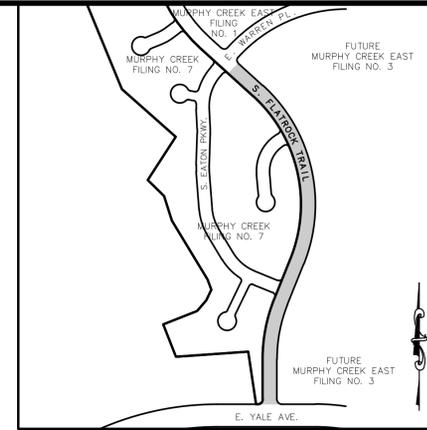
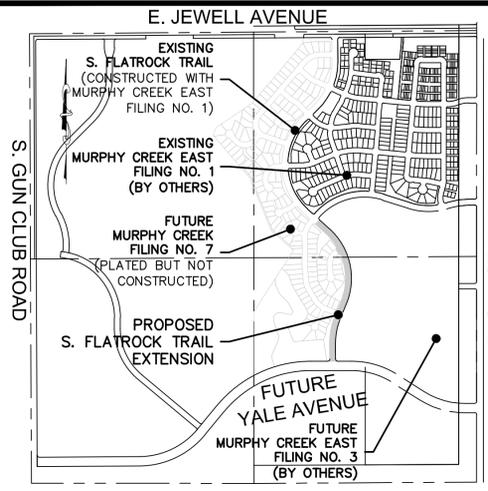


# S. FLATROCK TRAIL EXTENSION

## PRELIMINARY DRAINAGE PLAN



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

THE LOCATIONS OF EXISTING UNDERGROUND UTILITIES ARE SHOWN IN AN APPROXIMATE WAY ONLY AND HAVE NOT BEEN INDEPENDENTLY VERIFIED BY THE CONTRACTOR. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES BEFORE COMMENCING WORK, AND AGREES TO BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MIGHT BE OCCURRED BY THE CONTRACTOR'S FAILURE TO EXACTLY LOCATE AND PRESERVE ANY AND ALL UNDERGROUND UTILITIES.

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**LEGEND**

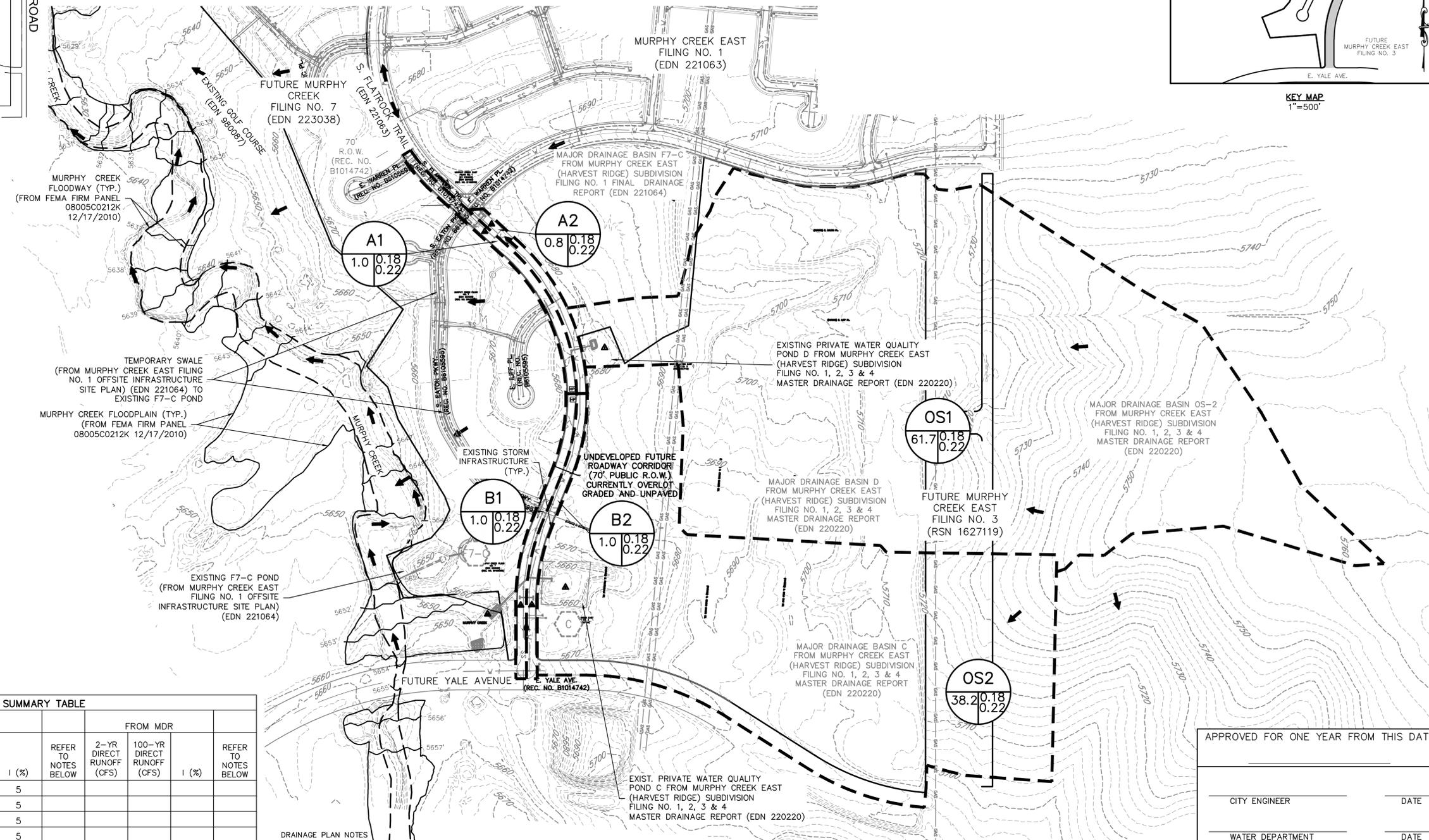
- PROPERTY BOUNDARY
- EXISTING LOT LINE
- PROPOSED CURB & GUTTER
- EXISTING CURB & GUTTER
- PROPOSED SIDEWALK
- PROPOSED CONCRETE PAVEMENT
- SECTION LINE
- PROPOSED EASEMENT
- EXISTING EASEMENT
- PROPOSED 2' CONTOURS
- EXISTING 2' CONTOURS
- BASE FLOOD ELEVATION

