

Kimley»Horn

January 10, 2023

Mr. Brett Lewis
Thompson Thrift Construction
901 Wabash Ave, Suite 300
Terre Haute, IN 47807
Upland Flats by Watermark

Please refer to ECM Chapter 5.10.6B for required statements and information on certification letters. Please include this statement "the site and adjacent properties (as affected by work performed under the County permit) are stable with respect to settlement and subsidence, sloughing of cut and fill slopes, revegetation or other ground cover, and that the improvements (public improvements, common development improvements, site grading and paving) meet or exceed the minimum design requirements."

Please also include a statement that the facilities provide the required storage volume and will meet the required release rates, as documented by an attached UDFCD design form submitted with the original application, the stage areas, elevations and outlet dimensions.

POND AS-BUILT CERTIFICATION LETTER

To whom it may concern,

The drainage facilities for the on-site extended detention basin, also referred to as the South Pond, was installed in general conformance with the construction documents for Upland Flats by Watermark (Tract DD, Hannah Ridge at Feathergrass Filing No. 1). This pond design was approved by El Paso County on November 9, 2021. This certification is based on an as-built survey performed by Compass Surveying & Mapping, LLC. On September 15, 2022. The results are as follows:

South Pond	Design	As-Built
Pond Volume	2.137	2.129
Pond Volume (No Freeboard)	1.482	1.465
100-Year Detention Volume	1.451	1.451

Additionally, the construction of the pond outlet structure was completed in compliance with the plans.

If you have any questions, please reach out to eric.gunderson@kimley-horn.com.

Thank you!


Eric Gunderson, PE
Engineer of Record
Kimley-Horn and Associates, Inc.



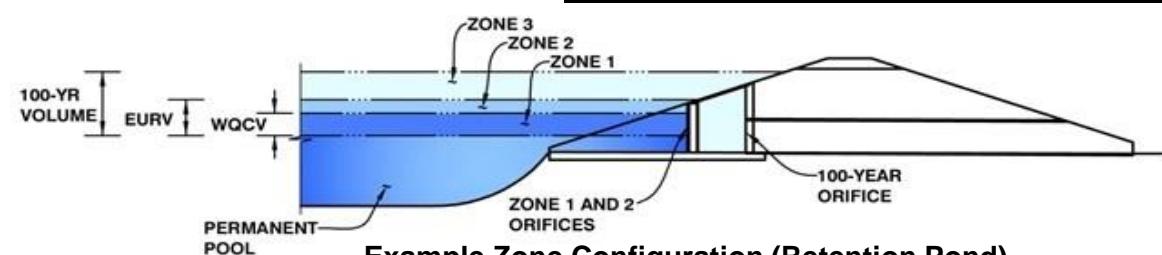
Eric Gunderson, Colorado PE 49487

DETENTION BASIN STAGE-STORAGE TABLE BUILDER

MHFD-Detention, Version 4.03 (May 2020)

Project: Watermark at Akers

Basin ID: South Pond - AS-BUILT CONDITION



Example Zone Configuration (Retention Pond)

Watershed Information

Selected BMP Type =	EDB
Watershed Area =	18.76
Watershed Length =	2,125
Watershed Length to Centroid =	600
Watershed Slope =	0.020
Watershed Imperviousness =	41.00%
Percentage Hydrologic Soil Group A =	80.0%
Percentage Hydrologic Soil Group B =	20.0%
Percentage Hydrologic Soil Groups C/D =	0.0%
Target WQCV Drain Time =	40.0

Location for 1-hr Rainfall Depths = User Input

After providing required inputs above including 1-hour rainfall depths, click 'Run CUHP' to generate runoff hydrographs using the embedded Colorado Urban Hydrograph Procedure.

