Bryant Development and Review Committee Meeting

Boswell Municipal Complex - City Hall Conference Room

210 SW 3rd Street

Date: March 16, 2023 - **Time:** 9:00 AM

Call to Order

Old Business

New Business

1. Butler Center - 1109 N Reynolds Road - Site Plan

GarNat Engineering - Requesting Recommendation for Site Plan Approval

- 0685-SMP-01.pdf
- 0685-LTR-02.pdf
- 0685-LTR-01.pdf
- 0685-APP-01.pdf
- 0685-AFF-01.pdf
- 0685-PLN-01.pdf

2. Butler Center - 1109 N Reynolds Road - Rezoning

GarNat Engineering - Requesting Recommendation for Rezoning of Property from R-E to C-2

- 0686-PNO-01.pdf
- 0686-LTR-01.pdf
- 0686-SRV-01.pdf
- 0686-AFF-01.pdf
- 0686-APP-01.pdf

3. 25300 I-30 N - Conditional Use Permit

Hope Consulting - Requesting Recommendation for Conditional Use Permit for a Storage Facility

- 0687-APP-02.pdf
- 0687-PLN-01.pdf
- 0687-APP-01.pdf

4. Jacob's Corner Subdivision - Final Plat

Hope Consulting - Requesting Recommendation for Approval of Final Plat

- 0688-ADH-01.pdf
- 0688-PLT-01.pdf
- 0688-ASB-01.pdf
- 0688-LTR-01.pdf

5. Hilldale Crossing Subdivision Ph. 2 - Final Plat

Hope Consulting - Requesting Recommendation for Approval of Final Plat

- 0689-ASB-02.pdf
- 0689-ADH-01.pdf
- 0689-ASB-01.pdf
- 0689-PLT-01.pdf
- 0689-LTR-01.pdf

6. Hilltop Landing Subdivision - Preliminary Plat

Hope Consulting - Requesting Recommendation for Preliminary Plat Approval

- 0690-DRN-01.pdf
- 0690-PLT-01.pdf
- 0690-LTR-01.pdf
- 0690-PLN-01.pdf

7. Midland Road Estates Subdivision - Preliminary Plat

Hope Consulting - Requesting Discussion for Preliminary Plat Approval

- 0691-PLT-01.pdf
- 0691-LTR-01.pdf

8. REQUEST TO ADD: Elite Volleyball Academy - Vernia Park Subdivision - Site Plan

GarNat Engineering - Requesting Recommendation fro Site Plan Approval, Rezoning from R-2 to C-2, and Rear Setback Variance

- 0695-LTR-01.pdf
- 0694-LTR-01.pdf
- 0694-APP-01.pdf
- 0694-PLT-01.pdf
- 0693-PLT-01.pdf
- 0693-LTR-01.pdf
- 0693-PLN-01.pdf

Staff Approved

9. Wendy's - 2206 N Reynolds - Sign Permit

Action Signs - Requesting Sign Permit Approval - STAFF APPROVED

- 0677-APP-01.pdf

10. Alliance Technical Group - 219 Brown Lane - Sign Permit

Aero Signs - Requesting Sign Permit Approval - STAFF APPROVED

- 0678-PLN-01.pdf

Permit Report

Adjournments

New Facility For:
Butler Center
1109 N Reynolds Road
Bryant, AR 72022

STORM WATER MAINTENANCE PLAN

The Reynolds Road Storage owner will be responsible for the inspection and maintenance of the stormwater detention pond located on its.

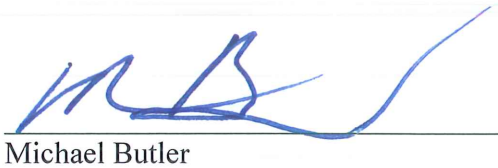
Inspections are to be scheduled as directed in this document. All documentation on scheduled inspections, dates of inspections, and maintenance completed shall be retained by the Reynolds Road Storage owner for a period of three years.

DETENTION PIPES

Annual Maintenance (as applicable):

[ ] Check pipes for sediment in-fill, clean when necessary

[ ] Check outlets for clogging with trash or dead vegetation, clean when necessary



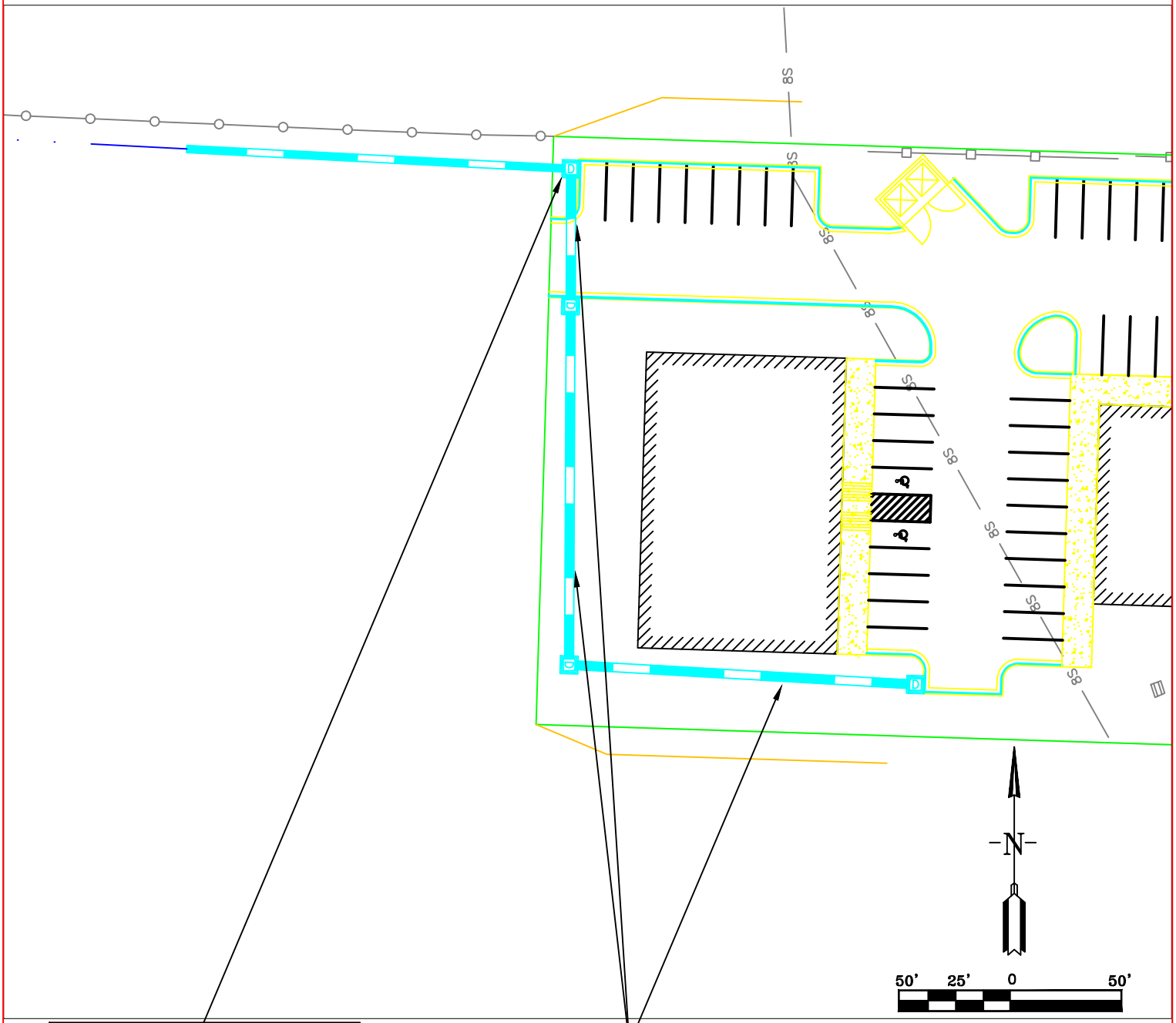
Michael Butler
Butler Wealth Capital, LLC

03/07/2023
date

INSPECTION REPORT

DATE: / /

BUTLER CENTER



OUTLET

DETENTION PIPE

COMMENT

NEW FACILITY FOR:
BUTLER CENTER
CITY OF BRYANT, AR
DRAINAGE CALCULATIONS – SUMMARY
3/2/2023

DESCRIPTION OF PROJECT

Butler center is an approximately 1.51 Acre development located in the City of Bryant, Arkansas approximately a mile south of Reynolds Road. There are three drainage basins on the site. Eastern and Southern basins are small and will not be detained. The large basin will be detained in a pipe network storage located in the western end of the site. The detention for the storage network will be underground in 30" HDPE pipe.

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

NEW FACILITY FOR:
BUTLER CENTER
CITY OF BRYANT, AR
DRAINAGE CALCULATIONS – SUMMARY
3/2/2023

SUMMARY OF DRAINAGE BASINS

PRE-DEVELOPMENT CONDITIONS

There are three drainage basins on the site. Basin 1 drains to east side and Basin 3 drains to south side of the site. This discharge will not be captured. Basin 2 is developed. This discharge will be captured. The existing site is a mixture of gravel, grass and a building.

POST-DEVELOPMENT CONDITIONS

As previously described, this site is being developed into a commercial facility. Slopes range from 1% to 8%. Runoff drains from the developed areas to underground detention in the south western section of the development.

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 10-year return storm. The distance from the face of the curb to the center of the street is 15 feet.

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.

PIPE NETWORK STORAGE SUMMARY

The pipe network storage in these calculations detains flows from all of the runoff of the site. The pipe network storage is located in the south western portion of the property. Water collected in the storm water system is discharged into the pipe network via curb inlets. The pipe network storage is made of 263 linear feet of 30" HDPE and RCP pipe and has a volume of 1,289 cf. A concrete control structure is constructed on the southern end of the pipe network storage. This control structure uses a slotted weir to limit the discharge through the structure to that of the 2, 10, 25, 50, and 100-year pre-development flow. The pipe network storage is designed to hold the 100-year storm event.

TPOST

TPOST

SDMH
RIM=432.16'
8" MP OUT (N)=427.91'
8" MP IN (S)=427.97'

6.5N/30" SWEETGUM TREE

4.2N/14" TREE

6S/32" PINE TREE

6.1S/38" PINE TREE

8.2S/38" PINE TREE

16"S12" TREE

6" TREE

6" TREE

6" TREE

6.5S/24" TREE

BASIN 2
C=0.49
I=10.00 IN/HR
A=1.18 ACRES
Q_{100}=5.79 CFS

5.7N/40" HACKBERRY TREE

BASIN 3
C=0.47
I=10.00 IN/HR
A=0.16 ACRES
Q_{100}=0.75 CFS

6" HACKBERRY TREE

4.3S/22" SWEETGUM TREE

SWEETGUM TREE

30" SPLIT TREE

2.8S/10" HACKBERRY TREE

8" ELM TREE

SDMH
RIM=436.18'
18" RCP (OUT)=432.90'

SDMH
RIM=436.13'
18" RCP (IN)=432.00'

12" PEAR TREE

BASIN 1
C=0.73
I=10.00 IN/HR
A=0.17 ACRES
Q_{100}=1.25 CFS

3.5N/16" SPLIT MAGNOLIA TREE

3.4N/20" HACKBERRY TREE

FFE
440.90

60.3'

16" HACKBERRY TREES

4N/24" HACKBERRY TREE

6" MIMOSA TREE

5N/26" CEDAR TREE

4N/12" WATER OAK TREE

3-6" SPLIT TREES

3.4N/14" HACKBERRY TREE

32'

2.8S/16" TREE

3.4E/8" TREE

HIGHWAY #183/REYNOLDS ROAD
(80' R/W)

N

20' 10' 0 20'

BY	REVISION	DATE

GNE Designing our client's success

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

NEW FACILITY FOR:
BUTLER CENTER
CITY OF BRYANT, AR

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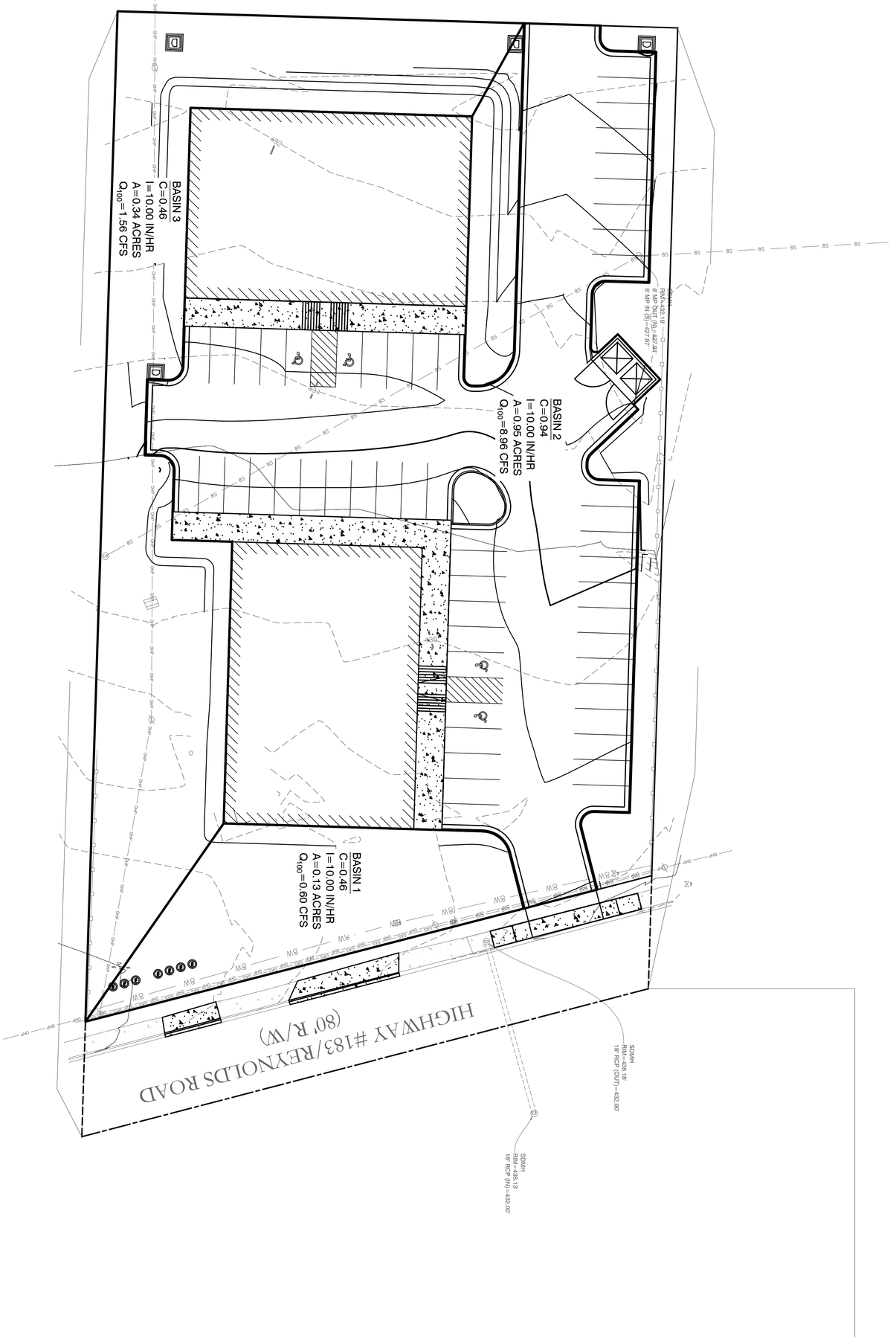
CONTENTS:
PRE
DRAINAGE
PLAN

PROJECT NO:
22203

DATE:
FEB 2023

SHEET NO:
1.0



NEW FACILITY FOR:
BUTLER CENTER
CITY OF BRYANT, AR

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3825 Mt Carmel Rd
Bryant, AR 72022
garnatengineering@gmail.com

DATE	REVISION	BY

CONTENTS: POST DRAINAGE PLAN

PROJECT NO: 22203

DATE: FEB 2023

SHEET NO: 2.0

J:\Projects\2022 Projects\22203 Butler Center 1109 North Reynolds Road Kenny Whitfield\Drawings\DWGs\Design\22203 1109 N Reynolds Rd Design.dwg

Stormwater Calcs - Butler Center
Using Rational Method

Pre-development

Calculated Tc values - Drainage Basin 1 & 3

$$Tc = \frac{56 * L^{.6} * n^{.6}}{i^{.4} * S^{.3}} \text{ seconds}$$

L1 =	100	feet	
n1 =	0.03		
S1 =	0.032	ft/ft	
$I_{assumed}$ =	8.40	inches	
$Tc_{calculated}$	130	seconds	
$Tc_{calculated}$	2.16	minutes	
Tc =	2.16	minutes	Tc for 25-yr Storm from Exhibit 400-1 of Bryant Drainage Manual
I =	8.40	inches	i for 25-yr Storm from Exhibit 400-1 of Bryant Drainage Manual
Use Tc =	**5.00**	minutes	

I_{100} =	10	Inches	I_{10} =	7.2	Inches
I_{50} =	9.2	Inches	I_{5} =	6.5	Inches
I_{25} =	8.40	Inches	I_{2} =	5.6	Inches

Calculated Tc values - Drainage Basin 2

$$Tc = \frac{56 * L^{.6} * n^{.6}}{i^{.4} * S^{.3}} \text{ seconds}$$

L1 =	320	feet	
n1 =	0.03		
S1 =	0.032	ft/ft	
$I_{assumed}$ =	8.40	inches	
$Tc_{calculated}$	261	seconds	
$Tc_{calculated}$	4.35	minutes	
Tc =	4.35	minutes	Tc for 25-yr Storm from Exhibit 400-1 of Bryant Drainage Manual
I =	8.40	inches	i for 25-yr Storm from Exhibit 400-1 of Bryant Drainage Manual
Use Tc =	**5.00**	minutes	

I_{100} =	10	Inches	I_{10} =	7.2	Inches
I_{50} =	9.2	Inches	I_{5} =	6.5	Inches
I_{25} =	8.40	Inches	I_{2} =	5.6	Inches

Stormwater Calcs - Butler Center
Using Rational Method

Post-development

Calculated Tc values - Drainage Basin 1, 2 & 3

$$Tc = \frac{56 * L^{.6} * n^{.6}}{i^{.4} * S^{.3}} \text{ seconds}$$

L1 =	320	feet
n1 =	0.013	
S1 =	0.035	ft/ft
$I_{assumed}$ =	8.40	inches
$Tc_{calculated}$	154	seconds
$Tc_{calculated}$	2.56	minutes

Tc =	2.56	minutes	Tc for 25-yr Storm from Exhibit 400-1 of Bryant Drainage Manual
I =	8.40	inches	i for 25-yr Storm from Exhibit 400-1 of Bryant Drainage Manual
Use Tc =	**5.00**	minutes	

I_{100} =	10 Inches	I_{10} =	7.2 Inches
I_{50} =	9.2 Inches	I_{5} =	6.5 Inches
I_{25} =	8.40 Inches	I_{2} =	5.6 Inches

Stormwater Calcs - Butler Center
using Rational Method

Pre-development

Calculated C values - Drainage Basin 1

	Area	C_{100}	C_{50}	C_{25}	C_{10}	C_5	C_2	
								(C values taken from Table 400-2 of City of Bryant Drainage Manual)
Greenspace	0.08	0.47	0.43	0.4	0.36	0.34	0.31	Flat, 0-2%
Driveway	0.09	0.97	0.92	0.88	0.83	0.8	0.75	Road
Total Area =	**0.17**	**0.73**	**0.69**	**0.65**	**0.61**	**0.58**	**0.54**	

Calculated C values - Drainage Basin 2

	Area	C_{100}	C_{50}	C_{25}	C_{10}	C_5	C_2	
								(C values taken from Table 400-2 of City of Bryant Drainage Manual)
Greenspace	1.09	0.47	0.43	0.4	0.36	0.34	0.31	Flat, 0-2%
Gravel	0.07	0.65	0.55	0.5	0.35	0.3	0.25	Gravel
Roof	0.02	0.97	0.92	0.88	0.83	0.8	0.75	Roof
Total Area =	**1.18**	**0.49**	**0.45**	**0.42**	**0.37**	**0.35**	**0.32**	

Calculated C values - Drainage Basin 3

	Area	C_{100}	C_{50}	C_{25}	C_{10}	C_5	C_2	
								(C values taken from Table 400-2 of City of Bryant Drainage Manual)
Greenspace	0.16	0.47	0.43	0.4	0.36	0.34	0.31	Flat, 0-2%
Total Area =	**0.16**	**0.47**	**0.43**	**0.40**	**0.36**	**0.34**	**0.31**	

Stormwater Calcs - Butler Center
using Rational Method

Post-development

Calculated C values - Drainage Basin 1

	Area	C_{100}	C_{50}	C_{25}	C_{10}	C_5	C_2
Greenspace	0.13	0.46	0.42	0.39	0.35	0.32	0.29
Total Area =	**0.13**	**0.46**	**0.42**	**0.39**	**0.35**	**0.32**	**0.29**

(C values taken from Table 400-2 of City of Bryant Drainage Manual)

Good Condition, Average 2-7%

Calculated C values - Drainage Basin 2

	Area	C_{100}	C_{50}	C_{25}	C_{10}	C_5	C_2
Greenspace	0.05	0.46	0.42	0.39	0.35	0.32	0.29
Roof/Pavement	0.90	0.97	0.92	0.88	0.83	0.8	0.75
Total Area =	**0.95**	**0.94**	**0.89**	**0.85**	**0.80**	**0.77**	**0.73**

(C values taken from Table 400-2 of City of Bryant Drainage Manual)

Good Condition, Average 2-7%

Road

Calculated C values - Drainage Basin 3

	Area	C_{100}	C_{50}	C_{25}	C_{10}	C_5	C_2
Greenspace	0.34	0.46	0.42	0.39	0.35	0.32	0.29
Total Area =	**0.34**	**0.46**	**0.42**	**0.39**	**0.35**	**0.32**	**0.29**

(C values taken from Table 400-2 of City of Bryant Drainage Manual)