**DESIGN POINT**

- MAJOR BASIN BOUNDARY
- PROPOSED BASIN BOUNDARY
- DRAINAGE FLOW ARROW
- HIGH OR LOW POINT

**DESIGN POINT**

A = BASIN DESIGNATION  
B = AREA IN ACRES  
C = 2 YR RUNOFF COEFFICIENT  
D = 100 YR RUNOFF COEFFICIENT



**HISTORIC RUNOFF SUMMARY TABLE**

DESIGN POINT	CONTRIBUTING BASIN	CONTRIBUTING AREA (ACRES)	FROM PDR			FROM MDR			REFER TO NOTES BELOW
			2-YR DIRECT RUNOFF (CFS)	100-YR DIRECT RUNOFF (CFS)	I (%)	2-YR DIRECT RUNOFF (CFS)	100-YR DIRECT RUNOFF (CFS)	I (%)	
A1	A1	1.03	0.40	1.42	5				
A2	A2	0.76	0.30	1.05	5				
B1	B1	1.00	0.39	1.38	5				
B2	B2	1.00	0.39	1.38	5				
1	OS1	61.67	24.20	85.13	5	41.61	160.93	37.2	
2	OS2	38.21	14.99	52.75	5	28.85	114.28	57.2	

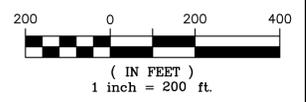
- DRAINAGE PLAN NOTES**
- ALL STORM INFRASTRUCTURE IS TO BE PUBLICLY MAINTAINED UNLESS OTHERWISE NOTED.
  - STORM SYSTEM HAS BEEN SIZED FOR THE 100-YR STORM.
  - "CITY OF AURORA PLAN REVIEW IS ONLY FOR GENERAL CONFORMANCE WITH CITY OF AURORA DESIGN CRITERIA AND THE CITY CODE. THE CITY IS NOT RESPONSIBLE FOR THE ACCURACY AND ADEQUACY OF THE DESIGN, OF DIMENSIONS AND ELEVATIONS WHICH SHALL BE CONFIRMED AND CORRELATED AT THE JOB SITE. THE CITY OF AURORA, THROUGH THE APPROVAL OF THIS DOCUMENT, ASSUMES NO RESPONSIBILITY FOR THE COMPLETENESS AND/OR ACCURACY OF THIS DOCUMENT."
  - MURPHY CREEK 7 AND MURPHY CREEK EAST ARE ANTICIPATED TO BE IN CONSTRUCTION STAGES DURING THE CONSTRUCTION OF SOUTH FLATROCK TRAIL. THESE FILINGS ARE NOT TRIBUTARY TO POND C/DESIGN POINT 6 AND DO NOT AFFECT THE DRAINAGE CONDITIONS OF THE SOUTH FLATROCK TRAIL PROJECT.
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    - MURPHY CREEK EAST FILING NO. 1 OFFSITE INFRASTRUCTURE SITE PLAN (EDN 221064)
    - MURPHY CREEK EAST FILING NO. 1 CIVIL PLANS (EDN 221063)
    - MURPHY CREEK EAST FILING NO. 2 CIVIL PLANS (RSN 1509083)
    - MURPHY CREEK EAST (HARVEST RIDGE) SUBDIVISION FILING NO. 1 FINAL DRAINAGE REPORT (EDN 221063)
  - THE CONSTRUCTION OF SOUTH FLATROCK TRAIL IS ANTICIPATED TO OCCUR PRIOR TO DEVELOPMENT OF MURPHY CREEK FILINGS 3 AND/OR 4.