Water Quality Capture Volume (WQCV) =	0.285	ac
Excess Urban Runoff Volume (EURV) =	0.833	ac
2-yr Runoff Volume (P1 = 1.19 in.) =	0.658	ac
5-yr Runoff Volume (P1 = 1.52 in.) =	0.894	ac
10-yr Runoff Volume (P1 = 1.75 in.) =	1.086	ac
25-yr Runoff Volume (P1 = 2 in.) =	1.513	ac
50-yr Runoff Volume (P1 = 2.25 in.) =	1.843	ac
100-yr Runoff Volume (P1 = 2.55 in.) =	2.346	ac
500-yr Runoff Volume (P1 = 3.14 in.) =	3.249	ac
Approximate 2-yr Detention Volume =	0.547	ac
Approximate 5-yr Detention Volume =	0.743	ac
Approximate 10-yr Detention Volume =	0.926	ac
Approximate 25-yr Detention Volume =	1.119	ac
Approximate 50-yr Detention Volume =	1.243	ac
Approximate 100-yr Detention Volume =	1.451	ac

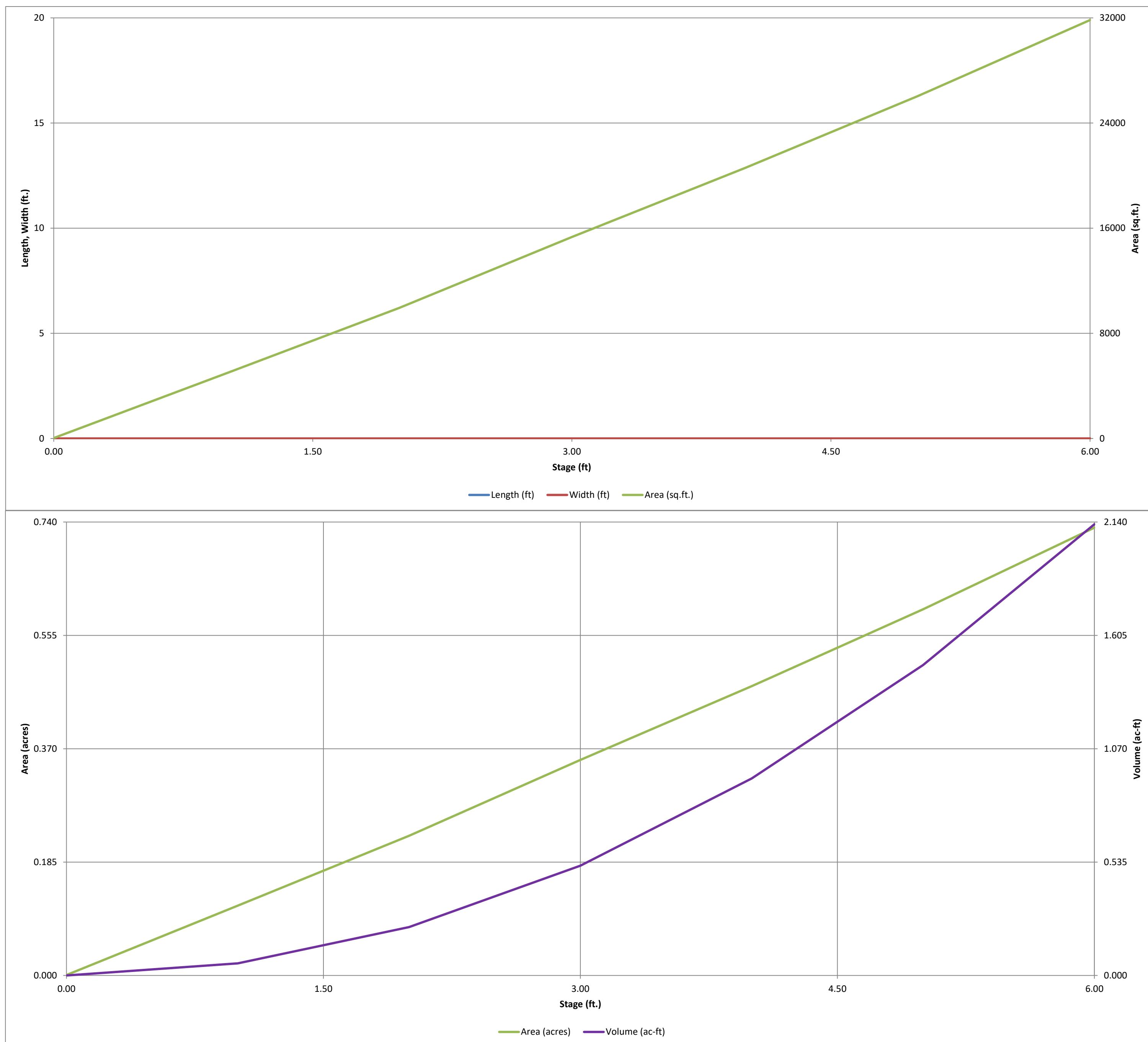
Optional User Overrides	
	acre-feet
	acre-feet
1.19	inches
1.52	inches
1.75	inches
2.00	inches
2.25	inches
2.55	inches
	inches

