Bryant Planning Commission Meeting

Boswell Municipal Complex - City Hall Court Room

210 SW 3rd Street

YouTube: https://www.youtube.com/c/bryantarkansas

Date: March 10, 2025 - **Time:** 6:00 PM

Call to Order

Approval of Minutes

1. Planning Commission Meeting Minutes 2/10/2025

- 2025-02-10 Planning Commision Meeting Minutes.pdf

Announcements

DRC Report

2. 501 Prints - 307 Bryant Ave - Sign Permit

Arkansas Sign & Neon - Requesting Sign Permit Approval - STAFF APPROVED

- 93400-SGNAPP-01.pdf

3. Little Caesars - 1315 N Reynolds Road - Sign Permit

Arkansas Sign & Neon - Requesting Sign Permit Approval - STAFF APPROVED

- 93401-SGNAPP-01.pdf

Old Business

New Business

4. Hawkins Valley Phase 1 - Preliminary Plat

GarNat Engineering - Requesting Preliminary Plat Approval

- 0941-OWS-01.pdf
- 0941-PLN-02.pdf
- 0941-RSPCO-01.pdf
- 0941-DRN-02.pdf
- 0941-PLN-01.pdf
- 0941-RSP-01.pdf
- 0941-DRN-03.pdf

5. Proposed RFQ for New Comprehensive Growth Plan

Ted Taylor - Review and Approval to Proceed on RFQ for a New Comprehensive Growth Plan for the City.

- RFQ_ Comprehensive Growth Plan.pdf

Adjournments

Bryant Planning Commission Meeting Minutes

Monday, February 10, 2025
Boswell Municipal Complex – City Hall Courtroom
6:00 PM

Agenda

CALL TO ORDER

- Chairman Lance Penfield calls the meeting to order.
- Commissioners Present: Statton, Johnson, Penfield, Edwards, Erwin, Speed
- Commissioners Absent: Hooten

ANNOUNCEMENTS

Mayor Chris Treat gave a brief presentation on the We AR Bryant 2025-2026 Strategic Plan.

APPROVAL OF MINUTES

1. **Planning Commission Meeting Minutes 1/16/2025**

   Motion to Approve Minutes made by Commissioner Statton, Seconded by Commissioner Edwards. Voice Vote, 6 Yays, 0 nays, 1 Absent.

Chairman Penfield read the DRC Report.

DRC REPORT

2. **2714 Lavern Dr- Conditional Use Permit**
   Vanessa Guerra - Requesting Recommendation for Approval of Conditional Use Permit for Duplex - RECOMMENDED APPROVAL based on completing Public Hearing Requirements.

3. **2711 Springhill Road- Rezoning C-1 to C-2**
   Mohammad Tariq - Requesting Recommendation for Rezoning from C-1 to C-2 - RECOMMENDED APPROVAL, based on completing Public Hearing Requirements.

4. **2711 Springhill Road- Conditional Use Permit**
   Mohammad Tariq - Requesting Recommendation for Approval of CUP for the use of Automobile Sales & Leasing - Small Lot RECOMMENDED APPROVAL based on completing Public Hearing Requirements.

5. **Panera Bread - 23146 I-30- Site Plan**
   Crafton Tull - Requesting Site Plan Approval - APPROVED, Contingent upon remaining comments being addressed

6. **D1 Training - 1800 N Reynolds Road- Sign Permit**
   Arkansas Sign and Neon - Requesting Sign Permit Approval - STAFF APPROVED

7. **Empire Vape & Smoke Shop - 319 Bryant Ave- Sign Permit**
   Aero Signs - Requesting Sign Permit Approval - STAFF APPROVED

8. **Sherwin Williams - 4000 Hwy 5 N Ste 1- Sign Permi**t
   Arkansas Sign & Neon - Requesting Sign Permit Approval - STAFF APPROVED

PUBLIC HEARING

9. **2714 Lavern Dr- Conditional Use Permit**

   Vanessa Guerra - Requesting Approval for Conditional Use Permit for Duplex.

   Ms Guerra is needing this duplex so she can take care of a family member. A condition was placed on the permit approval that there must be one additional hard surface parking space added to the site. This would make for a total of four parking spaces.

   After brief discussion on the item, Chairman Penfield called for a roll call vote to approve. 6 yays, 0 nays, 1 Absent.

10. **2711 Springhill Road- Rezoning C-1 to C-2**

    Mohammad Tariq - Requesting Approval for Rezoning from C-1 to C-2.

    There was a brief discussion on the proposed rezoning and use. Mr Ted Taylor said there would be no oil changes, detailing, or maintenance performed at this location. Mr Tariq stated that the location would be for selling vehicles only and that they would have 15-20 at a time.

    Chairman Penfield asked for anyone in the public that wanted to speak for or against to come forward to the podium.

    Mac Edwards, Springhill Road - Concerns on the appeal of C-2 uses with proximity to surrounding neighborhood areas and safety concerns. ***Against***

    Brande Henderson - Springhill Road - Concerns over safety and the appeal of a car lot on Springhill Road. ***Against***

After another brief discussion on the item, Chairman Penfield called for a roll call vote to approve. 0 yays, 6 nays, 1 Absent.

Due to the request for rezoning not passing, the following time was removed from the agenda.

~~**11.2711 Springhill Road- Conditional Use Permit**~~

~~Mohammad Tariq - Requesting Approval for CUP for the use of Automobile Sales & Leasing - Small Lot~~

NEW BUSINESS

A motion was made to add the item "GenWealth - Request for Non-Standard Building Approval" by Commissioner Johnson, seconded by Statton. Voice Vote, 7 Yays, 0 Nays, 1 Absent.

12. GenWealth - Bryant Parkway - Non-standard Building

AHA - Requesting Approval for Non-standard building

After brief discussion on the item, Chairman Penfield called for a roll call vote to approve. 6 yays, 0 nays, 1 Absent.

ADJOURNMENT

Motion to Adjourn made by Commissioner Statton, Seconded by Commissioner Speed. Voice Vote, 6 Yays, 0 nays, 1 Absent. The meeting was adjourned.

_____ _____

Chairman, Lance Penfield *Date*

_____ _____

Secretary, Tracy Picanco *Date*

City of Bryant, Arkansas
Community Development
210 SW 3rd Street Bryant, AR 72022
501-943-0943

SIGN PERMIT APPLICATION

Applicants are advised to read the Sign Ordinance prior to completing and signing this form. The Sign Ordinance is available at www.cityofbryant.com under the Planning and Community Development tab.

Note: Electrical Permits may be Required, Please contact the Community Development Office for more information.

Date: 01/17/2025

Sign Co. or Sign Owner

Name ARKANSAS SIGN & NEON
Address 8525 DISTRIBUTION DR
City, State, Zip LITTLE ROCK AR 72209
Phone 501.562.3942
Email Address lora@arkansassign.com

Property Owner

Name 501 PRINTS
Address 307 BRYANT AVE SUITE 3
City, State, Zip BRYANT AR
Phone
Email Address

GENERAL INFORMATION

Name of Business 501 PRINTS
Address/Location of sign 307 BRYANT AVE SUITE 3 BRYANT AR
Zoning Classification

Please use following page to provide details on the signs requesting approval. Along with information provided on this application, **a Site Plan showing placement of sign(s) and any existing sign(s) on the property is required** to be submitted**. Renderings of the sign(s) showing the correct dimensions is also required** to be submitted with the application. A thirty-five dollar ($35) per sign payment will be collected at the time of permit issuance. According to the Sign Ordinance a fee for and sign variance or special sign permit request shall be one hundred dollars ($100). Additional documentation may be required by Sign Administrator.

READ CAREFULLY BEFORE SIGNING

I Lora A. Rand, do hereby certify that all information contained within this application is true and correct. I fully understand that the terms of the Sign Ordinance supersede the Sign Administrator's approval and that all signs must fully comply with all terms of the Sign Ordinance regardless of approval. I further certify that the proposed sign is authorized by the owner of the property and that I am authorized by the property owner to make this application. I understand

that no sign may be placed in public right of way. I understand that I must comply with all Building and Electrical Codes and that it is my responsibility to obtain all necessary permits.

Use table below to enter information regarding each sign for approval. Please use each letter to reference each sign rendering.

SIGN	**Type** (Façade, Pole, Monument, other)	**Dimensions** (Height, Length, Width)	**Sqft** (Measured in whole as rectangle)	**Height of Sign** (Measured from lot surface)		Column for Admin Certifying Approval
				Top of Sign	Bottom of Sign	
A	WALL	2' X 10'	20	17	15	
B						
C			COSTS = 4250.00			
E						
F						
G						

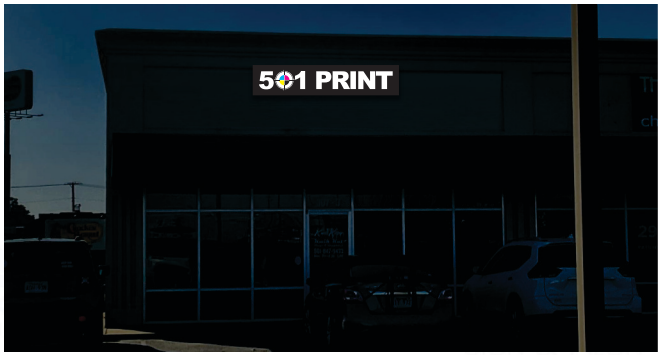


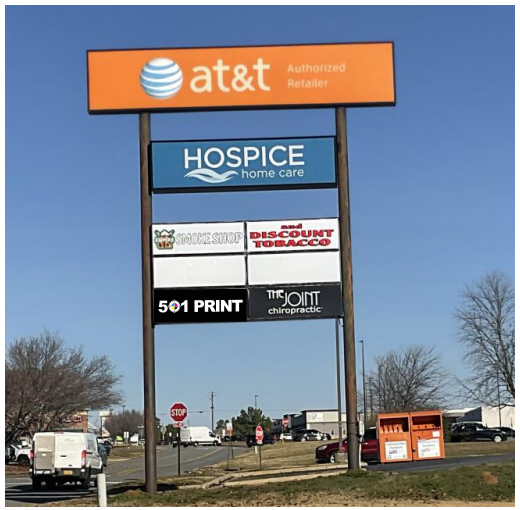
specs:
remove existing wall sign, seal penetrations
fabricate and install cloud-channel sign
led illuminated, black returns, black trimcap
polycarb face w/ vinyl print



(2) new lexan panels w/ graphics
(will survey for exact measurements for fabrication)











ARKANSAS SIGN & NEON
8525 DISTRIBUTION DR.
LITTLE ROCK, AR 72209
501.562.3942 (P)
501.562.6651 (F)
arkansassign.com

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CLIENT: 501 PRINT
307-3 BRYANT AVE, BRYANT AR
REP:
KEVIN HONEA
DATE:
12/20/2024 - DWG1

rev2

REQUIRES CLIENT APPROVAL AND LANDLORD APPROVAL FOR PERMITTING AND PRODUCTION

LANDLORD APPROVAL

SIGNATURE _____

ADDRESS _____

_____

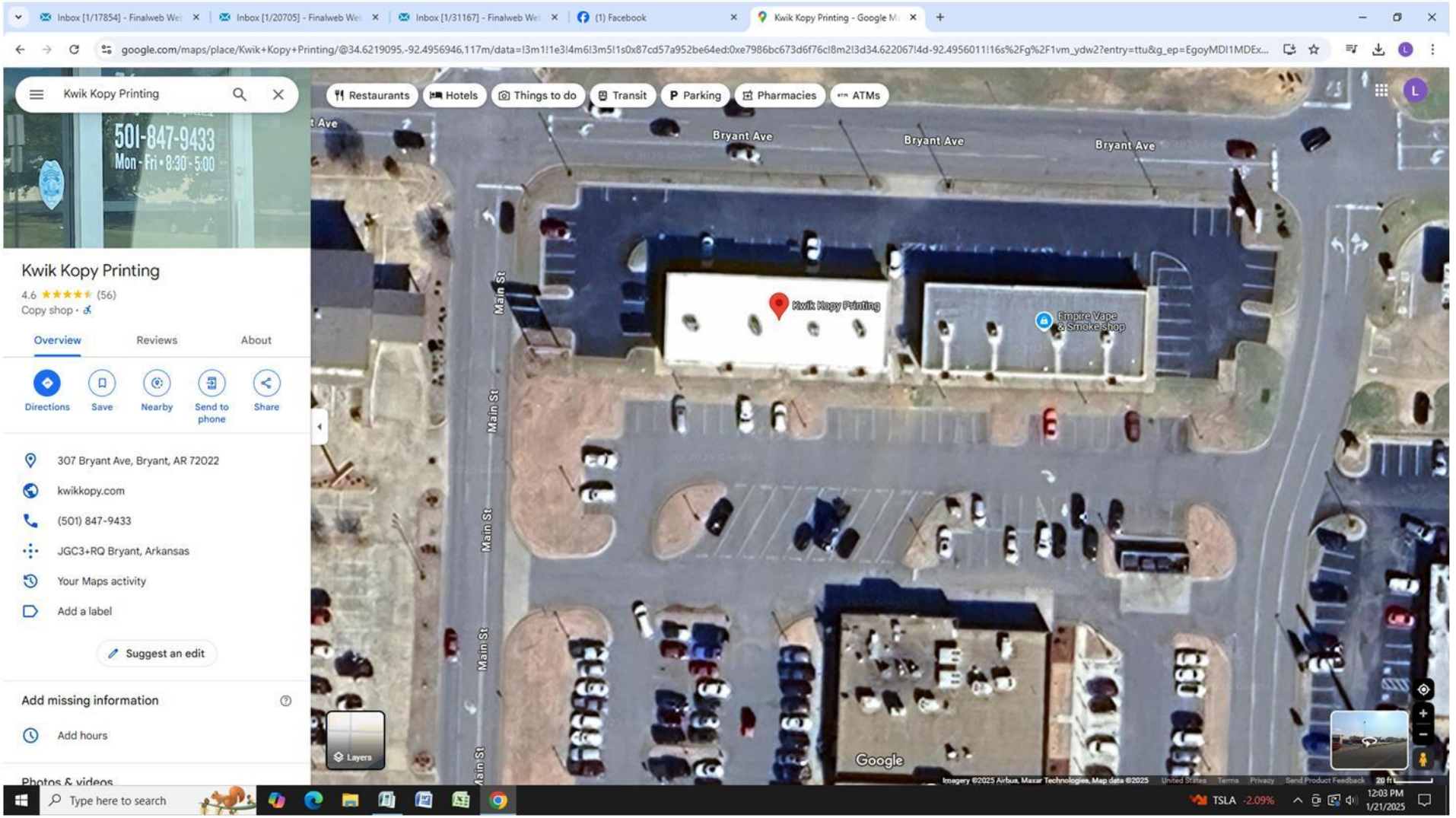
_____ ***DATE:***

Client Approval

Signature _____

Date _____

NOTE: ANY NEEDED WALL REPAIRS ARE NOT ASN RESPONSIBILITY. ANY VIEWS SHOWING REPAIRS ARE FOR VIEWING ONLY.


Inbox [1/17854] - Finalweb Web
Inbox [1/20705] - Finalweb Web
Inbox [1/31167] - Finalweb Web
(1) Facebook
Kwik Kopy Printing - Google Maps
google.com/maps/place/Kwik+Kopy+Printing/@34.6219095,-92.4956946,117m/data=!3m1!1e3!4m6!3m5!1s0x87cd57a952be64ed:0xe7986bc673d6f76c!8m2!3d34.622067!4d-92.4956011!16s%2Fg%2F1vm_ydw2?entry=ttu&g_ep=EgoyMDI1MDEx...
Kwik Kopy Printing
501-847-9433
Mon - Fri • 8:30 - 5:00
Kwik Kopy Printing
4.6 (56)
Copy shop
Overview
Reviews
About
Directions
Save
Nearby
Send to phone
Share
307 Bryant Ave, Bryant, AR 72022
kwikkopy.com
(501) 847-9433
JGC3+RQ Bryant, Arkansas
Your Maps activity
Add a label
Suggest an edit
Add missing information
Add hours
Photos & videos
Restaurants
Hotels
Things to do
Transit
Parking
Pharmacies
ATMs
Bryant Ave
Bryant Ave
Bryant Ave
Main St
Main St
Main St
Main St
Kwik Kopy Printing
Empire Vape & Smoke shop
Layers
Google
Imagery ©2025 Airbus, Maxar Technologies, Map data ©2025
Type here to search
TSLA -2.09%
12:03 PM
1/21/2025

City of Bryant, Arkansas
Community Development
210 SW 3rd Street Bryant, AR 72022
501-943-0943

SIGN PERMIT APPLICATION

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Date: 02/04/2025

Sign Co. or Sign Owner

Name ARKANSAS SIGN & NEON
Address 8525 DISTRIBUTION DR
City, State, Zip LITTLE ROCK AR 72209
Phone 501.562.3942
Email Address lora@arkansassign.com

Property Owner

Name LITTLE CAESARS
Address 1315 N REYNOLDS RD
City, State, Zip B RYANT AR 72022
Phone
Email Address

GENERAL INFORMATION

Name of Business LITTLE CAESARS
Address/Location of sign 1315 N REYNOLDS RD BRYANT AR 72022
Zoning Classification

Please use following page to provide details on the signs requesting approval. Along with information provided on this application, **a Site Plan showing placement of sign(s) and any existing sign(s) on the property is required** to be submitted**. Renderings of the sign(s) showing the correct dimensions is also required** to be submitted with the application. A thirty-five dollar ($35) per sign payment will be collected at the time of permit issuance. According to the Sign Ordinance a fee for and sign variance or special sign permit request shall be one hundred dollars ($100). Additional documentation may be required by Sign Administrator.

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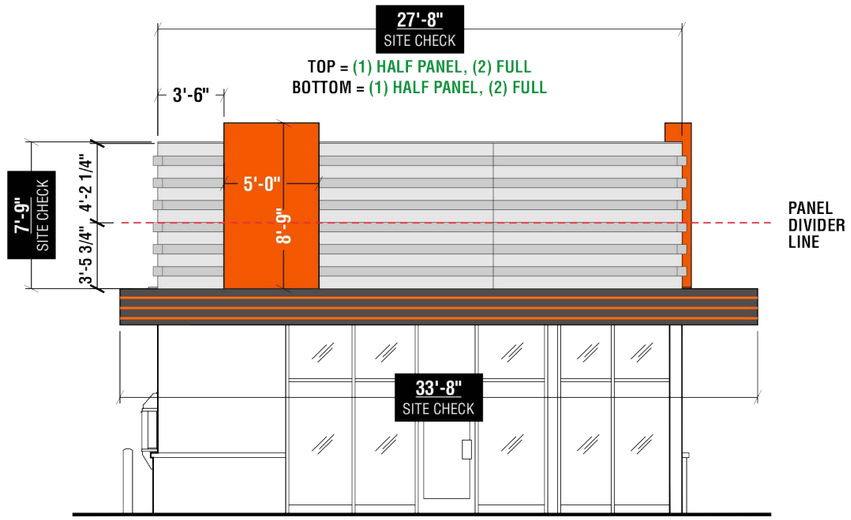
that no sign may be placed in public right of way. I understand that I must comply with all Building and Electrical Codes and that it is my responsibility to obtain all necessary permits.

Use table below to enter information regarding each sign for approval. Please use each letter to reference each sign rendering.

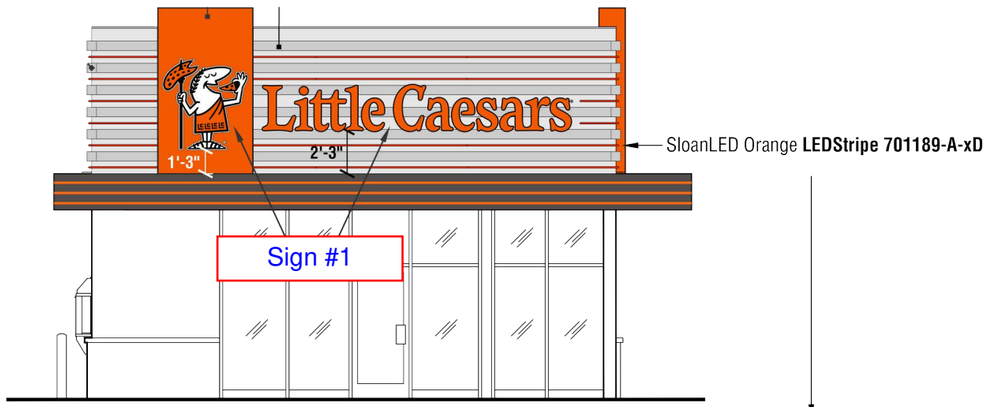
SIGN	**Type** (Façade, Pole, Monument, other)	**Dimensions** (Height, Length, Width)	**Sqft** (Measured in whole as rectangle)	**Height of Sign** (Measured from lot surface)		Column for Admin Certifying Approval
				Top of Sign	Bottom of Sign	
A	FACADE-SOUTH ELEV	4'10 X 21'7	62.9	18'5	13'7	
B	FACADE-EAST ELEV	4'10 X 21'7	62.9	18'5"	13'7"	
C						
E						
F		JOB COSTS - 20000.00				
G						

Sign Placement/ Installation Guide (FRONT ELEVATION)

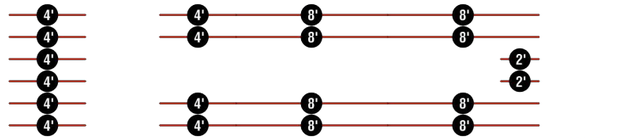
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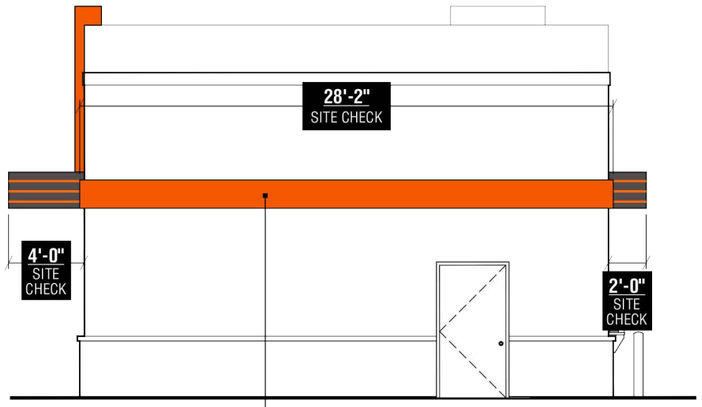
PANEL INSTALL DETAIL



GRAPHIC / LED TUBE DETAIL



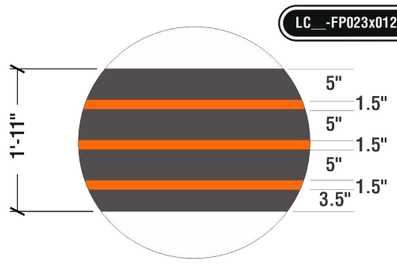
SloanLED Orange LEDStripe TOTAL =
(2) 2'
(10) 4'
(0) 6'
(8) 8'



REAR ELEVATION

LC__-FP018x0239.000A

.080 formed aluminum band (3" deep) to be primed and painted **Orange SIGN31683 High Gloss**



.080 aluminum constructed clad to be primed and painted Pre-Mix "**Little Caesars Bronze**" Note
Stripes to be Avery Bright Orange SC9180-O

FABRICATION NOTE:
INCLUDE 3 EXTRA VINYL STRIPES 5'-0" LONG HAVE 5" SPACING AS PER USUAL SET-UP

Drawing No.
LC__-SP07022.000A1

SITE CHECK REQUIRED
VECTOR ART REQUIRED
COLOUR REQUIRED

December 3, 2024 8:06 PM
M.Auclair
Removed DT Awning

Preliminary Artwork
Approved for Production

Project ID: 00000

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1315 N Reynolds Road
Bryant, Arkansas, USA

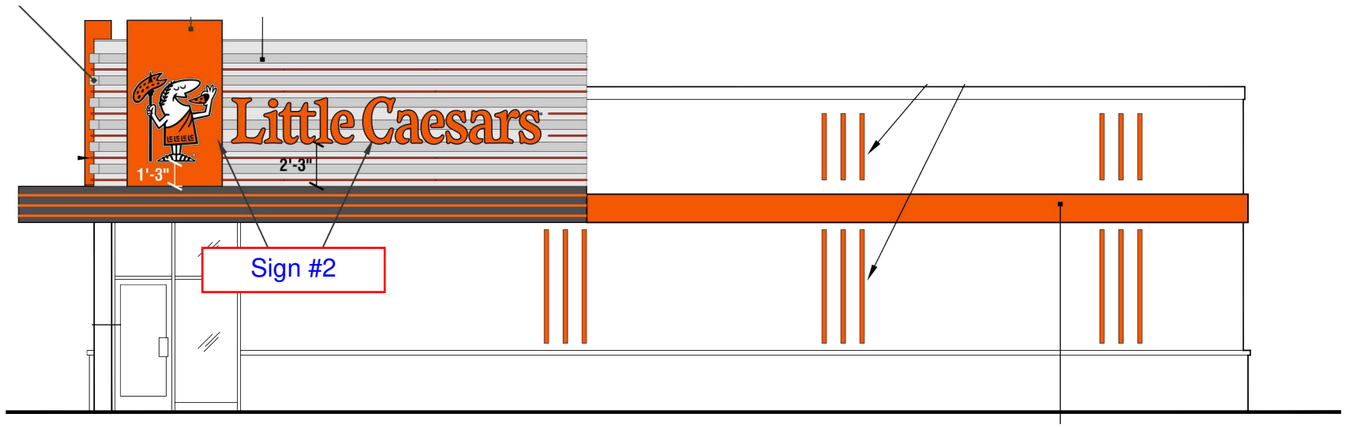
Little Caesars

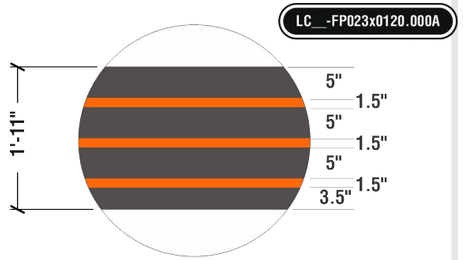
DRAWN BY: T. Dodge
DATE: September 26, 2024

Graphic rendition is representative of specific signage. Colour / dimensional / material details should be verified using reference drawing specifications. Pride Signs Ltd. is not responsible for inherent variations caused by display and / or print variations.

Sign Placement/ Installation Guide (RIGHT ELEVATION)

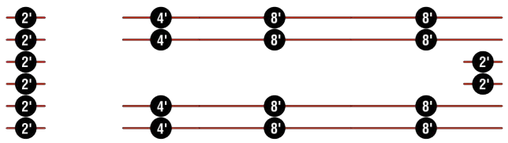
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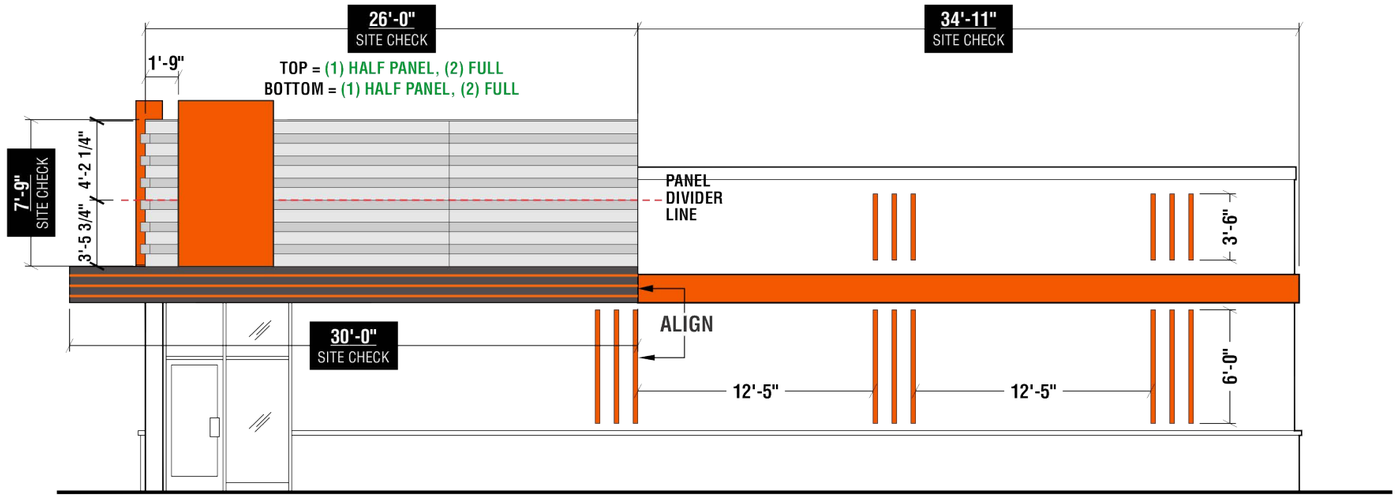


.080 aluminum constructed clad to be primed and painted Pre-Mix "**Little Caesars Bronze**" Note
Stripes to be Avery Bright Orange SC9180-O

FABRICATION NOTE:
INCLUDE 3 EXTRA VINYL STRIPES 5'-0" LONG HAVE 5" SPACING AS PER USUAL SET-UP



SloanLED Orange LEDStripe TOTAL =
(8) 2'
(4) 4'
(0) 6'
(8) 8'



Drawing No.
LC__-SP07022.000B1

SITE CHECK REQUIRED
VECTOR ART REQUIRED
COLOUR REQUIRED

Preliminary Artwork

Approved for Production

Project ID: 00000

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1315 N Reynolds Road
Bryant, Arkansas, USA

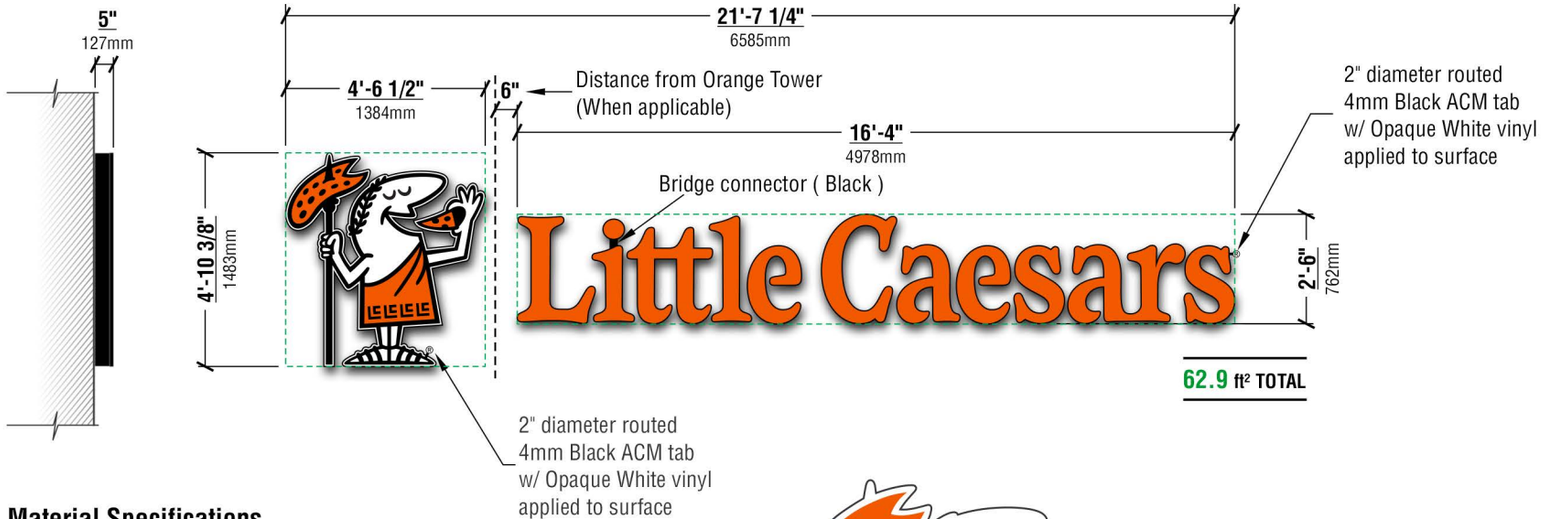
Little Caesars

DRAWN BY: T. Dodge
DATE: September 26, 2024

Graphic rendition is representative of specific signage. Colour / dimensional / material details should be verified using reference drawing specifications. Pride Signs Ltd. is not responsible for inherent variations caused by display and / or print variations.

Illuminated Channel Logo & Letters (2 Required)

Scale: 1/4" = 1'-0"



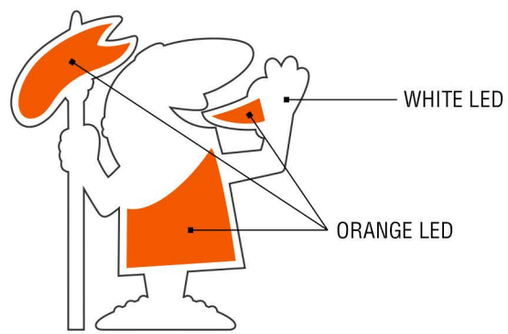
Material Specifications

Logo

- Pre finished Black aluminum letter coil returns
- 3/16" Orange 2119 and White 7328 acrylic face with 3/4" Black trim cap
- Orange and White LED illumination

Little Caesars

- Pre finished Black aluminum letter coil returns
- 3/16" Orange 2119 acrylic faces with 3/4" Black trim cap
- Orange LED illumination



COLOR TRAP DETAIL

NOTE:
Orange Led Enclosed In A Separate 4" Channel (White Coil)

Drawing No.
LC__-CL058x0259.120A

Electrical Requirements

120v 277v 347v

CHANNEL LETTERS

Sign #1 & Sign#2
Sign Area
62.9 sq ft
Each

Preliminary Artwork

Approved for Production

November 22, 2018 T. Dodge

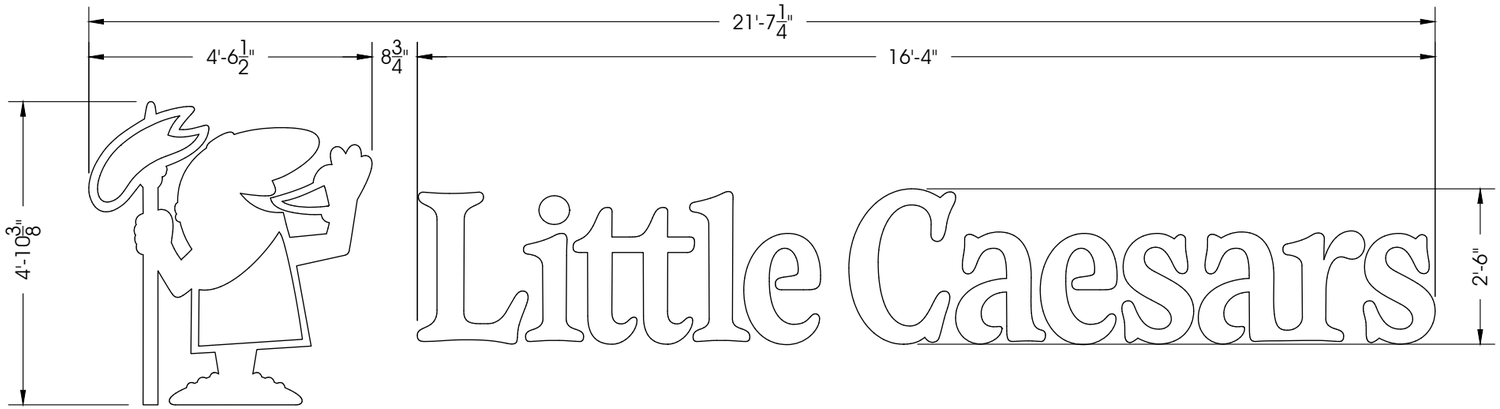
PRIDE SIGNS
255 PINEBUSH ROAD CAMBRIDGE ONTARIO CANADA TEL: 519.622.4040 FAX: 519.622.4031 WWW.PRIDESIGNS.COM

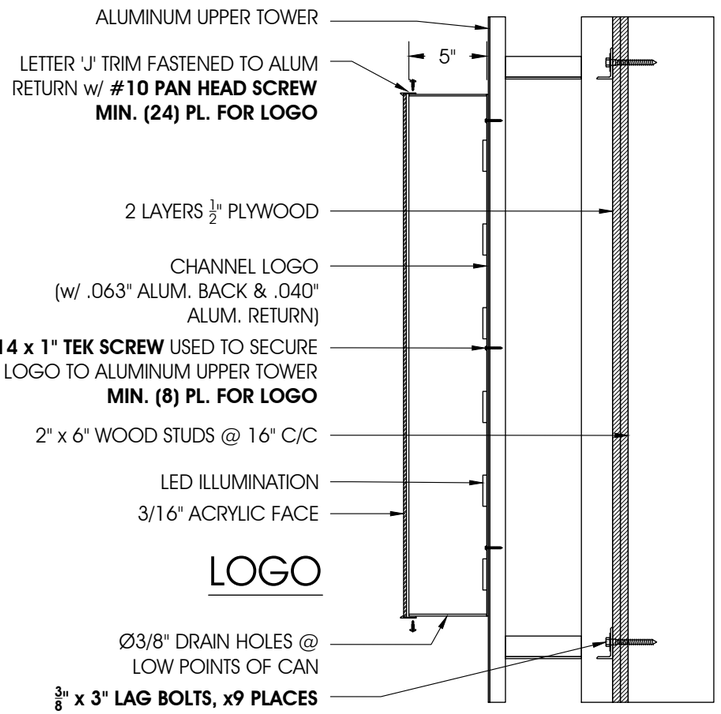
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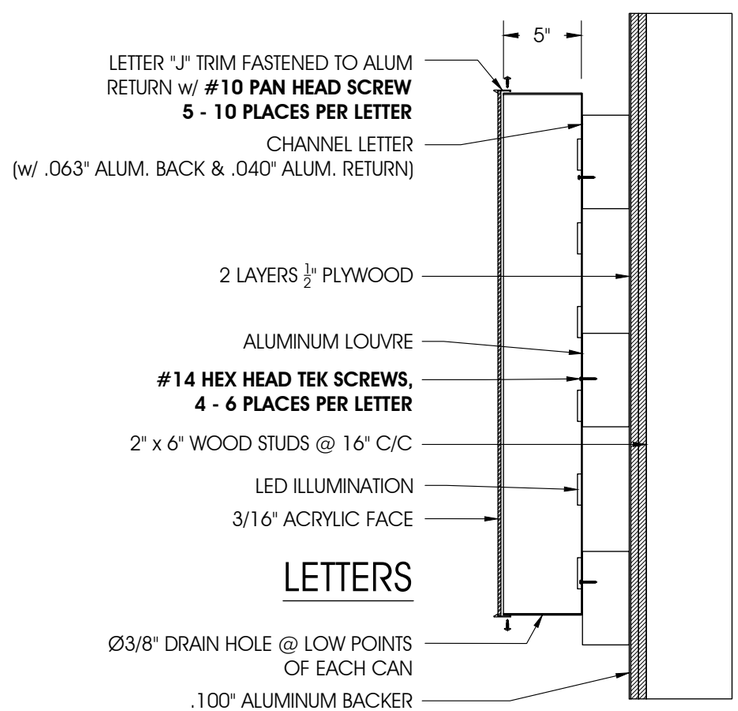
Little Caesars

DRAWN BY: T. Dodge
DATE: August 2, 2018

Graphic rendition is representative of specific signage. Colour / dimensional / material details should be verified using reference drawing specifications. Pride Signs Ltd. is not responsible for inherent variations caused by display and / or print variations.







DESIGN NOTES:
LOADS AS PER ASCE 7-10 FOR BRYANT, AR AREA:
RISK CATEGORY II BUILDING AND STRUCTURES EXPOSURE: 115 MPH

GENERAL WELD NOTE:
1/8" FILLET WELD REQUIRED UNLESS OTHERWISE STATED

ATTENTION:
FIELD ASSEMBLY OF THIS SECTIONAL SIGN IS SUBJECT TO THE ACCEPTANCE OF THE LOCAL AUTHORITY

LES ENSEIGNES MODULAIRES MONTS SUR PLACE PEUVENT ETRE VERIFIEES EN TOUT TEMPS PAR LE SERVICE D'INSPECTION LOCAL

PRIDE SIGNS. INTERNATIONAL SIGN ASSOCIATION sac ace c UL us

THIS STRUCTURAL DRAWING IS THE PROPERTY OF PRIDE SIGNS LIMITED AND MAY NOT BE USED IN WHOLE OR PART WITHOUT THE WRITTEN CONSENT FROM PRIDE SIGNS LIMITED. © 2023
255 PINEBUSH ROAD, CAMBRIDGE, ON, CANADA N1T 1B9 - TEL: 519.622.4040 - WWW.PRIDESIGNS.COM

UL FILE # E500193

DRAWN BY: F. BERGER 26-Sep-18
CHECKED BY: S. POWER 03-Oct-18
CUT FILE: 24-Sep-18 WEIGHT: 95 LBS.

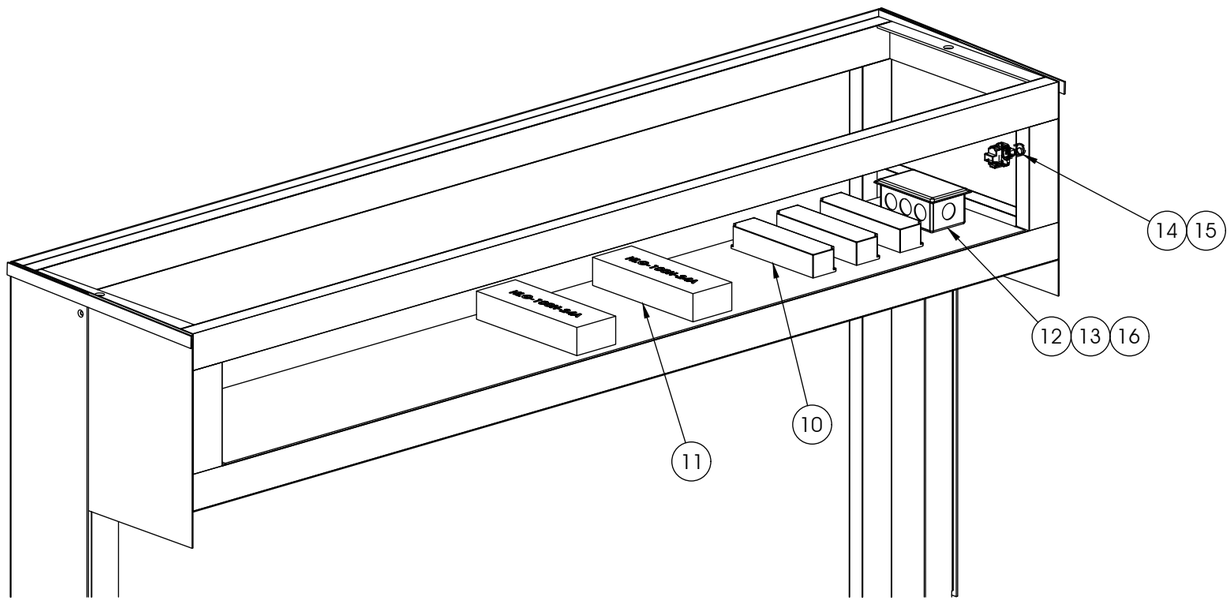
Little Caesars
1315 NORTH REYNOLDS ROAD
BRYANT, AR

ILLUMINATED CHANNEL LETTERS

03 ADDED POWER SUPPLY DETAILS S. POWER 08-May-24

UL REQUIREMENTS:
SIGN PROGRAM: SECTION LABEL 12
AMP DRAW: 6.0 A @ 120V
ENVIRONMENTAL LOCATION: DAMP 01
DISCONNECT SWITCH: YES 01

ELECTRICAL INSTALLATION INSTRUCTIONS



RIGHT ELEVATION

NOTES:

1) SILICONE LED's TO BACK
2) LPV-60-12V POWER SUPPLIES
   TO BE PLACED IN UPPER TOWER
3) LOGO INSTALLED ON TOWER
   LC__-FP105x0060.000A
4) TOGGLE SWITCH w/ BOOT IS
   SECURED TO UPPER TOWER ASSEMBLY
5) SECTIONAL STICKER TO BE PLACED
   ON CAESAR LOGO

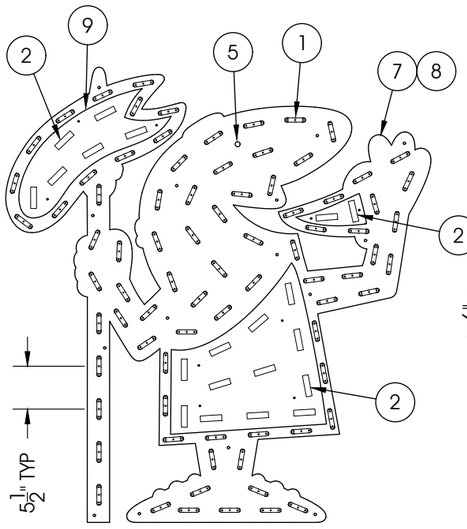
ELECTRICAL NOTE:
75 MOD / POWER SUPPLY
FOR SLOAN PRISM LED's
1.2A / POWER SUPPLY

LC__-CL058x0259.120A R03
SHEET #: 2B OF 3

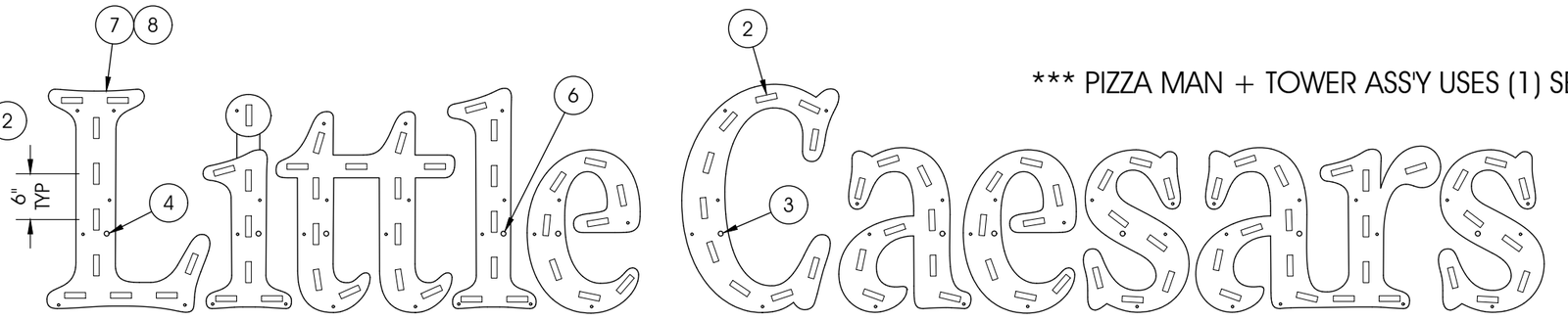
BILL OF MATERIALS

REF#	DESCRIPTION	QTY	LENGTH
1	WHITE GOQ-3 LED	81	
2	ORANGE SLOAN PRISM LED (LED645)	124	
3	18GA LOW VOLTAGE WIRE	1	20'
4	18GA LOW VOLTAGE WIRE	1	10'
5	18GA LOW VOLTAGE WIRE	1	6'
6	18GA LOW VOLTAGE WIRE	9	3'
7	.063" ROUTED ALUM BACK	15	
8	.040" x 5" ALUM RETURN	1	155'
9	.040" x 4" ALUM RETURN	1	14'
10	LPV-60 60W-12V POWER SUPPLY	3	
11	MEANWELL HLG-100W-24V P.S.	2	
12	120V UTILITY BOX	1	
13	BLANK COVER	1	
14	TOGGLE SWITCH w/ RUBBER BOOT	1	
15	3/8" HOLOFLEX CABLE	1	2'-0"
16	14/2 Bx CABLE	1	20'-0"

** ITEM 9 TO BE SHEARED FROM 5.33" COIL



81 WHITE LED's (PS1)
20 ORANGE LED's (PS2)



10 ORANGE LED's (PS2) | 7 ORANGE LED's (PS2) | 13 ORANGE LED's (PS2) | 7 ORANGE LED's (PS2) | 8 ORANGE LED's (PS2) | 10 ORANGE LED's (PS3) | 9 ORANGE LED's (PS3) | 8 ORANGE LED's (PS3) | 8 ORANGE LED's (PS3) | 16 ORANGE LED's (PS3) | 8 ORANGE LED's (PS3)

*** PIZZA MAN + TOWER ASS'Y USES (1) SECTIONAL STICKER

ATTENTION:
FIELD ASSEMBLY OF THIS SECTIONAL SIGN IS SUBJECT TO THE ACCEPTANCE OF THE LOCAL AUTHORITY

LES ENSEIGNES MODULAIRES MONTS SUR PLACE PEUVENT ETRE VERIFIEES EN TOUT TEMPS PAR LE SERVICE D'INSPECTION LOCAL

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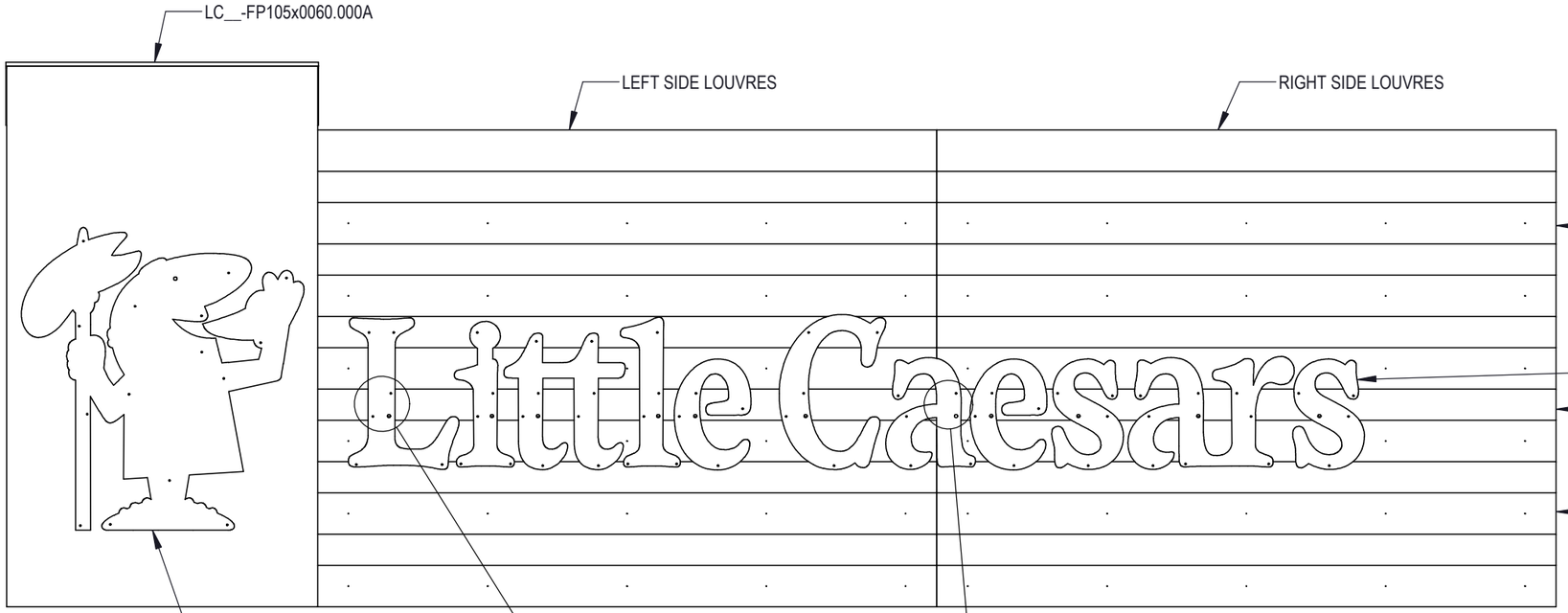
DRAWN BY: F. BERGER 26-Sep-18
CHECKED BY: S. POWER 03-Oct-18
CUT FILE: 24-Sep-18 WEIGHT: 95 LBS.

Little Caesars

VARIOUS

ILLUMINATED CHANNEL LETTERS

03 ADDED POWER SUPPLY DETAILS S. POWER 08-May-24
UL REQUIREMENTS: AMP DRAW: 6.0 A @ 120V
SIGN PROGRAM: SECTION LABEL 12 ENVIRONMENTAL LOCATION: DAMP 01
DISCONNECT SWITCH: YES 01



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UL FILE # E500193

DRAWN BY: F. BERGER 26-Sep-18
CHECKED BY: S. POWER 03-Oct-18
CUT FILE: 24-Sep-18 **WEIGHT: 95 LBS**

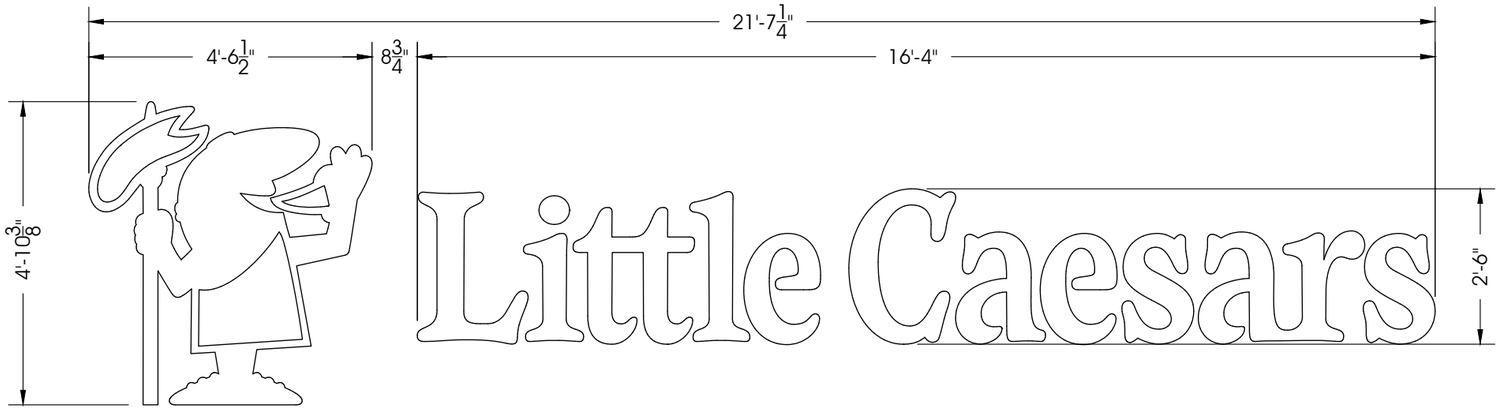
Little Caesars
VARIOUS
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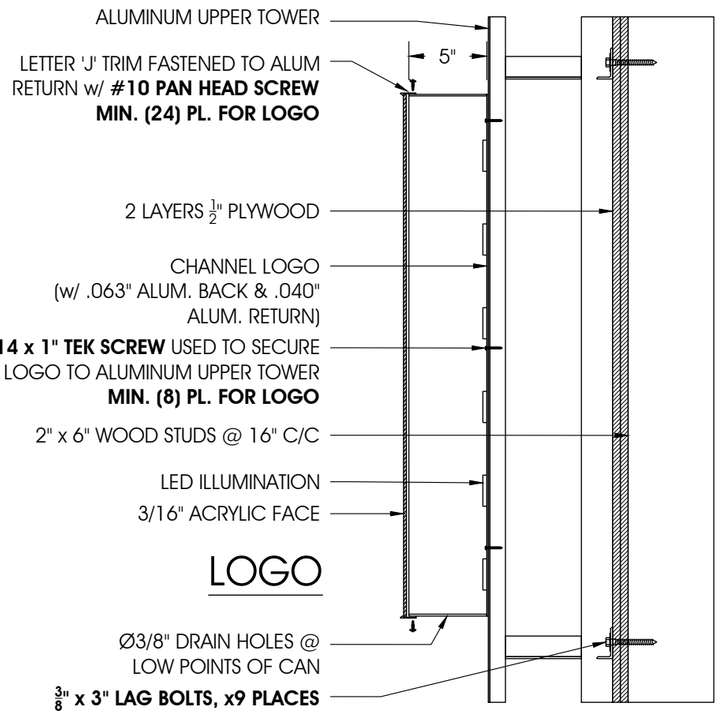
ILLUMINATED CHANNEL LETTERS

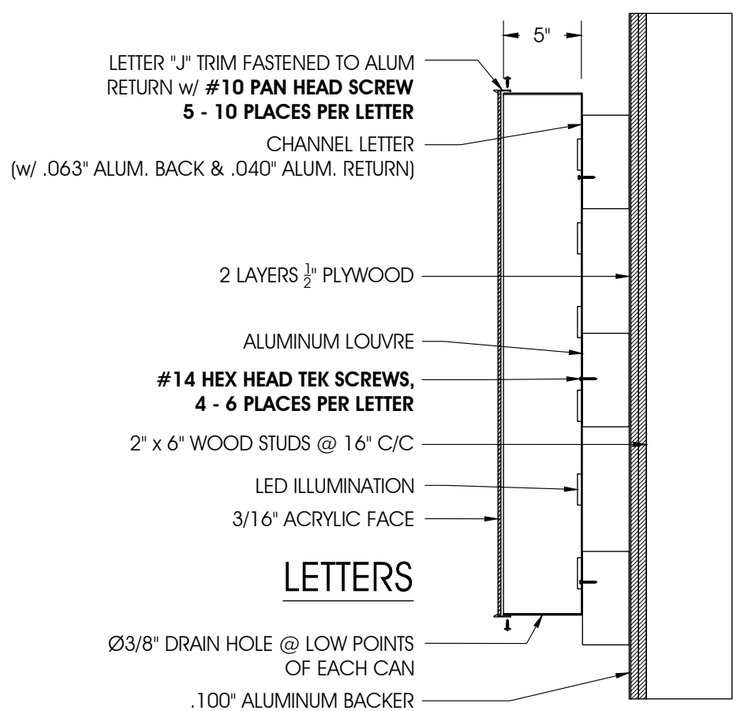
03 ADDED POWER SUPPLY DETAILS S. POWER 08-May-24

UL REQUIREMENT:
SIGN PROGRAM: SECTION LABEL - 12
-

TOTAL AMP DRAW: 6.0 A @ 120 V
ENVIRONMENTAL LOCATION: DAMP - 01
DISCONNECT SWITCH: YES - 01







ATTENTION:
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DRAWN BY: F. BERGER 26-Sep-18
CHECKED BY: S. POWER 03-Oct-18
CUT FILE: 24-Sep-18 WEIGHT: 95 LBS.

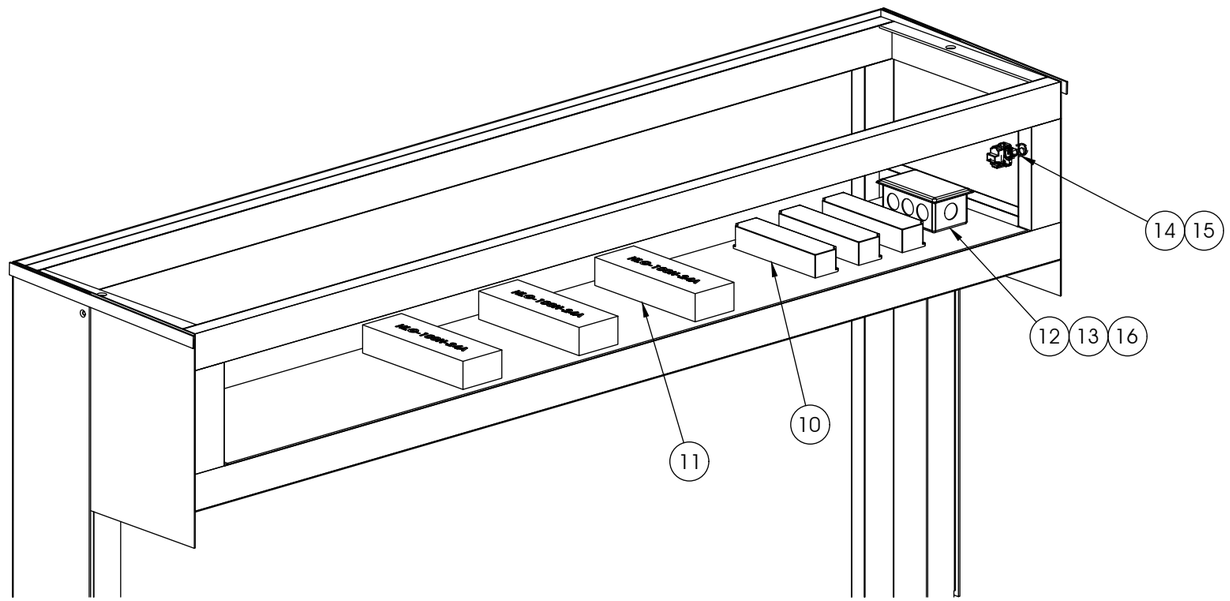
Little Caesars

VARIOUS

ILLUMINATED CHANNEL LETTERS

03 ADDED POWER SUPPLY DETAILS S. POWER 08-May-24
UL REQUIREMENTS: AMP DRAW: 7.2 A @ 120V
SIGN PROGRAM: SECTION LABEL 12 ENVIRONMENTAL LOCATION: DAMP 01
DISCONNECT SWITCH: YES 01

ELECTRICAL INSTALLATION INSTRUCTIONS



FRONT ELEVATION

NOTES:

1) SILICONE LED's TO BACK
2) LPV-60-12V POWER SUPPLIES
   TO BE PLACED IN UPPER TOWER
3) LOGO INSTALLED ON TOWER
   LC__-FP105x0060.000A
4) TOGGLE SWITCH w/ BOOT IS
   SECURED TO UPPER TOWER ASSEMBLY
5) SECTIONAL STICKER TO BE PLACED
   ON CAESAR LOGO

ELECTRICAL NOTE:
75 MOD / POWER SUPPLY
FOR SLOAN PRISM LED's
1.2A / POWER SUPPLY

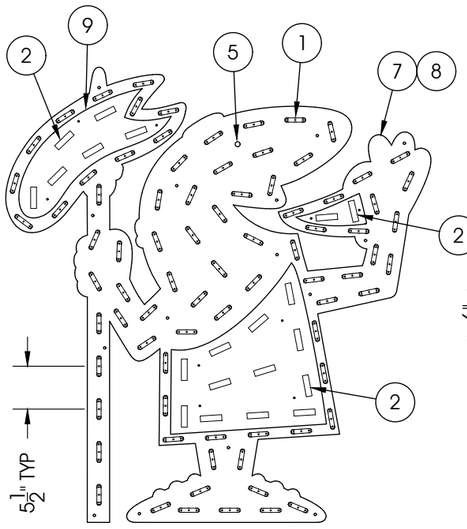
LC__-CL058x0259.120A
SHEET #: 2C OF 3

R03

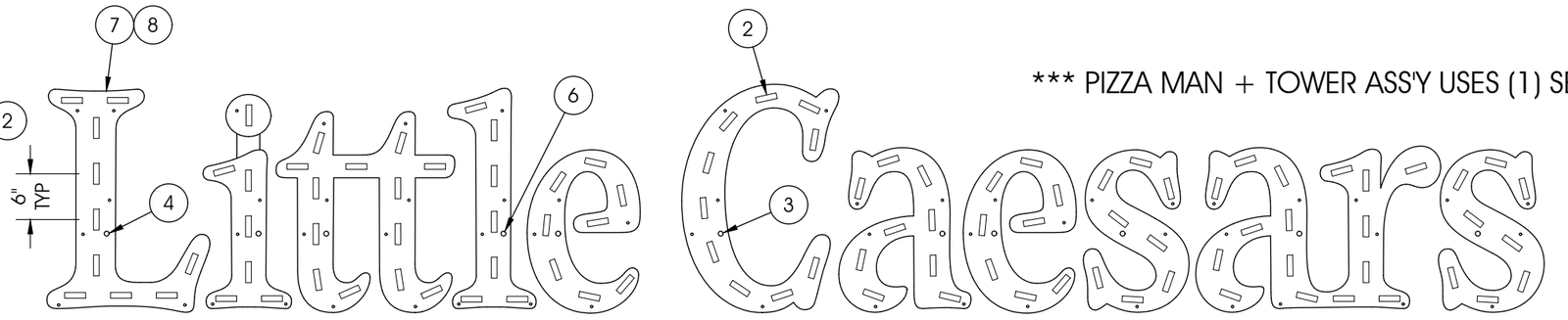
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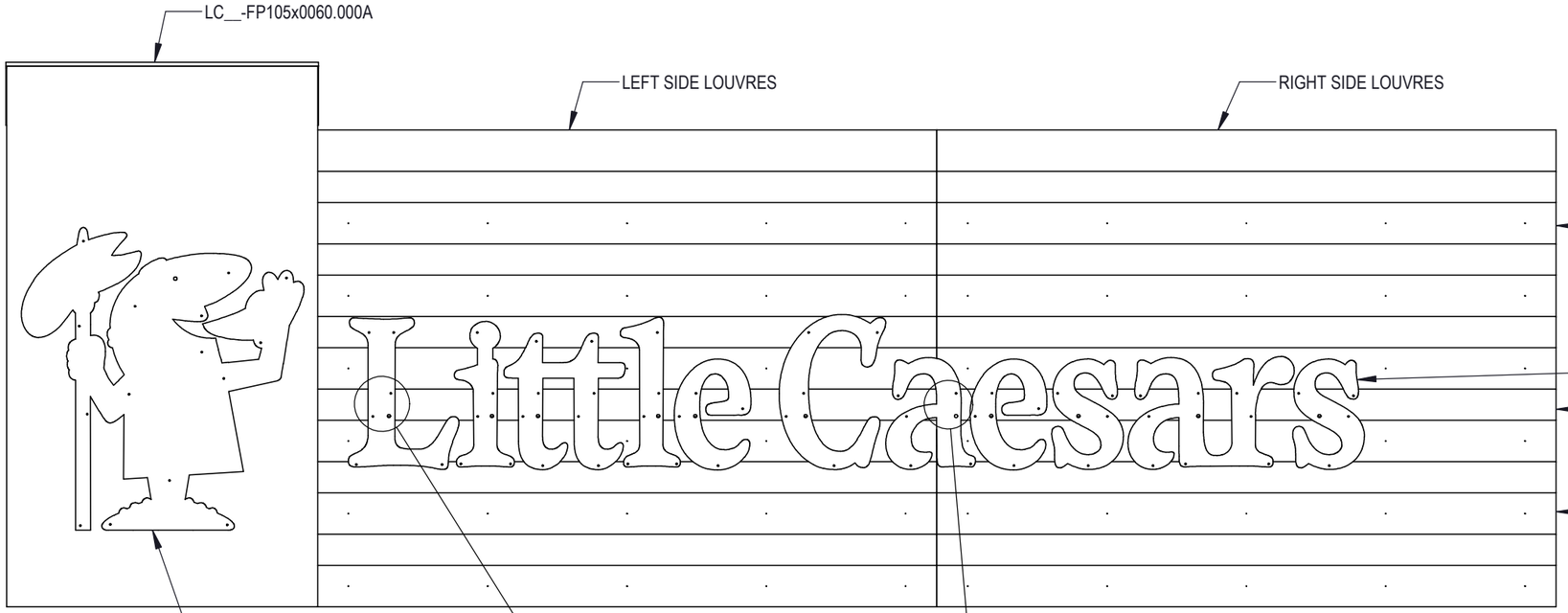
DRAWN BY: F. BERGER 26-Sep-18
CHECKED BY: S. POWER 03-Oct-18
CUT FILE: 24-Sep-18 WEIGHT: 95 LBS.

Little Caesars

VARIOUS

ILLUMINATED CHANNEL LETTERS

03 ADDED POWER SUPPLY DETAILS S. POWER 08-May-24
UL REQUIREMENTS: AMP DRAW: 7.2 A @ 120V
SIGN PROGRAM: SECTION LABEL 12 ENVIRONMENTAL LOCATION: DAMP 01
DISCONNECT SWITCH: YES 01



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UL FILE # E500193

DRAWN BY: F. BERGER 26-Sep-18
CHECKED BY: S. POWER 03-Oct-18
CUT FILE: 24-Sep-18 **WEIGHT: 95 LBS**

Little Caesars
VARIOUS
,

ILLUMINATED CHANNEL LETTERS

03 ADDED POWER SUPPLY DETAILS S. POWER 08-May-24

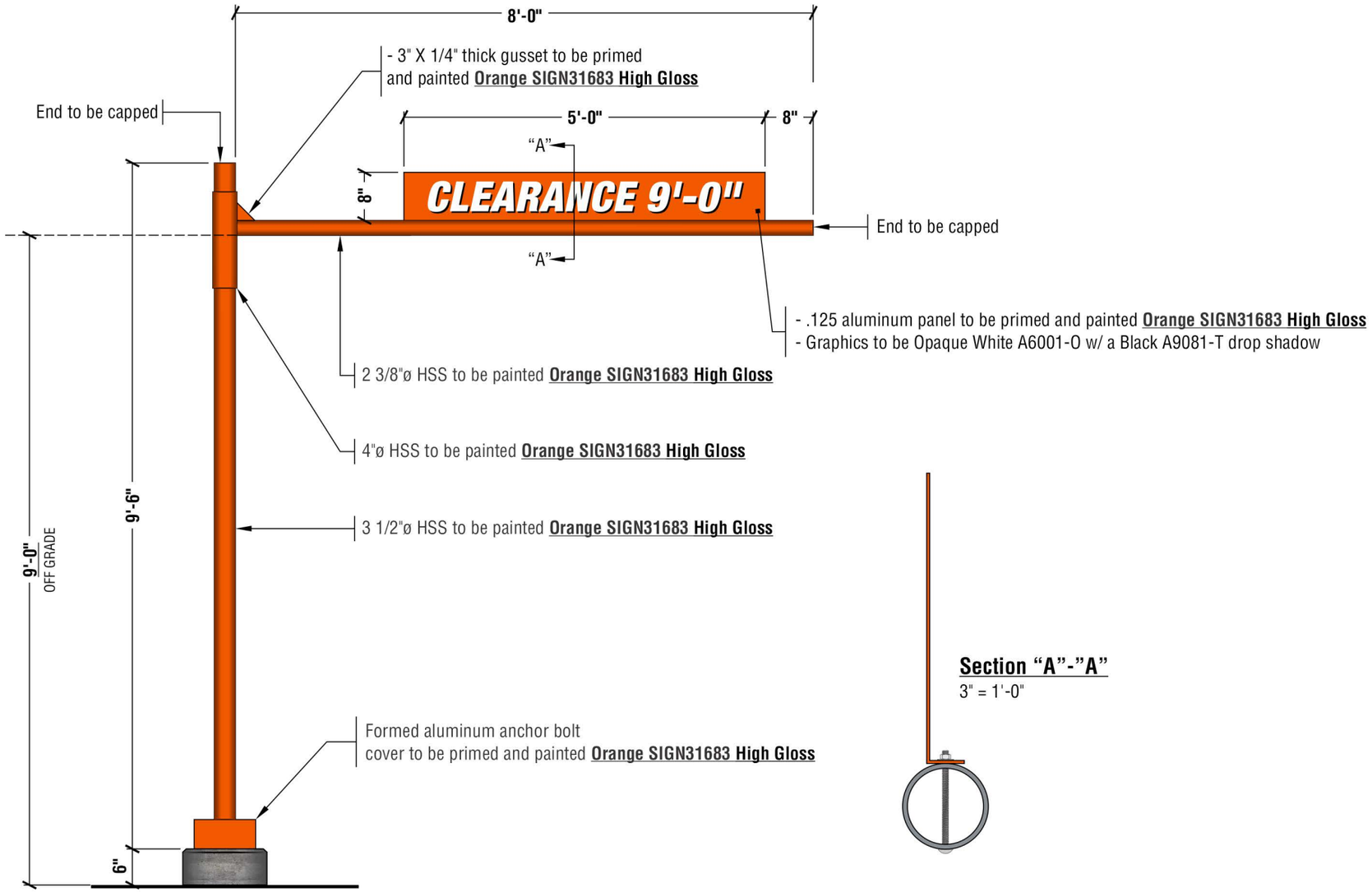
UL REQUIREMENT:
SIGN PROGRAM: SECTION LABEL - 12
-

TOTAL AMP DRAW: 7.2 A @ 120 V
ENVIRONMENTAL LOCATION: DAMP - 01
DISCONNECT SWITCH: YES - 01

Non Illuminated Height Restriction Bar (1 Required)

Scale: 1/2" = 1'-2"

Drawing No.
LC__-PS120x0096.000A



Section "A"-"A"
3" = 1'-0"

Height Restriction Bar

Preliminary Artwork

Approved for Production

November 25, 2018 T. Dodge

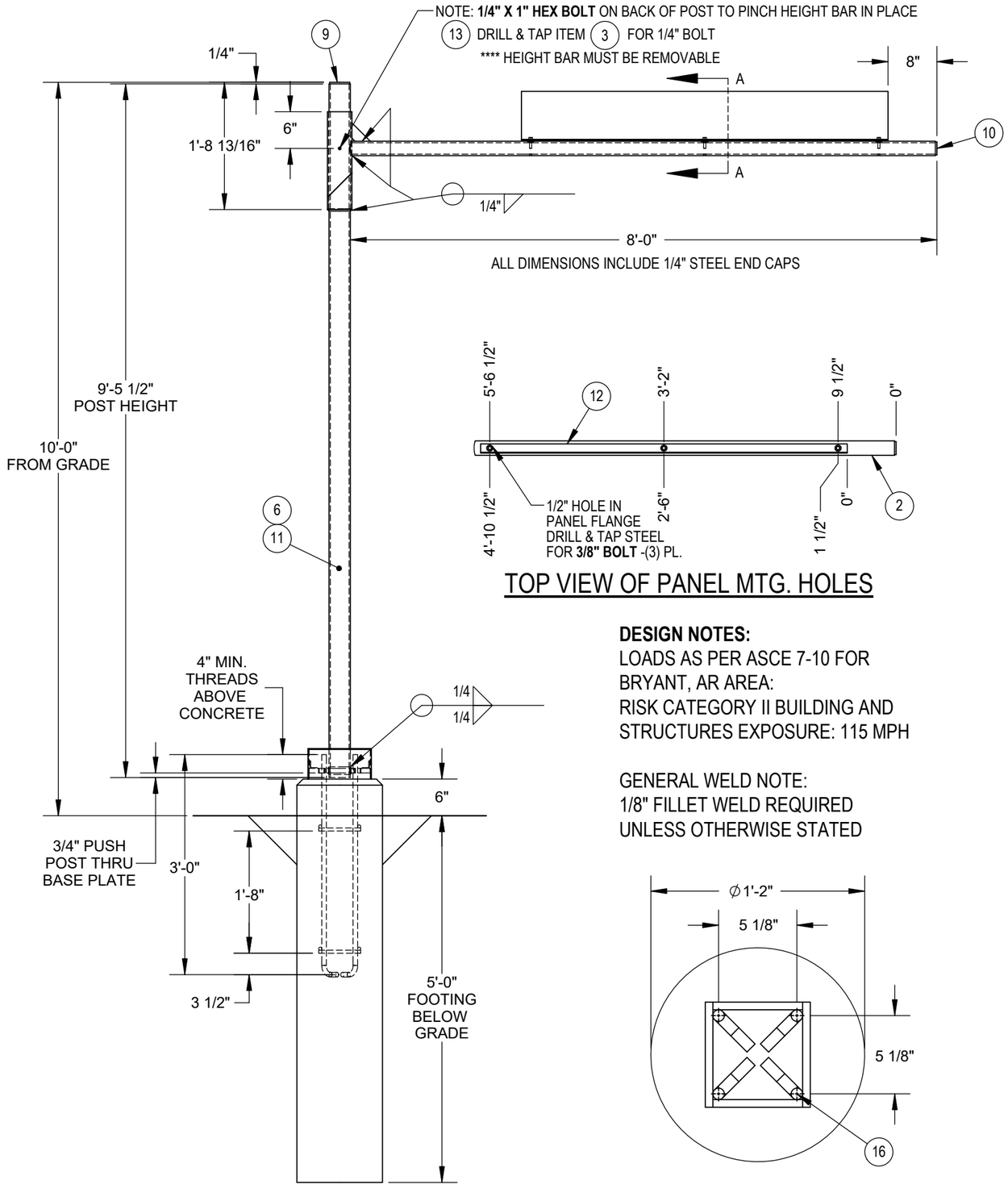
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Little Caesars

DRAWN BY: T. Dodge
DATE: November 25, 2018

Graphic rendition is representative of specific signage. Colour / dimensional / material details should be verified using reference drawing specifications. Pride Signs Ltd. is not responsible for inherent variations caused by display and / or print variations.