NOTE 1: FLOW NUMBERS ARE REFERENCED FROM "MURPHY CREEK EAST (HARVEST RIDGE) SUBDIVISION FILING NO. 1, 2, 3, 4 MASTER DRAINAGE REPORT", DATED NOVEMBER 2020. WHERE THERE ARE BOTH MDR AND PDR VALUES, MDR FLOWS HAVE BEEN USED IN THE DESIGN OF FILING NO. 7 TO BE MORE CONSERVATIVE.

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NOTE 4: FLOW NUMBERS ARE REFERENCED FROM "PRELIMINARY DRAINAGE REPORT FOR MURPHY CREEK 7", DATED AUGUST 31ST, 2021 BASED ON RATIONAL CALCULATIONS FOR THE OFF-SITE TRIBUTARY AREAS WITHIN THE GOLF COURSE PROPERTY."



APPROVED FOR ONE YEAR FROM THIS DATE

CITY ENGINEER \_\_\_\_\_ DATE \_\_\_\_\_

WATER DEPARTMENT \_\_\_\_\_ DATE \_\_\_\_\_

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**BENCHMARK**  
CITY OF AURORA ID: 4S6519SR001 (OLD #21-065)  
PUNCH IN 3" DIAM. BRASS CAP ON NORTHEAST CORNER IN CONCRETE BASE FOR 1ST POWER TOWER SOUTH OF THE FLORIDA LANDLINE; SAID POWER TOWER BEING ON THE WEST SIDE OF HARVEST ROAD.

PUBLISHED ELEVATION: 5,629.98 (C.O.A. DATUM: NAVD 88-U.S. SURVEY FT.)

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LAKEWOOD, CO 80228  
303.462.1100

**DEVELOPER**  
9335 E. HARVARD AVE.  
DENVER, CO 80231  
303.961.4242  
HARVEY ALPERT

**CLIENT**  
MURPHY CREEK DEVELOPMENT, LLC  
S. FLATROCK TRAIL EXTENSION  
AURORA, COLORADO  
PRELIMINARY DRAINAGE PLAN  
HISTORIC DRAINAGE MAP

**DATE** 06/12/2022

A 1st SUBMITTAL TO JURISDICTION 06/12/2022 - RDL  
B 2nd SUBMITTAL TO JURISDICTION 07/07/2022 - RDL

REVISIONS

DR. EAP. CH. RDL  
P.M. RDL

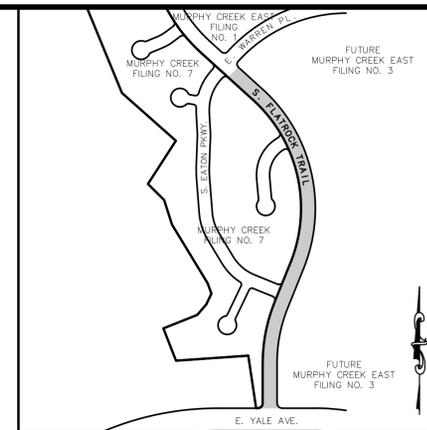
JOB 21003852  
SHEET NO. 1

GAD FILE: 21003852 - DRAINAGE\_MAP\_EXISTING\_CONDITIONS.DWG



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KEY MAP  
1"=500'



DEVELOPER  
9335 E HARVARD AVE.  
DENVER, CO 80231  
303.961.4242  
HARVEY ALPERT

MURPHY CREEK DEVELOPMENT, LLC  
S. FLATROCK TRAIL EXTENSION  
AURORA, COLORADO  
PRELIMINARY DRAINAGE PLAN  
PROPOSED DRAINAGE MAP