Define Zones and Basin Geometry

Zone 1 Volume (WQCV) =	0.285	acre-feet
Zone 2 Volume (EURV - Zone 1) =	0.548	acre-feet
Zone 3 Volume (100-year - Zones 1 & 2) =	0.618	acre-feet
Total Detention Basin Volume =	1.451	acre-feet
Initial Surcharge Volume (ISV) =	user	ft ³
Initial Surcharge Depth (ISD) =	user	ft
Total Available Detention Depth (H _{total}) =	user	ft
Depth of Trickle Channel (H _{TC}) =	user	ft
Slope of Trickle Channel (S _{TC}) =	user	ft/ft
Slopes of Main Basin Sides (S _{main}) =	user	H:V
Basin Length-to-Width Ratio (R _{L/W}) =	user	
Initial Surcharge Area (A _{ISV}) =	user	ft ²
Surcharge Volume Length (L _{ISV}) =	user	ft
Surcharge Volume Width (W _{ISV}) =	user	ft
Depth of Basin Floor (H _{FLOOR}) =	user	ft
Length of Basin Floor (L _{FLOOR}) =	user	ft
Width of Basin Floor (W _{FLOOR}) =	user	ft
Area of Basin Floor (A _{FLOOR}) =	user	ft ²
Volume of Basin Floor (V _{FLOOR}) =	user	ft ³
Depth of Main Basin (H _{MAIN}) =	user	ft
Length of Main Basin (L _{MAIN}) =	user	ft
Width of Main Basin (W _{MAIN}) =	user	ft
Area of Main Basin (A _{MAIN}) =	user	ft ²
Volume of Main Basin (V _{MAIN}) =	user	ft ³
Calculated Total Basin Volume (V _{total}) =	user	acre-feet

DETENTION BASIN STAGE-STORAGE TABLE BUILDER

MHFD-Detention, Version 4.03 (May 2020)