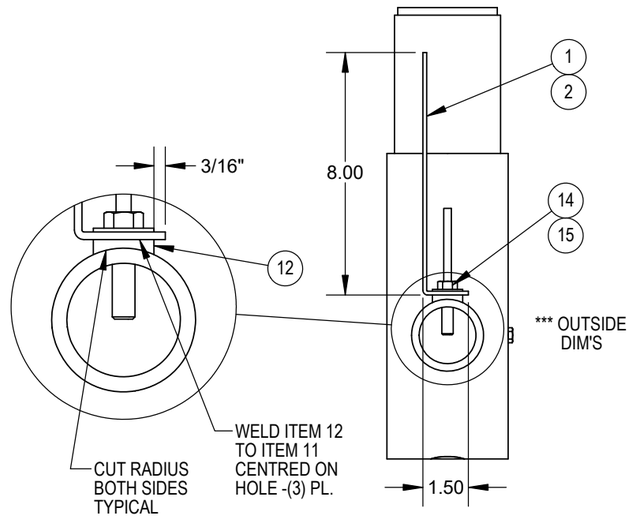


TOP VIEW OF PANEL MTG. HOLES

DESIGN NOTES:

LOADS AS PER ASCE 7-10 FOR BRYANT, AR AREA:
RISK CATEGORY II BUILDING AND STRUCTURES EXPOSURE: 115 MPH

GENERAL WELD NOTE:
1/8" FILLET WELD REQUIRED UNLESS OTHERWISE STATED



SECTION A-A
SCALE 1 : 5

LC__-PS120x0096.000A

SHEET #: 4 OF 6

R01

ITEM NO.	PartNo	QTY.	DESCRIPTION	WIDTH	LENGTH
1	AS051	1	.125" ALUM. FORMED PANEL	5'-0"	9 5/16"
2	AT015	3	1" X 1" X .095" ALUM. TUBE SPACER (TTS)		1/4"
3	HSS212	1	4" OD x.1875" HSS (MOE)		1'-2"
4	HSS212	1	4" OD x.1875" HSS (MOE)		6"
5	HSS212	6	4" OD x .1875" HSS (SEE PG2)		
6	BP366	1	3/4" TH. X 10" DIA. STEEL BASE PLATE		
7	SA005	2	1 1/4"x1 1/4"x1/8" STEEL ANGLE		2"
8	SF015	1	1/4" TH. X 3" STEEL GUSSET		3"
9	BP383	1	1/4" TH. X 3 5/16" DIA. STEEL END CAP		EA
10	BP382	1	1/4" TH. X 2 1/8" DIA. STEEL END CAP		EA
11	ST064	1	3 1/2" OD X .216" STEEL TUBE		9'-5 1/2"
12	ST067	1	2 3/8" OD x.25" STEEL TUBE		7'-11 7/8"
13	BOLT002	1	1/4" X 1" HEX BOLT -STEEL		
14	BOLT120	3	Ø3/8" x 1-1/2" STEEL HEX BOLT		
15	WASH005	3	3/8" STEEL WASHER		
16	AB005	4	Ø3/4" x 36" STEEL ANCHOR BOLT		
17	PAT305	1	PLYWOOD ANCHOR BOLT PATTERN		

NOTE: ITEM #17 IS NOT SHOWN

*** ADDITIONAL DETAILS ON NEXT SHEETS

CONCRETE CAISSON FOUNDATION

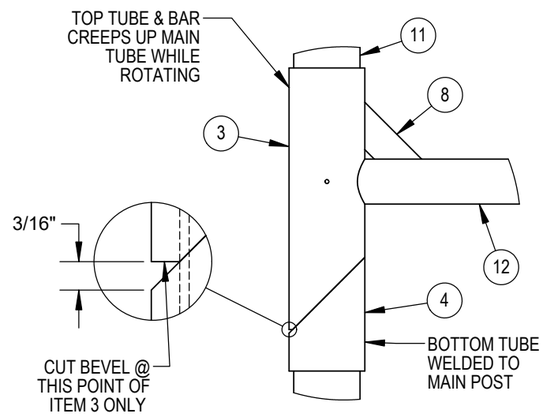
☐ **- Ø3/4" ANCHOR BOLTS (ASTM A307)**

DESIGN NOTES:

1. **PRESUMPTIVE ALLOWABLE SOIL BEARING CAPACITY: 2000 psf.**
2. **PRESUMPTIVE ALLOWABLE PASSIVE LATERAL SOIL RESISTANCE: 150 psf/ft.**

SPECIFICATIONS:

- ☐ 1. **HSS SECTIONS SHALL CONFORM TO CSA G40.21M-350W.**
- ☐ 2. **STEEL PLATES SHALL CONFORM TO CSA G40.21M-300W**
- ☐ 3. **REINFORCING STEEL SHALL CONFORM TO CSA G30.18-09 GRADE 400.**
- ☐ 4. **ANCHOR BOLTS TO BE MANUFACTURED FROM ASTM A-36 (A307) BAR OR GREATER.**
- ☐ 5. **CONCRETE SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH AFTER 28 DAYS OF 25 MPa.**
- ☐ 6. **CONCRETE SHALL HAVE 4" - 5" SLUMP WITH 4% - 7% AIR ENTRAINMENT, VIBRATE DURING PLACEMENT.**
- ☐ 7. **ALL CONCRETE WORK TO BE IN CONFORMANCE WITH CSA-A23.1.**
- ☐ 8. **CONCRETE MUST BE POURED AGAINST UNDISTURBED SOIL, NO BACKFILL AROUND FOUNDATION.**
- ☐ 9. **IF BACKFILL IS REQUIRED, IT IS TO BE PLACED IN SUITABLY COMPACTED LAYERS (DEPTHS SELECTED IN ACCORDANCE WITH THE EQUIPMENT USED), WITH EACH LAYER COMPACTED TO 95% MODIFIED PROCTOR DENSITY.**
- 10. **CONCRETE REQUIRES A MIN. OF 7 DAYS OF CURE TIME PRIOR TO INSTALLATION OF SIGN.**
- 11. **CONNECTION BOLTS FOR SIGN BOXES SHALL CONFORM TO SAE J429 GRADE 5 OR GREATER.**



PIVOT DETAIL

ITEM NO.	PartNo	QTY.	DESCRIPTION	WIDTH	LENGTH
18	AS062	1	.125" ROUTED ALUM TOP PLATE		
19	AS021	1	.080" ALUMINUM RETURN	4 7/8"	1'-4 3/16"
20	AS006	2	.063" FORMED ALUM JOINER BAR	1 1/2"	8 1/16"

NOTE: ITEM #18, 19 & 20 ARE ON SHEET 2

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UL FILE # E500193

DRAWN BY: F. BERGER 02-APR-18
CHECKED BY:
CUT FILE: 31/05/2018 WEIGHT: 153.60 LBS

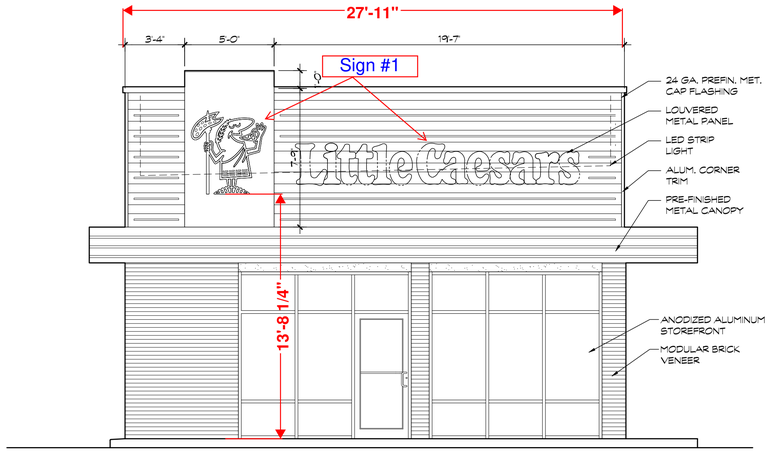
LITTLE CAESARS
1315 NORTH REYNOLDS ROAD
BRYANT, AR

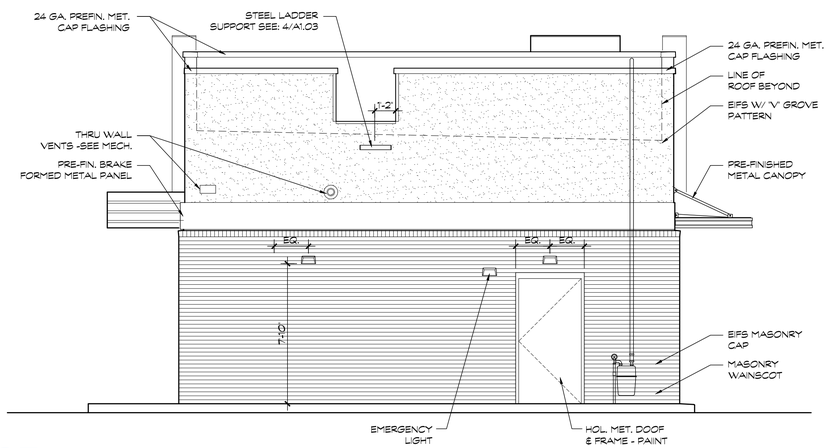
HEIGHT RESTRICTION STRUCTURE

01 RELEASED FOR PRODUCTION F. BERGER 31-JUN-18

UL REQUIREMENT:
SIGN PROGRAM: SIGN LABEL - 00
-

TOTAL AMP DRAW: N/A
ENVIRONMENTAL LOCATION: - 00
DISCONNECT SWITCH: N/A - 00

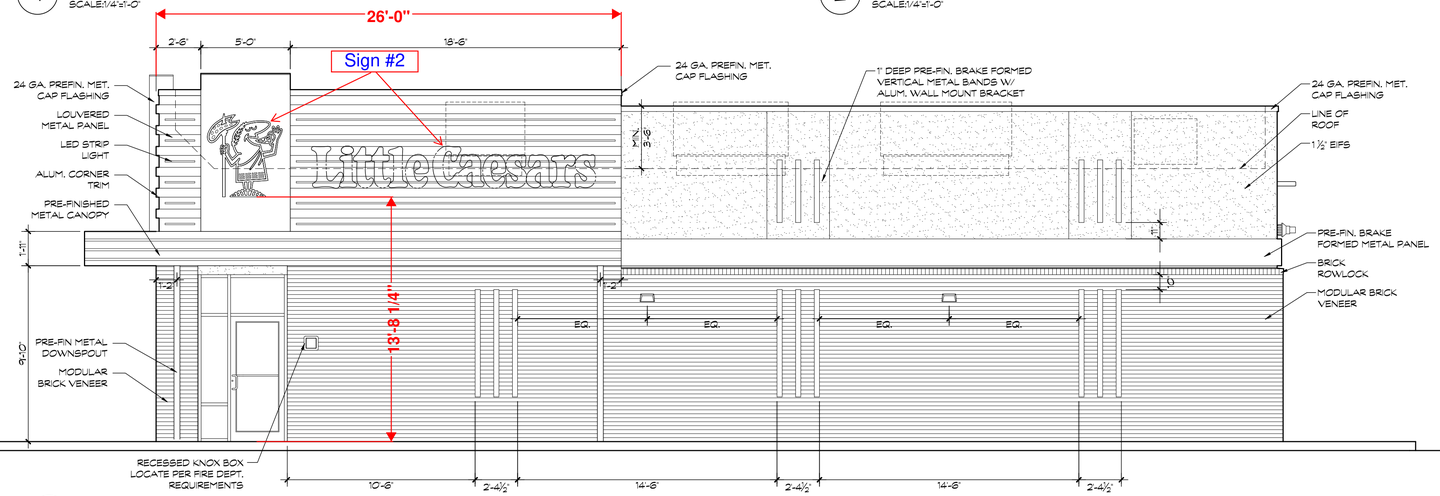


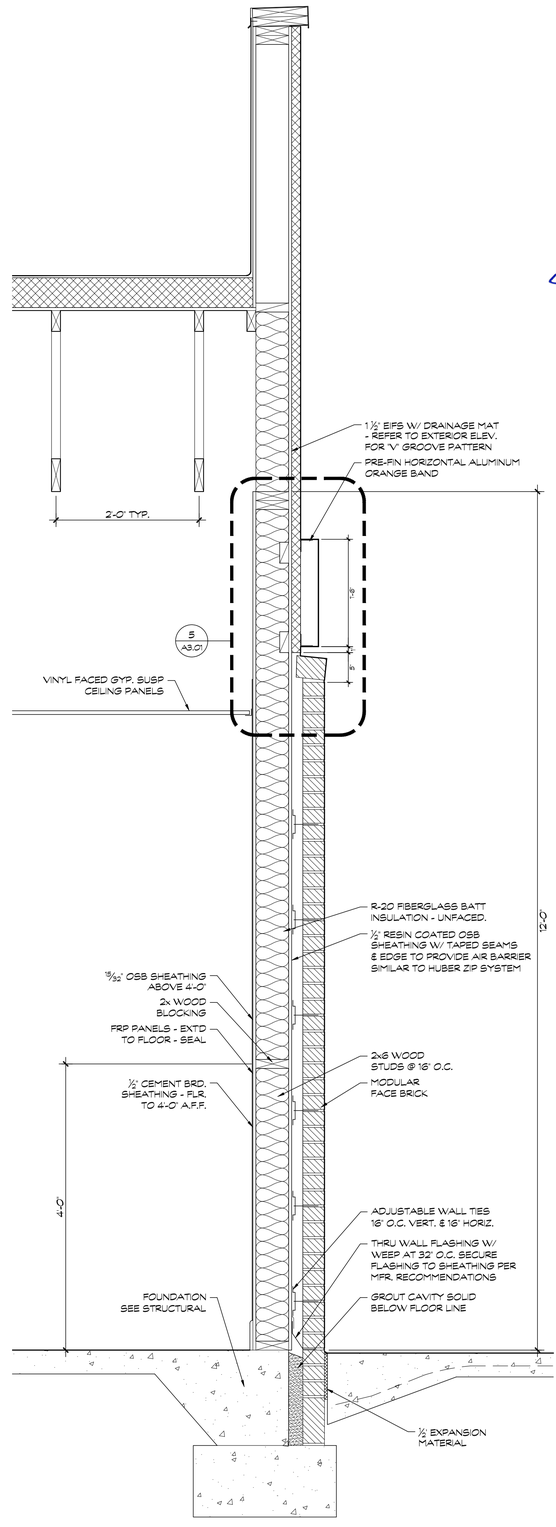


1 SOUTH ELEVATION
SCALE:1/4"=1'-0"

SOUTH ELEVATION = 630.0SF

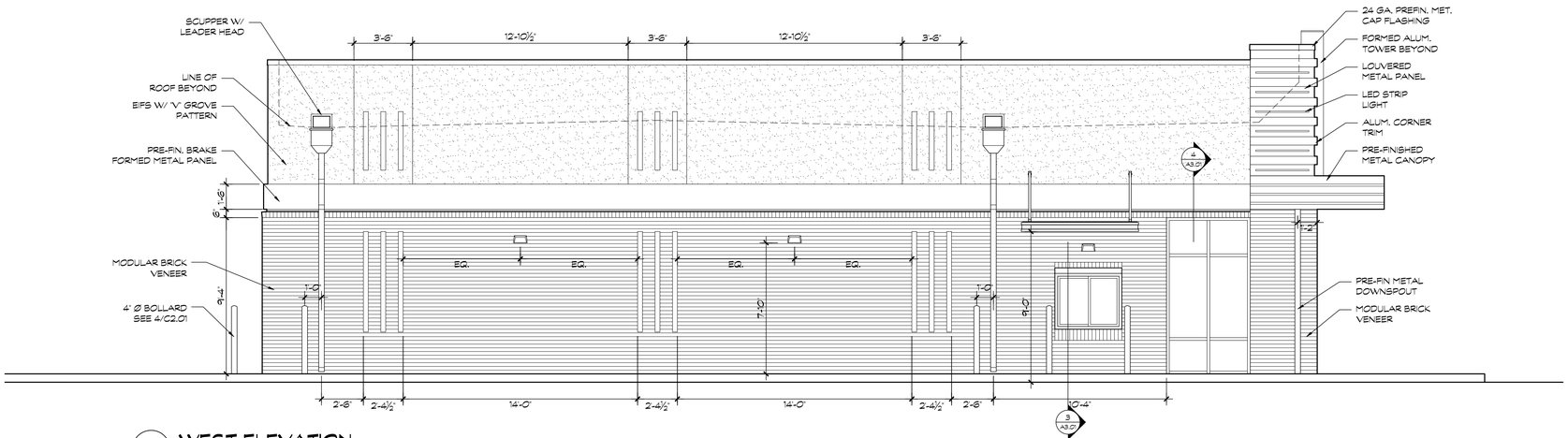
2 NORTH ELEVATION
SCALE:1/4"=1'-0"





3 EAST ELEVATION
SCALE:1/4"=1'-0"

EAST ELEVATION SF = 1203.75



4 WEST ELEVATION
SCALE:1/4"=1'-0"

5 WALL SECTION
SCALE: 1"=1'-0"

P+Sa
PECKHAM + SMITH ARCHITECTS, INC.
2222 Cottondale Ln., Suite 220
Little Rock, Arkansas 72202
(501) 663-3635

PECKHAM SMITH ARCHITECTS, INC. CORPORATE No. 0429 ARKANSAS

LITTLE CAESARS RESTAURANT
1315 N. REYNOLDS ROAD
BRYANT, ARKANSAS

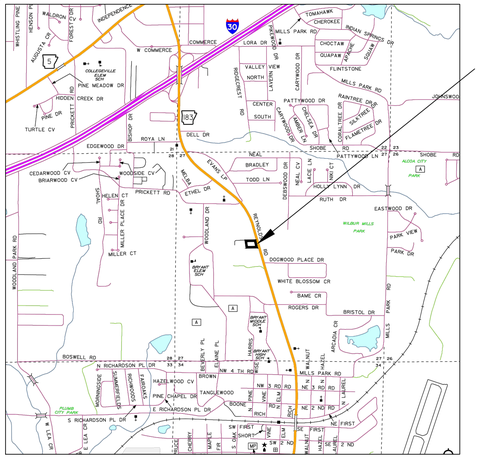
DATE:
AUGUST 8, 2024

PROJECT NUMBER:
23017

REVISION DATE:

SHEET TITLE:
EXTERIOR ELEV.

SHEET NUMBER:
A2.01



VICINITY MAP

GENERAL NOTES:
1. ALL DIMENSIONS SHOWN ARE TO THE BACK OF CURB UNLESS OTHERWISE NOTED. RADII ARE 5 FEET UNLESS OTHERWISE INDICATED.

2. SEE ARCHITECTURAL PLANS FOR EXACT LOCATIONS AND DIMENSIONS OF PORCHES, RAMPS, SLOPED PAVING, TRUCK DOCKS, BUILDING UTILITY ENTRANCE LOCATIONS AND PRECISE BUILDING DIMENSIONS.

3. THE CONTRACTOR IS SPECIFICALLY CAUTIONED THAT THE LOCATION AND/OR ELEVATION OF EXISTING UTILITIES AS SHOWN ON THESE PLANS IS BASED ON RECORDS OF THE VARIOUS UTILITY COMPANIES AND WHERE POSSIBLE, MEASUREMENTS TAKEN IN THE FIELD. THE INFORMATION IS NOT TO BE RELIED ON AS BEING EXACT OR COMPLETE. THE CONTRACTOR MUST CALL THE APPROPRIATE UTILITY COMPANY AT LEAST 48 HOURS BEFORE ANY EXCAVATION TO REQUEST EXACT FIELD LOCATION OF UTILITIES. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO RELOCATE ALL EXISTING UTILITIES WHICH CONFLICT WITH THE PROPOSED IMPROVEMENTS SHOWN ON THE PLANS.

4. CONTRACTOR IS RESPONSIBLE FOR COMPLIANCE WITH O.S.H.A. AND ANY OTHER APPLICABLE LOCAL, STATE OR FEDERAL SAFETY REGULATIONS, INCLUDING THE USE OF TRENCH SHORING, ETC.

5. REPAIR, REPLACE OR EXTEND EXISTING DAMAGED OR MISSING CURB AND GUTTER, SIDEWALK, RAMPS OR CONCRETE APRONS ON SITE & WITHIN THE PUBLIC RIGHT-OF-WAY ADJACENT TO THE SITE. REMOVE ABANDONED DRIVEWAYS. ALL WORK WITHIN PUBLIC RIGHT-OF-WAY SHALL CONFORM TO CITY STANDARDS AND ADA GUIDELINES.

6. CONTACT BRYANT STREET DEPARTMENT FOR INSPECTIONS OF ANY WORK IN PUBLIC RIGHT-OF-WAY PRIOR TO PLACEMENT OF CONCRETE OR ASPHALT OR FOR CLARIFICATION OF REQUIREMENTS PRIOR TO TO COMMENCING WORK. FAILURE TO DO SO CAN RESULT IN REMOVAL OF ANY IMPROPERLY PLACED CONCRETE OR ASPHALT AT THE EXPENSE OF THE CONTRACTOR.

7. CONTACT BRYANT FIRE DEPARTMENT FOR LOCATION AND REQUIREMENTS FOR FIRE LANE STRIPING ON SITE BEFORE APPLICATION. FIRE LANES WILL BE 4" WHITE LETTERS ON 6" RED TRAFFIC PAINT AT 15' INTERVALS.

SITE PLAN NOTES

1. SITE CONTAINS A PROPOSED DRIVE THRU RESTAURANT.
2. BASIS OF BEARINGS: GPS GRID NORTH.
3. THE PROPERTY IS NOT SHOWN IN THE 100 YEAR FLOOD PLAIN ON THE FLOOD INSURANCE RATE MAP COMMUNITY PANEL NUMBER 050308 0380E, DATED 6/05/20.
4. THIS PROPERTY IS ZONED C-2.
5. ALL ABUTTING PROPERTIES ARE ZONED C-2.
6. THIS TRACT CONTAINS 37,231 S.F. OR 0.855 ACRES, MORE OR LESS.
7. SETBACKS FOR C-2 ZONING ON HWY 183 ARE:
   50' FRONT
   0' SIDE OR 25' ALONG STREET OR RESIDENTIAL
   15' REAR OR 55' ABUTTING RESIDENTIAL
8. BUILDING TO LOT COVERAGE 5.0% (35% MAX.).
   IMPERVIOUS SURFACE AREA TO LOT COVERAGE 65%.

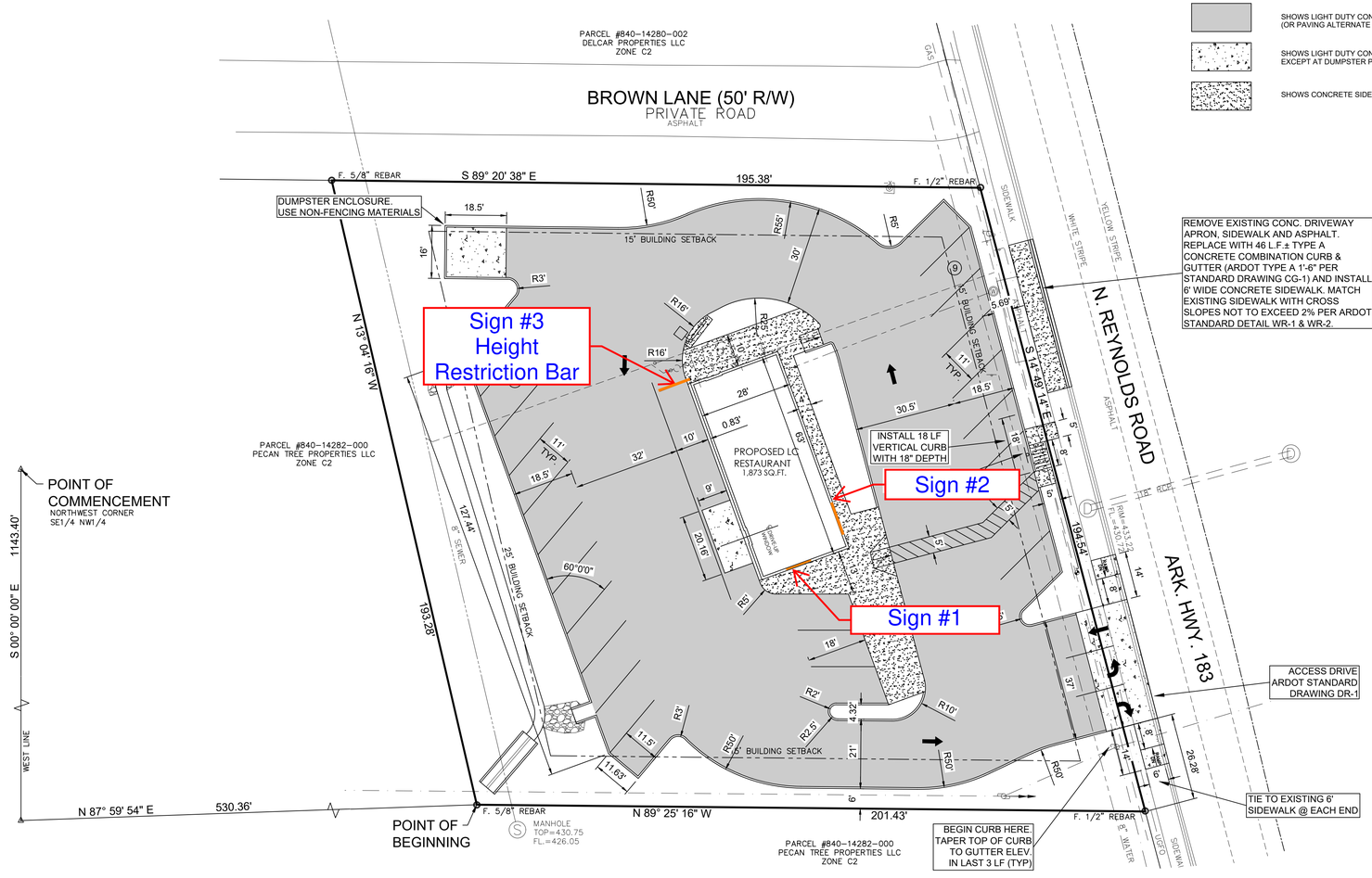
SURVEY LEGAL DESCRIPTION:

PART OF THE SE1/4 NW1/4 OF SECTION 27, TOWNSHIP 1 SOUTH, RANGE 14 WEST, IN THE CITY OF BRYANT, SALINE COUNTY, ARKANSAS, MORE PARTICULARLY DESCRIBED AS FOLLOWS:

COMMENCING AT THE NORTHWEST CORNER OF SAID SE1/4 NW1/4;
THENCE ALONG THE WEST LINE OF THE SAID SE1/4 NW1/4 S 00° 00' 00" E FOR 1143.40 FEET;
THENCE N 87° 59' 54" E FOR 530.36 FEET LEAVING THE WEST LINE OF SAID SE1/4 NW/4 TO A TO 5/8" REBAR AND THE POINT OF BEGINNING;
THENCE N 13° 04' 16" W FOR 193.28 FEET TO A 5/8" REBAR AND THE SOUTHERLY RIGHT OF WAY LINE OF BROWN LANE;
THENCE ALONG SAID RIGHT OF WAY LINE S 89° 20' 38" E FOR 195.38 FEET TO A 1/2" REBAR AND THE WESTERLY RIGHT OF WAY LINE OF NORTH REYNOLDS ROAD;
THENCE ALONG SAID RIGHT OF WAY LINE S 14° 49' 14" E FOR 194.54 FEET TO A 1/2" REBAR;
THENCE N 89° 25' 16" W FOR 201.43 FEET TO THE POINT OF BEGINNING;

LEGEND

- PROPERTY LINE
- EASEMENT
- SANITARY SEWER LINE
- OVERHEAD ELECTRIC LINE
- STORM DRAIN LINE
- EDGE OF ASPHALT
- CURB & GUTTER
- UTILITY POLE & GUY
- GAS METER
- TELEPHONE PEDESTAL
- SIGN
- CALCULATED POINT
- SHOWS FOUND SURVEY MARKER AS DESCRIBED
- SHOWS LIGHT DUTY CONC. PAVEMENT (OR PAVING ALTERNATE - HEAVY DUTY ASPHALT PAVEMENT)
- SHOWS LIGHT DUTY CONCRETE PAVEMENT EXCEPT AT DUMPSTER PAD
- SHOWS CONCRETE SIDEWALK



PARKING

REGULAR	19 SPACES
ACCESSIBLE	1 SPACES
TOTAL	20 SPACES
REQUIRED	7 SPACES (1 SPACE/300 SF OCCUPIED SPACE)

GRAPHIC SCALE

20 0 10 20 40 80

(IN FEET)
1 inch = 20 ft.

STATE OF ARKANSAS REGISTERED PROFESSIONAL ENGINEER No.4685 JOHN R. POWNALL

CERTIFICATE OF AUTHORIZATION THOMAS ENGINEERING CO. No. 94 ARKANSAS

REVISED: 8-8-24 ARDOT COMMENTS

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

THOMAS ENGINEERING COMPANY
3810 LOOKOUT ROAD, N. LITTLE ROCK, AR. 72116
TEL: 501-753-4463 FAX: 501-753-6814

SITE PLAN
LITTLE CAESARS
BRYANT, ARKANSAS

APPROVED	DRAWN BY	DATE	SHEET NO.
	JRP	8/26/24	C2
SCALE 1" = 20'			

LITTLE CAESARS-BRYANT-23-0165.dwg

PLOTTED: 8/26/2024

LANDLORD AUTHORIZATION FORM

I, Michael Fritz, AS THE

D OWNER OF THE PROPERTY; OR

D OWNER'S AUTHORIZED SIGNING OFFICER (AUTHORIZED TO BIND THE COMPANY)

COMPANY: OBWAT Holdings, LLC

ADDRESS: 7500 Landers Road

CITY/PROVINCE: North Little Rock AR POSTAL CODE: 72117

FOR THE TENANT Little Caesar's Pizza of Arkansas, Inc.

AT THE PROPERTY LOCATED AT 1315 N. Reynolds Rod, Bryant AR 72022 HEREBY:

(i) GRANT PRIDE SIGNS LIMITED PERMISSION TO APPLY FOR AND OBTAIN NECESSARY SIGN PERMITS AND VARIANCES AND OBTAIN SITE PLANS AND/OR ELEVATION DRAWINGS FROM THE ARCHIVES IFREQUIRED.

(ii) AUTHORIZE PRIDE SIGNS LIMITED TO ERECT SIGN(S) AT THE AFOREMENTIONED LOCATION AND MAY, AT THEIR OPTION, ELECT TO SUB-CONTRACT THE INSTALLATION.

SINCERELY,

Michael R. Fritz Digitally signed by Michael R. Fritz Date: 2024.11.26 10:35:24 -06'00'

SIGNATURE

PRINT NAME

Michael Fritz

TITLE

Manager

PHONE NUMBER

FAX NUMBER

mfritz@littlecaesarsofar.com

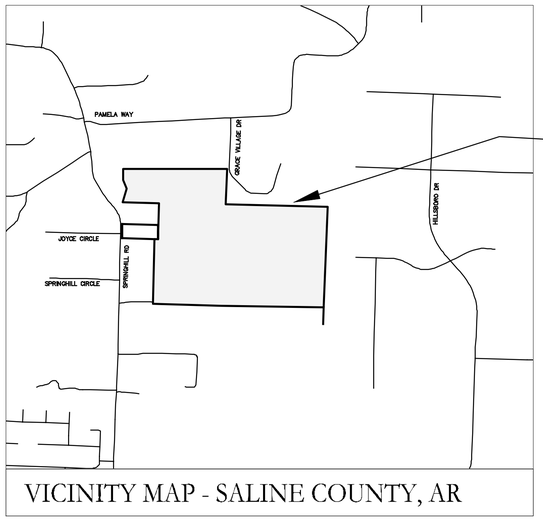
EMAIL

November 26, 2024

DATE

Updated: January 2023

HAWKINS VALLEY
OVERALL WATER & SEWER
FOR THOMAS D.B. COLLINS, LTD.
CITY OF BRYANT,
SALINE COUNTY, ARKANSAS



PROJECT LOCATION

VICINITY MAP - SALINE COUNTY, AR



ARKANSAS

Prepared by:

GarNat Engineering, LLC

P.O. Box 116
Benton, AR 72018
Ph (501) 408-4650

3825 Mt Carmel Road
Bryant, AR 72022
www.garnatengineering.com

Designing our client's success

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
NO. 9551
VERNON J. WILLIAMS

01-23-2025

CERTIFICATE OF AUTHORIZATION
GarNat Engineering, LLC.
No. 2174
ARKANSAS ENGINEER

1 OVERALL WATER PLAN

2 OVERALL SANITARY SEWER PLAN

3 SANITARY SEWER PLAN & PROFILE
MAIN "A" STA. 0+00 - 11+65

4 SANITARY SEWER PLAN & PROFILE
MAIN "A" STA. 11+63 - 21+60

5 SANITARY SEWER PLAN & PROFILE
MAIN "A" STA. 21+59 - 29+02
MAIN "P" STA. 0+00 - 5+09

6 SANITARY SEWER PLAN & PROFILE
MAIN "B" STA. 0+00 - 10+00

7 SANITARY SEWER PLAN & PROFILE
MAIN "C" STA. 0+00 - 2+70

8 SANITARY SEWER PLAN & PROFILE
MAIN "D" STA. 0+00 - 1+30

9 SANITARY SEWER PLAN & PROFILE
MAIN "E" STA. 0+00 - 5+50

10 SANITARY SEWER PLAN & PROFILE
MAIN "D" STA. 0+00 - 5+50

11 SANITARY SEWER PLAN & PROFILE
MAIN "G" STA. 0+00 - 4+21

12 SANITARY SEWER PLAN & PROFILE
MAIN "I" STA. 0+00 - 3+42
MAIN "II" STA. 0+00 - 1+64

13 SANITARY SEWER PLAN & PROFILE
MAIN "J" STA. 0+00 - 13+22

14 SANITARY SEWER PLAN & PROFILE
MAIN "K" STA. 0+00 - 10+72

15 SANITARY SEWER PLAN & PROFILE
MAIN "K" STA. 10+71 - 19+00

16 SANITARY SEWER PLAN & PROFILE
MAIN "K" STA. 19+00 - 23+90
MAIN "L" STA. 0+00 - 4+90

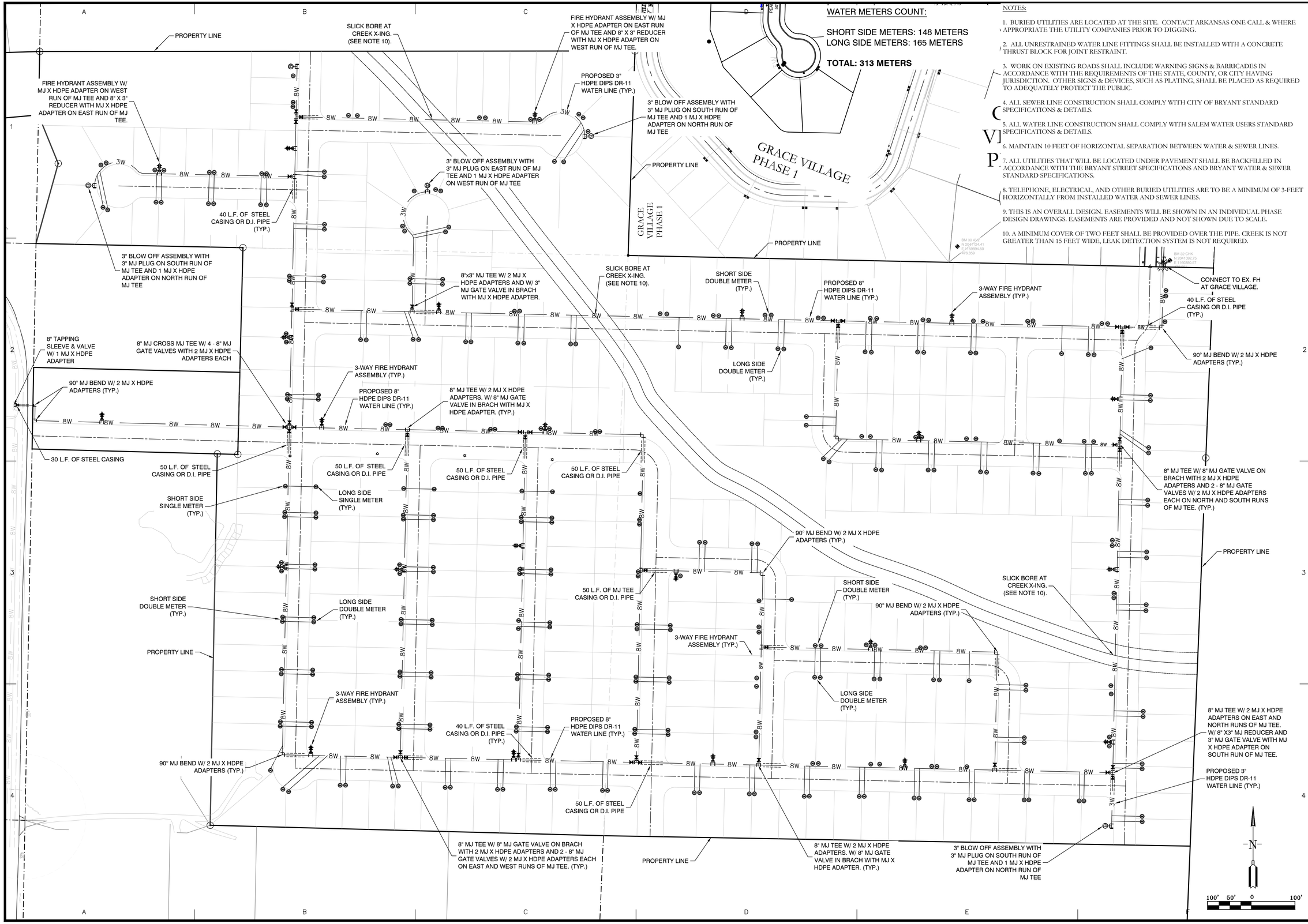
17 SANITARY SEWER PLAN & PROFILE
MAIN "M" STA. 0+00 - 6+40
MAIN "Q" STA. 0+00 - 2+39

18 SANITARY SEWER PLAN & PROFILE
MAIN "I" STA. 0+00 - 3+36

19 SANITARY SEWER PLAN & PROFILE
MAIN "N" STA. 0+00 - 8+70

20 SANITARY SEWER PLAN & PROFILE
MAIN "R" STA. 0+00 - 3+10

21 SANITARY SEWER PLAN & PROFILE
MAIN "S" STA. 0+00 - 7+25
MAIN "O" STA. 0+00 - 3+26



BY	REVISION	DATE

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GarNat Engineering, LLC
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Benton, AR 72018
3825 Mt Carmel Rd
Bryant, AR 72022
garnatengineering@gmail.com
Ph (501) 408-4650

HAWKINS VALLEY
OVERALL WATER & SEWER
FOR: THOMAS DB COLLINS, LTD, LLC
CITY OF BRYANT,
SALINE COUNTY, ARKANSAS

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
NO. 9551
VERNON J. WILLIAMS

01-23-2025

CONTENTS:

OVERALL WATER PLAN

PROJECT NO: 24076

DATE: DECEMBER 2024

SHEET NO: 1

a:\Projects\2024 Projects\24076 Hawkins Valley Sprgs\05 Road Stream\Jeremy Lane Lee Pengra\Drawings\24076 Hawkins Valley Water and Sewer Rev1 - 1-15-2025 R1.dwg

GRACE VILLAGE PHASE 3

NOTES:

1. ADJUST RIM ELEVATION TO FINISHED GRADE AS REQUIRED.
2. SANITARY SEWER CONSTRUCTION SHALL COMPLY WITH CITY OF BRYANT STANDARD SPECIFICATIONS & DETAILS.
3. MAINTAIN 10 FEET OF HORIZONTAL SEPARATION BETWEEN WATER & SEWER LINES.
4. ALL MANHOLES SHALL BE EPOXY COATED PER CITY OF BRYANT REQUIREMENTS.
5. THIS IS AN OVERALL DESIGN. EASEMENTS WILL BE SHOWN IN AN INDIVIDUAL PHASE DESIGN DRAWINGS. EASEMENTS ARE PROVIDED AND NOT SHOWN DUE TO SCALE.

PROPERTY LINE
SSMH A14 STA 29+01.84
SSMH A12 STA 24+39.07
SSMH A13 STA 27+01.05
SSMH A11 STA 21+59.80
SSMH P2 STA 5+08.30
SSMH P1 STA 1+90.00
SSMH R1 STA 1+36.73
SSMH O1 STA 3+26.10
SSMH A10 STA 19+46.54
SSMH R2 STA 3+10.00
SSMH S3 STA 7+24.80
SSMH S2 STA 4+49.80
SSMH S1 STA 2+59.80
SSMH A9 STA 16+54.97
SSMH T1 STA 3+35.61
SSMH C1 STA 0+00.00
SSMH A8 STA 14+12.81
SSMH B4 STA 9+91.71
SSMH B3 STA 8+20.00
SSMH B2 STA 5+50.00
SSMH B1 STA 2+80.00
SSMH A7 STA 13+14.94
SSMH A6 STA 11+64.06
SSMH C2 STA 2+70.00
SSMH D1 STA 1+30.00
SSMH E1 STA 1+30.00
SSMH L2 STA 4+90.00
SSMH K8 STA 23+90.00
SSMH E2 STA 3+70.00
SSMH F1 STA 2+55.86
SSMH A5 STA 10+03.65
SSMH A4 STA 8+10.58
PROPERTY LINE
SSMH K7 STA 21+50.00
SSMH L1 STA 2+50.00
SSMH E3 STA 5+50.00
SSMH F2 STA 5+50.00
SSMH A3 STA 4+14.58
SSMH G1 STA 3+15.68
SSMH I1 STA 3+42.00
SSMH H1 STA 1+63.21
SSMH G2 STA 4+20.68
SSMH K6 STA 19+00.00
SSMH K5 STA 16+30.00
SSMH K4 STA 14+60.00
SSMH K3 STA 10+71.77
SSMH K2 STA 7+58.57
SSMH K1 STA 3+81.43
PROPERTY LINE
GRACE VILLAGE PHASE 1
GRACE VILLAGE
GRACE VILLAGE DRIVE 50' R/W
EX SSMH 3 - GRACE VILLAGE STA 2+38.26
RIM ELEV:464.15
SSMH
INV IN 8" PVC (N) 458.29
INV OUT 8" PVC (SE) 458.25
SSMH J1 STA 0+00.00
SSMH M2 STA 6+40.00
SSMH M1 STA 2+60.00
SSMH J2 STA 1+96.47
RIM ELEV:458.26
SSMH
INV IN 8" PVC (NW) 450.51
INV OUT 8" PVC (SE) 450.32
ABANDON EXISTING 8" SEWER MAIN
SSMH N4 STA 8+70.00
SSMH N3 STA 7+70.00
SSMH N2 STA 3+70.90
SSMH N1 STA 2+50.00
SSMH J3 STA 4+66.47
RIM ELEV:452.42
SSMH
INV IN 8" PVC (NW) 445.40
INV OUT 8" PVC (SE) 445.28
PROPERTY LINE
SSMH J4 STA 7+77.21
RIM ELEV:448.33
SSMH
INV IN 8" PVC (NW) 441.14
INV OUT 12" PVC (E) 441.07
SSMH A2 STA 1+35.83
EX SSMH A1 STA 0+00.00
SSMH J5 STA 12+16.47
SSMH J6 STA 13+21
PROPERTY LINE
N
100' 50' 0 100'

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Bryant, AR 72022
Ph (501) 408-4650
garnatengineering@gmail.com

DATE	REVISION	BY

HAWKINS VALLEY
OVERALL WATER & SEWER
FOR: THOMAS DB COLLINS, LTD, LLC
CITY OF BRYANT,
SALINE COUNTY, ARKANSAS

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
NO. 9551
VERNON J. WILLIAMS

01-23-2025

CONTENTS:
OVERALL SANITARY SEWER PLAN

PROJECT NO: 24076

DATE: DECEMBER 2024

SHEET NO: 2

J:\Projects\2024 Projects\24076 Hawkins Valley Springhill Road Strawberry Lane Lee Ranges\Drawings\Water\Design\24076 Hawkins Valley Water and Sewer R01 - 1-15-2025 R1.dwg

SSMH H1
STA 1+63.21

SSMH A2
STA 1+35.83

RIM ELEV:448.33
SSMH
INV IN 8" PVC (NW) 441.14
INV OUT 12" PVC (E) 441.07

PIPE A2 - A1 136' L.F. OF 12" SDR-26 PVC @ 0.22%

PIPE A3 - A2 279' L.F. OF 12" SDR-26 PVC @ 0.22%

SSMH A3
STA 4+14.58

PIPE A3 - H1 160' L.F. OF 8" SDR-26 PVC @ 0.40%

PIPE I1 - G1 344' L.F. OF 8" SDR-26 PVC @ 0.40%

SSMH G1
STA 3+15.68

SEWER MAIN I

SEWER MAIN G

SSMH G2 @ STA 2+40.40 - 48" DIA. MH - 8" SDR-26 PVC @ 0.40%

SSMH F1
STA 2+55.86

PIPE F1 - F2 258' L.F. OF 8" SDR-26 PVC @ 0.40%

SEWER MAIN A

20.0' SHARED-USE TRAIL

50.0' CREEK BUFFER

PIPE A4 - A3 396' L.F. OF 12" SDR-26 PVC @ 0.22%

SSMH A4
STA 8+10.58

PIPE A4 - A5 193' L.F. OF 12" SDR-26 PVC @ 0.22%

SSMH A5
STA 10+03.65

SSMH A5 - A6 160' L.F. OF 8" SDR-26 PVC @ 0.22%

SEWER MAIN F

SSMH A6
STA 11+64.06

PIPE A7 - A8 98' L.F. OF 12" SDR-26 PVC @ 0.22%

SSMH A7
STA 13+14.94

PIPE A7 - F1 258' L.F. OF 8" SDR-26 PVC @ 0.40%

ABANDON EXISTING
8" SEWER MAIN

SEWER MAIN J

RIM ELEV:442.45
SSMH
INV IN 8" PVC (NW) 445.40
INV OUT 8" PVC (SE) 445.28

PIPE J1 - J2 258' L.F. OF 8" SDR-26 PVC @ 0.40%

SSMH J2 @ STA 7+38.98 - 48" DIA. MH - 8" SDR-26 PVC @ 0.40%

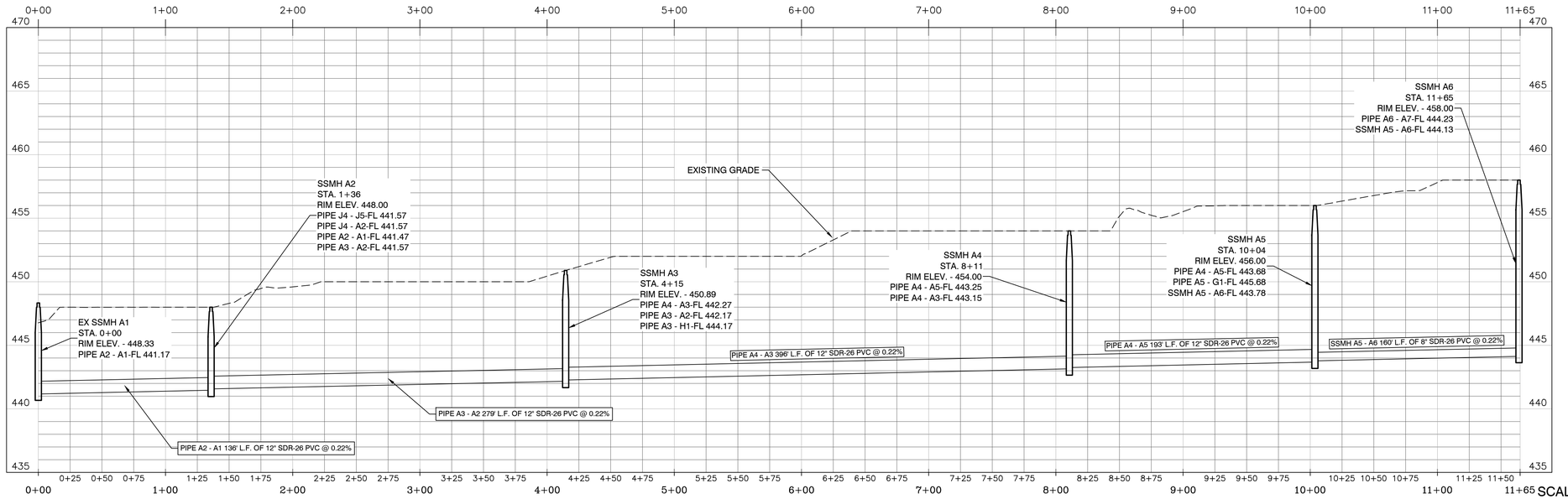
PIPE N1 - N2 120' L.F. OF 8" SDR-26 PVC @ 0.40%

PIPE N2 - N3 400' L.F. OF 8" SDR-26 PVC @ 0.40%

SSMH N3
STA 7+70.00

50' 25' 0 50'

SEWER MAIN A STA. 0+00 – 11+65



SCALE: H 1" = 50'
V 1" = 5'

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garnatengineering@gmail.com

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SALINE COUNTY, ARKANSAS

STATE OF ARKANSAS
VERNON J. WILLIAMS
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NO. 9551

01-23-2025

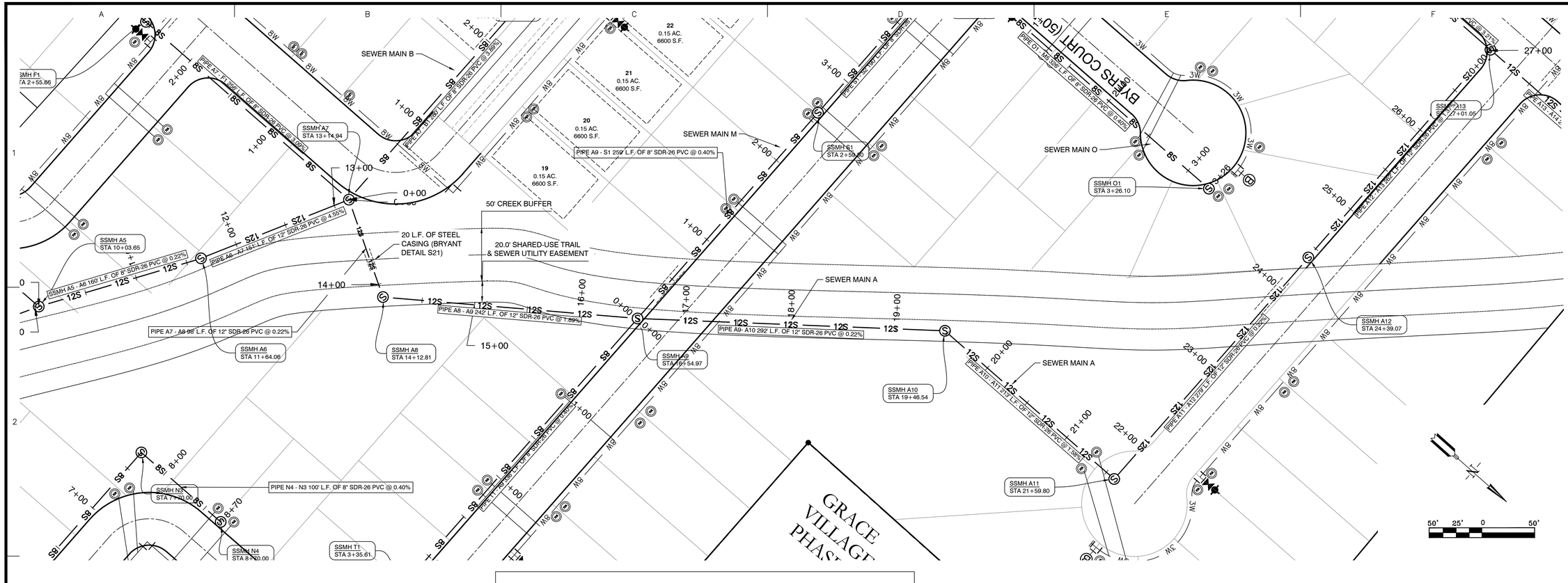
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SANITARY SEWER PLAN & PROFILE MAIN "A" STA. 0+00 - 11+65

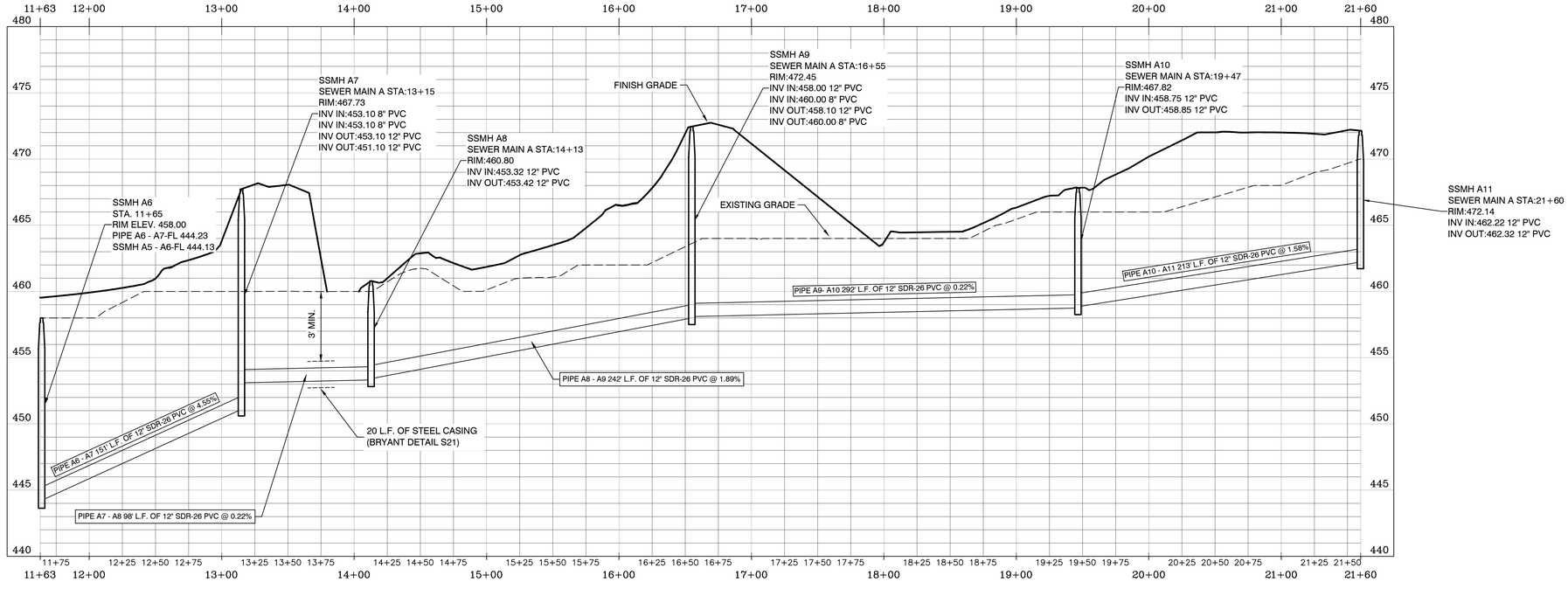
PROJECT NO: 24076

DATE: DECEMBER 2024

SHEET NO: 3

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SEWER MAIN A STA. 11+63 – 21+60

SCALE: H 1" = 50'
V 1" = 5'

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01-23-2025

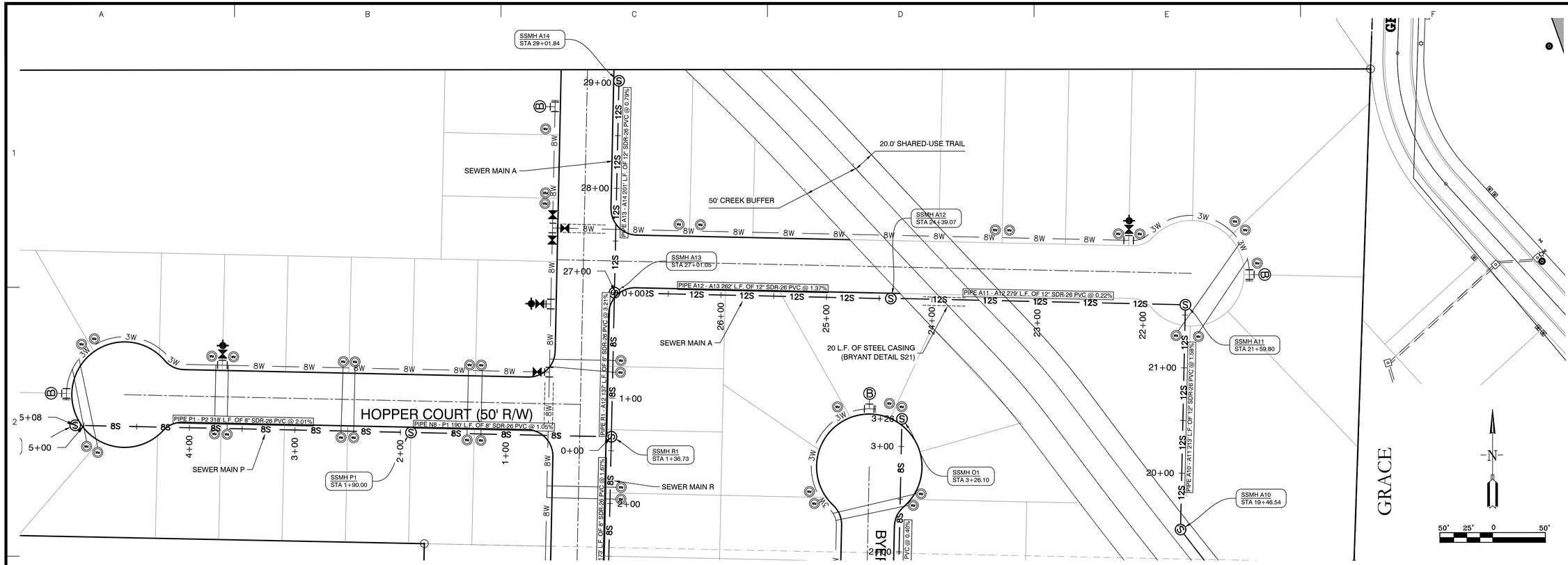
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PROJECT NO: 24076

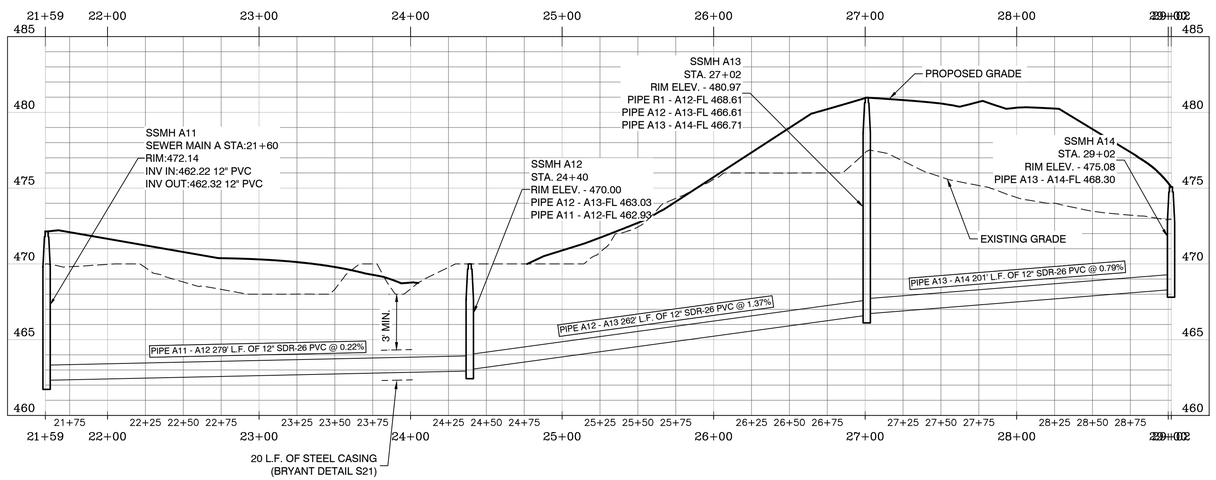
DATE: DECEMBER 2024

SHEET NO: 4

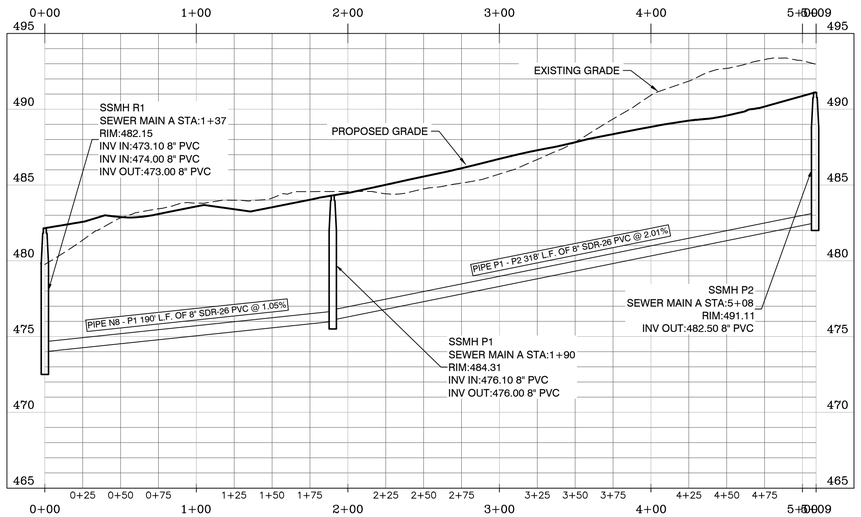
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SEWER MAIN A STA. 21+59 – 29+02



SEWER MAIN P STA. 0+00 – 5+09



SCALE: H 1" = 50'
V 1" = 5'

BY	REVISION	DATE

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STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
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NO. 9551

01-23-2025

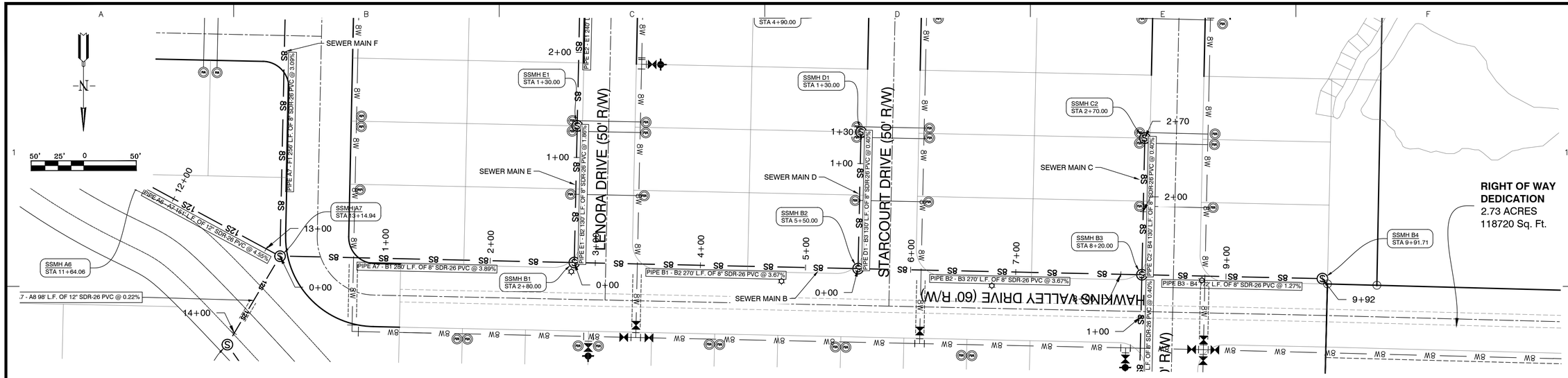
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SANITARY SEWER PLAN & PROFILE MAIN "A" STA. 21+59 - 29+02 MAIN "P" STA. 0+00 - 5+09

PROJECT NO:
24076

DATE:
DECEMBER 2024

SHEET NO:
5

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SEWER MAIN B STA. 0+00 -10+00

SCALE: H 1" = 50'
V 1" = 5'

BY	REVISION	DATE

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garnatengineering@gmail.com

HAWKINS VALLEY
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FOR: THOMAS DB COLLINS, LTD, LLC
CITY OF BRYANT,
SALINE COUNTY, ARKANSAS

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
NO. 9551
VERNON J. WILLIAMS

01-23-2025

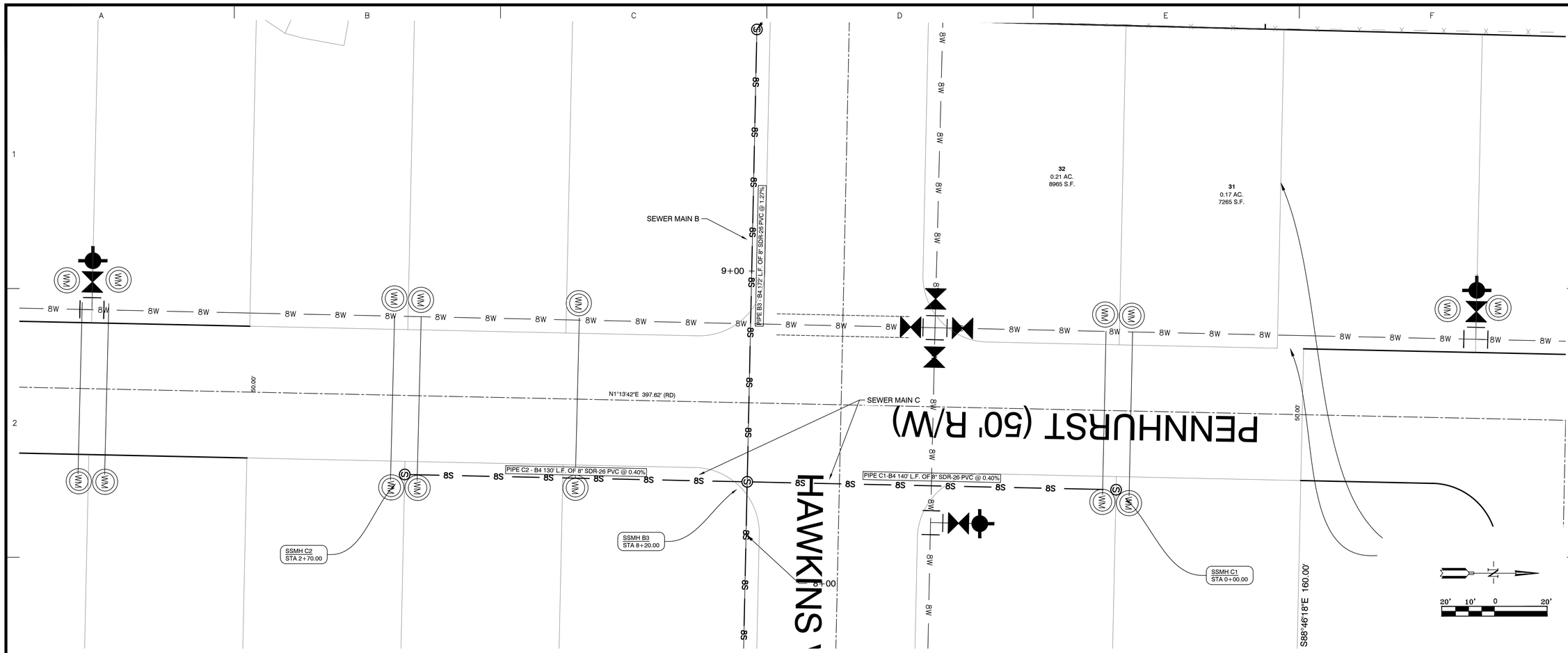
CONTENTS:
SANITARY SEWER
PLAN & PROFILE
MAIN "B"
STA. 0+00 - 10+00

PROJECT NO:
24076

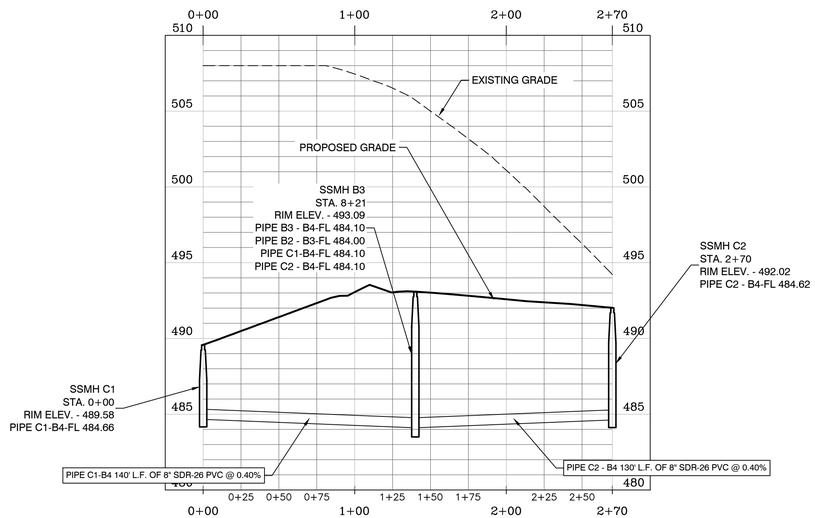
DATE:
DECEMBER 2024

SHEET NO:
6

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SEWER MAIN C STA. 0+00 – 2+70



SCALE: H 1" = 50'
V 1" = 5'

BY	REVISION	DATE

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GarNat Engineering, LLC
P.O. Box 116
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3825 Mt Carmel Rd
Bryant, AR 72022
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garnatengineering@gmail.com

HAWKINS VALLEY
OVERALL WATER & SEWER
FOR: THOMAS DB COLLINS, LTD, LLC
CITY OF BRYANT,
SALINE COUNTY, ARKANSAS

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
NO. 9551
VERNON J. WILLIAMS

01-23-2025

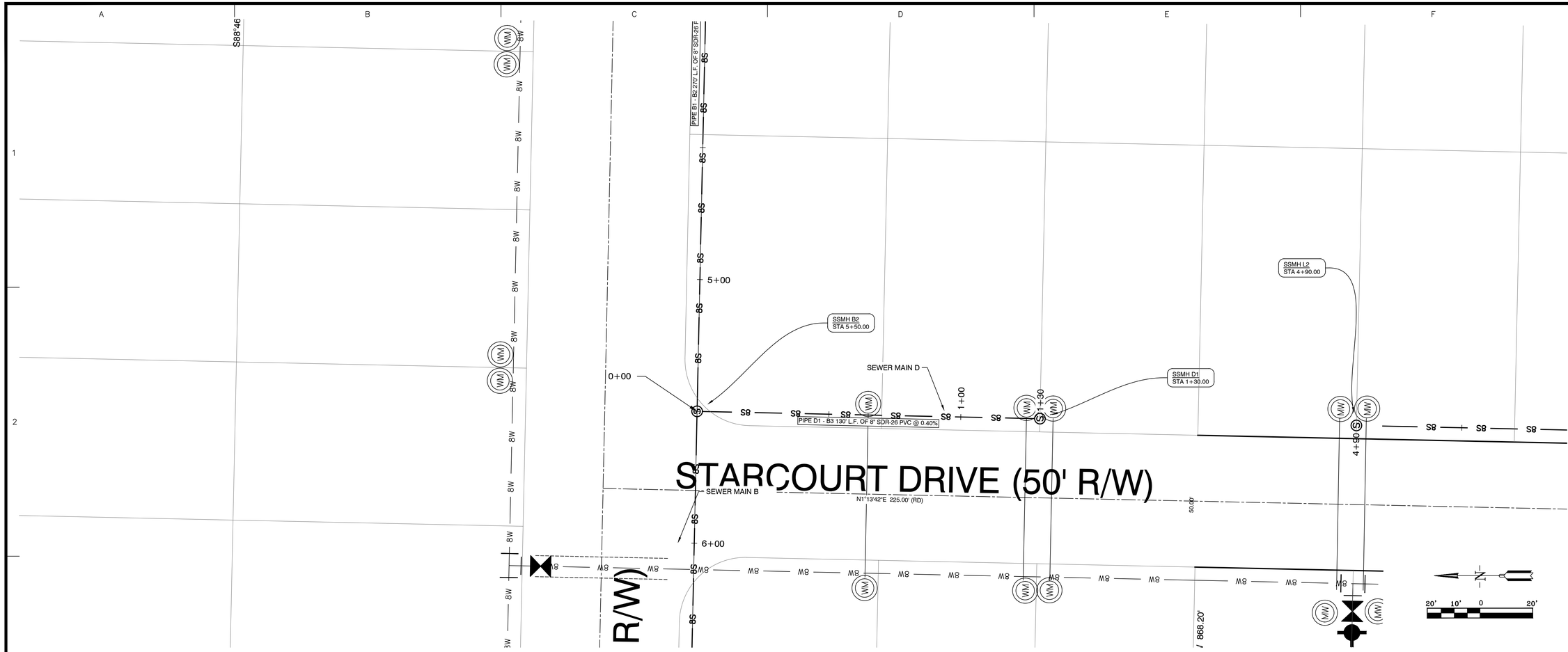
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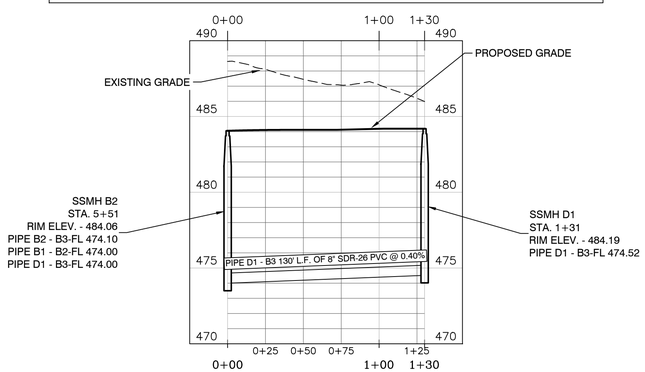
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SEWER MAIN D STA. 0+00 – 1+30



SCALE: H 1" = 50'
V 1" = 5'

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OVERALL WATER & SEWER
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CITY OF BRYANT,
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STATE OF ARKANSAS
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NO. 9551
VERNON J. WILLIAMS

01-23-2025

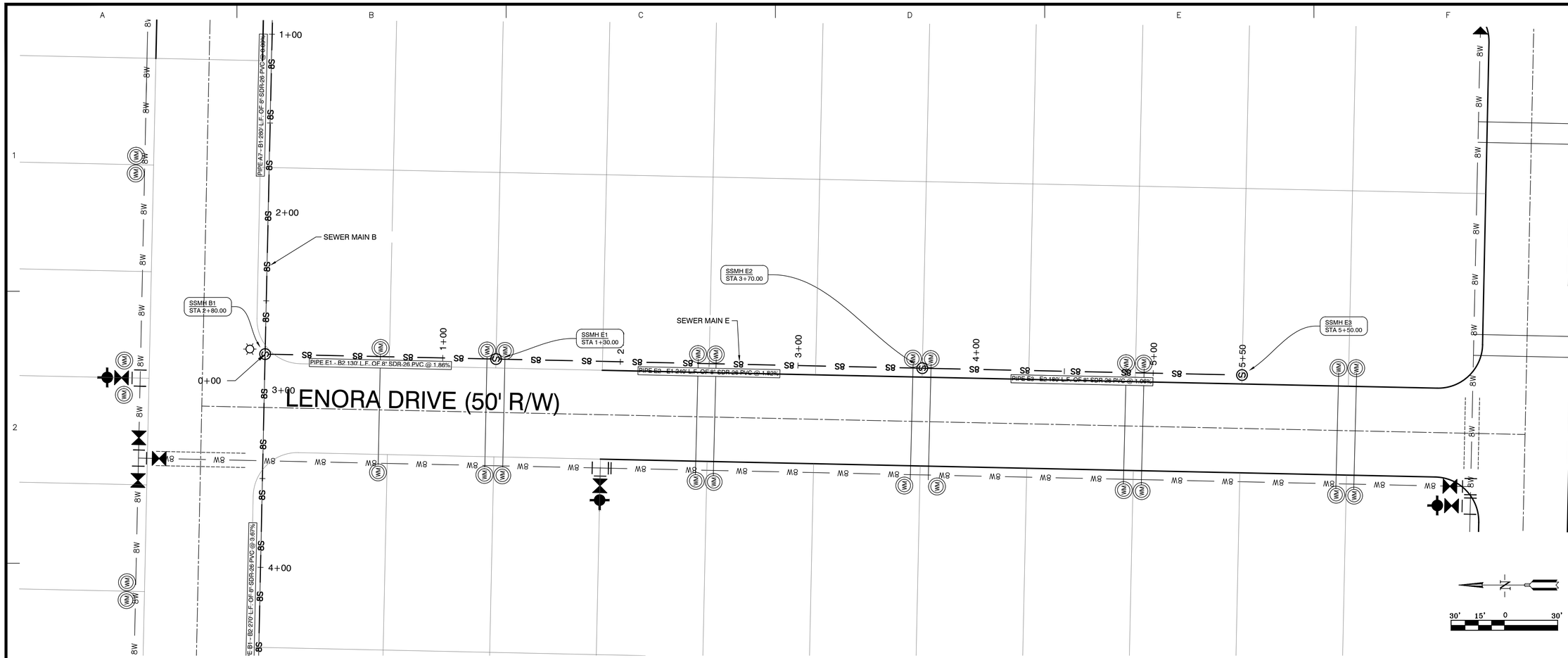
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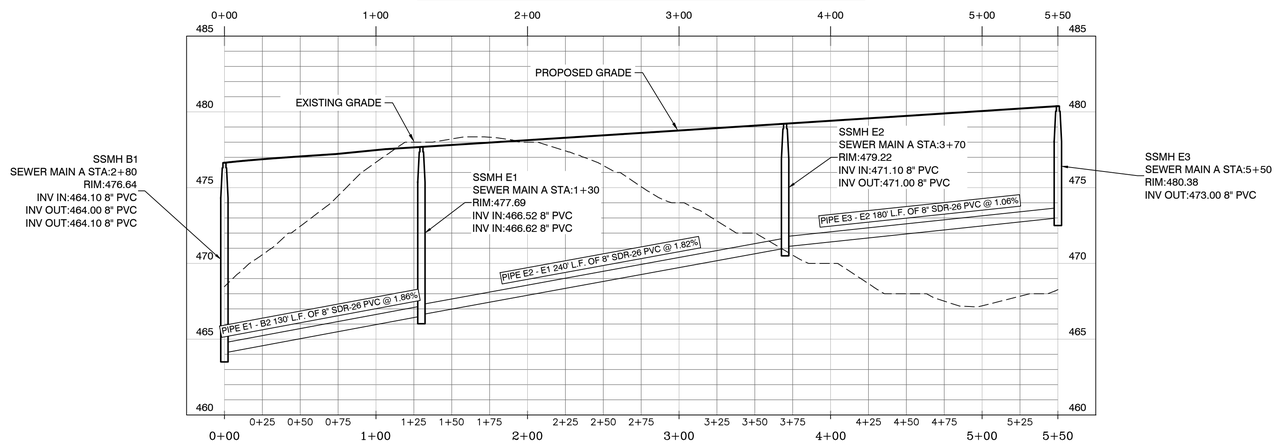
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SEWER MAIN E STA. 0+00 - 5+50



SCALE: H 1" = 50'
V 1" = 5'

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CITY OF BRYANT,
SALINE COUNTY, ARKANSAS

STATE OF ARKANSAS
VERNON J. WILLIAMS
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NO. 9551