CLIENT  
DATE 06/12/2022

APPROVED FOR ONE YEAR FROM THIS DATE

CITY ENGINEER \_\_\_\_\_ DATE \_\_\_\_\_  
WATER DEPARTMENT \_\_\_\_\_ DATE \_\_\_\_\_

REVISIONS

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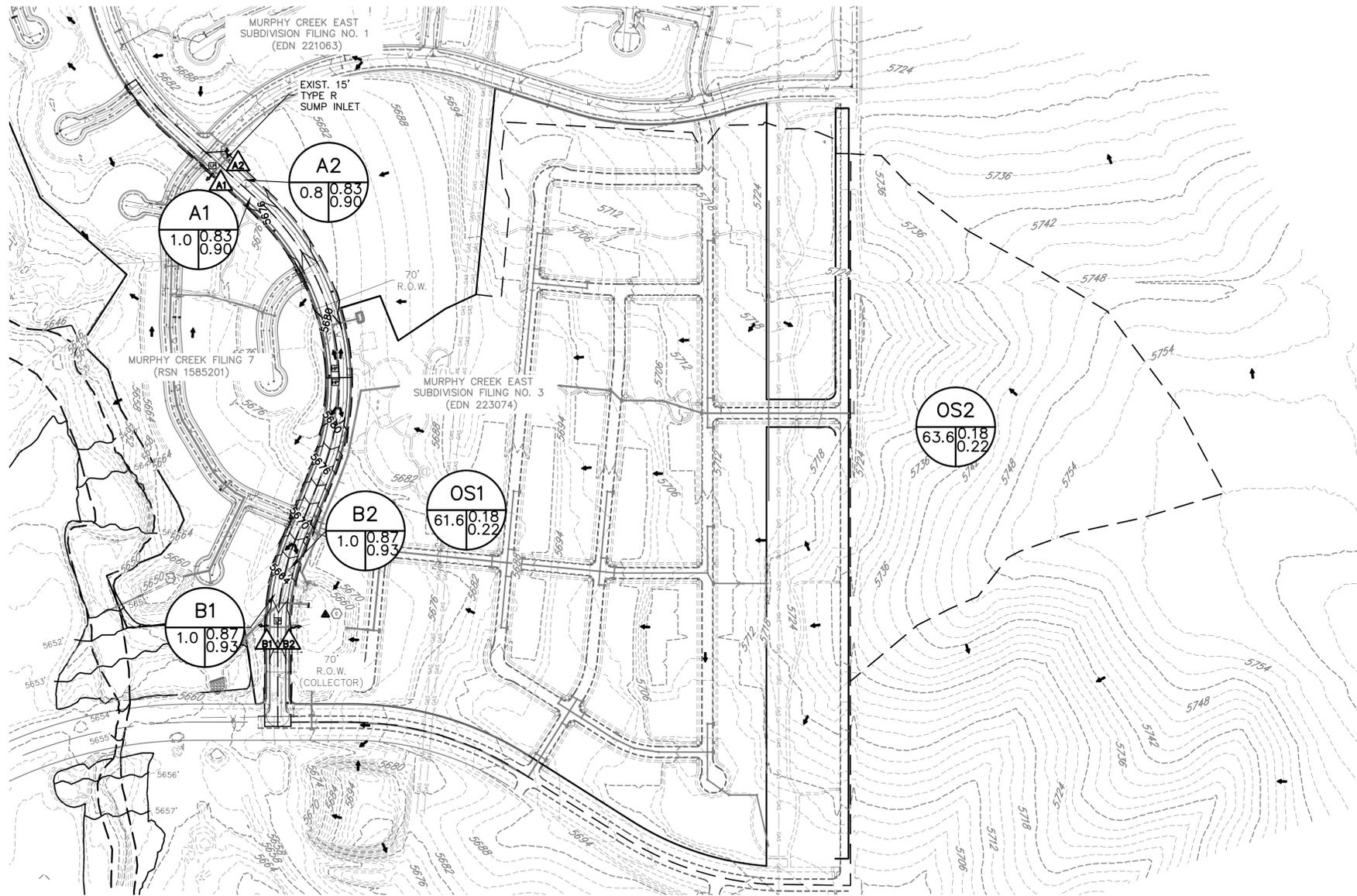
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DR. EAP | CH. RDL  
P.M. RDL  
JOB # 21003852  
SHEET NO. 2

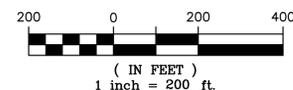
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**LEGEND**

- PROPERTY BOUNDARY
  - EXISTING LOT LINE
  - PROPOSED CURB & GUTTER
  - EXISTING CURB & GUTTER
  - PROPOSED SIDEWALK
  - PROPOSED CONCRETE PAVEMENT
  - SECTION LINE
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 C = 2 YR RUNOFF COEFFICIENT  
 D = 100 YR RUNOFF COEFFICIENT
- DESIGN POINT
  - PROPOSED BASIN BOUNDARY
  - DRAINAGE FLOW ARROW
  - EMERGENCY OVERFLOW PATH
  - HIGH OR LOW POINT