Good Condition, Average 2-7%

Stormwater Calcs - Butler Center
using Rational Method

Pre-development

Drainage Basin 1

Q_{100} =	1.25 CFS	Q_{50}=	1.08 CFS	Q_{25} =	0.93 CFS	Q_{10} =	0.75 CFS	Q_5 =	0.64 CFS	Q_2 =	0.52 CFS
c =	0.73	c =	0.69	c =	0.65	c =	0.61	c =	0.58	c =	0.54
i=	10.00 in/hr	i=	9.20 in/hr	i=	8.40 in/hr	i=	7.20 in/hr	i=	6.50 in/hr	i=	5.60 in/hr
A=	0.17 acres	A=	0.17 acres	A=	0.17 acres	A=	0.17 acres	A=	0.17 acres	A=	0.17 acres

Drainage Basin 2

Q_{100} =	5.79 CFS	Q_{50}=	4.85 CFS	Q_{25} =	4.12 CFS	Q_{10} =	3.13 CFS	Q_5 =	2.66 CFS	Q_2 =	2.08 CFS
c =	0.49	c =	0.45	c =	0.42	c =	0.37	c =	0.35	c =	0.32
i=	10.00 in/hr	i=	9.20 in/hr	i=	8.40 in/hr	i=	7.20 in/hr	i=	6.50 in/hr	i=	5.60 in/hr
A=	1.18 acres	A=	1.18 acres	A=	1.18 acres	A=	1.18 acres	A=	1.18 acres	A=	1.18 acres

Drainage Basin 3

Q_{100} =	0.75 CFS	Q_{50}=	0.63 CFS	Q_{25} =	0.54 CFS	Q_{10} =	0.41 CFS	Q_5 =	0.35 CFS	Q_2 =	0.28 CFS
c =	0.47	c =	0.43	c =	0.40	c =	0.36	c =	0.34	c =	0.31
i=	10.00 in/hr	i=	9.20 in/hr	i=	8.40 in/hr	i=	7.20 in/hr	i=	6.50 in/hr	i=	5.60 in/hr
A=	0.16 acres	A=	0.16 acres	A=	0.16 acres	A=	0.16 acres	A=	0.16 acres	A=	0.16 acres

Post-development

Drainage Basin 1

Q_{100} =	0.60 CFS	Q_{50}=	0.50 CFS	Q_{25} =	0.43 CFS	Q_{10} =	0.33 CFS	Q_5 =	0.27 CFS	Q_2 =	0.21 CFS
c =	0.46	c =	0.42	c =	0.39	c =	0.35	c =	0.32	c =	0.29
i=	10.00 in/hr	i=	9.20 in/hr	i=	8.40 in/hr	i=	7.20 in/hr	i=	6.50 in/hr	i=	5.60 in/hr
A=	0.13 acres	A=	0.13 acres	A=	0.13 acres	A=	0.13 acres	A=	0.13 acres	A=	0.13 acres

Drainage Basin 2

Q_{100} =	8.96 CFS	Q_{50}=	7.81 CFS	Q_{25} =	6.82 CFS	Q_{10} =	5.50 CFS	Q_5 =	4.78 CFS	Q_2 =	3.86 CFS
c =	0.94	c =	0.89	c =	0.85	c =	0.80	c =	0.77	c =	0.73
i=	10.00 in/hr	i=	9.20 in/hr	i=	8.40 in/hr	i=	7.20 in/hr	i=	6.50 in/hr	i=	5.60 in/hr
A=	0.95 acres	A=	0.95 acres	A=	0.95 acres	A=	0.95 acres	A=	0.95 acres	A=	0.95 acres

Drainage Basin 3

Q_{100} =	1.56 CFS	Q_{50}=	1.31 CFS	Q_{25} =	1.11 CFS	Q_{10} =	0.86 CFS	Q_5 =	0.71 CFS	Q_2 =	0.55 CFS
c =	0.46	c =	0.42	c =	0.39	c =	0.35	c =	0.32	c =	0.29
i=	10.00 in/hr	i=	9.20 in/hr	i=	8.40 in/hr	i=	7.20 in/hr	i=	6.50 in/hr	i=	5.60 in/hr
A=	0.34 acres	A=	0.34 acres	A=	0.34 acres	A=	0.34 acres	A=	0.34 acres	A=	0.34 acres

Detention Volume

Pond-1
for Q100

Cundev=	0.49	
Iundev=	10.00	in/hr
Cdev=	0.94	
Idev=	10.00	in/hr
R=	4.52	
A=	0.95	acres
Tc=	5.00	minutes
	60	sec/min

Detention Volume= 1,289 cubic feet

R= (Cdev*Idev)-(Cundev*Iundev)
Detention Volume= R*A*Tc*60

Stormwater Calcs - Butler Center
using Rational Method
Weir & Detention Pond Sizing

Storm Event	Flow (cfs)
Q2 - Pre Basin 2	2.08
Q10 - Pre Basin 2	3.13
Q25 - Pre Basin 2	4.12
Q50 - Pre Basin 2	4.85
Q100 - Pre Basin 2	5.79
Q10 - Post Basin 2	5.50
Q25 - Post Basin 2	6.82
Q100 - Post Basin 2	8.96

Rectangular Weir

Q2

Q (cfs)	**CLH^1.5**
C	**2.5**
L	**0.5** 6"
H	**1.33**
Q (cfs)	**1.92**

Q10

Q (cfs)	**CLH^1.5**
C	**2.5**
L	**0.5** 6"
H	**1.75**
Q (cfs)	**2.89**

Q25

Q (cfs)	**CLH^1.5**
C	**2.5**
L	**0.5** 6"
H	**2.17**
Q (cfs)	**4.00**

Q50

Q (cfs)	**CLH^1.5**
C	**2.5**
L	**0.5** 6"
H	**2.33**
Q (cfs)	**4.45**

Q100

Q (cfs)	**CLH^1.5**
C	**2.5**
L	**0.5** 6"
H	**2.5**
Q (cfs)	**4.94**

Pond Volume
Volume Required 1289 CF

Use 36" Pipe

Dia = 30.00
A = 4.91 SF
L (required) = 262.61 FT

Stormwater Calcs - Butler Center
Detention Culverts

PIPE NAME	DIAMETER (IN)	LENGTH (FT)	AREA (SF)	VOLUME (CF)
PIPE 141	30.00	117	4.91	574.47
PIPE 139	30.00	121	4.91	594.11
PIPE 140	30.00	46	4.91	225.86
TOTAL		284		**1394.44**

Stormwater Calcs - Butler Center
Outlet Pipe Capacity

OUTLET CULVERT

Pipe	From	To	Design Flow (cfs):	Slope (ft/ft):	Diameter (inches)	No. Pipes	Manning's	Area Full (sf)	Wetted Perimeter Full (ft)	Hydraulic Radius Full (ft)	Flow Capacity (cfs)	% Capacity
18" HDPE	East	West	5.79	0.0050	18	1	0.012	1.77	4.712	0.375	8.05	72%

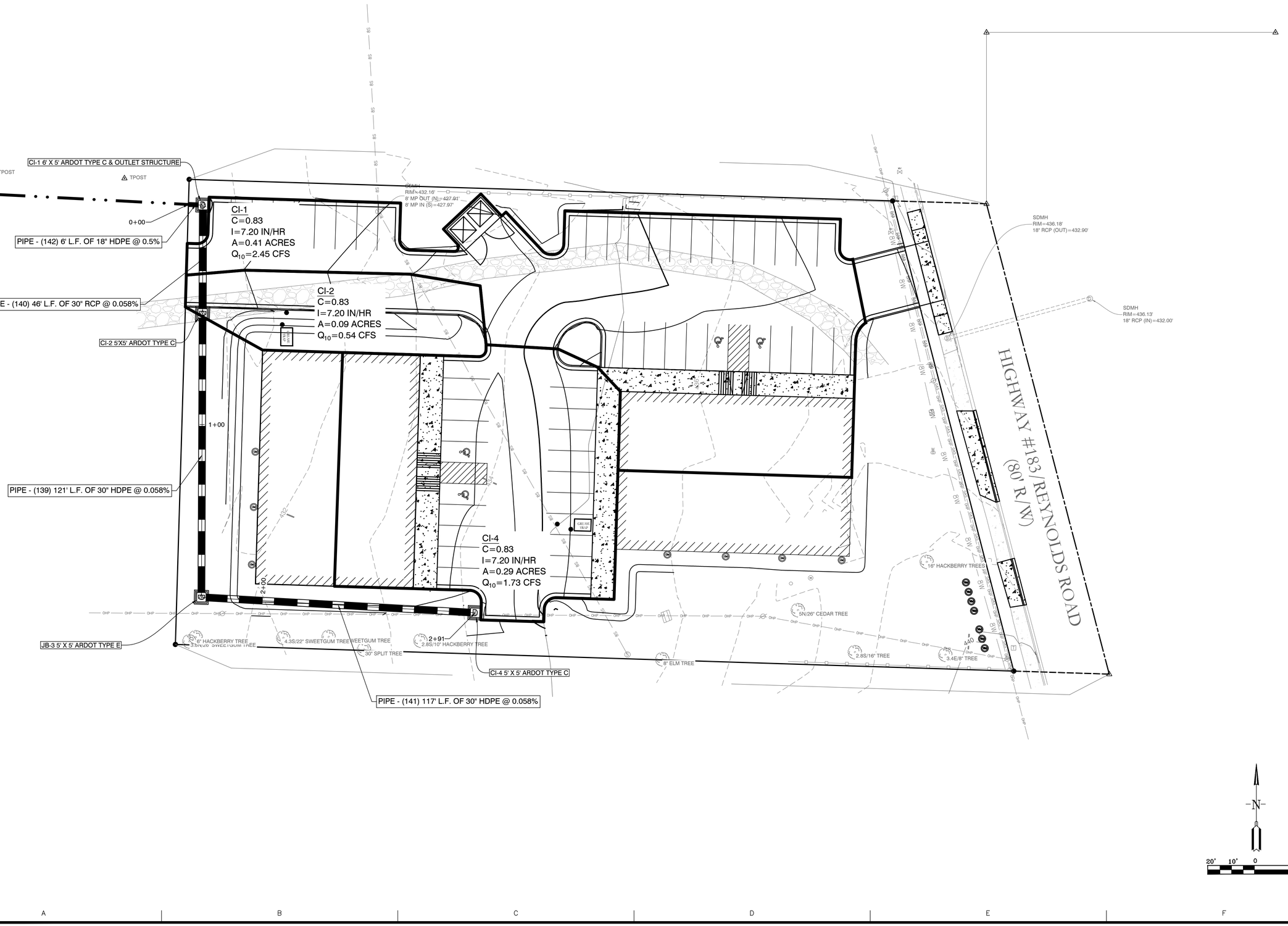
Stormwater Calcs - Butler Center

Ditch Capacity

Mannings equation for ditch

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

Depth (ft)	Width Bottom (ft)	Top (ft)	area (ft^2)	rH	slope (ft/ft)	Velocity (ft/s)	Q (cfs)
0.75	0.00	4.50	1.69	0.36	1.000%	3.40	5.74



BY	REVISION	DATE

GNE Designing our client's success

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

NEW FACILITY FOR:
BUTLER CENTER
CITY OF BRYANT, AR

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CONTENTS:

INLET BASIN PLAN

PROJECT NO:
22203

DATE:
FEB 2023

SHEET NO:
3.0

Stormwater Calcs - Butler Center
Using Rational Method

Post-development Basin

Calculated Tc values - Drainage Basin CI-1

$$Tc = \frac{56 * L^{.6} * n^{.6}}{i^{.4} * S^{.3}} \text{ seconds}$$

L1 =	700		feet
n1 =	0.013		Smooth Concrete/Asphalt
S1 =	0.031		ft/ft
$I_{assumed}$ =	7.20		inches
$Tc_{calculated}$		271	seconds
$Tc_{calculated}$		4.52	minutes
Tc =	4.52		minutes
I =	7.20		inches
Use Tc =	**5.00**		minutes

Stormwater Calcs - Butler Center
using Rational Method
POST-DEV C VALUES

CI-1

	Area	C_{10}	C_{25}	C_{100}	(C values taken from Table 400-2 of City of Bryant Drainage Manual)
	0.41	0.83	0.88	0.97	Asphalt/Roof
Total Area =	**0.41**	**0.83**	**0.88**	**0.97**	

CI-2

	Area	C_{10}	C_{25}	C_{100}	(C values taken from Table 400-2 of City of Bryant Drainage Manual)
	0.09	0.83	0.88	0.97	Asphalt/Roof
Total Area =	**0.09**	**0.83**	**0.88**	**0.97**	

CI-4

	Area	C_{10}	C_{25}	C_{100}	(C values taken from Table 400-2 of City of Bryant Drainage Manual)
	0.29	0.83	0.88	0.97	Asphalt/Roof
Total Area =	**0.29**	**0.83**	**0.88**	**0.97**	

Stormwater Calcs - Butler Center
using Rational Method
Post Development Flowrates

CI-1

Q_{10} =	2.45	CFS
c =	0.83	
i=	7.20	in/hr
A=	0.41	acres

CI-2

Q_{10} =	0.54	CFS
c =	0.83	
i=	7.20	in/hr
A=	0.09	acres

CI-4

Q_{10} =	1.73	CFS
c =	0.83	
i=	7.20	in/hr
A=	0.29	acres

Stormwater Calcs - Butler Center GUTTER SPREAD 10-YR STORM

CI-1

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

			Q= Flowrate(cfs)
Q	2.45	cfs	n=manning's number
n	0.012		k=0.56
k_u	0.56		S_x= cross slope
S_x	0.028		S_L= longitudinal slope
S_L	0.031		T= Gutter Spread
T	**5.96**	ft	

CI-2

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

Q	0.54	cfs
n	0.012	
k_u	0.56	
S_x	0.03	
S_L	0.017	
T	**3.62**	ft

CI-4

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

Q	1.73	cfs
n	0.012	
k_u	0.56	
S_x	0.028	
S_L	0.03	
T	**5.34**	ft

Stormwater Calcs - Butler Center - CURB INLETS

10-YEAR STORM

Area #	Area	I	C	Q (cfs)	Weir Q=3.0LY^1.5 Q (cfs)	Y (ft)	Required L (ft)	Actual L (ft)	
CI-1	0.41	7.20	0.83	2.45	2.45	0.49	**2.38**	**5**	5' box
CI-2	0.09	7.20	0.83	0.54	0.54	0.49	**0.52**	**5**	5' box
CI-4	0.29	7.20	0.83	1.73	1.73	0.49	**1.68**	**5**	5' box

GNE

3825 Mt Carmel Rd.
Bryant, AR 72022

GarNat Engineering, LLC

P.O. Box 116
Benton, AR 72018

March 8, 2023

Mr. Truett Smith
Bryant Planning Coordinator/Planning Commission Secretary
210 SW 3rd Street
Bryant, AR 72022

Re: Large Scale Development Commercial Building – Butler Center

Dear Mr. Smith:

Please allow this letter and following list of enclosures to serve as my application for approval of the referenced large scale development. It is my desire that this matter be included on the agenda for your May 2023 City of Bryant Planning Commission Meeting.

List of Enclosures

- 2 Full Set Plans
- Affidavit
- 8 copies of Site Plan
- Drainage Study
- Bryant Large Development Checklist
- ADA/ABA Form

If you have questions or need any additional information, please do not hesitate to contact me.

Sincerely,
GarNat Engineering, LLC

Vernon J. Williams

Vernon J. Williams, P.E., President

Bryant Planning Commission

LARGE SCALE DEVELOPMENT
COMMERCIAL BUILDING
CHECKLIST

CITY OF BRYANT
210 SW 3RD STREET
BRYANT, AR 72022
501-943-0309

PC MEETING DATE:	SECOND MONDAY OF EACH MONTH
TIME:	6:00 P.M.
PLACE:	COURTROOM - BRYANT OFFICE COMPLEX
AGENDA DEADLINE:	5:00 P.M. THREE WEEKS PRIOR TO THE REGULARLY SCHEDULED MEETING DATE

REQUIREMENTS FOR SUBMISSION

LETTER TO PLANNING COMMISSION STATING YOUR REQUEST

COMPLETED CHECKLIST (SUBDIVISION OR BUILDING)

ADA/ABA FORM COMPLETED

TWO FULL SETS OF BUILDING PLANS

20 FOLDED COPIES OF SITE PLAN (MINIMUM SIZE 17" X 34") THAT INCLUDES THE FOLLOWING:
VICINITY MAP - LEGAL DESCRIPTION - LANDSCAPING PLAN

20 FOLDED COPIES OF FLOOR PLAN

20 COPIES OF FRONT AND REAR BUILDING ELEVATIONS

AN IBM COMPATIBLE DISKETTE IN PDF FORMAT

COPY OF ADEQ STORMWATER POLLUTION PREVENTION PLAN FOR PROPERTY PARCEL CONTAINING ONE ACRE OR LARGER.

COPY OF STORMWATER DETENTION APPROVAL BY ENGINEER

$250.00 FOR STORMWATER DETENTION AND DRAINAGE PLAN REVIEW

ALL REQUIREMENTS LISTED ABOVE MUST BE COMPLETED AND ATTACHED BEFORE SUBMITTING APPLICATION TO BE PLACED ON THE PLANNING COMMISSION AGENDA.

NOTE: WHEN MAKING CHANGES TO AN APPROVED SITE PLAN, A REVISED SITE PLAN MUST BE SUBMITTED TO THE BRYANT PLANNING COMMISSION FOR APPROVAL. THIS MUST BE DONE PRIOR TO IMPLEMENTATION. FAILURE TO COMPLY WILL RESULT IN PENALTIES/FINES BEING IMPOSED IN ACCORDANCE WITH CITY ORDINANCES.

I HAVE COMPLIED WITH THE REQUIREMENTS LISTED ABOVE AND HAVE CHECKED ALL OF THE BOXES ON THE CHECKLIST WHICH APPLY TO THIS PROJECT SUBMITTAL.

Vernon J Williams
SIGNATURE

3/8/23
DATE

City of Bryant Commercial Building Checklist

Name of Development Butler Center

Site Location 1109-A North Reynolds Rd. Bryant, AR Current zoning R-E

Owner Butler Wealth Capital, LLC Phone 870-703-3807

I. Basic Information Needed On The Site Plan

- 1. Name of Development
- 2. Current zoning
- 3. Name and Address of owner of Record
- 4. Name and address of the architect, landscape architect, engineer, surveyor, or other person involved in the preparation of the plan
- 5. Date of preparation of the plan
- 6. Vicinity map locating streets, highways, section lines, railroad, schools, & parks within ½ mile
- 7. Legal description of the property with exact boundary lines
- 8. North arrow & Scale
- 9. Identification of any land areas within the 100 year floodplain and within the 100 year floodway
- 10. Lot area in square feet
- 11. Show scale (not less than 1" = 100') (paper size minimum 17" X 34")
- 12. Existing streams, drainage channels, and other bodies of water
- 13. Drainage easements for stormwater run-off and detention shown & labeled
- 14. Location and name of existing streets
- 15. Show source of water supply
- 16. Show location of waste water connection to municipal system & sanitary sewer layout
- 17. Fire Hydrant placement
- 18. Proposed location of buildings and other structures, parking areas, drives, loading areas, service areas, alleys, walks, screening, and public streets
- 19. Sufficient dimensions to indicate relationship between buildings, property lines, parking areas and other elements of the plan
- 20. Extent and character of proposed landscaping. Common and/or Botanical plant names and sizes of new vegetation must be clearly indicated.
- 21. Location, massing and pattern of existing vegetation to be retained
- 22. Existing structures on the site
- 23. Pedestrian and vehicular access points, sidewalks, crosswalks, etc.
- 24. Typical building elevations depicting the style, size and exterior construction materials of the buildings proposed. Where several building types are proposed on the plan, such as apartments and commercial buildings, a separate sketch shall be prepared for each type. The elevations shall be drawn at a minimum scale of 1/16" to a foot and must show adjoining context.
- 25. Any variance approvals

II. Additional Information Needed, But Not On The Site Plan

Commercial Building Worksheet

	Yes	No
Site is compatible with Master Street Plan	✓	
Proposed improvement is within building line setbacks Front 37 ft. Side 25 ft. CNR Side N/A ft. Back 30 ft.		
Parking requirements can be satisfied Floor Space 13500 sq.ft. divided by 300 = 45 (no. of parking spaces required)	✓	
Improvement is outside 100 year flood plain (if answer is no - Provide 404 Permit for site)	✓	
Lowest building floor level and all mechanical equipment are above FEMA 100 year flood elevation	✓	
Will there be a dumpster located on the site?	✓	
Will there be a construction site office?		✓
Have you made "One Call"?		✓
Structure and site complies with ADA (Americans with Disability Act) and ABA (Architectural Barriers Act) Accessibility Guidelines	✓	
Design complies with Arkansas Plumbing Code and National Electric Code requirements	✓	
Foundation and structure meet earthquake requirements for Zone 1.		
Structure meets Arkansas Energy Code for specified use.	✓	
Complies with Arkansas Fire Prevention Code	✓	
Complies with International Code Council regulations	✓	
Will a Site Clearance Permit be required? (City Ordinance 2002-03)	✓	
Are you granted any variances by the Board of Adjustment?		
If you have been granted a variance please explain in detail:		

III. Landscaping Compliance With Requirements

	YES	NO
No planting within 5 feet of a fire hydrant	✓	
Spacing will be 40' between trees	✓	
Tree must be a minimum 3" in diameter at the base and 12' + tall	✓	
Existing trees meeting the minimum size can be counted to meet above criteria	✓	
No trees can be planted within 30 feet of a property corner or driveway	✓	
Shrubs along street right-of-way lines cannot exceed 30 inches in height	✓	

IV. Site Coverage Compliance with Requirements

(For your convenience we have listed the three commercial zoning site coverage requirements - choose the zoning for this project and complete only that section)

	YES	NO
1. C-1 Zoning - Neighborhood Commercial		
Lot area: minimum of 2,500 square feet; maximum 16,000 square feet	___	___
Front Yard: none required	___	___
Side Yard: minimum of 5 feet each side	___	___
Rear Yard: minimum of 55 feet	___	___
Maximum lot coverage of 70% of the total area of the site for all principal, accessory buildings, parking lots, sidewalks, private streets, or drives.	___	___
Parking: one space per each 200 sq. ft. of commercial use	___	___
Loading areas: physically separated from all streets with 10 ft grassy area	___	___
When abuts a residential district, a minimum 6' high wood, rock, or masonry fence is required with a landscape screen	___	___
2. C-2 Zoning - Lots fronting along roadways designated as Interstate 30 and frontage roads, State Highway 5 and 183		
Front Yard: not less than 50 feet from front property line	___	___
Side Yard: not required, except where they abut a street or a residential lot line then a minimum of 25 feet is required	___	___
Rear Yard: minimum of 15 feet, except where they abut residential area then a minimum of 55 feet is required	___	___
A maximum lot coverage of 35% of the total area of the site for all principal and accessory buildings	___	___
Parking: one space per each 300 sq. ft. of occupied space	___	___
When abuts a residential district, a minimum 6' high wood, rock, or masonry fence is required with a landscape screen	___	___
3. C-2 Zoning - Lots fronting along roadways designated as interior local.		
Front Yard: none required	___	✓
Side Yard: not required, except where they abut a street or a residential lot line then a minimum of 25 percent of lot dimension	___	✓
Rear Yard: minimum of 15 feet, except where they abut residential area then a minimum of 55 feet is required	___	✓
A maximum lot coverage of 85% of the total area of the site for all principal, accessory buildings and parking	✓	___
Parking: one space per each 300 sq. ft. of occupied space	✓	___
When abuts a residential district, a minimum 6' high wood, rock, or masonry fence is required with a landscape screen	___	___

V. Site Plan Attachments

(Application will not be accepted until all attachment requirements are met)

- 26. Letter to Planning Commission stating your request
- 27. Completed Checklist
- 28. Completed ADA/ABA Form
- 29. Two full sets of Building Plans
- 30. 20 copies of Site Plan (folded to no larger than 8 ½ X 14 size) that includes vicinity map and landscaping plan (minimum size 17" X 34" paper)
- 31. 20 copies of Landscaping Plan (folded to no larger than 8 ½ X 14 size)
- 32. 20 copies of building floor plan (folded to no larger than 8 ½ X 14 size)
- 33. Copy of Stormwater Detention approval
- 34. Copy of ADEQ Stormwater Pollution Prevention Plan for property containing one acre or larger.
- 35. IBM compatible diskette or CD with data in PDF format.
- 36. Receipt for $250.00 for Stormwater Detention and Drainage Plan review

I CERTIFY that the design of Butler Center in the City of Bryant, Arkansas complies with the above regulations, laws and codes.