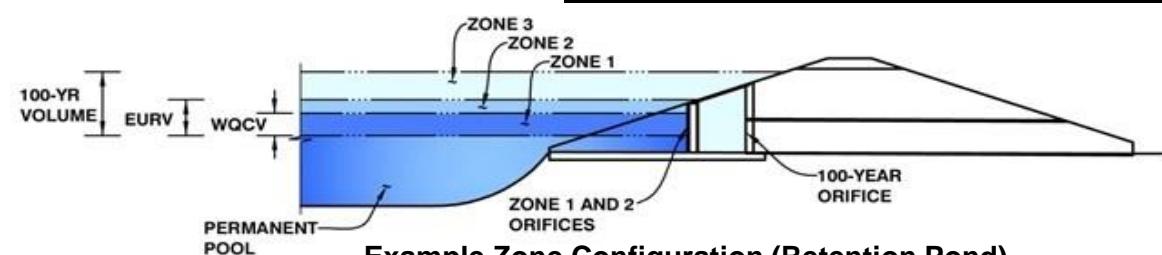


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Basin ID: South Pond



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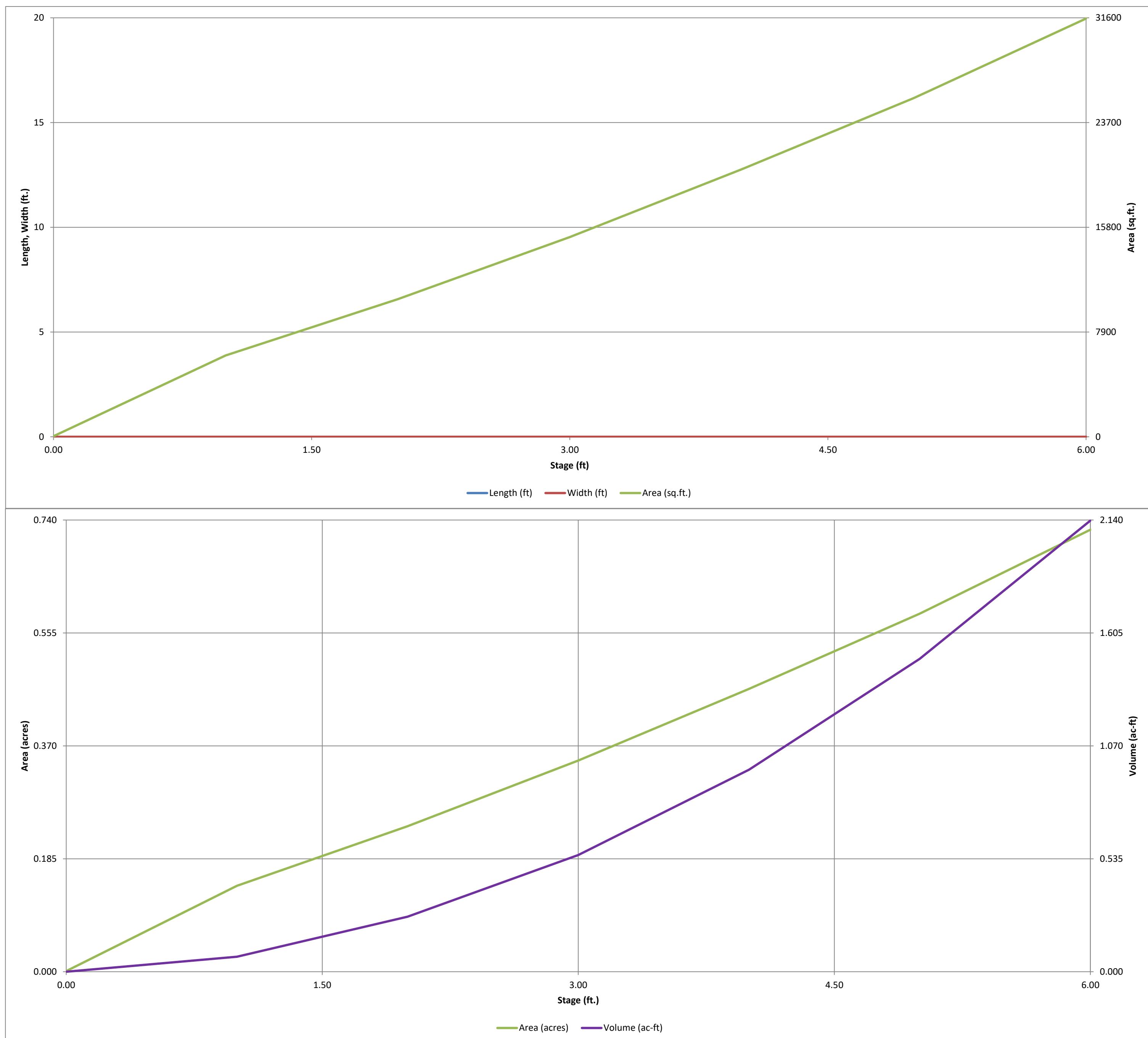