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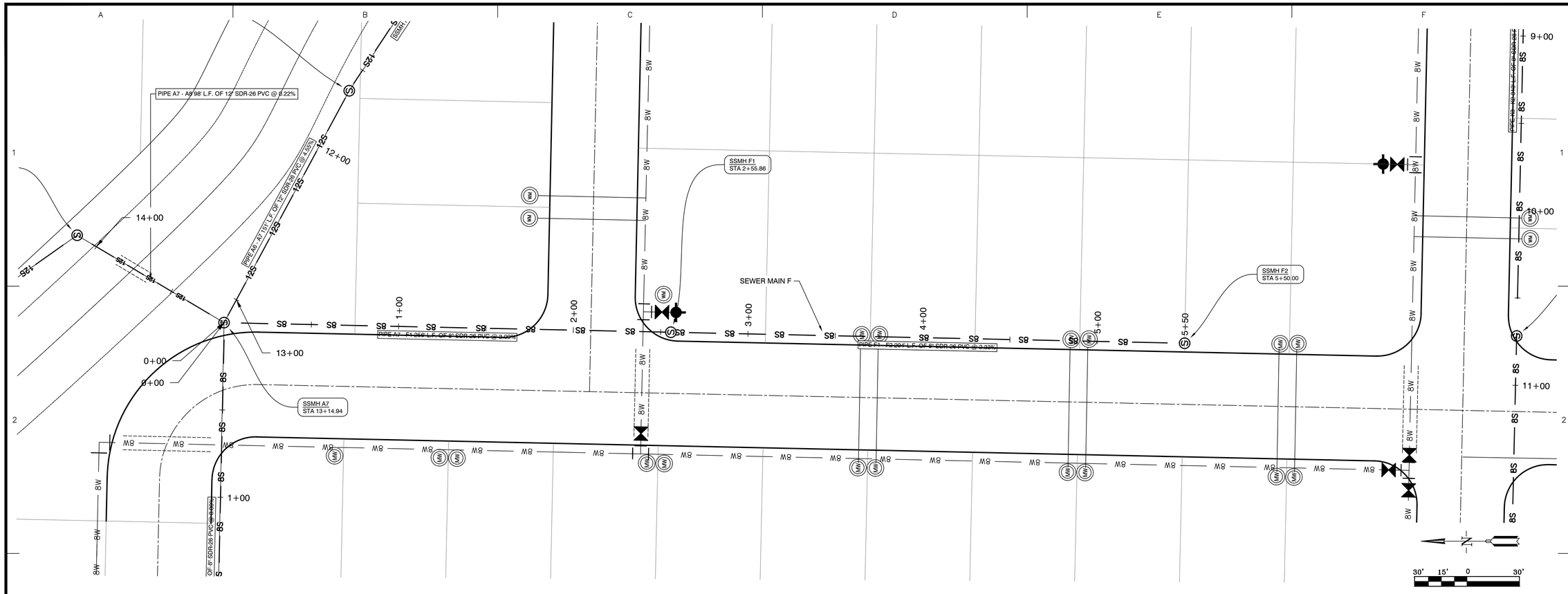
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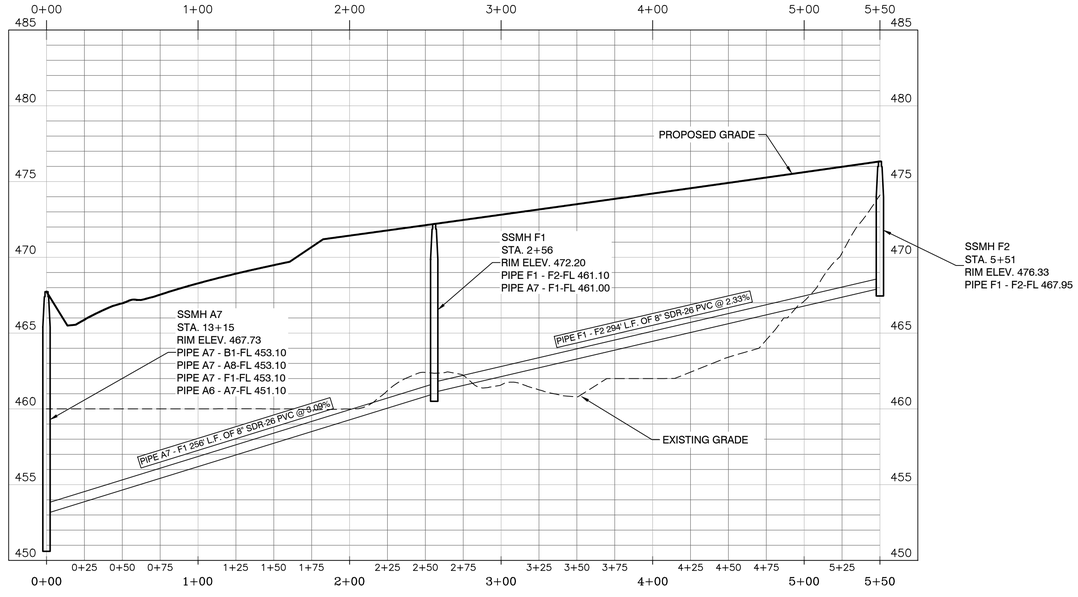
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SEWER MAIN F STA. 0+00 – 5+50



SCALE: H 1" = 50'
V 1" = 5'

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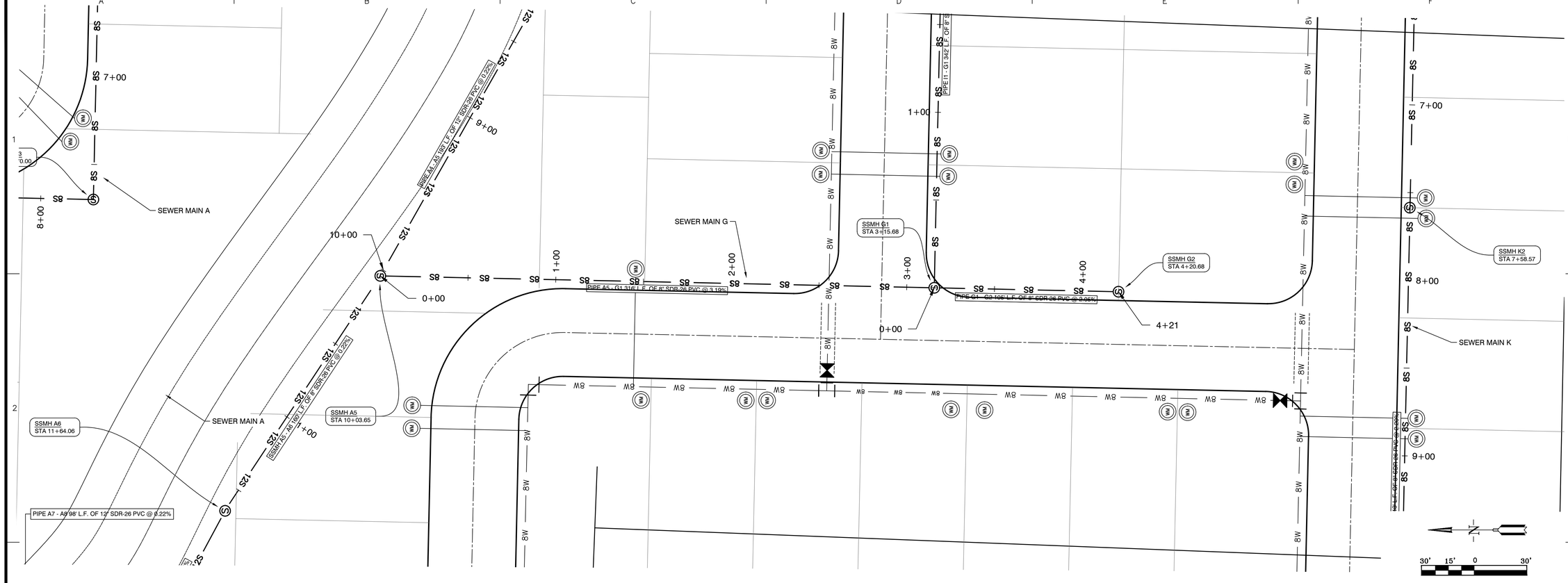
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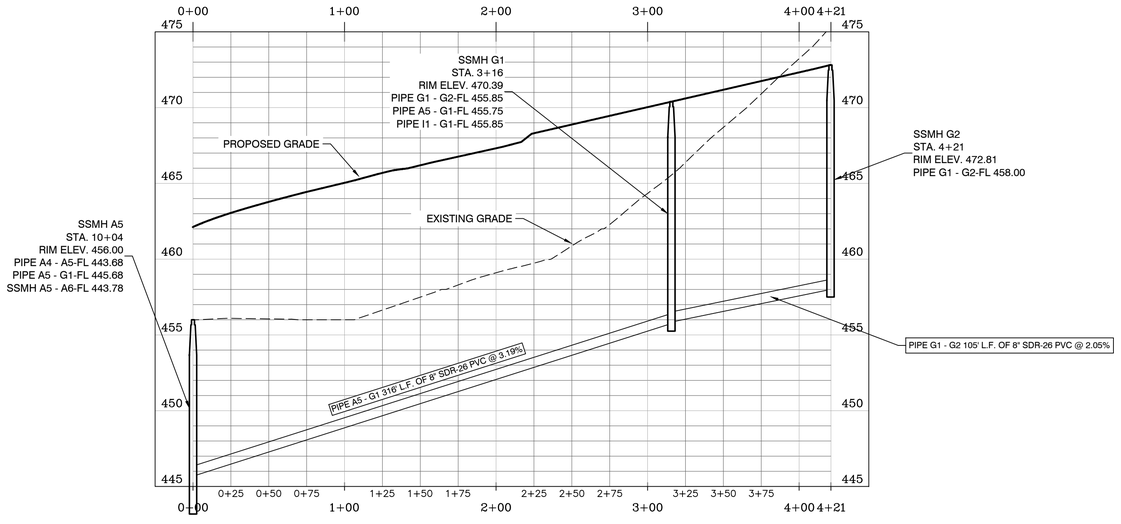
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SEWER MAIN G STA. 0+00 – 4+21



SCALE: H 1" = 50'
V 1" = 5'

DATE	REVISION	BY

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01-23-2025

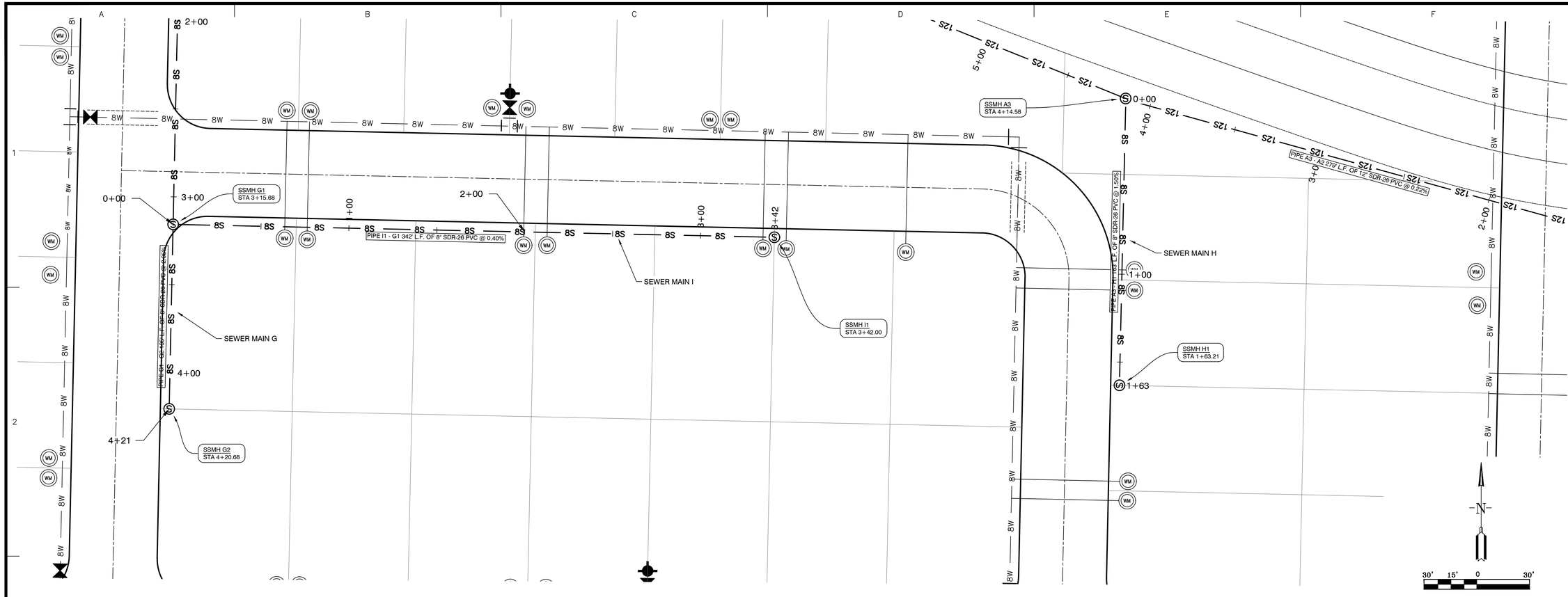
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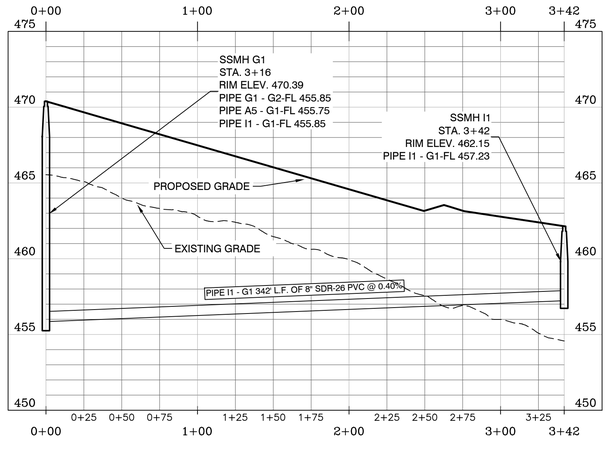
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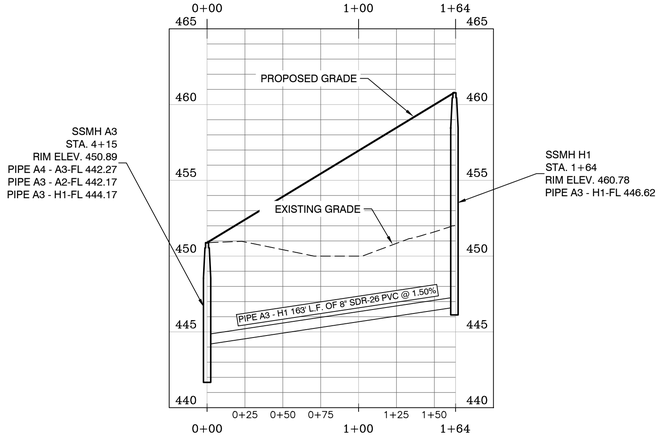
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SEWER MAIN I STA. 0+00 – 3+42



SEWER MAIN H STA. 0+00 – 1+64



SCALE: H 1" = 50'
V 1" = 5'

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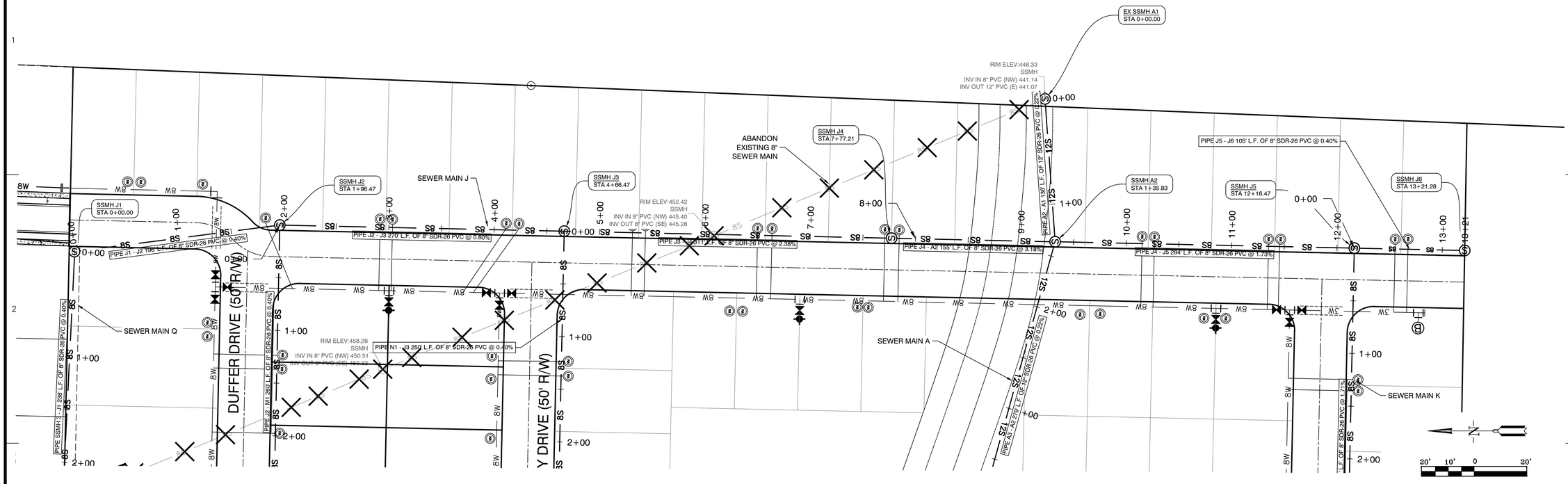
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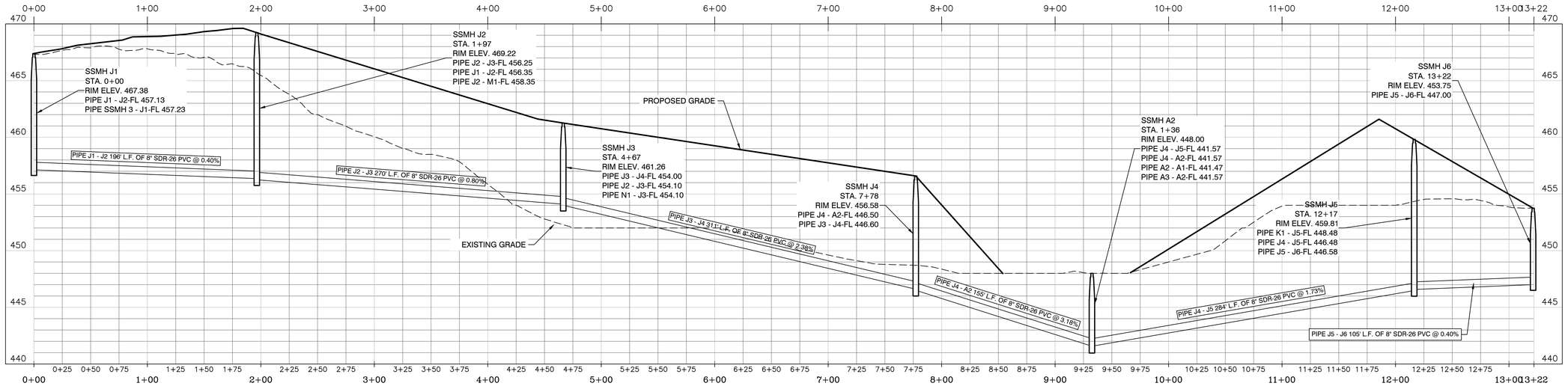
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SEWER MAIN J STA. 0+00 – 13+22



SCALE: H 1" = 50'
V 1" = 5'

DATE	REVISION	BY

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STATE OF ARKANSAS
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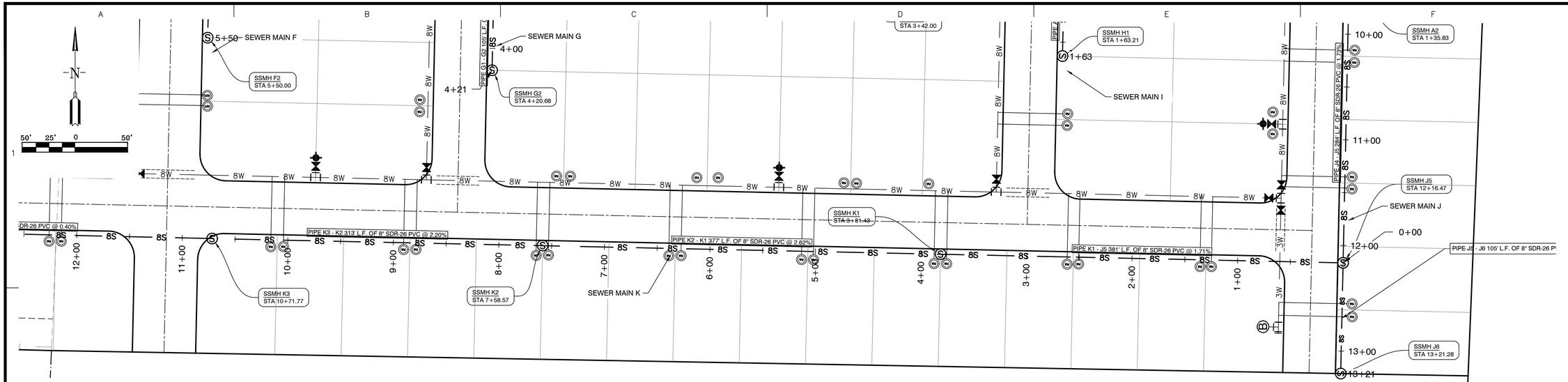
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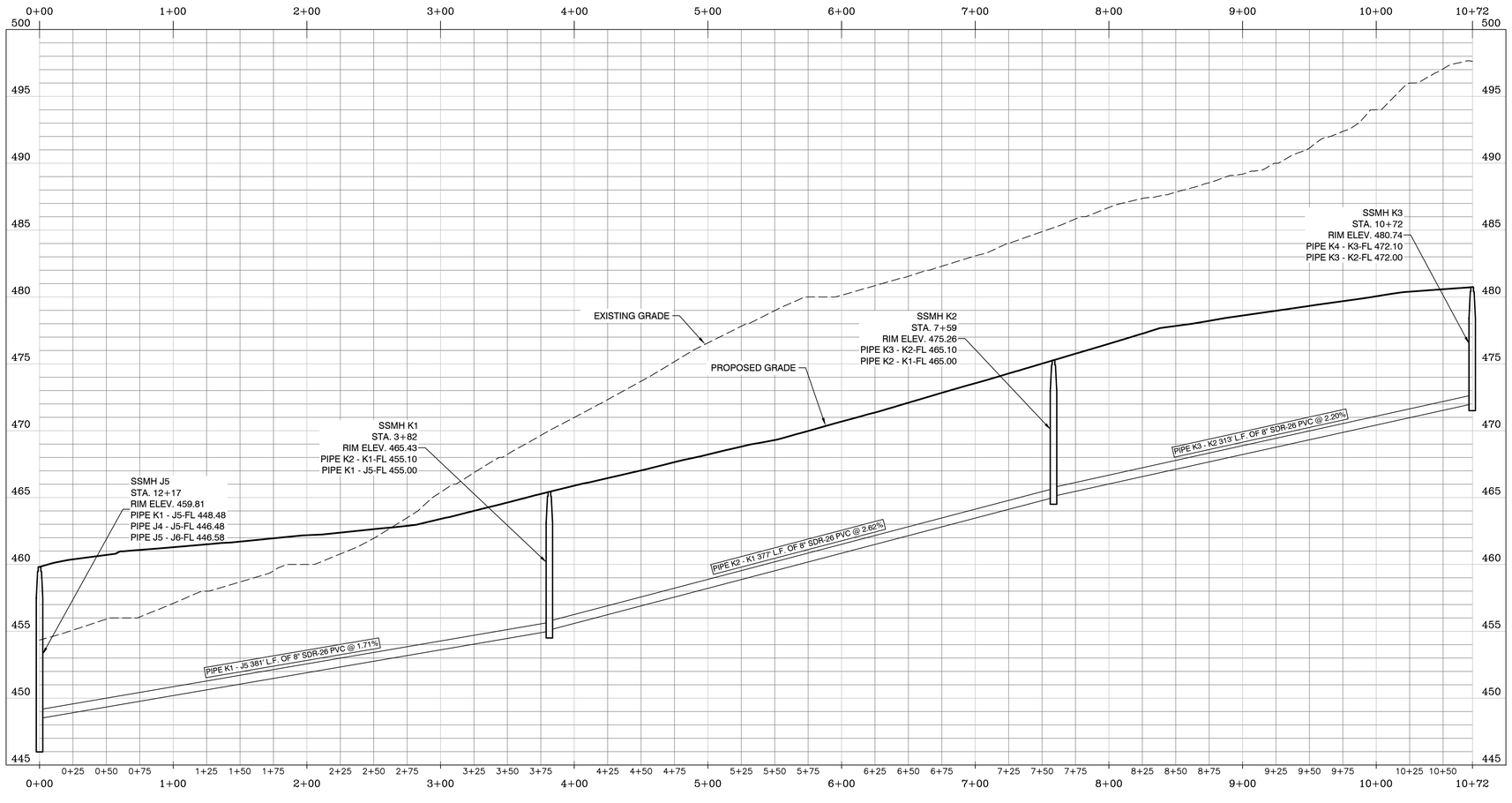
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SEWER MAIN K STA. 0+00 – 10+72



SCALE: H 1" = 50'
V 1" = 5'

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FOR: THOMAS DB COLLINS, LTD, LLC
CITY OF BRYANT,
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STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
NO. 9551
VERNON J. WILLIAMS

01-23-2025

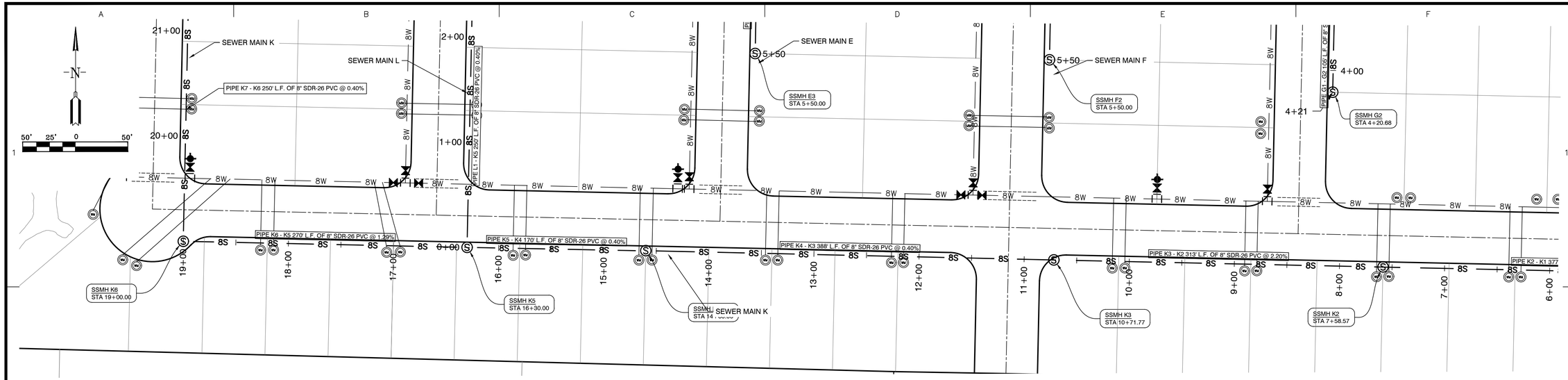
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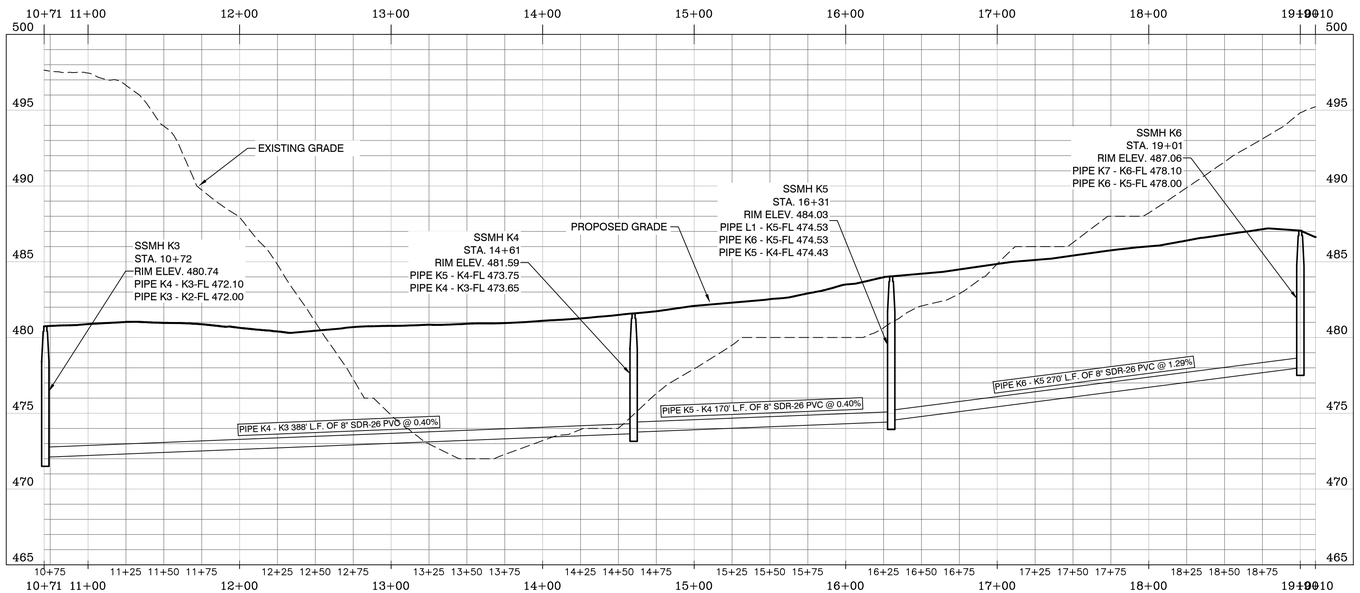
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SEWER MAIN K STA. 10+71 – 19+00



SCALE: H 1" = 50'
V 1" = 5'

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garnatengineering@gmail.com

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HAWKINS VALLEY
OVERALL WATER & SEWER
FOR: THOMAS DB COLLINS, LTD, LLC
CITY OF BRYANT,
SALINE COUNTY, ARKANSAS

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
NO. 9551
VERNON J. WILLIAMS

01-23-2025

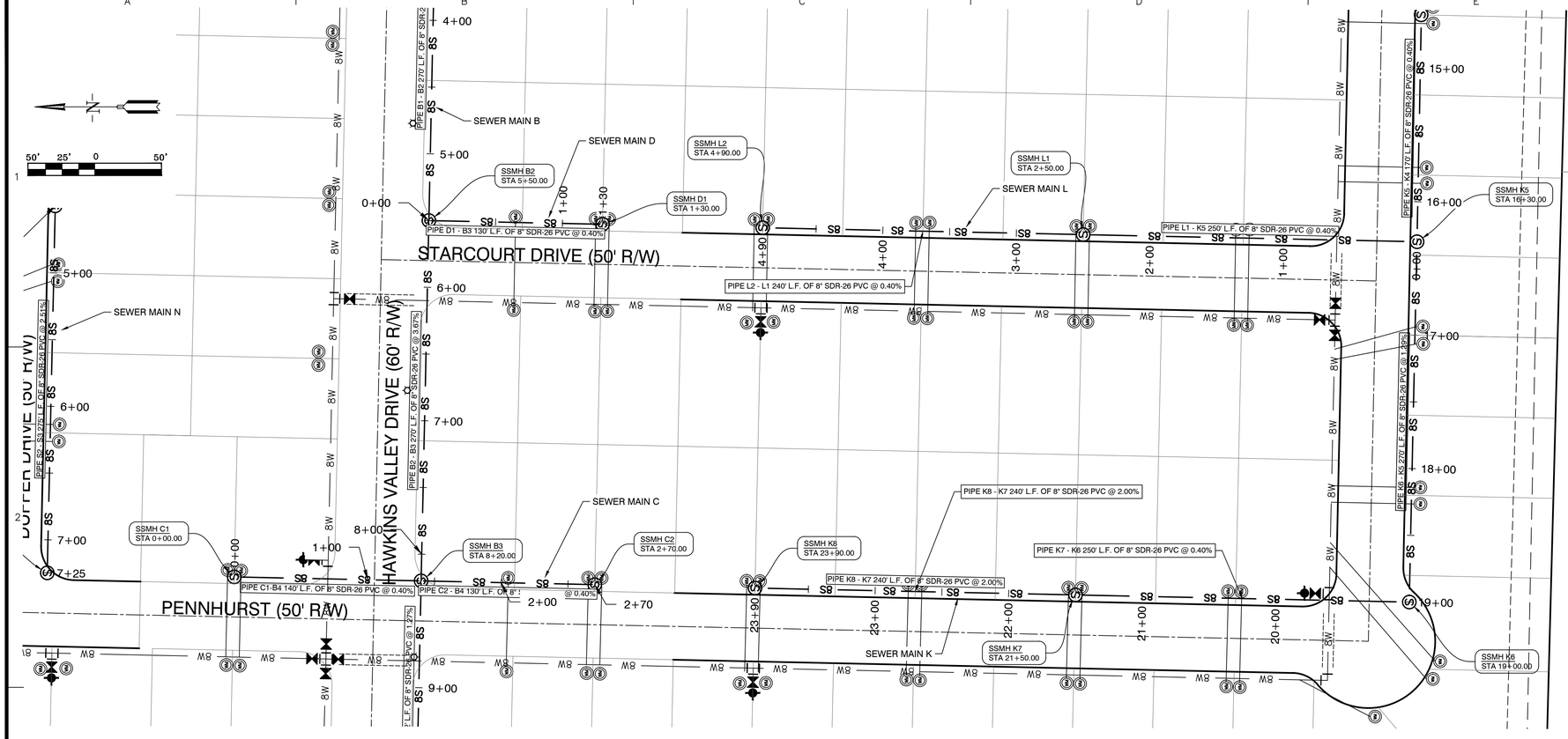
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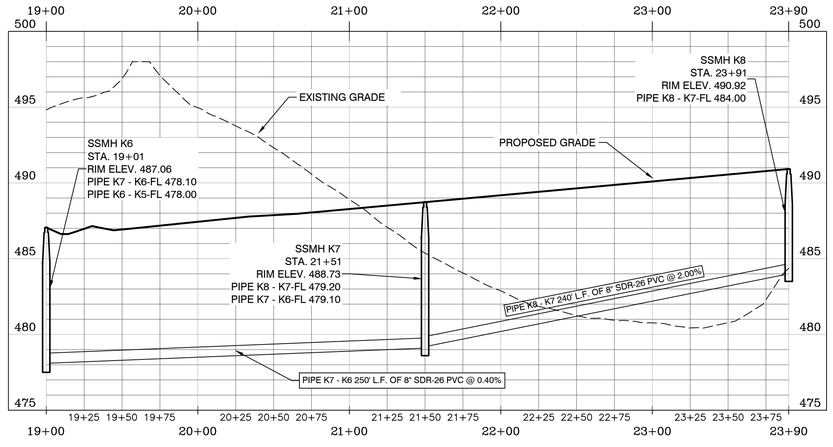
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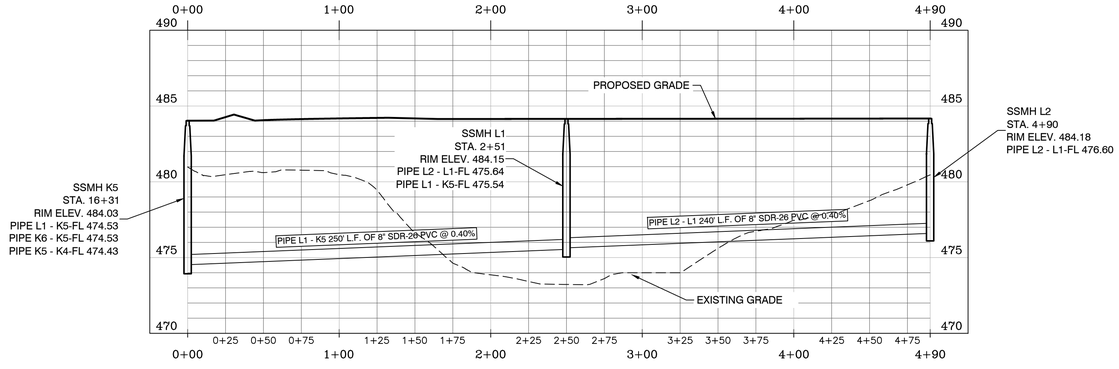
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SEWER MAIN K STA. 19+00 – 23+90



SEWER MAIN L STA. 0+00 – 4+90



SCALE: H 1" = 50'
V 1" = 5'

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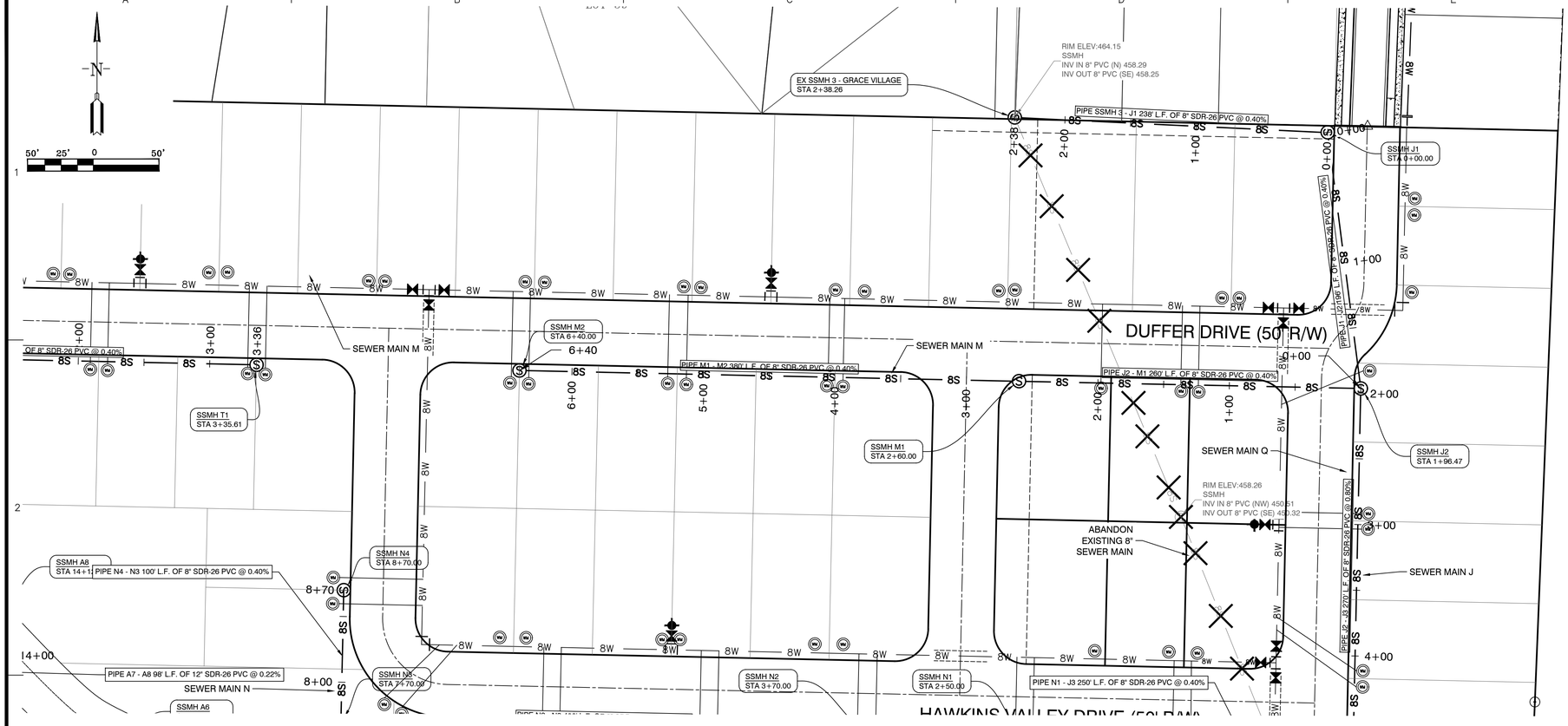
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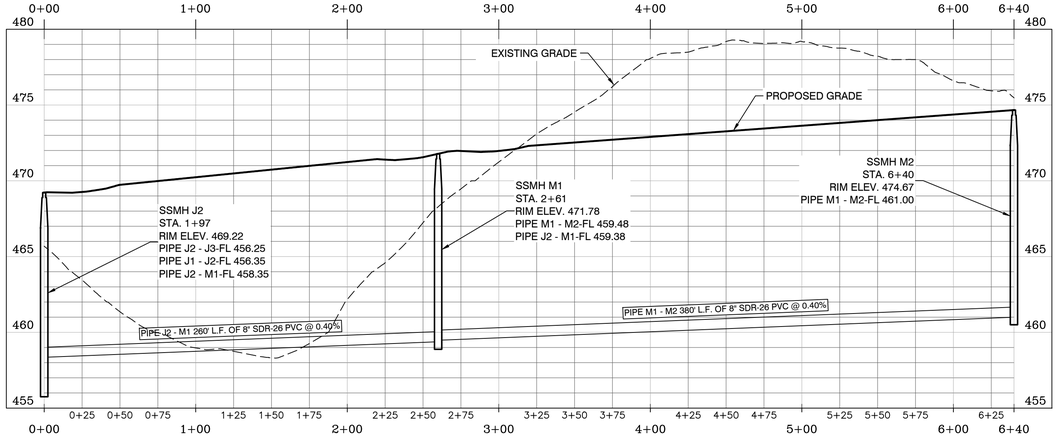
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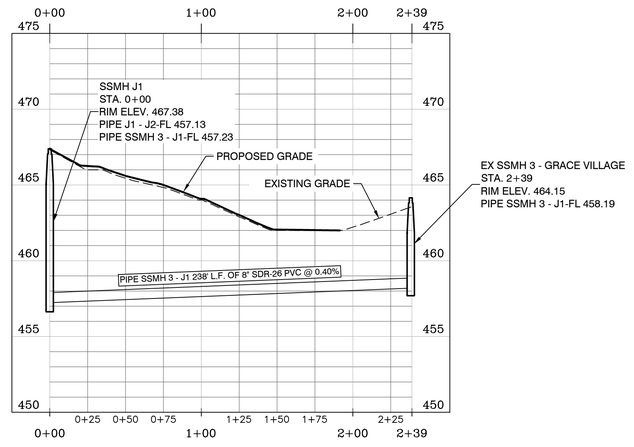
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SEWER MAIN M STA. 0+00 – 6+40



SEWER MAIN Q STA. 0+00 – 2+39



SCALE: H 1" = 50'
V 1" = 5'

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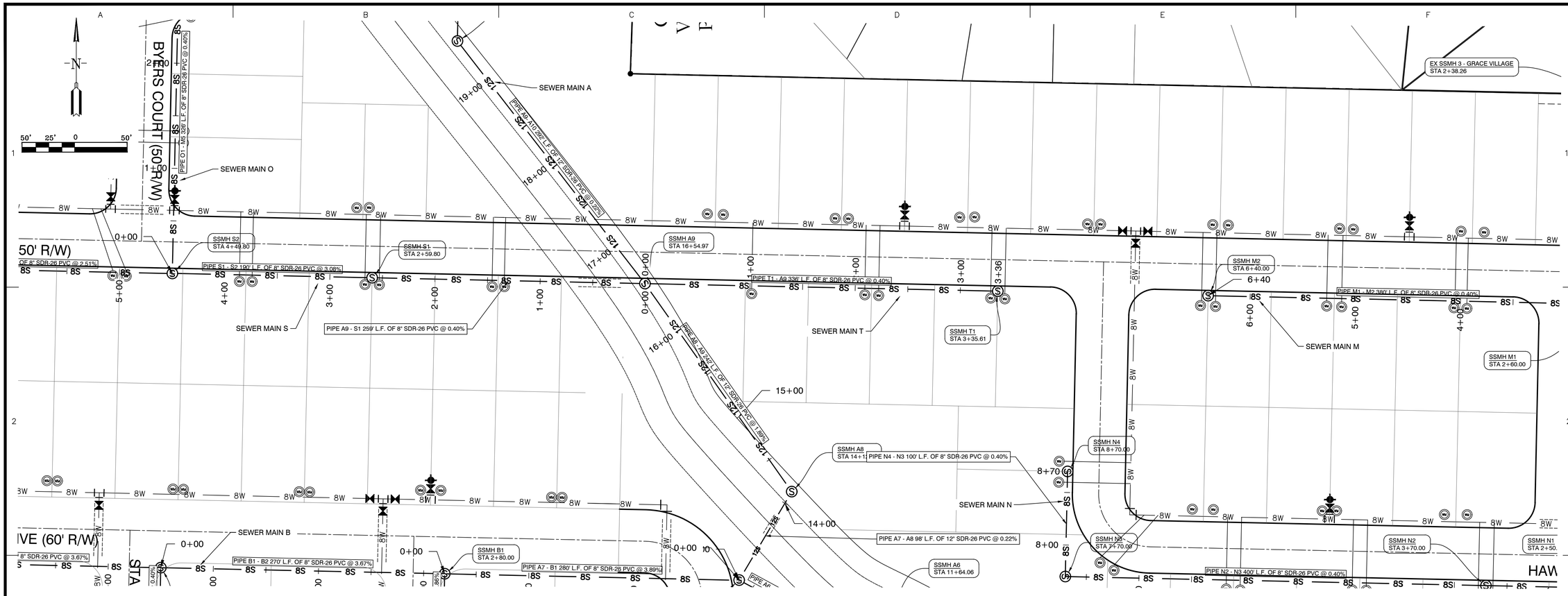
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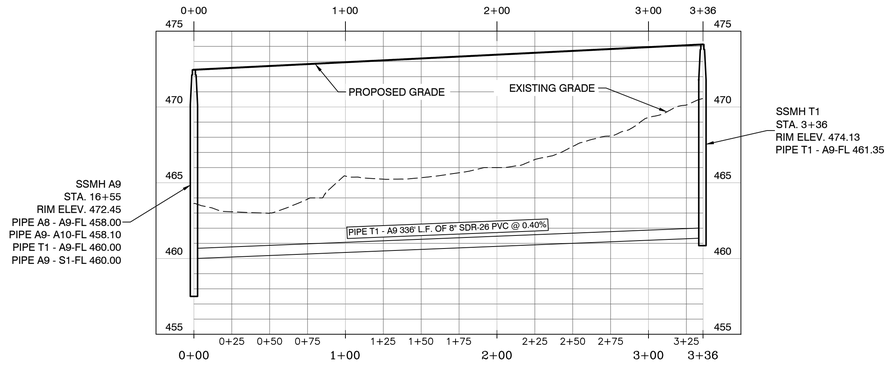
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SEWER MAIN T STA. 0+00 - 3+36



SCALE: H 1" = 50'
V 1" = 5'

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SALINE COUNTY, ARKANSAS

STATE OF ARKANSAS
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VERNON J. WILLIAMS

01-23-2025

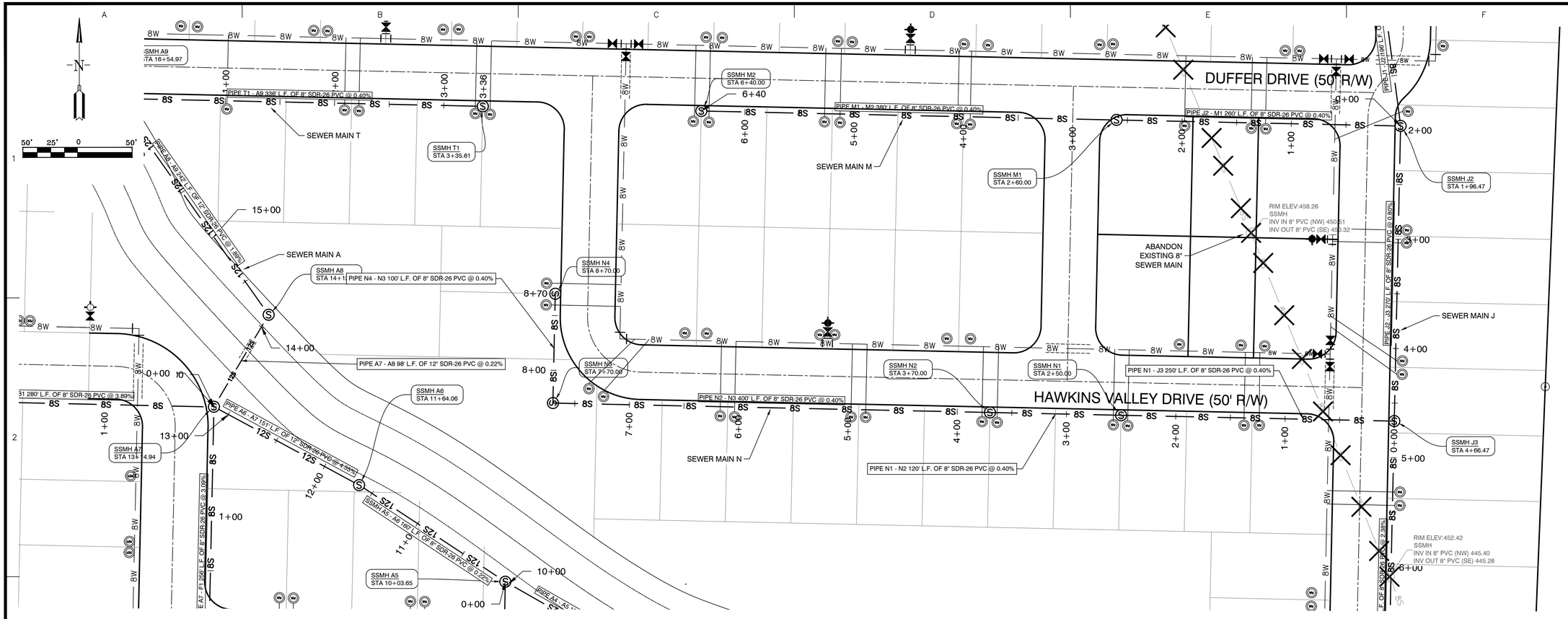
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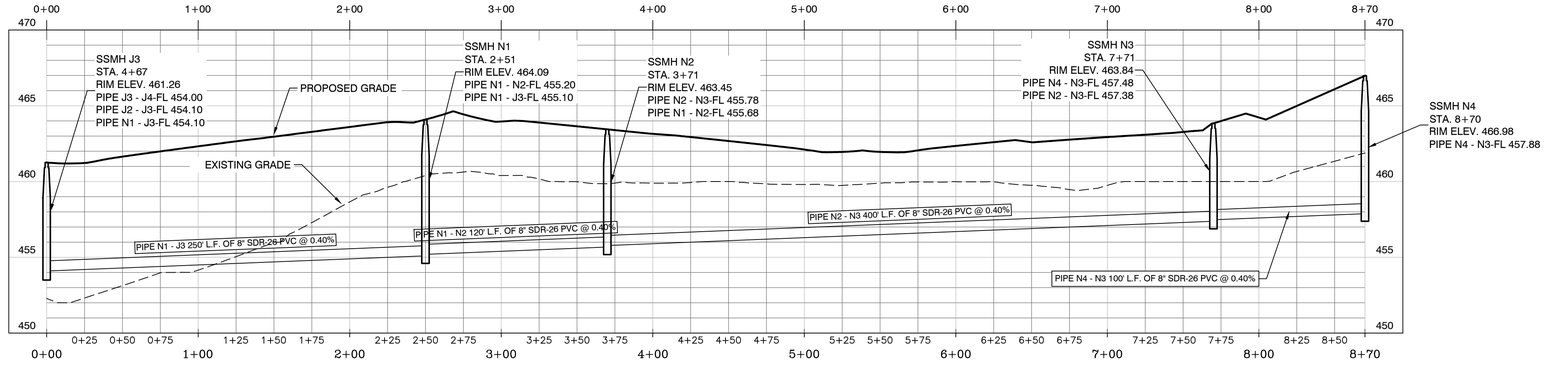
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SEWER MAIN N STA. 0+00 - 8+70



SCALE: H 1" = 50'
V 1" = 5'

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STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
VERNON J. WILLIAMS
NO. 9551

01-23-2025

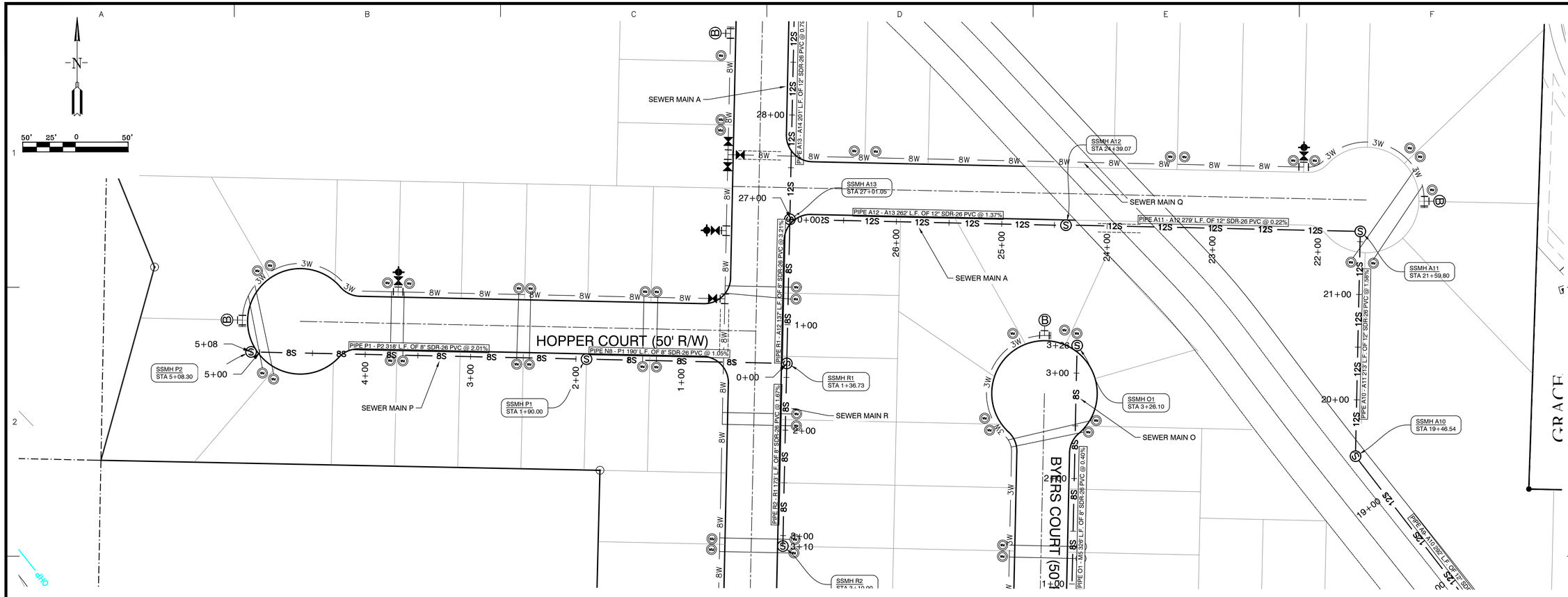
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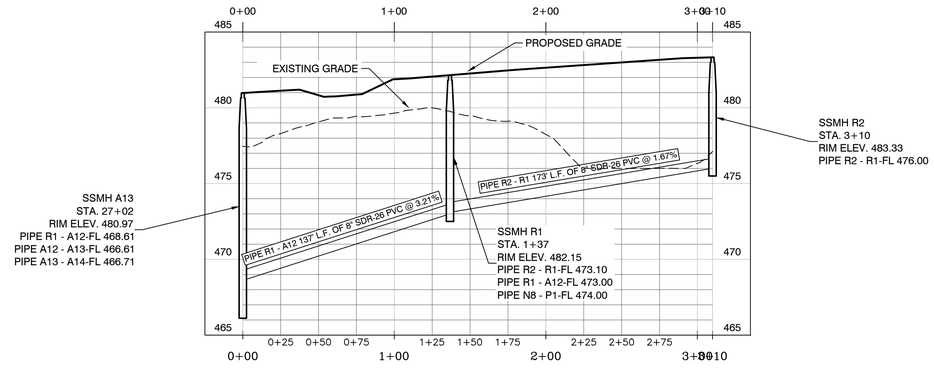
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SEWER MAIN R STA. 0+00 - 3+10



SCALE: H 1" = 50'
V 1" = 5'

BY	REVISION	DATE

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GarNat Engineering, LLC
P.O. Box 116 3825 Mt Carmel Rd
Benton, AR 72018 Bryant, AR 72022
Ph (501) 408-4650 garnatengineering@gmail.com

HAWKINS VALLEY
OVERALL WATER & SEWER
FOR: THOMAS DB COLLINS, LTD, LLC
CITY OF BRYANT,
SALINE COUNTY, ARKANSAS

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
NO. 9551
VERNON J. WILLIAMS

01-23-2025

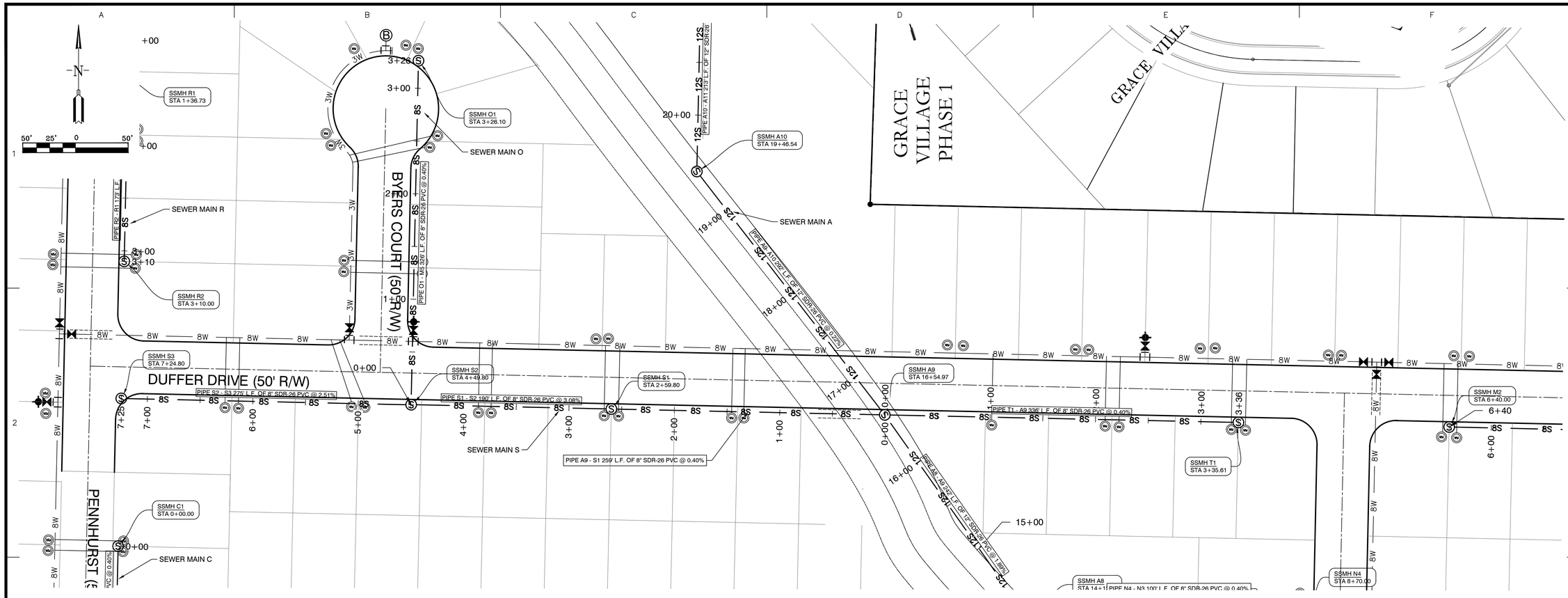
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PROJECT NO: 24076

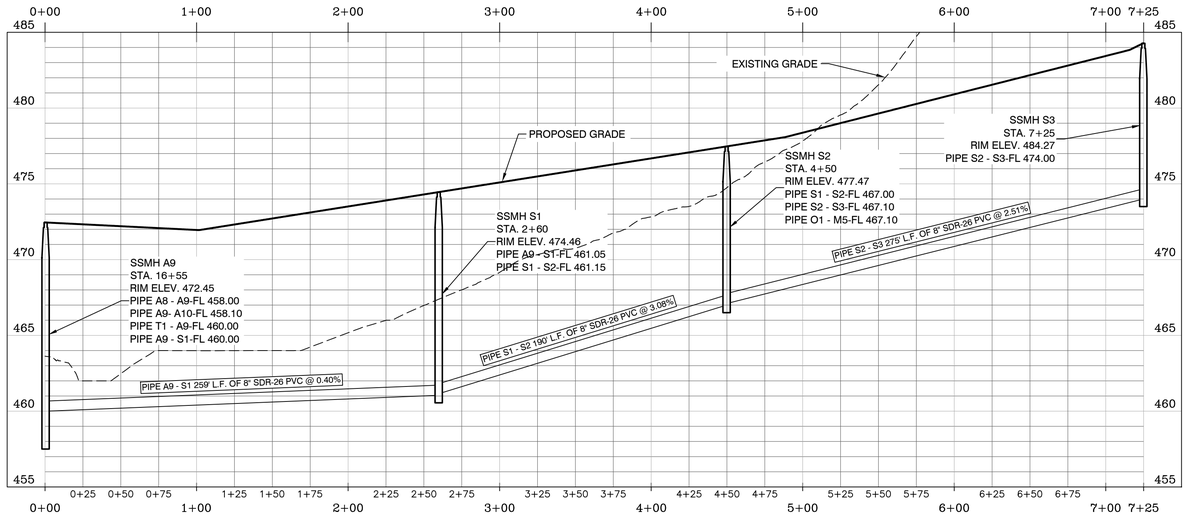
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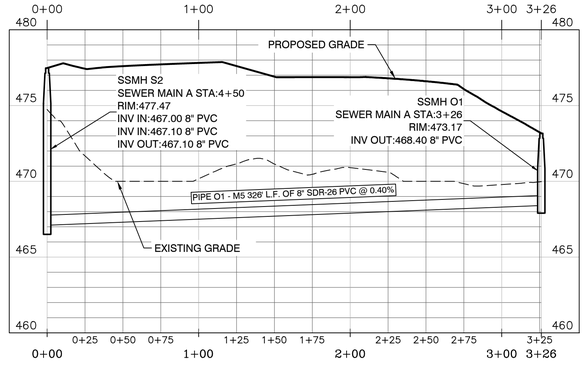
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SEWER MAIN S STA. 0+00 – 7+25



SEWER MAIN O STA. 0+00 – 3+26



SCALE: H 1" = 50'
V 1" = 5'

BY	REVISION	DATE

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Benton, AR 72018
3825 Mt Carmel Rd
Bryant, AR 72022
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HAWKINS VALLEY
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FOR: THOMAS DB COLLINS, LTD, LLC
CITY OF BRYANT,
SALINE COUNTY, ARKANSAS

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
VERNON J. WILLIAMS
NO. 9551

01-23-2025

CONTENTS:
SANITARY SEWER PLAN & PROFILE
MAIN "S"
STA. 0+00 - 7+25
MAIN "O"
STA. 0+00 - 3+26

PROJECT NO:
24076

DATE:
DECEMBER 2024

SHEET NO:
21

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HAWKINS VALLEY
PHASE 1
FOR THOMAS D.B. COLLINS, LTD.
CITY OF BRYANT,
SALINE COUNTY, ARKANSAS

Prepared by:

GarNat Engineering, LLC

P.O. Box 116
Benton, AR 72018
Ph (501) 408-4650

3825 Mt Carmel Road
Bryant, AR 72022
www.garnatengineering.com

Designing our client's success



02-03-2025

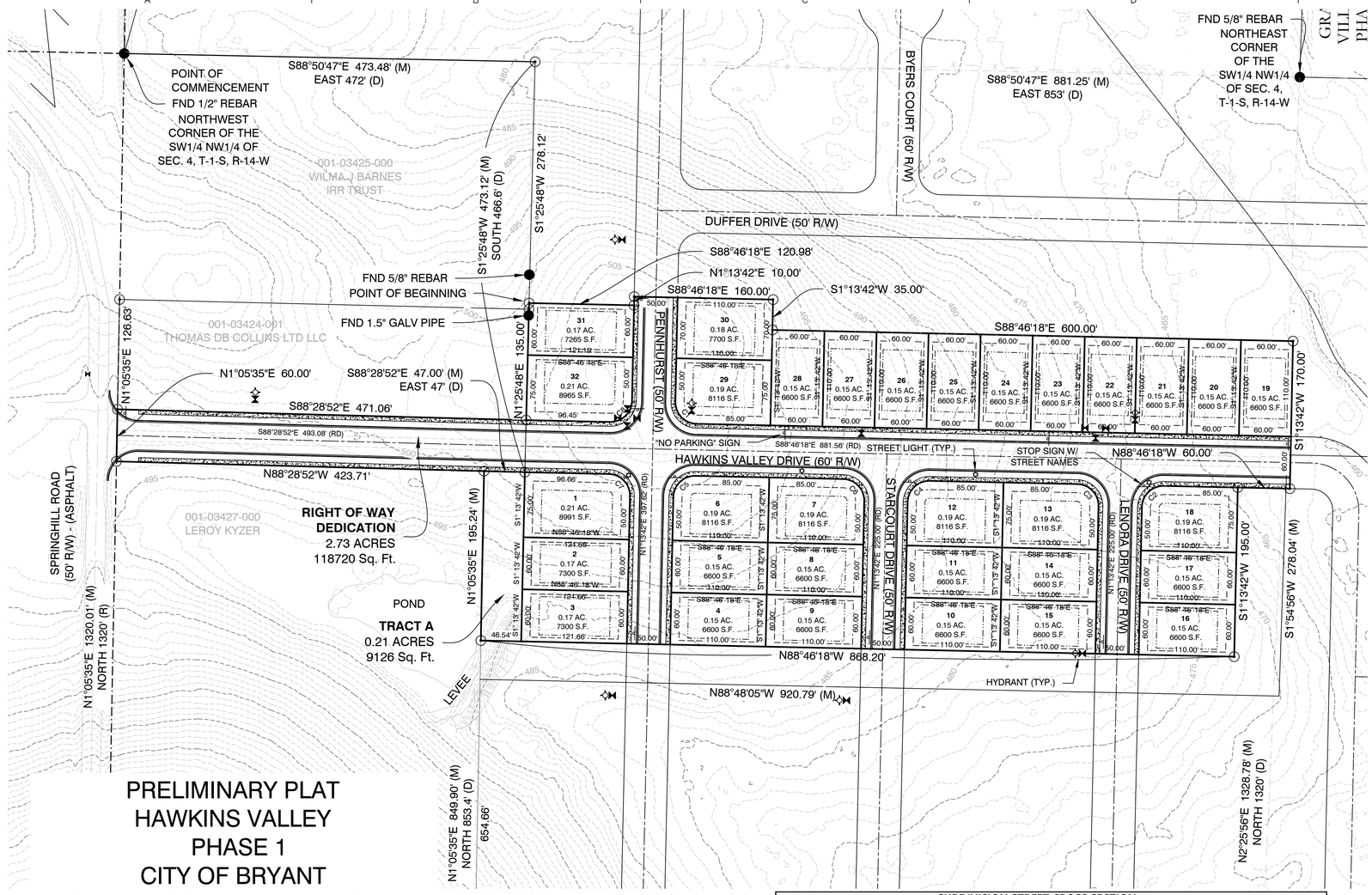




ARKANSAS

DRAWING INDEX:

V1.0	PRELIMINARY PLAT
C2.0	WATER AND SEWER PLAN
C2.1	SEWER PLAN & PROFILE MAIN A
C2.2	SEWER PLAN & PROFILE MAIN B
C2.3	SEWER PLAN & PROFILE MAIN C
C2.4	SEWER PLAN & PROFILE MAIN D & E
C3.0	STREET & DRAINAGE PLAN
C3.1	ROAD PROFILES
C3.2	OUTLET STRUCTURE DETAILS



PRELIMINARY PLAT
HAWKINS VALLEY
PHASE 1
CITY OF BRYANT
SALINE COUNTY, ARKANSAS

PLAT CERTIFICATES:

OWNER:

Name: Phillip Pengelly
Thomas DB Collins LTD, LLC
Address: 9360 Gilbert Road
Benton, Arkansas 72019

DEVELOPER:

Name: Lee Pengelly
Thomas DB Collins LTD, LLC
Address: 9360 Gilbert Road
Benton, Arkansas 72019

CERTIFICATE OF OWNER:

We, the undersigned, owners of the real estate shown and described herein do hereby certify that we have laid off, platted and subdivided, and do hereby lay off, plat and subdivide said real estate in accordance with the within plat.

Date: _____ Signed: _____

Name: Phillip Pengelly

Address: 9360 Gilbert Road, Benton, Arkansas 72019

Source of Title Saline County: Deed Book 2024 , Page 013856

CERTIFICATE OF PRELIMINARY ENGINEERING ACCURACY:

I, Vernon J. Williams, hereby certify that this plat correctly represents a survey and a plan made by me or under my supervision; that all monuments shown hereon actually exist and their locations, size, type, and material are correctly shown; and that all requirements of the City of Bryant Subdivision Rules and Regulations have been fully complied with.

Date: _____ Signed: _____

Vernon J. Williams
Registered Professional Engineer
No. 9551, Arkansas

CERTIFICATE OF PRELIMINARY SURVEYING ACCURACY:

I, George P. Wooden, hereby certify that this proposed preliminary plat correctly represents a boundary survey made by me or under my supervision; that the boundary lines shown hereon correspond with the description in the deeds cited in the above Source of Title; and that all monuments which were found or placed on the property are correctly described and located.

Date: _____ Signed: _____

George P. Wooden
Registered Land Surveyor
No. 1573, Arkansas

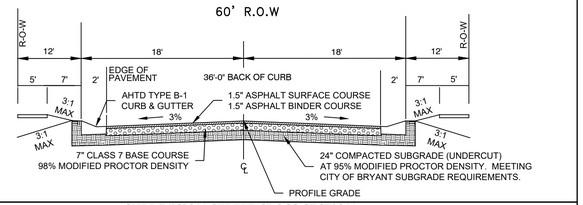
CERTIFICATE OF PRELIMINARY PLAT APPROVAL:

All requirements of the City of Bryant Subdivision Rules and Regulations relative to the preparation and submittal of a Preliminary Plat having been fulfilled, approval of this plat is hereby granted, subject to further provisions of said Rules and Regulations.

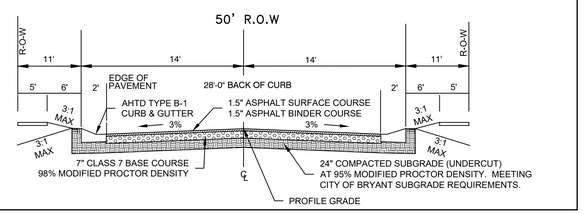
Date: _____ Signed: _____

Lance Penfield, Chairman
Bryant Planning Commission

SUBDIVISION STREET CROSS SECTION



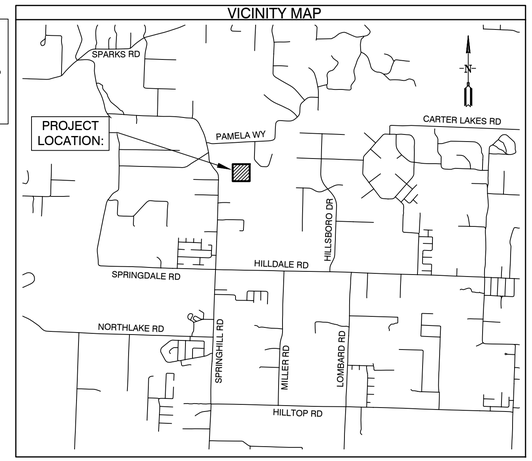
SUBDIVISION STREET CROSS SECTION



SURVEY LEGEND

- Computed point
- Found monument
- Set #4 RB/Plas. Cap
(M)-Measured
(R)-Record
(P)-Platted

VICINITY MAP



Curve Table

Curve #	Length	Radius	Delta	Chord Direction	Chord Length
C1	39.27'	25.00'	90°00'00"	N43° 46' 18"W	35.36'
C2	39.27'	25.00'	90°00'00"	N46° 13' 42"E	35.36'
C3	39.27'	25.00'	90°00'00"	N43° 46' 18"W	35.36'
C4	39.27'	25.00'	90°00'00"	S46° 13' 42"W	35.36'
C5	39.27'	25.00'	90°00'00"	N46° 13' 42"E	35.36'
C6	39.27'	25.00'	90°00'00"	S43° 46' 18"E	35.36'
C8	39.27'	25.00'	90°00'00"	S46° 13' 42"W	35.36'

GENERAL NOTES:

1. ALL STREETS & DRAINAGE TO MEET CITY OF BRYANT STANDARD SPECIFICATIONS & DETAILS.
2. ALL TRAFFIC CONTROL DEVICES SHALL MEET THE REQUIREMENTS OF CITY OF BRYANT STANDARD SPECIFICATIONS PER PART 4.9
3. NO FENCES CAN BE CONSTRUCTED IN DRAINAGE EASEMENTS WHERE OPEN DITCHES EXIST.
4. ROADS WILL BE MAINTAINED, INSPECTED, & ACCEPTED BY SALINE COUNTY.
5. NO FENCES SHALL BE BUILT WITHIN THIS DRAINAGE EASEMENT.
6. NO POOLS OR PERMANENT STRUCTURES SHALL BE BUILT IN EASEMENTS.
7. NO FENCES SHALL BE BUILT IN ROAD RIGHT-OF-WAY OR ACCESS EASEMENTS.
8. THE NUMBER OF HOUSES IS LIMITED TO THIRTY, UNTIL SECONDARY FIRE ACCESS ROAD MEETING CITY OF BRYANT REQUIREMENTS IS CONSTRUCTED.

PROPERTY SPECIFICATIONS:

ZONING CLASSIFICATION: R-1.S

MIN. LOT SIZE: 6,600 S.F.
NUMBER OF LOTS: 32
SOURCE OF WATER: SALEM WATER
SOURCE OF SEWER: CITY OF BRYANT

BUILDING SETBACKS:
FRONT - 20' OR AS SHOWN
REAR - 20' OR AS SHOWN
SIDE - 8' OR AS SHOWN

EASEMENTS: UTILITY & DRAINAGE (D.E. & U.E.)
FRONT - 10' OR AS SHOWN
REAR - 10' OR AS SHOWN
SIDE - 5' OR AS SHOWN
STREET RIGHT OF WAYS: 50' OR AS SHOWN
STREET WIDTH: 28' BOC TO BOC
LOT CORNERS: SET #4 REBAR WITH CAP

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
NO. 9551
VERNON J. WILLIAMS

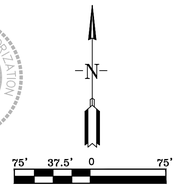
02-03-2025

PROPERTY DESCRIPTION:

PHASE 1 SUBDIVISION DESCRIPTION

PART OF THE SOUTHWEST QUARTER OF THE NORTHWEST QUARTER (SW1/4 NW1/4) OF SECTION 4, TOWNSHIP 1 SOUTH, RANGE 14 WEST, MORE PARTICULARLY DESCRIBED AS FOLLOWS: **COMMENCING** AT A FOUND 1/2" REBAR FOR THE NORTHWEST CORNER OF THE SAID SW1/4 NW1/4; THENCE S88°50'47"E, ALONG THE NORTH LINE THEREOF, FOR A DISTANCE OF 473.48 FEET TO A SET 1/2" REBAR WITH CAP #1573; THENCE S1°25'48"W, LEAVING SAID NORTH LINE, FOR A DISTANCE OF 278.12 FEET TO A SET 1/2" REBAR WITH CAP #1573 FOR THE **POINT OF BEGINNING**; THENCE S88°46'18"E FOR A DISTANCE OF 120.98 FEET TO A SET 1/2" REBAR WITH CAP #1573 LOCATED ON THE WEST RIGHT OF WAY OF PENNHURST; THENCE N1°13'42"E, ALONG SAID WEST RIGHT OF WAY, FOR A DISTANCE OF 10.00 FEET TO A POINT; THENCE S88°46'18"E, LEAVING SAID WEST RIGHT OF WAY, FOR A DISTANCE OF 160.00 FEET TO A SET 1/2" REBAR WITH CAP #1573; THENCE S1°13'42"W FOR A DISTANCE OF 35.00 FEET TO A SET 1/2" REBAR WITH CAP #1573; THENCE S88°46'18"E FOR A DISTANCE OF 600.00 FEET TO A SET 1/2" REBAR WITH CAP #1573; THENCE S1°13'42"W FOR A DISTANCE OF 170.00 FEET TO A SET 1/2" REBAR WITH CAP #1573 LOCATED ON THE SOUTH RIGHT OF WAY OF HAWKINS VALLEY DRIVE; THENCE N88°46'18"W, ALONG SAID SOUTH RIGHT OF WAY, FOR A DISTANCE OF 60.00 FEET TO A SET 1/2" REBAR WITH CAP #1573; THENCE S1°13'42"W, LEAVING SAID SOUTH RIGHT OF WAY, FOR A DISTANCE OF 195.00 FEET TO A SET 1/2" REBAR WITH CAP #1573; THENCE N88°46'18"W FOR A DISTANCE OF 868.20 FEET TO A SET 1/2" REBAR WITH CAP #1573; THENCE N1°05'35"E FOR A DISTANCE OF 195.24 FEET TO A SET 1/2" REBAR WITH CAP #1573 LOCATED ON THE SOUTH RIGHT OF WAY OF HAWKINS VALLEY DRIVE; THENCE N88°28'52"W, ALONG SAID SOUTH RIGHT OF WAY, FOR A DISTANCE OF 423.71 FEET TO A SET 1/2" REBAR WITH CAP #1573 LOCATED ON THE EAST RIGHT OF WAY OF SPRINGHILL ROAD; THENCE N1°05'35"E, ALONG SAID EAST RIGHT OF WAY, FOR A DISTANCE OF 60.00 FEET TO A SET 1/2" REBAR WITH CAP #1573 LOCATED ON THE NORTH RIGHT OF WAY OF HAWKINS VALLEY DRIVE; THENCE S88°28'52"E, LEAVING SAID SPRINGHILL ROAD EAST RIGHT OF WAY AND ALONG NORTH RIGHT OF WAY OF HAWKINS VALLEY DRIVE, FOR A DISTANCE OF 471.06 FEET TO A SET 1/2" REBAR WITH CAP #1573; THENCE N1°25'48"E, LEAVING SAID NORTH RIGHT OF WAY, FOR A DISTANCE OF 135.00 FEET TO THE **POINT OF BEGINNING**, CONTAINING 8.17 ACRES, MORE OR LESS. SUBJECT TO THE RIGHT OF WAY OF SPRINGHILL ROAD AND ANY EXISTING EASEMENTS.

CERTIFICATE OF AUTHORIZATION
GarNat Engineering, LLC
No. 2174
ARKANSAS



SURVEY PLAT CODE:
500-01S-14W-0-04-430-62-1573

BASIS OF BEARINGS:

NAD 83 ARKANSAS GRID SOUTH ZONE (GPS)

CERTIFICATIONS:

By affixing my seal and signature, I George P. Wooden, PLS No. 1573, hereby certify that this drawing correctly depicts a survey compiled under my supervision dated June 22, 2024.

According the the Federal Emergency Management Agency (FEMA) Flood Insurance Rate Map (FIRM) for Saline County unincorporated areas, panel # 05125C0225E dated 6/5/2020 , no portion of the property described hereon does lie within the 100 year flood hazard boundary.