[signature]	Vernon J Williams
Owner	**Engineer/Architect**
6 Creekwood Court	501-408-4650
Mailing Address	Phone #
Little Rock, AR 72223	03/08/2023
City	Date

CITY USE

Action Taken:

Special Conditions:

Permit Issued: Date _____ Sq.Ft. _____ Amount $_____

Construction Completed Certified For Occupancy: Date: _____

Inspector: _____

Permit No. _____

BUILDING PERMIT

ADA/ABA ACCESSIBILITY STANDARDS

The *Americans with Disability Act* and *Architectural Barriers Act* Accessibility Guidelines were prepared by the U.S. Access Board and mandated by the U. S. Department of Justice regulations implementing Title III as the official ADA/ABA accessibility guidelines. **All new construction, remodeling, and modifications must conform to these building standards** for places of public accommodation and commercial facilities. Residential is exempt.

The ADA/ABA accessibility guidelines contain general design standards for building and site elements, such as accessible entrances and routes, ramps, parking spaces, stairs, elevators, restrooms, signage, etc. Also included are specific standards for restaurants, medical care facilities, libraries and transportation facilities and vehicles, and places of lodging.

The guidelines also include "scoping" requirements that outline the necessary features or appropriate quantity for achieving ready access. For example, at least 50 percent of all public entrances to buildings must be accessible with an accessible path of travel. In public restrooms, at least one bathroom stall must be accessible unless there are more than six stalls, in which case the number increases.

I hereby certify that I have read and examined the above notice and will comply with all guidelines of the ADA Accessibility Guidelines. I further understand that a copy of the ADA/ABA Regulations are available for inspection during business hours of City Hall or I may obtain a copy by writing:

The Access Board
1331 F Street, NW, Suite 1000
Washington, DC 20004-1111
(202) 272-0080 (v) (202) 272-0082 (TTY) (202) 272-0081 (fax)
(800) 872-2253 (v) (800) 993-2822 (TTY)
email: info@access-board.gov

Signature of Contractor or Authorized Agent _____ **Date** 03/07/2023

Signature of Owner (if owner-builder) _____ **Date** 03/07/2023

Application of Permit Approved: _____ **Date** _____
Commission - Chairman

AFFIDAVIT

I, Michael Butler, Butler Wealth Capital, LLC certify by my signature below that I hereby authorize Vernon Williams of GarNat Engineering, LLC to act as Butler Wealth Capital, LLC's agent regarding the Planning Commission Approval of the proposed development at 1109 N Reynolds Road.

Michael Butler
Butler Wealth Capital, LLC

03/07/2023
Date

Subscribed and sworn to me a Notary Public on this 7TH day of MARCH, 2023.

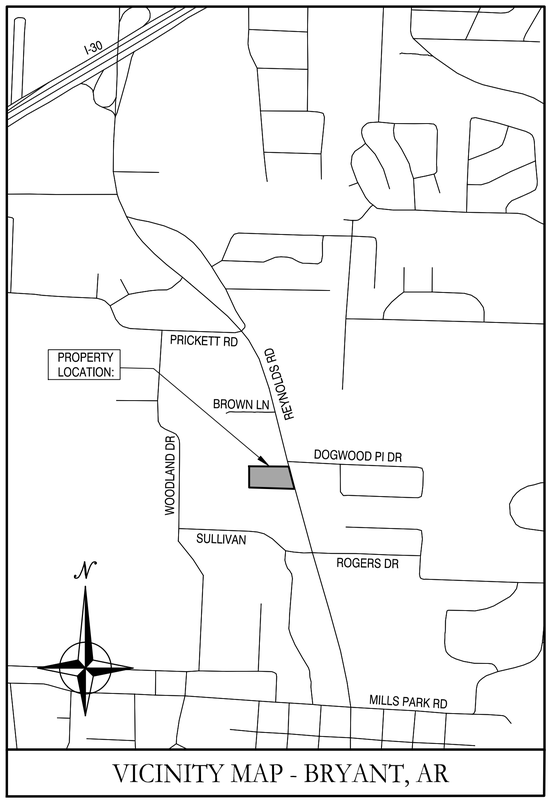
Notary Public

My Commission Expires:

02-05-2031

GEORGE P. WOODEN
Notary Public-Arkansas
Saline County
My Commission Expires 02-05-2031
Commission # 12714343

NEW FACILITY FOR:
BUTLER CENTER
CITY OF BRYANT, AR



VICINITY MAP - BRYANT, AR

Prepared by:

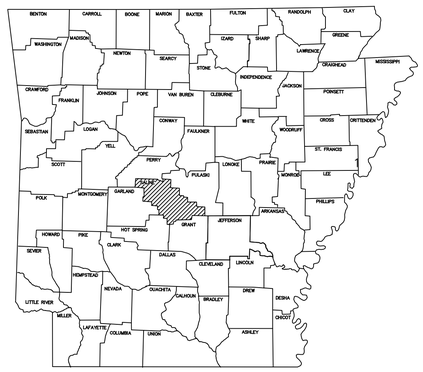
GarNat Engineering, LLC

Designing our client's success

www.garnatengineering.com

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

3825 Mt Carmel Road
Bryant, AR 72022
Fx (888) 900-3068



ARKANSAS

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

03-06-2023

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

DRAWING INDEX:

ARDOT STANDARD DRAWINGS:

SITE LEGEND:

FIRE HYDRANT	ASPHALT
ELECTRICAL & UTILITY POLE	
SANITARY SEWER MANHOLE	
WATER VALVE	
STORM MANHOLE	GRAVEL
LIGHT POLE	
TELEPHONE PEDESTAL	
BENCHMARKS	CONCRETE
ELECTRIC BOX	
GUY ANCHOR	
WATER METER	
GAS METER	
SIGN	
EXISTING WATERLINE	
OVERHEAD POWER	
TEST PIT	
FORCE MAIN	
CHAIN-LINK FENCE	
WOOD FENCE	
SANITARY SEWER LINE	

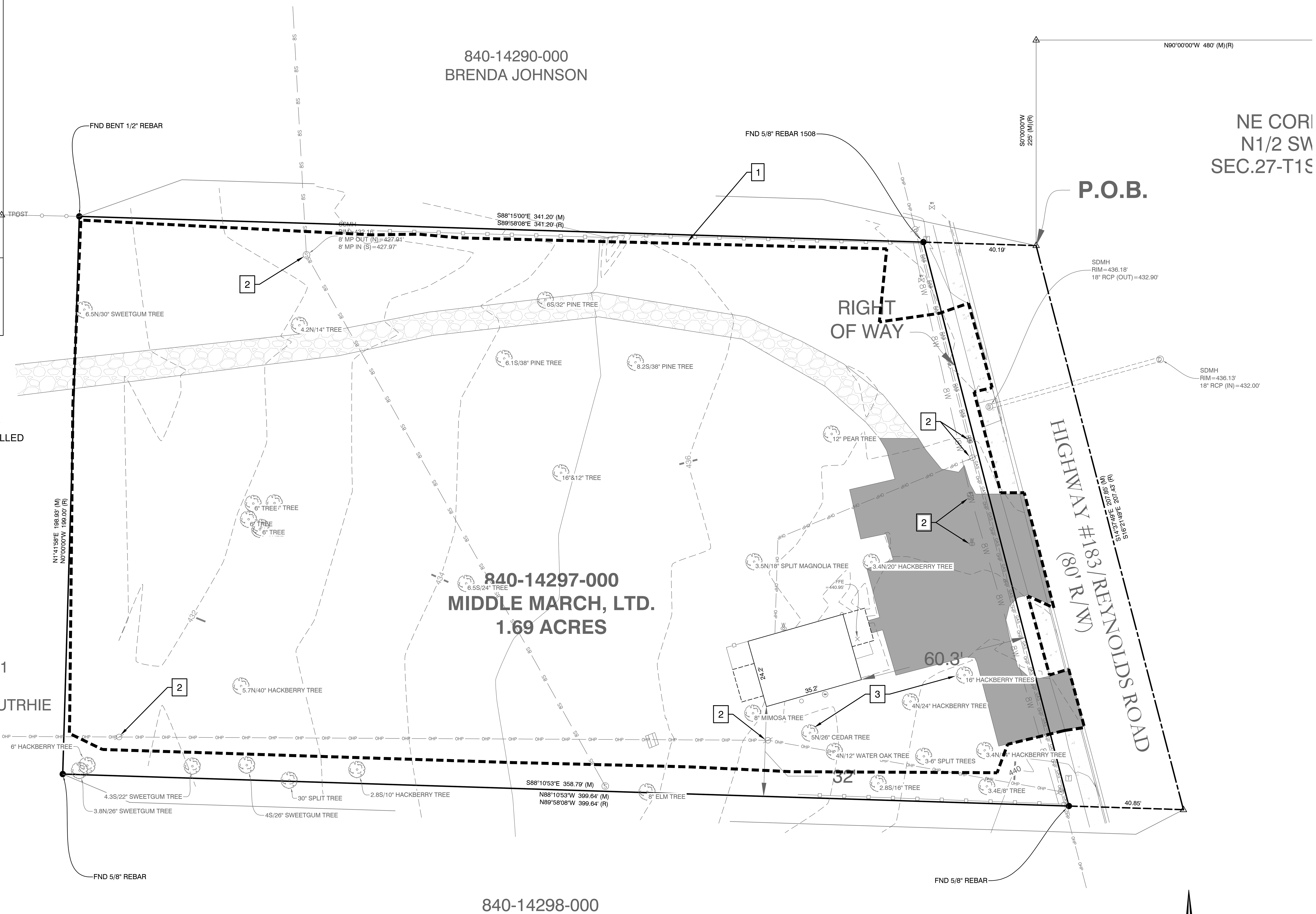
SURVEY LEGEND

- Computed point
- Found monument
- Set #4 RB/Plas. Cap

(M)-Measured
(R)-Record
(P)-Platted

KEYED DEMO NOTES:

1. REMOVE ALL ABOVE GROUND FEATURES & UTILITY SERVICES WITHIN THESE LIMITS THAT ARE NOT CALLED TO BE PROTECTED OR REUSED. CLEAR & GRUB WITHIN THESE LIMITS.
2. PROTECT EXISTING UTILITY.
3. PROTECT TREES.



LEGEND:

	ASPHALT DEMOLITION LIMITS
	CONCRETE DEMOLITION LIMITS

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

NEW FACILITY FOR:
BUTLER CENTER
CITY OF BRYANT, AR

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
NO. 9551
VERNON J. WILLIAMS
03-06-2023

CONTENTS:
SITE DEMO PLAN

PROJECT NO: 22203
DATE: FEB 2023
SHEET NO: D1.0

1. SAFETY

1.1. JOBSITE SAFETY IS THE SOLE AND EXCLUSIVE RESPONSIBILITY OF THE GENERAL CONTRACTOR.

1.2. THIS RESPONSIBILITY COVERS THEIR OWN WORK FORCE, ALL SUBCONTRACTORS, VISITING PERSONNEL, OFFICIALS, AND THE GENERAL PUBLIC WHICH MAY HAVE ACCESS TO THE JOBSITE.

1.3. THE CONTRACTOR SHALL EXERCISE COMPLETE CONTROL OVER WHO HAS ACCESS TO THE JOBSITE TO ENSURE JOBSITE SAFETY.

1.4. THE CONTRACTOR SHALL CONFORM TO ALL SECURITY AND SAFETY REQUIREMENTS OF THE OWNER.

1.5. ANY SAFETY OR OTHER TRAINING REQUIRED BY THE OWNER FOR THE WORK FORCE MUST BE PROVIDED BY THE CONTRACTOR AT THE CONTRACTOR'S EXPENSE.

2. PERMITS

2.1. CONTRACTOR SHALL SECURE ALL REQUIRED PERMITS AS REQUIRED BY REGULATING AUTHORITIES OR BY THE OWNER. CONTRACTOR SHALL BE FULLY RESPONSIBLE FOR THE TERMS AND CONDITIONS ASSOCIATED WITH EACH REQUIRED PERMIT, AS WELL AS ADHERING TO THE RULES AND REGULATIONS OF EACH REGULATING AUTHORITY

3. CONTRACT DOCUMENTS

3.1. ALL WORK SHALL CONFORM TO THE PLANS, THESE NOTES, AND SPECIFICATIONS IN ALL RESPECTS AND SHALL BE SUBJECT TO APPROVAL BY THE ENGINEER.

4. INDEMNITY

4.1. BY ACCEPTING THE CONTRACT FOR THIS WORK, THE CONTRACTOR, AT THEIR OWN EXPENSE AND RISK, HEREBY RELEASES AND AGREES TO INDEMNIFY, DEFEND AND HOLD HARMLESS THE OWNER, GARNAT ENGINEERING, THEIR OFFICERS, AGENTS, EMPLOYEES, CONSULTANTS, AND REPRESENTATIVES FOR DAMAGE TO THE PROPERTY OR INJURY TO, OR DEATH, OF ANY PERSONS, FROM ANY AND ALL CLAIMS, DEMANDS, ACTIONS OF ANY KIND WHATSOEVER ARISING OUT OF AND IN CONNECTION WITH THE AGREEMENT OR PROSECUTION OF WORK UNDER IT, WHETHER SUCH CLAIMS, DEMANDS, ACTIONS, OR LIABILITY ARE CAUSED BY THE CONTRACTOR, IT'S AGENTS, EMPLOYEES, SUBCONTRACTORS, PRODUCTS INSTALLED ON THE PROJECT OR CAUSED BY ANY OTHER PARTY.

5. CONSTRUCTION PROCEDURES, MATERIALS AND WORKMANSHIP SHALL BE IN ACCORDANCE WITH THE CURRENT EDITIONS OF THE FOLLOWING STANDARDS UNLESS OTHERWISE MODIFIED ON THE DRAWINGS OR IN THESE NOTES OR SPECIFICATIONS.

5.1. STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION - ARKANSAS HIGHWAY AND TRANSPORTATION DEPARTMENT

5.2. INTERNATIONAL BUILDING CODE

5.3. ACI 315 MANUAL OF STANDARD PRACTICES FOR DETAILING REINFORCED CONCRETE STRUCTURES

5.4. CRSI RECOMMENDED PRACTICE FOR PLACING REINFORCING STEEL.

5.5. CITY OF BRYANT STANDARD SPECIFICATIONS.

5.6. LATEST EDITIONS OF AWWA, ASTM, ADH, AND TEN STATES STANDARDS.

6. SITE

6.1. CONTRACTOR WILL BE RESPONSIBLE FOR PROTECTION OF ALL PROPERTY CORNERS.

6.2. CONTRACTOR IS NOT TO PERFORM WORK BEYOND THE DESIGNATED WORK LIMITS WITHOUT FIRST OBTAINING WRITTEN AUTHORIZATION FROM THE PROJECT ENGINEER OR OWNER.

6.3. CONTRACTOR IS RESPONSIBLE FOR REPAIRING THE DAMAGE DONE TO ANY EXISTING ITEM DURING CONSTRUCTION SUCH AS BUT NOT LIMITED TO: DRAINAGE, UTILITIES, PAVEMENT, STRIPING, CURB, ETC. REPAIRS SHALL BE EQUAL TO, OR BETTER THAN EXISTING CONDITIONS.

6.4. CONTRACTOR TO REMOVE OR RELOCATE, WHEN APPLICABLE, ALL ITEMS, SHOWN TO BE REMOVED OR RELOCATED AND NOT SHOWN WITHIN CONSTRUCTION LIMITS AND WHERE REQUIRED TO ALLOW FOR NEW CONSTRUCTION AS SHOWN.

6.5. CONTRACTOR TO ADJUST ALL EXISTING AND PROPOSED MANHOLES, VALVE BOXES, ETC. TO FINISH GRADE, WHERE REQUIRED.

7. STRUCTURES

7.1. ALL STORM STRUCTURES SHALL HAVE A SMOOTH UNIFORM POURED MORTAR INVERT IN TO INVERT OUT.

7.2. BEDDING FOR STORM STRUCTURES SHALL CONSIST OF A MINIMUM OF 6-INCHES OF COMPACTED #57 STONE ON TOP OF COMPACTED SUBGRADE.

7.3. AREAS EXPOSED BY EXCAVATION OR STRIPPING AND ON WHICH SUBGRADE PREPARATIONS ARE TO BE PERFORMED SHALL BE SCARIFIED TO MINIMUM DEPTH OF 0'-8" AND COMPACTED TO MINIMUM OF 95% OPTIMUM DENSITY. ANY AREAS THAT FAIL COMPACTION ARE TO BE STABLIZED AS DIRECTED BY THE ENGINEER.

8. PRIOR TO PLACING FILL IN LOW AREAS, SUCH AS PREVIOUSLY EXISTING CREEKS, PONDS, OR LAKES, PERFORM FOLLOWING PROCEDURES:

8.1. DRAIN WATER OUT BY GRAVITY WITH DITCH HAVING FLOW LINE LOWER THAN LOWEST ELEVATION IN LOW AREA. IF DRAINAGE CANNOT BE PERFORMED BY GRAVITY DITCH, USE ADEQUATE PUMP TO OBTAIN THE SAME RESULTS.

8.2. AFTER DRAINAGE OF LOW AREA IS COMPLETE, REMOVE MULCH, MUD DEBRIS, AND OTHER UNSUITABLE MATERIAL BY USING ACCEPTABLE EQUIPMENT AND METHODS THAT WILL KEEP NATURAL SOILS UNDERLYING LOW AREA DRY AND UNDISTURBED.

9. UTILITIES

9.1. AN ATTEMPT HAS BEEN MADE TO APPROXIMATELY LOCATE UTILITIES ON THE DRAWINGS.

9.2. UTILITIES SHOWN ON THE DRAWINGS WERE LOCATED BY VISUAL OBSERVATION, AND BY TRANSCRIBING FROM RECORD MAPS AND PLANS.

9.3. NO EXCAVATIONS WERE MADE TO CONFIRM SUB-SURFACE UTILITIES. NEITHER THE SURVEYOR NOR PROJECT ENGINEER GUARANTEES THAT ALL UTILITIES HAVE BEEN SHOWN, OR THAT THOSE SHOWN ARE FULLY ACCURATE.

9.4. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL ADJUSTMENTS AND/OR RELOCATION OF EXISTING UTILITIES THAT ARE DAMAGED AS A RESULT OF WORK OF THIS PROJECT.

9.5. CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING AND PROPERLY DISCONNECTING, ABANDONING, RELOCATING, AND/OR ADJUSTING ALL AFFECTED UTILITIES WITHIN THE PROJECT AREA.

9.6. ALL UTILITY WORK SHALL BE COORDINATED AND EXECUTED IN ACCORDANCE WITH THE OWNER AND/OR GOVERNING UTILITY COMPANY CODES, SPECIFICATIONS, STANDARDS, AND REQUIREMENTS.

9.7. DESIGN AND ALIGNMENT OF UNDERGROUND TELEPHONE, TV CABLE, GAS AND ELECTRIC SERVICES SHALL BE PROVIDED BY THE INDIVIDUAL UTILITIES AND ARE NOT NECESSARILY SHOWN WITH THESE PLANS. CONTRACTOR SHALL PROVIDE CONDUITS SIZED TO ACCOMMODATE UTILITY ROUTING WITH PULL STRINGS WHERE NECESSARY.

9.8. CONTRACTOR TO PROVIDE ALL NECESSARY APPURTENANCES NECESSARY FOR COMPLETE UTILITY SERVICES WHICH ARE NOT PROVIDED BY THE UTILITY COMPANY.

9.9. WATER AND SEWER RELOCATIONS SHOWN SHALL COMPLY WITH THE CITY OF BRYANT'S STANDARD WATER AND SEWER SPECIFICATIONS AND DETAILS. SERVICE LINE WORK SHALL BE COMPLETED BY A LICENSED PLUMBER AND COMPLY WITH ARKANSAS PLUMBING CODE.