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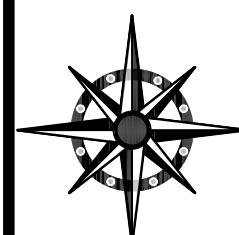
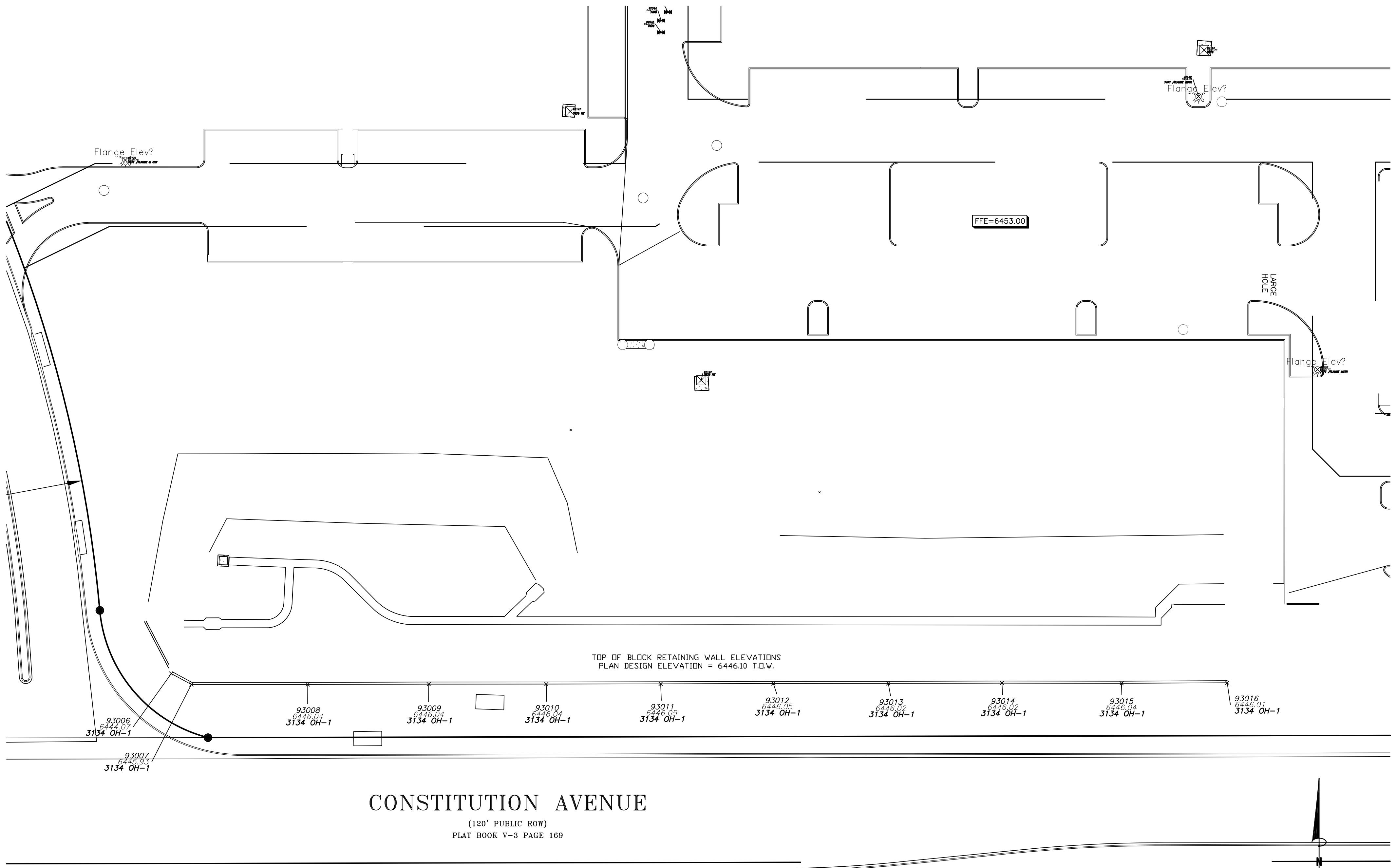