DESIGN POINT	CONTRIBUTING BASIN	CONTRIBUTING AREA (ACRES)	FROM PDR			REFER TO NOTES BELOW	FROM MURPHY CREEK FILING NO. 3			REFER TO NOTES BELOW
			2-YR DIRECT RUNOFF (CFS)	100-YR DIRECT RUNOFF (CFS)	I (%)		2-YR DIRECT RUNOFF (CFS)	100-YR DIRECT RUNOFF (CFS)	I (%)	
A1	A1	1.03	2.61	8.03	100					
A2	A2	0.80	1.92	5.92	100					
B1	B1	1.00	2.53	7.79	100					
B2	B2	1.00	2.53	7.79	100					
1	C	70.72				67.00	267.90	40	4	
	OS1	21.66				8.10	27.10	5	4	

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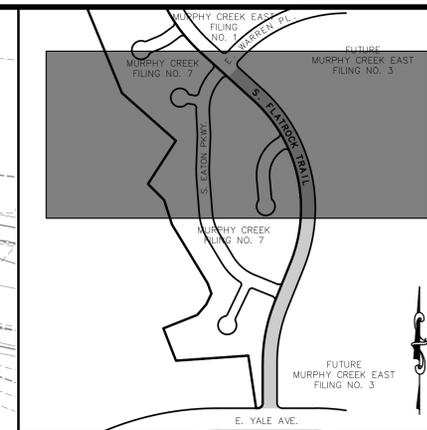
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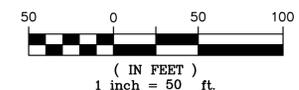
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KEY MAP  
1"=500'

**LEGEND**

	PROPERTY BOUNDARY
	EXISTING LOT LINE
	PROPOSED CURB & GUTTER
	EXISTING CURB & GUTTER
	PROPOSED SIDEWALK
	PROPOSED CONCRETE PAVEMENT
	SECTION LINE
	PROPOSED EASEMENT
	EXISTING EASEMENT
	PROPOSED CONTOURS
	EXISTING CONTOURS
	BASE FLOOD ELEVATION
	A = BASIN DESIGNATION B = AREA IN ACRES C = 2 YR RUNOFF COEFFICIENT D = 100 YR RUNOFF COEFFICIENT
	DESIGN POINT
	PROPOSED BASIN BOUNDARY
	DRAINAGE FLOW ARROW
	EMERGENCY OVERFLOW PATH
	HIGH OR LOW POINT



**DRAINAGE PLAN NOTES**

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**PROPOSED DIRECT RUNOFF SUMMARY TABLE**

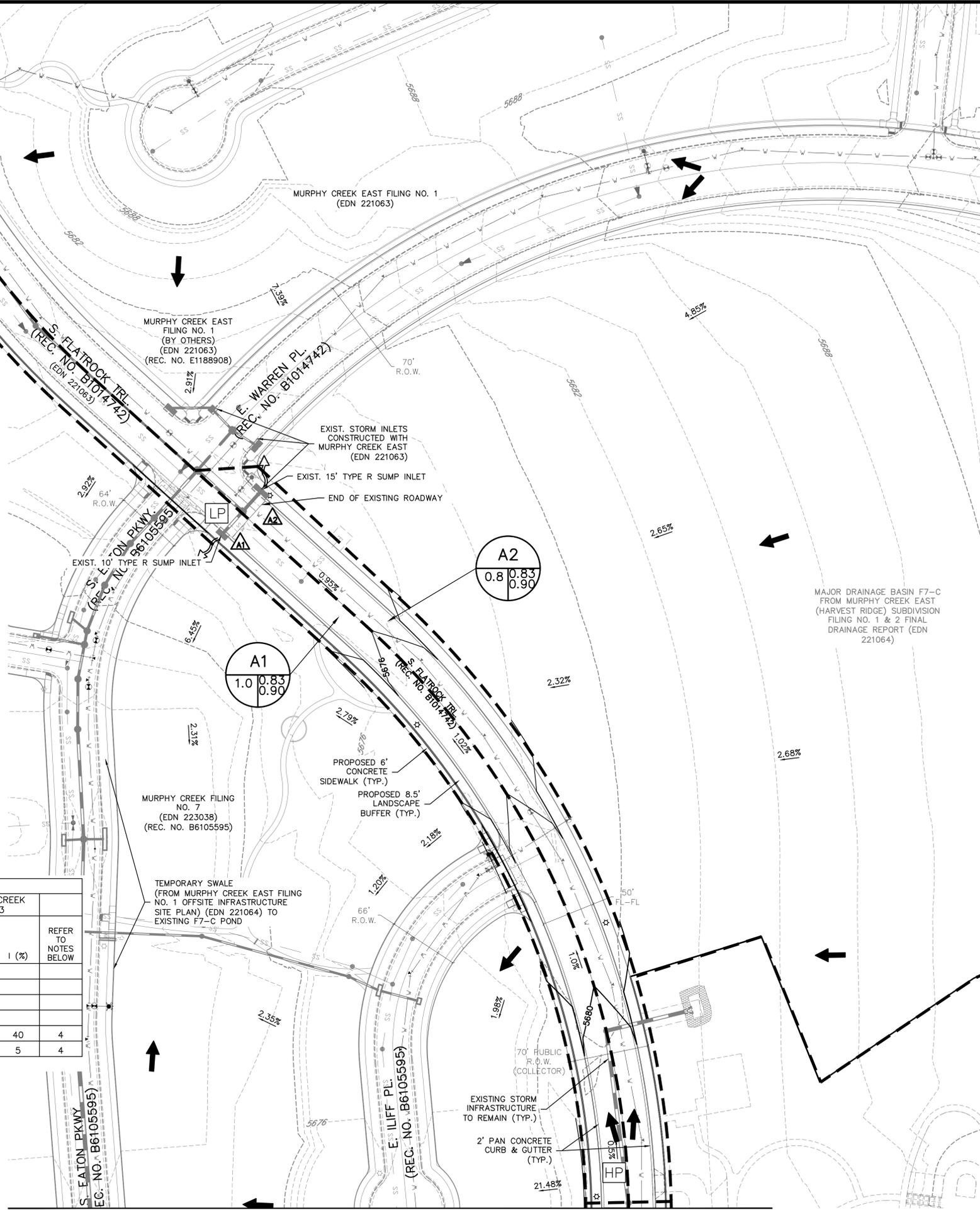
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	OS1	21.66				8.10	27.10	5		4