10. DISPOSAL OF DEBRIS, WASTE OR SPOIL

10.1. BURNING OF DEBRIS AND WASTE IS NOT ALLOWED. CONTRACTOR MAY BE REQUIRED TO PROPERLY HAUL AWAY AND DISPOSE OF ANY WASTE MATERIAL REMOVED FROM THE SITE.

10.2. ANY WASTE OR SPOIL MATERIAL WHICH IS EXCAVATED FROM THE JOB SITE IS TO BE DISPOSED OF AS DIRECTED BY THE ENGINEER OR OWNER.

10.3. REMOVAL AND DISPOSAL OF EXCAVATED WASTE MATERIAL IS CONSIDERED SUBSIDIARY TO ALL OTHER ITEMS IN THE PROJECT, AND WILL NOT BE PAID FOR SEPARATELY.

10.4. CONTRACTOR SHALL FOLLOW ALL LOCAL, STATE AND FEDERAL REGULATIONS IN DISPOSING OF DEMOLISHED MATERIAL REMOVED FROM THIS SITE.

10.5. CONTRACTOR SHALL REMOVE FROM SITE AND DISPOSE OF MATERIAL ENCOUNTERED IN GRADING OPERATIONS THAT, IN OPINION OF THE ENGINEER, IS UNSUITABLE OR UNDESIRABLE FOR BACKFILLING OR SUBGRADE PURPOSES. DISPOSE OF IN A MANNER SATISFACTORY TO ENGINEER. BACKFILL UNDERCUT AREAS WITH LAYERS OF SUITABLE MATERIAL AND COMPACT AS SPECIFIED HEREIN.

11. SUBSTITUTIONS

11.1. SUBSTITUTIONS ARE NOT ALLOWED WITHOUT PRIOR APPROVAL FROM THE PROJECT ENGINEER.

12. ENVIRONMENTAL

12.1. THE CONTRACTOR IS TO MEET ALL ENVIRONMENTAL REQUIREMENTS OF THE OWNER AND ANY REGULATORY AGENCY HAVING AUTHORITY OVER THIS SITE.

12.2. THE CONTRACTOR IS TO UTILIZE BEST MANAGEMENT PRACTICES (BMP'S) FOR CONTROL OF EROSION DURING ALL CONSTRUCTION PHASES OF THIS PROJECT.

12.3. MININUM BMP'S REQUIRED FOR THE PROJECT ARE LISTED ON SHEET THESE PLANS. CONTRACTOR SHALL PROVIDE THESE BMP'S AND ANY OTHERS REQUIRED FOR THE PROJECT.

12.4. CONTRACTOR SHALL KEEP WORK AREA CLEAN AND FREE OF ACCUMULATED TRASH AND DEBRIS. CONTRACTOR SHALL BE RESPONSIBLE FOR IMPLEMENTING MEASURES TO AVOID TRACKING OF MUD, DIRT, ROCKS, AND DEBRIS ONTO AREAS OUTSIDE THE PROJECT AREA. CONTRACTOR SHALL CLEAN PAVEMENTS WHEN NECESSARY OR AS OTHERWISE DIRECTED, AND SHALL CONTROL DUST BY SWEEPING AND WATERING AS NEEDED. DE-TRACKING MAY BE REQUIRED AT ALL ENTRANCES.

13. FINAL SITE CONDITIONS

13.1. ALL DISTURBED AREAS NOT RECEIVING PAVEMENT OR LANDSCAPING SHALL HAVE VEGETATION ESTABLISHED AT TIME OF FINAL INSPECTION.

13.2. ALL UNSURFACED AREAS DISTURBED BY GRADING OPERATIONS SHALL RECEIVE 4 INCHES OF TOPSOIL. CONTRACTOR SHALL APPLY STABILIZATION FABRIC TO ALL SLOPE 2H:1V OR STEEPER UNTIL A HEALTHY STAND OF GRASS IS OBTAINED.

13.3. ALL CUT OR FILL SLOPES SHALL BE 3H:1V OR FLATTER UNLESS OTHERWISE NOTED.

13.4. CONTRACTOR SHALL ASSURE POSITIVE DRAINAGE AWAY FROM BUILDINGS FOR ALL NATURAL AND PAVED AREAS

13.5. UPON PARTIAL OR FINAL COMPLETION OF GRADING WORK, SPREAD TOPSOIL, SEED, FERTILIZER, AND MULCH IN ACCORDANCE WITH THE PROJECT SPECIFICATIONS AND THE STORM WATER POLLUTION PREVENTION PLAN.

14. TRAFFIC CONTROL

14.1. CONTRACTOR SHALL ENGAGE A SUBCONSULTANT WHO SPECIALIZES IN MAINTENANCE OF TRAFFIC PLANS. SUBCONSULTANT SHALL PREPARE A MAINTENANCE OF TRAFFIC PLAN FOR THE PROJECT THAT COMPLIES WITH THE REQUIREMENTS OF MUTCD AND ALL APPLICABLE AUTHORITIES HAVING JURISDICTION OVER ROAD RIGHT-OF-WAY. CONTRACTOR SHALL SUBMIT MAINTENANCE OF TRAFFIC PLAN TO ENGINEER FOR APPROVAL PRIOR TO BEGINNING WORK.

BY	REVISION	DATE

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NEW FACILITY FOR:
BUTLER CENTER
CITY OF BRYANT, AR

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

03-06-2023

CONTENTS:

GENERAL NOTES

PROJECT NO: 22203

DATE: FEB 2023

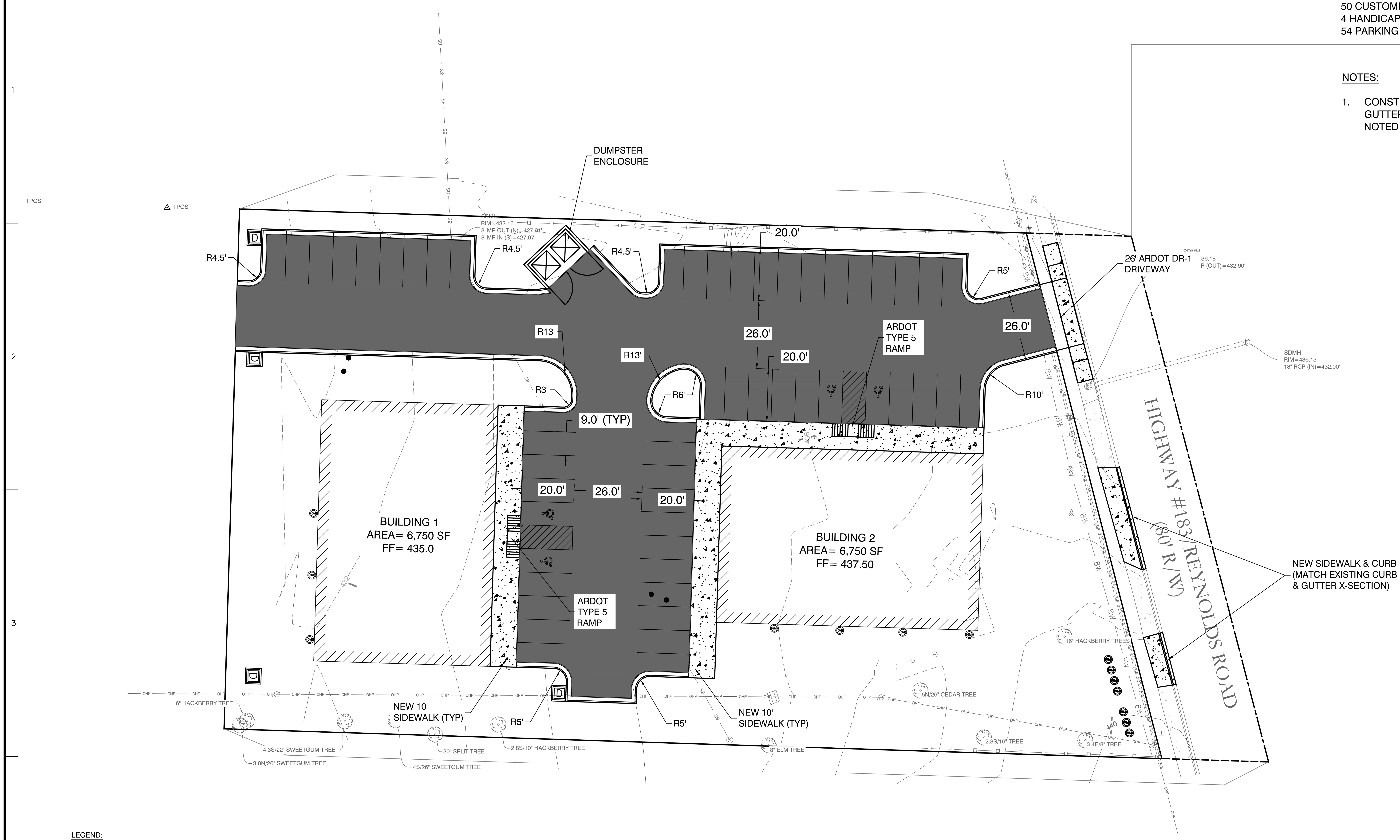
SHEET NO: G1.0

PARKING SPACES:

50 CUSTOMER PARKING SPACES
4 HANDICAP PARKING SPACES
54 PARKING SPACES TOTAL

NOTES:

1. CONSTRUCT AHTD TYPE 'A' CURB & GUTTER IN ALL AREAS EXCEPT AS NOTED ON PLANS.



LEGEND:

(concrete pattern)	PROPOSED CONCRETE
(dark fill)	PROPOSED ASPHALT
(light fill)	EXISTING ASPHALT

N

20' 10' 0 20'

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

03-06-2023

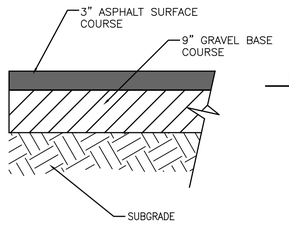
CONTENTS:

SITE PLAN

PROJECT NO: 22203

DATE: FEB 2023

SHEET NO: C1.0



ASPHALT PAVING 1

NOT TO SCALE

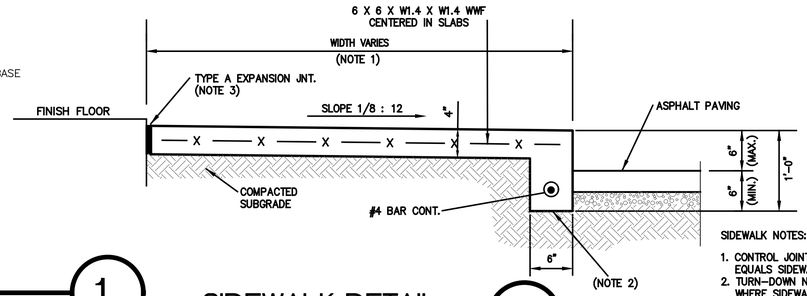
NOTES:

1. ASPHALT SURFACE COURSE SHALL MEET MATERIAL AND INSTALLATION REQUIREMENTS OF SECTION 407 OF AHTD STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION, LATEST EDITION.

2. ASPHALT BINDER COURSE SHALL MEET MATERIAL & INSTALLATION REQUIREMENTS OF SECTION 406 OF AHTD STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION, LATEST EDITION.

3. GRAVEL BASE COURSE SHALL MEET MATERIAL AND INSTALLATION REQUIREMENTS FOR AHTD CLASS 7 AGGREGATE BASE COURSE IN SECTION 303 OF AHTD STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION, LATEST EDITION.

4. SUBGRADE SHALL BE COMPACTED TO A UNIFORM DENSITY OF NOT LESS THAN 95% OF THE MODIFIED PROCTOR.

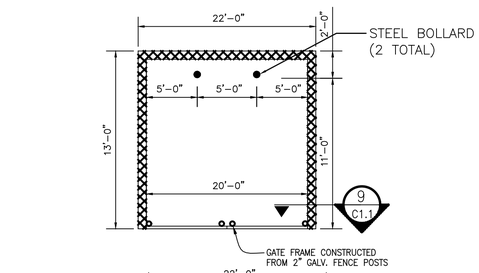


SIDEWALK DETAIL 2

NOT TO SCALE

SIDEWALK NOTES:

1. CONTROL JOINT SPACING EQUALS SIDEWALK WIDTH
2. TURN-DOWN NOT REQUIRED WHERE SIDEWALK MATCHES SURROUNDING GRADE
3. EXPANSION JOINT REQUIRED AT ALL ADJACENT CONCRETE. NOT REQUIRED AT ASPHALT PAVING OR SOIL



SCREENED DUMPSTER ENCLOSURE 3

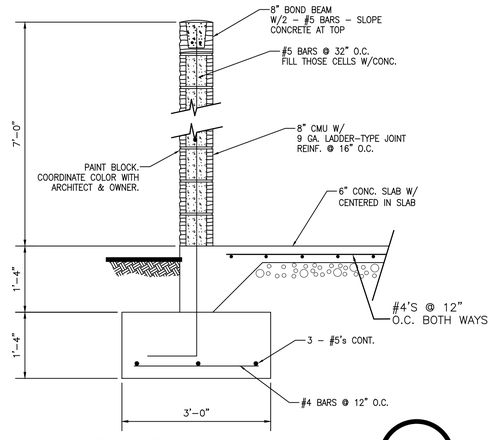
NOT TO SCALE

GATE NOTES:

1. GATE MUST OPEN AT LEAST 120°.

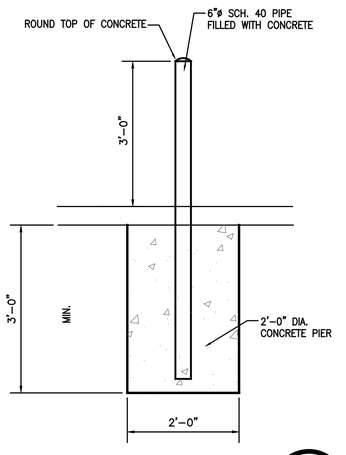
2. HOLD OPEN RODS MUST BE INSTALLED ON THE OUTSIDE FACE OF THE GATES WITH THE HANDLES AT LEAST 36" AFG.

3. HOLES MUST BE DRILLED IN THE PAVEMENT TO HOLD THE GATES IN THE OPEN AND CLOSED POSITION.



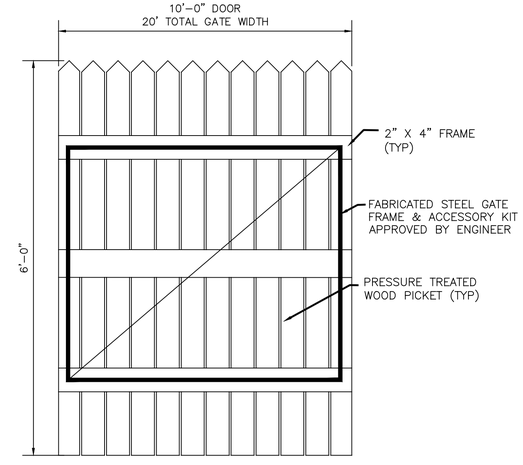
DUMPSTER ENCLOSURE SECTION 4

NOT TO SCALE



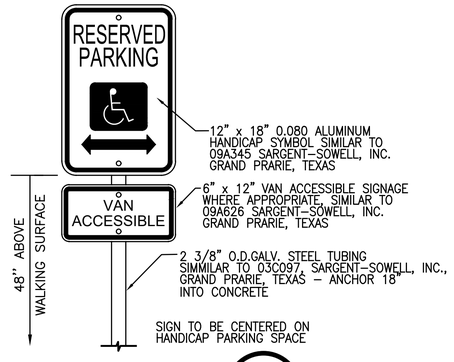
PIPE BOLLARD DETAIL 5

NOT TO SCALE



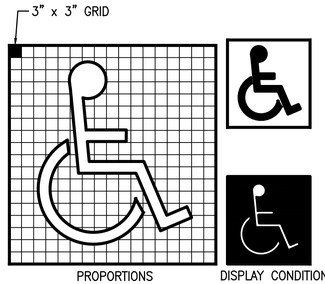
GATE DETAIL 6

NOT TO SCALE



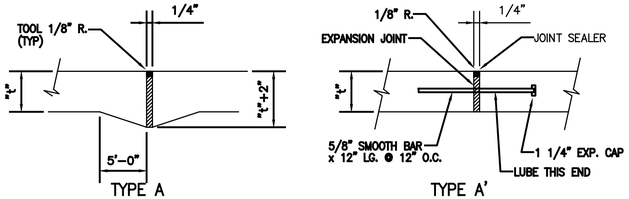
TYP. H.C. SIGN 7

NOT TO SCALE



H.C. PAVEMENT EMBLEM 8

NOT TO SCALE



"t" = SPECIFIED PAVEMENT THICKNESS

CONCRETE JOINTING DETAILS 9

NOT TO SCALE

NOTE: ALL JOINT SPACING NOT TO EXCEED 15'-0" INTERVALS

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NEW FACILITY FOR:
BUTLER CENTER
CITY OF BRYANT, AR

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

03-06-2023

CONTENTS:
SITE DETAILS

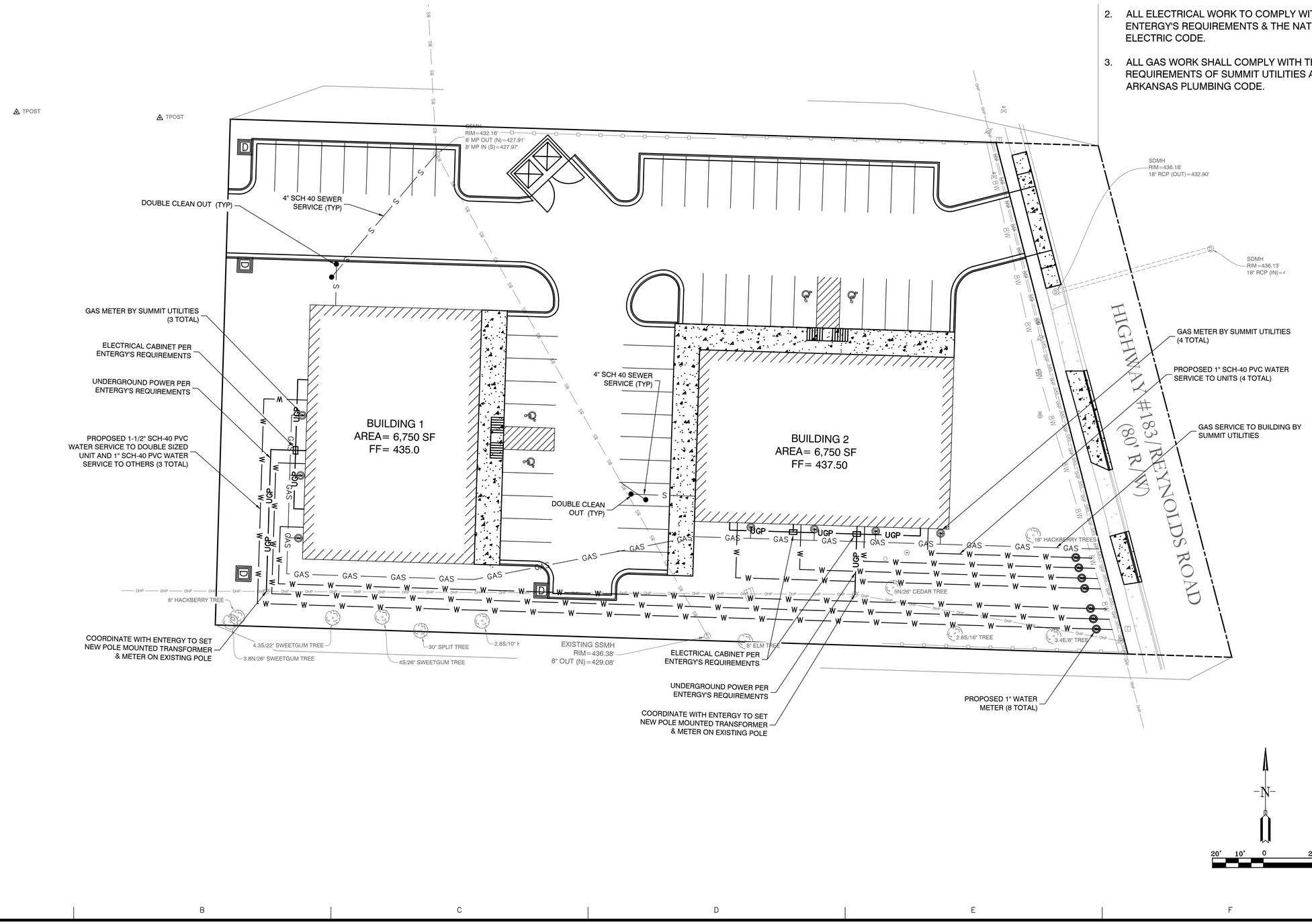
PROJECT NO:
22203

DATE:
FEB 2023

SHEET NO:
C1.1

NOTES:

1. ALL WATER AND SEWER WORK SHALL COMPLY WITH THE REQUIREMENTS OF CITY OF BRYANT STANDARD SPECIFICATIONS FOR DESIGN OF WATER AND SEWER AND THE ARKANSAS PLUMBING CODE. CITY OF BRYANT STANDARD SPECIFICATIONS ARE AVAILABLE FOR DOWNLOAD FROM WWW.CITYOFBRYANT.COM
2. ALL ELECTRICAL WORK TO COMPLY WITH ENTERGY'S REQUIREMENTS & THE NATIONAL ELECTRIC CODE.
3. ALL GAS WORK SHALL COMPLY WITH THE REQUIREMENTS OF SUMMIT UTILITIES AND ARKANSAS PLUMBING CODE.