BY								
REVISION								
DATE								

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GarNat Engineering, LLC
P.O. Box 116
Benton, AR 72018
Ph (501) 408-4650
3825 Mt Carmel Road
Bryant, AR 72022
garnatengineering@gmail.com

HAWKINS VALLEY
PHASE 1
CITY OF BRYANT,
SALINE COUNTY, ARKANSAS

STATE OF ARKANSAS
REGISTERED PROFESSIONAL LAND SURVEYOR
NO. 1573
GEORGE P. WOODEN
SIGNATURE

2-3-25

CONTENTS:
PRELIMINARY PLAT

PROJECT NO:
24076

DATE:
DEC. 17, 2024

SHEET NO:
V1.0

J:\Projects\2024 Projects\24076 Hawkins Valley Springhill Road Strawberry Lane Lee Pengelly\Drawings\DWGs\Design\24076 Hawkins Valley Phase 1 Preliminary Plat R13 1-31-2025.dwg

NOTES:

1. BURIED UTILITIES ARE LOCATED AT THE SITE. CONTACT ARKANSAS ONE CALL & WHERE APPROPRIATE THE UTILITY COMPANIES PRIOR TO DIGGING.

2. ALL UNRESTRAINED WATER LINE FITTINGS SHALL BE INSTALLED WITH A CONCRETE THRUST BLOCK FOR JOINT RESTRAINT.

3. WORK ON EXISTING ROADS SHALL INCLUDE WARNING SIGNS & BARRICADES IN ACCORDANCE WITH THE REQUIREMENTS OF THE STATE, COUNTY, OR CITY HAVING JURISDICTION. OTHER SIGNS & DEVICES, SUCH AS PLATING, SHALL BE PLACED AS REQUIRED TO ADEQUATELY PROTECT THE PUBLIC.

4. ALL SEWER LINE CONSTRUCTION SHALL COMPLY WITH CITY OF BRYANT STANDARD SPECIFICATIONS & DETAILS.

5. ALL WATER LINE CONSTRUCTION SHALL COMPLY WITH SALEM WATER USERS STANDARD SPECIFICATIONS & DETAILS.

6. MAINTAIN 10 FEET OF HORIZONTAL SEPARATION BETWEEN WATER & SEWER LINES.

7. ALL UTILITIES THAT WILL BE LOCATED UNDER PAVEMENT SHALL BE BACKFILLED IN ACCORDANCE WITH THE BRYANT STREET SPECIFICATIONS AND BRYANT WATER & SEWER STANDARD SPECIFICATIONS.

8. TELEPHONE, ELECTRICAL, AND OTHER BURIED UTILITIES ARE TO BE A MINIMUM OF 3-FEET HORIZONTALLY FROM INSTALLED WATER AND SEWER LINES.

HOPPER COURT (50' R/W)

BYERS COURT (50' R/W)

GRACE VILLAGE PHASE 1

DUFFER DRIVE (50' R/W)

PENNHURST (50' R/W)

HAWKINS VALLEY DRIVE (60' R/W)

STACOURT DRIVE (50' R/W)

LENORA DRIVE (50' R/W)

FIRE HYDRANT ASSEMBLY WITH 8" MJ PLUG ON NORTH RUN OF TEE AND 1 MJ X HDPE ADAPTER ON SOUTH RUN OF TEE W/ ANCHOR COLLAR

8" TAPPING SLEEVE & VALVE W/ 1 MJ X HDPE ADAPTER

90° MJ BEND W/ 2 MJ X HDPE ADAPTERS (TYP.)

25 L.F. OF STEEL CASING

10.0' UTILITY EASEMENT

PROPOSED 8" HDPE DIPS DR-11 WATER LINE

8" MJ CROSS TEE W/ 4 - 8" MJ GATE VALVES WITH 2 MJ X HDPE ADAPTERS EACH

50 L.F. OF STEEL CASING OR D.I. PIPE

SSMH B4
STA 9+91.71

RIGHT OF WAY DEDICATION
2.73 ACRES
118720 Sq. Ft.

TRACT A
0.21 ACRES
9126 Sq. Ft.

SSMH C1
STA 0+00.00

8" TEE W/ 2 MJ X HDPE ADAPTERS. W/ 8" MJ GATE VALVE IN BRACH WITH 2 MJ X HDPE ADAPTERS.

3-WAY FIRE HYDRANT ASSEMBLY (TYP.)

8" MJ TEE W/ 8" MJ GATE VALVE ON BRACH WITH 2 MJ X HDPE ADAPTERS AND 2 - 8" MJ GATE VALVES W/ 2 MJ X HDPE ADAPTERS EACH ON EAST AND WEST RUNS OF TEE.

INSTALL MJ CAP AT THE END OF THE LINE W / 1 MJ X HDPE ADAPTER. RESTRAIN W/ ANCHOR COLLAR.

50 L.F. OF STEEL CASING OR D.I. PIPE

50 L.F. OF STEEL CASING OR D.I. PIPE

PROPOSED MAIN "B" SANITARY SEWER

SSMH B1
STA 2+80.00

SSMH A7
STA 13+ 4.94

SSMH B2
STA 5+50.00

SHORT SIDE SINGLE METER (TYP.)

LONG SIDE SINGLE METER (TYP.)

PROPOSED MAIN "D" SANITARY SEWER

PROPOSED MAIN "E" SANITARY SEWER

PROPOSED MAIN "C" SANITARY SEWER

SSMH C2
STA 2+70.00

SHORT SIDE DOUBLE METER (TYP.)

LONG SIDE DOUBLE METER (TYP.)

SSMH D1
STA 1+30.00

FIRE HYDRANT ASSEMBLY WITH 8" MJ PLUG ON SOUTH RUN OF TEE AND 1 MJ X HDPE ADAPTER ON NORTH RUN OF TEE W/ ANCHOR COLLAR

FIRE HYDRANT ASSEMBLY WITH 8" MJ PLUG ON SOUTH RUN OF TEE AND 1 MJ X HDPE ADAPTER ON NORTH RUN OF TEE W/ ANCHOR COLLAR.

1	0.21 AC. 8991 S.F.	2	0.17 AC. 7300 S.F.
3	0.17 AC. 7300 S.F.	4	0.15 AC. 6600 S.F.
5	0.15 AC. 6600 S.F.	7	0.19 AC. 8116 S.F.
8	0.15 AC. 6600 S.F.	9	0.15 AC. 6600 S.F.
10	0.15 AC. 6600 S.F.	11	0.15 AC. 6600 S.F.
12	0.19 AC. 8116 S.F.	13	0.19 AC. 8116 S.F.
14	0.15 AC. 6600 S.F.	15	0.15 AC. 6600 S.F.
16	0.15 AC. 6600 S.F.	17	0.15 AC. 6600 S.F.
18	0.19 AC. 8116 S.F.	19	0.15 AC. 6600 S.F.
20	0.15 AC. 6600 S.F.	21	0.15 AC. 6600 S.F.
22	0.15 AC. 6600 S.F.	23	0.15 AC. 6600 S.F.
24	0.15 AC. 6600 S.F.	25	0.15 AC. 6600 S.F.
26	0.15 AC. 6600 S.F.	27	0.15 AC. 6600 S.F.
28	0.15 AC. 6600 S.F.	29	0.19 AC. 8116 S.F.
30	0.18 AC. 7700 S.F.	31	0.17 AC. 7265 S.F.
32	0.21 AC. 8965 S.F.		

50' 25' 0 50'

BY	DATE	REVISION
		1

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3825 Mt Carmel Rd
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garnatengineering@gmail.com

HAWKINS VALLEY PHASE 1
CITY OF BRYANT, SALINE COUNTY, ARKANSAS

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
NO. 9551
VERNON J. WILLIAMS

02-03-2025

CONTENTS:
WATER & SANITARY SEWER PLAN

PROJECT NO:
24076

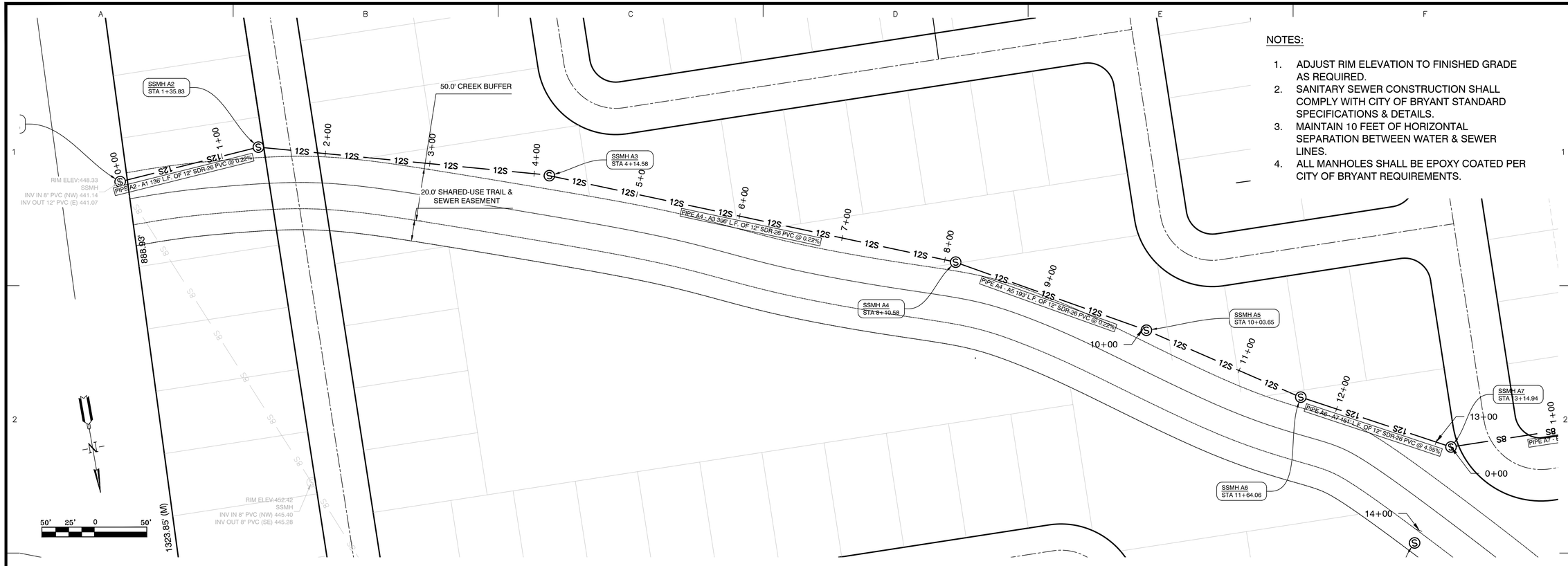
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DECEMBER 2024

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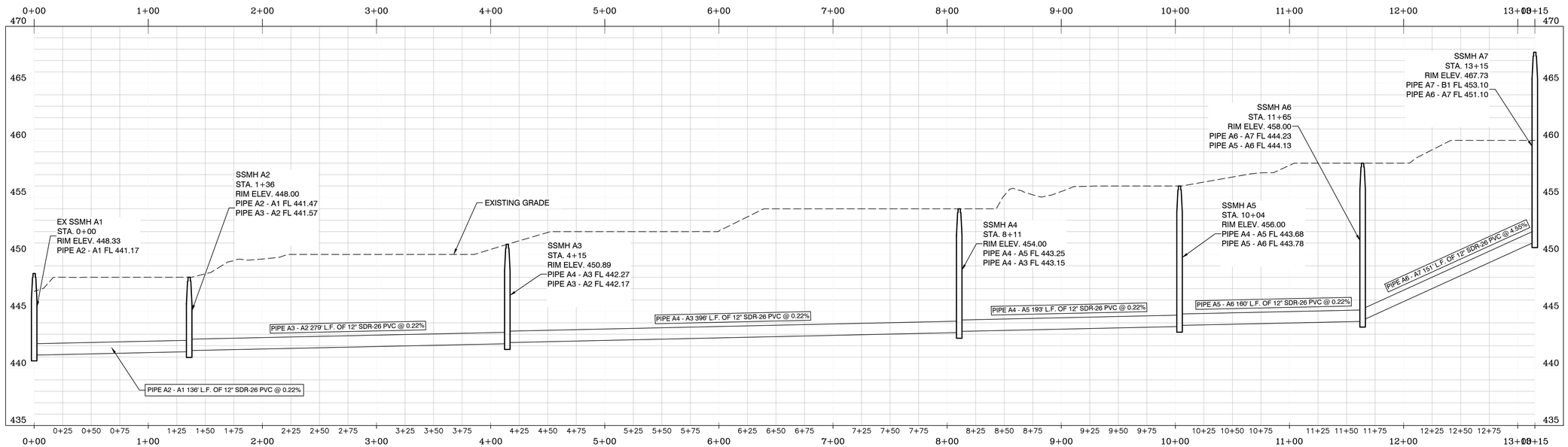
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NOTES:

1. ADJUST RIM ELEVATION TO FINISHED GRADE AS REQUIRED.
2. SANITARY SEWER CONSTRUCTION SHALL COMPLY WITH CITY OF BRYANT STANDARD SPECIFICATIONS & DETAILS.
3. MAINTAIN 10 FEET OF HORIZONTAL SEPARATION BETWEEN WATER & SEWER LINES.
4. ALL MANHOLES SHALL BE EPOXY COATED PER CITY OF BRYANT REQUIREMENTS.



SEWER MAIN A STA. 0+00 – 13+15



SCALE: H 1" = 50'
V 1" = 5'

BY	REVISION	DATE

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STATE OF ARKANSAS
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NO. 9551

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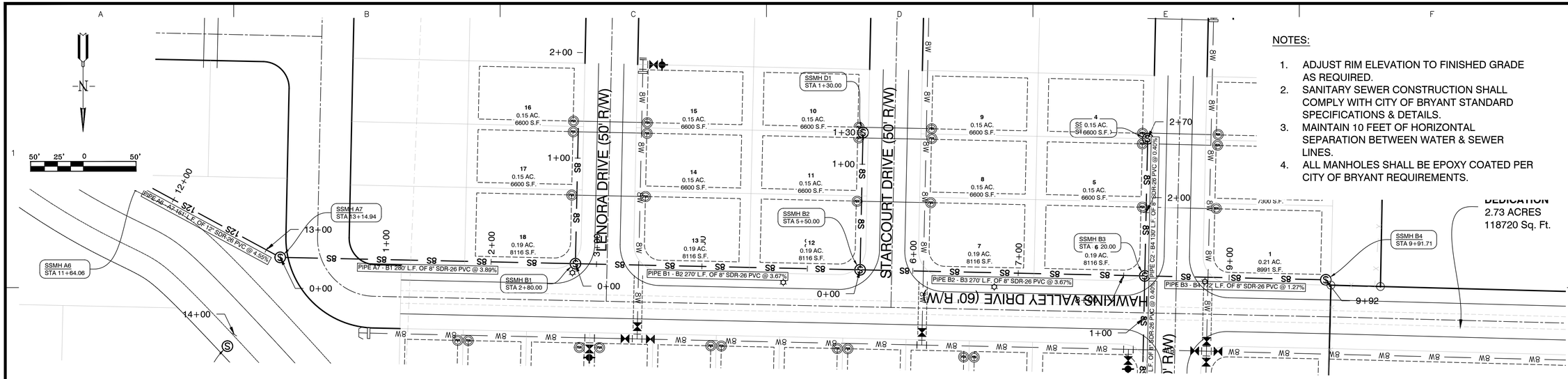
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PROJECT NO: 24076

DATE: DECEMBER 2024

SHEET NO: C2.1

A:\Projects\2024 Projects\24076 Hawkins Valley Springhill Road Strawberry Lane Lee Property\Drawings\Design\24076 Hawkins Valley Water and Sewer RFI - 1-15-2025 R1.dwg



NOTES:

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SEWER MAIN B STA. 0+00 - 9+92

SCALE: H 1" = 50'
V 1" = 5'

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garnatengineering@gmail.com

HAWKINS VALLEY
PHASE 1
CITY OF BRYANT,
SALINE COUNTY, ARKANSAS

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
NO. 9551
VERNON J. WILLIAMS

02-03-2025

CONTENTS:
SANITARY SEWER PLAN & PROFILE MAIN "B" STA. 0+00 - 9+92

PROJECT NO: 24076

DATE: DECEMBER 2024

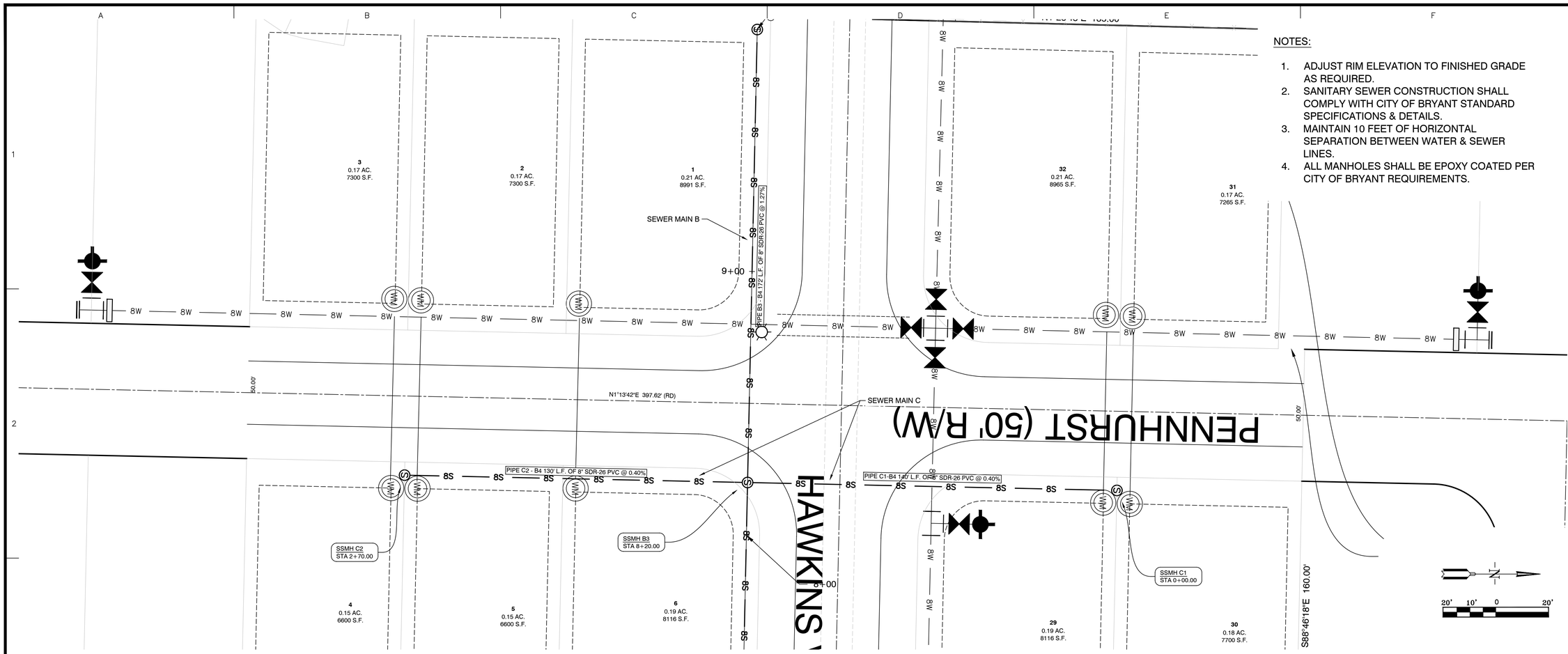
SHEET NO: C2.2

BY | REVISION | DATE

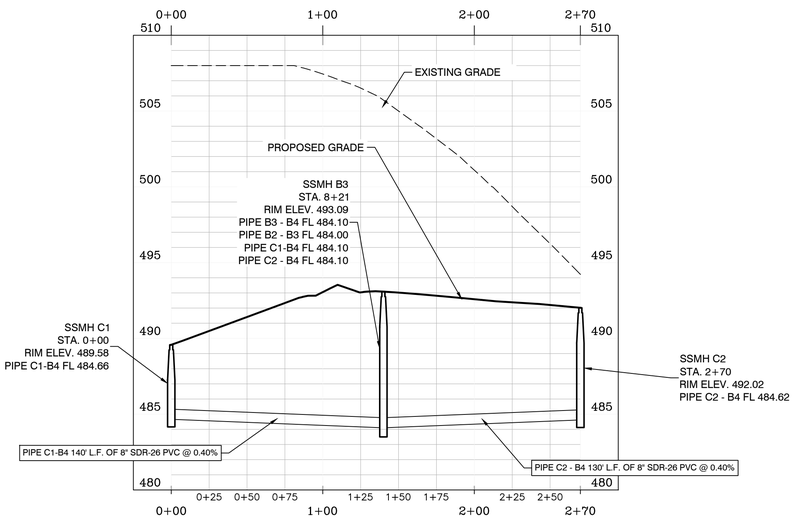
J:\Projects\2024 Projects\24076 Hawkins Valley Sprigg St Road Strawberry Lane Lee Perry\Drawings\Civil\Dwg\Layout\24076 Hawkins Valley Water and Sewer Rev1 - 1-15-2025 10.dwg

NOTES:

1. ADJUST RIM ELEVATION TO FINISHED GRADE AS REQUIRED.
2. SANITARY SEWER CONSTRUCTION SHALL COMPLY WITH CITY OF BRYANT STANDARD SPECIFICATIONS & DETAILS.
3. MAINTAIN 10 FEET OF HORIZONTAL SEPARATION BETWEEN WATER & SEWER LINES.
4. ALL MANHOLES SHALL BE EPOXY COATED PER CITY OF BRYANT REQUIREMENTS.



SEWER MAIN C STA. 0+00 – 2+70



SCALE: H 1" = 50'
V 1" = 5'

BY	REVISION	DATE

GNE Designing our client's success
GarNat Engineering, LLC
P.O. Box 116 Benton, AR 72018
3825 Mt Carmel Rd Bryant, AR 72022
garnatengineering@gmail.com
Ph (501) 408-4650

HAWKINS VALLEY PHASE 1
CITY OF BRYANT,
SALINE COUNTY, ARKANSAS

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
NO. 9551
VERNON J. WILLIAMS

02-03-2025

CONTENTS:

SANITARY SEWER PLAN & PROFILE MAIN "C" STA. 0+00 - 2+70

PROJECT NO: 24076

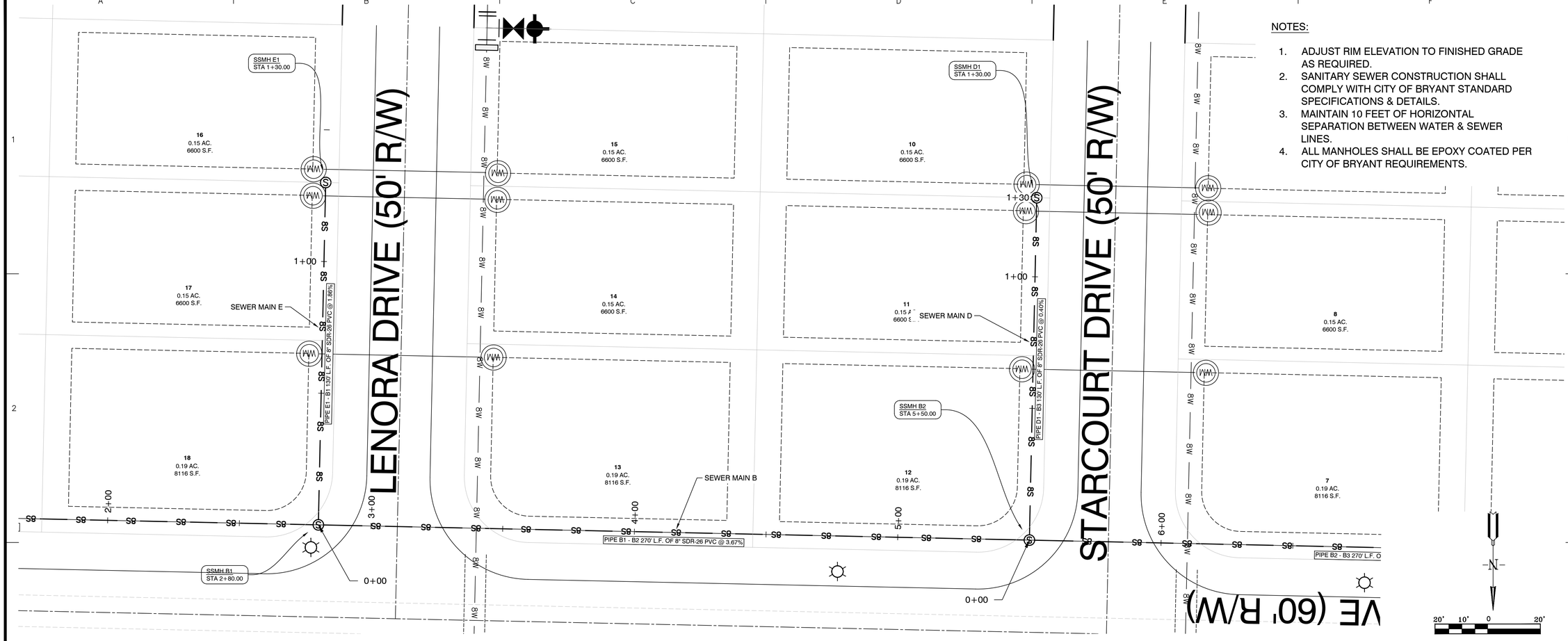
DATE: DECEMBER 2024

SHEET NO: C2.3

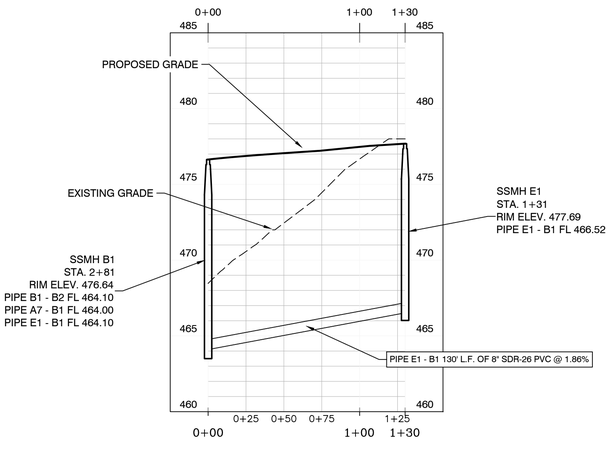
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NOTES:

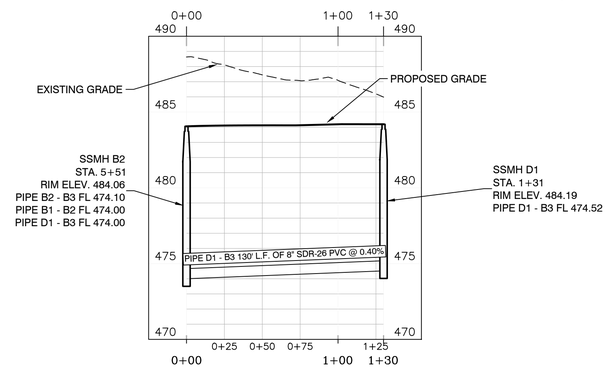
1. ADJUST RIM ELEVATION TO FINISHED GRADE AS REQUIRED.
2. SANITARY SEWER CONSTRUCTION SHALL COMPLY WITH CITY OF BRYANT STANDARD SPECIFICATIONS & DETAILS.
3. MAINTAIN 10 FEET OF HORIZONTAL SEPARATION BETWEEN WATER & SEWER LINES.
4. ALL MANHOLES SHALL BE EPOXY COATED PER CITY OF BRYANT REQUIREMENTS.



SEWER MAIN E STA. 0+00 - 1+30



SEWER MAIN D STA. 0+00 – 1+30



SCALE: H 1" = 50'
V 1" = 5'

BY	REVISION	DATE

GNE Designing our client's success
GarNat Engineering, LLC
P.O. Box 116
Benton, AR 72018
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Bryant, AR 72022
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garnatengineering@gmail.com

HAWKINS VALLEY
PHASE 1
CITY OF BRYANT,
SALINE COUNTY, ARKANSAS

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
NO. 9551
VERNON J. WILLIAMS

02-03-2025

CONTENTS:
SANITARY SEWER PLAN & PROFILE MAIN "D" & MAIN "E" STA. 0+00 - 1+30

PROJECT NO:
24076

DATE:
DECEMBER 2024

SHEET NO:
C2.4

J:\Projects\2024 Projects\24076 Hawkins Valley Springhill Road Strawberry Lane Bar Property\Drawings\Design\24076 Hawkins Valley Water and Sewer RFI — 1-15-2025 RI.dwg

DUFFER DRIVE (50' R/W)

HAWKINS VALLEY DRIVE (60' R/W)

ENNIS COURT (50' R/W)

STARCOURT DRIVE (50' R/W)

LENORA DRIVE (50' R/W)

TOP OF POND = 468.0'

BOTTOM OF POND = 463.0'

100.0'

70.0'

150.0'

OUTLET STRUCTURE
FL=462.95'

CI-5 4' DIA BOX W_OPENING ON EAST

PIPE - (200) (1) 240' L.F. OF 18" HDPE @ 3.1%

PIPE-1 237' L.F. OF 18" HDPE @ 3.0%

CI-2 4' DIA BOX

CI-4 4' DIA BOX

CI-1 4' DIA BOX

PIPE - (199) 53' L.F. OF 18" RCP @ 1.4%

CI-3 4' DIA BOX W_4' WING

PIPE - (201) 51' L.F. OF 18" RCP @ 2.1%

471.17

RIGHT OF WAY
DEDICATION
2.73 ACRES
118720 Sq. Ft.

TRACT A
0.21 ACRES
9126 Sq. Ft.

V DITCH
2' HEIGHT
1550 LF LENGTH
3H:1V SLOPE

1	0.21 AC. 8991 S.F.	6	0.19 AC. 8116 S.F.
2	0.17 AC. 7300 S.F.	5	0.15 AC. 6600 S.F.
3	0.17 AC. 7300 S.F.	4	0.15 AC. 6600 S.F.
31	0.17 AC. 7265 S.F.	30	0.18 AC. 7700 S.F.
32	0.21 AC. 8965 S.F.	29	0.19 AC. 8116 S.F.
28	0.15 AC. 6600 S.F.	27	0.15 AC. 6600 S.F.
26	0.15 AC. 6600 S.F.	25	0.15 AC. 6600 S.F.
24	0.15 AC. 6600 S.F.	23	0.15 AC. 6600 S.F.
22	0.15 AC. 6600 S.F.	21	0.15 AC. 6600 S.F.
20	0.15 AC. 6600 S.F.	19	0.15 AC. 6600 S.F.
8	0.15 AC. 6600 S.F.	9	0.15 AC. 6600 S.F.
11	0.15 AC. 6600 S.F.	14	0.15 AC. 6600 S.F.
10	0.15 AC. 6600 S.F.	15	0.15 AC. 6600 S.F.
12	0.19 AC. 8116 S.F.	13	0.19 AC.
18	0.19 AC. 8116 S.F.	17	0.15 AC. 6600 S.F.
16	0.15 AC. 6600 S.F.		

N

50' 25' 0 50'

BY | REVISION | DATE

GNE Designing our client's success

GarNat Engineering, LLC
P.O. Box 116
Benton, AR 72018
3825 Mt Carmel Rd
Bryant, AR 72022
Ph (501) 408-4650
garnatengineering@gmail.com

FOR: THOMAS DB COLLINS, LTD, LLC
HAWKINS VALLEY
PHASE 1
SALINE COUNTY, ARKANSAS

STATE OF ARKANSAS
Vernon J. Williams
REGISTERED PROFESSIONAL ENGINEER
NO. 9551
VERNON J. WILLIAMS

1-06-2025

CONTENTS:
STREET & DRAINAGE PLAN

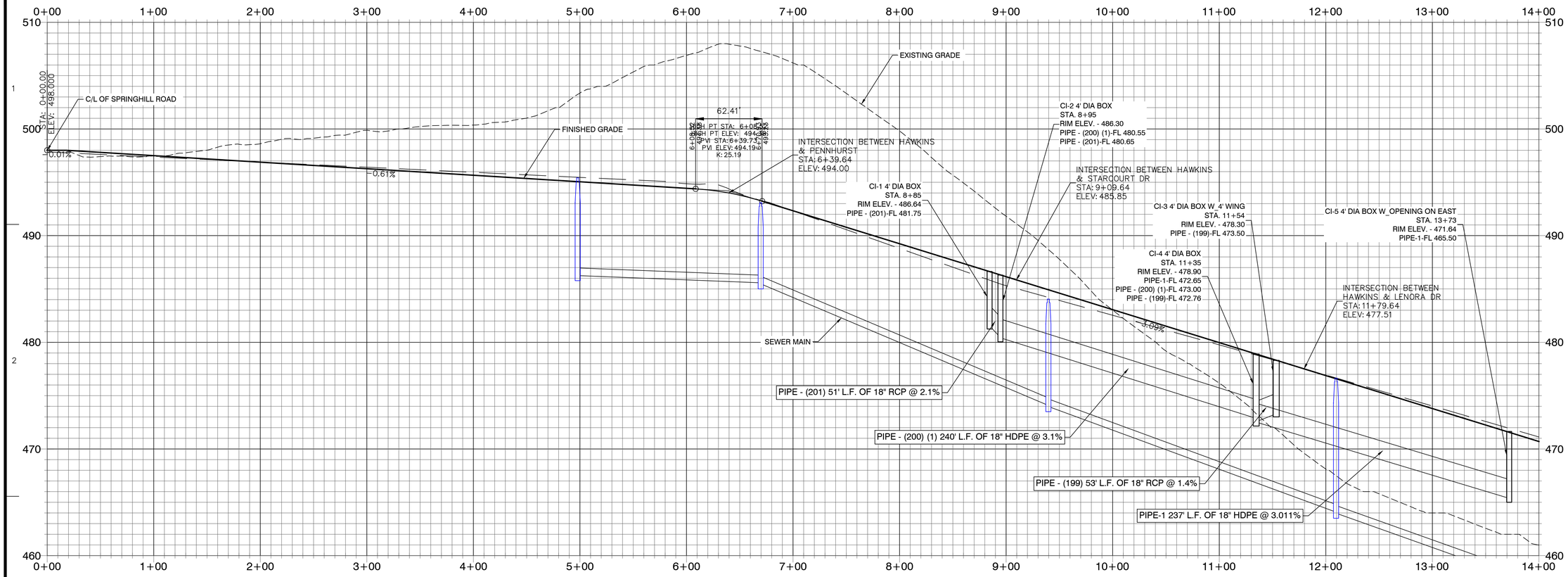
PROJECT NO: 24076

DATE: JAN 2025

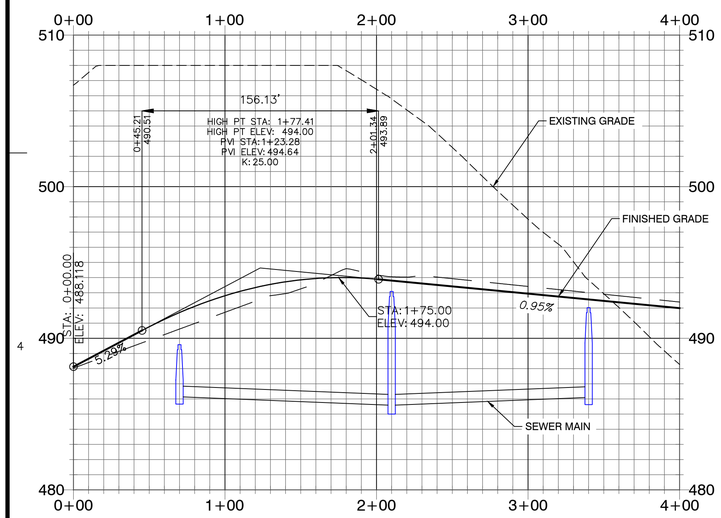
SHEET NO: C3.0

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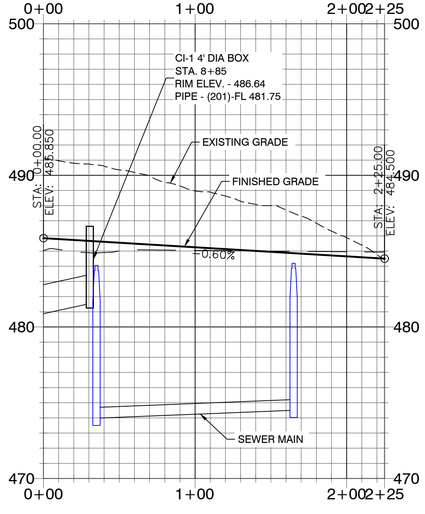
HAWKINS VALLEY DRIVE PROFILE



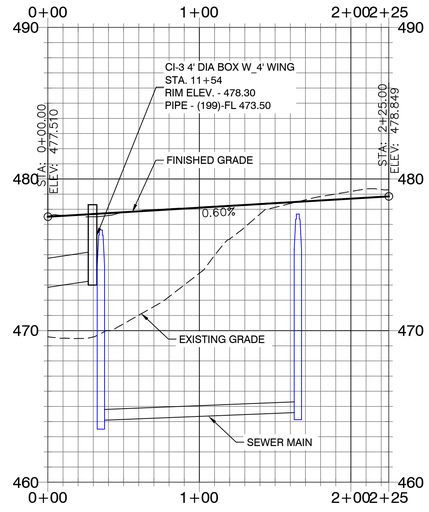
PENNHURST ROAD PROFILE



STARCOURT DRIVE PROFILE



LENORA DRIVE PROFILE



SCALE: H 1" = 50'
V 1" = 5'

BY	REVISION	DATE

GNE Designing our client's success
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Benton, AR 72018
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Bryant, AR 72022
Ph (501) 408-4650
garnatengineering@gmail.com

FOR: THOMAS DB COLLINS, LTD, LLC
HAWKINS VALLEY
PHASE 1
SALINE COUNTY, ARKANSAS

STATE OF ARKANSAS
Vernon J. Williams
REGISTERED PROFESSIONAL ENGINEER
NO. 9551
VERNON J. WILLIAMS

1-06-2025

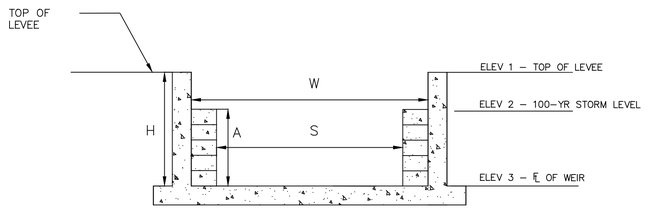
CONTENTS:
ROAD PROFILES

PROJECT NO:
24076

DATE:
JAN 2025

SHEET NO:
C3.1

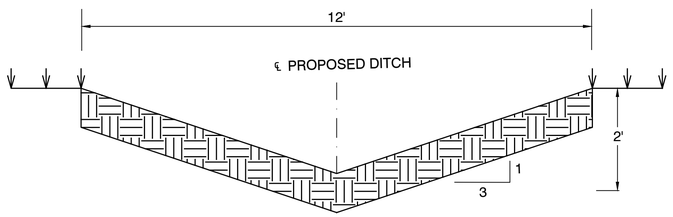
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DETENTION OUTLET SECTION

NOT TO SCALE

CONTROL STRUCTURE								
OUTLET STRUCTURE	L	W	H	ELEV 1	ELEV 2	ELEV 3	S	A
1	5'–0"	7'–8"	5'–1"	468.00	467.00	462.95	5'–9"	4'–0"



TYPICAL DITCH CROSS SECTION

(N.T.S)

DETENTION OUTLET NOTES:

1. ALL CONCRETE WALLS SHALL BE A MINIMUM OF 6" THICK & REINFORCED WITH #4'S @ 12" O.C. BOTH WAYS.
2. BOTTOM SLAB SHALL BE 12" THICK & REINFORCED WITH #4'S @ 12" O.C. BOTH WAYS.

BY	REVISION	DATE

GNE Designing our client's success
GarNat Engineering, LLC
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3825 Mt Carmel Rd Bryant, AR 72022
Ph (501) 408-4650
garnatengineering@gmail.com

FOR: THOMAS DB COLLINS, LTD, LLC
HAWKINS VALLEY
PHASE 1
SALINE COUNTY, ARKANSAS

STATE OF ARKANSAS
Vernon ★★★ Williams
REGISTERED PROFESSIONAL ENGINEER
★★★
NO. 9551
VERNON J. WILLIAMS

1-06-2025

CONTENTS:

OUTLET STRUCTURE DETAILS

PROJECT NO: 24076

DATE: JAN 2025

SHEET NO: C3.2

\\192.168.1.100\Projects\2024 Projects\24076 Hawkins Valley Springhill Road Strawberry Lane Lot Property\Drawings\Civil\Design\24076-Springhill Road-Strawberry Lane-Hawkins Valley.dwg

HAWKINS VALLEY
PHASE 1
FOR THOMAS D.B. COLLINS, LTD.
CITY OF BRYANT,
SALINE COUNTY, ARKANSAS

GNE response to comments drawn in red

Prepared by:

GarNat Engineering, LLC

P.O. Box 116
Benton, AR 72018
Ph (501) 408-4650

3825 Mt Carmel Road
Bryant, AR 72022
www.garnatengineering.com

Designing our client's success



ARKANSAS





DRAWING INDEX:

V1.0	PRELIMINARY PLAT
C2.0	OVERALL WATER AND SEWER PLAN
C2.1	SEWER PLAN & PROFILE MAIN A
C2.2	SEWER PLAN & PROFILE MAIN B
C2.3	SEWER PLAN & PROFILE MAIN C
C2.4	SEWER PLAN & PROFILE MAIN D & E
C3.0	STREET & DRAINAGE PLAN
C3.1	ROAD PROFILES
C3.2	OUTLET STRUCTURE DETAILS

POINT OF COMMENCEMENT
FND 1/2" REBAR
NORTHWEST CORNER OF THE SW1/4 NW1/4 OF SEC. 4, T-1-S, R-14-W

S88°50'47"E 473.48' (M)
EAST 472' (D)

001-03425-000
WILMA J BARNES IRR TRUST

S1°25'48"W 473.12' (M)
SOUTH 466.6' (D)

S1°25'48"W 278.12'

FND 5/8" REBAR
NORTHEAST CORNER OF THE SW1/4 NW1/4 OF SEC. 4, T-1-S, R-14-W

S88°50'47"E 881.25' (M)
EAST 853' (D)

BYERS COURT (50' R/W)

GRACE VILLAGE PHASE 1

DUFFER DRIVE (50' R/W)

FND 5/8" REBAR
POINT OF BEGINNING

S88°46'18"E 120.98'

N1°13'42"E 10.00'

S88°46'18"E 160.00'

S1°13'42"W 35.00'

FND 1.5" GALV PIPE

001-03424-001
THOMAS DB COLLINS LTD LLC

S88°46'18"E 600.00'

N1°05'35"E 126.63'

N1°25'48"E 135.00'

PENNHURST (50' R/W)

We provided steel casing on our water line plans.

S88°28'52"E 47.00' (M)
EAST 47' (D)

N1°05'35"E 60.00'

S88°28'52"E 471.06'

S88°28'52"E 493.08' (RD)

"NO PARKING" SIGN

S88°46'18"E 881.56' (RD)

STREET LIGHT (TYP.)

HAWKINS VALLEY DRIVE (60' R/W)

STOP SIGN W/ STREET NAMES

N88°46'18"W 60.00'

S1°13'42"W 170.00'

N88°28'52"W 423.71'

SPRINGHILL ROAD
(50' R/W) - (ASPHALT)

001-03427-000
LEROY KYZER

RIGHT OF WAY DEDICATION
2.73 ACRES
118720 Sq. Ft.

POND

TRACT A
0.21 ACRES
9126 Sq. Ft.

N1°05'35"E 195.24' (M)

N1°05'35"E 1320.01' (M)
NORTH 1320' (R)

STARCOURT DRIVE (50' R/W)

LENORA DRIVE (50' R/W)

S1°13'42"W 195.00'

S1°54'56"W 278.04' (M)

N88°46'18"W 868.20'

HYDRANT (TYP.)

LEVEE

N88°48'05"W 920.79' (M)

N1°05'35"E 849.90' (M)
NORTH 853.4' (D)
654.66'

N2°25'56"E 1328.78' (M)
NORTH 1320' (D)

PRELIMINARY PLAT
HAWKINS VALLEY
PHASE 1
CITY OF BRYANT
SALINE COUNTY, ARKANSAS

PLAT CERTIFICATES:

OWNER:
Name: Phillip Pengelly
Thomas DB Collins LTD, LLC
Address: 9360 Gilbert Road
Benton, Arkansas 72019

DEVELOPER:
Name: Lee Pengelly
Thomas DB Collins LTD, LLC
Address: 9360 Gilbert Road
Benton, Arkansas 72019

CERTIFICATE OF OWNER:

We, the undersigned, owners of the real estate shown and described herein do hereby certify that we have laid off, platted and subdivided, and do hereby lay off, plat and subdivide said real estate in accordance with the within plat.

Date: _____ Signed: _____
Name: Phillip Pengelly
Address: 9360 Gilbert Road, Benton, Arkansas 72019

Source of Title Saline County: Deed Book 2024 , Page 013856

CERTIFICATE OF PRELIMINARY ENGINEERING ACCURACY:

I, Vernon J. Williams, hereby certify that this plat correctly represents a survey and a plan made by me or under my supervision; that all monuments shown hereon actually exist and their locations, size, type, and material are correctly shown; and that all requirements of the City of Bryant Subdivision Rules and Regulations have been fully complied with.

Date: _____ Signed: _____
Vernon J. Williams
Registered Professional Engineer
No. 9551, Arkansas

CERTIFICATE OF PRELIMINARY SURVEYING ACCURACY:

I, George P. Wooden, hereby certify that this proposed preliminary plat correctly represents a boundary survey made by me or under my supervision; that the boundary lines shown hereon correspond with the description in the deeds cited in the above Source of Title; and that all monuments which were found or placed on the property are correctly described and located.

Date: _____ Signed: _____
George P. Wooden
Registered Land Surveyor
No. 1573, Arkansas

CERTIFICATE OF PRELIMINARY PLAT APPROVAL:

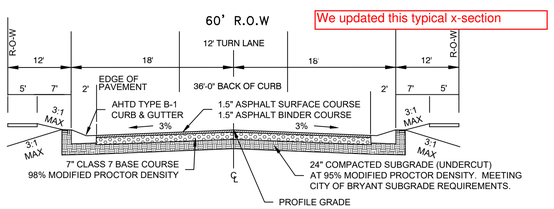
All requirements of the City of Bryant Subdivision Rules and Regulations relative to the preparation and submittal of a Preliminary Plat having been fulfilled, approval of this plat is hereby granted, subject to further provisions of said Rules and Regulations.

Date: _____ Signed: _____
Lance Penfield, Chairman
Bryant Planning Commission

SUBDIVISION STREET CROSS SECTION

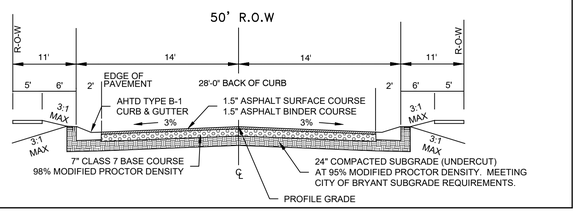
60' R.O.W

We updated this typical x-section



SUBDIVISION STREET CROSS SECTION

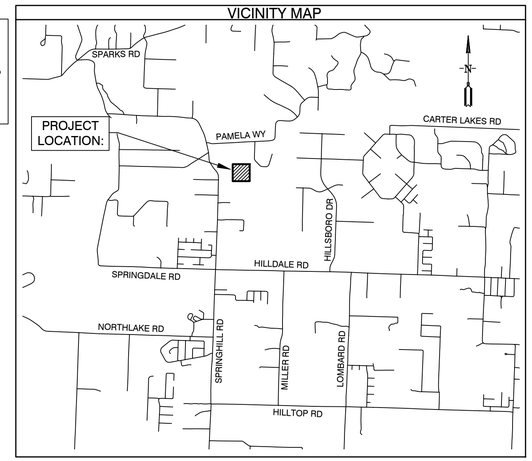
50' R.O.W



SURVEY LEGEND

- Computed point
- Found monument
- Set #4 RB/Plas. Cap
(M)-Measured
(R)-Record
(P)-Platted

VICINITY MAP



Curve Table

Curve #	Length	Radius	Delta	Chord Direction	Chord Length
C1	39.27'	25.00'	90°00'00"	N43° 46' 18"W	35.36'
C2	39.27'	25.00'	90°00'00"	N46° 13' 42"E	35.36'
C3	39.27'	25.00'	90°00'00"	N43° 46' 18"W	35.36'
C4	39.27'	25.00'	90°00'00"	S46° 13' 42"W	35.36'
C5	39.27'	25.00'	90°00'00"	N46° 13' 42"E	35.36'
C6	39.27'	25.00'	90°00'00"	S43° 46' 18"E	35.36'
C8	39.27'	25.00'	90°00'00"	S46° 13' 42"W	35.36'

GENERAL NOTES:

1. ALL STREETS & DRAINAGE TO MEET CITY OF BRYANT STANDARD SPECIFICATIONS & DETAILS.
2. ALL TRAFFIC CONTROL DEVICES SHALL MEET THE REQUIREMENTS OF CITY OF BRYANT STANDARD SPECIFICATIONS PER PART 4.9
3. NO FENCES CAN BE CONSTRUCTED IN DRAINAGE EASEMENTS WHERE OPEN DITCHES EXIST.
4. ROADS WILL BE MAINTAINED, INSPECTED, & ACCEPTED BY SALINE COUNTY.
5. NO FENCES SHALL BE BUILT WITHIN THIS DRAINAGE EASEMENT.
6. NO POOLS OR PERMANENT STRUCTURES SHALL BE BUILT IN EASEMENTS.
7. NO FENCES SHALL BE BUILT IN ROAD RIGHT-OF-WAY OR ACCESS EASEMENTS.

We have drawn these to comply with City of Bryant requirements. We would request a variance if required.

STATE OF ARKANSAS
VERNON J. WILLIAMS
NO. 9551
REGISTERED PROFESSIONAL ENGINEER

PROPERTY SPECIFICATIONS:

ZONING CLASSIFICATION: R-1.S

MIN. LOT SIZE: 6,600 S.F.
NUMBER OF LOTS: 32
SOURCE OF WATER: SALEM WATER
SOURCE OF SEWER: CITY OF BRYANT

BUILDING SETBACKS:
FRONT - 20' OR AS SHOWN
REAR - 20' OR AS SHOWN
SIDE - 8' OR AS SHOWN

EASEMENTS: UTILITY & DRAINAGE (D.E. & U.E.)
FRONT - 10' OR AS SHOWN
REAR - 10' OR AS SHOWN
SIDE - 5' OR AS SHOWN
STREET RIGHT OF WAYS: 50' OR AS SHOWN
STREET WIDTH: 28' BOC TO BOC
LOT CORNERS: SET #4 REBAR WITH CAP

PROPERTY DESCRIPTION:

PHASE 1 SUBDIVISION DESCRIPTION

PART OF THE SOUTHWEST QUARTER OF THE NORTHWEST QUARTER (SW1/4 NW1/4) OF SECTION 4, TOWNSHIP 1 SOUTH, RANGE 14 WEST, MORE PARTICULARLY DESCRIBED AS FOLLOWS: **COMMENCING** AT A FOUND 1/2" REBAR FOR THE NORTHWEST CORNER OF THE SAID SW1/4 NW1/4; THENCE S88°50'47"E, ALONG THE NORTH LINE THEREOF, FOR A DISTANCE OF 473.48 FEET TO A SET 1/2" REBAR WITH CAP #1573; THENCE S1°25'48"W, LEAVING SAID NORTH LINE, FOR A DISTANCE OF 278.12 FEET TO A SET 1/2" REBAR WITH CAP #1573 FOR THE **POINT OF BEGINNING**; THENCE S88°46'18"E FOR A DISTANCE OF 120.98 FEET TO A SET 1/2" REBAR WITH CAP #1573 LOCATED ON THE WEST RIGHT OF WAY OF PENNHURST; THENCE N1°13'42"E, ALONG SAID WEST RIGHT OF WAY, FOR A DISTANCE OF 10.00 FEET TO A POINT; THENCE S88°46'18"E, LEAVING SAID WEST RIGHT OF WAY, FOR A DISTANCE OF 160.00 FEET TO A SET 1/2" REBAR WITH CAP #1573; THENCE S1°13'42"W FOR A DISTANCE OF 35.00 FEET TO A SET 1/2" REBAR WITH CAP #1573; THENCE S88°46'18"E FOR A DISTANCE OF 600.00 FEET TO A SET 1/2" REBAR WITH CAP #1573; THENCE S1°13'42"W FOR A DISTANCE OF 170.00 FEET TO A SET 1/2" REBAR WITH CAP #1573 LOCATED ON THE SOUTH RIGHT OF WAY OF HAWKINS VALLEY DRIVE; THENCE N88°46'18"W, ALONG SAID SOUTH RIGHT OF WAY, FOR A DISTANCE OF 60.00 FEET TO A SET 1/2" REBAR WITH CAP #1573; THENCE S1°13'42"W, LEAVING SAID SOUTH RIGHT OF WAY, FOR A DISTANCE OF 195.00 FEET TO A SET 1/2" REBAR WITH CAP #1573; THENCE N88°46'18"W FOR A DISTANCE OF 868.20 FEET TO A SET 1/2" REBAR WITH CAP #1573; THENCE N1°05'35"E FOR A DISTANCE OF 195.24 FEET TO A SET 1/2" REBAR WITH CAP #1573 LOCATED ON THE SOUTH RIGHT OF WAY OF HAWKINS VALLEY DRIVE; THENCE N88°28'52"W, ALONG SAID SOUTH RIGHT OF WAY, FOR A DISTANCE OF 423.71 FEET TO A SET 1/2" REBAR WITH CAP #1573 LOCATED ON THE EAST RIGHT OF WAY OF SPRINGHILL ROAD; THENCE N1°05'35"E, ALONG SAID EAST RIGHT OF WAY, FOR A DISTANCE OF 60.00 FEET TO A SET 1/2" REBAR WITH CAP #1573 LOCATED ON THE NORTH RIGHT OF WAY OF HAWKINS VALLEY DRIVE; THENCE S88°28'52"E, LEAVING SAID SPRINGHILL ROAD EAST RIGHT OF WAY AND ALONG NORTH RIGHT OF WAY OF HAWKINS VALLEY DRIVE, FOR A DISTANCE OF 471.06 FEET TO A SET 1/2" REBAR WITH CAP #1573; THENCE N1°25'48"E, LEAVING SAID NORTH RIGHT OF WAY, FOR A DISTANCE OF 135.00 FEET TO THE **POINT OF BEGINNING**, CONTAINING 8.17 ACRES, MORE OR LESS. SUBJECT TO THE RIGHT OF WAY OF SPRINGHILL ROAD AND ANY EXISTING EASEMENTS.

GarNat Engineering, LLC
No. 2174
CERTIFICATE OF AUTHORIZATION
ARKANSAS

75' 37.5' 0 75'

SURVEY PLAT CODE:
500-01S-14W-0-04-430-62-1573

BASIS OF BEARINGS:
NAD 83 ARKANSAS GRID SOUTH ZONE (GPS)

CERTIFICATIONS:

By affixing my seal and signature, I George P. Wooden, PLS No. 1573, hereby certify that this drawing correctly depicts a survey compiled under my supervision dated June 22, 2024.

According the the Federal Emergency Management Agency (FEMA) Flood Insurance Rate Map (FIRM) for Saline County unincorporated areas, panel # 05125C0225E dated 6/5/2020 , no portion of the property described hereon does lie within the 100 year flood hazard boundary.

BY	REVISION	DATE

GNE Designing our client's success

GarNat Engineering, LLC
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Bryant, AR 72022
garnatengineering@gmail.com

HAWKINS VALLEY
PHASE 1
CITY OF BRYANT,
SALINE COUNTY, ARKANSAS

STATE OF ARKANSAS
REGISTERED PROFESSIONAL SURVEYOR
No. 1573
GEORGE P. WOODEN
SIGNATURE
PRELIMINARY

CONTENTS:
PRELIMINARY PLAT

PROJECT NO:
24076

DATE:
DEC. 17, 2024

SHEET NO:
V1.0

J:\Projects\2024 Projects\24076 Hawkins Valley Springhill Road Strawberry Lane Lee Pengelly\Drawings\Civil\Design\24076 Hawkins Valley Phase 1 Preliminary Plat R11~ 122324.dwg

NOTES:

1. BURIED UTILITIES ARE LOCATED AT THE SITE. CONTACT ARKANSAS ONE CALL & WHERE APPROPRIATE THE UTILITY COMPANIES PRIOR TO DIGGING.

2. ALL UNRESTRAINED WATER LINE FITTINGS SHALL BE INSTALLED WITH A CONCRETE THRUST BLOCK FOR JOINT RESTRAINT.

3. WORK ON EXISTING ROADS SHALL INCLUDE WARNING SIGNS & BARRICADES IN ACCORDANCE WITH THE REQUIREMENTS OF THE STATE, COUNTY, OR CITY HAVING JURISDICTION. OTHER SIGNS & DEVICES, SUCH AS PLATING, SHALL BE PLACED AS REQUIRED TO ADEQUATELY PROTECT THE PUBLIC.

4. ALL SEWER LINE CONSTRUCTION SHALL COMPLY WITH CITY OF BRYANT STANDARD SPECIFICATIONS & DETAILS.

5. ALL WATER LINE CONSTRUCTION SHALL COMPLY WITH SALEM WATER USERS STANDARD SPECIFICATIONS & DETAILS.

6. MAINTAIN 10 FEET OF HORIZONTAL SEPARATION BETWEEN WATER & SEWER LINES.

7. ALL UTILITIES THAT WILL BE LOCATED UNDER PAVEMENT SHALL BE BACKFILLED IN ACCORDANCE WITH THE BRYANT STREET SPECIFICATIONS AND BRYANT WATER & SEWER STANDARD SPECIFICATIONS.

8. TELEPHONE, ELECTRICAL, AND OTHER BURIED UTILITIES ARE TO BE A MINIMUM OF 3-FEET HORIZONTALLY FROM INSTALLED WATER AND SEWER LINES.

HOPPER COURT (50' R/W)

001-03425-000
WILMA J BARNES
IRR TRUST

BYERS COURT (50' R/W)

DUFFER DRIVE (50' R/W)

19+00
18+00
17+00
16+00
15+00

FIRE HYDRANT ASSEMBLY WITH 8" MJ PLUG ON NORTH RUN OF TEE AND 1 MJ X HDPE ADAPTER ON SOUTH RUN OF TEE

8" TEE W/ 2 MJ X HDPE ADAPTERS. W/ 8" MJ GATE VALVE IN BRACH WITH 2 MJ X HDPE ADAPTERS.

8" MJ TEE W/ 8" MJ GATE VALVE ON BRACH WITH 2 MJ X HDPE ADAPTERS AND 2 - 8" MJ GATE VALVES W/ 2 MJ X HDPE ADAPTERS EACH ON EAST AND WEST RUNS OF TEE.

FIRE HYDRANT ASSEMBLY WITH 8" MJ PLUG ON EAST RUN OF TEE AND 1 MJ X HDPE ADAPTER ON WEST RUN OF TEE

3-WAY FIRE HYDRANT ASSEMBLY (TYP.)

001-03424-001
THOMAS DB COLLINS LTD LLC

8" TAPPING SLEEVE & VALVE W/ 1 MJ X HDPE ADAPTER

25 L.F. OF STEEL CASING

90° MJ BEND W/ 2 MJ X HDPE ADAPTERS (TYP.)

8" MJ CROSS TEE W/ 4 - 8" MJ GATE VALVES WITH 2 MJ X HDPE ADAPTERS EACH

PROPOSED 8" HDPE DIPS DR-11 WATER LINE

10.0' UTILITY EASEMENT

PENNHURST (50' R/W)

SSMH C1
STA 0+00.00

0+00
1+00

60 L.F. OF STEEL CASING OR D.I. PIPE

11+43

HAWKINS VALLEY DRIVE (60' R

8+00

0+00

PROPOSED MAIN "B" SANITARY SEWER

SSMH B2
STA 4+31.49

SSMH B5
STA 11+43.20

SSMH B4
STA 9+71.49

SSMH B3
STA 7+01.49

STARCOURT DRIVE (50' R/W)

LENORA DRIVE (50' R/W)

SHORT SIDE SINGLE METER (TYP.)

LONG SIDE SINGLE METER (TYP.)

PROPOSED MAIN "C" SANITARY SEWER

PROPOSED MAIN "D" SANITARY SEWER

PROPOSED MAIN "E" SANITARY SEWER

SHORT SIDE DOUBLE METER (TYP.)

LONG SIDE DOUBLE METER (TYP.)

SSMH C2
STA 2+70.00

SSMH D1
STA 1+30.00

SSMH E1
STA 1+30.00

SPRINGHILL ROAD
(50' R/W) - (ASPHALT)

001-03427-000
LEROY KYZER

RIGHT OF WAY DEDICATION
2.73 ACRES
118720 Sq. Ft.

POND

TRACT A
0.21 ACRES
9126 Sq. Ft.

LEVEE

FIRE HYDRANT ASSEMBLY WITH 8" MJ PLUG ON SOUTH RUN OF TEE AND 1 MJ X HDPE ADAPTER ON NORTH RUN OF TEE

1	0.21 AC. 8991 S.F.	2	0.17 AC. 7300 S.F.
3	0.17 AC. 7300 S.F.	4	0.15 AC. 6600 S.F.
7	0.19 AC. 8116 S.F.	8	0.15 AC. 6600 S.F.
9	0.15 AC. 6600 S.F.	10	0.15 AC. 6600 S.F.
11	0.15 AC. 6600 S.F.	12	0.15 AC. 6600 S.F.
13	0.19 AC. 8116 S.F.	14	0.15 AC. 6600 S.F.
15	0.15 AC. 6600 S.F.	16	0.15 AC. 6600 S.F.
17	0.15 AC. 6600 S.F.	18	0.19 AC. 8116 S.F.
19	0.15 AC. 6600 S.F.	20	0.15 AC. 6600 S.F.
21	0.15 AC. 6600 S.F.	22	0.15 AC. 6600 S.F.
23	0.15 AC. 6600 S.F.	24	0.15 AC. 6600 S.F.
25	0.15 AC. 6600 S.F.	26	0.15 AC. 6600 S.F.
27	0.15 AC. 6600 S.F.	28	0.15 AC. 6600 S.F.
29	0.19 AC. 8116 S.F.	30	0.17 AC. 7265 S.F.
31	0.17 AC. 7265 S.F.	32	0.21 AC. 8965 S.F.

50' 25' 0 50'

BY	REVISION	DATE

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FOR: THOMAS DB COLLINS, LTD, LLC
HAWKINS VALLEY
PHASE 1
SALINE COUNTY, ARKANSAS

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
NO. 9551
PRELIMINARY
VERNON J. WILLIAMS

CONTENTS:
OVERALL WATER & SANITARY SEWER PLAN

PROJECT NO:
24076

DATE:
DECEMBER 2024

SHEET NO:
C2.0

a:\Projects\2024 Projects\24076 Hawkins Valley Springhill Blvd Strawberry Ln Lee Perry\Civil\Drawings\Utility Design\24076 Hawkins Valley Water and Sewer Plan - 12-10-24.dwg

NOTES:

1. ADJUST RIM ELEVATION TO FINISHED GRADE AS REQUIRED.
2. SANITARY SEWER CONSTRUCTION SHALL COMPLY WITH CITY OF BRYANT STANDARD SPECIFICATIONS & DETAILS.
3. MAINTAIN 10 FEET OF HORIZONTAL SEPARATION BETWEEN WATER & SEWER LINES.
4. ALL MANHOLES SHALL BE EPOXY COATED PER CITY OF BRYANT REQUIREMENTS.

50.0' CREEK BUFFER

20.0' SHARED-USE TRAIL & SEWER EASEMENT

15' WIDE UTILITY EASEMENT

SSMH A1
STA 0+00.00

SSMH A2
STA 1+79.80

SSMH A3
STA 5+09.12

SSMH A4
STA 8+00.84

SSMH A5
STA 11+24.23

SSMH B1
STA 1+51.49

PIPE A1 - A2 180' L.F. OF 12" SDR-26 PVC @ 0.22%

PIPE A2 - A3 329' L.F. OF 12" SDR-26 PVC @ 0.22%

PIPE A3 - A4 292' L.F. OF 12" SDR-26 PVC @ 2.01%

PIPE A4 - A5 323' L.F. OF 12" SDR-26 PVC @ 1.00%

PIPE A6 - B1 101' L.F. OF 8" SDR-26 PVC @ 1.00%

FND 5/8" REBAR 1264

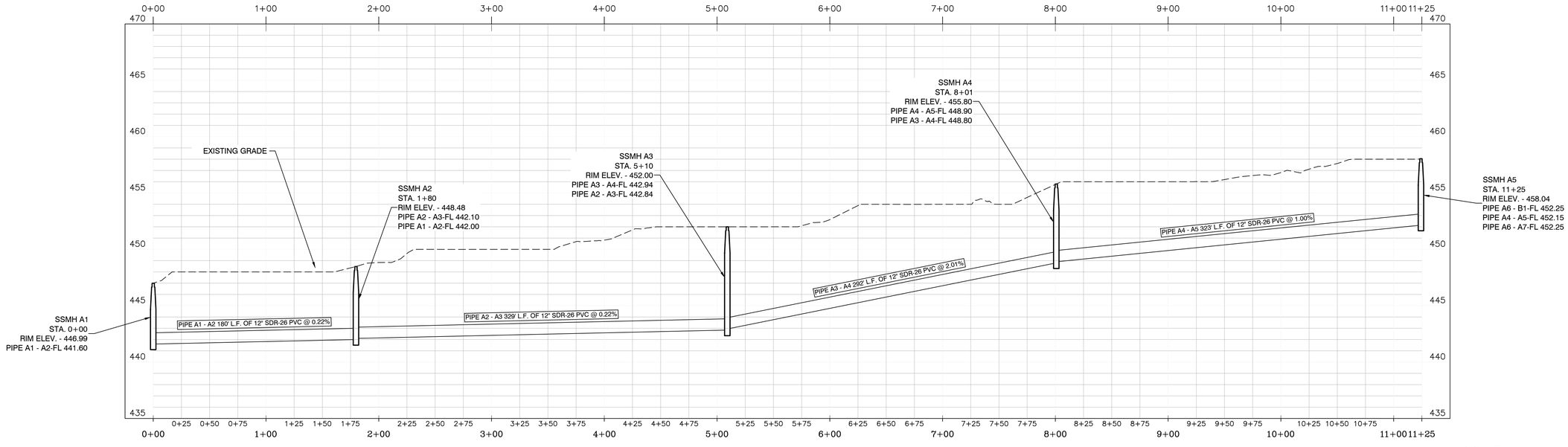
RIM ELEV.-452.42
SSMH
INV IN 8" PVC (NW) 445.40
INV OUT 8" PVC (E) 445.30

RIM ELEV-448.33
SSMH
INV IN 8" PVC (NW) 441.13
INV OUT 12" PVC (E) 441.03

1323.85' (M)

50' 25' 0 50'

SEWER MAIN A STA. 0+00 – 11+25



SCALE: H 1" = 50'
V 1" = 5'

BY	REVISION	DATE

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garnatengineering@gmail.com

FOR: THOMAS DB COLLINS, LTD, LLC
HAWKINS VALLEY
PHASE 1
SALINE COUNTY, ARKANSAS

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
VERNON J. WILLIAMS
NO. 9551

CONTENTS:

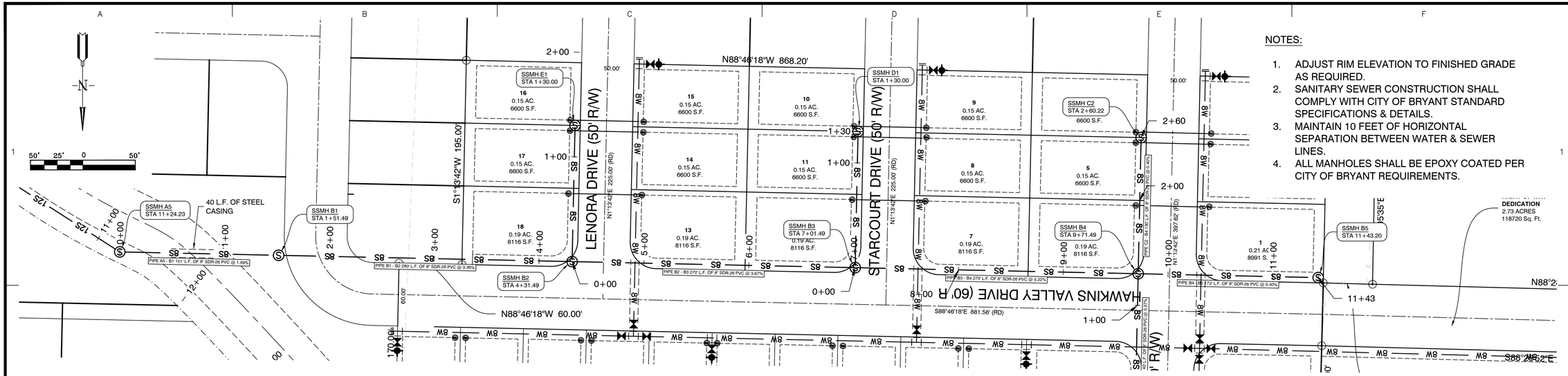
SANITARY SEWER PLAN & PROFILE MAIN "A" STA. 0+00 - 11+25

PROJECT NO: 24076

DATE: DECEMBER 2024

SHEET NO: C2.1

a:\Projects\2024 Projects\24076 Hawkins Valley Springhill Blvd Strawberry Lane Lee Ferguson\Civil\Drawings\24076 Hawkins Valley Blvd and Sewer.dwg, 12/13/2024 8:11:12 AM, Vernon



SEWER MAIN B STA. 0+00 -11+87

SCALE: H 1" = 50'
V 1" = 5'

FOR: THOMAS DB COLLINS, LTD, LLC
HAWKINS VALLEY
PHASE 1
SALINE COUNTY, ARKANSAS

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garnatengineering@gmail.com

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
NO. 9551
TRENTON J. WILLIAMS

CONTENTS:
SANITARY SEWER PLAN & PROFILE MAIN "B" STA. 0+00 - 11+87

PROJECT NO: 24076

DATE: DECEMBER 2024

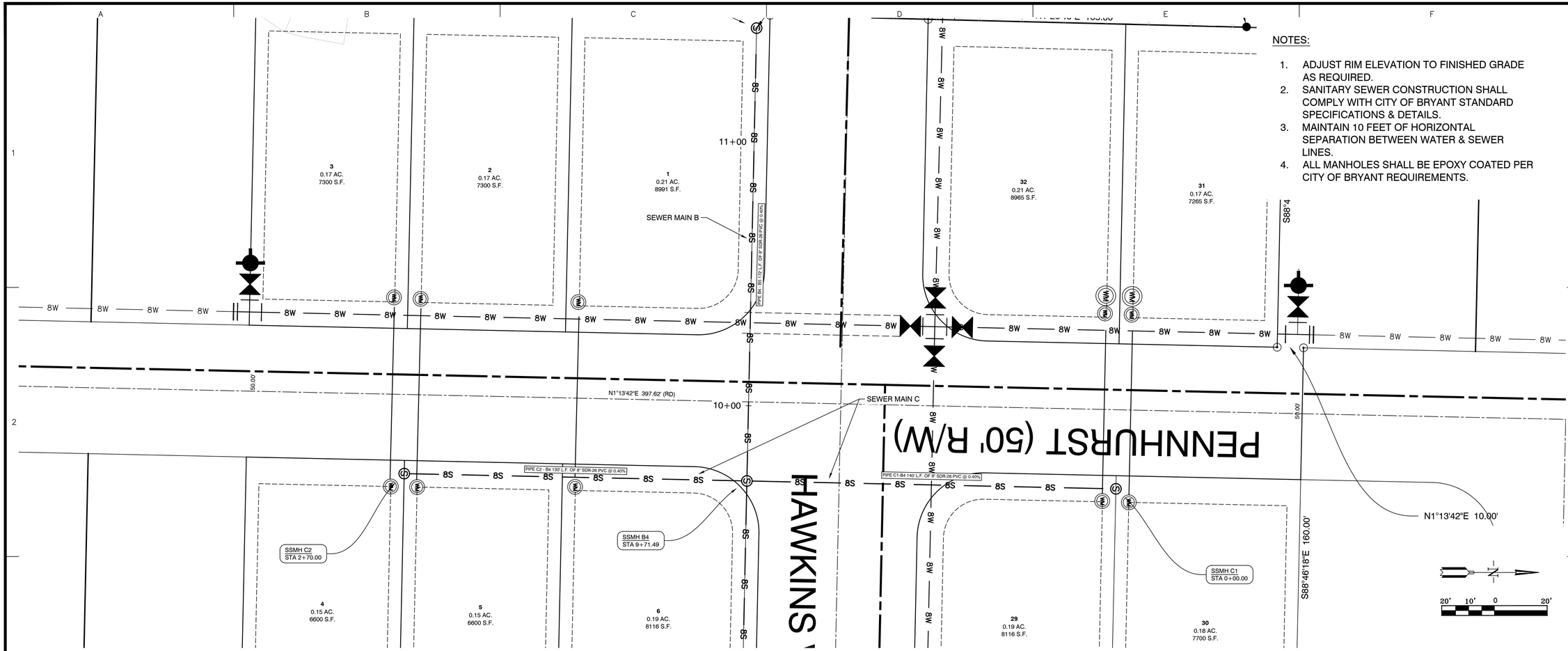
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BY	REVISION	DATE

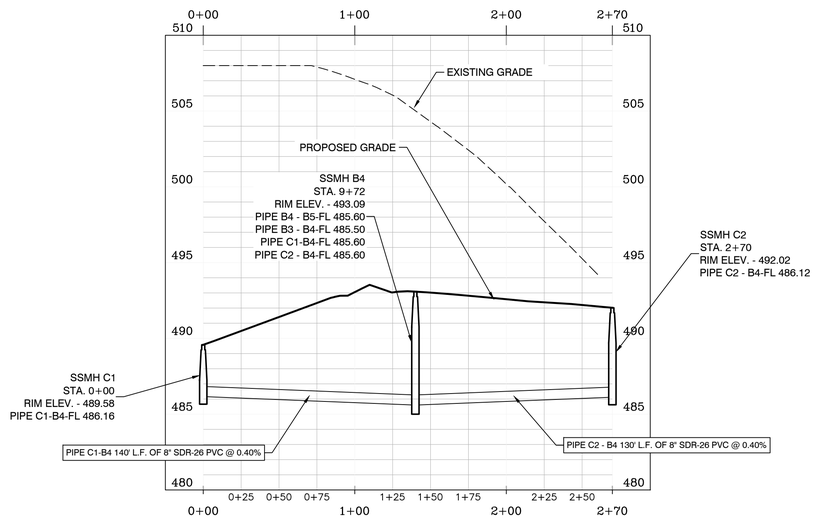
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NOTES:

1. ADJUST RIM ELEVATION TO FINISHED GRADE AS REQUIRED.
2. SANITARY SEWER CONSTRUCTION SHALL COMPLY WITH CITY OF BRYANT STANDARD SPECIFICATIONS & DETAILS.
3. MAINTAIN 10 FEET OF HORIZONTAL SEPARATION BETWEEN WATER & SEWER LINES.
4. ALL MANHOLES SHALL BE EPOXY COATED PER CITY OF BRYANT REQUIREMENTS.



SEWER MAIN C STA. 0+00 – 2+70



SCALE: H 1" = 50'
V 1" = 5'

BY	REVISION	DATE

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garnatengineering@gmail.com

FOR: THOMAS DB COLLINS, LTD, LLC
HAWKINS VALLEY
PHASE 1
SALINE COUNTY, ARKANSAS

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
NO. 9551
BRYON J. WILLIAMS
PRELIMINARY

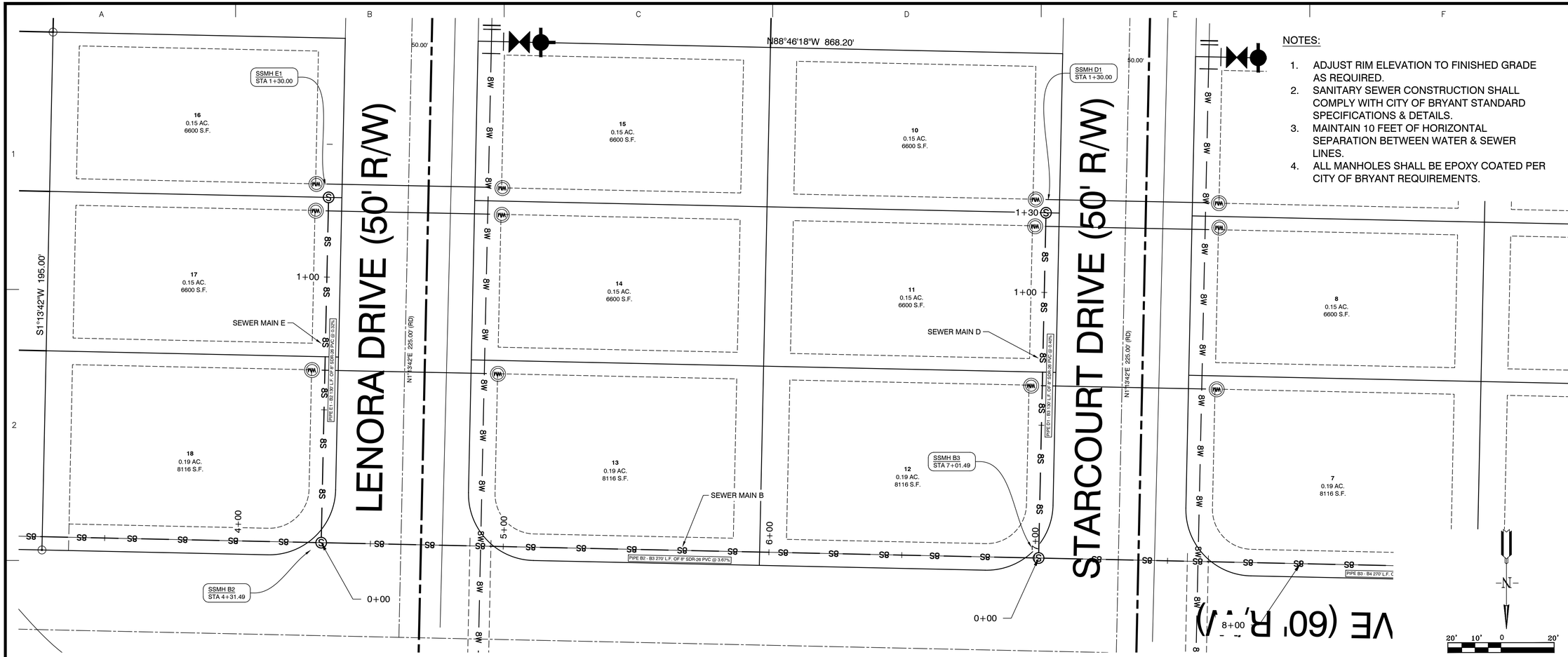
CONTENTS:
SANITARY SEWER PLAN & PROFILE MAIN "C" STA. 0+00 - 2+70

PROJECT NO: 24076

DATE: DECEMBER 2024

SHEET NO: C2.3

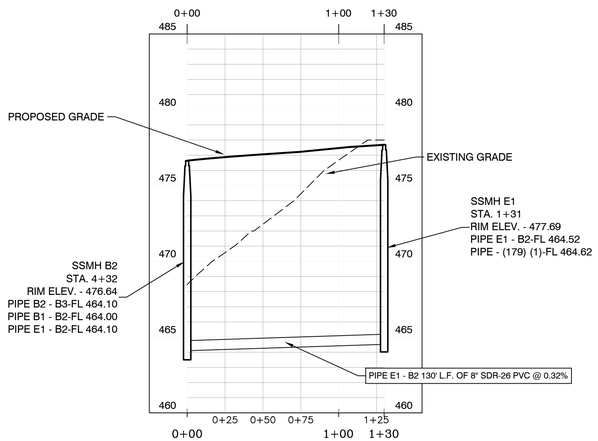
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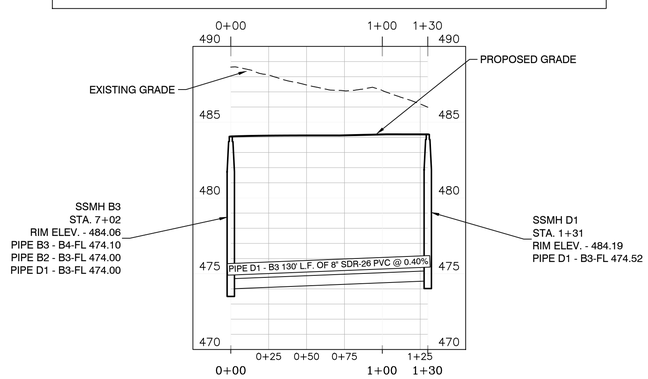
NOTES:

1. ADJUST RIM ELEVATION TO FINISHED GRADE AS REQUIRED.
2. SANITARY SEWER CONSTRUCTION SHALL COMPLY WITH CITY OF BRYANT STANDARD SPECIFICATIONS & DETAILS.
3. MAINTAIN 10 FEET OF HORIZONTAL SEPARATION BETWEEN WATER & SEWER LINES.
4. ALL MANHOLES SHALL BE EPOXY COATED PER CITY OF BRYANT REQUIREMENTS.