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DENVER, CO 80231

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S. FLATROCK TRAIL EXTENSION  
AURORA, COLORADO  
PRELIMINARY DRAINAGE PLAN  
PROPOSED DRAINAGE MAP

**DATE** 06/12/2022

APPROVED FOR ONE YEAR FROM THIS DATE

CITY ENGINEER \_\_\_\_\_ DATE \_\_\_\_\_

WATER DEPARTMENT \_\_\_\_\_ DATE \_\_\_\_\_

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PUBLISHED ELEVATION: 5,629.98 (C.O.A. DATUM: NAVD 88-U.S. SURVEY FT.)

DR. EAP CH. RDL  
P.M. RDL  
JOB 21003852  
SHEET NO. 3



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 HARVEY ALPERT

MURPHY CREEK DEVELOPMENT, LLC  
 S. FLATROCK TRAIL EXTENSION  
 AURORA, COLORADO  
 PRELIMINARY DRAINAGE PLAN  
 PROPOSED DRAINAGE MAP

CLIENT  
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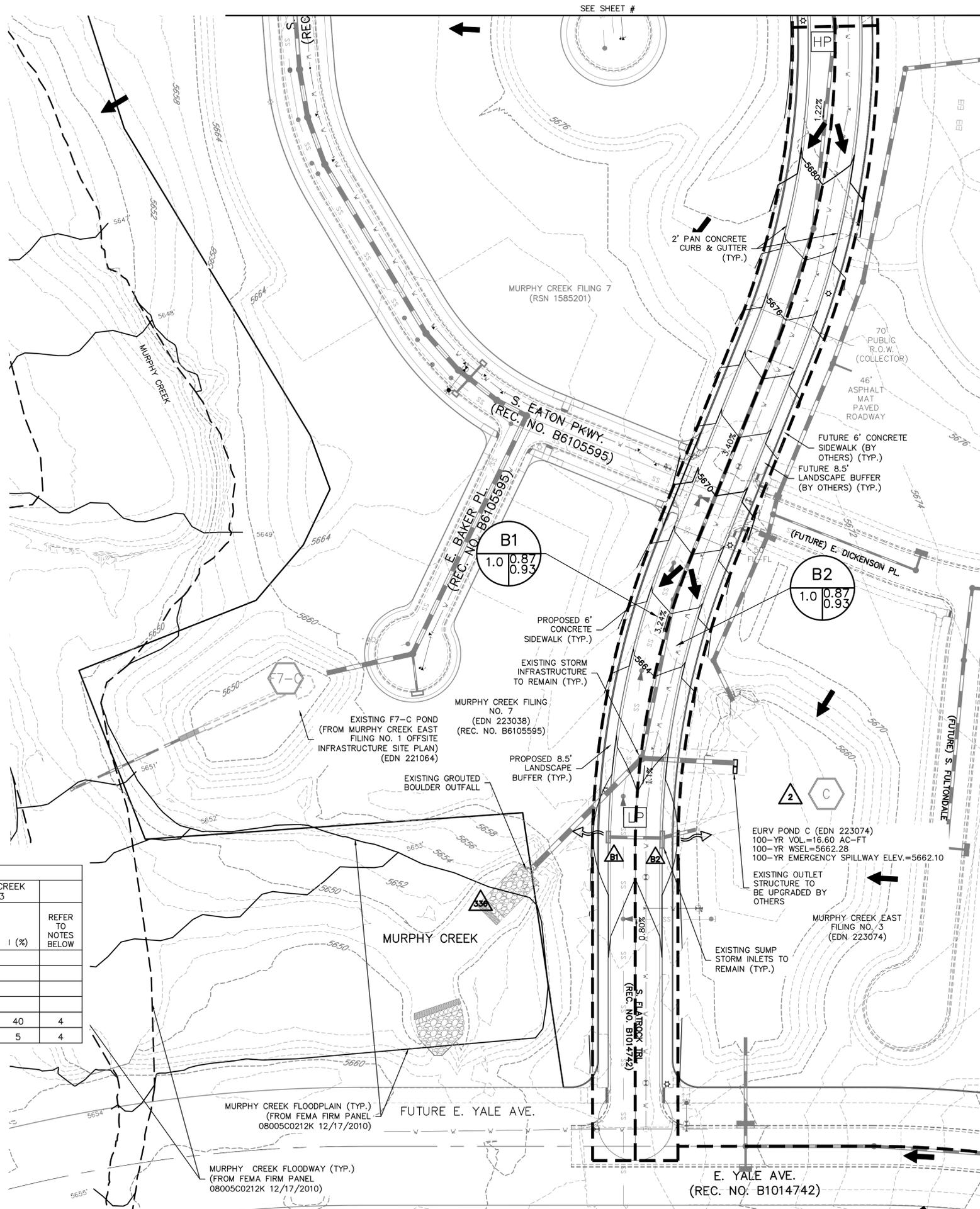
CITY ENGINEER \_\_\_\_\_ DATE \_\_\_\_\_  
 WATER DEPARTMENT \_\_\_\_\_ DATE \_\_\_\_\_

REVISIONS  
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BENCHMARK  
 CITY OF AURORA ID: 4S6519SRE001 (OLD #21-065)  
 PUNCH IN 3: DIAM. BRASS CAP ON NORTHEAST CORNER IN CONCRETE BASE FOR 1ST POWER TOWER SOUTH OF THE FLORIDA LANDLINE; SAID POWER TOWER BEING ON THE WEST SIDE OF HARVEST ROAD.

PUBLISHED ELEVATION: 5,629.98 (C.O.A. DATUM: NAVD 88-U.S. SURVEY FT.)  
 DR. EAP CH. RDL  
 P.M. RDL  
 JOB 21003852  
 SHEET NO. 4

SEE SHEET #



**DRAINAGE PLAN NOTES**

- ALL STORM INFRASTRUCTURE IS TO BE PUBLICLY MAINTAINED UNLESS OTHERWISE NOTED.
- STORM SYSTEM HAS BEEN SIZED FOR THE 100-YR STORM.
