite 450
Denver, CO 80202
p. 303.607.0977

CIVIL ENGINEER / STRUCTURAL ENGINEER
JVA Incorporated
1675 Larimer Street, #500
Denver, CO 80202
p. 303.444.1951

ELECTRICAL ENGINEER
Ackerman Engineering, Inc.
3000 Youngfield Street, #264
Wheat Ridge, CO 80215
p. 303.278.7297

IRRIGATION
Avocet Irrigation
11757 W. Ken Caryl Ave., Suite F-509
Littleton, CO 80127
p. 303.986.2175

MECHANICAL ENGINEER
ENVISION Mechanical Engineers, Inc.
9777 Pyramid Court, #260
Englewood, CO 80112
p. 303.688.0223

Town of Parker
SALISBURY PARK NORTH - PHASE 1
1700 MOTSENBOCKER RD
PARKER, CO 80134

hord | coplan | macht

ARCHITECTURE
LANDSCAPE ARCHITECTURE
PLANNING
INTERIOR DESIGN

Δ	DATE	DESCRIPTION

Project Number:	223072.00
Sheet Issue Date:	2024-10-04
Drawn By:	AMF/MGG/MJS
Checked By:	WTP/CWK/CFG

Drawing
PHASE 1 DETAILED GRADING & DRAINAGE PLAN

C1-127

60% CONSTRUCTION DOCUMENTS

20 0 20 40
SCALE IN FEET

© Hord Coplan Macht, Inc.

Q:\3752c - Salisbury Park North\Drawings\3752c-01-GRPHS1-01.dwg, 10/8/2024 - 4:51 PM, WTP

APPENDIX G: DIGITAL DATA