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NEW FACILITY FOR:
BUTLER CENTER
CITY OF BRYANT, AR

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

03-06-2023

CONTENTS:

UTILITY PLAN

PROJECT NO: 22203

DATE: FEB 2023

SHEET NO: C2.0

PIPE - (142) 130' L.F. OF 14" X 22" RCAP @ 0.5%

V-BOTTOM DITCH

CI-1 6' X 5' ARDOT TYPE C & OUTLET STRUCTURE

TPOST

TPOST

0+00

1+00

2+00

3+00

4+00

4+42

PIPE - (140) 46' L.F. OF 30" RCP @ 0.058%

CI-2 5'X5' ARDOT TYPE C

PIPE - (139) 121' L.F. OF 30" HDPE @ 0.058%

JB-3 5' X 5' ARDOT TYPE E

PIPE - (141) 117' L.F. OF 30" HDPE @ 0.058%

CI-4 5' X 5' ARDOT TYPE C

SDMH
RIM=432.16'
8" MP OUT (N)=427.91'
8" MP IN (S)=427.97'

SDMH
RIM=436.18'
18" RCP (OUT)=432.90'

SDMH
RIM=436.13'
18" RCP (IN)=432.00'

BUILDING 1
AREA= 6,750 SF
FF= 435.0

BUILDING 2
AREA= 6,750 SF
FF= 437.50

HIGHWAY #183/REYNOLDS ROAD
(80' R/W)

6" HACKBERRY TREE

4.3S/22" SWEETGUM TREE

3.8N/26" SWEETGUM TREE

30" SPLIT TREE

2.8S/10" HACKBERRY TREE

4S/26" SWEETGUM TREE

8" ELM TREE

5N/26" CEDAR TREE

2.8S/16" TREE

3.4E/8" TREE

16" HACKBERRY TREES

20' 10' 0 20'

N

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REVISION	
DATE	

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VERNON J. WILLIAMS

03-06-2023

CONTENTS:
GRADING & DRAINAGE PLAN

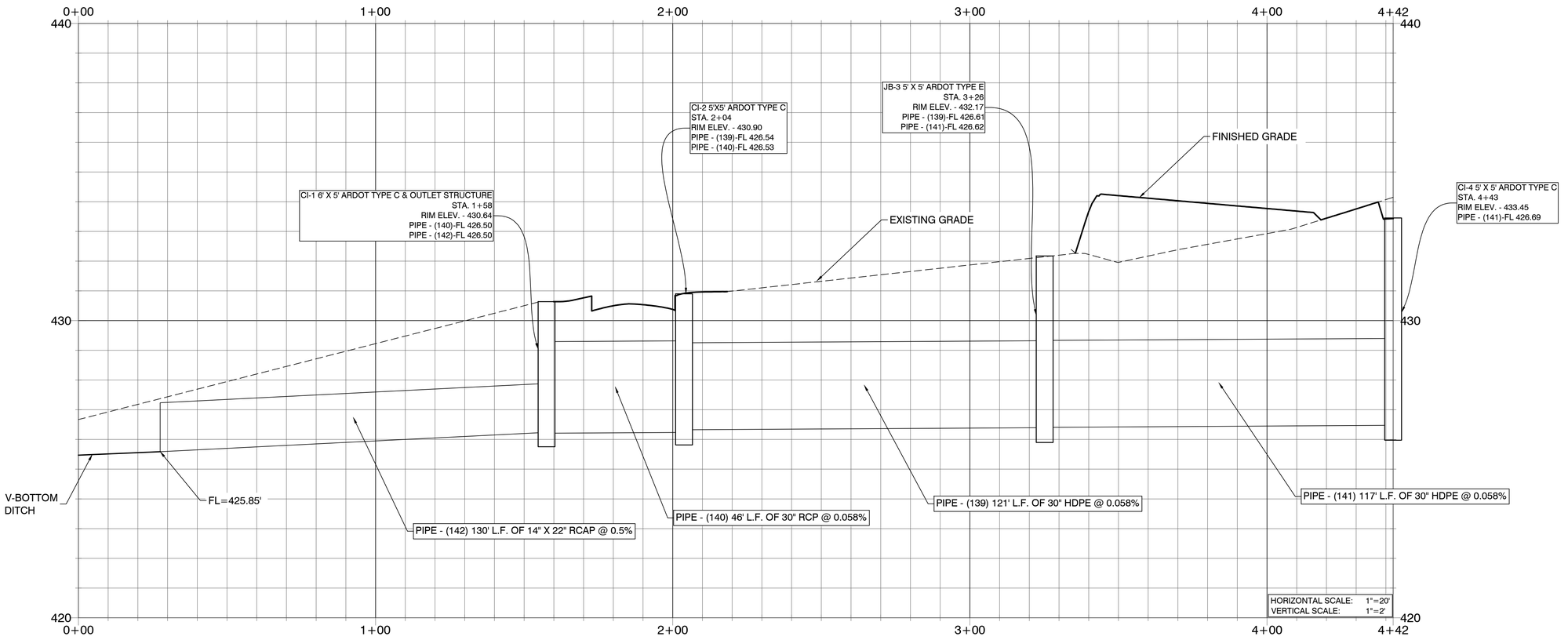
PROJECT NO:
22203

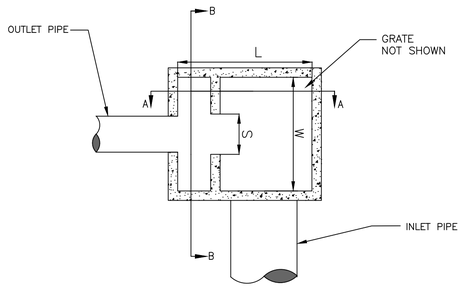
DATE:
FEB 2023

SHEET NO:
C3.0

a:\Projects\2022 Projects\22203 Butler Center 1109 North Reynolds Road Kenny Whitfield\Drawings\[Whit]Design\22203 1109 N Reynolds Rd Design.dwg

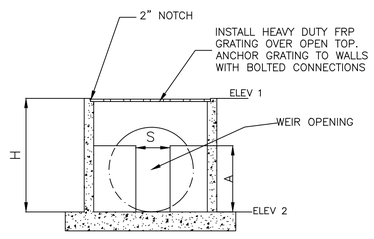
STORM DRAINAGE PROFILE





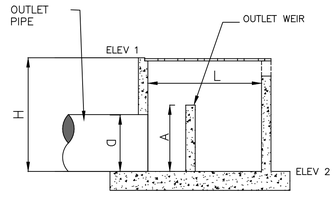
OUTLET STRUCTURE - WEIR PLAN VIEW

NOT TO SCALE



OUTLET STRUCTURE - WEIR SECTION B-B

NOT TO SCALE



OUTLET STRUCTURE - WEIR SECTION A-A

NOT TO SCALE

OUTLET STRUCTURE								
OUTLET STRUCTURE	L	W	H	ELEV 1	ELEV 2	S	A	D
WEIR	6'-0"	5'-0"	4'-1 1/2"	430.64	426.50	0'-6"	2'-6"	18"

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NEW FACILITY FOR:
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STATE OF ARKANSAS
Vernon J. Williams
REGISTERED PROFESSIONAL ENGINEER
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VERNON J. WILLIAMS

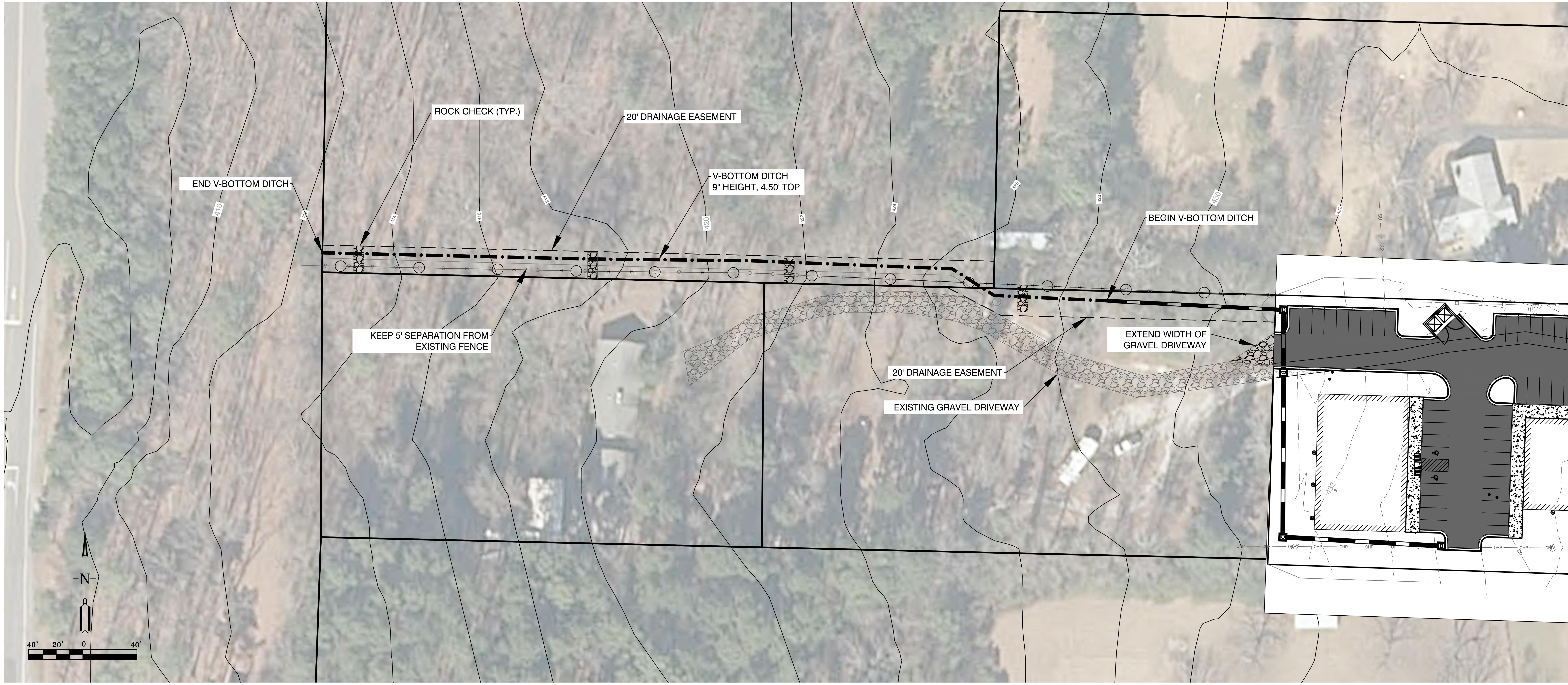
03-06-2023

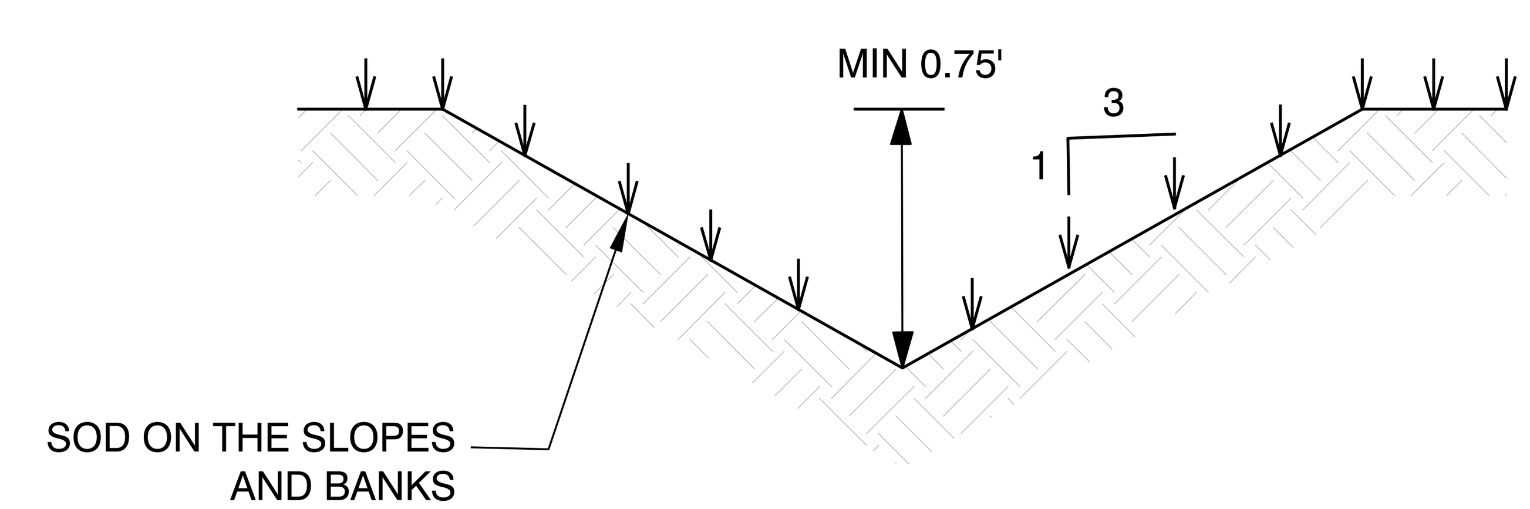
CONTENTS:
DRAINAGE PROFILE & OUTLET STRUCTURE DETAILS

PROJECT NO:
22203

DATE:
FEB 2023

SHEET NO:
C3.1





TYPICAL V-DITCH CROSS SECTION
(N.T.S)

BY	REVISION	DATE

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NEW FACILITY FOR:
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STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
NO. 9551
VERNON J. WILLIAMS

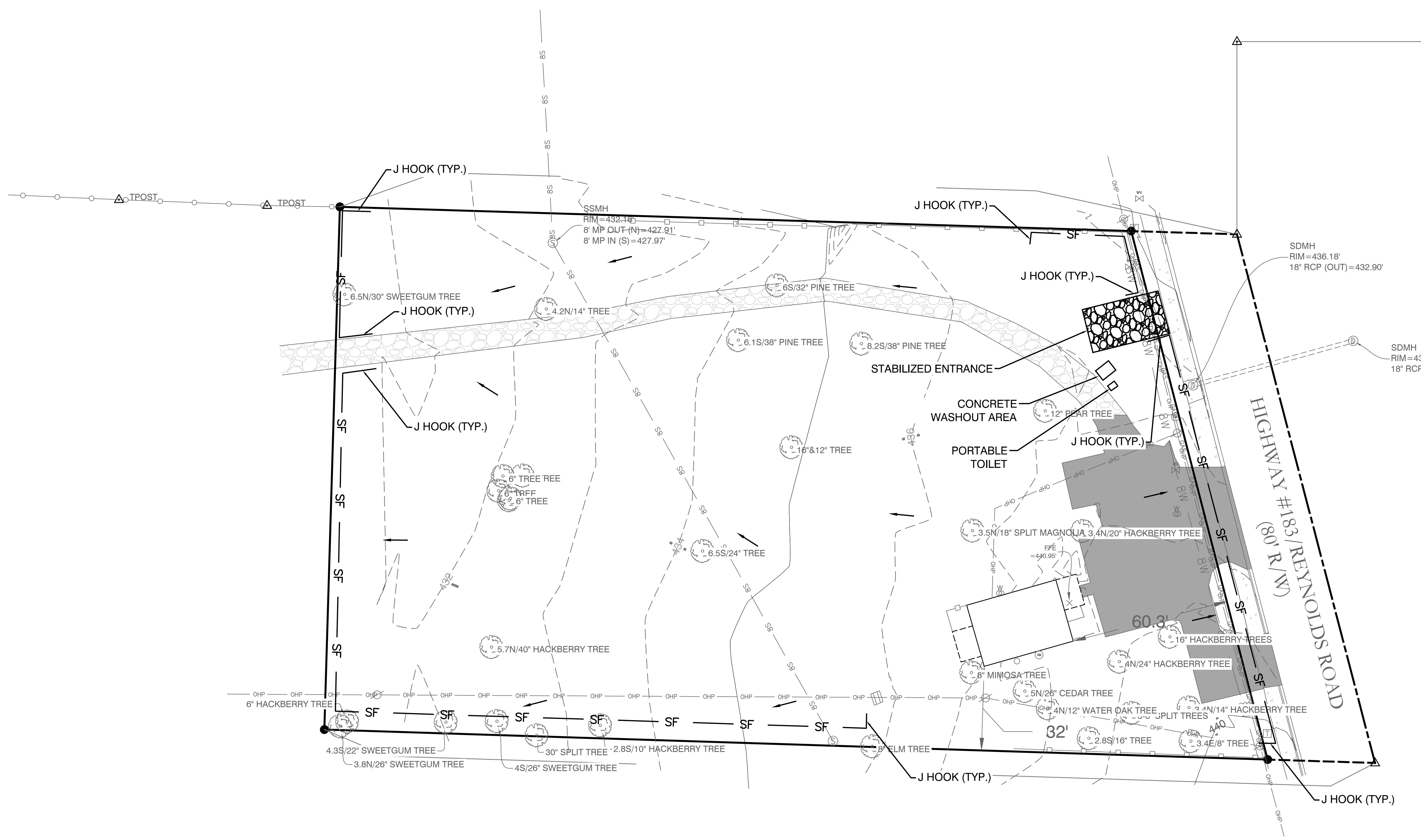
03-06-2023

CONTENTS:
OFFSITE DRAINAGE & BMP

PROJECT NO: 22203

DATE: FEB 2023

SHEET NO: C3.2

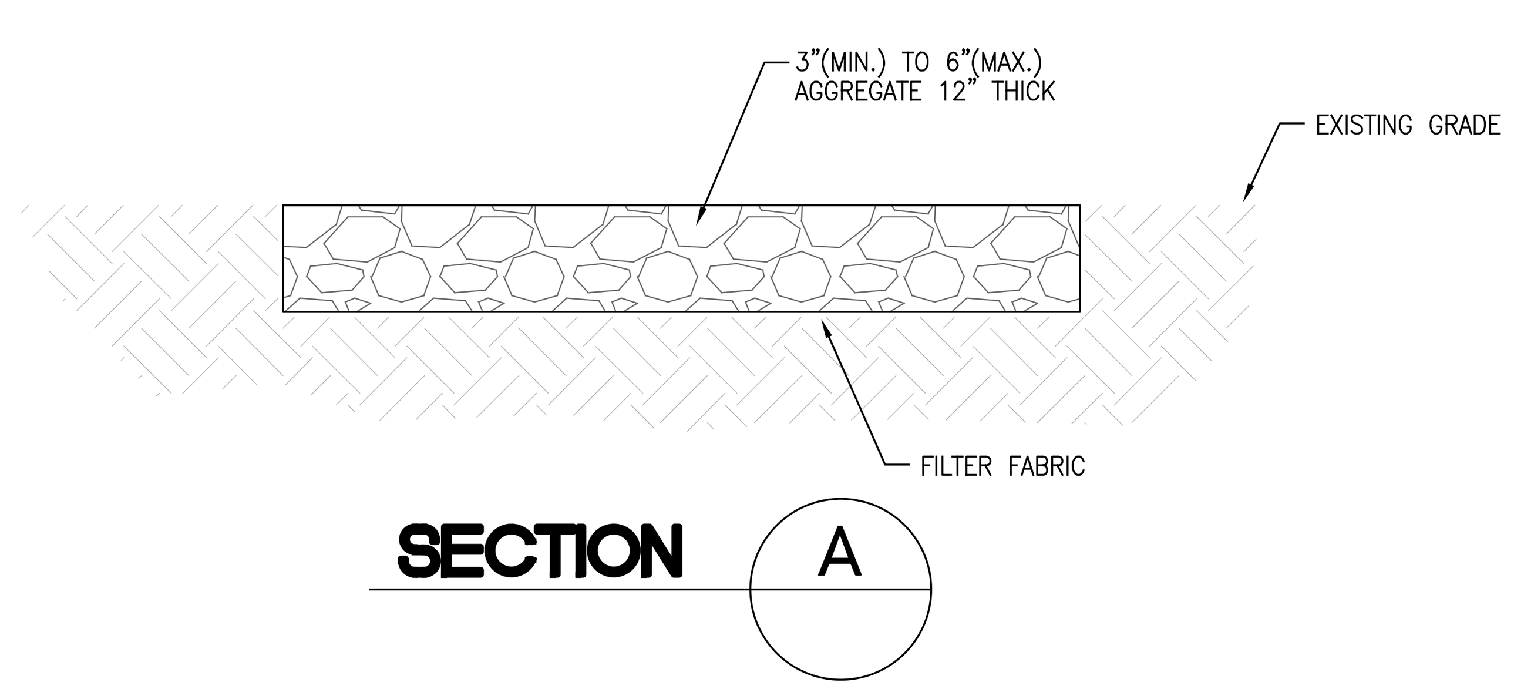


BMP NOTES:

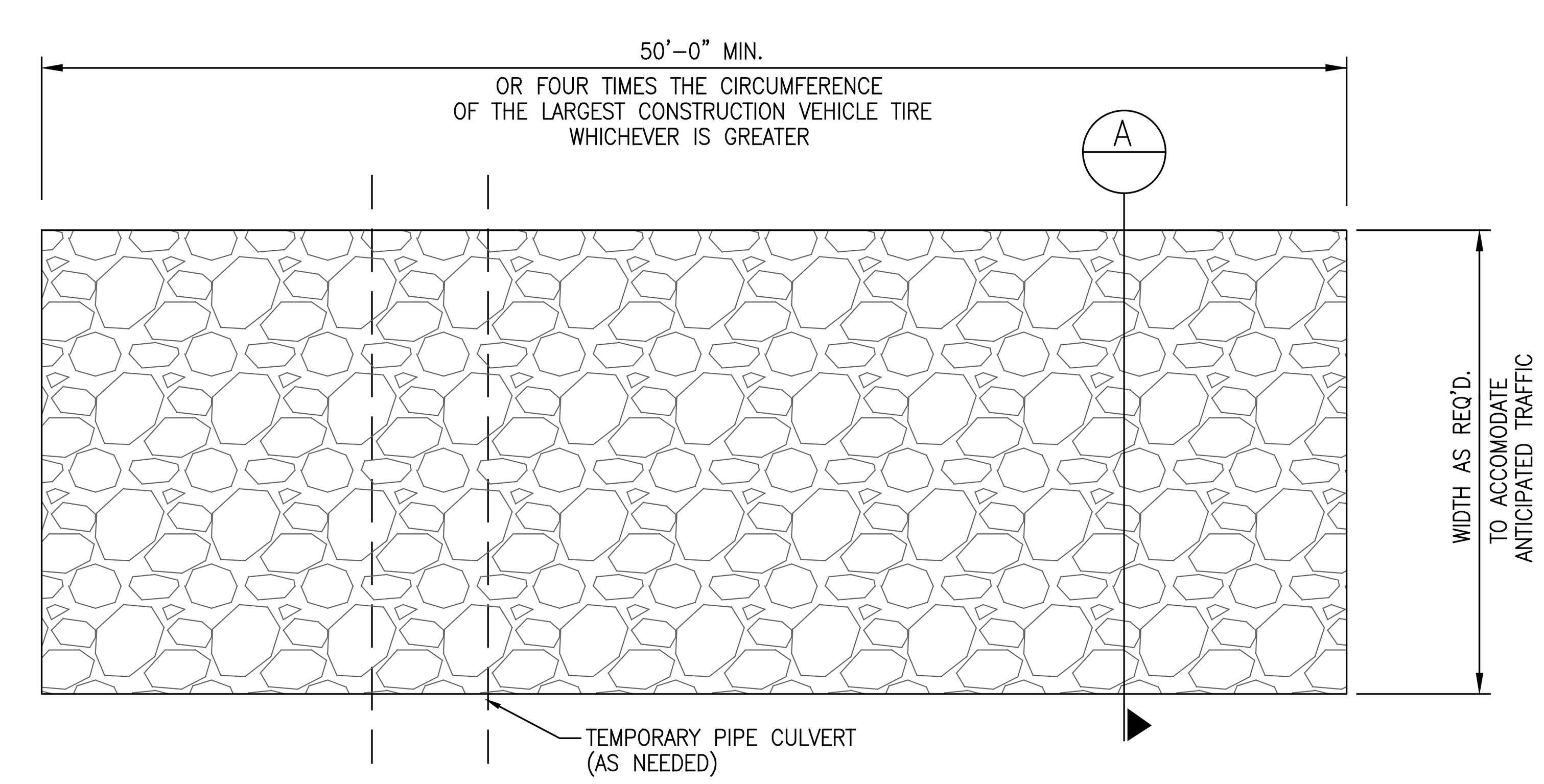
1. ALL WASH WATER (CONCRETE TRUCKS, VEHICLE CLEANING, EQUIPMENT CLEANING, ETC.) SHALL BE DETAINED AND PROPERLY TREATED OR DISPOSED.
2. DUST ON THE SITE SHALL BE CONTROLLED. THE USE OF MOTOR OILS AND OTHER PETROLEUM BASED OR TOXIC LIQUIDS FOR DUST SUPPRESSION OPERATIONS IS PROHIBITED.
3. RUBBISH, TRASH, GARBAGE, LITTER, OR OTHER SUCH MATERIALS SHALL BE DEPOSITED INTO SEALED CONTAINERS. MATERIAL SHALL BE PREVENTED FROM LEAVING THE PREMISES THROUGH THE ACTION OF WIND OR STORMWATER DISCHARGE INTO DRAINAGE DITCHES OR WATERS OF THE STATE.
4. DISTURBED PORTIONS OF THE SITE WHERE CONSTRUCTION ACTIVITY HAS STOPPED FOR AT LEAST 14 DAYS, SHALL BE TEMPORARILY SEEDED. THESE AREAS SHALL BE SEEDED NO LATER THAN 14 DAYS FROM THE LAST CONSTRUCTION ACTIVITY OCCURRING IN THESE AREAS.
5. DISTURBED PORTIONS OF THE SITE WHERE CONSTRUCTION ACTIVITY HAS PERMANENTLY STOPPED SHALL BE PERMANENTLY SEEDED. THESE AREAS SHALL BE SEEDED NO LATER THAN 14 DAYS AFTER THE LAST CONSTRUCTION ACTIVITY OCCURRING IN THESE AREAS. REFER TO THE GRADING PLAN AND/OR LANDSCAPE PLAN.
6. IF THE ACTION OF VEHICLES TRAVELING OVER THE SITE IS NOT SUFFICIENT TO REMOVE THE MAJORITY OF DIRT OR MUD, THEN THE TIRES MUST BE WASHED BEFORE THE VEHICLES ENTER A PUBLIC ROAD. IF WASHING IS USED, PROVISIONS MUST BE MADE TO INTERCEPT THE WASH WATER AND TRAP THE SEDIMENT BEFORE IT IS CARRIED OFF OF THE SITE.
7. ALL MATERIALS SPILLED, DROPPED, WASHED OR TRACKED FROM VEHICLES ONTO ROADWAYS OR INTO STORM DRAINS MUST BE REMOVED IMMEDIATELY.
8. CONTRACTORS OR SUBCONTRACTORS WILL BE RESPONSIBLE FOR REMOVING SEDIMENT IN THE DETENTION POND AND ANY SEDIMENT THAT MAY HAVE COLLECTED IN THE STORM SEWER DRAINAGE SYSTEMS IN CONJUNCTION WITH THE STABILIZATION OF THE SITE.
9. ON-SITE & OFF SITE SOIL STOCKPILE AND BORROW AREAS SHALL BE PROTECTED FROM EROSION AND SEDIMENTATION THROUGH IMPLEMENTATION OF BEST MANAGEMENT PRACTICES. STOCKPILE AND BORROW AREA LOCATIONS SHALL BE NOTED ON THE SITE MAP AND PERMITTED IN ACCORDANCE WITH GENERAL PERMIT REQUIREMENTS.
10. ALL CONSTRUCTION SHALL BE STABILIZED AT THE END OF EACH WORKING DAY, THIS INCLUDES BACKFILLING OF TRENCHES FOR UTILITY CONSTRUCTION AND PLACEMENT OF GRAVEL OR BITUMINOUS PAVING FOR ROAD CONSTRUCTION.

TOTAL SITE: 1.69 ACRES (INCLUDES R-O-W)

TOTAL DISTURBED AREA: 1.51 ACRES (INCLUDES R-O-W)



SECTION A

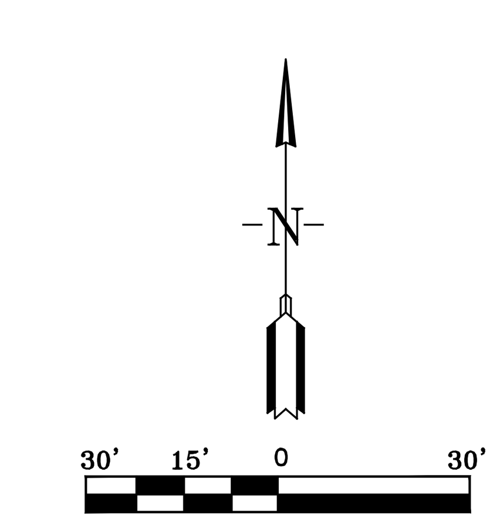


STABILIZED CONSTRUCTION ENTRANCE

NOT TO SCALE

LEGEND:

— — 500 — —	EXISTING CONTOURS
←—	DIRECTION OF OVERLAND FLOW
—— SF ——	SILT FENCING



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NEW FACILITY FOR:
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CITY OF BRYANT, AR

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

03-06-2023

CONTENTS:

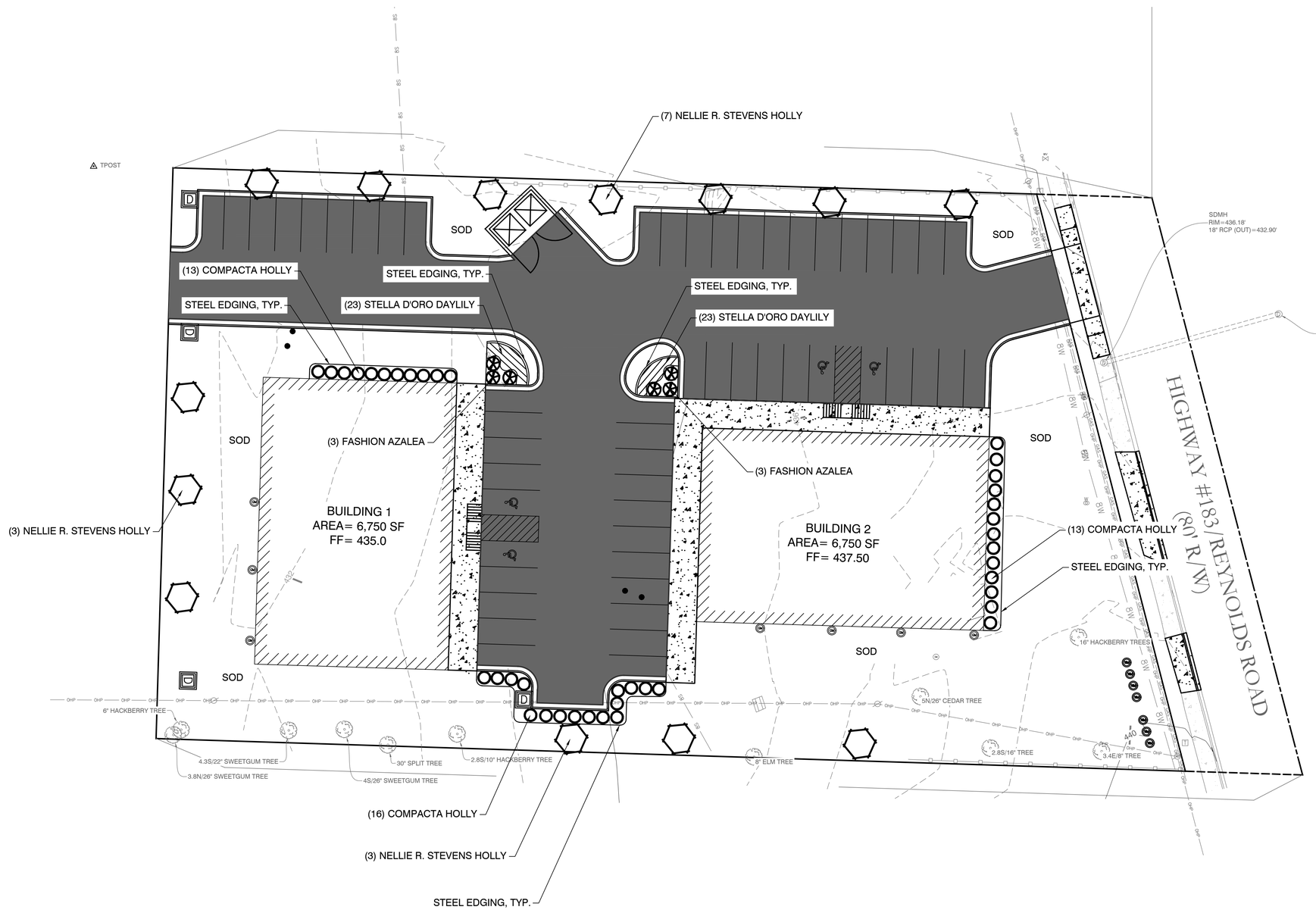
EROSION CONTROL PLAN

PROJECT NO: 22203

DATE: FEB 2023

SHEET NO:

C4.0



N

60' 30' 0 60'

BY	REVISION	DATE

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NEW FACILITY FOR:
BUTLER CENTER
CITY OF BRYANT, AR

LICENSED LANDSCAPE ARCHITECT
CHAD M. OPPENHUIZEN
No.5064
ARKANSAS

03-06-2023

CONTENTS:
LANDSCAPE PLAN

PROJECT NO:
22203

DATE:
FEB 2023

SHEET NO:
L1.0

LANDSCAPING NOTES:

1. REPORT ANY DISCREPANCIES FOUND IN THE PLANS. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO ADVISE THE DESIGNER OF ANY CONDITION FOUND ON THE SITE WHICH PROHIBITS INSTALLATION AS SHOWN ON THESE DRAWINGS.

2. THE NUMBER OF PLANTS OR INTENDED COVERAGE AREAS SHOWN SHALL SUPERSEDE NOTED QUANTITIES. TREE LOCATIONS ARE DIAGRAMMATIC.

3. ALL PLANT MATERIALS MUST BE APPROVED PRIOR TO INSTALLATION. SUBSTITUTIONS OF SIZE OR TYPE OF MATERIAL ARE NOT PERMITTED WITHOUT WRITTEN APPROVAL PRIOR TO DELIVERY OR INSTALLATION.

4. ALL PLANT MATERIALS SHALL BE MAINTAINED IN A HEALTHY AND GROWING CONDITION. REPLACE ANY DAMAGED, DESTROYED, OR REMOVED PLANT MATERIALS WITH THE SAME VARIETY AND SIZE PRIOR TO FINAL ACCEPTANCE.

5. PLANT STORAGE TO BE LOCATED OUT OF VEHICULAR USE AREAS AND NEAR A WATERING SYSTEM TO OPTIMIZE SURVIVAL.

6. ALL PLANTING BEDS SHALL BE IRRIGATED BY AN AUTOMATIC UNDERGROUND IRRIGATION SYSTEM.

7. ALL PLANTING BEDS SHALL BE MULCHED WITH 3-INCHES SHREDDED HARDWOOD OR CYPRESS MUCH.

8. ALL SHRUBS AND TREES SHALL RECEIVE PLANTING BACKFILL OF 2/3 TOPSOIL AND 1/3 COMPOST BY VOLUME AND 2 POUNDS OF 14-14-14 TIMED-RELEASE FERTILIZER PER CUBIC YARD OF BACKFILL.

9. ALL BEDS INSIDE LAWN AREAS TO BE EDGED WITH 4" PAINTED STEEL EDGING.

10. ALL TREES AND SHRUBS SHALL BE THOROUGHLY WATERED IMMEDIATELY AFTER PLANTING.

11. TREES SHALL NOT BE TOPPED AT ANY TIME. PROPER TREE PRUNING TECHNIQUES AS ESTABLISHED BY THE LATEST EDITION OF ANSI A300 STANDARDS FOR TREE CARE SHALL BE UTILIZED FOR MAINTENANCE PURPOSES.

12. COORDINATE ALL INSTALLATION ACTIVITIES WITH IRRIGATION WORK AND IMMEDIATELY REPAIR DAMAGES TO FINISH GRADES, SOD, AND PLANT MATERIALS UNTIL FINAL ACCEPTANCE.

13. SEE GRADING AND DRAINAGE PLAN FOR PROPOSED SLOPES, SWALES, BERMS, AND WATER FEATURES. MAINTAIN PROPER FINISH GRADES IN ALL AREAS AS INDICATED.

14. LANDSCAPE CONTRACTOR SHALL BE RESPONSIBLE FOR FINE GRADING, REMOVAL OF MISCELLANEOUS DEBRIS AND ANY ADDITIONAL FILL REQUIRED TO PROVIDE MINIMUM TOPSOIL DEPTHS AND CREATE A SMOOTH CONDITION PRIOR TO PLANTING IN ALL AREAS.

15. TOPSOIL SHALL BE FREE OF STONES, ROOTS, CLODS, AND ANY OTHER FOREIGN MATERIAL THAT IS NOT BENEFICIAL FROM PLANT GROWTH.

16. LANDSCAPE AND OPEN AREAS SHALL BE KEPT FREE OF TRASH, LITTER, AND WEEDS AT ALL TIMES DURING CONSTRUCTION.

17. IDENTIFICATION LABELS MUST BE ATTACHED TO ALL PLANT MATERIALS AND SHALL REMAIN INTACT UNTIL FINAL ACCEPTANCE OF THE WORK. REMOVE ALL TAGS AND LABELS FOLLOWING FINAL ACCEPTANCE.

18. CALIPER OF TREES TO BE MEASURED 6-INCHES ABOVE GROUND LEVEL FOR TREES UP TO 4-INCH CALIPER SIZE.

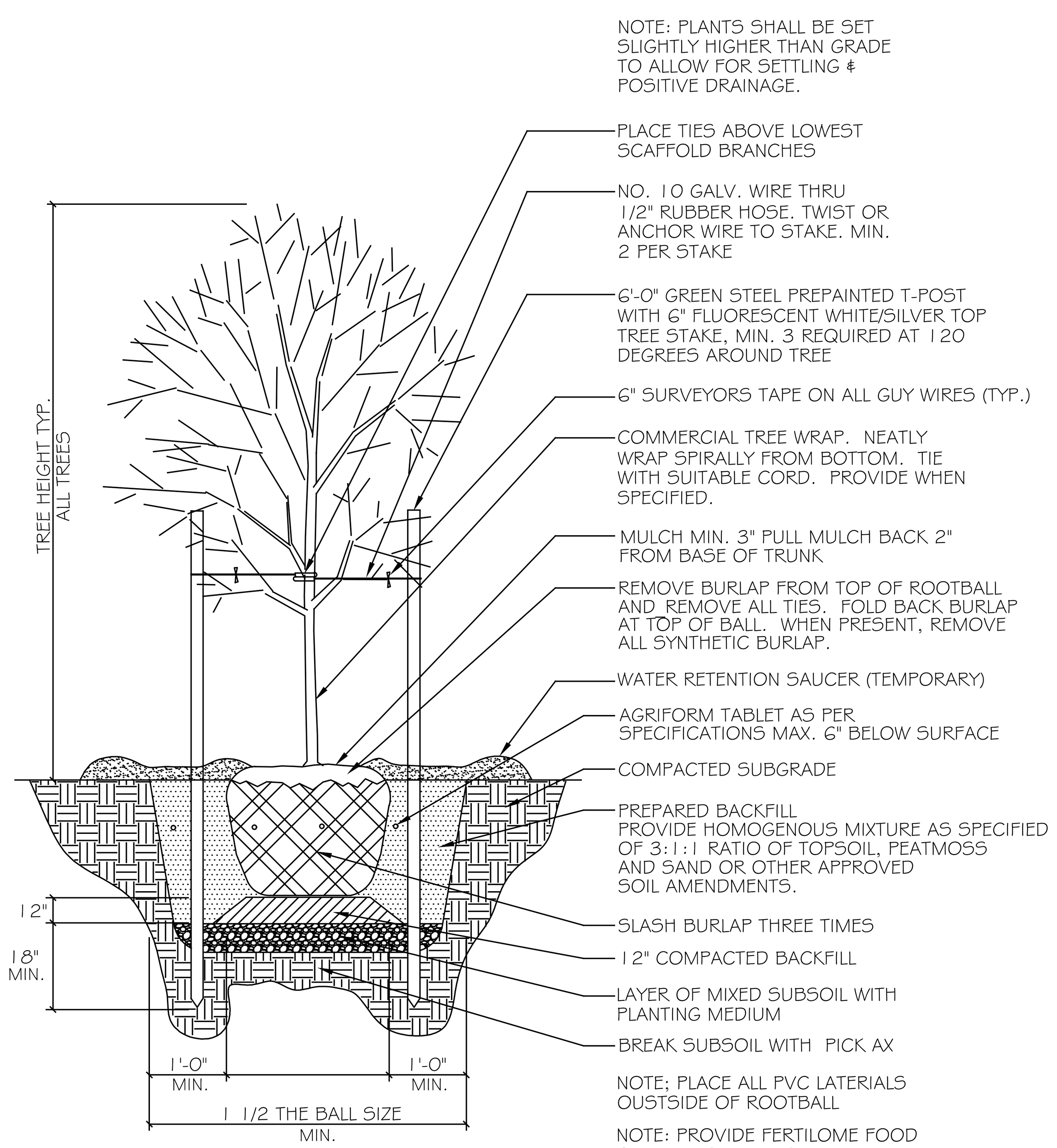
19. GENERAL CONTRACTOR SHALL PROVIDE 6-INCH DIAMETER MINIMUM SCHEDULE 40 PVC SLEEVING FOR IRRIGATION TO ALL CURB ISLANDS AND UNDER ALL DRIVE ISLE CROSSINGS.

20. CONTRACTOR TO REFER TO THE UTILITY PLAN SHEET FOR RECENT FIRE FLOW INFORMATION.

LEGEND:

PLAN QUANTITIES:

Quantity	Common Name/Botanical Name	Size	Remarks
13	Nellie R. Stevens Holly Ilex x 'Nellie R. Stevens'	10/15 gallon, 3-4' tall	Specimen with positive upright form and symmetrical. Well branched canopies.
40	Compacta Holly Ilex crentata 'Compacta'	3 gallon	Full well branched shrub with uniform shape.
6	Fashion Azalea Rhododendron 'Fashion'	3 gallon	Full well branched shrub with uniform shape.
46	Stella D'Oro Daylily Hemerocallis x Stella D'oro	1 gallon	Plant 18" o.c.
Contractor to measure	Bermuda Tifway 419 Cynodon Dactylon var. Tifway 419	Sod	Solid sod, all areas indicated with close knit joints



1 | L1 TREE PLANTING DETAIL

No Scale

SODDING OF DISTURBED AREAS

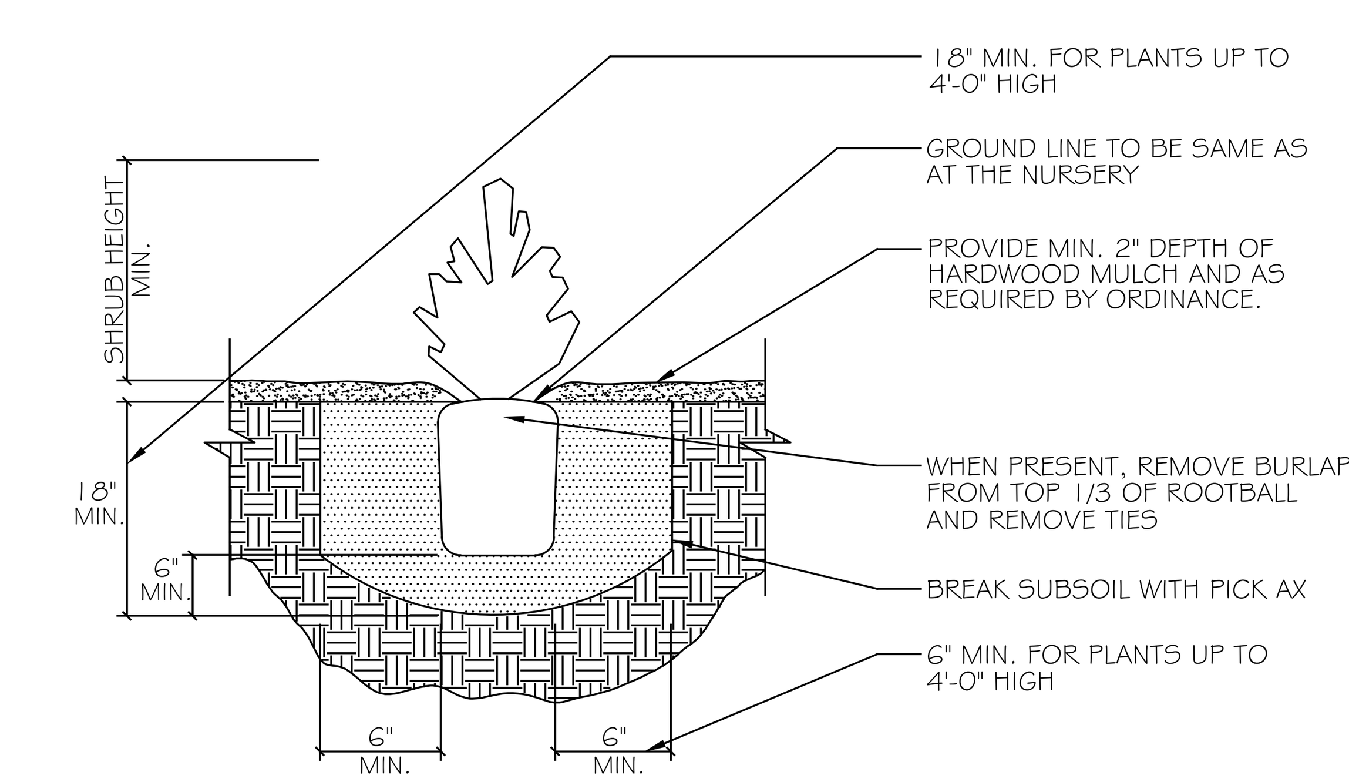
AREAS AND LIMITS OF SODDING ARE INDICATED BASED ON ANTICIPATED DISTURBANCE BY GRADING OPERATIONS. CONTRACTOR TO PROVIDE ADDITIONAL SODDING IN ANY OTHER AREAS DISTURBED BY WORK UNDER THIS CONTRACT. EXCAVATE AND REMOVE ANY REMAINING TURF AND SOIL TO A 4-INCH MINIMUM DEPTH WITHIN NEW SOD AREAS. HAND EXCAVATION REQUIRED WITHIN DRIP LINES OF TREE AREAS TO AVOID DAMAGE TO EXISTING ROOTS.CONTRACTOR TO INSTALL MINIMUM OF 3" OF TOPSOIL TO ALL AREAS TO BE SODDED OR SEEDED. FINE GRADE THE TOPSOIL TO ENSURE POSITIVE DRAINAGE AND A SMOOTH SURFACE FOR SOD INSTALLATION.