- "CITY OF AURORA PLAN REVIEW IS ONLY FOR GENERAL CONFORMANCE WITH CITY OF AURORA DESIGN CRITERIA AND THE CITY CODE. THE CITY IS NOT RESPONSIBLE FOR THE ACCURACY AND ADEQUACY OF THE DESIGN, OF DIMENSIONS AND ELEVATIONS WHICH SHALL BE CONFIRMED AND CORRELATED AT THE JOB SITE. THE CITY OF AURORA, THROUGH THE APPROVAL OF THIS DOCUMENT, ASSUMES NO RESPONSIBILITY FOR THE COMPLETENESS AND/OR ACCURACY OF THIS DOCUMENT."
- MURPHY CREEK 7 AND MURPHY CREEK EAST ARE ANTICIPATED TO BE IN CONSTRUCTION STAGES DURING THE CONSTRUCTION OF SOUTH FLATROCK TRAIL. THESE FILINGS ARE NOT TRIBUTARY TO POND C/DESIGN POINT 6 AND DO NOT AFFECT THE DRAINAGE CONDITIONS OF THE SOUTH FLATROCK TRAIL PROJECT.
- MURPHY CREEK EAST (BY CVL CONSULTANTS) IS ANTICIPATED TO BE CONSTRUCTED AHEAD OF MURPHY CREEK FILING NO. 7. MURPHY CREEK EAST IS CONSTRUCTING THE PONDS ON THE FILING NO. 7 PROPERTY. FILING NO. 7 IS MAINTAINING PONDS AS CONSTRUCTED BY MURPHY CREEK EAST AND ONLY MODIFYING GRADING AND OUTLET STRUCTURES AS NECESSARY. MURPHY CREEK EAST PROJECT INCLUDES THE FOLLOWING SUBMISSIONS THAT HAVE BEEN ACCOUNTED FOR IN THE DESIGN OF FILING NO. 7 (EDN 223038):
  - MURPHY CREEK EAST (HARVEST RIDGE) SUBDIVISION FILING NO. 1, 2, 3, & 4 MASTER DRAINAGE REPORT (220220)
  - MURPHY CREEK EAST FILING NO. 1 OFFSITE INFRASTRUCTURE SITE PLAN (EDN 221064)
  - MURPHY CREEK EAST FILING NO. 1 CIVIL PLANS (EDN 221063)
  - MURPHY CREEK EAST FILING NO. 2 CIVIL PLANS (RSN 1509083)
  - MURPHY CREEK EAST (HARVEST RIDGE) SUBDIVISION FILING NO. 1 FINAL DRAINAGE REPORT (EDN 221063)
- THE CONSTRUCTION OF SOUTH FLATROCK TRAIL IS ANTICIPATED TO OCCUR PRIOR TO DEVELOPMENT OF MURPHY CREEK FILINGS 3 AND/OR 4.