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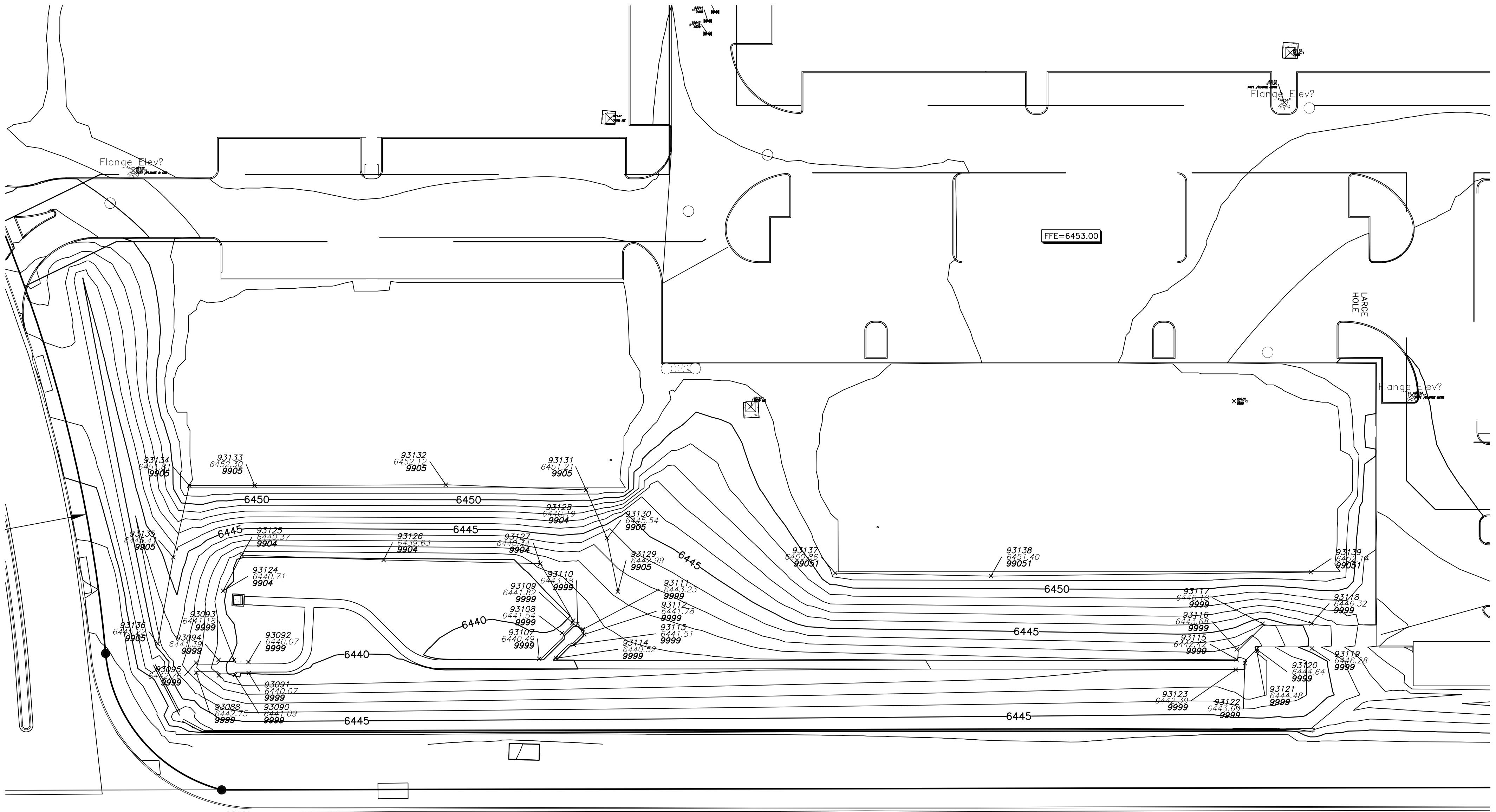
COMPASS SURVEYING & MAPPING, LLC
3249 WEST CAREFREE CIRCLE
COLORADO SPRINGS, CO 80917
719-354-4120
WWW.CSAMLLC.COM