MAINTENANCE AND WARRANTY

CONTRACTOR TO PROVIDE FULL MAINTENANCE OF INSTALLED LANDSCAPE AND IRRIGATION UNTIL DATE OF FINAL ACCEPTANCE. ADDITIONALLY, CONTRACTOR TO PROVIDE ONE YEAR WARRANTY FOR ALL LANDSCAPE AND IRRIGATION WORK FROM THE DATE OF FINAL ACCEPTANCE.

IRRIGATION SYSTEM

CONTRACTOR TO PROVIDE AUTOMATIC IRRIGATION SYSTEM FOR ALL NEW LANDSCAPE AND TURF AREAS SHOWN ON THE PLANS. SYSTEM WILL REQUIRE PROVIDING BACKFLOW PREVENTER, PERMITTING, POWER CONNECTION, CONTROLLER, AND ALL OTHER WORK REQUIRED FOR A COMPLETE AND FUNCTIONING SYSTEM THAT PROVIDES 100% COVERAGE. COORDINATE LOCATION OF CONTROLLER WITH OWNER, GENERAL CONTRACTOR, AND ELECTRICAL CONTRACTOR. COORDINATE LOCATION OF IRRIGATION SLEEVES WITH GENERAL CONTRACTOR PRIOR TO FULLY MOBILIZING TO SITE. CONTRACTOR TO REFER TO THE UTILITY PLAN SHEET FOR CURRENT FIRE FLOW INFORMATION.



NOTES:
1. PROVIDE WEED CONTROL AND/OR FERTILIZER AS SPECIFIED BELOW.
2. WEED CONTROL AND FERTILIZER MAY BE APPLIED AT A LATER DATE TO COMPLY WITH SEASONAL CONDITIONS AND THE GROWING PERIOD.
3. PROVIDE AGRIFORM TABLETS AS PER MANUFACTURERS RECOMMENDATIONS.
4. PROVIDE HOMOGENOUS BACKFILL PLANTING MIXTURE OF 3:1 RATIO TOPSOIL TO PEATMOSS AND/OR OTHER APPROVED SOIL AMENDMENTS.
5. PROVIDE FERTILOME ROOT STIMULATOR OR APPROVED EQUAL IN PITS.
6. APPLY BALAN PREEMERGENT WEED CONTROL OR APPROVED EQUAL TREATMENT ON ALL SHRUB AND GROUNDCOVER BEDS.

2 | L1 SHRUB PLANTING DETAIL

No Scale

BY | REVISION | DATE

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

NEW FACILITY FOR:
BUTLER CENTER
CITY OF BRYANT, AR

LICENSED LANDSCAPE ARCHITECT CHAD M. OPPENHUIZEN No. 5064 ARKANSAS

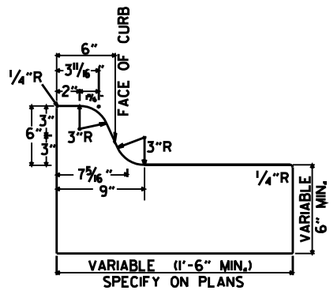
03-06-2023

CONTENTS:
LANDSCAPING NOTES & DETAILS

PROJECT NO: 22203

DATE: FEB 2023

SHEET NO: L1.1



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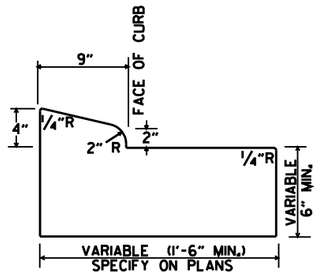

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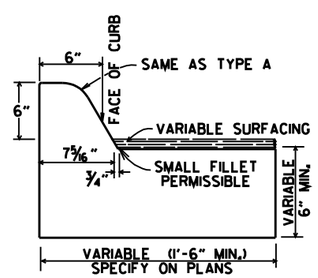

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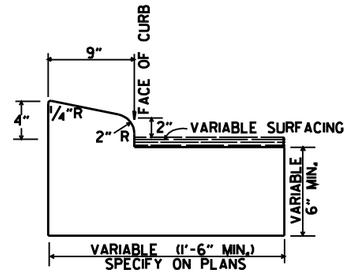

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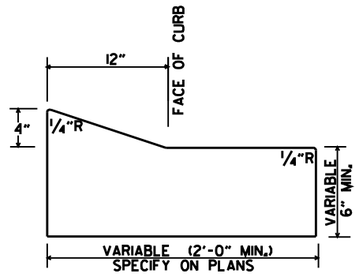

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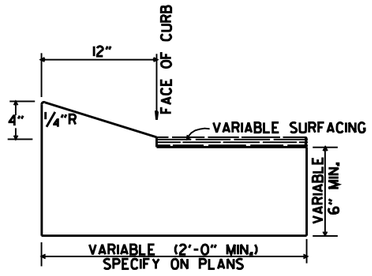
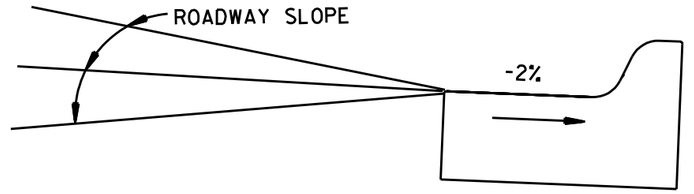


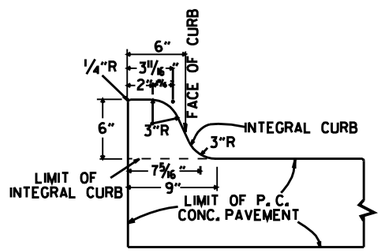
TYPE E-2

CONCRETE COMBINATION CURB AND GUTTER



DETAIL OF GUTTER SLOPE

GUTTER SHALL BE CONSTRUCTED ON 2% SLOPE AWAY FROM ROADWAY, REGARDLESS OF ROADWAY SLOPE.



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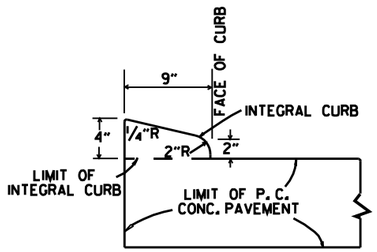

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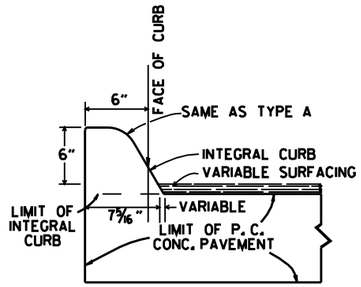
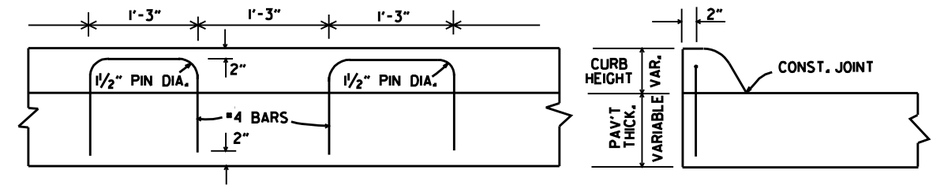
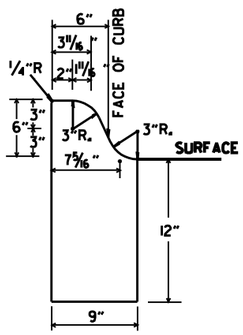


TYPE C

INTEGRAL CURB



ALTERNATE CONSTRUCTION METHOD FOR INTEGRAL CURB



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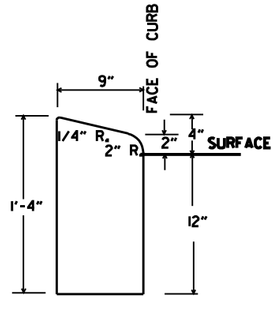

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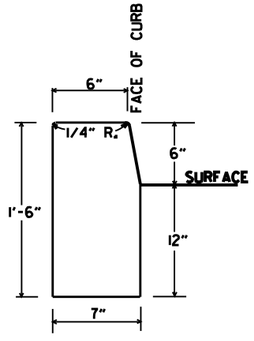

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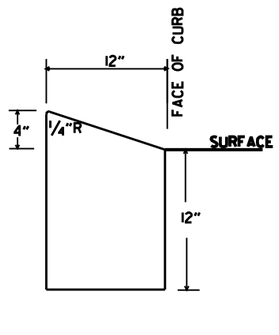
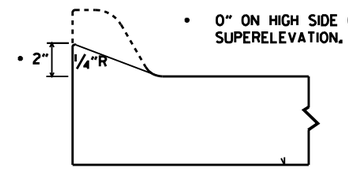


TYPE E

CONCRETE CURB



NOTE: USE MODIFIED CURB AS SPECIFIED ON STD. DR-1. COMPENSATION FOR MODIFIED CURB WILL BE CONSIDERED INCLUDED IN THE PRICE BID FOR THE TYPE OF CURB OR CURB AND GUTTER SPECIFIED.

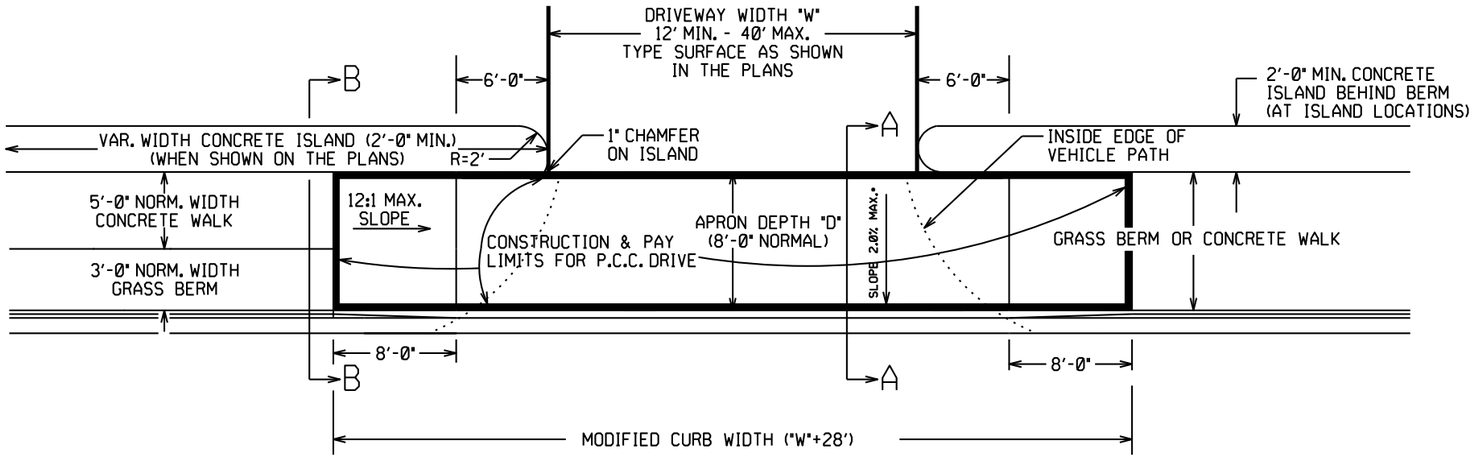
DETAILS OF MODIFIED CURB

DATE	REVISION	DATE FILMED
11-29-07	REVISED GUTTER SLOPE & MODIFIED CURB DETAILS	
11-10-05	ADDED DETAILS OF TYPE E CURBS	
11-16-01	REVISED CONCRETE CURB TYPE B	
11-18-98	REVISED MODIFIED CURB	
6-2-94	ADDED NOTE TO SPECIAL MODIFIED CURB	
8-5-93	CORRECTED GUTTER SLOPE	8-5-93
10-1-92	ADDED DETAILS OF GUTTER SLOPE	10-1-92
5-24-90	ADDED DETAILS OF MODIFIED CURB	5-24-90
11-30-89	VARIBLE DEPTH TYPE A & B I	11-30-89
7-15-88	REVISED MODIFIED CURB	630-7-15-88
11-1-73	REVISED MODIFIED CURB	500-11-1-73
10-2-72	REVISED AND REDRAWN	52-10-2-72

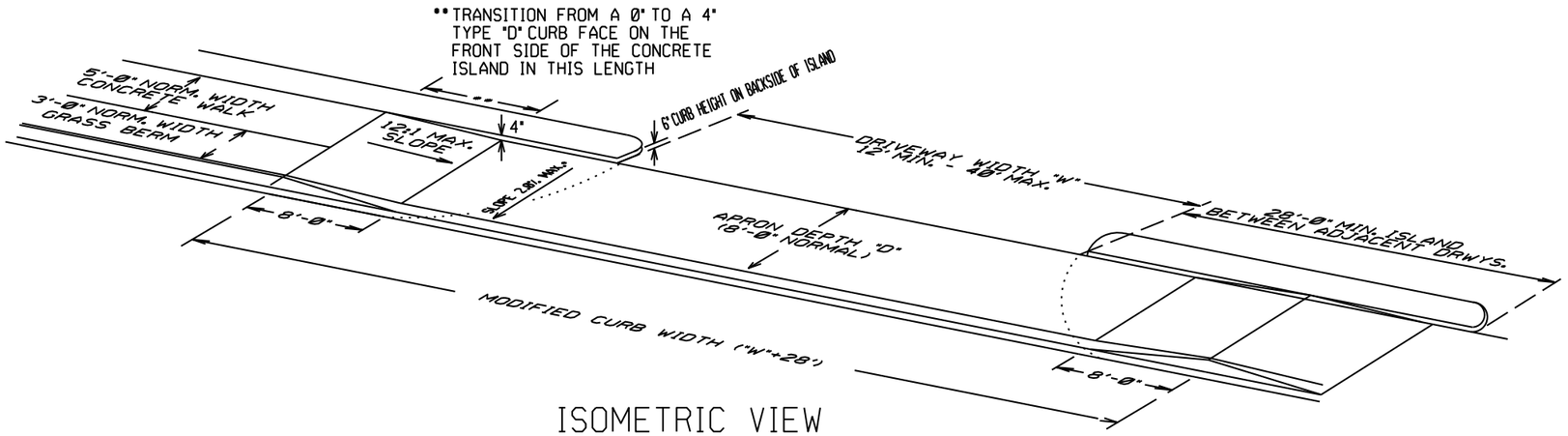
ARKANSAS STATE HIGHWAY COMMISSION

CURBING DETAILS

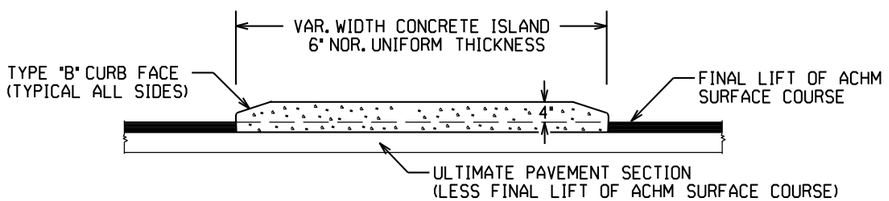
STANDARD DRAWING CG-1



PLAN VIEW



ISOMETRIC VIEW

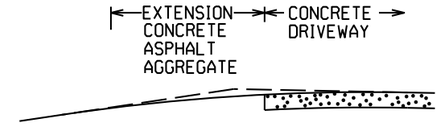


CURBED ISLANDS FOR CHANNELIZATION

CONCRETE ISLAND NOTES:

1. REFER TO PLANS FOR TYPE OF CURB FACE TO BE USED. NO DIRECT PAYMENT WILL BE MADE FOR THE CURB FACES SHOWN ON THE ISLAND DETAILS. PAYMENT FOR THE CURB FACE WILL BE INCLUDED IN THE UNIT PRICE BID FOR THE ITEM "CONCRETE ISLAND".

2. TRANSVERSE EXPANSION JOINTS, NOT LESS THAN 1/2" WIDE, SHALL BE PLACED AT MINIMUM INTERVAL OF 45'. TRANSVERSE JOINT SHALL BE CONSTRUCTED USING A JOINT FILLER COMPLYING WITH AASHTO M213.



EXTENSION TYPICAL SECTIONS

1: CONCRETE - 6" P.C. CONCRETE DRIVEWAY

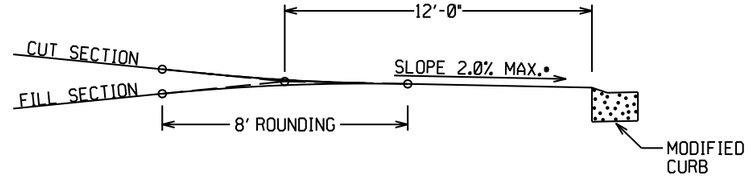
2: ASPHALT - 2" ACHM SURFACE COURSE (1/2")
4" ACHM BINDER COURSE (1") OR
4" ACHM BASE COURSE (1-1/2")

3: ASPHALT - 2" ACHM SURFACE COURSE (1/2")
7" AGGREGATE BASE COURSE

4: AGGREGATE - 6" AGGREGATE BASE COURSE

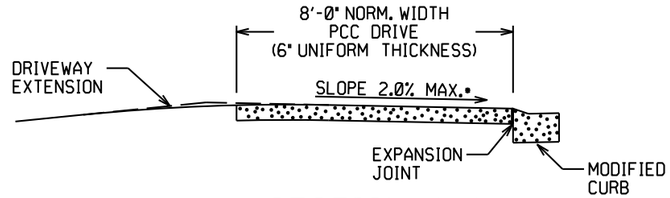
THE TYPE OF EXTENSION SHALL BE AS SHOWN IN THE PLANS. THE CONTRACTOR MAY, WITH THE APPROVAL OF THE ENGINEER, SUBSTITUTE A LOWER NUMBERED TYPE OF EXTENSION IN LIEU OF THE TYPE SPECIFIED IN THE PLANS, BUT AT NO ADDITIONAL COST TO THE DEPARTMENT.

DRIVEWAY EXTENSION DETAILS

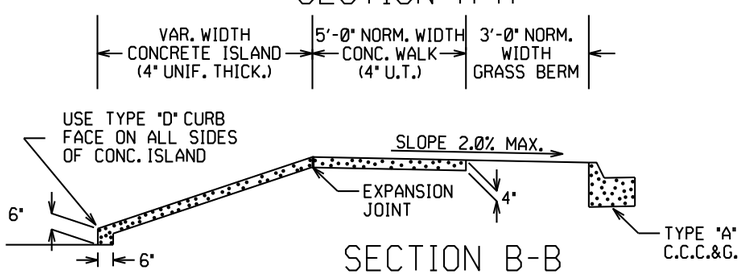


DRIVEWAY VERTICAL ALIGNMENT DETAILS

• NOTE: DRIVEWAYS MAY NOT BE SLOPED AWAY FROM THE ROADWAY UNLESS APPROVED BY THE ENGINEER.