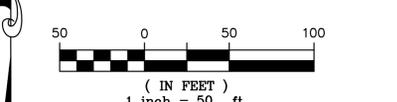
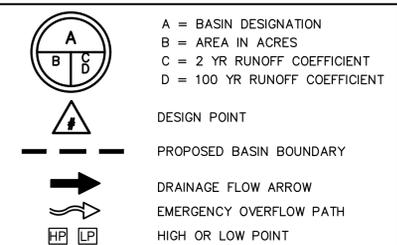
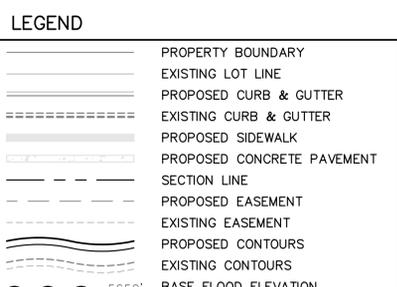
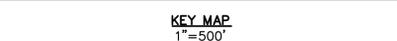
DESIGN POINT	CONTRIBUTING BASIN	CONTRIBUTING AREA (ACRES)	FROM PDR			REFER TO NOTES BELOW	FROM MURPHY CREEK FILING NO. 3			REFER TO NOTES BELOW
			2-YR DIRECT RUNOFF (CFS)	100-YR DIRECT RUNOFF (CFS)	I (%)		2-YR DIRECT RUNOFF (CFS)	100-YR DIRECT RUNOFF (CFS)	I (%)	
A1	A1	1.03	2.61	8.03	100					
A2	A2	0.80	1.92	5.92	100					
B1	B1	1.00	2.53	7.79	100					
B2	B2	1.00	2.53	7.79	100					
1	C	70.72				67.00	267.90	40	4	
	OS1	21.66				8.10	27.10	5	4	

NOTE 1: FLOW NUMBERS ARE REFERENCED FROM "MURPHY CREEK EAST (HARVEST RIDGE) SUBDIVISION FILING NO. 1, 2, 3, 4 MASTER DRAINAGE REPORT", DATED NOVEMBER 2020. WHERE THERE ARE BOTH MDR AND PDR VALUES, MDR FLOWS HAVE BEEN USED IN THE DESIGN OF FILING NO. 7 TO BE MORE CONSERVATIVE.

NOTE 2: FLOW NUMBERS ARE REFERENCED FROM "MASTER DRAINAGE PLAN FOR MURPHY CREEK, A PLANNED COMMUNITY", DATED FEBRUARY 1998.

NOTE 3: FLOW NUMBERS ARE REFERENCED FROM "MURPHY CREEK EAST (HARVEST RIDGE) SUBDIVISION FILING NO. 1 FINAL DRAINAGE REPORT", DATED FEBRUARY 2021.

NOTE 4: FLOW NUMBERS ARE REFERENCED FROM "PRELIMINARY DRAINAGE REPORT FOR MURPHY CREEK EAST FILING 3", DATED MARCH 13TH 2023.



APPROVED FOR ONE YEAR FROM THIS DATE

CITY ENGINEER \_\_\_\_\_ DATE \_\_\_\_\_

WATER DEPARTMENT \_\_\_\_\_ DATE \_\_\_\_\_

REVISIONS

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