SEWER MAIN E STA. 0+00 - 1+30



SEWER MAIN D STA. 0+00 – 1+30



SCALE: H 1" = 50'
V 1" = 5'

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HAWKINS VALLEY
PHASE 1
SALINE COUNTY, ARKANSAS

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
NO. 9551
VERNON J. WILLIAMS

CONTENTS:
SANITARY SEWER PLAN & PROFILE
MAIN "D" & MAIN "E"
STA. 0+00 - 1+30

PROJECT NO:
24076

DATE:
DECEMBER 2024

SHEET NO:
C2.4

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001-03425-000
WILMA J BARNES
IRR TRUST

001-03424-001
THOMAS DB COLLINS LTD LLC

001-03427-000
LEROY KYZER

RIGHT OF WAY DEDICATION
2.73 ACRES
118720 Sq. Ft.

POND

TRACT A
0.21 ACRES
9126 Sq. Ft.

DUFFER DRIVE (50' R/W)

PENNHURST (50' R/W)

HAWKINS VALLEY DRIVE (60' R/W)

STARCOURT DRIVE (50' R/W)

LENORA DRIVE (50' R/W)

LEVEE

PIPE - (203) 70' L.F. OF 18" HDPE @ 3.4%

CI-6 & OUTLET STRUCTURE 7X5' BOX

PIPE - (200) (1) 240' L.F. OF 18" HDPE @ 3.1%

D-1 236' L.F. OF 42" HDPE @ 0.037%

CI-2 4' DIA BOX

CI-4 5' DIA BOX

FES-1

PIPE - (199) 53' L.F. OF 18" RCP @ 1.4%

CI-1 4' DIA BOX

PIPE - (201) 51' L.F. OF 18" RCP @ 2.1%

D-2 41' L.F. OF 42" RCP @ 0.037%

CI-5 5' DIA BOX

CI-3 4' DIA BOX W 4' WING

BY	REVISION	DATE

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FOR: THOMAS DB COLLINS, LTD, LLC
HAWKINS VALLEY
PHASE 1
SALINE COUNTY, ARKANSAS

STATE OF ARKANSAS
Vernon J. Williams
REGISTERED PROFESSIONAL ENGINEER
NO. 9551
VERNON J. WILLIAMS

1-06-2025

CONTENTS:
STREET & DRAINAGE PLAN

PROJECT NO: 24076

DATE: JAN 2025

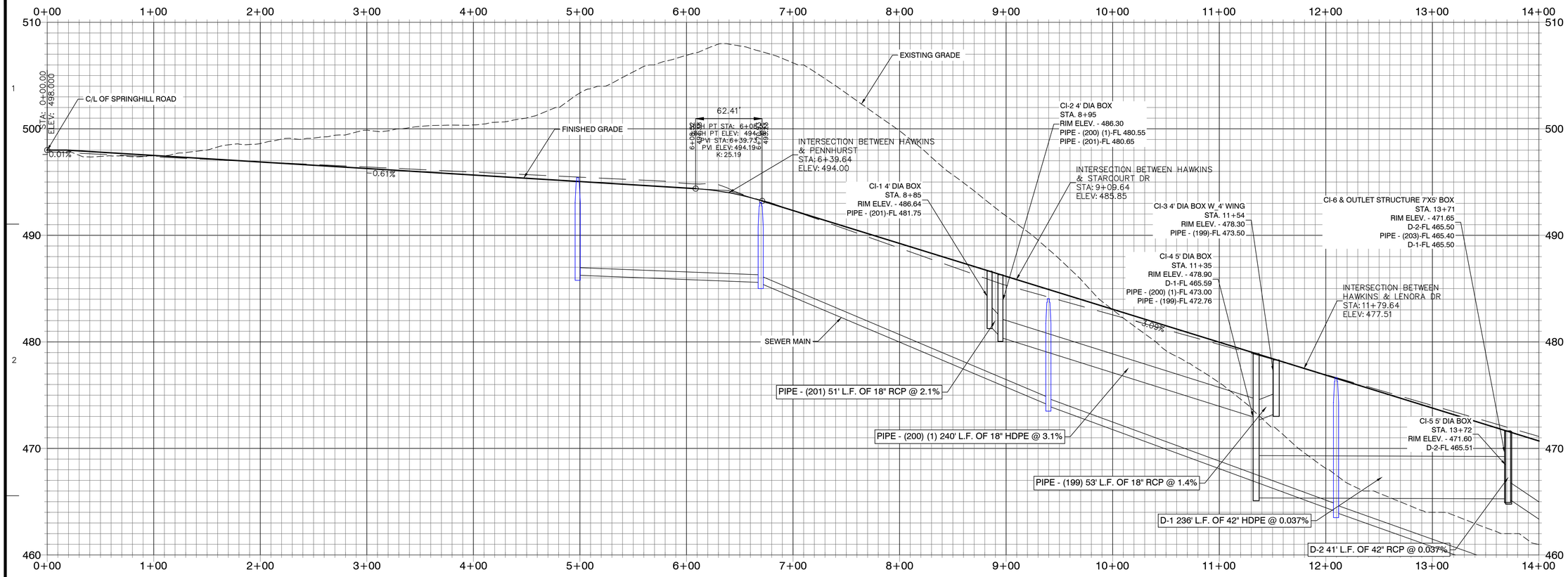
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50' 25' 0 50'

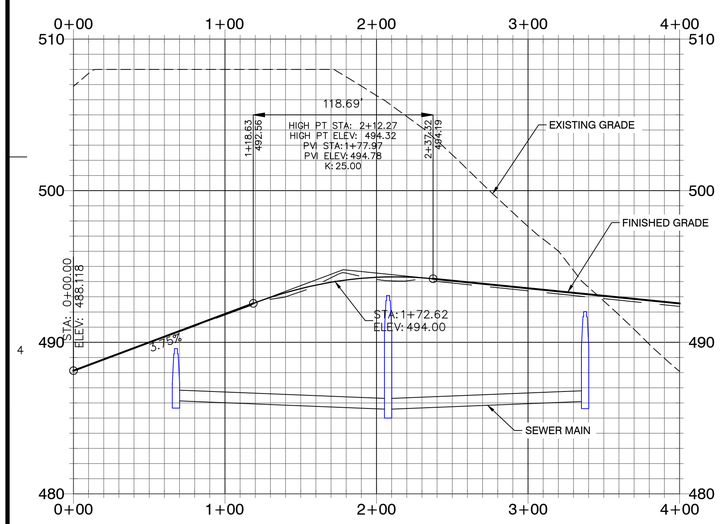
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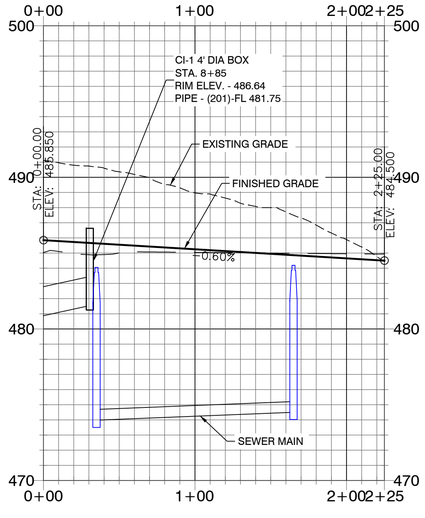
HAWKINS VALLEY DRIVE PROFILE



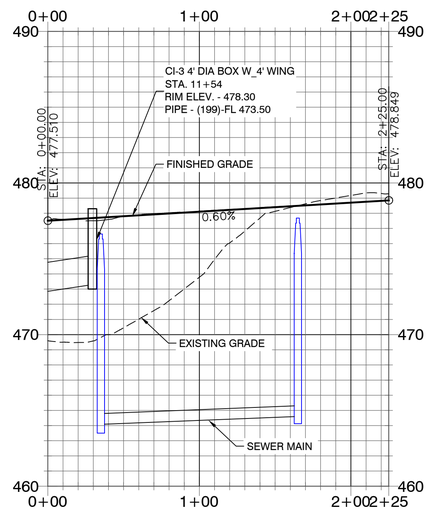
PENNHURST ROAD PROFILE



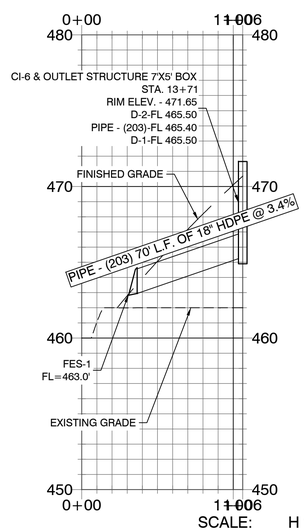
STARCOURT DRIVE PROFILE



LENORA DRIVE PROFILE



OUTLET PIPE PROFILE



SCALE: H 1" = 50'
V 1" = 5'

BY	REVISION	DATE

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garnatengineering@gmail.com

FOR: THOMAS DB COLLINS, LTD, LLC
HAWKINS VALLEY
PHASE 1
SALINE COUNTY, ARKANSAS

STATE OF ARKANSAS
Vernon J. Williams
REGISTERED PROFESSIONAL ENGINEER
NO. 9551
VERNON J. WILLIAMS

1-06-2025

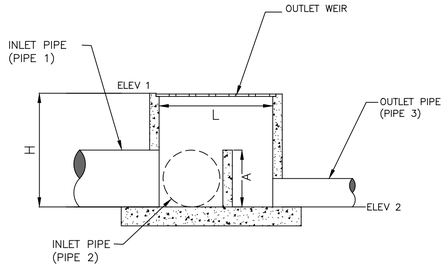
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ROAD PROFILES

PROJECT NO:
24076

DATE:
JAN 2025

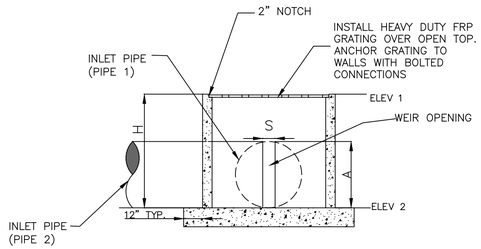
SHEET NO:
C3.1

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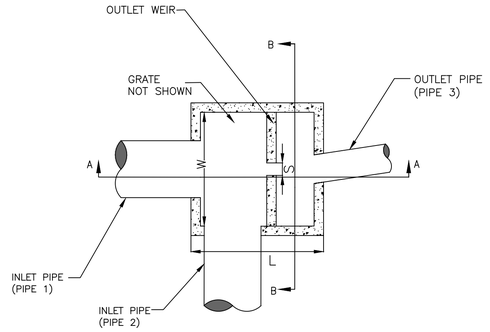
DETENTION OUTLET SECTION A-A

NOT TO SCALE



DETENTION OUTLET SECTION B-B

NOT TO SCALE



DETENTION OUTLET PLAN VIEW

NOT TO SCALE

CONTROL STRUCTURE

OUTLET STRUCTURE	L	W	H	ELEV 1	ELEV 2	S	PIPE 1 DIA	PIPE 2 DIA	PIPE 3 DIA	A
1	7'–0"	5'–0"	6'–3"	471.65	465.40	0'–7.5"	42"	42"	18"	3'–6"

DETENTION OUTLET NOTES:

1. ALL CONCRETE WALLS SHALL BE A MINIMUM OF 6" THICK & REINFORCED WITH #4'S @ 12" O.C. BOTH WAYS.
2. BOTTOM SLAB SHALL BE 12" THICK & REINFORCED WITH #4'S @ 12" O.C. BOTH WAYS.

BY	REVISION	DATE

GNE Designing our client's success
GarNat Engineering, LLC
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Bryant, AR 72022
Ph (501) 408-4650
garnatengineering@gmail.com

FOR: THOMAS DB COLLINS, LTD, LLC
HAWKINS VALLEY
PHASE 1
SALINE COUNTY, ARKANSAS

STATE OF ARKANSAS
Vernon ★★★ Williams
REGISTERED PROFESSIONAL ENGINEER
★★★
NO. 9551
VERNON J. WILLIAMS

1-06-2025

CONTENTS:

OUTLET STRUCTURE DETAILS

PROJECT NO: 24076

DATE: JAN 2025

SHEET NO: C3.2

I:\2024\24076 Hawkins Valley Springhill Road Strawberry Lane Lee Property\Drawings\Civil\Design\24076-Springhill-Road-Strawberry-Lane-Lee-Property.dwg

HAWKINS VALLEY
DRAINAGE CALCULATIONS – SUMMARY
1/29/2025

DESCRIPTION OF PROJECT

Hawkins Valley subdivision is an approximately 9.35 Acre development located in the Saline County, Arkansas east of Springhill Road. There is a large drainage basin on the site. Detention pond is located on the northeast corner of the site and discharged on the existing creek.

Stormwater Calculations were prepared with the intent to comply with the City of Bryant's Drainage Code. The primary intent of this analysis is to produce a drainage system adequately sized to convey post development runoff while attenuating post development discharge levels equal to or less than pre development flows.

Hydraulic calculations were made using the Rational Method. Design frequencies were analyzed for 2, 5, 10, 25, 50, and 100-year return periods.

These calculations are divided into the following sections:

Summary of Drainage Basins

Summary of Inlets

Summary of Pipes

Pipe Network Storage Summary

Appendices

Exhibit A – Pre-Development Drainage Basins

Exhibit B – Post-Development Drainage Basins

HAWKINS VALLEY
DRAINAGE CALCULATIONS – SUMMARY
1/29/2025

SUMMARY OF DRAINAGE BASINS

PRE-DEVELOPMENT CONDITIONS

The entire area for pre-existing drainage area of the site drains to a creek to the east. There is a drainage basin in the site that flows onto the creek. Discharge will be captured and detained.

POST-DEVELOPMENT CONDITIONS

As previously described, this site is being developed into a residential subdivision. Slopes range from 1% to 10%. Runoff drains from the developed areas to detention pond on the northeast corner of the site. 100-year storm event is considered for detention. A concrete control structure is used to release the water without the loss of life or major property damage.

SUMMARY OF INLETS

On the drainage plan you will see labels for all of the inlets for these calculations. The flows shown are for the 25-year return storm. The distance from the back of the curb to the center of the street is 18 feet. One lane of traffic remains unobstructed by storm sewer discharges during a 25-year storm event.

SUMMARY OF PIPES

All pipes used in this project are HDPE and RCP. Therefore, a manning's of 0.012 was used on all pipes in the analysis.

POND SUMMARY

The pond in these calculations detains flows from all of the runoff of the site. The pond is located on the northeast corner of the site. Water collected in the storm water system is discharged into the pond via a pipe culvert and a ditch. A concrete control structure is constructed on the eastern edge of the pond. This control structure uses a slotted weir to limit the discharge through the structure to that of the pre-development flow. The Pond volume is designed to hold the 100-year storm event and a factor of safety of 25% is added on detention volumes.

Stormwater Calcs - Hawkins Valley
Using Rational Method

Pre-development

Calculated Tc values - Drainage Basin 1

							Shallow Concentrated												Shallow Concentrated									
Tc =	$\frac{0.83 * L^{.467} * n^{.467}}{S^{.5}}$	minutes	Tsc =	$\frac{L}{60V}$	minutes	Flow	Tsc =	$\frac{L}{60V}$	minutes	Pipe Flow	Tsc =	$\frac{L}{60V}$	minutes	Flow	Tsc =	$\frac{L}{60V}$	minutes	Pipe Flow	Tsc =	$\frac{L}{60V}$	minutes	Open Channel
			V=	16.1345 * S^0.5	ft/sec	Unpaved	V=	$\frac{1.49*(D/4)^{(2/3)}*S^{0.5}}{n}$	ft/sec		V=	16.1345 * S^0.5	ft/sec	Unpaved	V=	$\frac{1.49*(D/4)^{(2/3)}*S^{0.5}}{n}$	ft/sec		V=	$\frac{1.49*(R)^{(2/3)}*S^{0.5}}{n}$	ft/sec	Open Channel
L1 =	150	feet	L1 =	400	feet		L1 =	50	feet		L1 =	570	feet		L1 =	50	feet		L1 =	1480	feet	
n1 =	0.6	Deciduous Timber					D=	2	feet						D=	2	feet		R=	0.95	feet	(V-Ditch 2 ' ht., 3:1 Slope)
S1 =	0.053	ft/ft	S1 =	0.070	ft/ft		S1 =	0.010	ft/ft		S1 =	0.016	ft/ft		S1 =	0.010	ft/ft		S1 =	0.026	ft/ft	
			$V_{calculated}$ =	4.27	ft/sec		n=	0.013			$V_{calculated}$ =	2.03	ft/sec		n=	0.013			n=	0.022	earth with short grass, few weeds
							$V_{calculated}$ =	7.22	ft/sec						$V_{calculated}$ =	7.22	ft/sec		$V_{calculated}$ =	4.16	ft/sec	
$Tc_{calculated}$	16.35	minutes	$Tc_{calculated}$	1.56	minutes		$Tc_{calculated}$	0.12	minutes		$Tc_{calculated}$	4.69	minutes		$Tc_{calculated}$	0.12	minutes		$Tc_{calculated}$	5.93	minutes	

Tc = 28.76 minutes

Use Tc = **29.0** minutes

I_{100} =	5.6 Inches/hr	I_{10} =	3.9 Inches/hr
I_{50} =	5.1 Inches/hr	I_5 =	3.5 Inches/hr
I_{25} =	4.6 Inches/hr	I_2 =	2.8 Inches/hr

i from Exhibit 400-1 of Bryant Drainage Manual

Stormwater Calcs - Hawkins Valley
Using Rational Method

Pre-development

Calculated Tc values - Drainage Basin 1

Tc =	$\frac{0.83 * L^{.467} * n^{.467}}{S^{.5}}$	minutes	Tsc =	$\frac{L}{60V}$	minutes	Shallow Cc	Tsc =	$\frac{L}{60V}$	minutes	Pipe Flow	Tsc =	$\frac{L}{60V}$	minutes	Shallow Concen	Tsc =	$\frac{L}{60V}$	minutes	Pipe Flow	Tsc =	$\frac{L}{60V}$	minutes	Open Channel		
			V=	16.1345 * S^0.5	ft/sec	Unpaved	V=	$\frac{1.49*(D/4)^{(2/3)}*S^{0.5}}{n}$	ft/sec		V=	16.1345 * S^0.5	ft/sec	Unpaved	V=	$\frac{1.49*(D/4)^{(2/3)}*S^{0.5}}{n}$	ft/sec		V=	$\frac{1.49*(R)^{(2/3)}*S^{0.5}}{n}$	ft/sec	Open Channel		
L1 =	150	feet	L1 =	400	feet		L1 =	50	feet		L1 =	570	feet		L1 =	50	feet		L1 =	1480	feet			
n1 =	0.6	Deciduous Timber					D=	2	feet						D=	2	feet		R=	0.95	feet	(V-Ditch 2 ' ht.,		
S1 =	0.053	ft/ft	S1 =	0.070	ft/ft		S1 =	0.010	ft/ft		S1 =	0.016	ft/ft		S1 =	0.010	ft/ft		S1 =	0.026	ft/ft	3:1 Slope)		
			$V_{calculated}$ =	4.27	ft/sec		n=	0.013			$V_{calculated}$ =	2.03	ft/sec		n=	0.013			n=	0.022	earth with short grass, few		
							$V_{calculated}$ =	7.22	ft/sec						$V_{calculated}$ =	7.22	ft/sec		$V_{calculated}$ =	4.16	ft/sec			
$Tc_{calculated}$	16.35	minutes	$Tc_{calculated}$	1.56	minutes		$Tc_{calculated}$	0.12	minutes		$Tc_{calculated}$	4.69	minutes		$Tc_{calculated}$	0.12	minutes		$Tc_{calculated}$	5.93	minutes			
Tc =	28.76	minutes																						
Use Tc =	**29.0**	minutes	I_{100} =	5.6	Inches/hr		I_{10} =	3.9	Inches/hr															
			I_{50} =	5.1	Inches/hr		I_5 =	3.5	Inches/hr		i from Exhibit 400-1 of Bryant Drainage Manual													
			I_{25} =	4.6	Inches/hr		I_2 =	2.8	Inches/hr															

Stormwater Calcs - Hawkins Valley
using Rational Method

Pre-development

Calculated C values - Drainage Basin 1

	Area	C_{100}	C_{50}	C_{25}	C_{10}	C_5	C_2
Undeveloped	44.03	0.47	0.43	0.4	0.36	0.34	0.31
Total Area =	**44.03**	**0.47**	**0.43**	**0.40**	**0.36**	**0.34**	**0.31**

(C values taken from Table 400-1 of City of Bryant Drainage Manual)

Woodlands, Average, 2-7%

Stormwater Calcs - Hawkins Valley
using Rational Method

Post-development

Calculated C values - Drainage Basin 1A

	Area	C_{100}	C_{50}	C_{25}	C_{10}	C_5	C_2
Undeveloped	34.68	0.47	0.43	0.4	0.36	0.34	0.31
Single Family House	9.35	0.70	0.65	0.60	0.50	0.45	0.40
Total Area =	**44.03**	**0.52**	**0.48**	**0.44**	**0.39**	**0.36**	**0.33**

(C values taken from Table 400-1 of City of Bryant Drainage Manual)
(C values taken from Page-50 of City of Bryant Drainage Manual)

Stormwater Calcs - Hawkins Valley
using Rational Method

Pre-development

Drainage Basin 1

Q_{100} =	115.89	CFS	Q_{50}=	96.56	CFS	Q_{25} =	81.02	CFS	Q_{10} =	61.82	CFS
c =	0.47		c =	0.43		c =	0.40		c =	0.36	
i=	5.60	in/hr	i=	5.10	in/hr	i=	4.60	in/hr	i=	3.90	in/hr
A=	44.03	acres	A=	44.03	acres	A=	44.03	acres	A=	44.03	acres

Q_{5} =	52.40	CFS	Q_{2} =	38.22	CFS	
c =	0.34		c =	0.31		
i=	3.50	in/hr	i=	2.80	in/hr	
A=	44.03	acres	A=	44.03	acres	

Post-development

Drainage Basin 1

Q_{100} =	127.93	CFS	Q_{50}=	107.05	CFS	Q_{25} =	89.62	CFS	Q_{10} =	66.92	CFS
c =	0.52		c =	0.48		c =	0.44		c =	0.39	
i=	5.60	in/hr	i=	5.10	in/hr	i=	4.60	in/hr	i=	3.90	in/hr
A=	44.03	acres	A=	44.03	acres	A=	44.03	acres	A=	44.03	acres

Q_{5} =	56.00	CFS	Q_{2} =	40.57	CFS	
c =	0.36		c =	0.33		
i=	3.50	in/hr	i=	2.80	in/hr	
A=	44.03	acres	A=	44.03	acres	

Stormwater Calcs - Hawkins Valley
using Rational Method
Culvert Capacities

CI-1
Q_{25} = 1.44 CFS
c = 0.86 Road/Asphalt
i= 8.4 in/hr
A= 0.20 acres

CI-2
Q_{25} = 1.37 CFS
c = 0.86 Road/Asphalt
i= 8.4 in/hr
A= 0.19 acres

CI-3
Q_{25} = 6.99 CFS
c = 0.64 Road/Asphalt
i= 8.4 in/hr
A= 1.30 acres

CI-4
Q_{25} = 1.23 CFS
c = 0.86 Road/Asphalt
i= 8.4 in/hr
A= 0.17 acres

CI-5
Q_{25} = 1.16 CFS
c = 0.86 Road/Asphalt
i= 8.4 in/hr
A= 0.16 acres

Pipe Name	From	To	Design Flow (cfs):	Slope (ft/ft):	Diameter (inches)	No. Pipes	Manning's	Area Full (sf)	Wetted Perimeter Full (ft)	Hydraulic	Flow Capacity (cfs)	% Capacity
18" RCP	CI-1	CI-2	1.44	0.0210	18	1	0.012	1.77	4.712	0.375	16.49	9%
18" HDPE	CI-2	CI-4	2.82	0.0310	18	1	0.012	1.77	4.712	0.375	20.04	14%
18" RCP	CI-3	CI-4	9.81	0.0140	18	1	0.012	1.77	4.712	0.375	13.46	73%
18" HDPE	CI-4	CI-5	11.03	0.0310	18	1	0.012	1.77	4.712	0.375	20.04	55%

Stormwater Calcs - Hawkins Valley
Using Rational Method

Mannings equation for ditch

n= 0.022 based on n for open channel earth with short grass, few weeds

Slope= 3 :1

Depth (ft)	Bottom (ft)	Top (ft)	area (ft^2)	rH	slope (ft/ft)	Velocity (ft/s)	Q (cfs)
2	1	13	14	1.03	0.01	6.89	96.44

Stormwater Calcs - Hawkins Valley
using Rational Method
Weir Sizing

Storm Event	Flow (cfs)
Q2 - Pre	38.22
Q10 - Pre	61.82
Q25 - Pre	81.02
Q50 - Pre	96.56
Q100 - Pre	115.89
Q2 - Post	40.57
Q10 - Post	66.92
Q25 - Post	89.62
Q50 - Post	107.05
Q100 - Post	127.93

Rectangular Weir

Q2

Q (cfs)	**CLH^1.5**	
C	**2.5**	
L	**5.75**	5.75'
H	**1.9**	
Q (cfs)	**37.65**	

Q10

Q (cfs)	**CLH^1.5**	
C	**2.5**	
L	**5.75**	5.75'
H	**2.6**	
Q (cfs)	**60.27**	

Q25

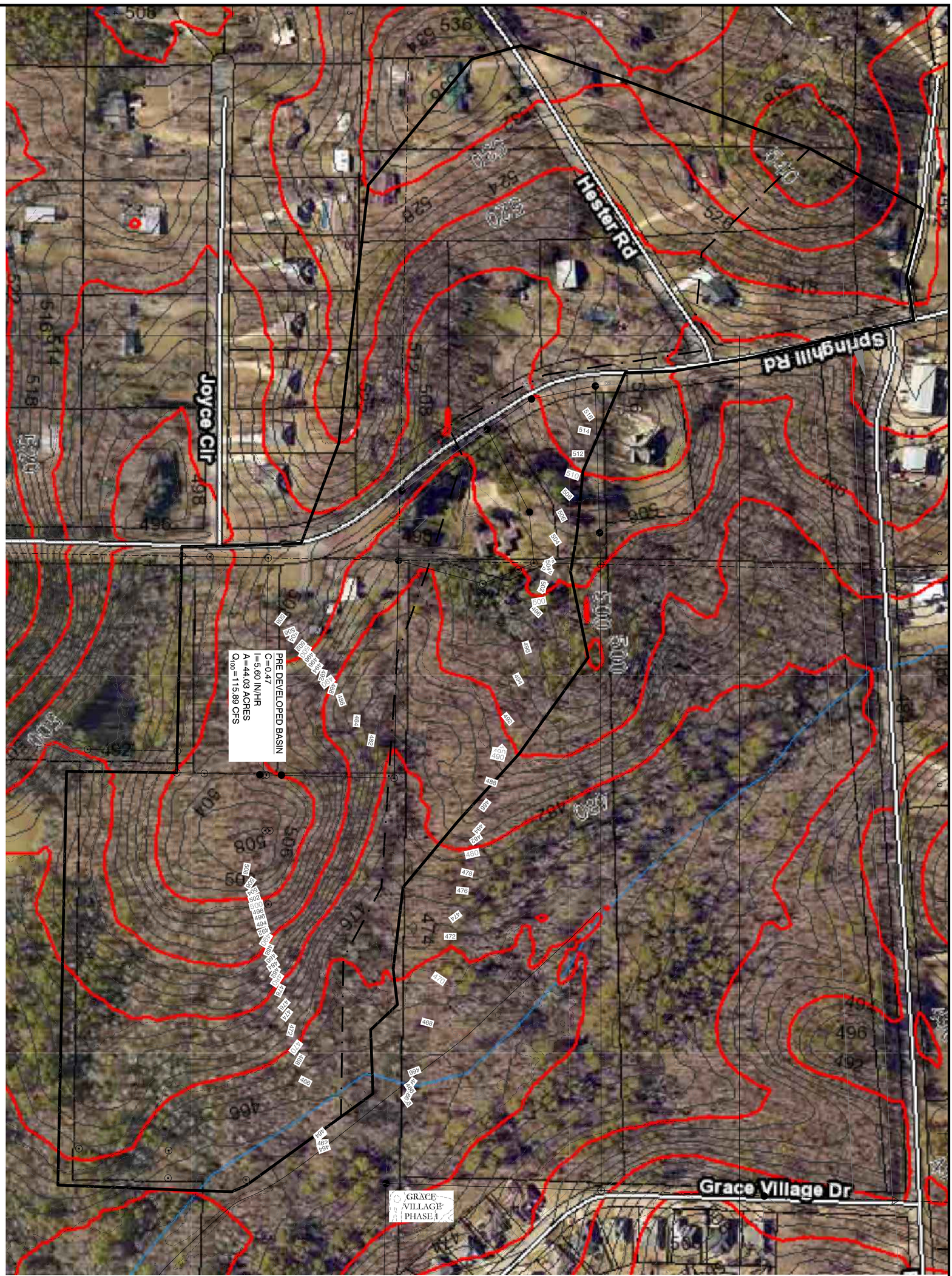
Q (cfs)	**CLH^1.5**	
C	**2.5**	
L	**5.75**	5.75'
H	**3.15**	
Q (cfs)	**80.37**	

Q50

Q (cfs)	**CLH^1.5**	
C	**2.5**	
L	**5.75**	5.75'
H	**3.55**	
Q (cfs)	**96.15**	

Q100

Q (cfs)	**CLH^1.5**	
C	**2.5**	
L	**5.75**	5.75'
H	**4**	
Q (cfs)	**115.00**	



100' 50' 0 100

N

PRELIMINARY

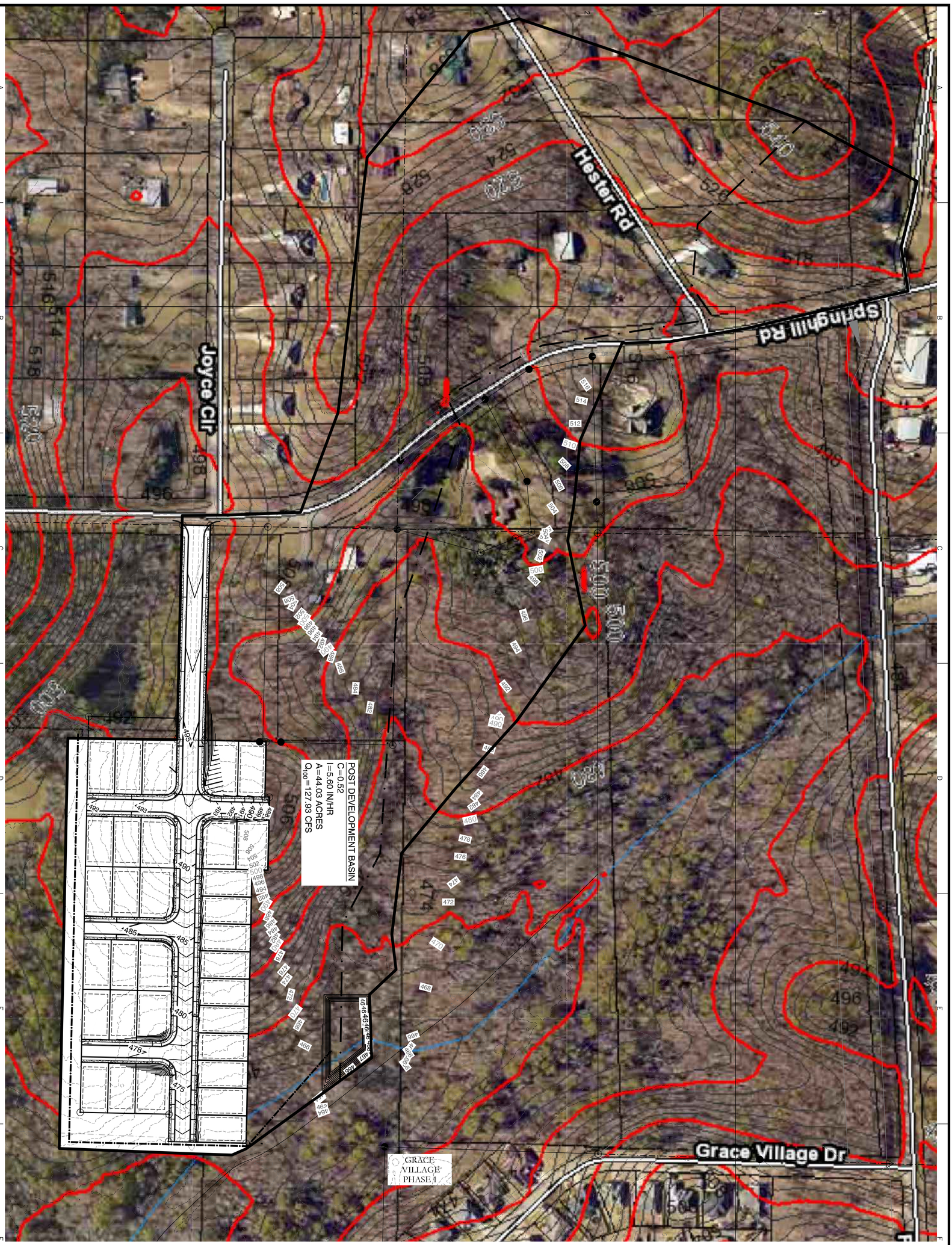
FOR: THOMAS DB COLLINS, LTD, LLC
HAWKINS VALLEY
PHASE 1
SALINE COUNTY, ARKANSAS

SHEET NO: 1.0
DATE: JAN 2025
PROJECT NO: 24076
CONTENTS: PRE DRAINAGE BASIN

GNE Designing our client's success
GarNat Engineering, LLC
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3825 Mt Carmel Rd
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garnatengineering@gmail.com

DATE	REVISION	BY

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50' 25' 0 50'

N

PRELIMINARY

FOR: THOMAS DB COLLINS, LTD, LLC
HAWKINS VALLEY
PHASE 1
SALINE COUNTY, ARKANSAS

SHEET NO: 2.0
DATE: JAN 2025
PROJECT NO: 24076
CONTENTS: POST DRAINAGE BASIN

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DATE	REVISION	BY

\\192.168.0.58\J\Projects\2024 Projects\24076 Hawkins Valley Springhill Road Strawberry Lane Lee Pengelly\Drawings\DWGs\Design\24076-Springhill-Road-Drainage Map-R5.dwg

Stormwater Calcs - Hawkins Valley
Using Rational Method

Calculated Tc values - Drainage Basin CI-1

Tc =	$\frac{0.83 * L^{.467} * n^{.467}}{S^{.5}}$	minutes	Overland Flow	Tsc =	$\frac{L}{60V}$	minutes	Shallow Concentrated Flow
				V=	20.3282 * S^0.5	ft/sec	Paved
L1 =	150	feet		L1 =	115	feet	
n1 =	0.013	concrete					
S1 =	0.026	ft/ft	Z1=493.65	S1 =	0.032	ft/ft	Z1=489.77
			Z2=489.77				Z2=486.12
				$V_{calculated}$ =	3.62	ft/sec	
$Tc_{calculated}$	3.39	minutes		$Tc_{calculated}$	0.53	minutes	
Tc =	3.92	minutes					
Use Tc =	**5.0**	minutes		I_{100} =	10	Inches/hr	i from Exhibit 400-1 of Bryant Drainage Manual
				I_{25} =	8.4	Inches/hr	
				I_{10} =	7.6	Inches/hr	

Calculated Tc values - Drainage Basin CI-2

Tc =	$\frac{0.83 * L^{.467} * n^{.467}}{S^{.5}}$	minutes	Overland Flow	Tsc =	$\frac{L}{60V}$	minutes	Shallow Concentrated Flow
				V=	20.3282 * S^0.5	ft/sec	Paved
L1 =	150	feet		L1 =	120	feet	
n1 =	0.013	concrete					
S1 =	0.024	ft/ft	Z1=493.41	S1 =	0.032	ft/ft	Z1=489.82
			Z2=489.82				Z2=486.01
				$V_{calculated}$ =	3.62	ft/sec	
$Tc_{calculated}$	3.47	minutes		$Tc_{calculated}$	0.55	minutes	
Tc =	4.03	minutes					
Use Tc =	**5.0**	minutes		I_{100} =	10	Inches/hr	i from Exhibit 400-1 of Bryant Drainage Manual
				I_{25} =	8.4	Inches/hr	
				I_{10} =	7.6	Inches/hr	

Calculated Tc values - Drainage Basin CI-3

Tc =	$\frac{0.83 * L^{.467} * n^{.467}}{S^{.5}}$	minutes	Overland Flow	Tsc =	$\frac{L}{60V}$	minutes	Shallow Concentrated Flow
				V=	20.3282 * S^0.5	ft/sec	Paved
L1 =	150	feet		L1 =	125	feet	
n1 =	0.013	concrete					
S1 =	0.029	ft/ft	Z1=486.12	S1 =	0.029	ft/ft	Z1=481.77
			Z2=481.77				Z2=478.13
				$V_{calculated}$ =	3.47	ft/sec	
$Tc_{calculated}$	3.28	minutes		$Tc_{calculated}$	0.60	minutes	
Tc =	3.88	minutes					
Use Tc =	**5.0**	minutes		I_{100} =	10	Inches/hr	i from Exhibit 400-1 of Bryant Drainage Manual
				I_{25} =	8.4	Inches/hr	
				I_{10} =	7.6	Inches/hr	

Calculated Tc values - Drainage Basin CI-4

Tc =	$\frac{0.83 * L^{.467} * n^{.467}}{S^{.5}}$	minutes	Overland Flow	Tsc =	$\frac{L}{60V}$	minutes	Shallow Concentrated Flow
				V=	20.3282 * S^0.5	ft/sec	Paved
L1 =	150	feet		L1 =	86	feet	
n1 =	0.013	concrete					
S1 =	0.031	ft/ft	Z1=486.01	S1 =	0.042	ft/ft	Z1=481.34
			Z2=481.34				Z2=478.57
				$V_{calculated}$ =	4.18	ft/sec	
$Tc_{calculated}$	3.21	minutes		$Tc_{calculated}$	0.34	minutes	
Tc =	3.55	minutes					
Use Tc =	**5.0**	minutes		I_{100} =	10	Inches/hr	i from Exhibit 400-1 of Bryant Drainage Manual
				I_{25} =	8.4	Inches/hr	
				I_{10} =	7.6	Inches/hr	

Calculated Tc values - Drainage Basin CI-5

Tc =	$\frac{0.83 * L^{.467} * n^{.467}}{S^{.5}}$	minutes	Overland Flow	Tsc =	$\frac{L}{60V}$	minutes	Shallow Concentrated Flow
				V=	20.3282 * S^0.5	ft/sec	Paved
L1 =	150	feet		L1 =	85	feet	
n1 =	0.013	concrete					
S1 =	0.032	ft/ft	Z1=478.57	S1 =	0.031	ft/ft	Z1=473.84
			Z2=473.84				Z2=471.22
				$V_{calculated}$ =	3.57	ft/sec	
$Tc_{calculated}$	3.20	minutes		$Tc_{calculated}$	0.40	minutes	
Tc =	3.60	minutes					
Use Tc =	**5.0**	minutes		I_{100} =	10	Inches/hr	i from Exhibit 400-1 of Bryant Drainage Manual
				I_{25} =	8.4	Inches/hr	
				I_{10} =	7.6	Inches/hr	

Stormwater Calcs - Hawkins Valley
using Rational Method
POST-DEV C VALUES

SDMH-C1

	Area	C_{10}	C_{25}	C_{100}	(C values taken from Table 400-2 of City of Bryant Drainage Manual)
	0.20	0.81	0.86	0.95	Road/Asphalt
Total Area =	**0.20**	**0.81**	**0.86**	**0.95**	

SDMH-C2

	Area	C_{10}	C_{25}	C_{100}	(C values taken from Table 400-2 of City of Bryant Drainage Manual)
	0.19	0.81	0.86	0.95	Road/Asphalt
Total Area =	**0.19**	**0.81**	**0.86**	**0.95**	

SDMH-C3

	Area	C_{10}	C_{25}	C_{100}	(C values taken from Table 400-2 of City of Bryant Drainage Manual)
	0.20	0.81	0.86	0.95	Road/Asphalt
	1.10	0.5	0.6	0.7	Single Family House
Total Area =	**1.30**	**0.55**	**0.64**	**0.74**	

SDMH-C4

	Area	C_{10}	C_{25}	C_{100}	(C values taken from Table 400-2 of City of Bryant Drainage Manual)
	0.17	0.81	0.86	0.95	Road/Asphalt
Total Area =	**0.17**	**0.81**	**0.86**	**0.95**	

SDMH-C5

	Area	C_{10}	C_{25}	C_{100}	(C values taken from Table 400-2 of City of Bryant Drainage Manual)
	0.16	0.81	0.86	0.95	Road/Asphalt
Total Area =	**0.16**	**0.81**	**0.86**	**0.95**	

Stormwater Calcs - Hawkins Valley
using Rational Method
Post Development Flowrates

SDMH-C1

Q_{10} =	1.21 CFS	Q_{25} =	1.43 CFS	Q_{100} =	1.87 CFS
c =	0.81	c =	0.86	c =	0.95
i=	7.60 in/hr	i=	8.40 in/hr	i=	10.00 in/hr
A=	0.20 acres	A=	0.20 acres	A=	0.20 acres

SDMH-C2

Q_{10} =	1.19 CFS	Q_{25} =	1.40 CFS	Q_{100} =	1.84 CFS
c =	0.81	c =	0.86	c =	0.95
i=	7.60 in/hr	i=	8.40 in/hr	i=	10.00 in/hr
A=	0.19 acres	A=	0.19 acres	A=	0.19 acres

SDMH-C3

Q_{10} =	5.43 CFS	Q_{25} =	7.00 CFS	Q_{100} =	9.62 CFS
c =	0.55	c =	0.64	c =	0.74
i=	7.60 in/hr	i=	8.40 in/hr	i=	10.00 in/hr
A=	1.30 acres	A=	1.30 acres	A=	1.30 acres

SDMH-C4

Q_{10} =	1.02 CFS	Q_{25} =	1.19 CFS	Q_{100} =	1.57 CFS
c =	0.81	c =	0.86	c =	0.95
i=	7.60 in/hr	i=	8.40 in/hr	i=	10.00 in/hr
A=	0.17 acres	A=	0.17 acres	A=	0.17 acres

SDMH-C5

Q_{10} =	1.01 CFS	Q_{25} =	1.18 CFS	Q_{100} =	1.55 CFS
c =	0.81	c =	0.86	c =	0.95
i=	7.60 in/hr	i=	8.40 in/hr	i=	10.00 in/hr
A=	0.16 acres	A=	0.16 acres	A=	0.16 acres

Hawkins Valley GUTTER SPREAD 25-YR STORM

SDMH-C1

$$T = \left(\frac{Q^* n}{k_u^* S_x^{1.67} * S_L^{0.5}} \right)^{.375}$$

Q= Flowrate(cfs)
n=manning's number
k=0.56
S_x= cross slope
S_L= longitudinal slope
T= Gutter Spread

Q	1.43	cfs
n	0.012	
k_u	0.56	
S_x	0.028	
S_L	0.031	
T	**4.87**	ft

SDMH-C2

$$T = \left(\frac{Q^* n}{k_u^* S_x^{1.67} * S_L^{0.5}} \right)^{.375}$$

Q	1.40	cfs
n	0.012	
k_u	0.56	
S_x	0.03	
S_L	0.017	
T	**5.18**	ft

SDMH-C3

$$T = \left(\frac{Q^* n}{k_u^* S_x^{1.67} * S_L^{0.5}} \right)^{.375}$$

Q	7.00	cfs
n	0.012	
k_u	0.56	
S_x	0.028	
S_L	0.03	
T	**9.01**	ft

SDMH-C4

$$T = \left(\frac{Q^* n}{k_u^* S_x^{1.67} * S_L^{0.5}} \right)^{.375}$$

Q	1.19	cfs
n	0.012	
k_u	0.56	
S_x	0.03	
S_L	0.03	
T	**4.44**	ft

SDMH-C5

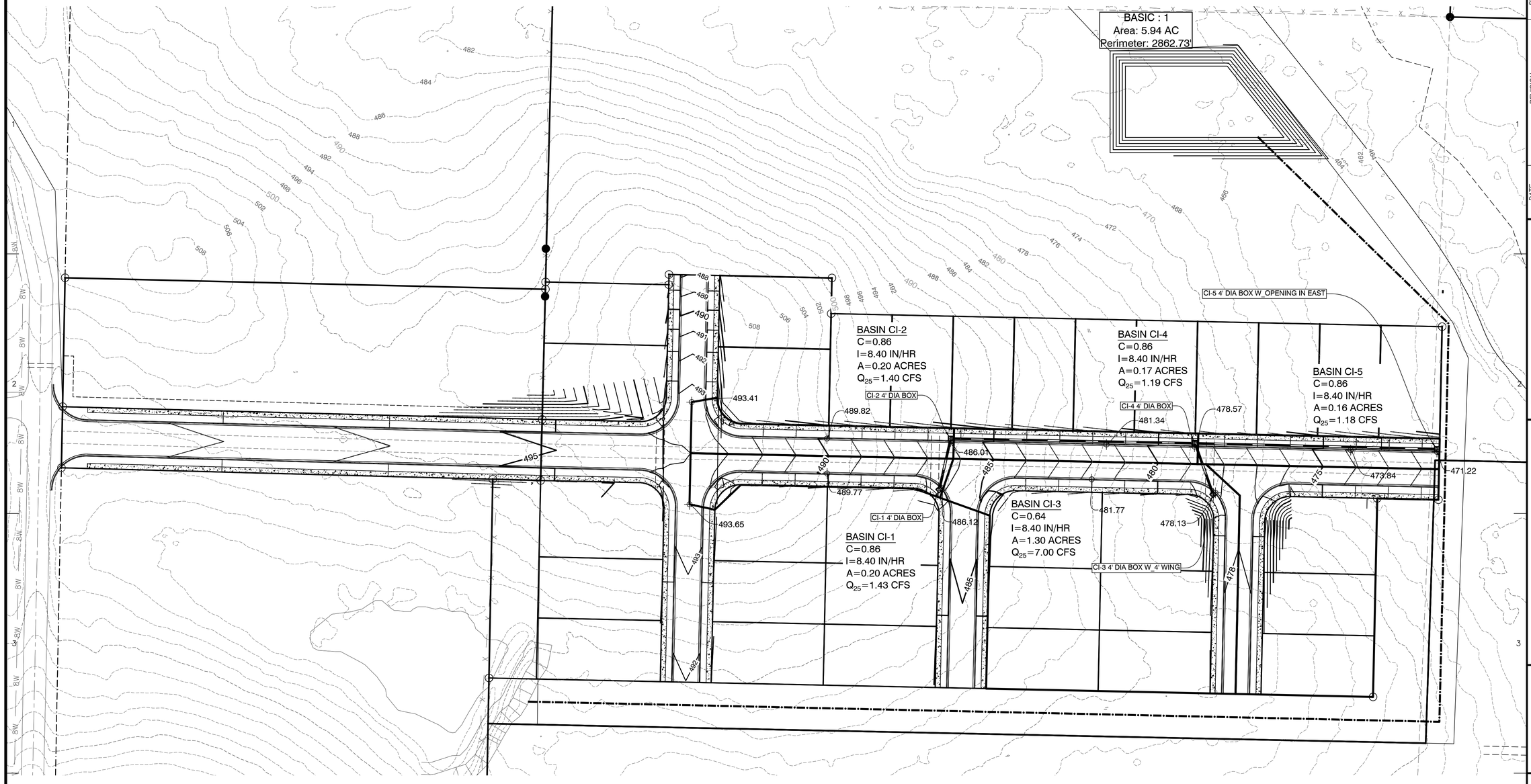
$$T = \left(\frac{Q^* n}{k_u^* S_x^{1.67} * S_L^{0.5}} \right)^{.375}$$

Q	1.18	cfs
n	0.012	
k_u	0.56	
S_x	0.028	
S_L	0.03	
T	**4.56**	ft

Hawkins Valley - CURB INLETS

25-YEAR STORM

Area #	Area	I	C	Q (cfs)	Weir Q=3.0LY^1.5 Q (cfs)	Y (ft)	Required L (ft)	Actual L (ft)	
SDMH-C1	0.20	8.40	0.86	1.43	1.43	0.49	**1.39**	**4**	4' box
SDMH-C2	0.19	8.40	0.86	1.40	1.40	0.49	**1.36**	**4**	4' box
SDMH-C3	1.30	8.40	0.64	7.00	7.00	0.49	**6.81**	**4**	4' box with 4' wing
SDMH-C4	0.17	8.40	0.86	1.19	1.19	0.49	**1.16**	**4**	4' box
SDMH-C5	0.16	8.40	0.86	1.18	1.18	0.49	**1.15**	**4**	4' box



BY	REVISION	DATE

GNE Designing our client's success

GarNat Engineering, LLC
P.O. Box 116
Benton, AR 72018
3825 Mt Carmel Rd
Bryant, AR 72022
Ph (501) 408-4650
garnatengineering@gmail.com

FOR: THOMAS DB COLLINS, LTD, LLC
HAWKINS VALLEY
PHASE 1
SALINE COUNTY, ARKANSAS

PRELIMINARY

CONTENTS:
INLET BASIN PLAN

PROJECT NO:
24076

DATE:
JAN 2025

SHEET NO:
3.0

\\192.168.0.90\Projects\2024 Projects\24076 Hawkins Valley Springhill Road, Strawberry Lane Subdivision\24076-Springhill Road Subdivision.dwg

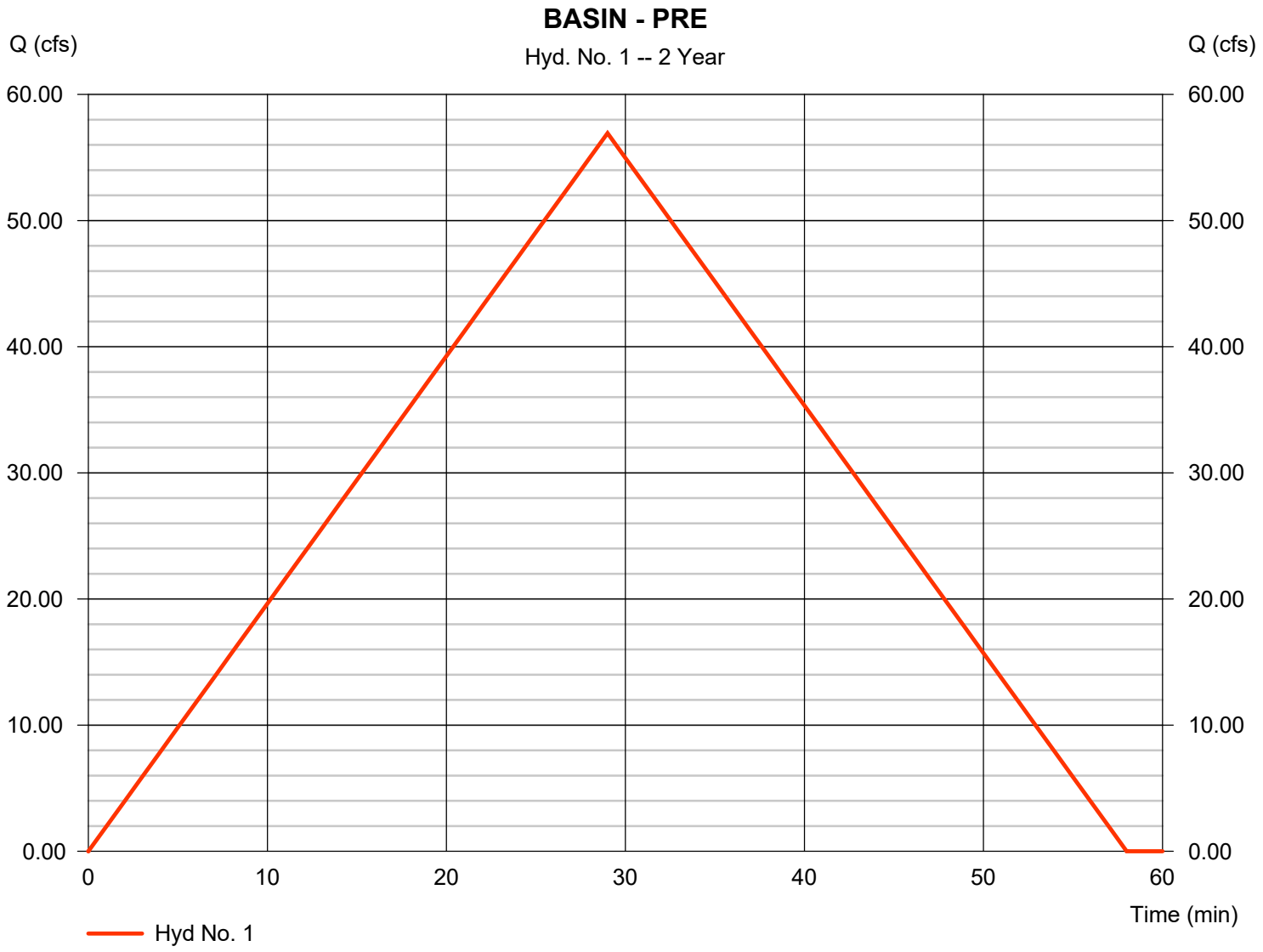
Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2021 Tuesday, 01 / 28 / 2025

Hyd. No. 1

BASIN - PRE

Hydrograph type	=	Rational	Peak discharge	=	56.93 cfs
Storm frequency	=	2 yrs	Time to peak	=	29 min
Time interval	=	1 min	Hyd. volume	=	99,054 cuft
Drainage area	=	44.030 ac	Runoff coeff.	=	0.47
Intensity	=	2.751 in/hr	Tc by User	=	29.00 min
IDF Curve	=	BRYANT IDF.IDF	Asc/Rec limb fact	=	1/1



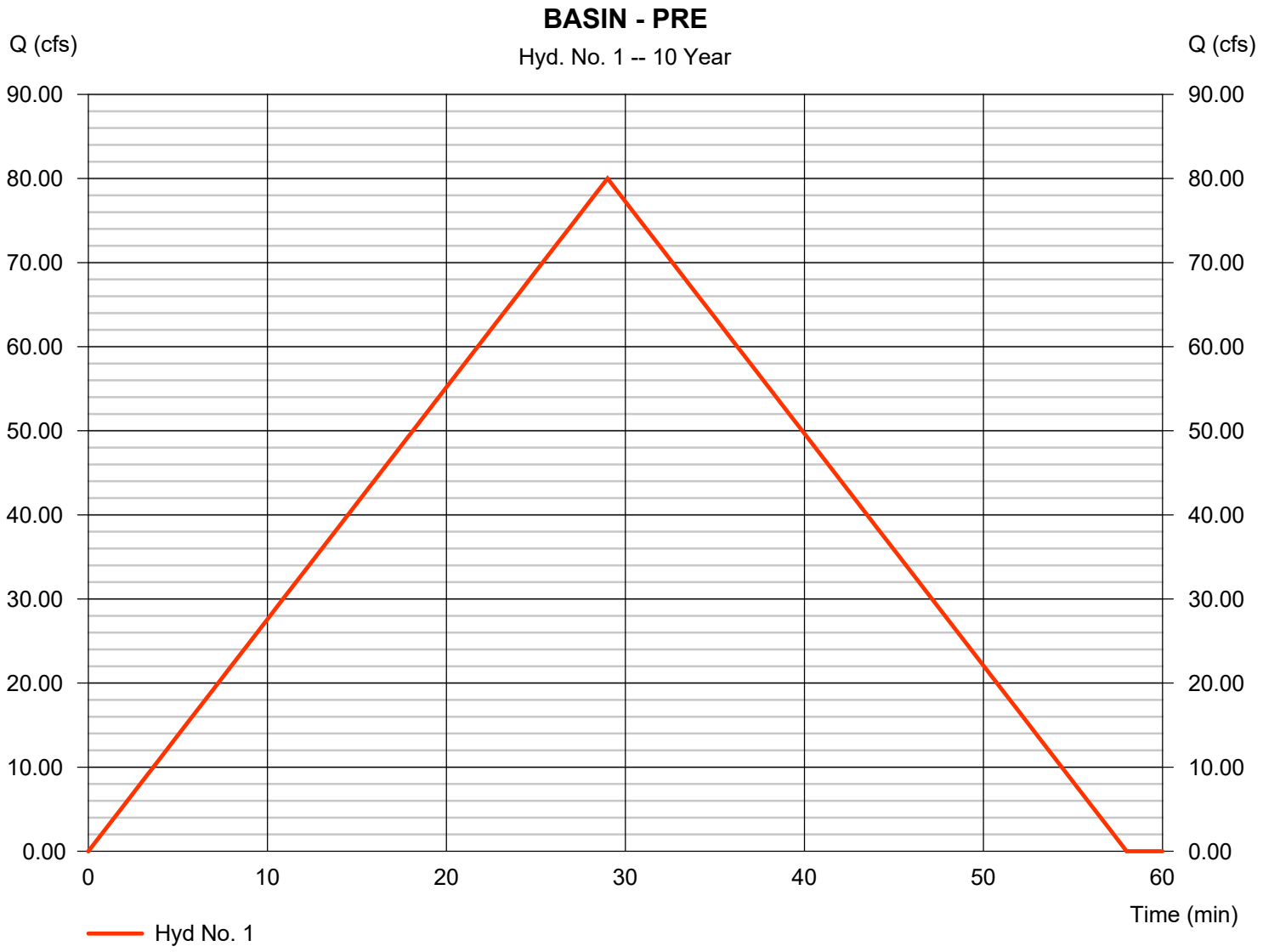
Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2021 Tuesday, 01 / 28 / 2025

Hyd. No. 1

BASIN - PRE

Hydrograph type	= Rational	Peak discharge	= 80.01 cfs
Storm frequency	= 10 yrs	Time to peak	= 29 min
Time interval	= 1 min	Hyd. volume	= 139,223 cuft
Drainage area	= 44.030 ac	Runoff coeff.	= 0.47
Intensity	= 3.866 in/hr	Tc by User	= 29.00 min
IDF Curve	= BRYANT IDF.IDF	Asc/Rec limb fact	= 1/1



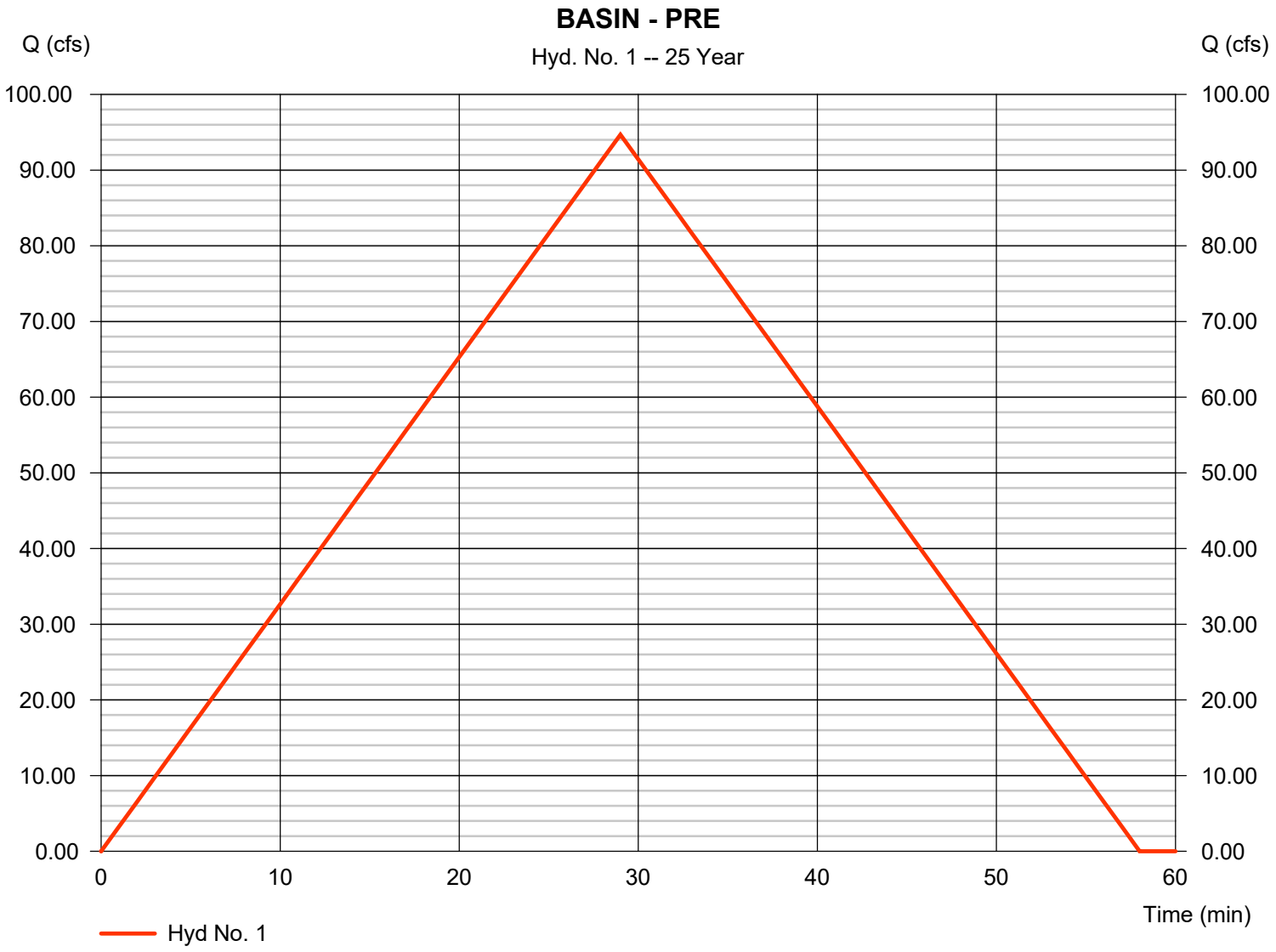
Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2021 Tuesday, 01 / 28 / 2025

Hyd. No. 1

BASIN - PRE

Hydrograph type	= Rational	Peak discharge	= 94.69 cfs
Storm frequency	= 25 yrs	Time to peak	= 29 min
Time interval	= 1 min	Hyd. volume	= 164,756 cuft
Drainage area	= 44.030 ac	Runoff coeff.	= 0.47
Intensity	= 4.576 in/hr	Tc by User	= 29.00 min
IDF Curve	= BRYANT IDF.IDF	Asc/Rec limb fact	= 1/1



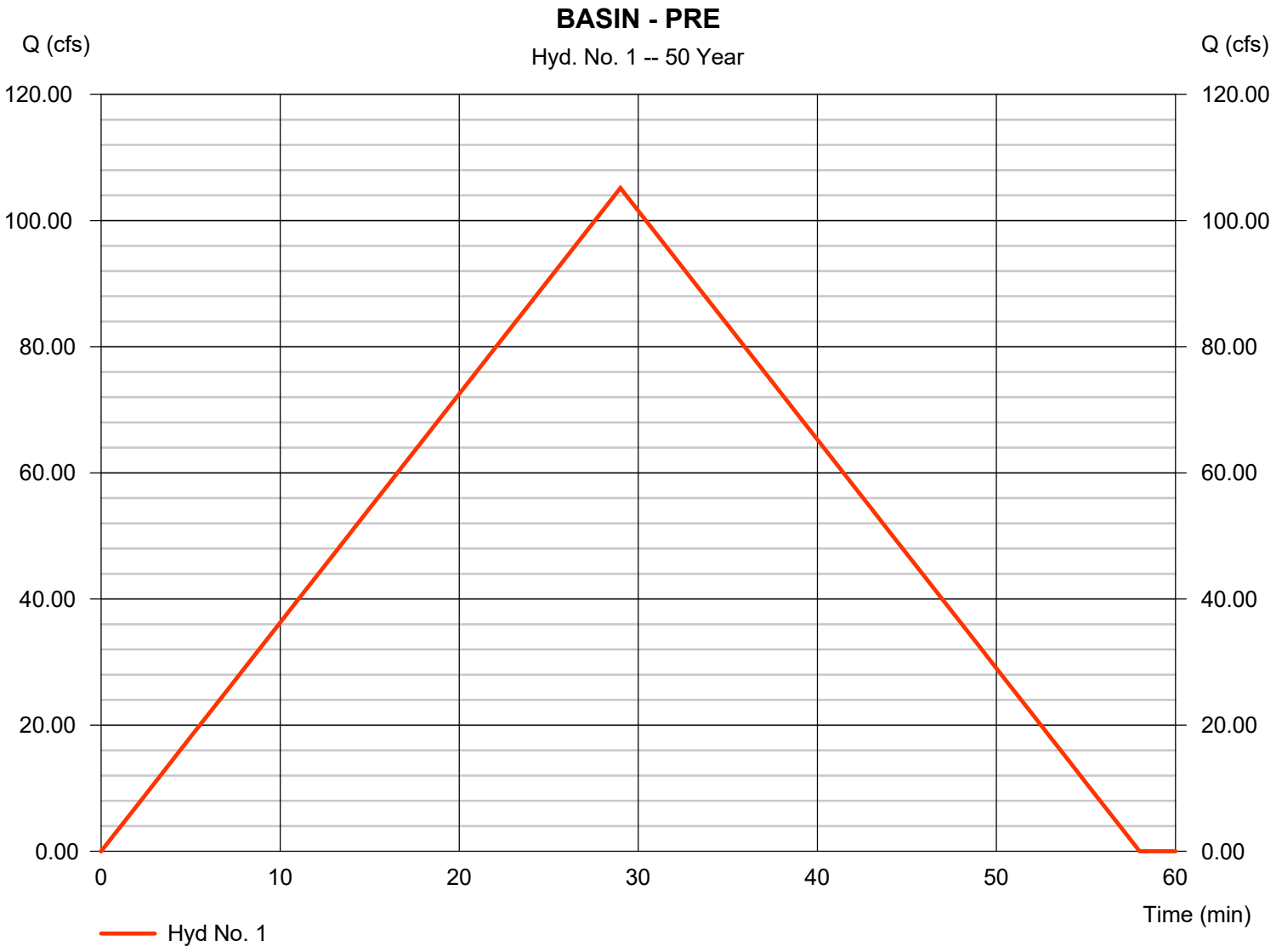
Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2021 Tuesday, 01 / 28 / 2025

Hyd. No. 1

BASIN - PRE

Hydrograph type	=	Rational	Peak discharge	=	105.16 cfs
Storm frequency	=	50 yrs	Time to peak	=	29 min
Time interval	=	1 min	Hyd. volume	=	182,986 cuft
Drainage area	=	44.030 ac	Runoff coeff.	=	0.47
Intensity	=	5.082 in/hr	Tc by User	=	29.00 min
IDF Curve	=	BRYANT IDF.IDF	Asc/Rec limb fact	=	1/1



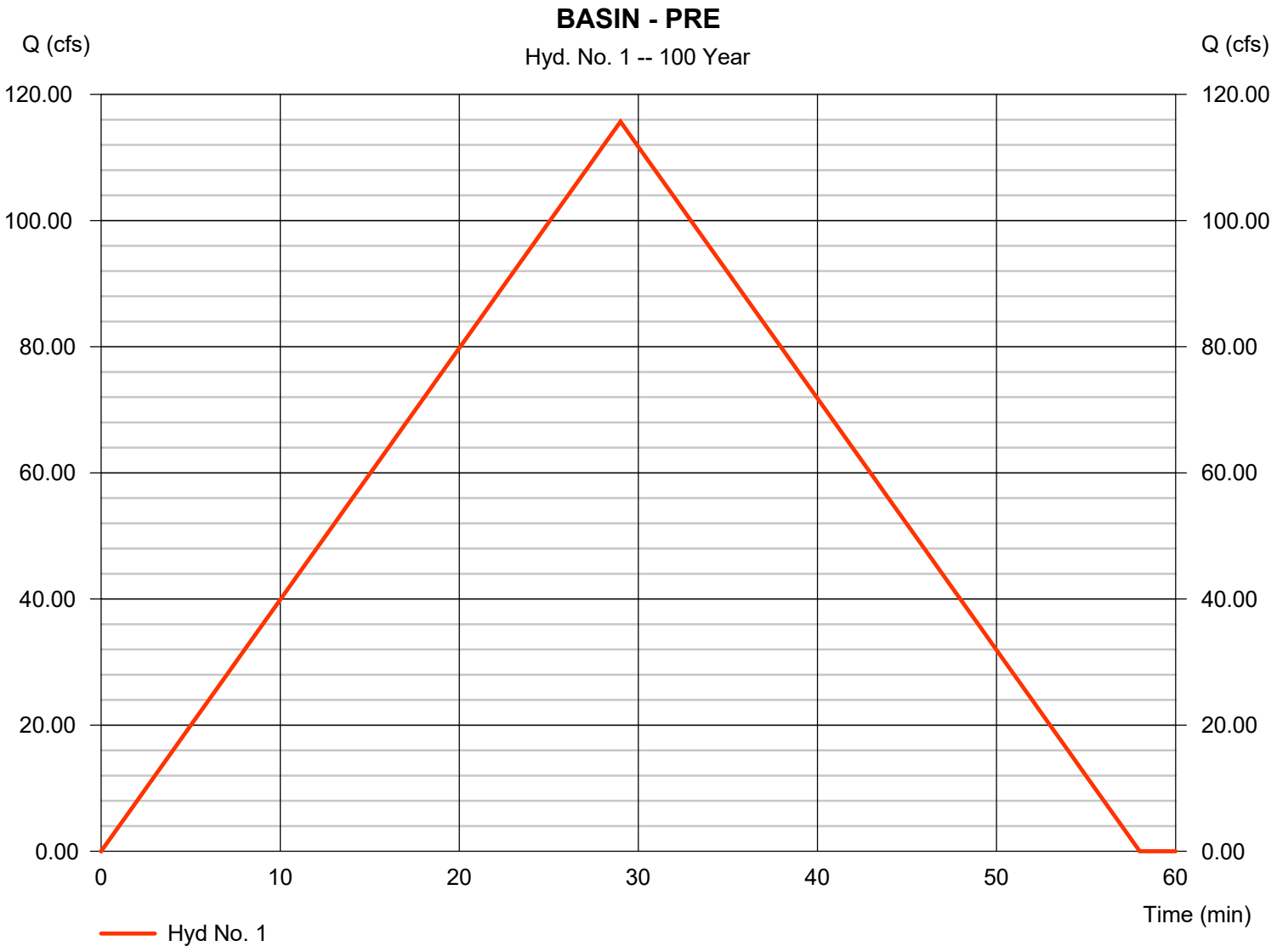
Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2021 Tuesday, 01 / 28 / 2025

Hyd. No. 1

BASIN - PRE

Hydrograph type	=	Rational	Peak discharge	=	115.69 cfs
Storm frequency	=	100 yrs	Time to peak	=	29 min
Time interval	=	1 min	Hyd. volume	=	201,307 cuft
Drainage area	=	44.030 ac	Runoff coeff.	=	0.47
Intensity	=	5.591 in/hr	Tc by User	=	29.00 min
IDF Curve	=	BRYANT IDF.IDF	Asc/Rec limb fact	=	1/1



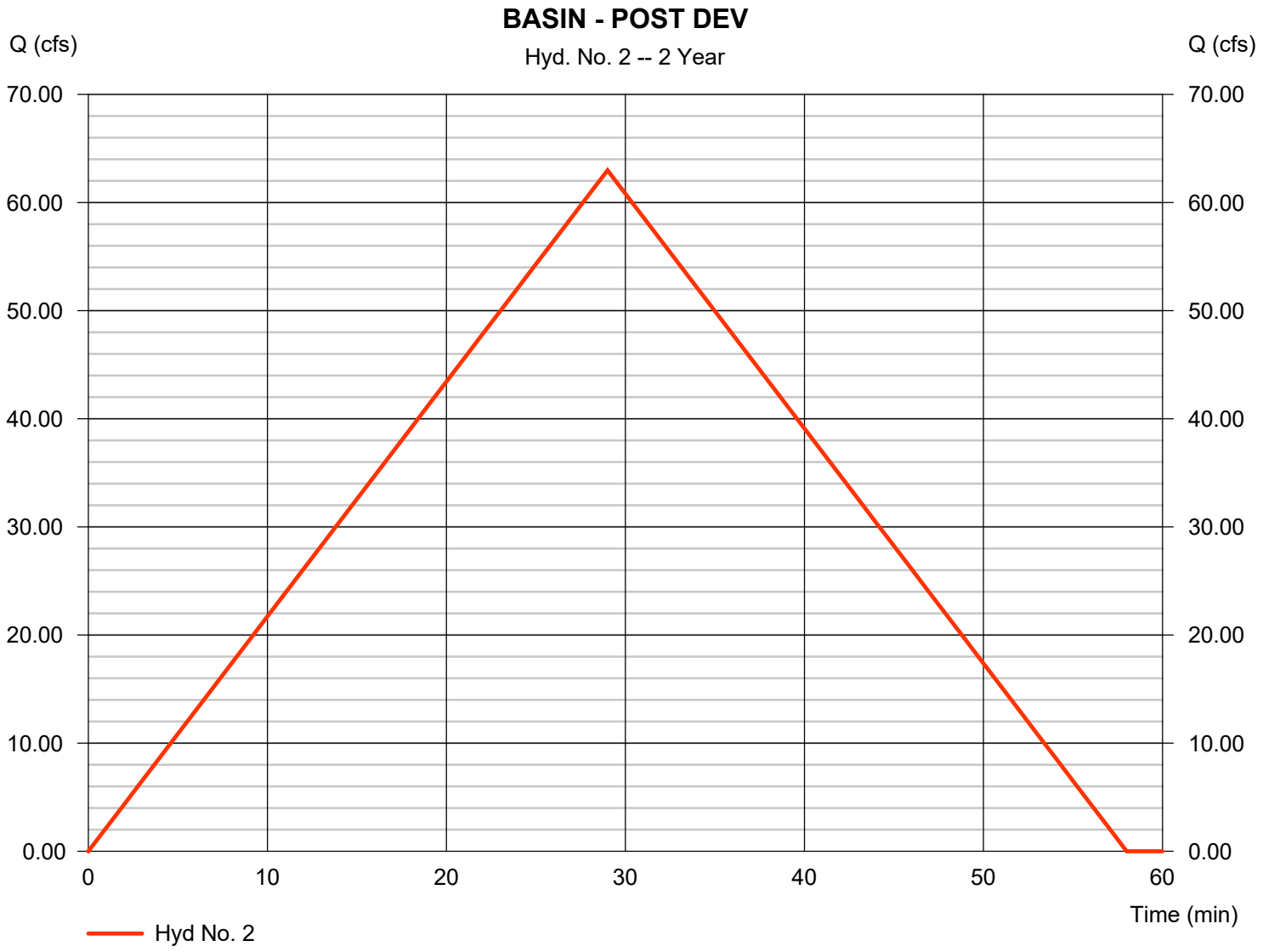
Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2021 Tuesday, 01 / 28 / 2025

Hyd. No. 2

BASIN - POST DEV

Hydrograph type	=	Rational	Peak discharge	=	62.98 cfs
Storm frequency	=	2 yrs	Time to peak	=	29 min
Time interval	=	1 min	Hyd. volume	=	109,592 cuft
Drainage area	=	44.030 ac	Runoff coeff.	=	0.52
Intensity	=	2.751 in/hr	Tc by User	=	29.00 min
IDF Curve	=	BRYANT IDF.IDF	Asc/Rec limb fact	=	1/1