AS-CONSTRUCTED
August 04, 2022

UPLAND FLATS BY WATERMARK
CITY OF COLORADO SPRINGS,
EL PASO COUNTY, COLORADO

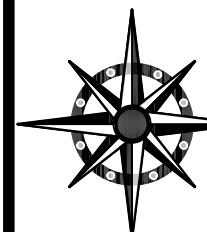
GRAPHIC SCALE
30 0 15 30
(IN FEET)
1 inch = 30 ft.

PROJECT No.	21264
DATE:	SEPTEMBER 7, 2022
DRAWN BY:	TB
CHECKED BY:	DRH
SHEET:	1 OF 3



CONSTITUTION AVENUE

(120' PUBLIC ROW)
BLAT BOOK V-3 PAGE 168



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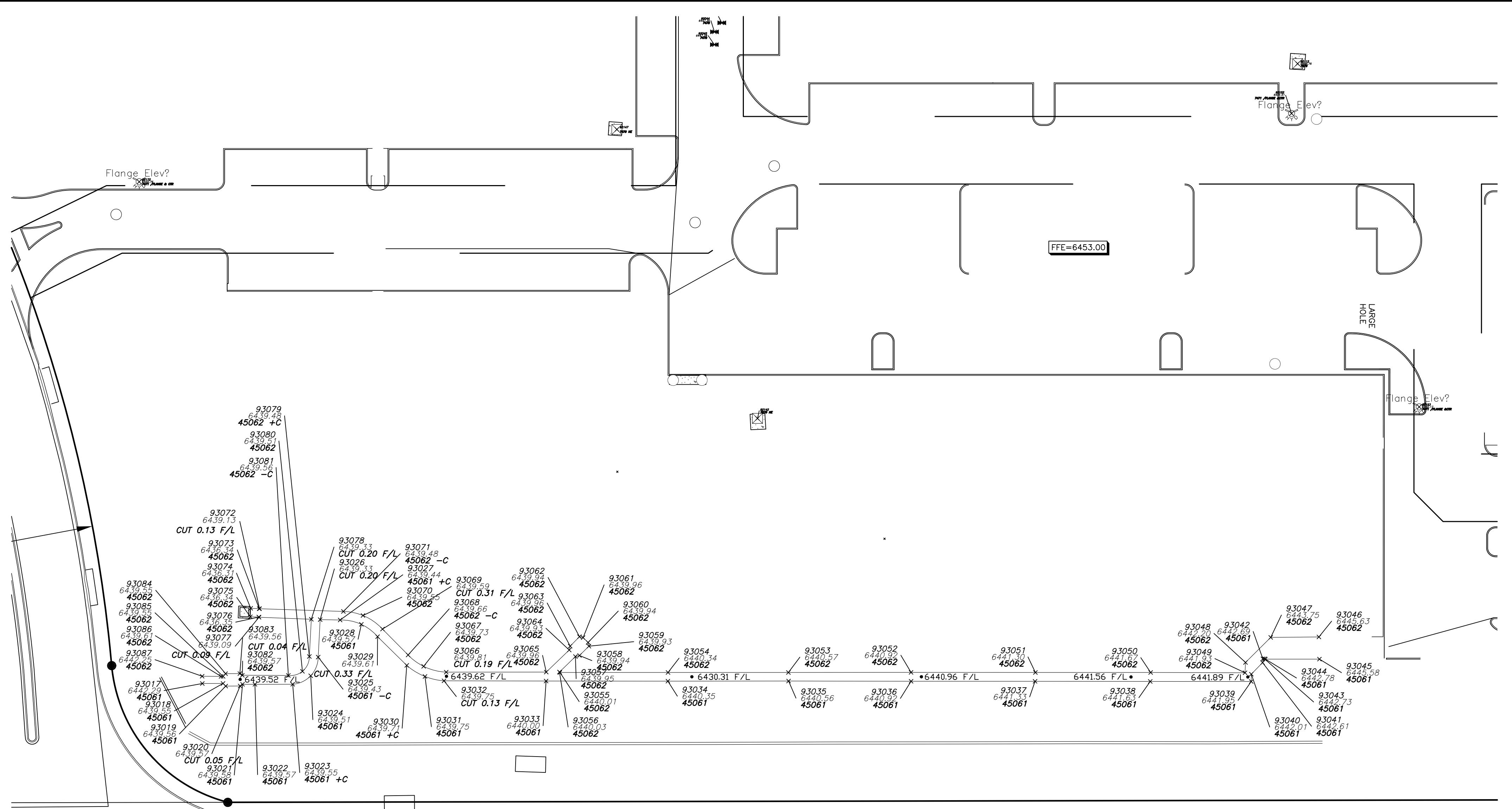
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UPLAND FLATS BY WATERMARK
CITY OF COLORADO SPRINGS,
EL PASO COUNTY, COLORADO

(IN FEET)

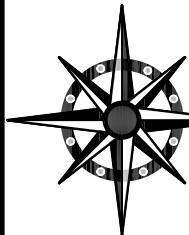
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SHEET:	2	OF	3



CONSTITUTION AVENUE

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PLAT BOOK V-3 PAGE 16



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EL PASO COUNTY, COLORADO

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