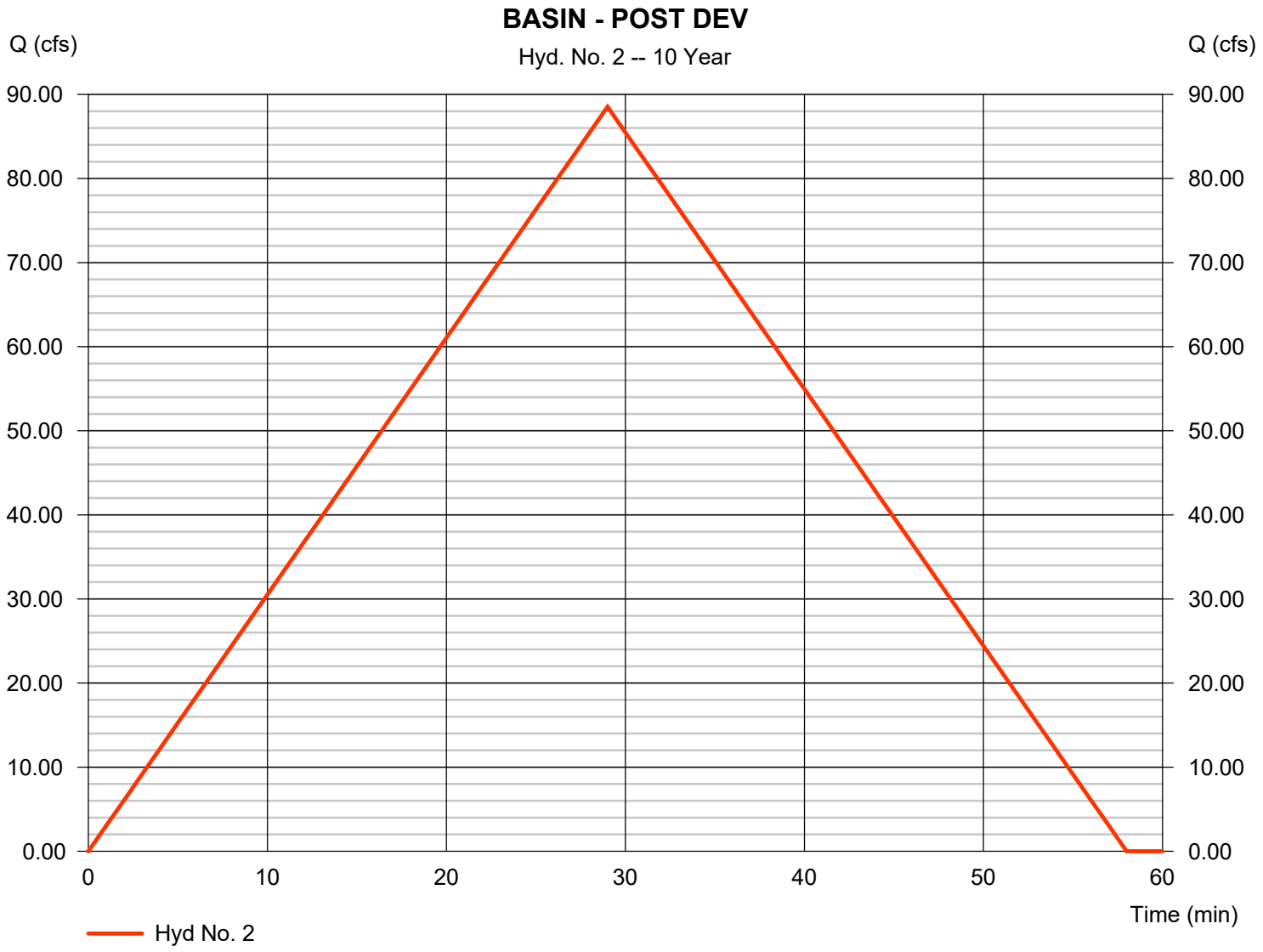
Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2021 Tuesday, 01 / 28 / 2025

Hyd. No. 2

BASIN - POST DEV

Hydrograph type	=	Rational	Peak discharge	=	88.53 cfs
Storm frequency	=	10 yrs	Time to peak	=	29 min
Time interval	=	1 min	Hyd. volume	=	154,034 cuft
Drainage area	=	44.030 ac	Runoff coeff.	=	0.52
Intensity	=	3.866 in/hr	Tc by User	=	29.00 min
IDF Curve	=	BRYANT IDF.IDF	Asc/Rec limb fact	=	1/1



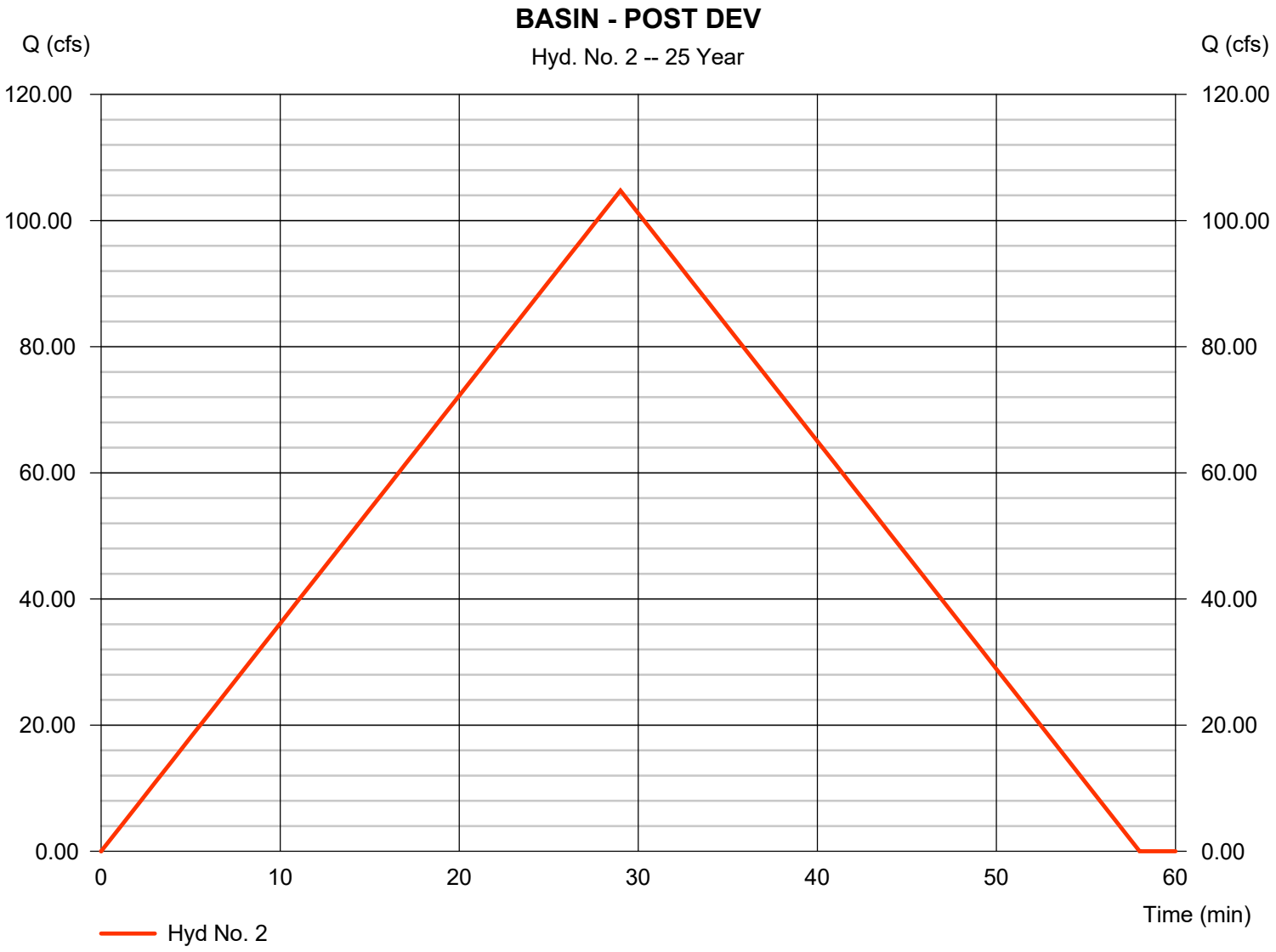
Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2021 Tuesday, 01 / 28 / 2025

Hyd. No. 2

BASIN - POST DEV

Hydrograph type	=	Rational	Peak discharge	=	104.76 cfs
Storm frequency	=	25 yrs	Time to peak	=	29 min
Time interval	=	1 min	Hyd. volume	=	182,283 cuft
Drainage area	=	44.030 ac	Runoff coeff.	=	0.52
Intensity	=	4.576 in/hr	Tc by User	=	29.00 min
IDF Curve	=	BRYANT IDF.IDF	Asc/Rec limb fact	=	1/1



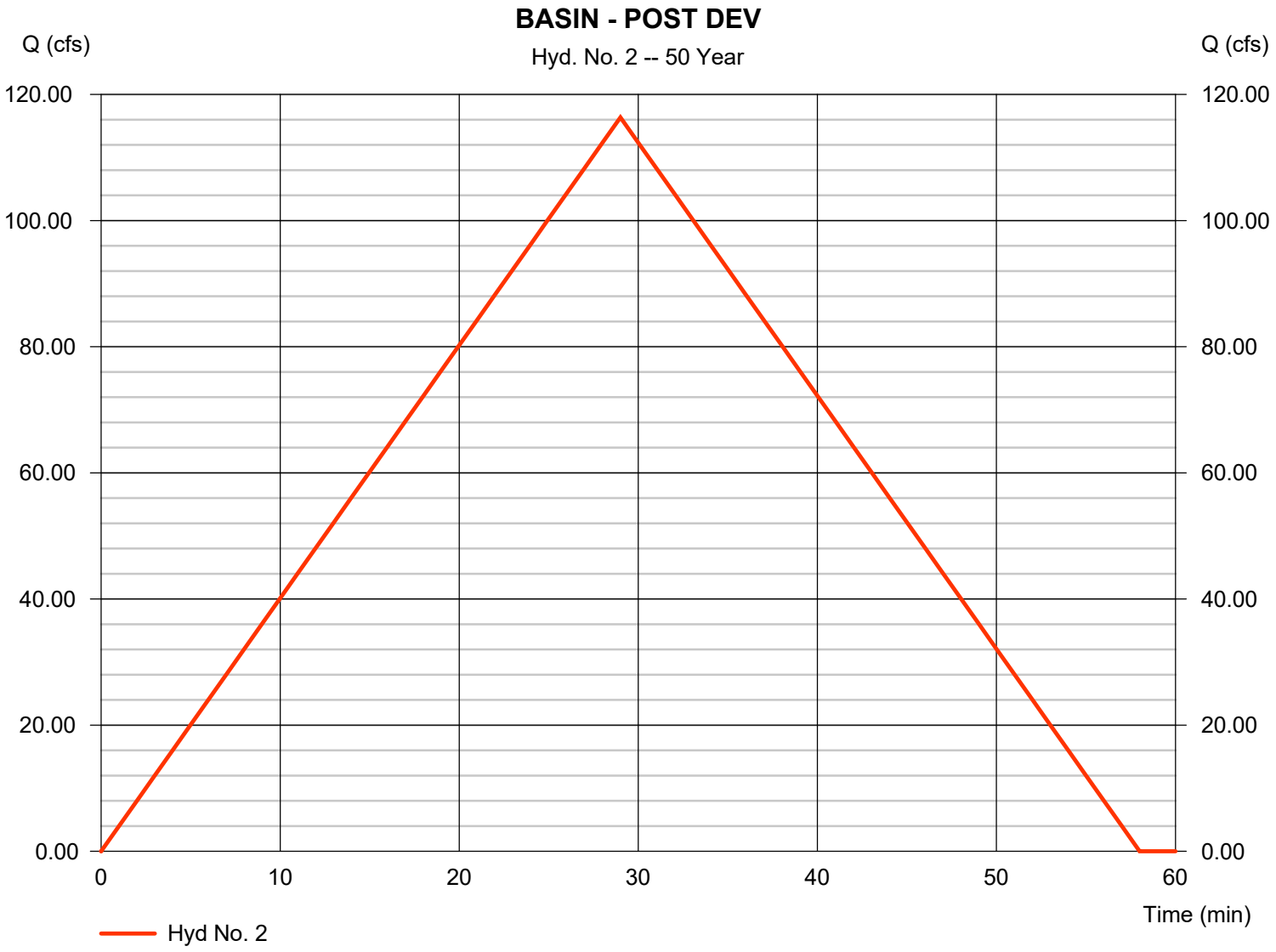
Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2021 Tuesday, 01 / 28 / 2025

Hyd. No. 2

BASIN - POST DEV

Hydrograph type	=	Rational	Peak discharge	=	116.35 cfs
Storm frequency	=	50 yrs	Time to peak	=	29 min
Time interval	=	1 min	Hyd. volume	=	202,453 cuft
Drainage area	=	44.030 ac	Runoff coeff.	=	0.52
Intensity	=	5.082 in/hr	Tc by User	=	29.00 min
IDF Curve	=	BRYANT IDF.IDF	Asc/Rec limb fact	=	1/1



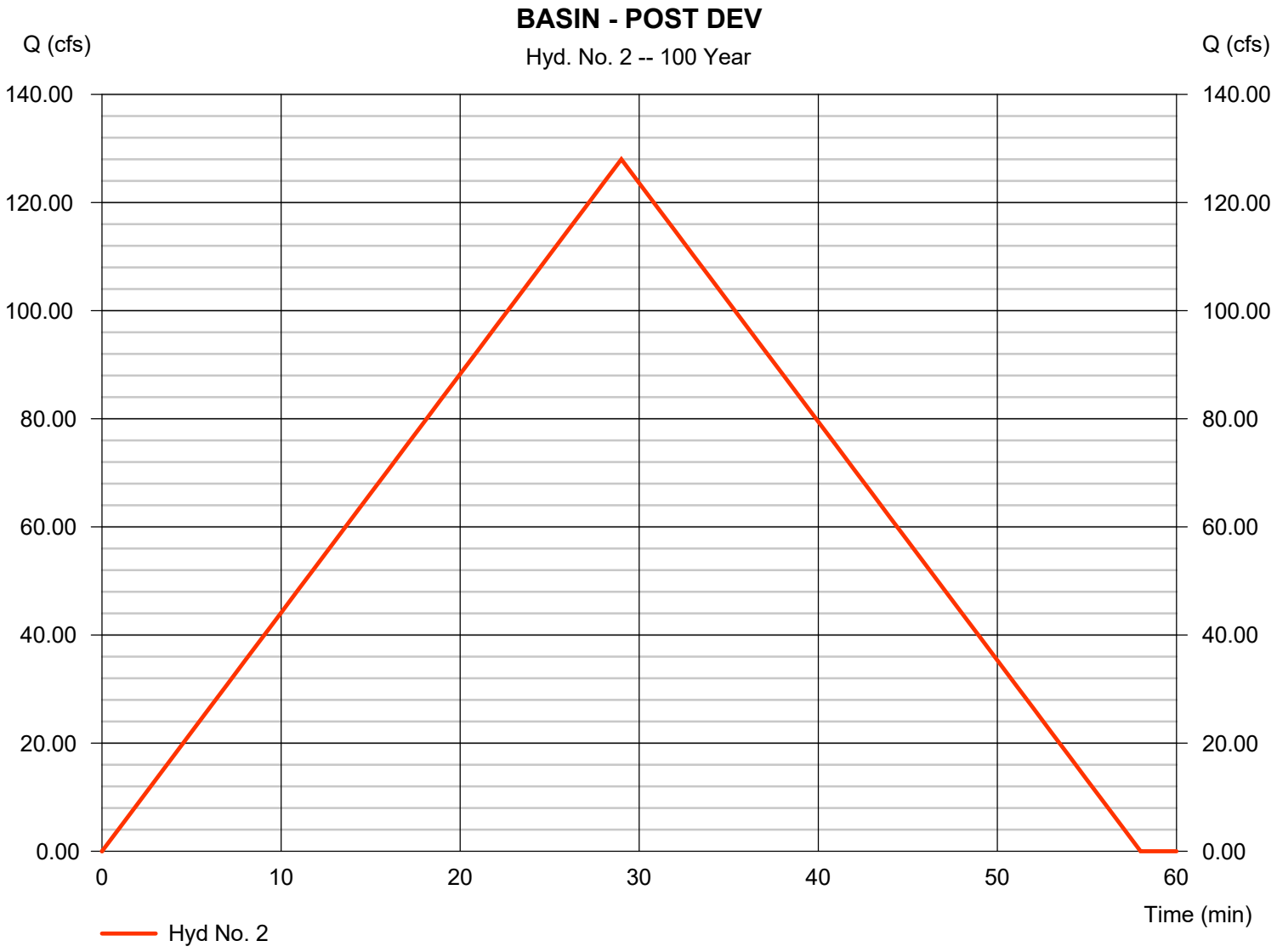
Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2021 Tuesday, 01 / 28 / 2025

Hyd. No. 2

BASIN - POST DEV

Hydrograph type	=	Rational	Peak discharge	=	128.00 cfs
Storm frequency	=	100 yrs	Time to peak	=	29 min
Time interval	=	1 min	Hyd. volume	=	222,723 cuft
Drainage area	=	44.030 ac	Runoff coeff.	=	0.52
Intensity	=	5.591 in/hr	Tc by User	=	29.00 min
IDF Curve	=	BRYANT IDF.IDF	Asc/Rec limb fact	=	1/1



Hydrograph Report

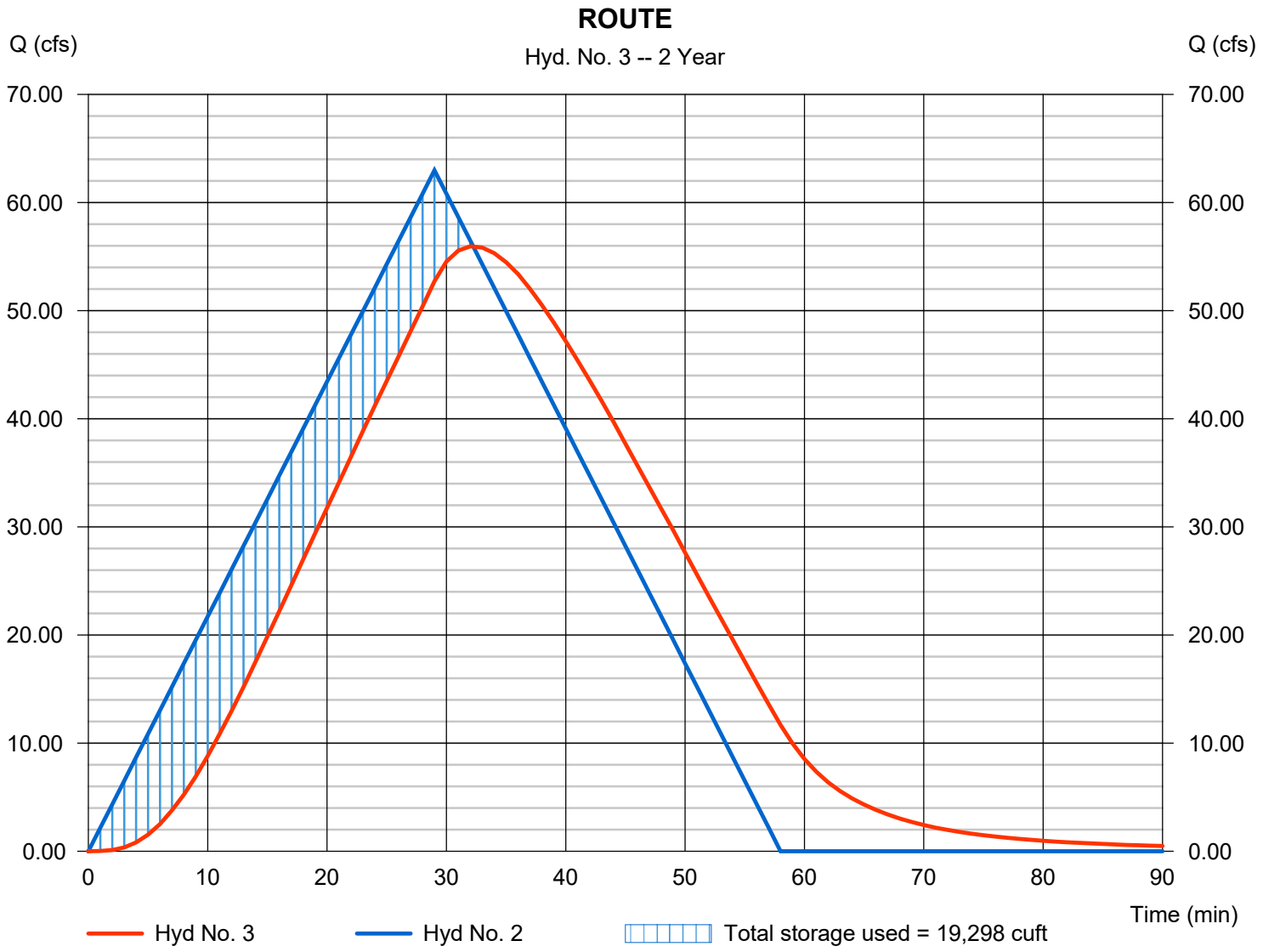
Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2021 Tuesday, 01 / 28 / 2025

Hyd. No. 3

ROUTE

Hydrograph type	= Reservoir	Peak discharge	= 55.95 cfs
Storm frequency	= 2 yrs	Time to peak	= 32 min
Time interval	= 1 min	Hyd. volume	= 109,590 cuft
Inflow hyd. No.	= 2 - BASIN - POST DEV	Max. Elevation	= 465.47 ft
Reservoir name	= POND	Max. Storage	= 19,298 cuft

Storage Indication method used.



Hydrograph Report

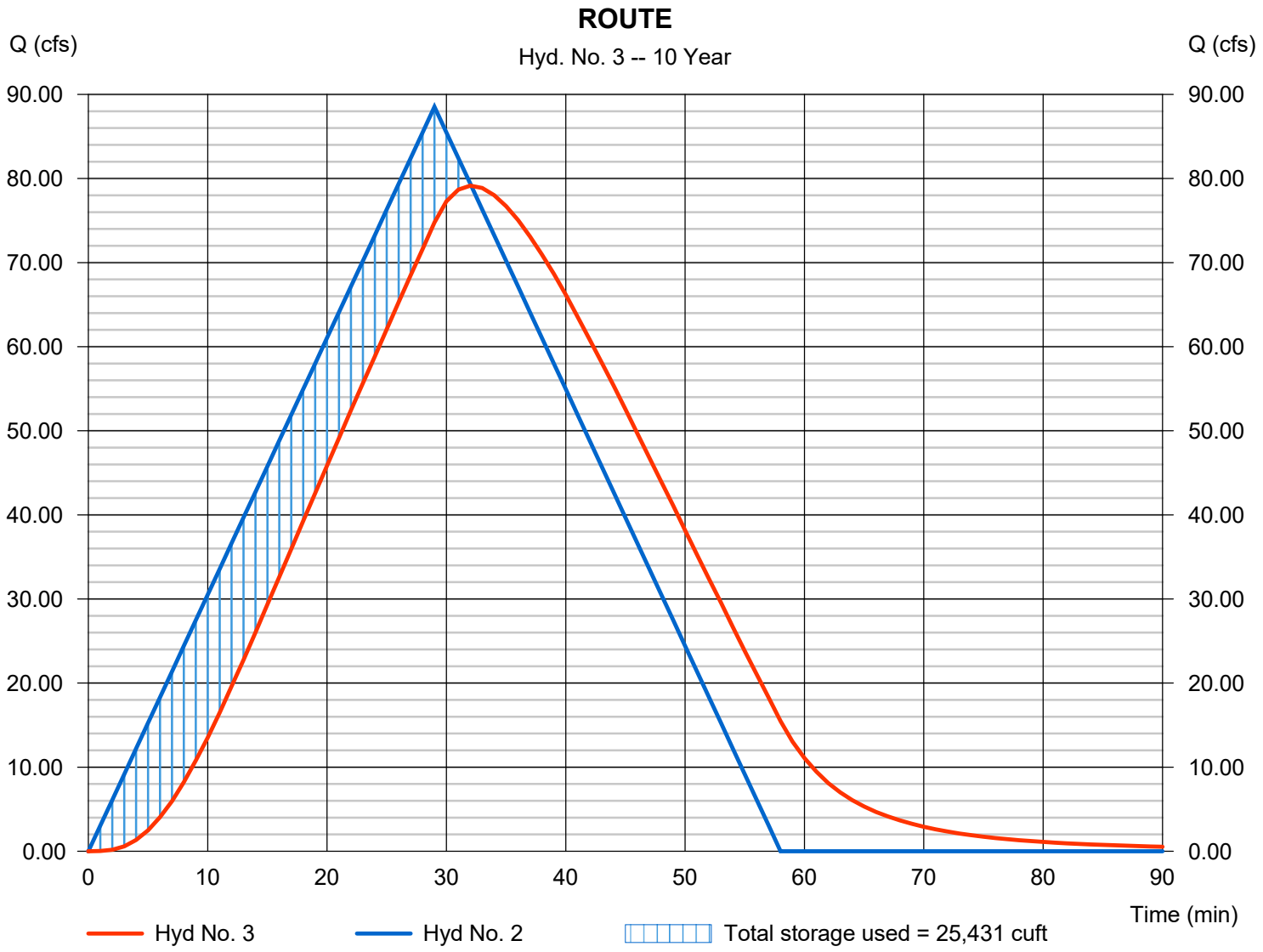
Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2021 Tuesday, 01 / 28 / 2025

Hyd. No. 3

ROUTE

Hydrograph type	= Reservoir	Peak discharge	= 79.14 cfs
Storm frequency	= 10 yrs	Time to peak	= 32 min
Time interval	= 1 min	Hyd. volume	= 154,032 cuft
Inflow hyd. No.	= 2 - BASIN - POST DEV	Max. Elevation	= 466.12 ft
Reservoir name	= POND	Max. Storage	= 25,431 cuft

Storage Indication method used.



Hydrograph Report

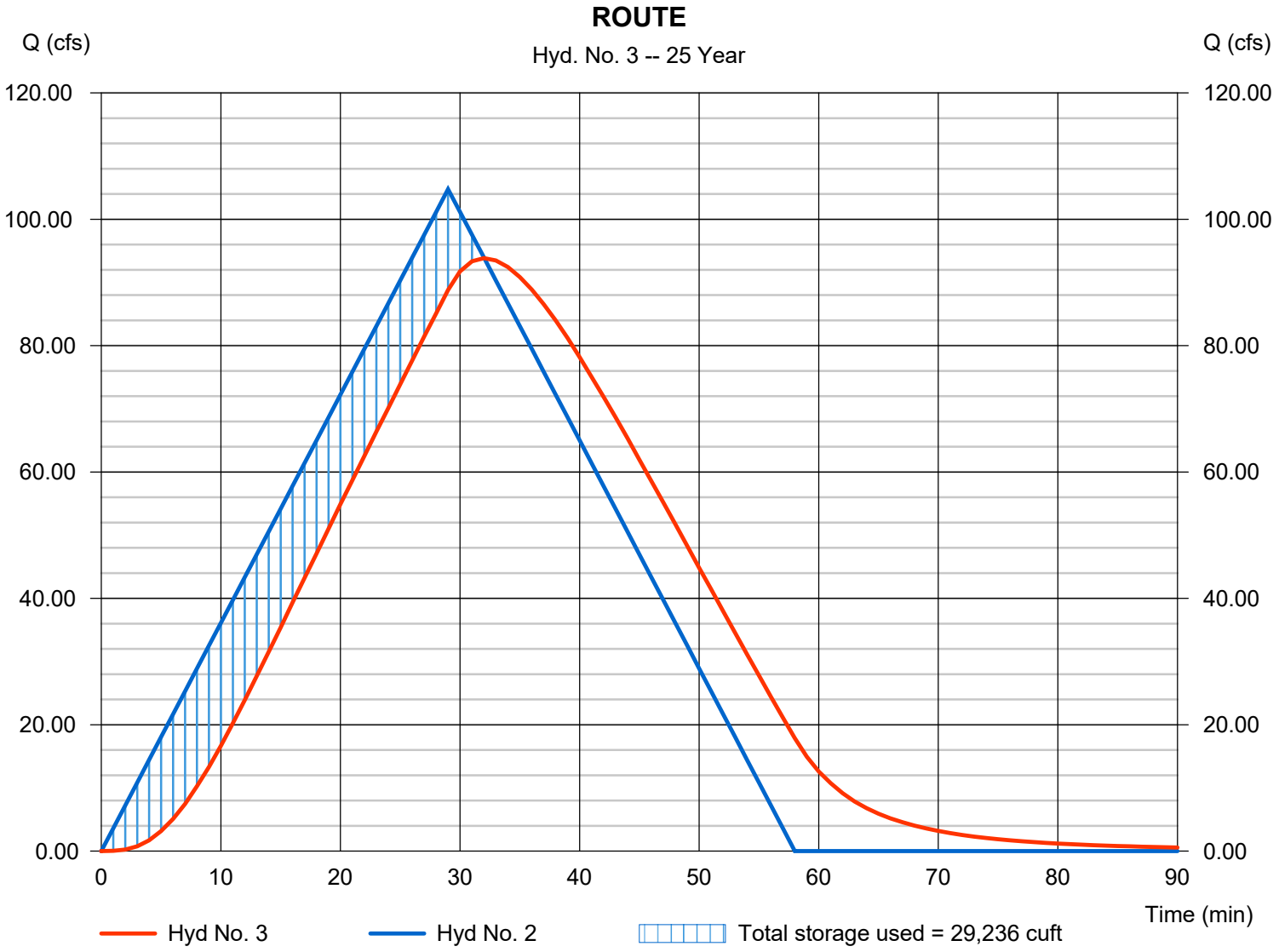
Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2021 Tuesday, 01 / 28 / 2025

Hyd. No. 3

ROUTE

Hydrograph type	= Reservoir	Peak discharge	= 93.85 cfs
Storm frequency	= 25 yrs	Time to peak	= 32 min
Time interval	= 1 min	Hyd. volume	= 182,281 cuft
Inflow hyd. No.	= 2 - BASIN - POST DEV	Max. Elevation	= 466.49 ft
Reservoir name	= POND	Max. Storage	= 29,236 cuft

Storage Indication method used.



Hydrograph Report

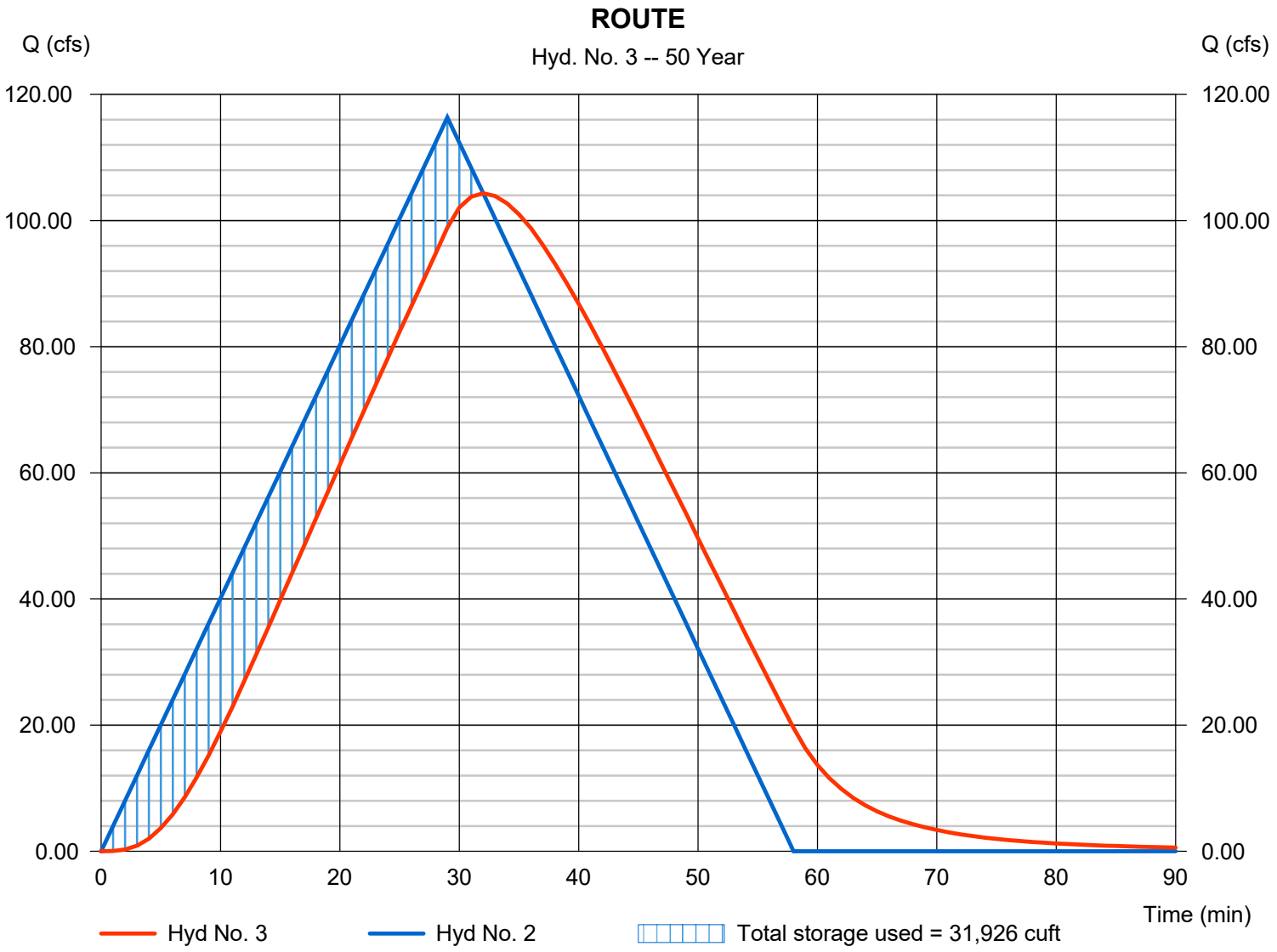
Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2021 Tuesday, 01 / 28 / 2025

Hyd. No. 3

ROUTE

Hydrograph type	= Reservoir	Peak discharge	= 104.32 cfs
Storm frequency	= 50 yrs	Time to peak	= 32 min
Time interval	= 1 min	Hyd. volume	= 202,450 cuft
Inflow hyd. No.	= 2 - BASIN - POST DEV	Max. Elevation	= 466.75 ft
Reservoir name	= POND	Max. Storage	= 31,926 cuft

Storage Indication method used.



Hydrograph Report

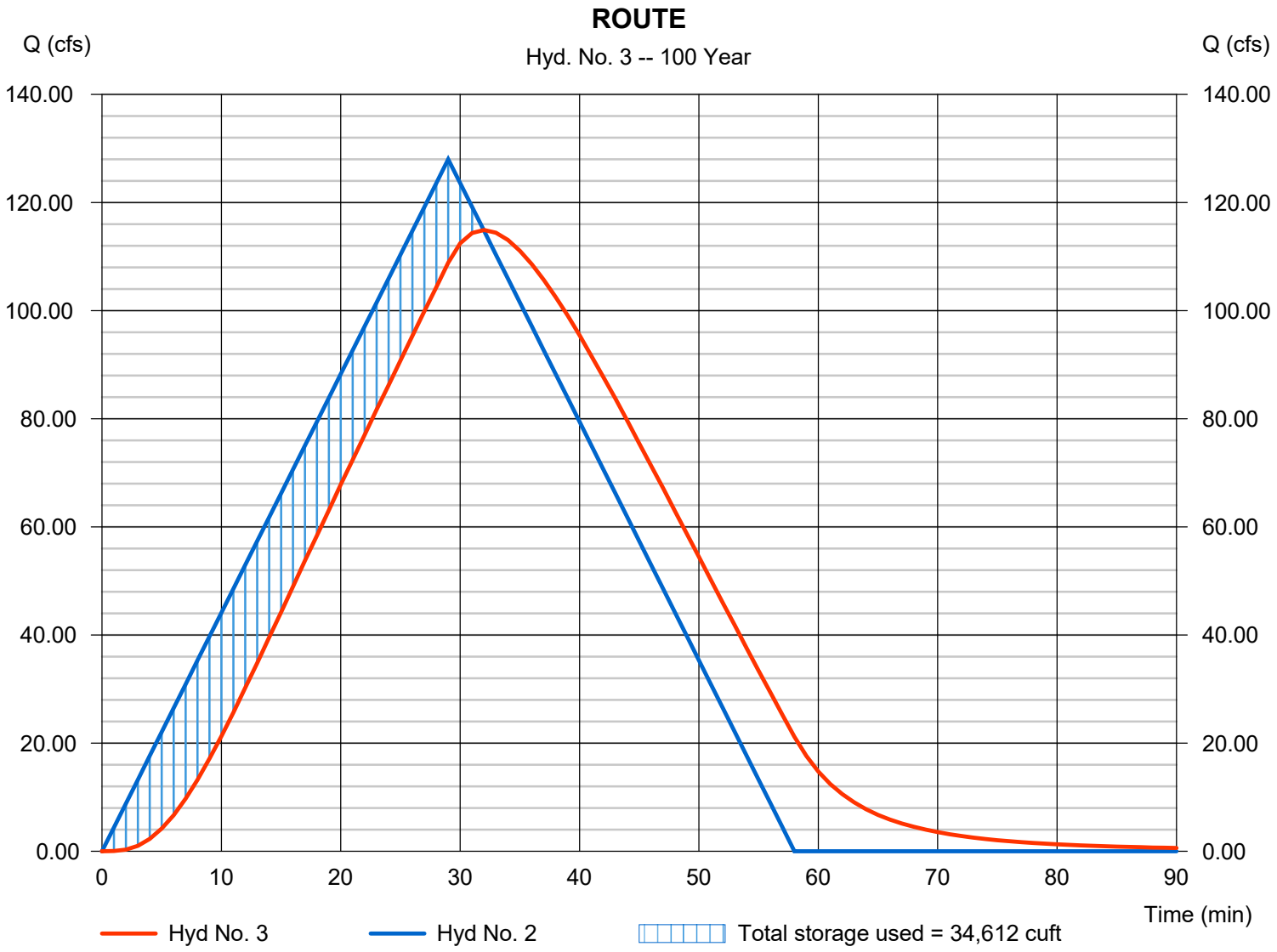
Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2021 Tuesday, 01 / 28 / 2025

Hyd. No. 3

ROUTE

Hydrograph type	= Reservoir	Peak discharge	= 114.92 cfs
Storm frequency	= 100 yrs	Time to peak	= 32 min
Time interval	= 1 min	Hyd. volume	= 222,721 cuft
Inflow hyd. No.	= 2 - BASIN - POST DEV	Max. Elevation	= 467.00 ft
Reservoir name	= POND	Max. Storage	= 34,612 cuft

Storage Indication method used.



Hydrograph Report

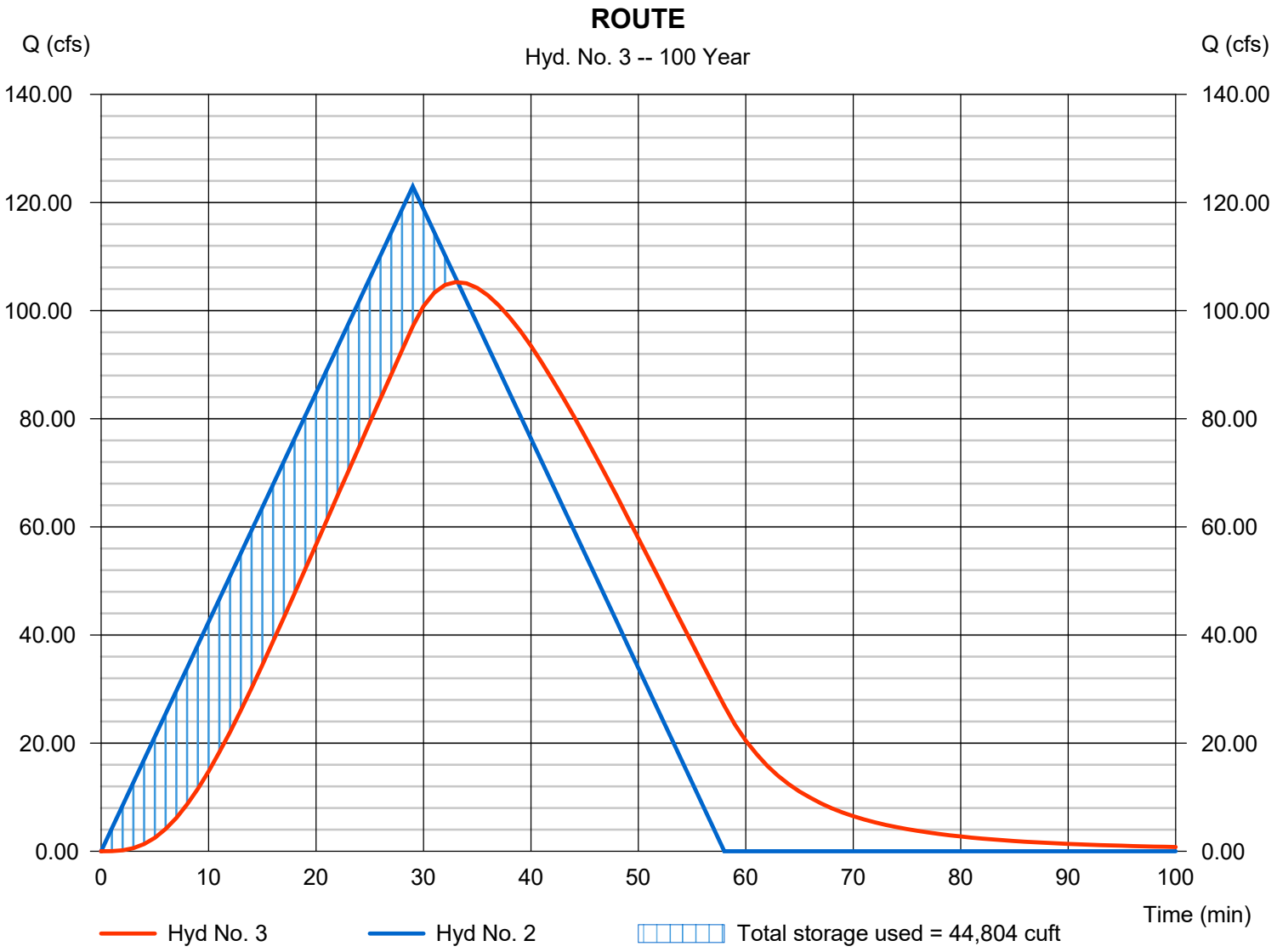
Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2021 Tuesday, 01 / 28 / 2025

Hyd. No. 3

ROUTE

Hydrograph type	= Reservoir	Peak discharge	= 105.29 cfs
Storm frequency	= 100 yrs	Time to peak	= 33 min
Time interval	= 1 min	Hyd. volume	= 213,968 cuft
Inflow hyd. No.	= 2 - BASIN - POST DEV	Max. Elevation	= 466.86 ft
Reservoir name	= POND	Max. Storage	= 44,804 cuft

Storage Indication method used.



Pond Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2021 Tuesday, 01 / 28 / 2025

Pond No. 1 - POND

Pond Data

Trapezoid -Bottom L x W = 130.0 x 70.0 ft, Side slope = 3.00:1, Bottom elev. = 463.00 ft, Depth = 4.00 ft

Stage / Storage Table

Stage (ft)	Elevation (ft)	Contour area (sqft)	Incr. Storage (cuft)	Total storage (cuft)
0.00	463.00	9,100	0	0
0.40	463.40	9,586	3,737	3,737
0.80	463.80	10,083	3,933	7,670
1.20	464.20	10,592	4,135	11,805
1.60	464.60	11,112	4,340	16,145
2.00	465.00	11,644	4,551	20,696
2.40	465.40	12,187	4,766	25,462
2.80	465.80	12,742	4,986	30,447
3.20	466.20	13,309	5,210	35,657
3.60	466.60	13,887	5,439	41,096
4.00	467.00	14,476	5,672	46,768

Culvert / Orifice Structures

	[A]	[B]	[C]	[PrfRsr]
Rise (in)	= 0.00	0.00	0.00	0.00
Span (in)	= 0.00	0.00	0.00	0.00
No. Barrels	= 0	0	0	0
Invert El. (ft)	= 0.00	0.00	0.00	0.00
Length (ft)	= 0.00	0.00	0.00	0.00
Slope (%)	= 0.00	0.00	0.00	n/a
N-Value	= .013	.013	.013	n/a
Orifice Coeff.	= 0.60	0.60	0.60	0.60
Multi-Stage	= n/a	No	No	No

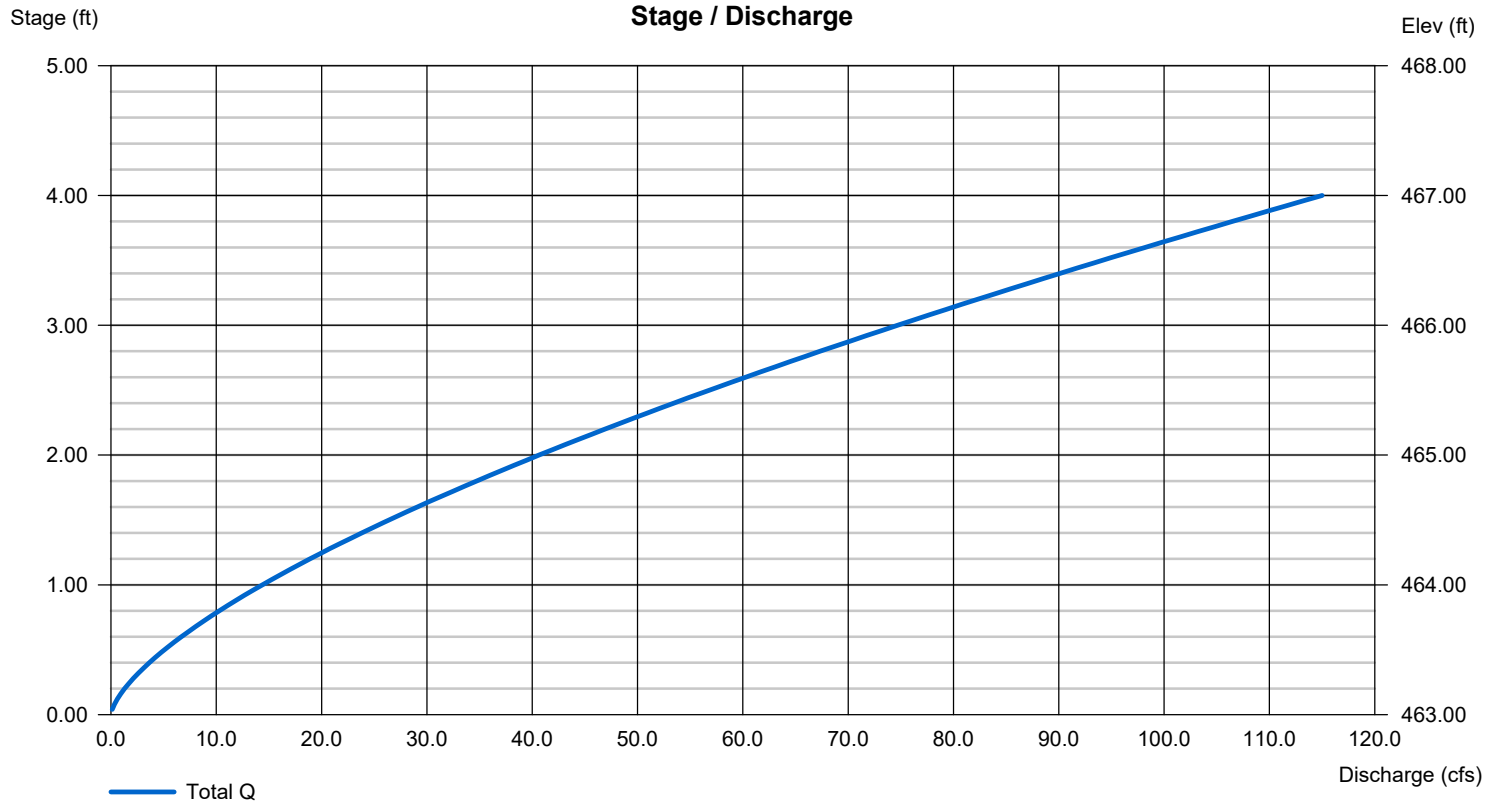
Weir Structures

	[A]	[B]	[C]	[D]
Crest Len (ft)	= 5.75	0.00	0.00	0.00
Crest El. (ft)	= 463.00	0.00	0.00	0.00
Weir Coeff.	= 2.50	3.33	3.33	3.33
Weir Type	= Rect	---	---	---
Multi-Stage	= No	No	No	No

Exfil.(in/hr) = 0.000 (by Wet area)

TW Elev. (ft) = 0.00

Note: Culvert/Orifice outflows are analyzed under inlet (ic) and outlet (oc) control. Weir risers checked for orifice conditions (ic) and submergence (s).



Pond Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2021 Tuesday, 01 / 28 / 2025

Pond No. 1 - POND

Pond Data

Trapezoid -Bottom L x W = 130.0 x 70.0 ft, Side slope = 3.00:1, Bottom elev. = 463.00 ft, Depth = 4.00 ft

Stage / Storage Table

Stage (ft)	Elevation (ft)	Contour area (sqft)	Incr. Storage (cuft)	Total storage (cuft)
0.00	463.00	9,100	0	0
0.40	463.40	9,586	3,737	3,737
0.80	463.80	10,083	3,933	7,670
1.20	464.20	10,592	4,135	11,805
1.60	464.60	11,112	4,340	16,145
2.00	465.00	11,644	4,551	20,696
2.40	465.40	12,187	4,766	25,462
2.80	465.80	12,742	4,986	30,447
3.20	466.20	13,309	5,210	35,657
3.60	466.60	13,887	5,439	41,096
4.00	467.00	14,476	5,672	46,768

Culvert / Orifice Structures

	[A]	[B]	[C]	[PrfRsr]
Rise (in)	= 0.00	0.00	0.00	0.00
Span (in)	= 0.00	0.00	0.00	0.00
No. Barrels	= 0	0	0	0
Invert El. (ft)	= 0.00	0.00	0.00	0.00
Length (ft)	= 0.00	0.00	0.00	0.00
Slope (%)	= 0.00	0.00	0.00	n/a
N-Value	= .013	.013	.013	n/a
Orifice Coeff.	= 0.60	0.60	0.60	0.60
Multi-Stage	= n/a	No	No	No

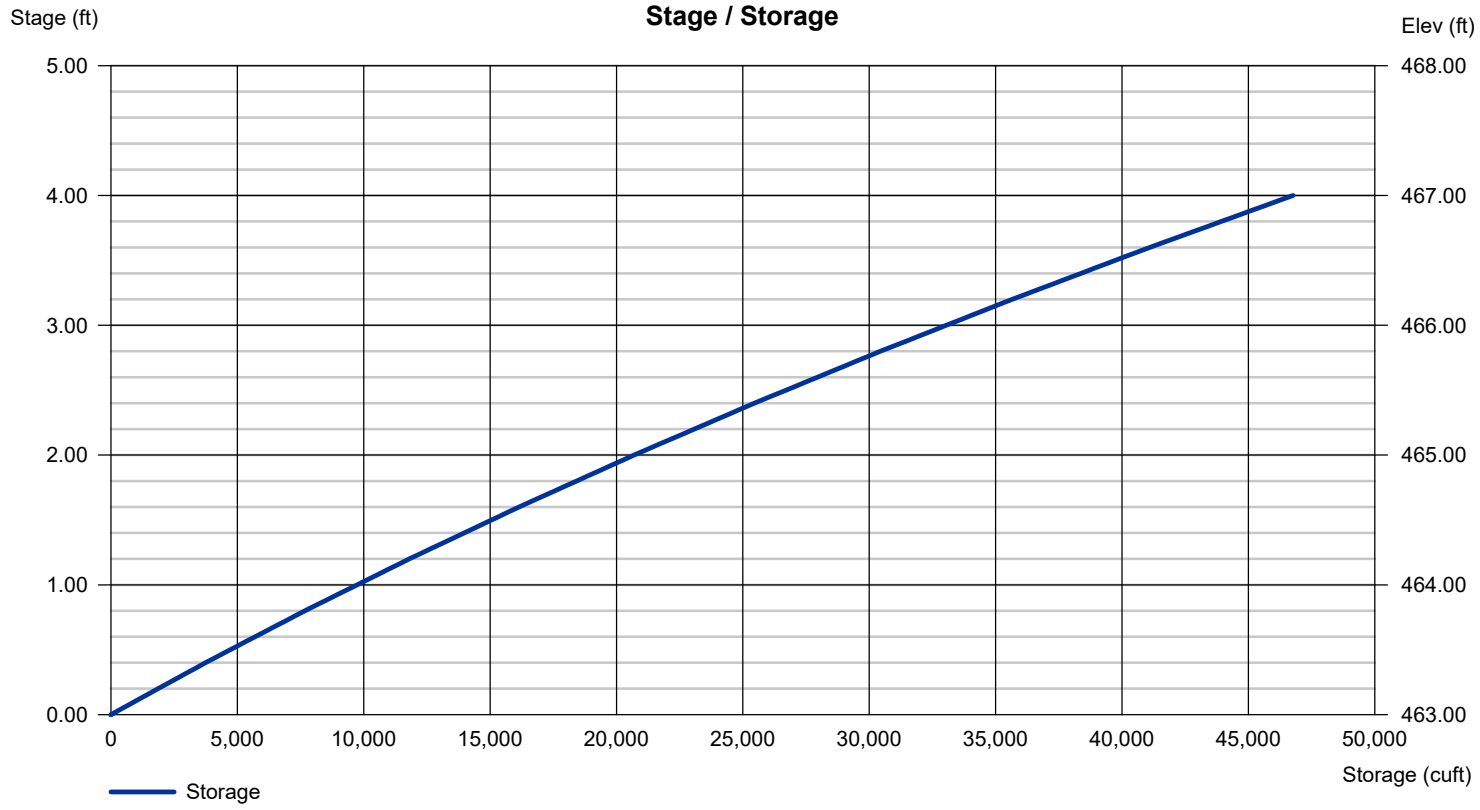
Weir Structures

	[A]	[B]	[C]	[D]
Crest Len (ft)	= 5.75	0.00	0.00	0.00
Crest El. (ft)	= 463.00	0.00	0.00	0.00
Weir Coeff.	= 2.50	3.33	3.33	3.33
Weir Type	= Rect	---	---	---
Multi-Stage	= No	No	No	No

Exfil.(in/hr) = 0.000 (by Wet area)

TW Elev. (ft) = 0.00

Note: Culvert/Orifice outflows are analyzed under inlet (ic) and outlet (oc) control. Weir risers checked for orifice conditions (ic) and submergence (s).



Weir Report

Weir

Rectangular Weir

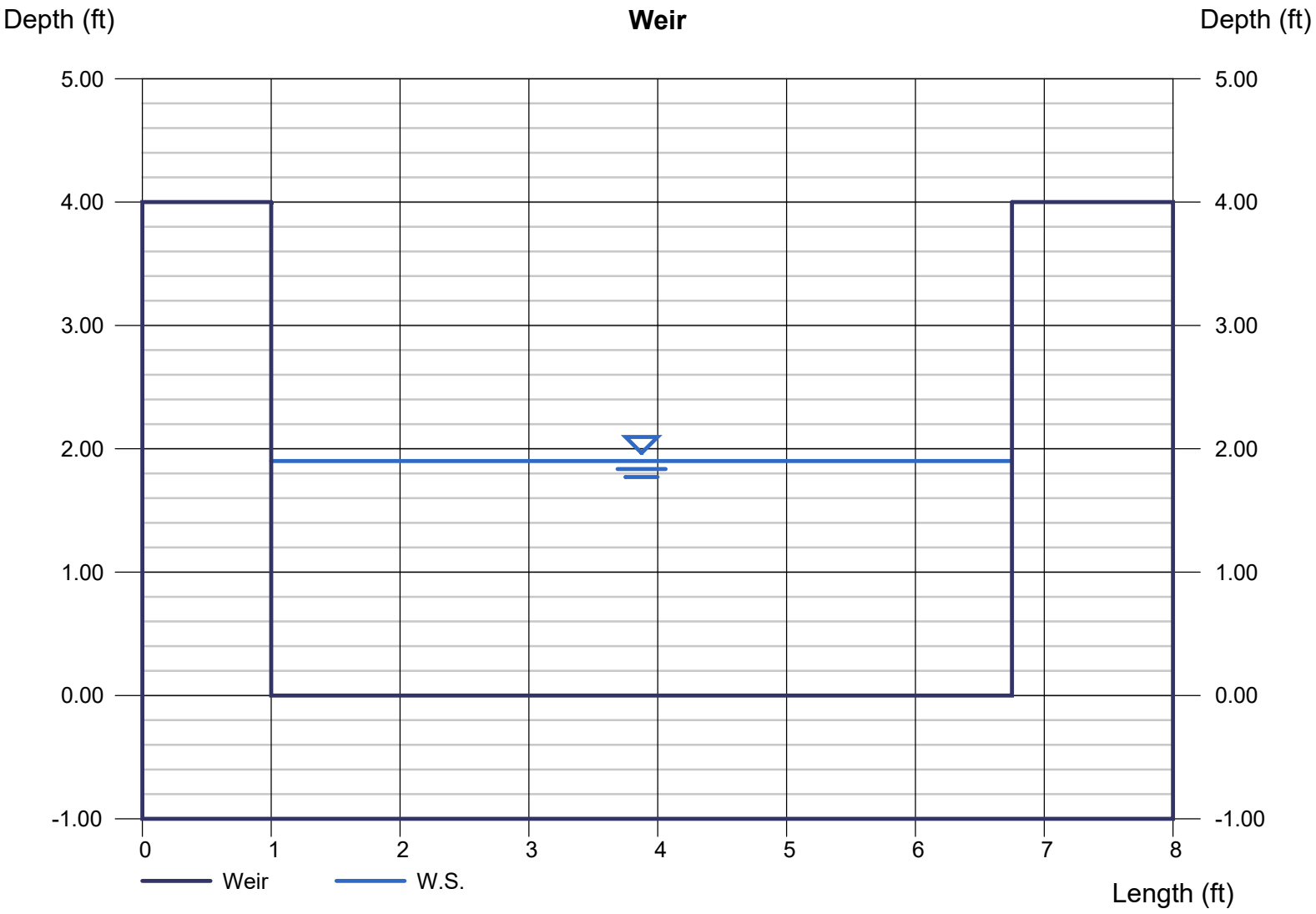
Crest	= Broad
Bottom Length (ft)	= 5.75
Total Depth (ft)	= 4.00

Calculations

Weir Coeff. Cw	= 2.50
Compute by:	Known Q
Known Q (cfs)	= 37.65

Highlighted

Depth (ft)	= 1.90
Q (cfs)	= 37.65
Area (sqft)	= 10.93
Velocity (ft/s)	= 3.44
Top Width (ft)	= 5.75



Weir Report

Weir

Rectangular Weir

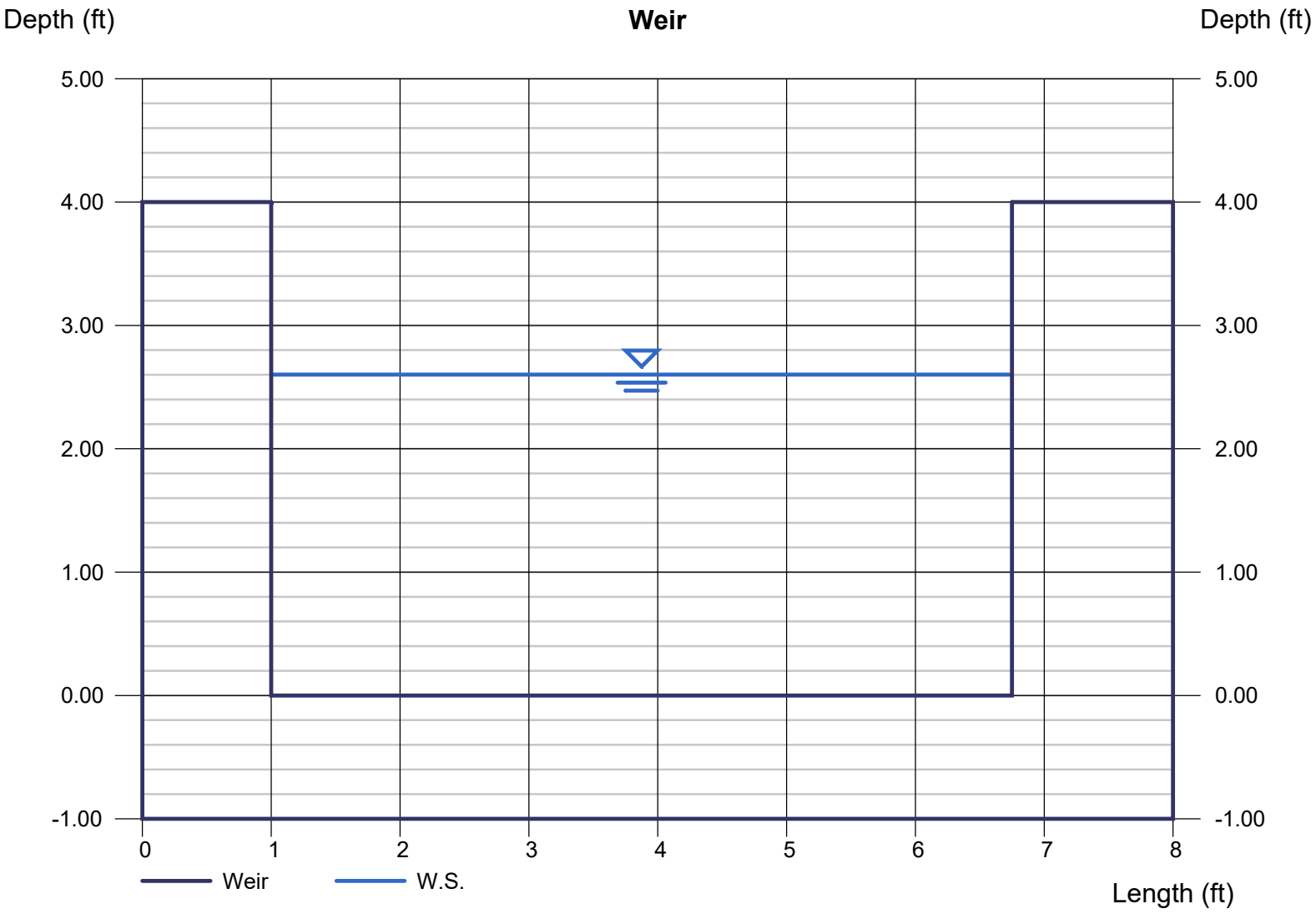
Crest	= Broad
Bottom Length (ft)	= 5.75
Total Depth (ft)	= 4.00

Calculations

Weir Coeff. Cw	= 2.50
Compute by:	Known Q
Known Q (cfs)	= 60.27

Highlighted

Depth (ft)	= 2.60
Q (cfs)	= 60.27
Area (sqft)	= 14.96
Velocity (ft/s)	= 4.03
Top Width (ft)	= 5.75



Weir Report

Hydraflow Express Extension for Autodesk® Civil 3D® by Autodesk, Inc. Tuesday, Jan 28 2025

Weir

Rectangular Weir

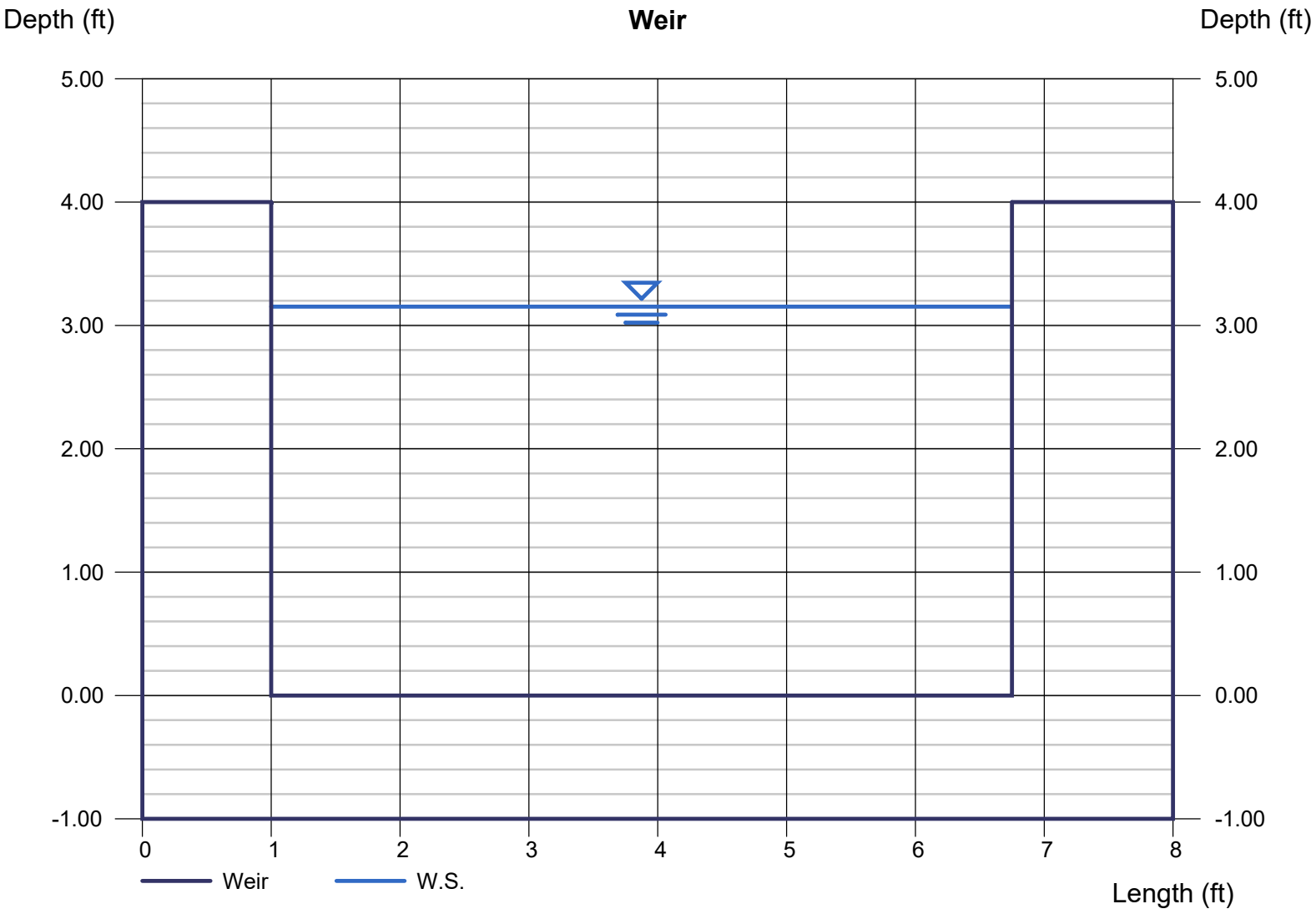
Crest	= Broad
Bottom Length (ft)	= 5.75
Total Depth (ft)	= 4.00

Calculations

Weir Coeff. Cw	= 2.50
Compute by:	Known Q
Known Q (cfs)	= 80.37

Highlighted

Depth (ft)	= 3.15
Q (cfs)	= 80.37
Area (sqft)	= 18.12
Velocity (ft/s)	= 4.43
Top Width (ft)	= 5.75



Weir Report

Weir

Rectangular Weir

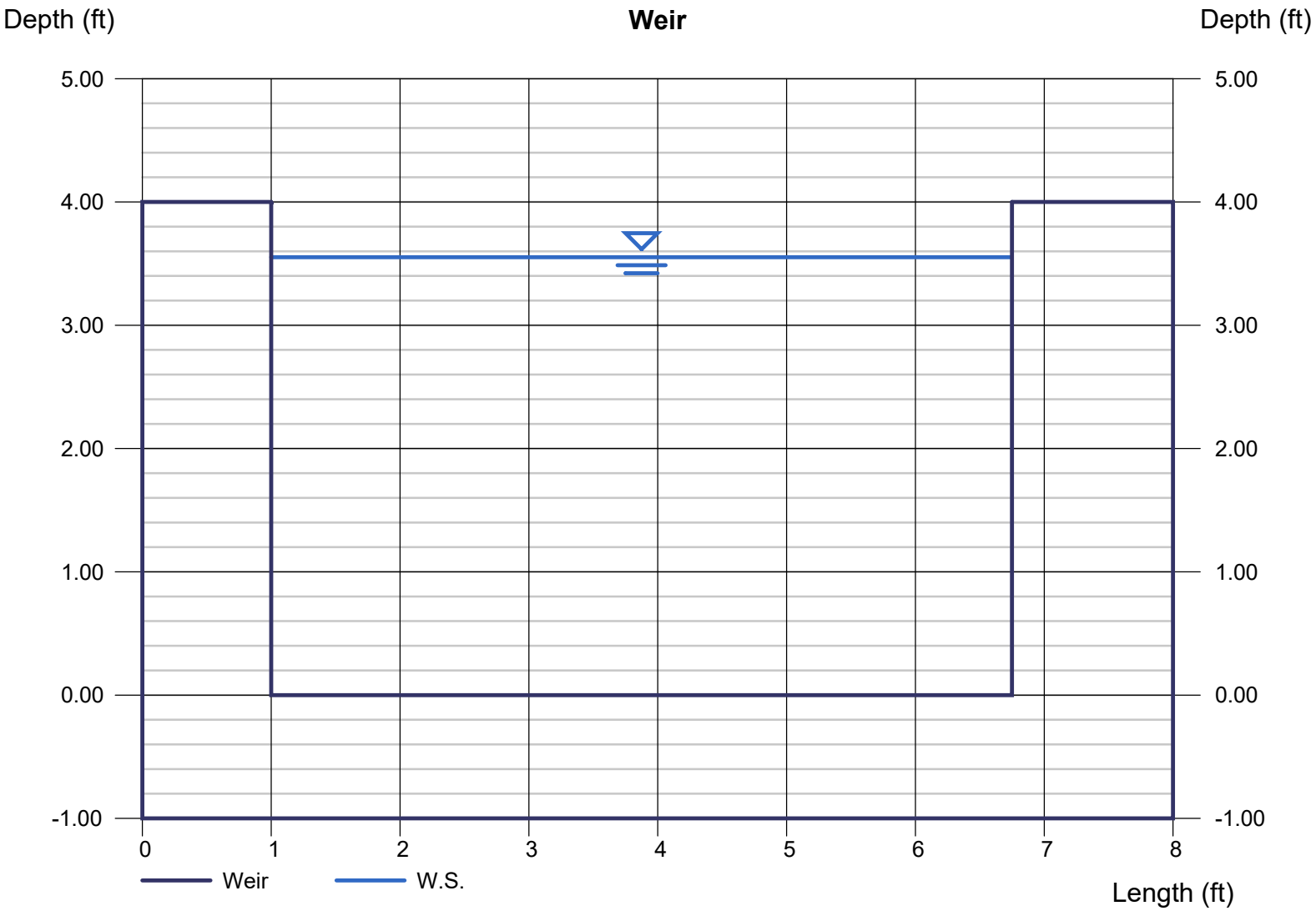
Crest	= Broad
Bottom Length (ft)	= 5.75
Total Depth (ft)	= 4.00

Calculations

Weir Coeff. Cw	= 2.50
Compute by:	Known Q
Known Q (cfs)	= 96.15

Highlighted

Depth (ft)	= 3.55
Q (cfs)	= 96.15
Area (sqft)	= 20.43
Velocity (ft/s)	= 4.71
Top Width (ft)	= 5.75



Weir Report

Weir

Rectangular Weir

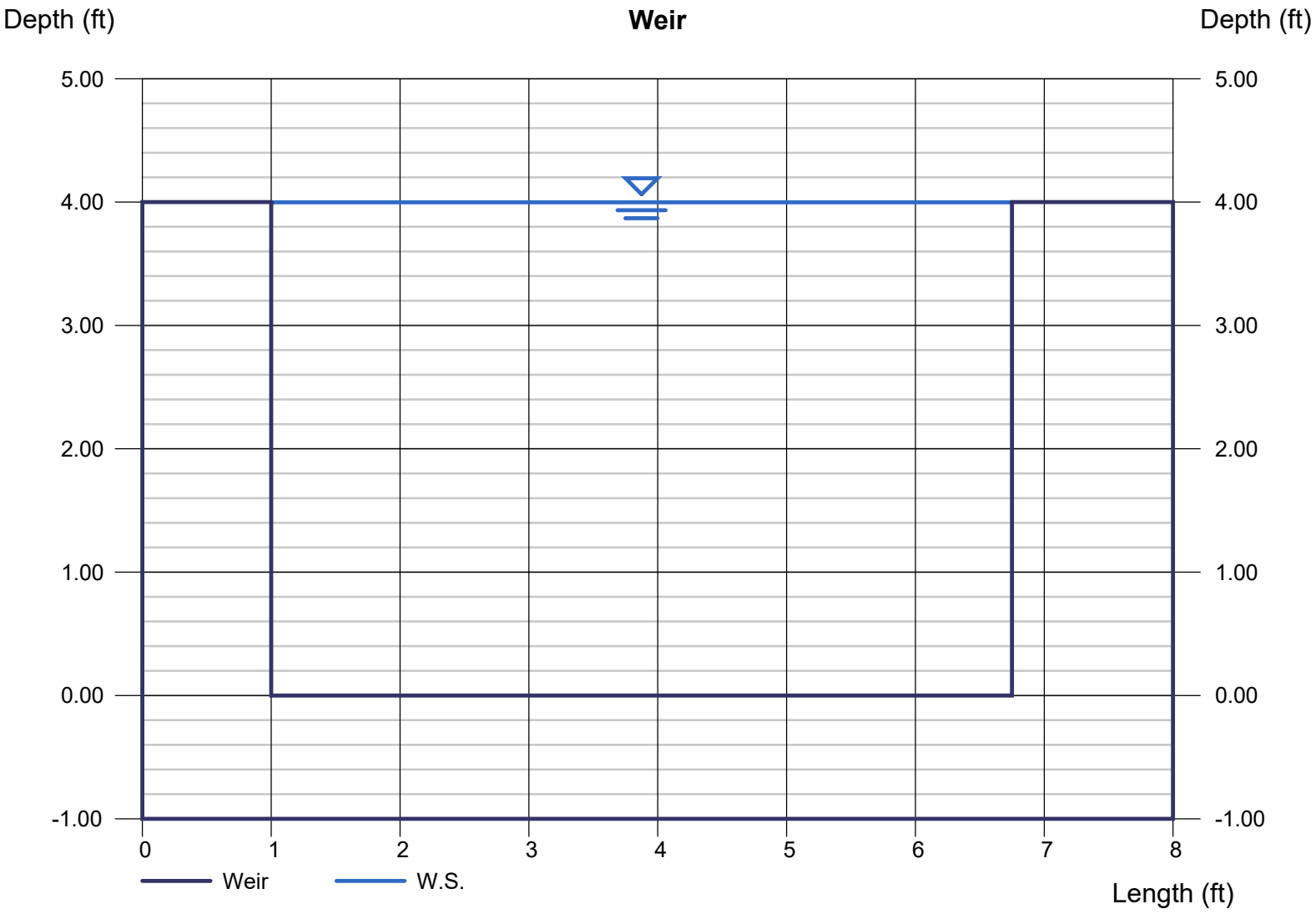
Crest	= Broad
Bottom Length (ft)	= 5.75
Total Depth (ft)	= 4.00

Calculations

Weir Coeff. Cw	= 2.50
Compute by:	Known Q
Known Q (cfs)	= 115.00

Highlighted

Depth (ft)	= 4.00
Q (cfs)	= 115.00
Area (sqft)	= 22.99
Velocity (ft/s)	= 5.00
Top Width (ft)	= 5.75



DUFFER DRIVE (50' R/W)

HAWKINS VALLEY DRIVE (60' R/W)

STARCOURT LANE (50' R/W)

LENORA DRIVE (50' R/W)

ERS COURT (50' R/W)

ENUE (50' R/W)

OUTLET STRUCTURE

CI-5 4' DIA BOX W_OPENING ON EAST

PIPE - (200) (1) 240' L.F. OF 18" HDPE @ 3.1%

PIPE-1 237' L.F. OF 18" HDPE @ 3.0%

CI-2 4' DIA BOX

CI-4 4' DIA BOX

CI-1 4' DIA BOX

PIPE - (199) 53' L.F. OF 18" RCP @ 1.4%

CI-3 4' DIA BOX W_4' WING

PIPE - (201) 51' L.F. OF 18" RCP @ 2.1%

1' BOTTOM, 2' HEIGHT
3H:1V SLOPE DITCH

RIGHT OF WAY DEDICATION
2.73 ACRES
118720 Sq. Ft.

TRACT A
0.21 ACRES
9126 Sq. Ft.

1	0.21 AC.	8991 S.F.
2	0.17 AC.	7300 S.F.
3	0.17 AC.	7300 S.F.
4	0.15 AC.	6600 S.F.
5	0.15 AC.	6600 S.F.
6	0.19 AC.	8116 S.F.
8	0.15 AC.	6600 S.F.
9	0.15 AC.	6600 S.F.
10	0.15 AC.	6600 S.F.
11	0.15 AC.	6600 S.F.
12	0.19 AC.	8116 S.F.
13	0.19 AC.	8116 S.F.
14	0.15 AC.	6600 S.F.
15	0.15 AC.	6600 S.F.
16	0.15 AC.	6600 S.F.
17	0.15 AC.	6600 S.F.
18	0.19 AC.	8116 S.F.
19	0.15 AC.	6600 S.F.
20	0.15 AC.	6600 S.F.
21	0.15 AC.	6600 S.F.
22	0.15 AC.	6600 S.F.
23	0.15 AC.	6600 S.F.
24	0.15 AC.	6600 S.F.
25	0.15 AC.	6600 S.F.
26	0.15 AC.	6600 S.F.
27	0.15 AC.	6600 S.F.
28	0.15 AC.	6600 S.F.
29	0.19 AC.	8116 S.F.
30	0.18 AC.	7700 S.F.
31	0.17 AC.	7265 S.F.
32	0.21 AC.	8965 S.F.

50' 25' 0 50'

BY	REVISION	DATE

GNE Designing our client's success

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P.O. Box 116
Benton, AR 72018
3825 Mt Carmel Rd
Bryant, AR 72022
garnatengineering@gmail.com
Ph (501) 408-4650

FOR: THOMAS DB COLLINS, LTD, LLC
HAWKINS VALLEY
PHASE 1
SALINE COUNTY, ARKANSAS

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
NO. 9551
VERNON J. WILLIAMS

1-06-2025

CONTENTS:
STREET & DRAINAGE PLAN

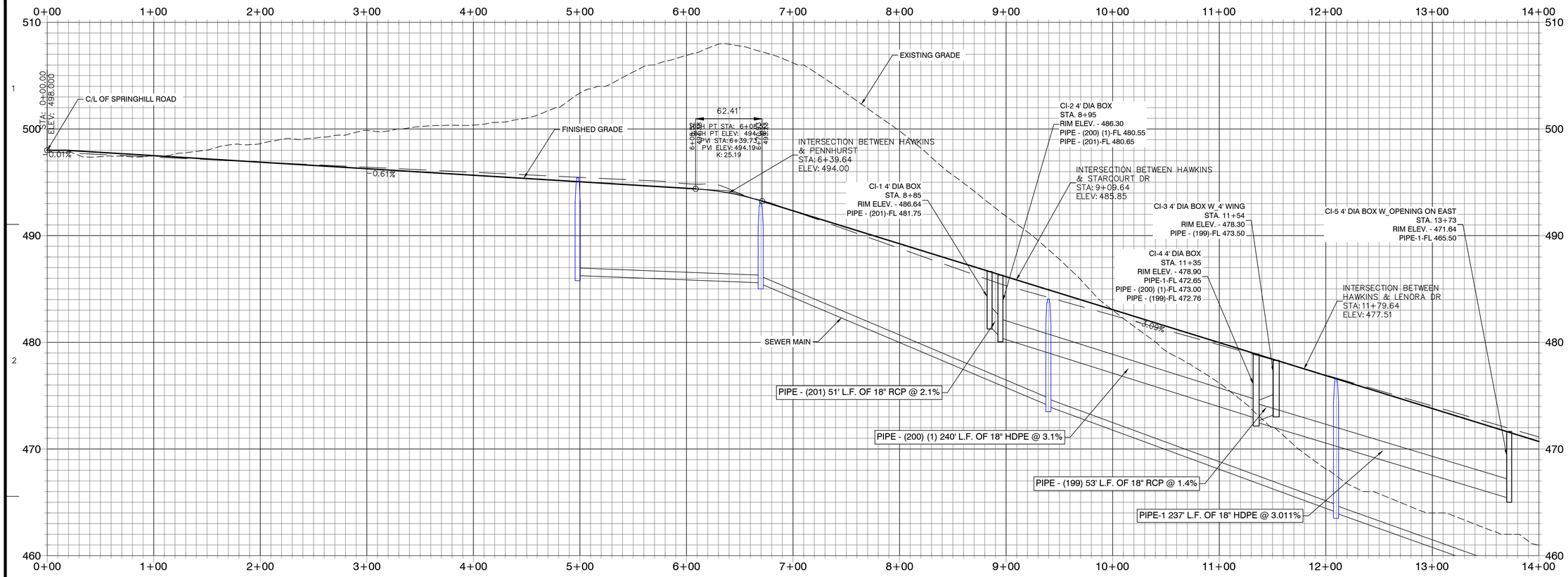
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DATE: JAN 2025

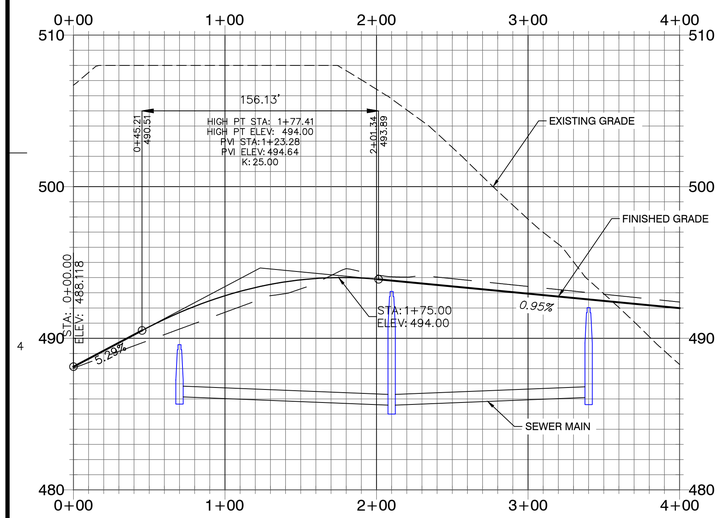
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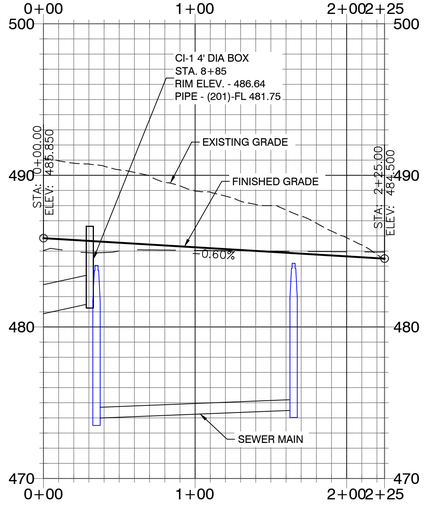
HAWKINS VALLEY DRIVE PROFILE



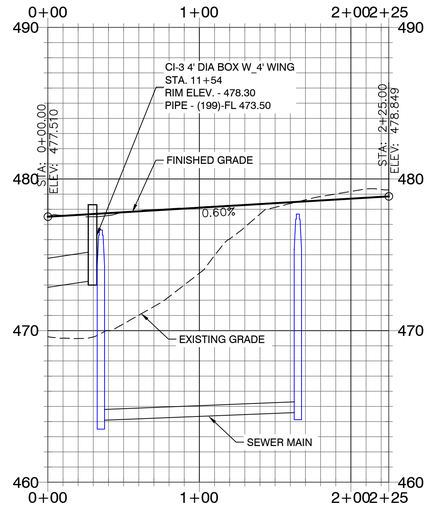
PENNHURST ROAD PROFILE



STARCOURT DRIVE PROFILE



LENORA DRIVE PROFILE



SCALE: H 1" = 50'
V 1" = 5'

BY	REVISION	DATE

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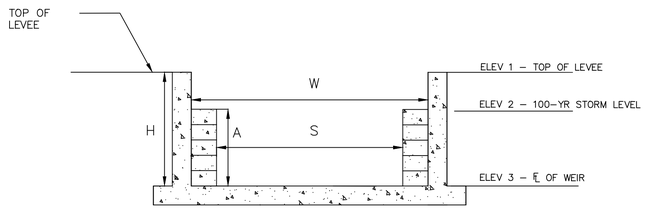
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PROJECT NO:
24076

DATE:
JAN 2025

SHEET NO:
C3.1

\\192.168.0.80\Projects\2024 Projects\24076 Hawkins Valley Springhill Road Strawberry Line Kenyatta\Drawings\Civil\Design\24076 Springhill Road Drainage Map-R0.dwg



DETENTION OUTLET SECTION

NOT TO SCALE

CONTROL STRUCTURE

OUTLET STRUCTURE	L	W	H	ELEV 1	ELEV 2	ELEV 3	S	A
1	5'–0"	7'–8"	5'–0"	468.00	467.00	463.00	5'–9"	4'–0"

DETENTION OUTLET NOTES:

1. ALL CONCRETE WALLS SHALL BE A MINIMUM OF 6" THICK & REINFORCED WITH #4'S @ 12" O.C. BOTH WAYS.
2. BOTTOM SLAB SHALL BE 12" THICK & REINFORCED WITH #4'S @ 12" O.C. BOTH WAYS.

BY	REVISION	DATE

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SALINE COUNTY, ARKANSAS

STATE OF ARKANSAS
Vernon ★★★ Williams
REGISTERED PROFESSIONAL ENGINEER
★★★
NO. 9551
VERNON J. WILLIAMS

1-06-2025

CONTENTS:

OUTLET STRUCTURE DETAILS

PROJECT NO: 24076

DATE: JAN 2025

SHEET NO: C3.2

\\192.168.1.100\Projects\2024 Projects\24076 Hawkins Valley Springhill Road Strawberry Lane Les Property\Drawings\Civil\Design\24076-Springhill Road-Strawberry Lane-Les.dwg

Hawkins Valley Subdivision – Phase 1

Drainage Calculations – review comments

1. Page 3 – justification for roughness coefficients REFERENCE ADDED.
2. Page 4 – duplicate? NO, IT IS FOR POST DEVELOPMENT.
3. Page 9 – what basins is this based upon – see smaller basins / comments on page 22 IT WAS DESIGNED PER POST DEVELOPMENT FLOW. SEE PAGE 24 & 25
4. Pages 11 & 12 – verify drainage basins SEE BELOW***
5. Page 13 – see comments on plan sheet PIPE SLOPES, SIZES, DITCH DETAILS, AND WEIR DETAILS ADDED. SEE PAGE 26 & 27.
6. Page 21 – Show enclosed storm pipe calculations for inside proposed phase PIPE SIZE CALCULATED BASED ON INLET BASIN.
7. Page 21 – Show ditch sizing calculations based upon actual contributing basins DITCH IS SIZED PER CONTRIBUTING BASIN.
8. Page 22 – see other basins not included in the calculations.
    a. Show pond details and layout including control structure POND DETAILS AND WEIR DETAILS ADDED SEE PAGE 26 & 27.
    b. Show pipe sizes, slopes etc PIPE SLOPES, SIZES ADDED. SEE PAGE 26
    c. Label ditch, show details,, slope, lengths, DITCH DETAILS, SLOPE AND LENGHT ADDED AND LABELLED. SEE PAGE 26 & 27.
9. Page 33 - Somewhere show a summary of the results of the pond and weir calculations ADDED PAGE 2.
10. Page 39 – Show details on pond POND DIMENSION, DEPTH AND WEIR DETAILS ADDED. SEE PAGE 26 & 27.
11. Page 40 – is this a dup licate? NO, 1ST CURVE IS STAGE VS DISCHARGE AND 2ND CURVE IS STAGE VS STORAGE CURVE.
12.

*** WE AGREE WITH THE BASINS. HOWEVER, WE DIDN'T CHANGE THE BASIN TO MEET THE BRYANT DEADLINE. WE WOULD LIKE TO ADD OUR PROJECT TO THE FEBRUARY AGENDA. ALL FLOWS ARE RELEASED TO THE CREEK TO COMPLY WITH THE BRYANT DRAINAGE CODE.

HAWKINS VALLEY
DRAINAGE CALCULATIONS – SUMMARY
2/3/2025

DESCRIPTION OF PROJECT

Hawkins Valley subdivision is an approximately 9.35 Acre development located in the Saline County, Arkansas east of Springhill Road. There is a large drainage basin on the site. Detention pond is located on the northeast corner of the site and discharged on the existing creek.

Stormwater Calculations were prepared with the intent to comply with the City of Bryant's Drainage Code. The primary intent of this analysis is to produce a drainage system adequately sized to convey post development runoff while attenuating post development discharge levels equal to or less than pre development flows.

Hydraulic calculations were made using the Rational Method. Design frequencies were analyzed for 2, 5, 10, 25, 50, and 100-year return periods.

These calculations are divided into the following sections:

Summary of Drainage Basins

Summary of Inlets

Summary of Pipes

Pipe Network Storage Summary

Appendices

Exhibit A – Pre-Development Drainage Basins

Exhibit B – Post-Development Drainage Basins

HAWKINS VALLEY

DRAINAGE CALCULATIONS – SUMMARY

2/3/2025

SUMMARY OF DRAINAGE BASINS

PRE-DEVELOPMENT CONDITIONS

The entire area for pre-existing drainage area of the site drains to a creek to the east. There is a drainage basin in the site that flows onto the creek. Discharge will be captured and detained. The amount of pre development flow is 115.89 cfs.

POST-DEVELOPMENT CONDITIONS

As previously described, this site is being developed into a residential subdivision. Slopes range from 1% to 10%. Runoff drains from the developed areas to detention pond on the northeast corner of the site. The amount of post development flow is 127.93 cfs. 100-year storm event is considered for detention. A concrete control structure is used to release the water without the loss of life or major property damage.

SUMMARY OF INLETS

On the drainage plan you will see labels for all of the inlets for these calculations. The flows shown are for the 25-year return storm. The distance from the back of the curb to the center of the street is 18 feet. One lane of traffic remains unobstructed by storm sewer discharges during a 25-year storm event.

SUMMARY OF PIPES

All pipes used in this project are HDPE and RCP. Therefore, a manning's of 0.012 was used on all pipes in the analysis.

POND SUMMARY

The pond in these calculations detains flows from all of the runoff of the site. The pond is located on the northeast corner of the site. Water collected in the storm water system is discharged into the pond via a pipe culvert and a ditch. The Pond volume is designed to hold the 100-year storm event and a factor of safety of 25% is added on detention volumes. The pond storage is 44,804 cft. A concrete control structure is constructed on the eastern edge of the pond. This control structure uses 5.75 feet wide slotted weir to limit the discharge through the structure to that of the 2, 10, 25, 50, and 100-year pre-development flow.

Stormwater Calcs - Hawkins Valley
Using Rational Method

Pre-development

Calculated Tc values - Drainage Basin 1

Tc =	$\frac{0.83 * L^{.467} * n^{.467}}{S^{.5}}$	minutes (Eqn 400-3)	Tsc =	$\frac{L}{60V}$	minutes	Shallow Concentrated Flow (Eqn 400-4)	Tsc =	$\frac{L}{60V}$	minutes	Pipe Flow (Eqn 400-4)	Tsc =	$\frac{L}{60V}$	minutes	Shallow Concentrated Flow	Tsc =	$\frac{L}{60V}$	minutes	Pipe Flow (Eqn 400-4)	Tsc =	$\frac{L}{60V}$	minutes	Open Channel (Eqn 400-4)
			V=	16.1345 * S^0.5	ft/sec	Unpaved (Eqn 400-5)	V=	$\frac{1.49*(D/4)^{(2/3)}*S^{0.5}}{n}$	ft/sec		V=	16.1345 * S^0.5	ft/sec	Unpaved (Eqn 400-5)	V=	$\frac{1.49*(D/4)^{(2/3)}*S^{0.5}}{n}$	ft/sec		V=	$\frac{1.49*(R)^{(2/3)}*S^{0.5}}{n}$	ft/sec	Open Channel
L1 =	150	feet	L1 =	400	feet		L1 =	50	feet		L1 =	570	feet		L1 =	50	feet		L1 =	1480	feet	
																				0.95		(V-Ditch 2 ' ht.,
n1 =	0.6	Deciduous Timber (n values taken from Table 400-3 of City of Bryant Drainage Manual)					D=	2	feet						D=	2	feet		R=		feet	3:1 Slope)
S1 =	0.053	ft/ft	S1 =	0.070	ft/ft		S1 =	0.010	ft/ft		S1 =	0.016	ft/ft		S1 =	0.010	ft/ft		S1 =	0.026	ft/ft	
			$V_{calculated}$ =	4.27	ft/sec		n=	0.013	concrete pipe (n values from Table 600-3 of COB Drainage Manual)		$V_{calculated}$ =	2.03	ft/sec		n=	0.013	concrete pipe		n=	0.022	earth with short grass, few weeds (n values from Table 500-1 of COB Drainage Manual)
							$V_{calculated}$ =	7.22	ft/sec						$V_{calculated}$ =	7.22	ft/sec		$V_{calculated}$ =	4.16	ft/sec	
$Tc_{calculated}$	16.35	minutes	$Tc_{calculated}$	1.56	minutes		$Tc_{calculated}$	0.12	minutes		$Tc_{calculated}$	4.69	minutes		$Tc_{calculated}$	0.12	minutes		$Tc_{calculated}$	5.93	minutes	
Tc =	28.76	minutes																				
Use Tc =	**29.0**	minutes	I_{100} =	5.6	Inches/hr	I_{10} =	3.9	Inches/hr														
			I_{50} =	5.1	Inches/hr	I_5 =	3.5	Inches/hr	i from Exhibit 400-1 of Bryant Drainage Manual													
			I_{25} =	4.6	Inches/hr	I_2 =	2.8	Inches/hr														

Stormwater Calcs - Hawkins Valley
Using Rational Method

Post-development

Calculated Tc values - Drainage Basin 1

Tc =	$\frac{0.83 * L^{.467} * n^{.467}}{S^{.5}}$	minutes (Eqn 400-3)	Tsc =	$\frac{L}{60V}$	minutes	Shallow Concentrated Flow (Eqn 400-4)	Tsc =	$\frac{L}{60V}$	minutes	Pipe Flow (Eqn 400-4)	Tsc =	$\frac{L}{60V}$	minutes	Shallow Concentrated Flow	Tsc =	$\frac{L}{60V}$	minutes	Pipe Flow (Eqn 400-4)	Tsc =	$\frac{L}{60V}$	minutes	Open Channel (Eqn 400-4)
			V=	16.1345 * S^0.5	ft/sec	Unpaved (Eqn 400-5)	V=	$\frac{1.49*(D/4)^{(2/3)}*S^{0.5}}{n}$	ft/sec		V=	16.1345 * S^0.5	ft/sec	Unpaved (Eqn 400-5)	V=	$\frac{1.49*(D/4)^{(2/3)}*S^{0.5}}{n}$	ft/sec		V=	$\frac{1.49*(R)^{(2/3)}*S^{0.5}}{n}$	ft/sec	Open Channel
L1 =	150	feet	L1 =	400	feet		L1 =	50	feet		L1 =	570	feet		L1 =	50	feet		L1 =	1480	feet	
n1 =	0.6	Deciduous Timber (n values taken from Table 400-3 of City of Bryant Drainage Manual)					D=	2	feet						D=	2	feet			0.95		(V-Ditch 2 ' ht., 3:1 Slope)
S1 =	0.053	ft/ft	S1 =	0.070	ft/ft		S1 =	0.010	ft/ft		S1 =	0.016	ft/ft		S1 =	0.010	ft/ft		S1 =	0.026	ft/ft	
			$V_{calculated}$ =	4.27	ft/sec		n=	0.013	concrete pipe (n values from Table 600-3 of COB Drainage Manual)		$V_{calculated}$ =	2.03	ft/sec		n=	0.013	concrete pipe		n=	0.022	earth with short grass, few weeds (n values from Table 500-1 of COB Drainage Manual)
							$V_{calculated}$ =	7.22	ft/sec						$V_{calculated}$ =	7.22	ft/sec		$V_{calculated}$ =	4.16	ft/sec	
$Tc_{calculated}$	16.35	minutes	$Tc_{calculated}$	1.56	minutes		$Tc_{calculated}$	0.12	minutes		$Tc_{calculated}$	4.69	minutes		$Tc_{calculated}$	0.12	minutes		$Tc_{calculated}$	5.93	minutes	
Tc =	28.76	minutes																					
Use Tc =	**29.0**	minutes	I_{100} =	5.6	Inches/hr		I_{10} =	3.9	Inches/hr														
			I_{50} =	5.1	Inches/hr		I_5 =	3.5	Inches/hr		i from Exhibit 400-1 of Bryant Drainage Manual												
			I_{25} =	4.6	Inches/hr		I_2 =	2.8	Inches/hr														

Stormwater Calcs - Hawkins Valley
using Rational Method

Pre-development

Calculated C values - Drainage Basin 1

	Area	C_{100}	C_{50}	C_{25}	C_{10}	C_5	C_2
Undeveloped	44.03	0.47	0.43	0.4	0.36	0.34	0.31
Total Area =	**44.03**	**0.47**	**0.43**	**0.40**	**0.36**	**0.34**	**0.31**

(C values taken from Table 400-1 of City of Bryant Drainage Manual)

Woodlands, Average, 2-7%

Stormwater Calcs - Hawkins Valley
using Rational Method

Post-development

Calculated C values - Drainage Basin 1

	Area	C_{100}	C_{50}	C_{25}	C_{10}	C_5	C_2
Undeveloped	34.68	0.47	0.43	0.4	0.36	0.34	0.31
Single Family House	9.35	0.70	0.65	0.60	0.50	0.45	0.40
Total Area =	**44.03**	**0.52**	**0.48**	**0.44**	**0.39**	**0.36**	**0.33**

(C values taken from Table 400-1 of City of Bryant Drainage Manual)
(C values taken from Page-50 of City of Bryant Drainage Manual)

Stormwater Calcs - Hawkins Valley
using Rational Method

Pre-development

Drainage Basin 1

Q_{100} =	115.89	CFS	Q_{50}=	96.56	CFS	Q_{25} =	81.02	CFS	Q_{10} =	61.82	CFS
c =	0.47		c =	0.43		c =	0.40		c =	0.36	
i=	5.60	in/hr	i=	5.10	in/hr	i=	4.60	in/hr	i=	3.90	in/hr
A=	44.03	acres	A=	44.03	acres	A=	44.03	acres	A=	44.03	acres

Q_{5} =	52.40	CFS	Q_{2} =	38.22	CFS	
c =	0.34		c =	0.31		
i=	3.50	in/hr	i=	2.80	in/hr	
A=	44.03	acres	A=	44.03	acres	

Post-development

Drainage Basin 1

Q_{100} =	127.93	CFS	Q_{50}=	107.05	CFS	Q_{25} =	89.62	CFS	Q_{10} =	66.92	CFS
c =	0.52		c =	0.48		c =	0.44		c =	0.39	
i=	5.60	in/hr	i=	5.10	in/hr	i=	4.60	in/hr	i=	3.90	in/hr
A=	44.03	acres	A=	44.03	acres	A=	44.03	acres	A=	44.03	acres

Q_{5} =	56.00	CFS	Q_{2} =	40.57	CFS	
c =	0.36		c =	0.33		
i=	3.50	in/hr	i=	2.80	in/hr	
A=	44.03	acres	A=	44.03	acres	

Stormwater Calcs - Hawkins Valley
Using Rational Method
Ditch Capacity

Mannings equation for ditch

n= 0.022 based on n for open channel earth with short grass, few weeds (n values from Table 500-1 of COB Drai

Slope= 3 :1

Design Q100= 63.75 cfs

Depth (ft)	Bottom (ft)	Top (ft)	area (ft^2)	rH	slope (ft/ft)	Velocity (ft/s)	Q (cfs)
2	0	12	12	0.95	0.01	6.54	78.47

Springhill Rd

Hester Rd

Grace Village Dr

Joyce Cir

540

462

CHKPT#BASIN

PRE DEVELOPED BASIN
C=0.47
I=5.60 IN/HR
A=44.03 ACRES
Q_{100}=115.89 CFS

GRACE VILLAGE PHASE 1

100' 50' 0 100

DATE	REVISION	BY

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HAWKINS VALLEY
PHASE 1
SALINE COUNTY, ARKANSAS

PRELIMINARY

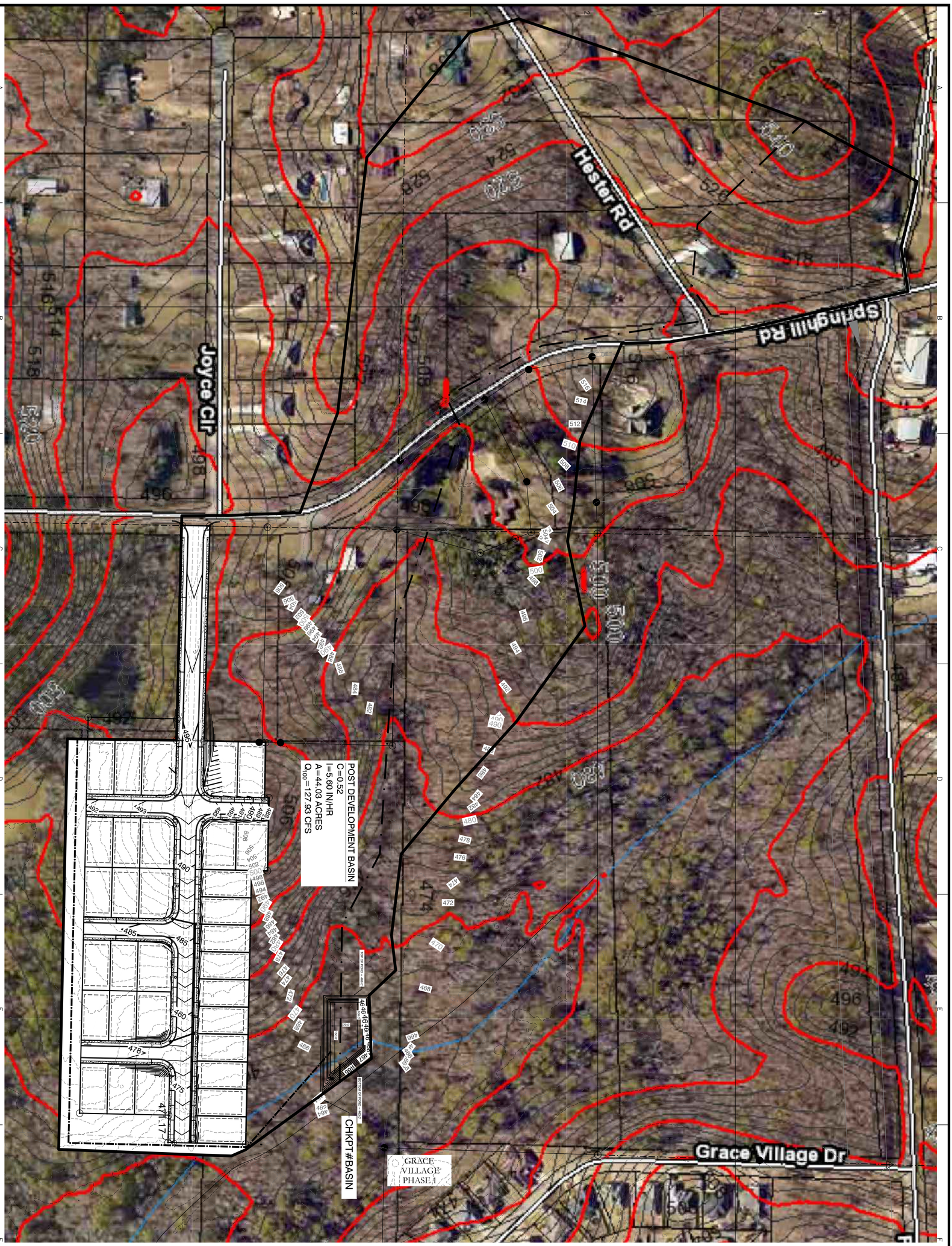
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PRE
DRAINAGE
BASIN

PROJECT NO:
24076

DATE:
JAN 2025

SHEET NO:
1.0

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SHEET NO: 2.0	DATE: JAN 2025	PROJECT NO: 24076	CONTENTS: POST DRAINAGE BASIN	PRELIMINARY

FOR: THOMAS DB COLLINS, LTD, LLC
HAWKINS VALLEY
PHASE 1
SALINE COUNTY, ARKANSAS

GNE Designing our client's success

GarNat Engineering, LLC

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Benton, AR 72018
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Bryant, AR 72022
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DATE	REVISION	BY

\\192.168.0.58\J\Projects\2024 Projects\24076 Hawkins Valley Springhill Road Strawberry Lane Lee Pengelly\Drawings\DWGs\Design\24076-Springhill-Road-Drainage Map-R5.dwg

Stormwater Calcs - Hawkins Valley
Using Rational Method

Calculated Tc values - Drainage Basin CI-1

Tc =	$\frac{0.83 * L^{.467} * n^{.467}}{S^{.5}}$	minutes	Overland Flow	Tsc =	$\frac{L}{60V}$	minutes	Shallow Concentrated Flow
				V=	20.3282 * S^0.5	ft/sec	Paved
L1 =	150	feet		L1 =	115	feet	
n1 =	0.013	concrete					
S1 =	0.026	ft/ft	Z1=493.65	S1 =	0.032	ft/ft	Z1=489.77
			Z2=489.77				Z2=486.12
				$V_{calculated}$ =	3.62	ft/sec	
$Tc_{calculated}$	3.39	minutes		$Tc_{calculated}$	0.53	minutes	
Tc =	3.92	minutes					
Use Tc =	**5.0**	minutes		I_{100} =	10	Inches/hr	i from Exhibit 400-1 of Bryant Drainage Manual
				I_{25} =	8.4	Inches/hr	
				I_{10} =	7.6	Inches/hr	

Calculated Tc values - Drainage Basin CI-2

Tc =	$\frac{0.83 * L^{.467} * n^{.467}}{S^{.5}}$	minutes	Overland Flow	Tsc =	$\frac{L}{60V}$	minutes	Shallow Concentrated Flow
				V=	20.3282 * S^0.5	ft/sec	Paved
L1 =	150	feet		L1 =	120	feet	
n1 =	0.013	concrete					
S1 =	0.024	ft/ft	Z1=493.41	S1 =	0.032	ft/ft	Z1=489.82
			Z2=489.82				Z2=486.01
				$V_{calculated}$ =	3.62	ft/sec	
$Tc_{calculated}$	3.47	minutes		$Tc_{calculated}$	0.55	minutes	
Tc =	4.03	minutes					
Use Tc =	**5.0**	minutes		I_{100} =	10	Inches/hr	i from Exhibit 400-1 of Bryant Drainage Manual
				I_{25} =	8.4	Inches/hr	
				I_{10} =	7.6	Inches/hr	

Calculated Tc values - Drainage Basin CI-3

Tc =	$\frac{0.83 * L^{.467} * n^{.467}}{S^{.5}}$	minutes	Overland Flow	Tsc =	$\frac{L}{60V}$	minutes	Shallow Concentrated Flow
				V=	20.3282 * S^0.5	ft/sec	Paved
L1 =	150	feet		L1 =	125	feet	
n1 =	0.013	concrete					
S1 =	0.029	ft/ft	Z1=486.12	S1 =	0.029	ft/ft	Z1=481.77
			Z2=481.77				Z2=478.13
				$V_{calculated}$ =	3.47	ft/sec	
$Tc_{calculated}$	3.28	minutes		$Tc_{calculated}$	0.60	minutes	
Tc =	3.88	minutes					
Use Tc =	**5.0**	minutes		I_{100} =	10	Inches/hr	i from Exhibit 400-1 of Bryant Drainage Manual
				I_{25} =	8.4	Inches/hr	
				I_{10} =	7.6	Inches/hr	

Calculated Tc values - Drainage Basin CI-4

Tc =	$\frac{0.83 * L^{.467} * n^{.467}}{S^{.5}}$	minutes	Overland Flow	Tsc =	$\frac{L}{60V}$	minutes	Shallow Concentrated Flow
				V=	20.3282 * S^0.5	ft/sec	Paved
L1 =	150	feet		L1 =	86	feet	
n1 =	0.013	concrete					
S1 =	0.031	ft/ft	Z1=486.01	S1 =	0.042	ft/ft	Z1=481.34
			Z2=481.34				Z2=478.57
				$V_{calculated}$ =	4.18	ft/sec	
$Tc_{calculated}$	3.21	minutes		$Tc_{calculated}$	0.34	minutes	
Tc =	3.55	minutes					
Use Tc =	**5.0**	minutes		I_{100} =	10	Inches/hr	i from Exhibit 400-1 of Bryant Drainage Manual
				I_{25} =	8.4	Inches/hr	
				I_{10} =	7.6	Inches/hr	

Calculated Tc values - Drainage Basin CI-5

Tc =	$\frac{0.83 * L^{.467} * n^{.467}}{S^{.5}}$	minutes	Overland Flow	Tsc =	$\frac{L}{60V}$	minutes	Shallow Concentrated Flow
				V=	20.3282 * S^0.5	ft/sec	Paved
L1 =	150	feet		L1 =	85	feet	
n1 =	0.013	concrete					
S1 =	0.032	ft/ft	Z1=478.57	S1 =	0.031	ft/ft	Z1=473.84
			Z2=473.84				Z2=471.22
				$V_{calculated}$ =	3.57	ft/sec	
$Tc_{calculated}$	3.20	minutes		$Tc_{calculated}$	0.40	minutes	
Tc =	3.60	minutes					
Use Tc =	**5.0**	minutes		I_{100} =	10	Inches/hr	i from Exhibit 400-1 of Bryant Drainage Manual
				I_{25} =	8.4	Inches/hr	
				I_{10} =	7.6	Inches/hr	

Calculated Tc values - Drainage Basin A1, A2, A3, A4, A5, A6, A7

Use Tc =	**5.0**	minutes	I_{100} =	10	Inches/hr	i from Exhibit 400-1 of Bryant Drainage Manual
			I_{25} =	8.4	Inches/hr	
			I_{10} =	7.6	Inches/hr	

Stormwater Calcs - Hawkins Valley
using Rational Method
POST-DEV C VALUES

SDMH-C1

	Area	C_{10}	C_{25}	C_{100}	(C values taken from Table 400-1 of City of Bryant Drainage Manual)
	0.20	0.81	0.86	0.95	Road/Asphalt
Total Area =	**0.20**	**0.81**	**0.86**	**0.95**	

SDMH-C2

	Area	C_{10}	C_{25}	C_{100}	(C values taken from Table 400-1 of City of Bryant Drainage Manual)
	0.19	0.81	0.86	0.95	Road/Asphalt
Total Area =	**0.19**	**0.81**	**0.86**	**0.95**	

SDMH-C3

	Area	C_{10}	C_{25}	C_{100}	(C values taken from Table 400-1 of City of Bryant Drainage Manual)
	0.20	0.81	0.86	0.95	Road/Asphalt
	1.10	0.5	0.6	0.7	Single Family House (C values taken from Page-50 of City of Bryant Drainage
Total Area =	**1.30**	**0.55**	**0.64**	**0.74**	

SDMH-C4

	Area	C_{10}	C_{25}	C_{100}	(C values taken from Table 400-1 of City of Bryant Drainage Manual)
	0.17	0.81	0.86	0.95	Road/Asphalt
Total Area =	**0.17**	**0.81**	**0.86**	**0.95**	

SDMH-C5

	Area	C_{10}	C_{25}	C_{100}	(C values taken from Table 400-1 of City of Bryant Drainage Manual)
	0.16	0.81	0.86	0.95	Road/Asphalt
Total Area =	**0.16**	**0.81**	**0.86**	**0.95**	

SDMH-A1

	Area	C_{10}	C_{25}	C_{100}	(C values taken from Table 400-1 of City of Bryant Drainage Manual)
	0.51	0.36	0.42	0.49	Pasture, Average 2-7%
	0.53	0.81	0.86	0.95	Road/Asphalt
Total Area =	**1.04**	**0.59**	**0.64**	**0.72**	

SDMH-A2

	Area	C_{10}	C_{25}	C_{100}	(C values taken from Table 400-1 of City of Bryant Drainage Manual)
	0.07	0.81	0.86	0.95	Road/Asphalt
Total Area =	**0.07**	**0.81**	**0.86**	**0.95**	

SDMH-A3

	Area	C_{10}	C_{25}	C_{100}	(C values taken from Table 400-1 of City of Bryant Drainage Manual)
	0.81	0.36	0.42	0.49	Pasture, Average 2-7%
	1.48	0.5	0.6	0.7	Single Family House (C values taken from Page-50 of City of Bryant Drainage
Total Area =	**2.29**	**0.45**	**0.54**	**0.63**	

SDMH-A4

	Area	C_{10}	C_{25}	C_{100}	
	1.31	0.5	0.6	0.7	Single Family House (C values taken from Page-50 of City of Bryant Drainage
Total Area =	**1.31**	**0.50**	**0.60**	**0.70**	

SDMH-A5

	Area	C_{10}	C_{25}	C_{100}	
	1.14	0.5	0.6	0.7	Single Family House (C values taken from Page-50 of City of Bryant Drainage
Total Area =	**1.14**	**0.50**	**0.60**	**0.70**	

SDMH-A6

	Area	C_{10}	C_{25}	C_{100}		
	0.75	0.5	0.6	0.7	Single Family House	(C values taken from Page-50 of City of Bryant Drainage
Total Area =	**0.75**	**0.50**	**0.60**	**0.70**		

SDMH-A7

	Area	C_{10}	C_{25}	C_{100}	(C values taken from Table 400-1 of City of Bryant Drainage Manual)
	0.53	0.35	0.39	0.46	Good Condition, Averaage 2-7%
Total Area =	**0.53**	**0.35**	**0.39**	**0.46**	

Stormwater Calcs - Hawkins Valley
using Rational Method
Post Development Flowrates

SDMH-C1

Q_{10} =	1.21 CFS	Q_{25} =	1.43 CFS	Q_{100} =	1.87 CFS
c =	0.81	c =	0.86	c =	0.95
i=	7.60 in/hr	i=	8.40 in/hr	i=	10.00 in/hr
A=	0.20 acres	A=	0.20 acres	A=	0.20 acres

SDMH-C2

Q_{10} =	1.19 CFS	Q_{25} =	1.40 CFS	Q_{100} =	1.84 CFS
c =	0.81	c =	0.86	c =	0.95
i=	7.60 in/hr	i=	8.40 in/hr	i=	10.00 in/hr
A=	0.19 acres	A=	0.19 acres	A=	0.19 acres

SDMH-C3

Q_{10} =	5.43 CFS	Q_{25} =	7.00 CFS	Q_{100} =	9.62 CFS
c =	0.55	c =	0.64	c =	0.74
i=	7.60 in/hr	i=	8.40 in/hr	i=	10.00 in/hr
A=	1.30 acres	A=	1.30 acres	A=	1.30 acres

SDMH-C4

Q_{10} =	1.02 CFS	Q_{25} =	1.19 CFS	Q_{100} =	1.57 CFS
c =	0.81	c =	0.86	c =	0.95
i=	7.60 in/hr	i=	8.40 in/hr	i=	10.00 in/hr
A=	0.17 acres	A=	0.17 acres	A=	0.17 acres

SDMH-C5

Q_{10} =	1.01 CFS	Q_{25} =	1.18 CFS	Q_{100} =	1.55 CFS
c =	0.81	c =	0.86	c =	0.95
i=	7.60 in/hr	i=	8.40 in/hr	i=	10.00 in/hr
A=	0.16 acres	A=	0.16 acres	A=	0.16 acres

SDMH-A1

Q_{10} =	4.64 CFS	Q_{25} =	5.61 CFS	Q_{100} =	7.51 CFS
c =	0.59	c =	0.64	c =	0.72
i=	7.60 in/hr	i=	8.40 in/hr	i=	10.00 in/hr
A=	1.04 acres	A=	1.04 acres	A=	1.04 acres

SDMH-A2

Q_{10} =	0.43 CFS	Q_{25} =	0.50 CFS	Q_{100} =	0.66 CFS
c =	0.81	c =	0.86	c =	0.95
i=	7.60 in/hr	i=	8.40 in/hr	i=	10.00 in/hr
A=	0.07 acres	A=	0.07 acres	A=	0.07 acres

SDMH-A3						
Q_{10} =	7.83	CFS	Q_{25} =	10.30	CFS	Q_{100} =	14.30	CFS
c =	0.45		c =	0.54		c =	0.63	
i=	7.60	in/hr	i=	8.40	in/hr	i=	10.00	in/hr
A=	2.29	acres	A=	2.29	acres	A=	2.29	acres

SDMH-A4						
Q_{10} =	4.96	CFS	Q_{25} =	6.58	CFS	Q_{100} =	9.14	CFS
c =	0.50		c =	0.60		c =	0.70	
i=	7.60	in/hr	i=	8.40	in/hr	i=	10.00	in/hr
A=	1.31	acres	A=	1.31	acres	A=	1.31	acres

SDMH-A5						
Q_{10} =	4.34	CFS	Q_{25} =	5.75	CFS	Q_{100} =	7.99	CFS
c =	0.50		c =	0.60		c =	0.70	
i=	7.60	in/hr	i=	8.40	in/hr	i=	10.00	in/hr
A=	1.14	acres	A=	1.14	acres	A=	1.14	acres

SDMH-A6						
Q_{10} =	2.85	CFS	Q_{25} =	3.78	CFS	Q_{100} =	5.25	CFS
c =	0.50		c =	0.60		c =	0.70	
i=	7.60	in/hr	i=	8.40	in/hr	i=	10.00	in/hr
A=	0.75	acres	A=	0.75	acres	A=	0.75	acres

SDMH-A7						
	Q_{10} =	1.41 CFS	Q_{25} =	1.74 CFS	Q_{100} =	2.44 CFS
	c =	0.35	c =	0.39	c =	0.46
	i=	7.60 in/hr	i=	8.40 in/hr	i=	10.00 in/hr
	A=	0.53 acres	A=	0.53 acres	A=	0.53 acres

TOTAL					
Q_{10} =	**36.31 CFS**	**Q_{25} =**	**46.46 CFS**	**Q_{100} =**	**63.75 CFS**

Hawkins Valley GUTTER SPREAD 25-YR STORM

SDMH-C1

$$T = \left(\frac{Q^* n}{k_u^* S_x^{1.67} * S_L^{0.5}} \right)^{.375}$$

Q= Flowrate(cfs)
n=manning's number
k=0.56
S_x= cross slope
S_L= longitudinal slope
T= Gutter Spread

Q	1.43	cfs
n	0.012	
k_u	0.56	
S_x	0.028	
S_L	0.031	
T	**4.87**	ft

SDMH-C2

$$T = \left(\frac{Q^* n}{k_u^* S_x^{1.67} * S_L^{0.5}} \right)^{.375}$$

Q	1.40	cfs
n	0.012	
k_u	0.56	
S_x	0.03	
S_L	0.017	
T	**5.18**	ft

SDMH-C3

$$T = \left(\frac{Q^* n}{k_u^* S_x^{1.67} * S_L^{0.5}} \right)^{.375}$$

Q	7.00	cfs
n	0.012	
k_u	0.56	
S_x	0.028	
S_L	0.03	
T	**9.01**	ft

SDMH-C4

$$T = \left(\frac{Q^* n}{k_u^* S_x^{1.67} * S_L^{0.5}} \right)^{.375}$$

Q	1.19	cfs
n	0.012	
k_u	0.56	
S_x	0.03	
S_L	0.03	
T	**4.44**	ft

SDMH-C5

$$T = \left(\frac{Q^* n}{k_u^* S_x^{1.67} * S_L^{0.5}} \right)^{.375}$$

Q	1.18	cfs
n	0.012	
k_u	0.56	
S_x	0.028	
S_L	0.03	
T	**4.56**	ft

Hawkins Valley - CURB INLETS

25-YEAR STORM

Area #	Area	I	C	Q (cfs)	Weir Q=3.0LY^1.5 Q (cfs)	Y (ft)	Required L (ft)	Actual L (ft)	
SDMH-C1	0.20	8.40	0.86	1.43	1.43	0.49	**1.39**	**4**	4' box
SDMH-C2	0.19	8.40	0.86	1.40	1.40	0.49	**1.36**	**4**	4' box
SDMH-C3	1.30	8.40	0.64	7.00	7.00	0.49	**6.81**	**4**	4' box with 4' wing
SDMH-C4	0.17	8.40	0.86	1.19	1.19	0.49	**1.16**	**4**	4' box
SDMH-C5	0.16	8.40	0.86	1.18	1.18	0.49	**1.15**	**4**	4' box

Stormwater Calcs - Hawkins Valley
using Rational Method
Culvert Capacities

CI-1
Q_{25} = 1.44 CFS
c = 0.86 Road/Asphalt
i= 8.4 in/hr
A= 0.20 acres

CI-2
Q_{25} = 1.37 CFS
c = 0.86 Road/Asphalt
i= 8.4 in/hr
A= 0.19 acres

CI-3
Q_{25} = 6.99 CFS
c = 0.64 Road/Asphalt
i= 8.4 in/hr
A= 1.30 acres

CI-4
Q_{25} = 1.23 CFS
c = 0.86 Road/Asphalt
i= 8.4 in/hr
A= 0.17 acres

CI-5
Q_{25} = 1.16 CFS
c = 0.86 Road/Asphalt
i= 8.4 in/hr
A= 0.16 acres

Pipe Name	From	To	Design Flow (cfs):	Slope (ft/ft):	Diameter (inches)	No. Pipes	Manning's	Area Full (sf)	Wetted Perimeter Full (ft)	Hydraulic	Flow Capacity (cfs)	% Capacity
18" RCP	CI-1	CI-2	1.44	0.0210	18	1	0.012	1.77	4.712	0.375	16.49	9%
18" HDPE	CI-2	CI-4	2.82	0.0310	18	1	0.012	1.77	4.712	0.375	20.04	14%
18" RCP	CI-3	CI-4	9.81	0.0140	18	1	0.012	1.77	4.712	0.375	13.46	73%
18" HDPE	CI-4	CI-5	11.03	0.0310	18	1	0.012	1.77	4.712	0.375	20.04	55%

Stormwater Calcs - Hawkins Valley
Using Rational Method
Ditch Capacity

Mannings equation for ditch

n= 0.022 based on n for open channel earth with short grass, few weeds (n values from Table 500-1 of COB Drainage Manual)

Slope= 3 :1

Design Q100= 63.75 cfs

Depth (ft)	Bottom (ft)	Top (ft)	area (ft^2)	rH	slope (ft/ft)	Velocity (ft/s)	Q (cfs)
2	0	12	12	0.95	0.01	6.54	78.47

TOP OF POND = 468.0'

BOTTOM OF POND = 463.0'

463 464 465 466 467 468

100.0'

70.0'

150.0'

OUTLET STRUCTURE
FL=462.95'

CHKPT#A3

BASIN A3
C=0.54
I=8.40 IN/HR
A=2.29 ACRES
Q_{25}=10.30 CFS

CHKPT#A2

CHKPT#A1

BASIN A2
C=0.86
I=8.40 IN/HR
A=0.07 ACRES
Q_{25}=0.50 CFS

BASIN A1
C=0.64
I=8.40 IN/HR
A=1.04 ACRES
Q_{25}=5.61 CFS

BASIN CI-4
C=0.86
I=8.40 IN/HR
A=0.17 ACRES
Q_{25}=1.19 CFS

CI-5 4' DIA BOX W. OPENING ON EAST

PIPE - (200) (1) 240' L.F. OF 18" HDPE @ 3.1%

PIPE-1 237' L.F. OF 18" HDPE @ 3.0%

BASIN CI-2
C=0.86
I=8.40 IN/HR
A=0.20 ACRES
Q_{25}=1.40 CFS

BASIN CI-5
C=0.86
I=8.40 IN/HR
A=0.16 ACRES
Q_{25}=1.18 CFS

CI-2 4' DIA BOX

CI-4 4' DIA BOX

493.41

489.82

481.34

478.57

CHKPT#CI5

486.01

478.84

471.22

489.77

PIPE - (199) 53' L.F. OF 18" RCP @ 1.4%

481.77

471.17

CHKPT#A6

493.65

CI-1 4' DIA BOX

BASIN CI-1
C=0.86
I=8.40 IN/HR
A=0.20 ACRES
Q_{25}=1.43 CFS

486.12

478.13

CI-3 4' DIA BOX W. 4' WING

PIPE - (201) 51' L.F. OF 18" RCP @ 2.1%

BASIN A6
C=0.60
I=8.40 IN/HR
A=0.75 ACRES
Q_{25}=3.78 CFS

BASIN A4
C=0.60
I=8.40 IN/HR
A=1.31 ACRES
Q_{25}=6.58 CFS

BASIN A5
C=0.60
I=8.40 IN/HR
A=1.14 ACRES
Q_{25}=5.75 CFS

BASIN CI-3
C=0.64
I=8.40 IN/HR
A=1.30 ACRES
Q_{25}=7.00 CFS

BASIN A7
C=0.39
I=8.40 IN/HR
A=0.53 ACRES
Q_{25}=1.74 CFS

CHKPT#A4

CHKPT#A5

V DITCH
2' HEIGHT
1550 LF LENGTH
3H:1V SLOPE

N

50' 25' 0 50'

BY	REVISION	DATE

GNE Designing our client's success

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PRELIMINARY

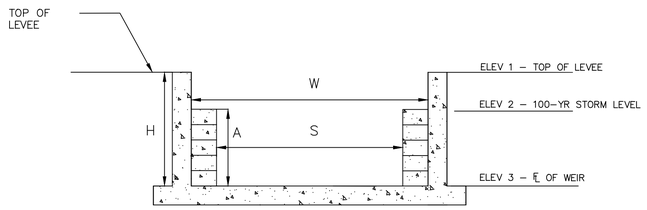
CONTENTS:
INLET BASIN PLAN

PROJECT NO:
24076

DATE:
JAN 2025

SHEET NO:
3.0

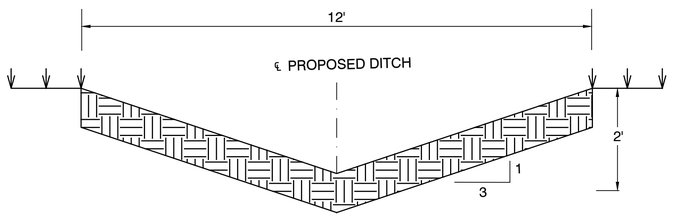
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DETENTION OUTLET SECTION

NOT TO SCALE

CONTROL STRUCTURE								
OUTLET STRUCTURE	L	W	H	ELEV 1	ELEV 2	ELEV 3	S	A
1	5'–0"	7'–8"	5'–1"	468.00	467.00	462.95	5'–9"	4'–0"



TYPICAL DITCH CROSS SECTION

(N.T.S)

DETENTION OUTLET NOTES:

1. ALL CONCRETE WALLS SHALL BE A MINIMUM OF 6" THICK & REINFORCED WITH #4'S @ 12" O.C. BOTH WAYS.
2. BOTTOM SLAB SHALL BE 12" THICK & REINFORCED WITH #4'S @ 12" O.C. BOTH WAYS.

BY	REVISION	DATE

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Ph (501) 408-4650
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FOR: THOMAS DB COLLINS, LTD, LLC
HAWKINS VALLEY
PHASE 1
SALINE COUNTY, ARKANSAS

STATE OF ARKANSAS
Vernon ★★★ Williams
REGISTERED PROFESSIONAL ENGINEER
★★★
NO. 9551
VERNON J. WILLIAMS

1-06-2025

CONTENTS:

OUTLET STRUCTURE DETAILS

PROJECT NO: 24076

DATE: JAN 2025

SHEET NO: C3.2

\\192.168.1.100\Projects\2024 Projects\24076 Hawkins Valley Springhill Road Strawberry Lane Lot Property\Drawings\Civil\Design\24076-Springhill Road-Strawberry Lane-Hawkins Valley.dwg

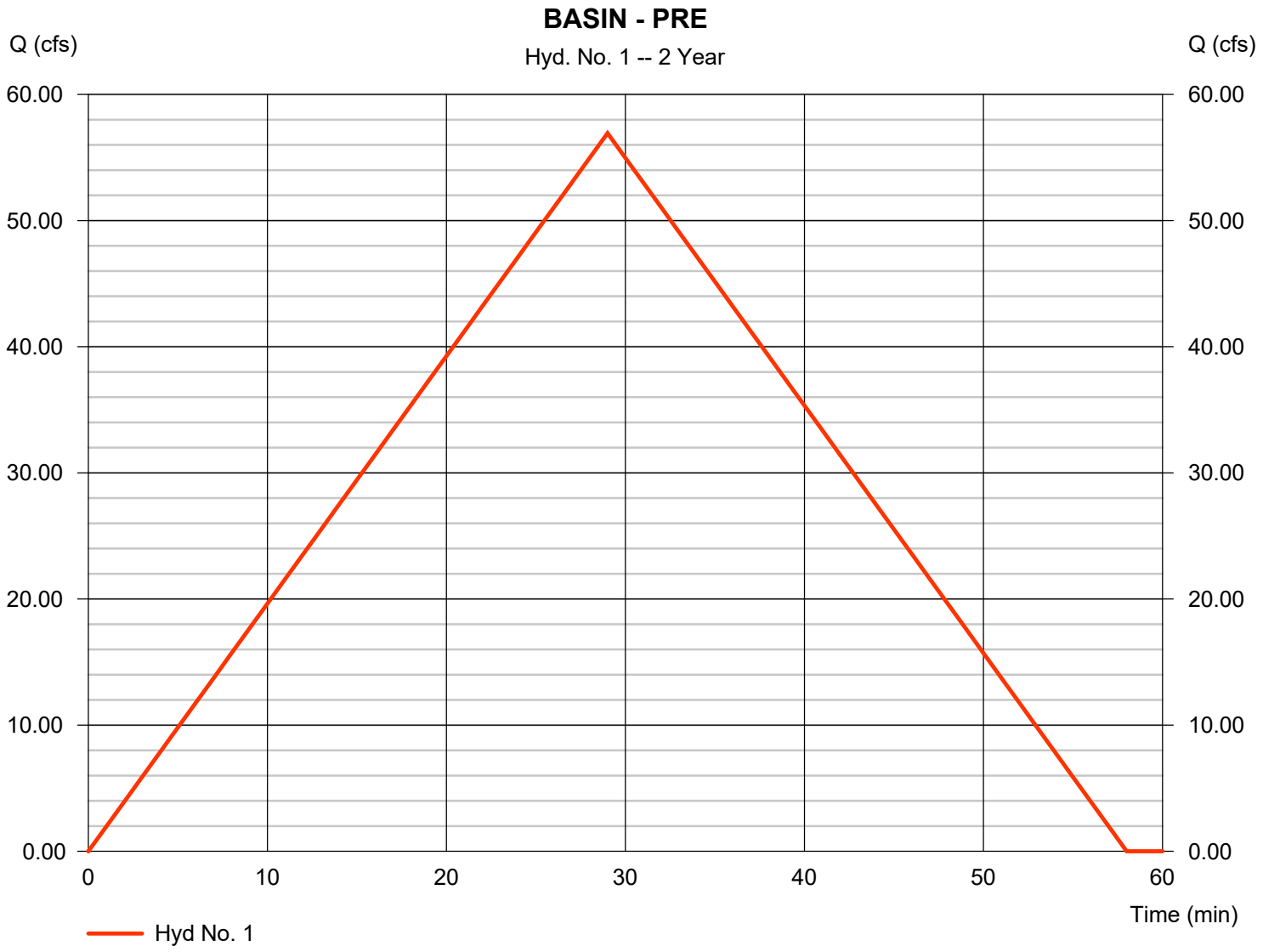
Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2021 Tuesday, 01 / 28 / 2025

Hyd. No. 1

BASIN - PRE

Hydrograph type	=	Rational	Peak discharge	=	56.93 cfs
Storm frequency	=	2 yrs	Time to peak	=	29 min
Time interval	=	1 min	Hyd. volume	=	99,054 cuft
Drainage area	=	44.030 ac	Runoff coeff.	=	0.47
Intensity	=	2.751 in/hr	Tc by User	=	29.00 min
IDF Curve	=	BRYANT IDF.IDF	Asc/Rec limb fact	=	1/1



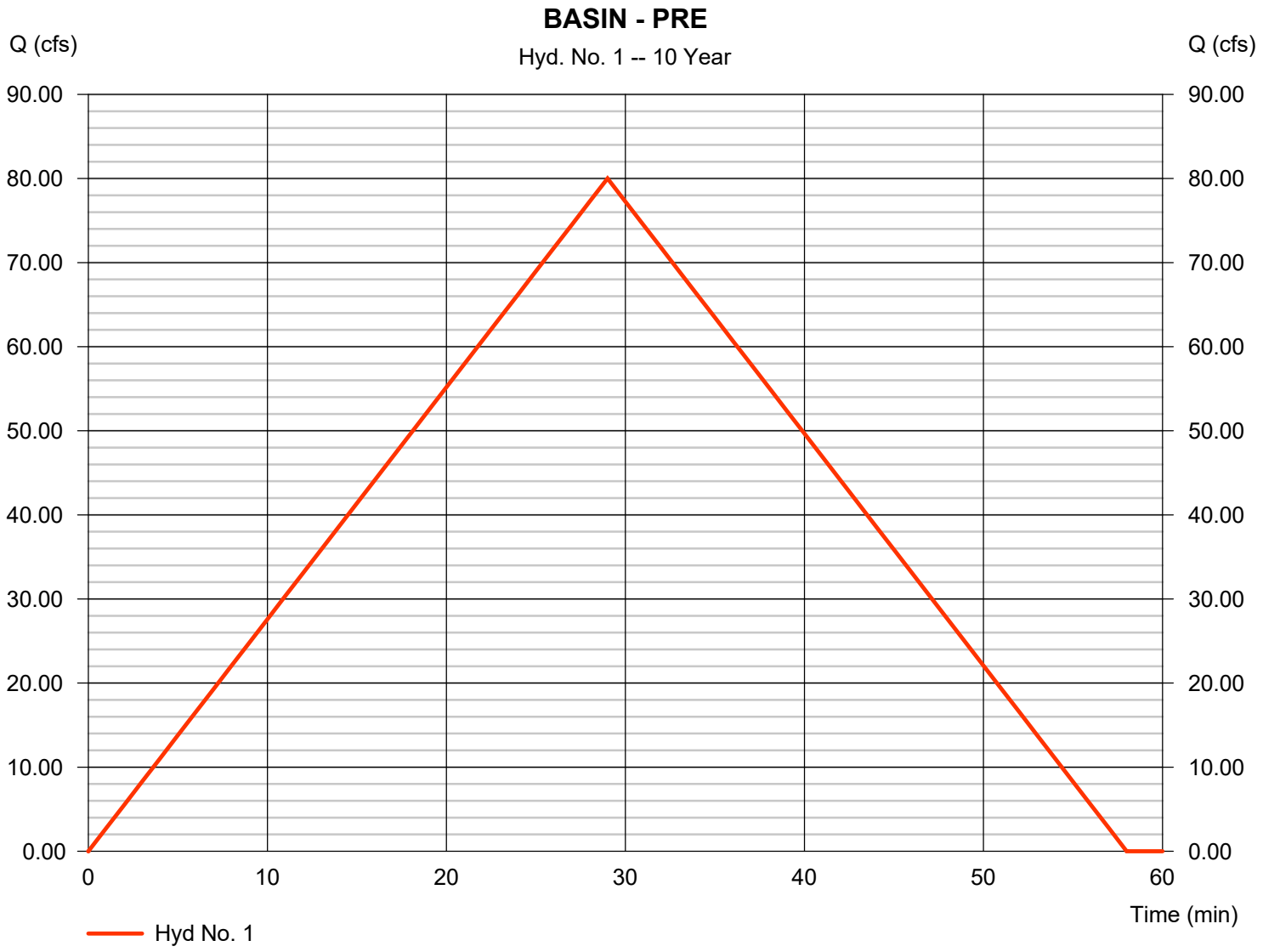
Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2021 Tuesday, 01 / 28 / 2025

Hyd. No. 1

BASIN - PRE

Hydrograph type	= Rational	Peak discharge	= 80.01 cfs
Storm frequency	= 10 yrs	Time to peak	= 29 min
Time interval	= 1 min	Hyd. volume	= 139,223 cuft
Drainage area	= 44.030 ac	Runoff coeff.	= 0.47
Intensity	= 3.866 in/hr	Tc by User	= 29.00 min
IDF Curve	= BRYANT IDF.IDF	Asc/Rec limb fact	= 1/1



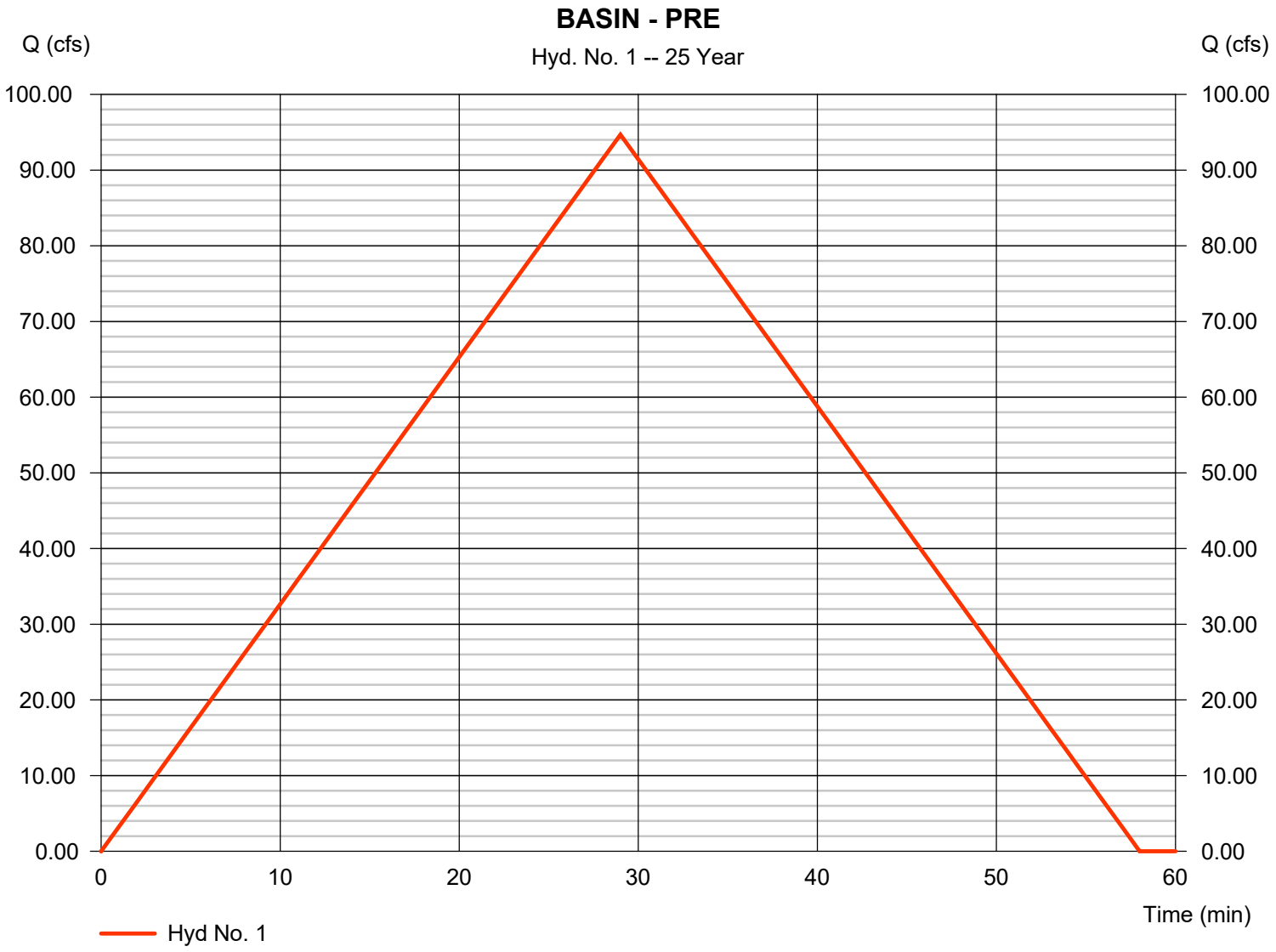
Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2021 Tuesday, 01 / 28 / 2025

Hyd. No. 1

BASIN - PRE

Hydrograph type	= Rational	Peak discharge	= 94.69 cfs
Storm frequency	= 25 yrs	Time to peak	= 29 min
Time interval	= 1 min	Hyd. volume	= 164,756 cuft
Drainage area	= 44.030 ac	Runoff coeff.	= 0.47
Intensity	= 4.576 in/hr	Tc by User	= 29.00 min
IDF Curve	= BRYANT IDF.IDF	Asc/Rec limb fact	= 1/1



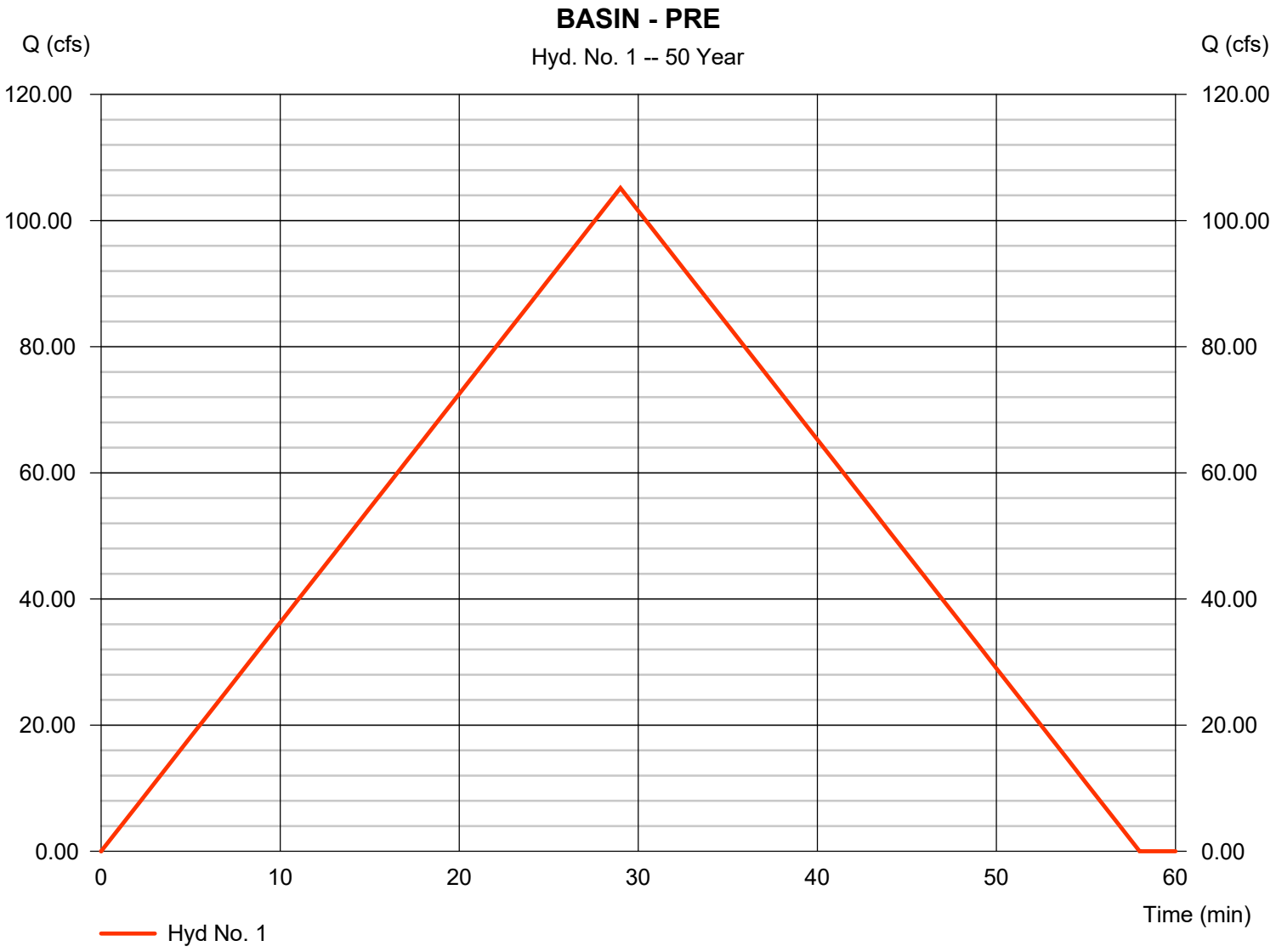
Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2021 Tuesday, 01 / 28 / 2025

Hyd. No. 1

BASIN - PRE

Hydrograph type	=	Rational	Peak discharge	=	105.16 cfs
Storm frequency	=	50 yrs	Time to peak	=	29 min
Time interval	=	1 min	Hyd. volume	=	182,986 cuft
Drainage area	=	44.030 ac	Runoff coeff.	=	0.47
Intensity	=	5.082 in/hr	Tc by User	=	29.00 min
IDF Curve	=	BRYANT IDF.IDF	Asc/Rec limb fact	=	1/1



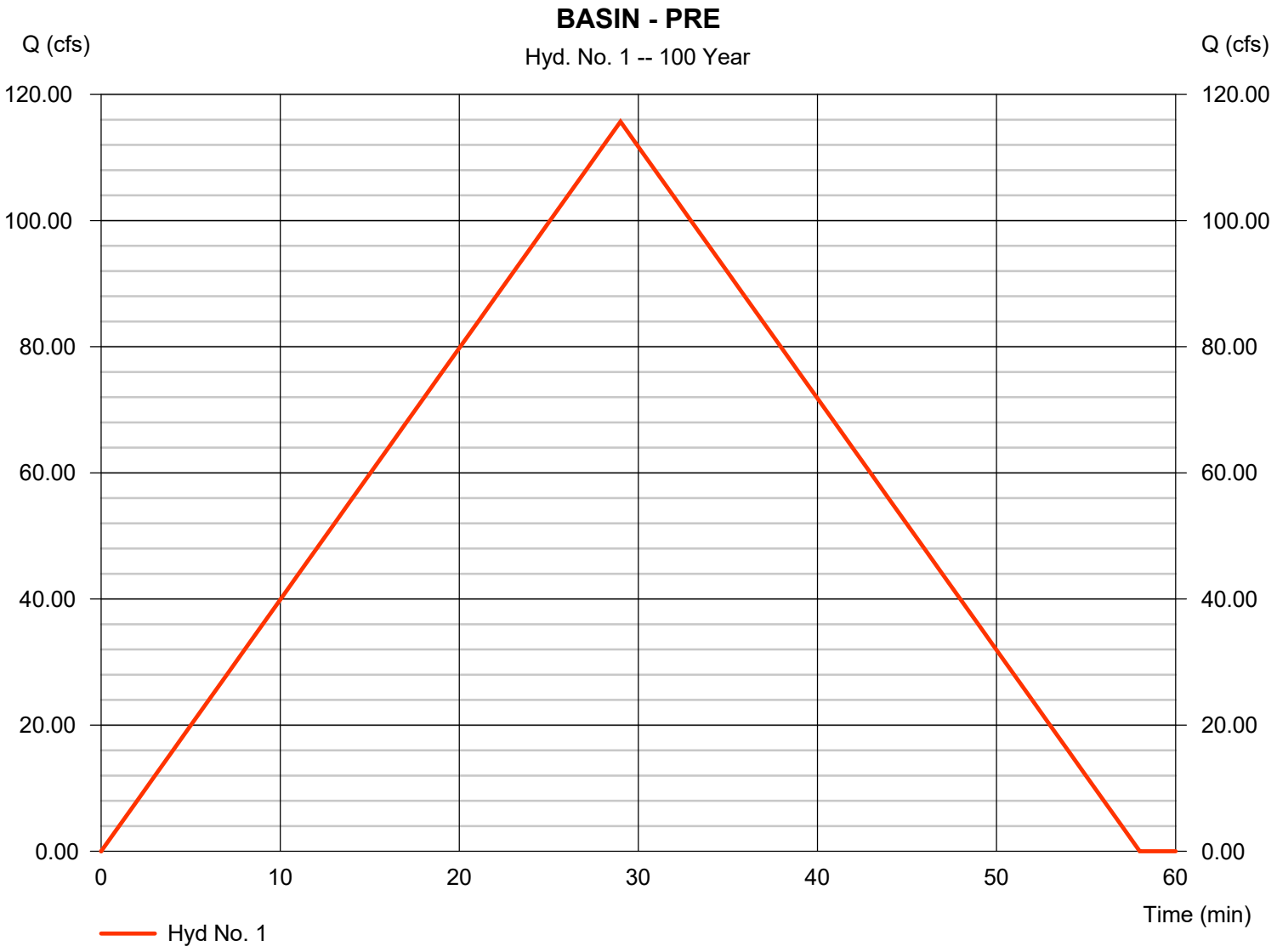
Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2021 Tuesday, 01 / 28 / 2025

Hyd. No. 1

BASIN - PRE

Hydrograph type	=	Rational	Peak discharge	=	115.69 cfs
Storm frequency	=	100 yrs	Time to peak	=	29 min
Time interval	=	1 min	Hyd. volume	=	201,307 cuft
Drainage area	=	44.030 ac	Runoff coeff.	=	0.47
Intensity	=	5.591 in/hr	Tc by User	=	29.00 min
IDF Curve	=	BRYANT IDF.IDF	Asc/Rec limb fact	=	1/1



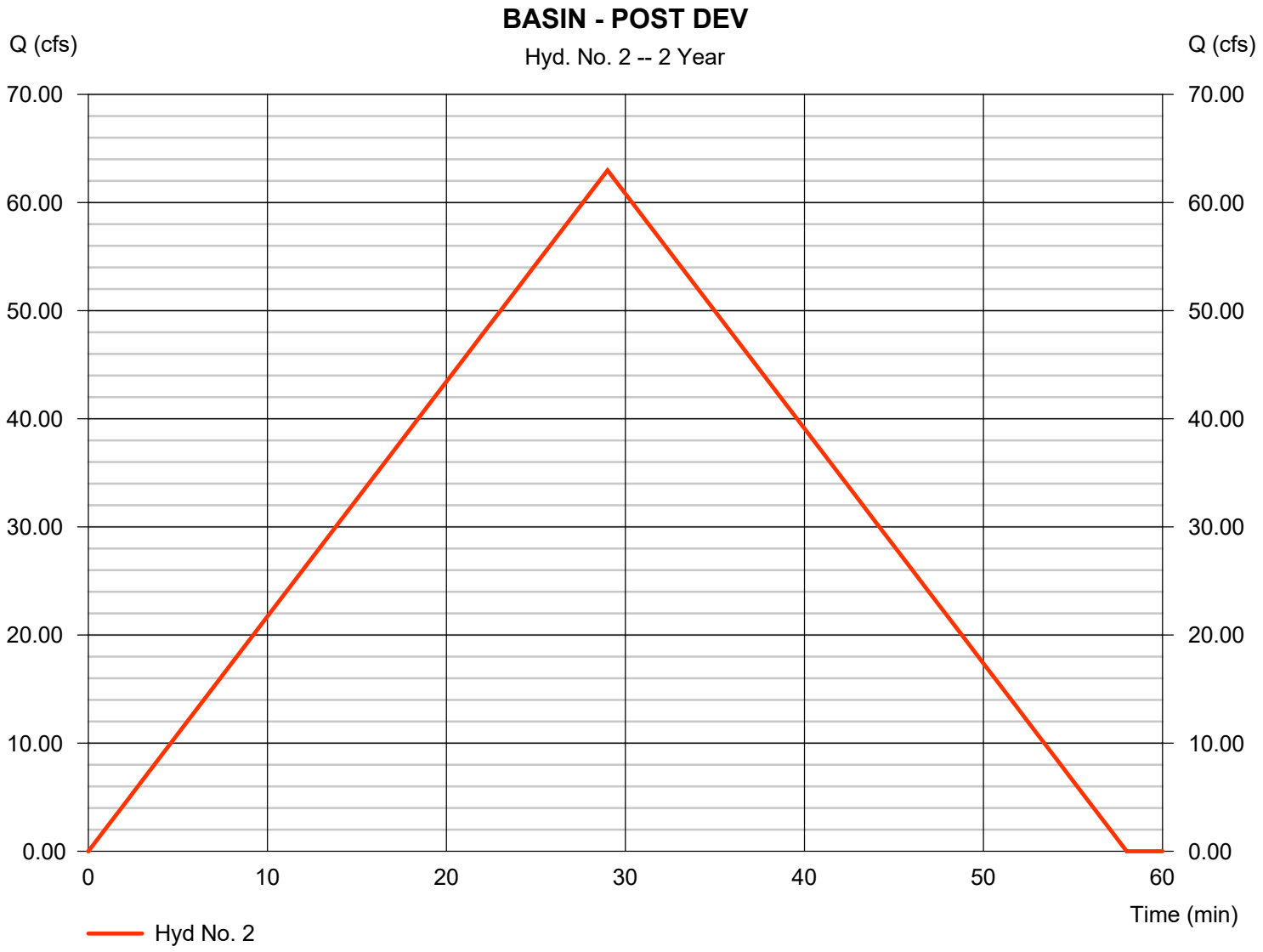
Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2021 Tuesday, 01 / 28 / 2025

Hyd. No. 2

BASIN - POST DEV

Hydrograph type	=	Rational	Peak discharge	=	62.98 cfs
Storm frequency	=	2 yrs	Time to peak	=	29 min
Time interval	=	1 min	Hyd. volume	=	109,592 cuft
Drainage area	=	44.030 ac	Runoff coeff.	=	0.52
Intensity	=	2.751 in/hr	Tc by User	=	29.00 min
IDF Curve	=	BRYANT IDF.IDF	Asc/Rec limb fact	=	1/1



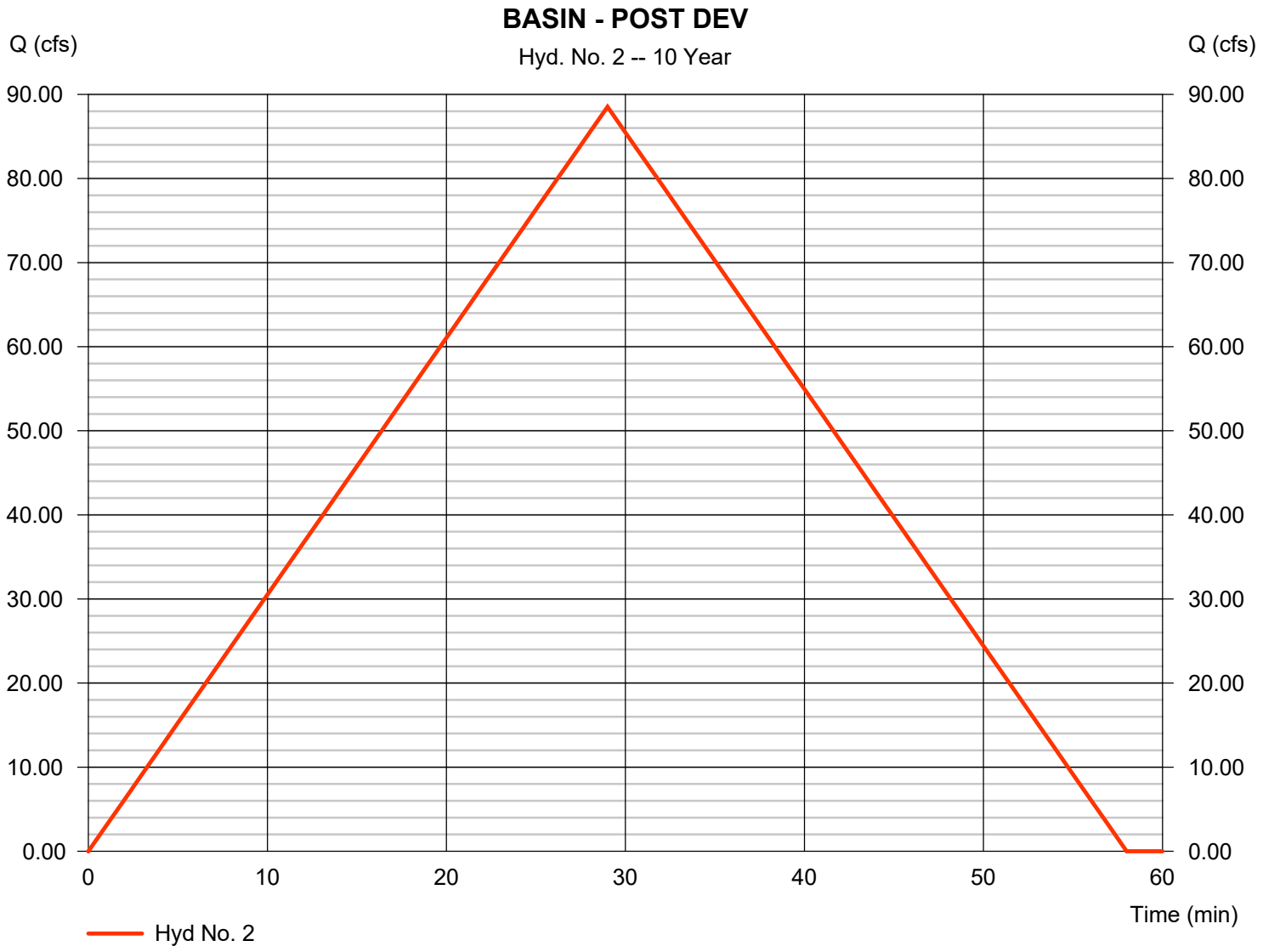
Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2021 Tuesday, 01 / 28 / 2025

Hyd. No. 2

BASIN - POST DEV

Hydrograph type	=	Rational	Peak discharge	=	88.53 cfs
Storm frequency	=	10 yrs	Time to peak	=	29 min
Time interval	=	1 min	Hyd. volume	=	154,034 cuft
Drainage area	=	44.030 ac	Runoff coeff.	=	0.52
Intensity	=	3.866 in/hr	Tc by User	=	29.00 min
IDF Curve	=	BRYANT IDF.IDF	Asc/Rec limb fact	=	1/1



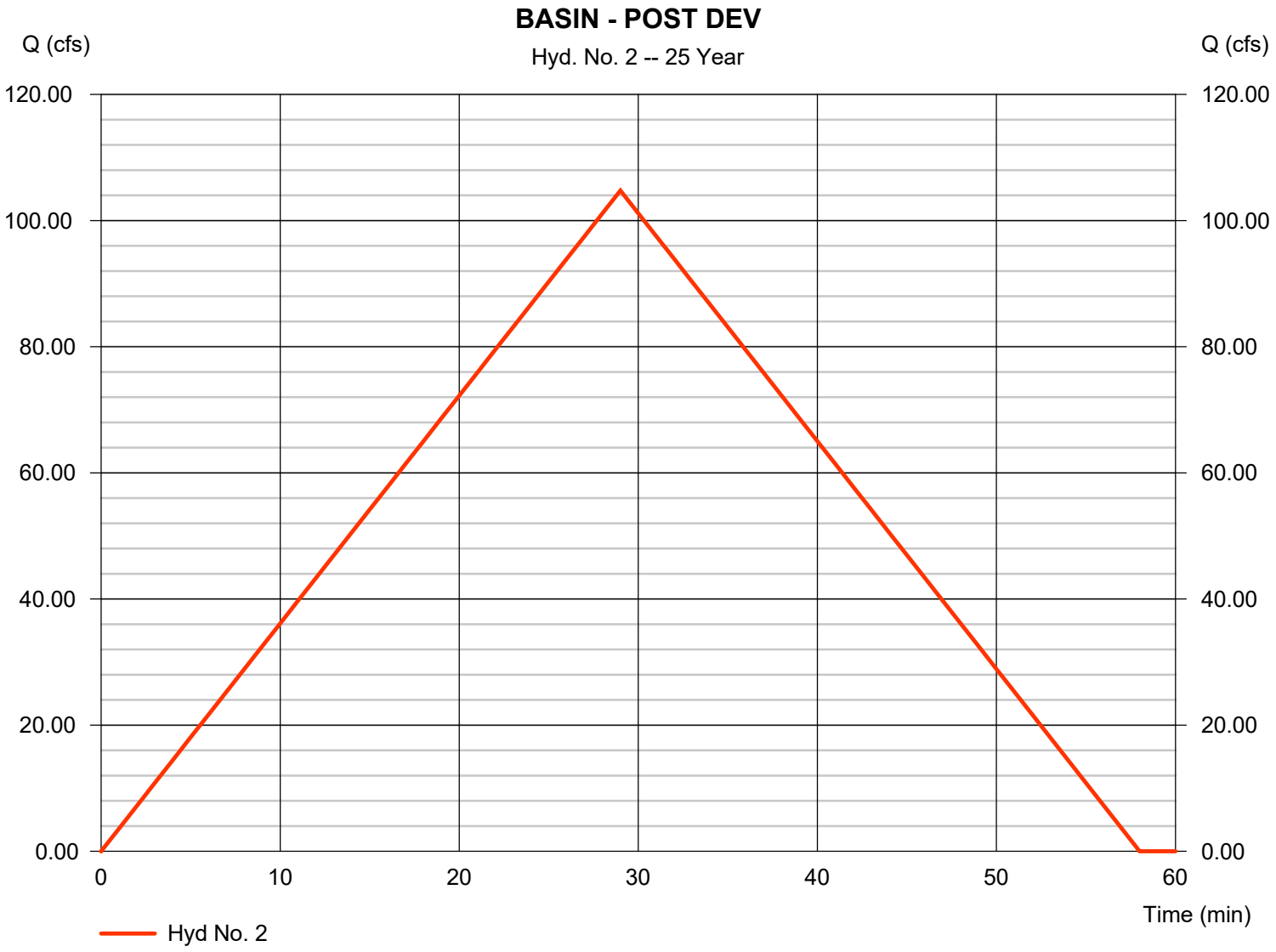
Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2021 Tuesday, 01 / 28 / 2025

Hyd. No. 2

BASIN - POST DEV

Hydrograph type	=	Rational	Peak discharge	=	104.76 cfs
Storm frequency	=	25 yrs	Time to peak	=	29 min
Time interval	=	1 min	Hyd. volume	=	182,283 cuft
Drainage area	=	44.030 ac	Runoff coeff.	=	0.52
Intensity	=	4.576 in/hr	Tc by User	=	29.00 min
IDF Curve	=	BRYANT IDF.IDF	Asc/Rec limb fact	=	1/1



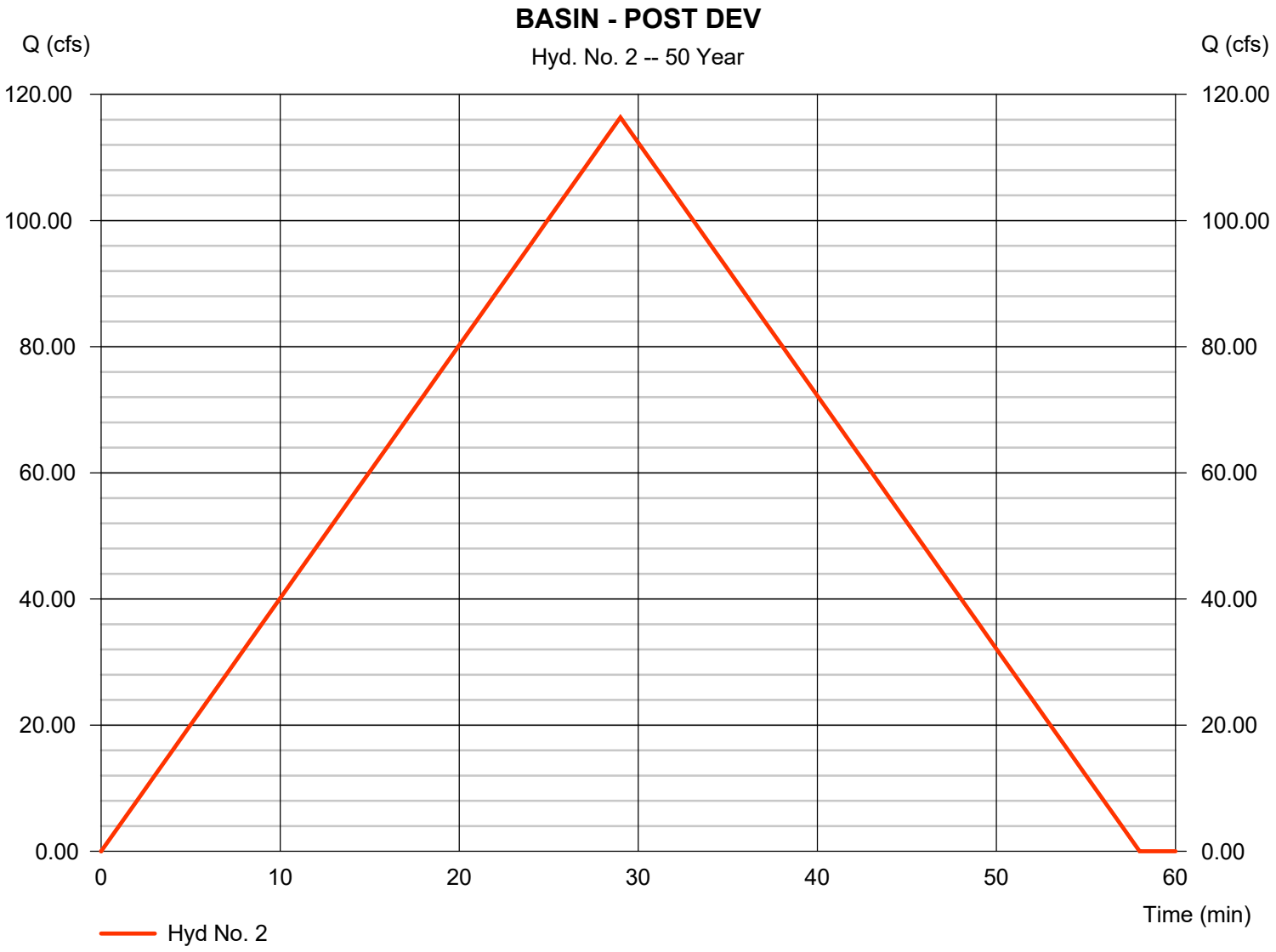
Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2021 Tuesday, 01 / 28 / 2025

Hyd. No. 2

BASIN - POST DEV

Hydrograph type	=	Rational	Peak discharge	=	116.35 cfs
Storm frequency	=	50 yrs	Time to peak	=	29 min
Time interval	=	1 min	Hyd. volume	=	202,453 cuft
Drainage area	=	44.030 ac	Runoff coeff.	=	0.52
Intensity	=	5.082 in/hr	Tc by User	=	29.00 min
IDF Curve	=	BRYANT IDF.IDF	Asc/Rec limb fact	=	1/1



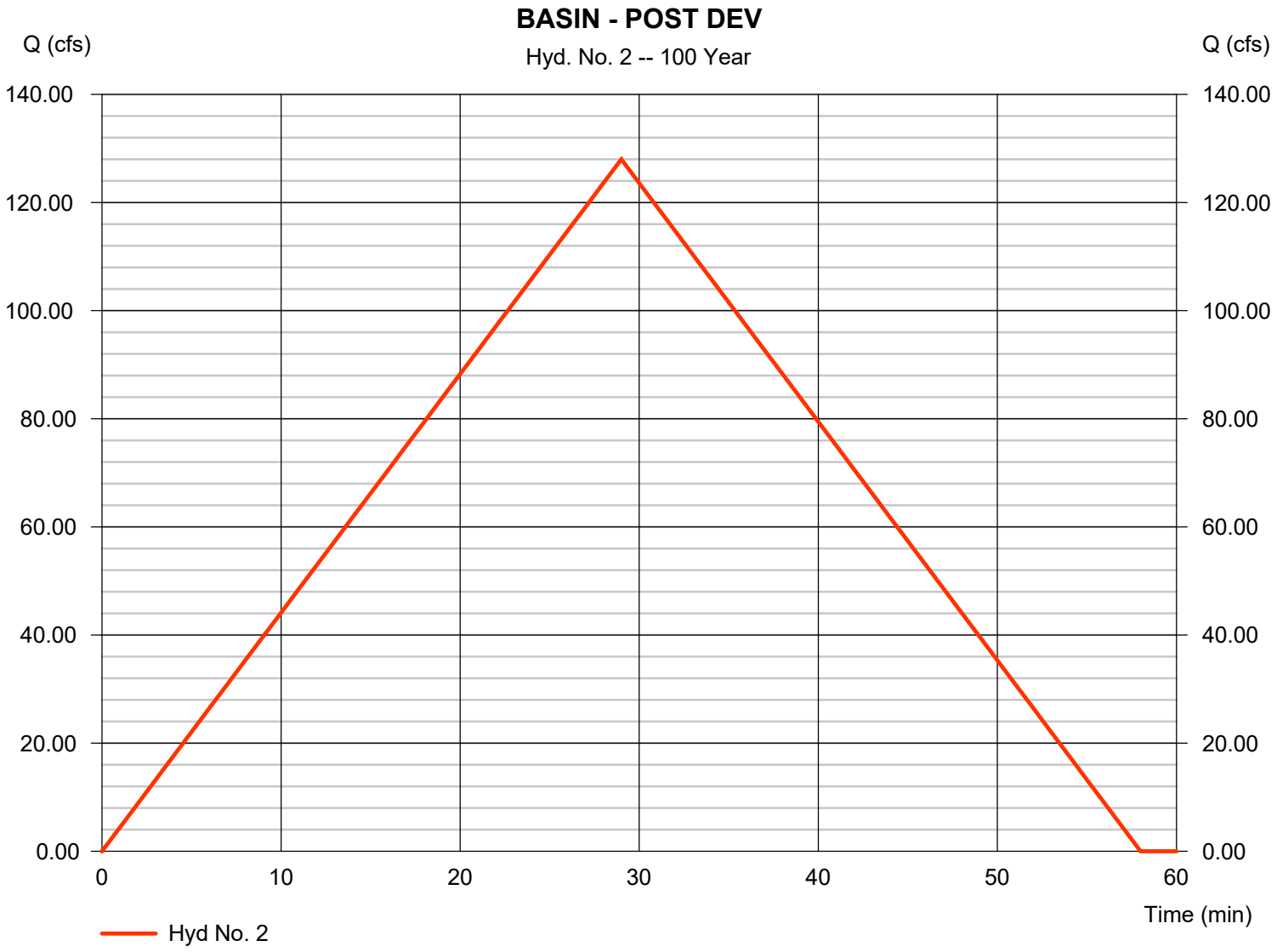
Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2021 Tuesday, 01 / 28 / 2025

Hyd. No. 2

BASIN - POST DEV

Hydrograph type	=	Rational	Peak discharge	=	128.00 cfs
Storm frequency	=	100 yrs	Time to peak	=	29 min
Time interval	=	1 min	Hyd. volume	=	222,723 cuft
Drainage area	=	44.030 ac	Runoff coeff.	=	0.52
Intensity	=	5.591 in/hr	Tc by User	=	29.00 min
IDF Curve	=	BRYANT IDF.IDF	Asc/Rec limb fact	=	1/1



Hydrograph Report

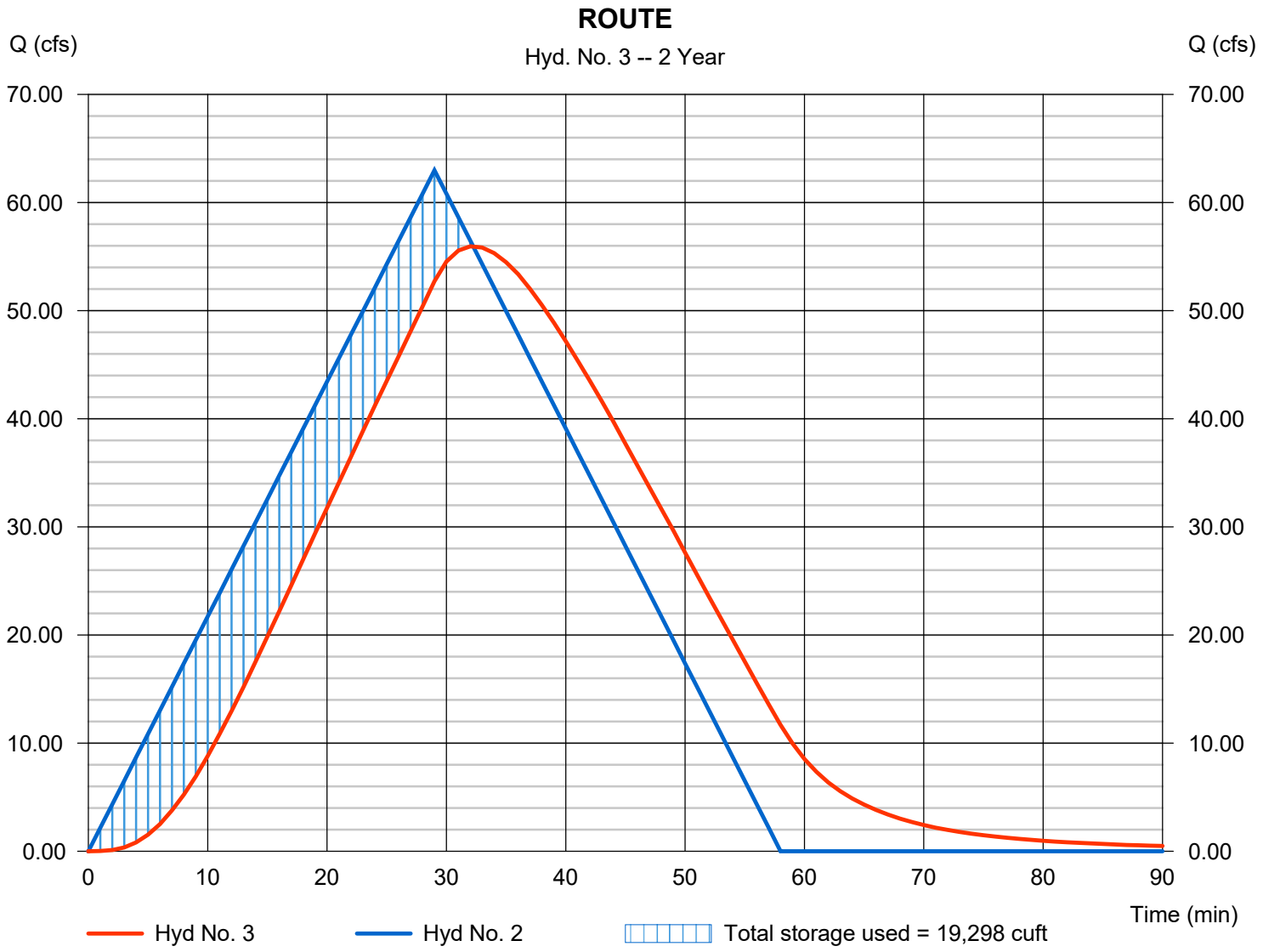
Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2021 Tuesday, 01 / 28 / 2025

Hyd. No. 3

ROUTE

Hydrograph type	= Reservoir	Peak discharge	= 55.95 cfs
Storm frequency	= 2 yrs	Time to peak	= 32 min
Time interval	= 1 min	Hyd. volume	= 109,590 cuft
Inflow hyd. No.	= 2 - BASIN - POST DEV	Max. Elevation	= 465.47 ft
Reservoir name	= POND	Max. Storage	= 19,298 cuft

Storage Indication method used.



Hydrograph Report

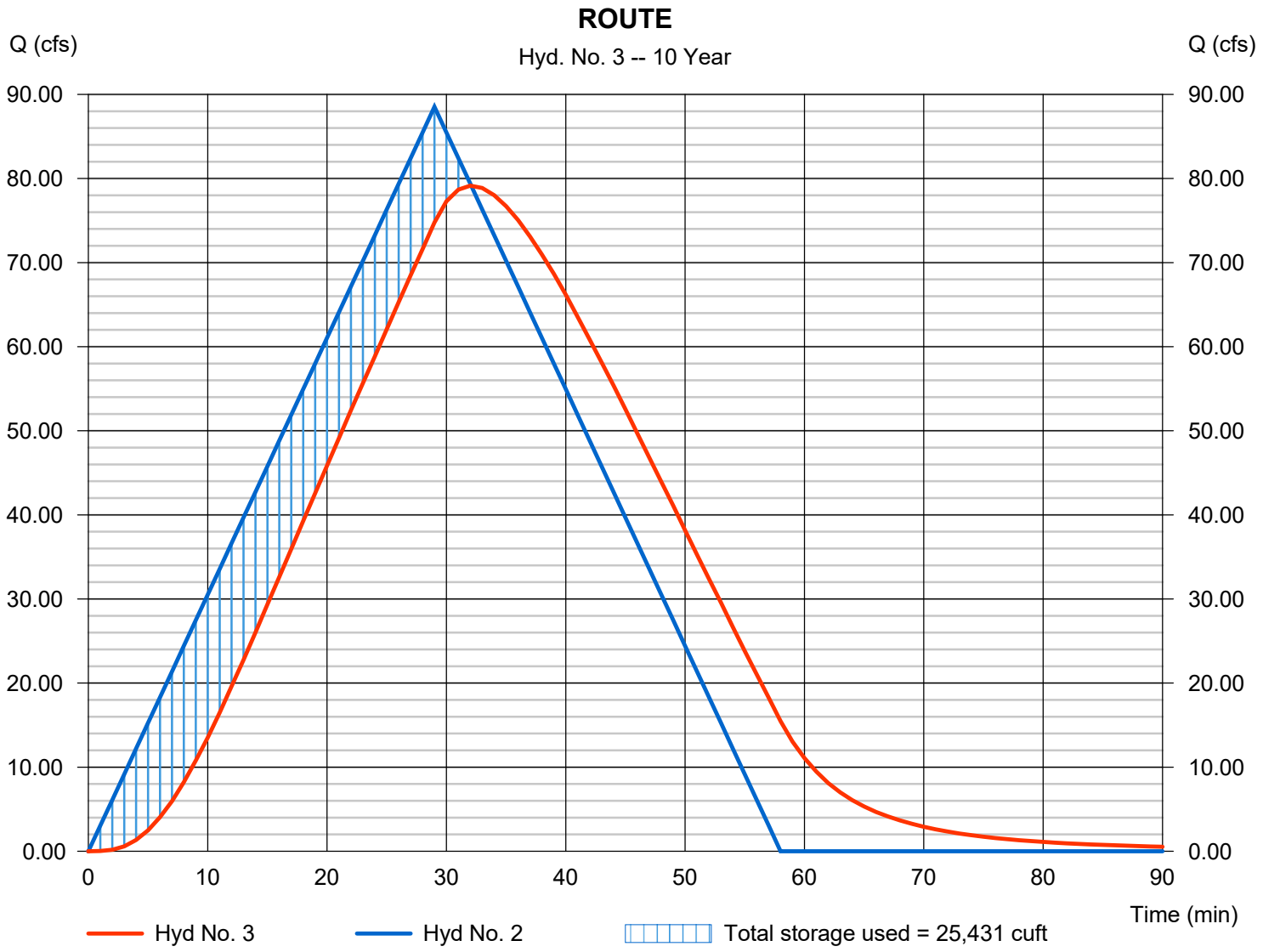
Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2021 Tuesday, 01 / 28 / 2025

Hyd. No. 3

ROUTE

Hydrograph type	= Reservoir	Peak discharge	= 79.14 cfs
Storm frequency	= 10 yrs	Time to peak	= 32 min
Time interval	= 1 min	Hyd. volume	= 154,032 cuft
Inflow hyd. No.	= 2 - BASIN - POST DEV	Max. Elevation	= 466.12 ft
Reservoir name	= POND	Max. Storage	= 25,431 cuft

Storage Indication method used.



Hydrograph Report

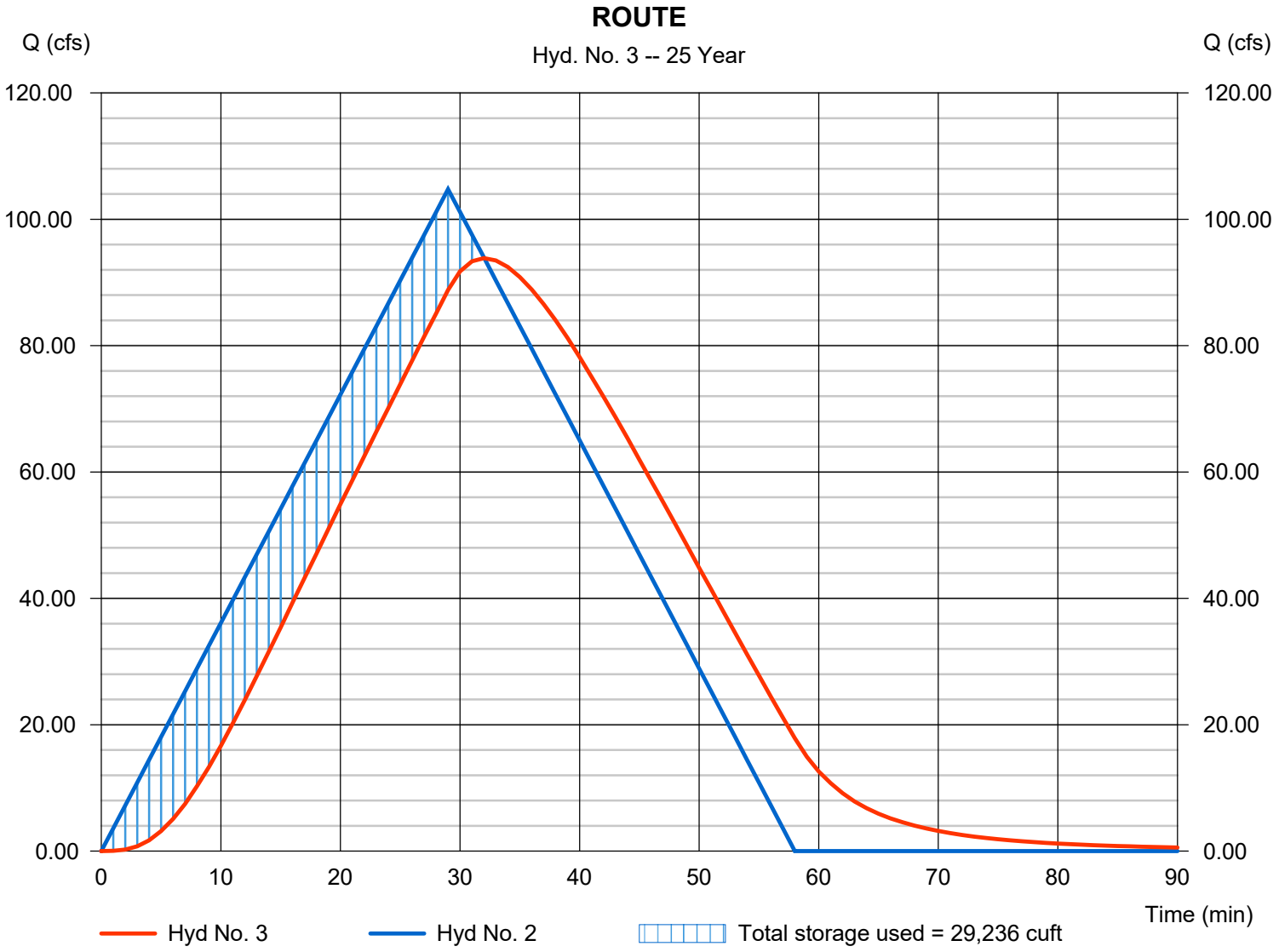
Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2021 Tuesday, 01 / 28 / 2025

Hyd. No. 3

ROUTE

Hydrograph type	= Reservoir	Peak discharge	= 93.85 cfs
Storm frequency	= 25 yrs	Time to peak	= 32 min
Time interval	= 1 min	Hyd. volume	= 182,281 cuft
Inflow hyd. No.	= 2 - BASIN - POST DEV	Max. Elevation	= 466.49 ft
Reservoir name	= POND	Max. Storage	= 29,236 cuft

Storage Indication method used.



Hydrograph Report

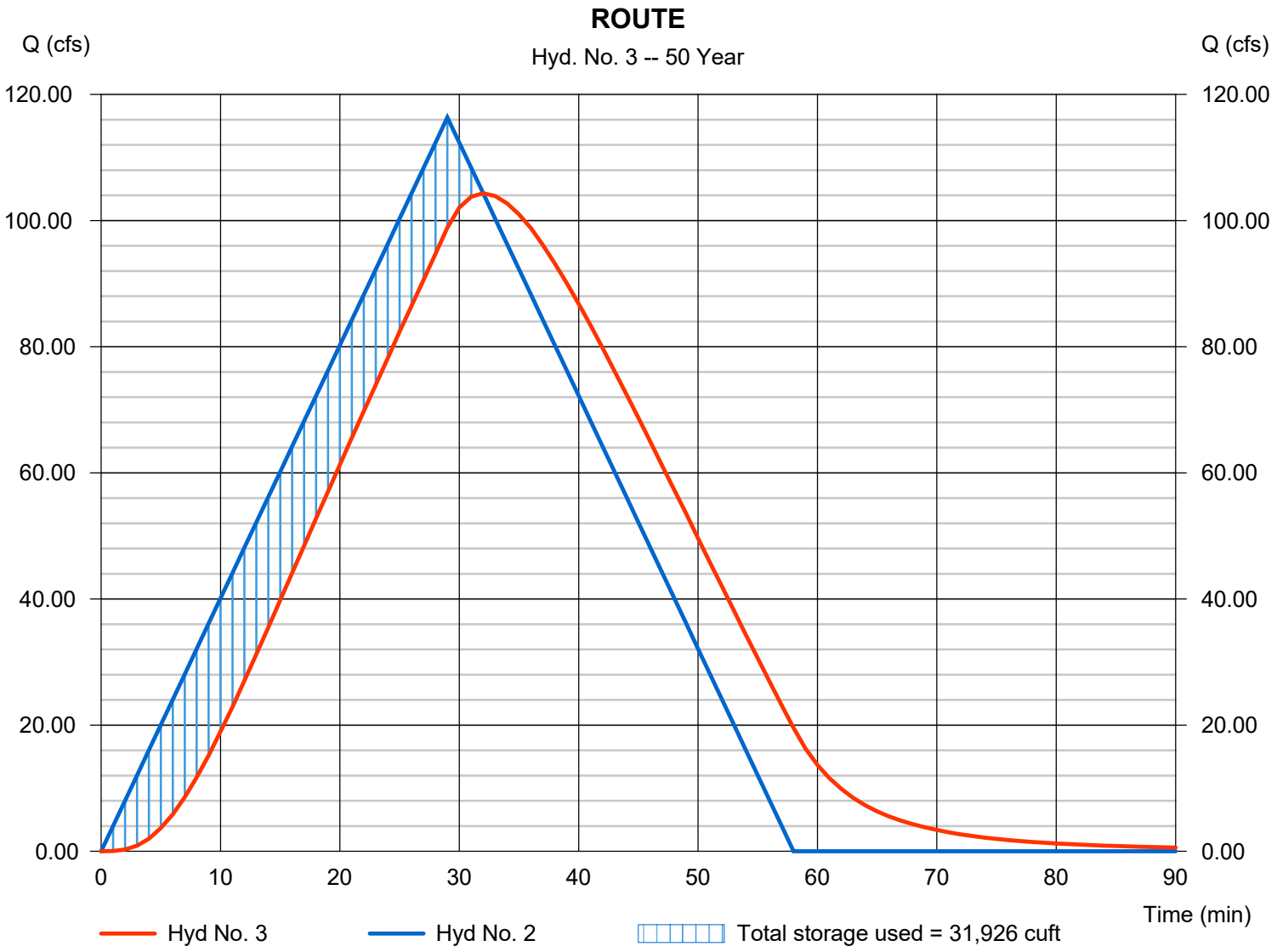
Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2021 Tuesday, 01 / 28 / 2025

Hyd. No. 3

ROUTE

Hydrograph type	= Reservoir	Peak discharge	= 104.32 cfs
Storm frequency	= 50 yrs	Time to peak	= 32 min
Time interval	= 1 min	Hyd. volume	= 202,450 cuft
Inflow hyd. No.	= 2 - BASIN - POST DEV	Max. Elevation	= 466.75 ft
Reservoir name	= POND	Max. Storage	= 31,926 cuft

Storage Indication method used.



Hydrograph Report

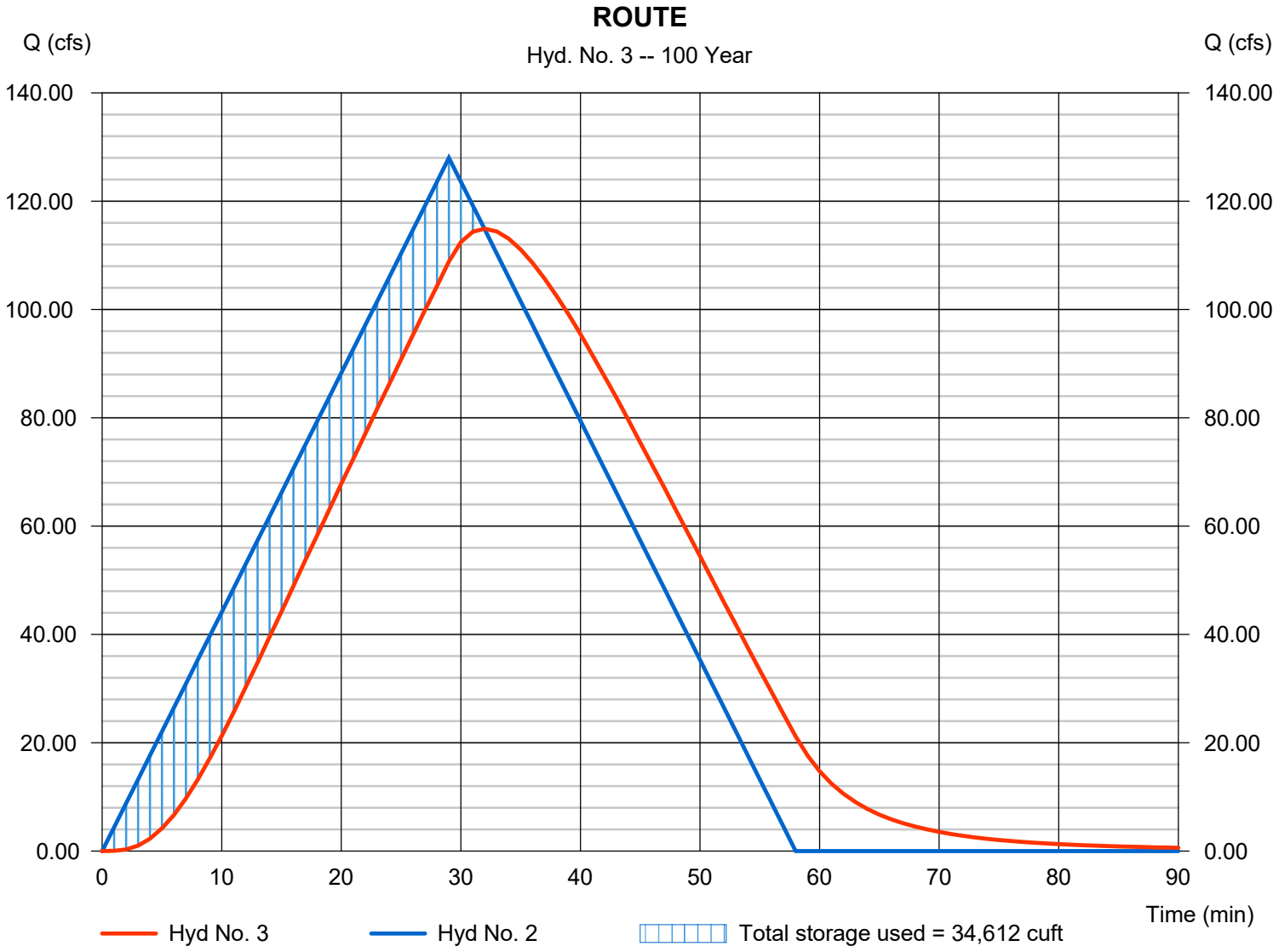
Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2021 Tuesday, 01 / 28 / 2025

Hyd. No. 3

ROUTE

Hydrograph type	= Reservoir	Peak discharge	= 114.92 cfs
Storm frequency	= 100 yrs	Time to peak	= 32 min
Time interval	= 1 min	Hyd. volume	= 222,721 cuft
Inflow hyd. No.	= 2 - BASIN - POST DEV	Max. Elevation	= 467.00 ft
Reservoir name	= POND	Max. Storage	= 34,612 cuft

Storage Indication method used.



Hydrograph Report

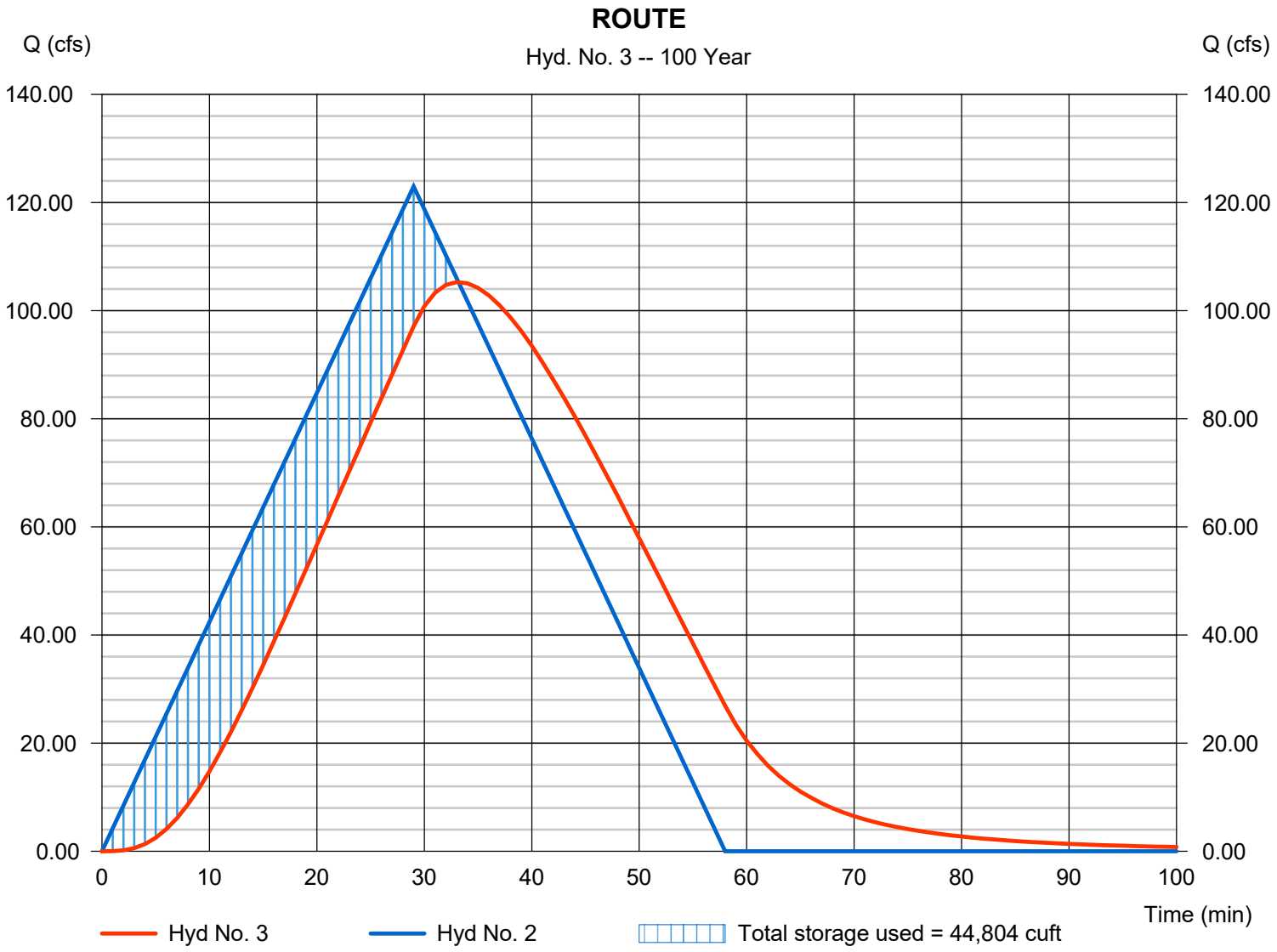
Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2021 Tuesday, 01 / 28 / 2025

Hyd. No. 3

ROUTE

Hydrograph type	= Reservoir	Peak discharge	= 105.29 cfs
Storm frequency	= 100 yrs	Time to peak	= 33 min
Time interval	= 1 min	Hyd. volume	= 213,968 cuft
Inflow hyd. No.	= 2 - BASIN - POST DEV	Max. Elevation	= 466.86 ft
Reservoir name	= POND	Max. Storage	= 44,804 cuft

Storage Indication method used.



Pond Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2021 Tuesday, 01 / 28 / 2025

Pond No. 1 - POND

Pond Data

Trapezoid -Bottom L x W = 130.0 x 70.0 ft, Side slope = 3.00:1, Bottom elev. = 463.00 ft, Depth = 4.00 ft

Stage / Storage Table

Stage (ft)	Elevation (ft)	Contour area (sqft)	Incr. Storage (cuft)	Total storage (cuft)
0.00	463.00	9,100	0	0
0.40	463.40	9,586	3,737	3,737
0.80	463.80	10,083	3,933	7,670
1.20	464.20	10,592	4,135	11,805
1.60	464.60	11,112	4,340	16,145
2.00	465.00	11,644	4,551	20,696
2.40	465.40	12,187	4,766	25,462
2.80	465.80	12,742	4,986	30,447
3.20	466.20	13,309	5,210	35,657
3.60	466.60	13,887	5,439	41,096
4.00	467.00	14,476	5,672	46,768

Culvert / Orifice Structures

	[A]	[B]	[C]	[PrfRsr]
Rise (in)	= 0.00	0.00	0.00	0.00
Span (in)	= 0.00	0.00	0.00	0.00
No. Barrels	= 0	0	0	0
Invert El. (ft)	= 0.00	0.00	0.00	0.00
Length (ft)	= 0.00	0.00	0.00	0.00
Slope (%)	= 0.00	0.00	0.00	n/a
N-Value	= .013	.013	.013	n/a
Orifice Coeff.	= 0.60	0.60	0.60	0.60
Multi-Stage	= n/a	No	No	No

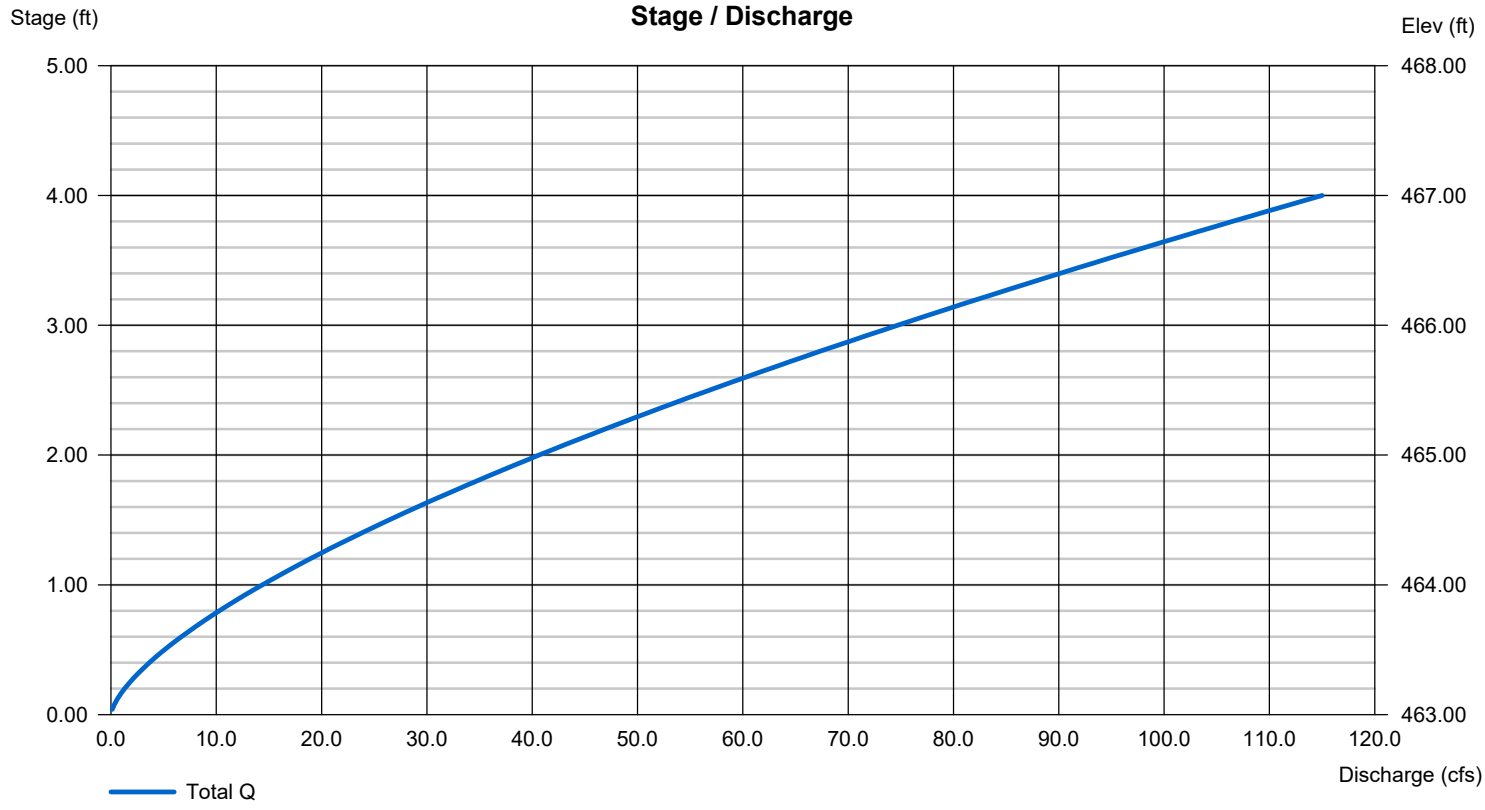
Weir Structures

	[A]	[B]	[C]	[D]
Crest Len (ft)	= 5.75	0.00	0.00	0.00
Crest El. (ft)	= 463.00	0.00	0.00	0.00
Weir Coeff.	= 2.50	3.33	3.33	3.33
Weir Type	= Rect	---	---	---
Multi-Stage	= No	No	No	No

Exfil.(in/hr) = 0.000 (by Wet area)

TW Elev. (ft) = 0.00

Note: Culvert/Orifice outflows are analyzed under inlet (ic) and outlet (oc) control. Weir risers checked for orifice conditions (ic) and submergence (s).



Pond Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2021 Tuesday, 01 / 28 / 2025

Pond No. 1 - POND

Pond Data

Trapezoid -Bottom L x W = 130.0 x 70.0 ft, Side slope = 3.00:1, Bottom elev. = 463.00 ft, Depth = 4.00 ft

Stage / Storage Table

Stage (ft)	Elevation (ft)	Contour area (sqft)	Incr. Storage (cuft)	Total storage (cuft)
0.00	463.00	9,100	0	0
0.40	463.40	9,586	3,737	3,737
0.80	463.80	10,083	3,933	7,670
1.20	464.20	10,592	4,135	11,805
1.60	464.60	11,112	4,340	16,145
2.00	465.00	11,644	4,551	20,696
2.40	465.40	12,187	4,766	25,462
2.80	465.80	12,742	4,986	30,447
3.20	466.20	13,309	5,210	35,657
3.60	466.60	13,887	5,439	41,096
4.00	467.00	14,476	5,672	46,768

Culvert / Orifice Structures

	[A]	[B]	[C]	[PrfRsr]
Rise (in)	= 0.00	0.00	0.00	0.00
Span (in)	= 0.00	0.00	0.00	0.00
No. Barrels	= 0	0	0	0
Invert El. (ft)	= 0.00	0.00	0.00	0.00
Length (ft)	= 0.00	0.00	0.00	0.00
Slope (%)	= 0.00	0.00	0.00	n/a
N-Value	= .013	.013	.013	n/a
Orifice Coeff.	= 0.60	0.60	0.60	0.60
Multi-Stage	= n/a	No	No	No

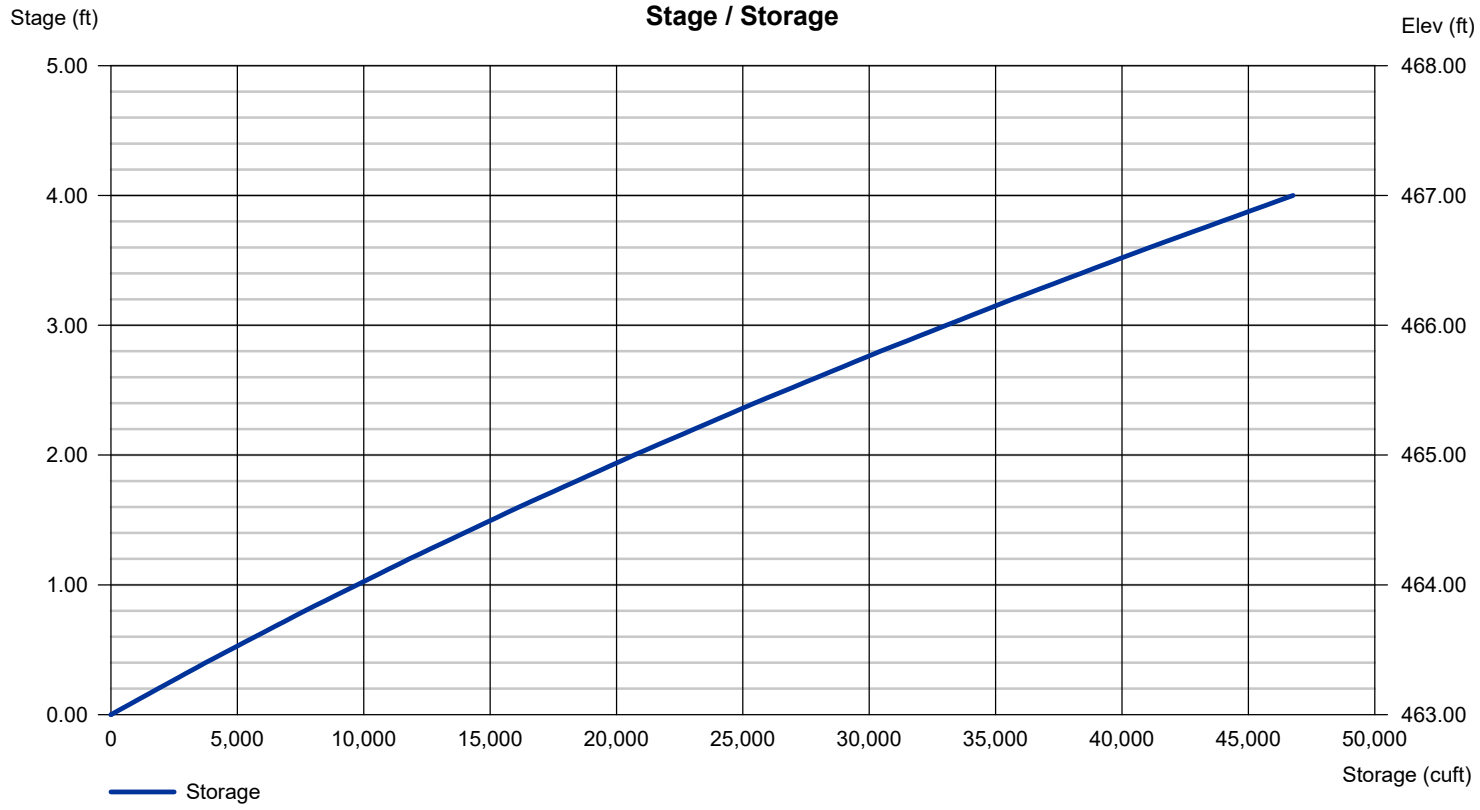
Weir Structures

	[A]	[B]	[C]	[D]
Crest Len (ft)	= 5.75	0.00	0.00	0.00
Crest El. (ft)	= 463.00	0.00	0.00	0.00
Weir Coeff.	= 2.50	3.33	3.33	3.33
Weir Type	= Rect	---	---	---
Multi-Stage	= No	No	No	No

Exfil.(in/hr) = 0.000 (by Wet area)

TW Elev. (ft) = 0.00

Note: Culvert/Orifice outflows are analyzed under inlet (ic) and outlet (oc) control. Weir risers checked for orifice conditions (ic) and submergence (s).



Weir Report

Weir

Rectangular Weir

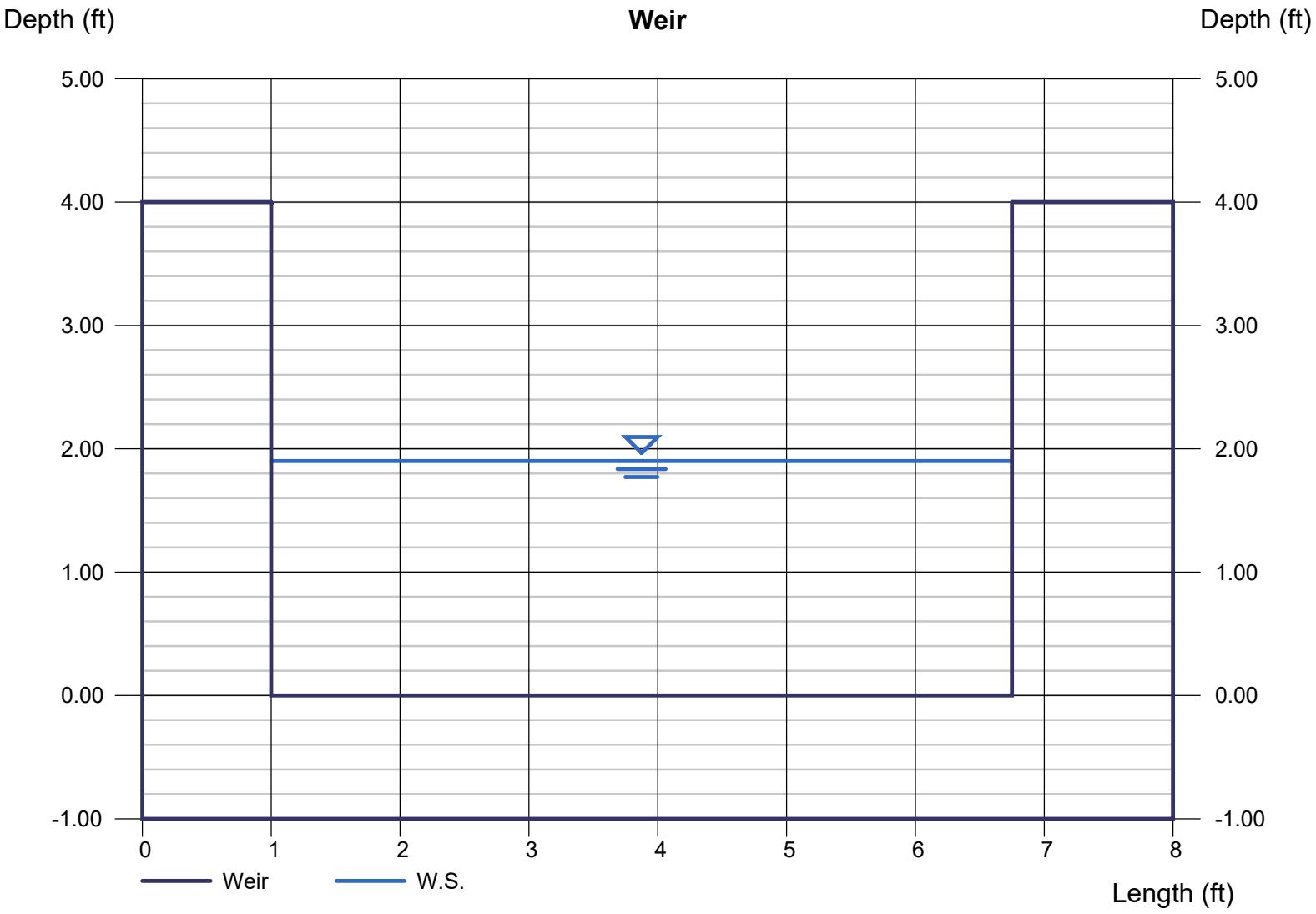
Crest	= Broad
Bottom Length (ft)	= 5.75
Total Depth (ft)	= 4.00

Calculations

Weir Coeff. Cw	= 2.50
Compute by:	Known Q
Known Q (cfs)	= 37.65

Highlighted

Depth (ft)	= 1.90
Q (cfs)	= 37.65
Area (sqft)	= 10.93
Velocity (ft/s)	= 3.44
Top Width (ft)	= 5.75



Weir Report

Weir

Rectangular Weir

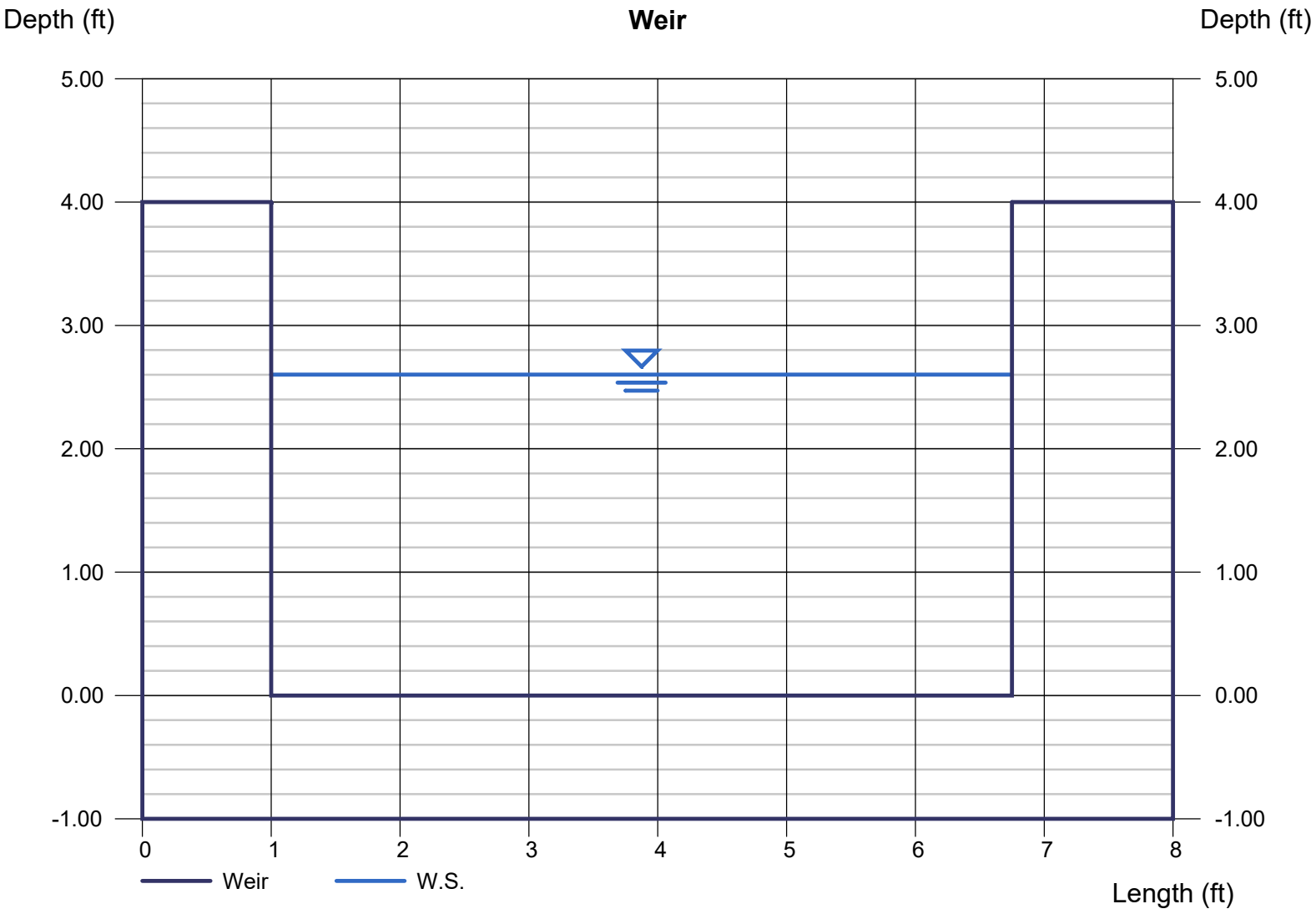
Crest	= Broad
Bottom Length (ft)	= 5.75
Total Depth (ft)	= 4.00

Calculations

Weir Coeff. Cw	= 2.50
Compute by:	Known Q
Known Q (cfs)	= 60.27

Highlighted

Depth (ft)	= 2.60
Q (cfs)	= 60.27
Area (sqft)	= 14.96
Velocity (ft/s)	= 4.03
Top Width (ft)	= 5.75



Weir Report

Hydraflow Express Extension for Autodesk® Civil 3D® by Autodesk, Inc. Tuesday, Jan 28 2025

Weir

Rectangular Weir

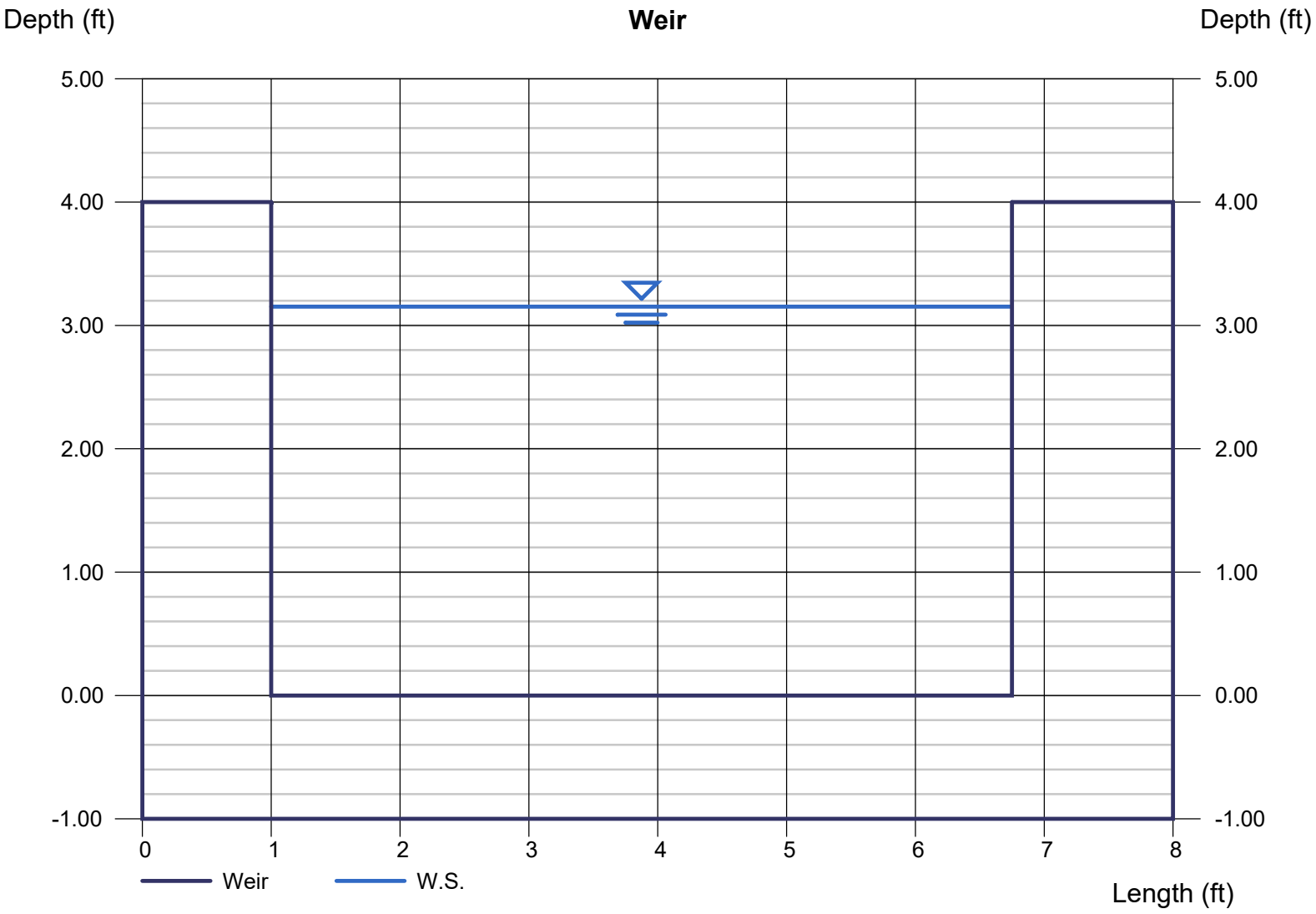
Crest	= Broad
Bottom Length (ft)	= 5.75
Total Depth (ft)	= 4.00

Calculations

Weir Coeff. Cw	= 2.50
Compute by:	Known Q
Known Q (cfs)	= 80.37

Highlighted

Depth (ft)	= 3.15
Q (cfs)	= 80.37
Area (sqft)	= 18.12
Velocity (ft/s)	= 4.43
Top Width (ft)	= 5.75



Weir Report

Weir

Rectangular Weir

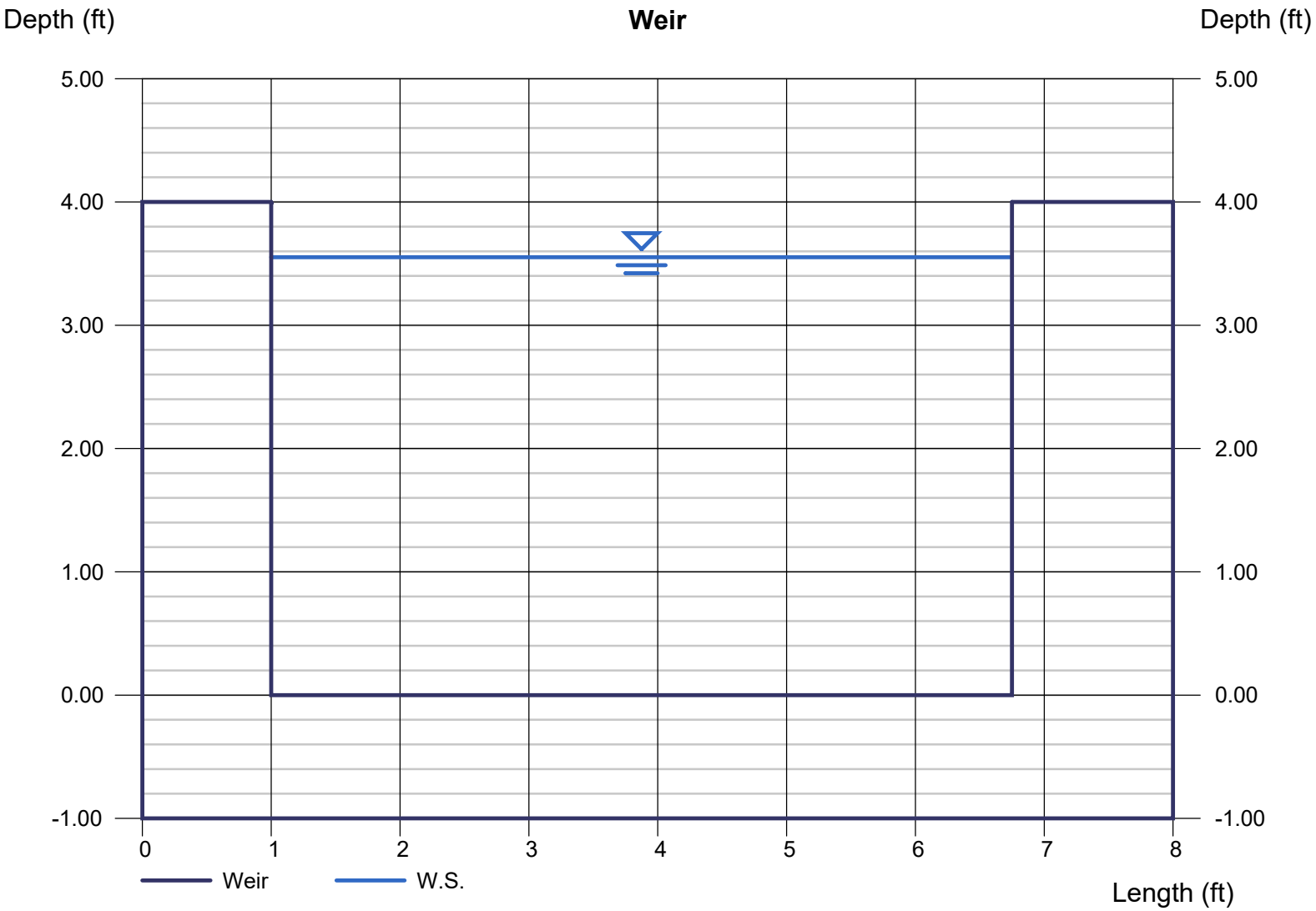
Crest	= Broad
Bottom Length (ft)	= 5.75
Total Depth (ft)	= 4.00

Calculations

Weir Coeff. Cw	= 2.50
Compute by:	Known Q
Known Q (cfs)	= 96.15

Highlighted

Depth (ft)	= 3.55
Q (cfs)	= 96.15
Area (sqft)	= 20.43
Velocity (ft/s)	= 4.71
Top Width (ft)	= 5.75



Weir Report

Weir

Rectangular Weir

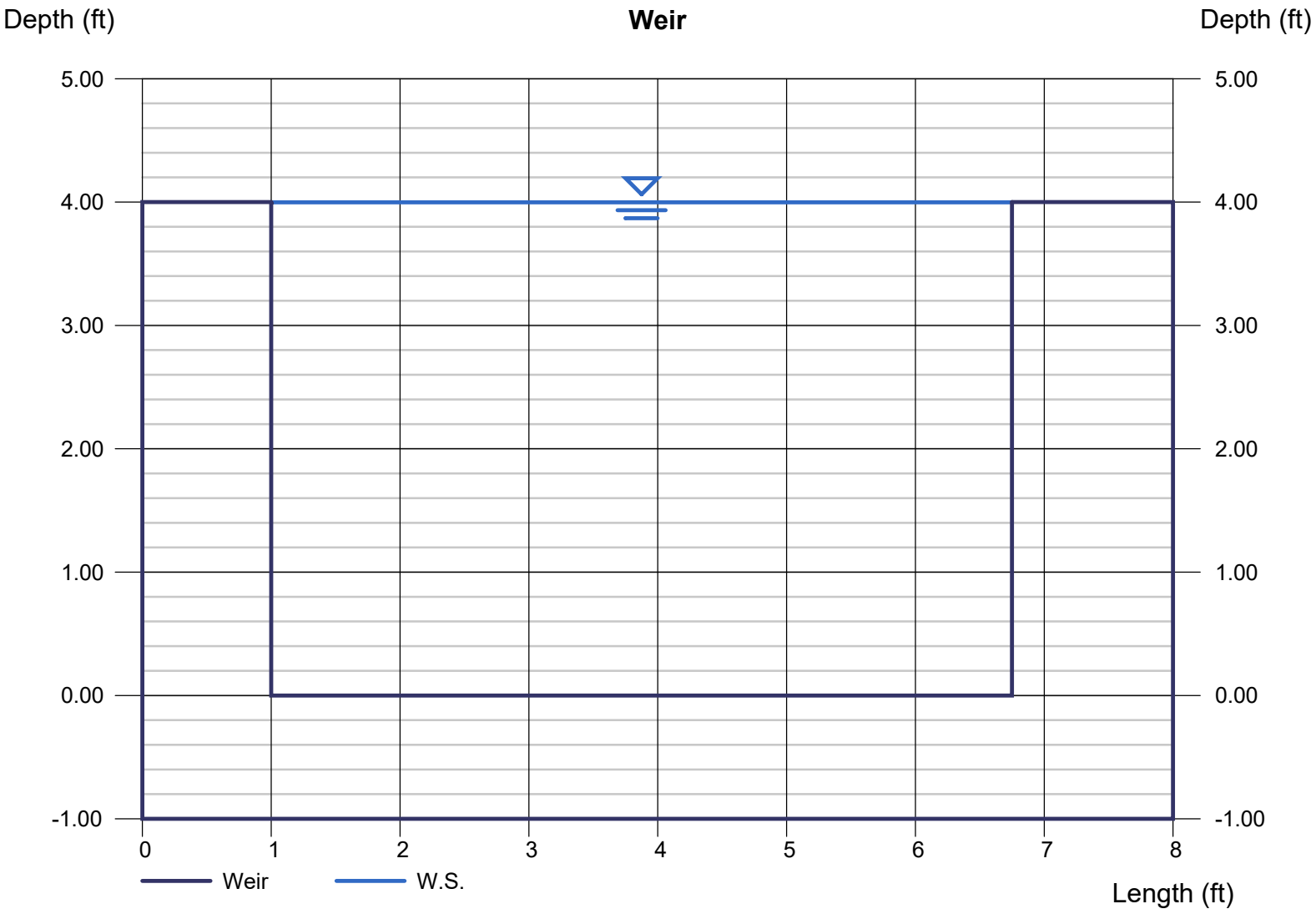
Crest	= Broad
Bottom Length (ft)	= 5.75
Total Depth (ft)	= 4.00

Calculations

Weir Coeff. Cw	= 2.50
Compute by:	Known Q
Known Q (cfs)	= 115.00

Highlighted

Depth (ft)	= 4.00
Q (cfs)	= 115.00
Area (sqft)	= 22.99
Velocity (ft/s)	= 5.00
Top Width (ft)	= 5.75



REQUEST FOR QUALIFICATIONS

Comprehensive Growth Plan for the City of Bryant, Arkansas

The City of Bryant, Arkansas, is seeking qualified professional planning and consulting firms to submit statements of qualifications for the development of a Comprehensive Growth Plan, including a Land Use Plan and a Feasibility Study. The selected firm will provide expertise in urban planning, land use analysis, infrastructure feasibility, economic development, and long-term strategic growth planning to guide the City in sustainable and managed expansion.

I. COMMUNITY BACKGROUND

Bryant, Arkansas, is a fast-growing city located in Saline County, part of the Little Rock metropolitan area. With a population exceeding 20,000 residents, Bryant has experienced significant growth due to its strong local economy, high quality of life, and proximity to major transportation corridors, including Interstate 30. The city is known for its excellent public schools, diverse recreational amenities, and commitment to fostering a business-friendly environment. As a hub for both residential and commercial development, Bryant is dedicated to strategic planning to accommodate its expanding population while preserving its community character and natural resources.

II. SCOPE OF WORK

The selected firm will be responsible for the following tasks:

1. Develop a Comprehensive Growth Plan, including a Land Use Plan, and a Feasibility Study:
    a. Comprehensive Growth Plan:
        i. Assess current demographic, economic, and development trends.
        ii. Engage stakeholders, including City officials, residents, and business leaders, to determine long-term community goals.
        iii. Develop growth scenarios, identifying areas for residential, commercial, industrial, and mixed-use development.
        iv. Provide policy recommendations for existing zoning, transportation, housing, and infrastructure development.
        v. Ensure consistency with local, including Saline County, regional, and state planning initiatives.
    b. Land Use Plan:
        i. Analyze existing land use patterns and zoning regulations.
        ii. Identify areas suitable for future development and areas requiring preservation or special planning considerations.
        iii. Provide strategies for smart growth, including infill development and mixed-use planning.
        iv. Recommend updates to zoning codes and land use policies to align with growth projections.

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c. Feasibility Study:
    i. Work in alignment with existing plans, including the Transportation Plan, Parks Master Plan, Bike/Pedestrian Plan, and the Water/Wastewater Master Plan, which is expected to be completed by Summer 2025.
    i. Identify constraints and opportunities related to topography, environmental conditions, and existing infrastructure.
    ii. Provide financial analysis for infrastructure investments needed to support future growth.
    iii. Assess economic viability and funding mechanisms for proposed development areas.

2. Environmental Services and Regulatory Compliance:
    a. Ensure regulatory compliance and permitting expertise, with knowledge of approval procedures for agencies such as the Arkansas Department of Transportation, Arkansas Department of Agriculture, Arkansas Natural Resource Commission, Arkansas Department of Environmental Quality, Federal Emergency Management Agency, Federal Highway Administration, and U.S. Environmental Protection Agency.
3. City Regulation and Reporting:
    a. Research and obtain extensive knowledge of City of Bryant zoning and planning regulations.
4. Meeting Attendance and Participation:
    a. Attend Planning Commission meetings, City Council meetings, and meetings with property owners, City staff, developers, and State, Federal, or local agencies.
    b. Coordinate and facilitate public outreach efforts, including planning, scheduling, organizing, and engaging stakeholders to secure their support.
5. Mapping and Visualization:
    a. Develop comprehensive visual tools, including infographics, maps, charts, and interactive dashboards, to support decision-making and enhance public understanding.
    b. Provide one (1) set of Comprehensive Plan maps in a digital format compatible with the City's GIS, ortho-corrected and geo-referenced to the state plane coordinate system.

III. QUALIFICATIONS

Interested firms must demonstrate expertise in:

1. Comprehensive and long-range planning.
2. Land use analysis and zoning policy development.
3. Economic and market feasibility studies.
4. Infrastructure and transportation planning.
5. Community engagement and stakeholder collaboration.
6. GIS mapping and data analysis.

IV. SUBMISSION REQUIREMENTS

Firms interested in responding to this RFQ must submit the following information:

1. Cover letter and introduction of the firm, including primary contact information.
2. A summary of the firm's background, key personnel, and experience in similar projects.

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3. A detailed description of the methodology and approach to completing the Comprehensive Growth Plan, Land Use Plan, and Feasibility Study.
4. Examples of similar plans or studies completed by the firm.
5. Estimated timeline for completion of the project.
6. Contact information for at least five (5) references from previous projects. References must include entity name, point of contact, address, phone number, email, and services provided.

V. SELECTION PROCESS

The City of Bryant will evaluate submissions based on the following criteria:

1. Qualifications and experience in comprehensive growth plans. (20 points)
2. Expertise in land use and feasibility studies. (20 points)
3. Quality of work in previous projects. (30 points)
4. Proposed timeline and schedule. (15 points)
5. References and prior client satisfaction. (10 points)
6. Approach to community engagement and stakeholder collaboration. (5 points)

Following the evaluation, the City may conduct interviews with the highest-ranked firms before making a final selection.

All responses should be addressed to:
City of Bryant
RFQ FOR COMPREHENSIVE GROWTH PLAN
Attn: Ted Taylor
210 S.W. 3rd Street
Bryant, AR 72022

One original signed, one electronic, and five (5) copies of responses must be received no later than **2:00 p.m. (CST) on DAY, MONTH DATE, 2025**. Any responses received after this deadline will not be considered. When projects are initiated, the City of Bryant will use the submitted information to select qualified firms; it will select the best qualified from that list and then commence contract negotiations with the selected firm. At the City's option, it may seek proposals for a particular project from one or more of the selected firms to aid in the selection process. The City of Bryant encourages participation of small, minority, and woman-owned business enterprises in the procurement of goods, services, professional services, and construction, either as a general contractor or as subcontractor. It is further requested that whenever possible, majority contractors who require subcontractors, seek qualified small, minority, and woman businesses to partner with them.

Additional Questions may be addressed to:
City of Bryant
Ted Taylor
501-943-0309 (office)
ttaylor@cityofbryant.com

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