SECTION A-A



SECTION B-B

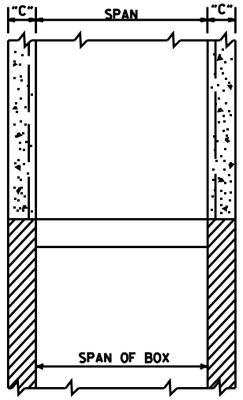
CURBED ISLAND BEHIND WALK

DATE REV	DATE FILMED	DESCRIPTION
5-19-22		REVISED ISLAND NOTES
11-07-19		REVISED WALK DETAILS
2-27-14		REVISED PLAN & ISOMETRIC VIEW
11-29-07		ADDED CHANNELIZATION ISLAND WITH TYPE C CURB FACE & REVISED DRIVEWAY SLOPE NOTE & VERTICAL ALIGNMENT DETAIL
11-10-05		REV. APRON SLOPE & DEPTH OF AGG. BASE.
8-22-02		ADDED ISLAND DETAILS & NOTES
3-30-00		REV. MOD. CURB WIDTH & TRANS. NOTE
11-19-98		REVISED NOTES
11-18-98		REDRAWN AND REISSUED

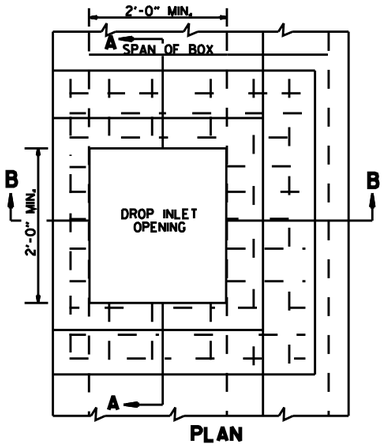
ARKANSAS STATE HIGHWAY COMMISSION

DETAILS OF DRIVEWAYS & ISLANDS

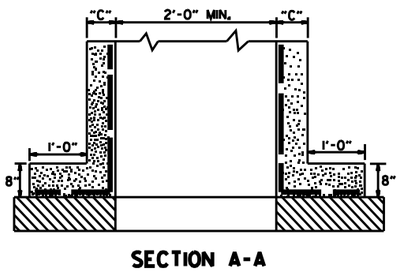
STANDARD DRAWING DR-1



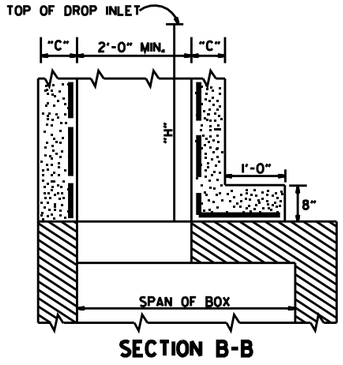
SECTION B-B



PLAN

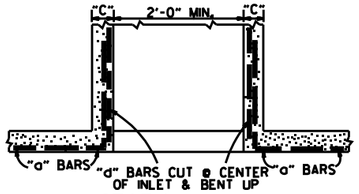


SECTION A-A

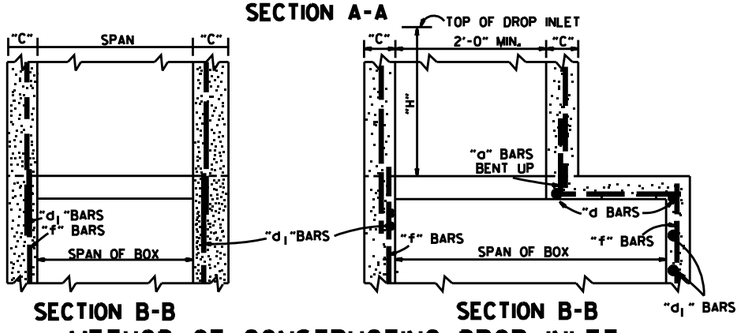


SECTION B-B

METHOD OF CONSTRUCTING DROP INLET ON EXISTING R.C. BOX CULVERT



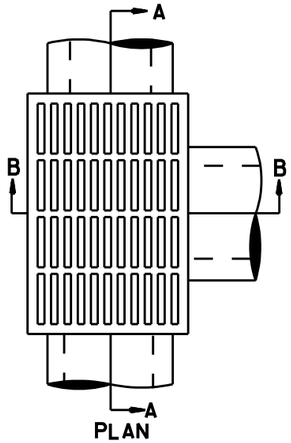
SECTION A-A



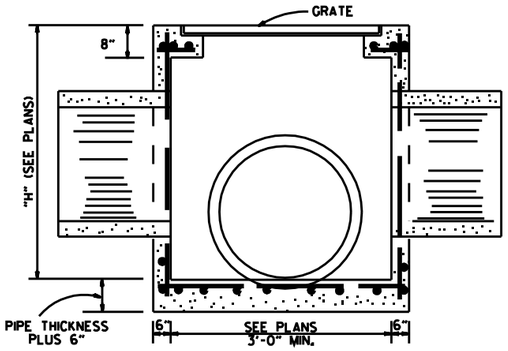
SECTION B-B SECTION B-B

METHOD OF CONSTRUCTING DROP INLET ON NEW R.C. BOX CULVERT

NOTE: "C" DIMENSIONS AND REINFORCING BAR SIZES, SHALL CONFORM TO THOSE SHOWN ON STANDARD DRAWING FOR DROP INLET.

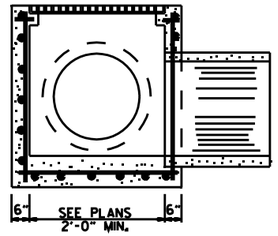


PLAN



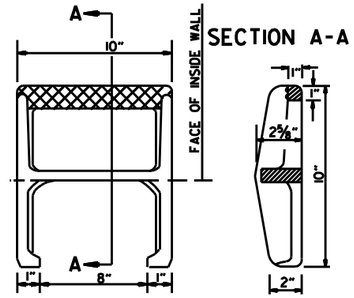
SECTION A-A

NOTE: REINF. BARS TO BE #4 BARS ON 6" CTRS. WITH 1½" MIN. COVER. THIS TYPE DROP INLET TO BE USED WHERE NOT SUBJECTED TO TRAFFIC.



SECTION B-B

DROP INLET (TYPE E)



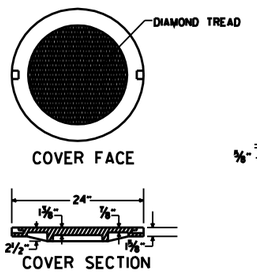
SECTION A-A

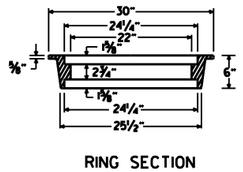
APPROX. WEIGHT = 11 LBS. (CAST IRON)

PLAN

NOTE: THIS DETAIL IS TYPICAL. OTHERS MAY BE USED WITH PRIOR APPROVAL OF THE ENGINEER.

DETAIL OF STEP FOR DROP INLET

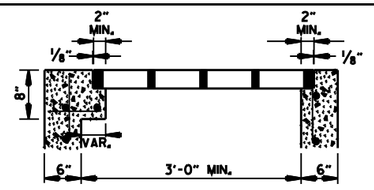




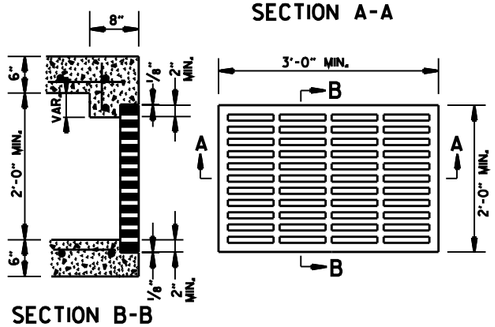
RING SECTION

APPROXIMATE TOTAL WEIGHT = 333 LBS.

HEAVY DUTY RING & COVER



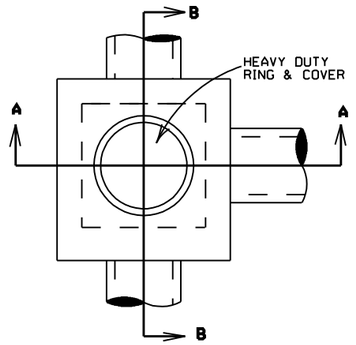
SECTION A-A



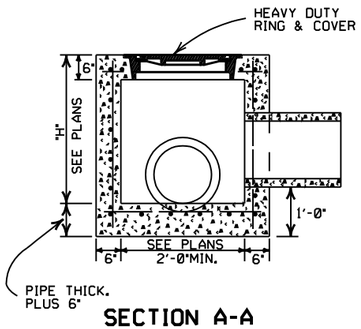
SECTION B-B

APPROXIMATE MINIMUM WATERWAY OPENING = 260 SQ. IN.

GRATE FOR TYPE E DROP INLET

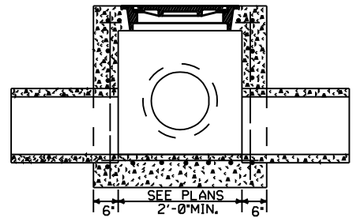


PLAN



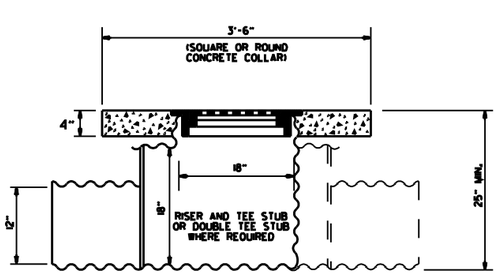
SECTION A-A

NOTE: REINF. BARS TO BE #4 BARS ON 6" CTRS. WITH 1½" MIN. COVER. THIS TYPE JUNCTION BOX TO BE USED WHERE NOT SUBJECTED TO TRAFFIC.

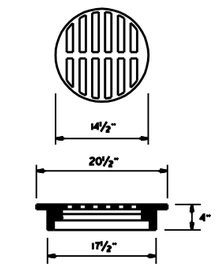


SECTION B-B

JUNCTION BOX (TYPE E)



NOTE: CONCRETE COLLAR TO BE CAST IN PLACE. 12" PIPE CULVERTS TO BE MEASURED AND PAID FOR AS " 12" SIDE DRAIN ".



USE NEENAH R-5901-C OR EQUIVALENT BICYCLE SAFE FRAME AND GRATE

DETAIL OF YARD DRAIN

GENERAL NOTES:

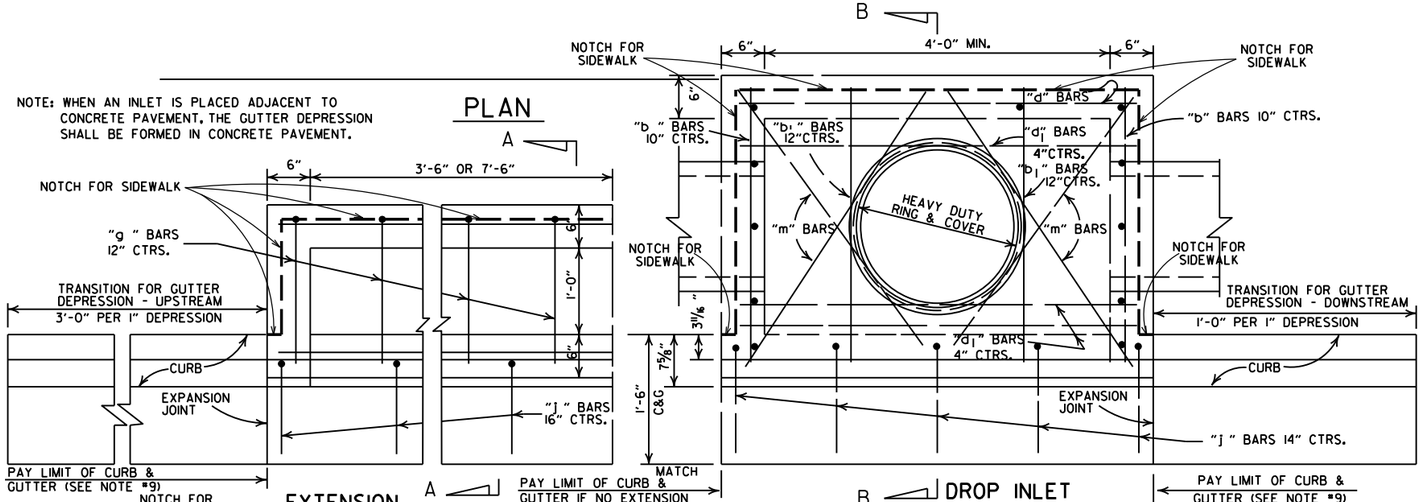
1. ALL EXPOSED CORNERS SHALL BE ¾" CHAMFERED.
2. STEPS SHALL BE INSTALLED ON 16" CENTERS ON ALL INLETS 4'-0" HIGH OR OVER, OR AS APPROVED BY THE ENGINEER.
3. EXPANSION JOINT MATERIAL SHALL BE ¾" PREFORMED FIBER.
4. GRATE OR GRATE AND FRAME SHALL BE CONSTRUCTED OF CAST IRON AND SHALL CONFORM TO THE REQUIREMENTS OF THE STANDARD SPECIFICATIONS FOR GRAY IRON CASTINGS AASHTO M 105 CLASS 35B. GRATE MAY BE USED WITHOUT FRAME.
5. GRATE AND FRAME SHALL NOT BE PAINTED.
6. GRATE SHALL BE BICYCLE SAFE.
7. HEAVY DUTY RING SHALL ALWAYS BE INSTALLED WITH FLANGE ON TOP.
8. HEAVY DUTY RING AND COVER SHALL BE CONSTRUCTED OF CAST IRON AND SHALL CONFORM TO THE REQUIREMENTS OF THE STANDARD SPECIFICATIONS FOR GRAY IRON CASTINGS AASHTO M105 CLASS 35B & AASHTO M306.
9. HEAVY DUTY RING AND COVER SHALL NOT BE PAINTED.
10. DIMENSIONS SHOWN FOR RING AND COVER ARE TYPICAL. THE CONTRACTOR MAY SUBSTITUTE SIMILAR CASTINGS WITH THE APPROVAL OF THE ENGINEER. REQUESTING APPROVAL FOR CASTING DESIGNS MAY BE MADE BY REFERRING TO PREVIOUSLY APPROVED DRAWINGS.

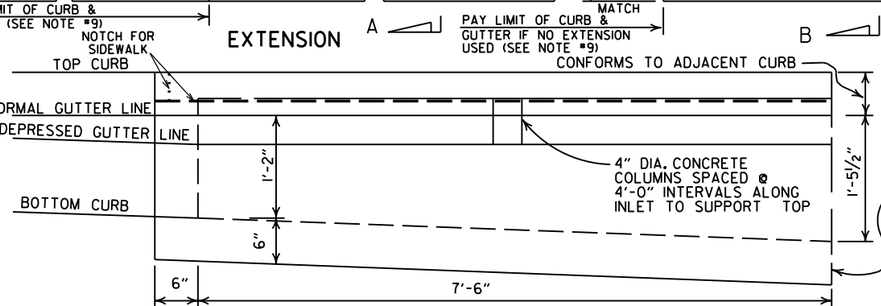
DATE REV.	REVISION	DATE FILMED
11-16-01	ADDED NOTE 10	
1-12-00	REVISED HEAVY DUTY RING & COVER	
7-02-98	CHANGED GRATE DETAIL, DELETED DI(TYPE D), REPLACED RING & COVER W/HEAVY DUTY RING & COVER, ADDED JUNCTION BOX (TYPE E)	
6-26-97	ADDED DIMENSION TO TYPE IV-A	
10-18-96	ADDED DETAIL OF YARD DRAIN	
8-15-91	DELETE TYPE IV GRATE	
7-15-88	REVISED STEP DETAIL	
5-20-83	REVISED DETAILS OF GRATES (TYPE IV & IV-A)	
2-4-83	ADDED GENERAL NOTE NO. 4	
3-2-81	ADDED TYPE IV-A GRATE	
5-22-74	DELETED INLET (TYPE F) & GRATE (TYPE III)	
10-2-72	REVISED AND REDRAWN	

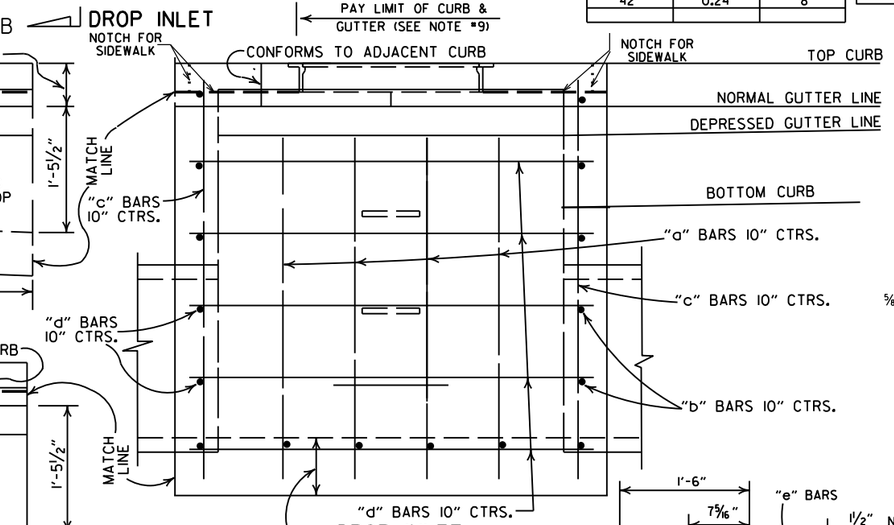
ARKANSAS STATE HIGHWAY COMMISSION

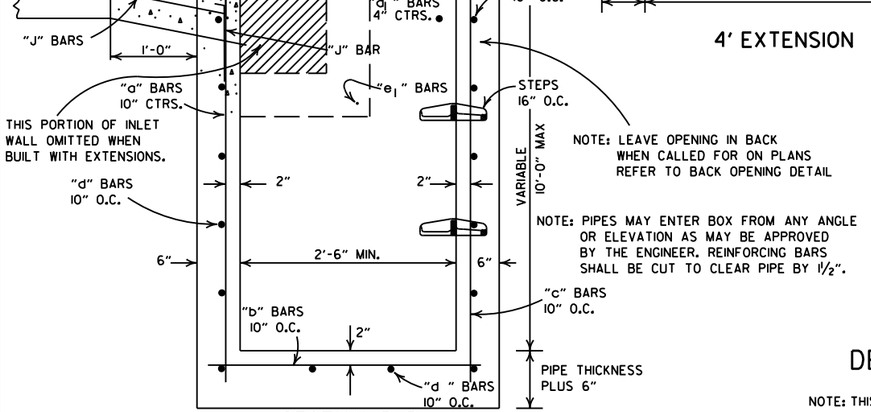
DETAILS OF DROP INLETS & JUNCTION BOXES

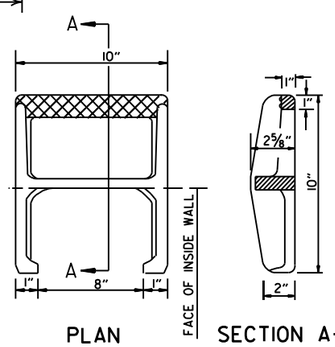
STANDARD DRAWING FPC-9

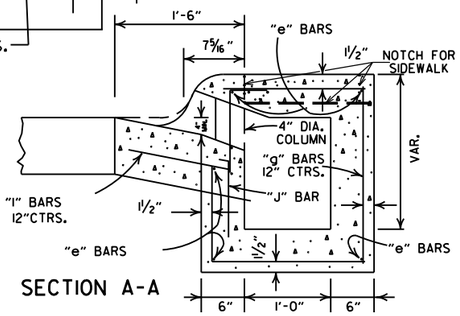












4'-0" LENGTH DROP INLET

PIPE SIZE	MIN. WIDTH	HEIGHT 5'-0" CLASS A CONC. CU. YDS.	HEIGHT 5'-0" REINF. STEEL POUNDS	PLUS OR MINUS PER LIN. FT. OF HEIGHT CLASS A CONC. CU. YDS.	PLUS OR MINUS PER LIN. FT. OF HEIGHT REINF. STEEL POUNDS
18"	2'-6"	1.77	156	0.28	22
24"	2'-6"	1.79	156	0.28	22
30"	3'-2"	2.39	205	0.30	26
36"	3'-8"	2.63	236	0.32	28
42"	4'-4"	2.95	250	0.34	30
48"	4'-10"	3.21	265	0.36	32

NOTE: QUANTITIES ARE APPROXIMATE AND ARE SHOWN FOR BIDDER INFORMATION ONLY.

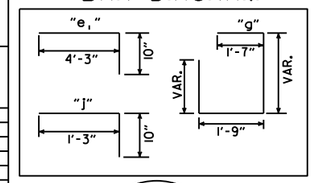
DROP INLET EXTENSION

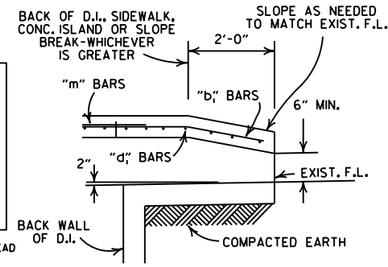
4'-0" CLASS A CONC. CU. YDS.	4'-0" REINF. STEEL POUNDS	8'-0" CLASS A CONC. CU. YDS.	8'-0" REINF. STEEL POUNDS
0.58	38	0.87	72
DEDUCT FROM QUANTITY COMPUTED FOR EACH EXTENSION ADDED.			
0.04	3		

DEDUCT FROM QUANTITY COMPUTED FOR EACH PIPE ENTERING INLET

INSIDE DIA. PIPE	CLASS A CONC.	REINF. STEEL
INCHES	CU. YDS.	POUNDS
18	0.05	2
24	0.09	3
30	0.13	4
42	0.24	8

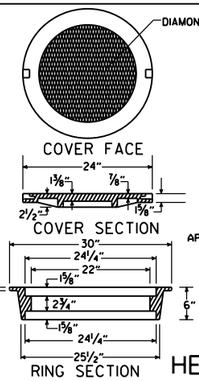
BAR DIAMOND





BACK OPENING

WHEN OPENING IN BACK IS CALLED FOR ON PLANS EXTEND OPENING AS SHOWN IN DETAIL. PAYMENT TO BE INCLUDED IN PRICE BID FOR DROP INLET (TYPE C).



HEAVY DUTY RING & COVER

APPROXIMATE TOTAL WEIGHT = 333 LBS.

GENERAL NOTES:
1. ALL EXPOSED CORNERS TO HAVE ¾" CHAMFER.
2. STEPS SHALL BE INSTALLED IN ALL INLETS 4'-0" HIGH AND OVER OF AS APPROVED BY THE ENGINEER.
3. ALL REINF. BARS SHALL BE #4 AND HAVE 1½" COVER.
4. DROP INLETS AND EXTENSION ON CURVED SECTIONS SHALL CONFORM TO THE CURVATURE OF THE CURB.
5. THIS DROP INLET MAY BE CONSTRUCTED ON NEW OR EXISTING R.C. BOX CULVERT AS SHOWN ON F.P.C.-9.
6. WHEN PLANS CALL FOR DROP INLET OVER 10'-0" HIGH, FLOOR AND WALLS SHALL BE CONSTRUCTED AS SHOWN FOR TYPE "RM" DROP INLET (FPC-9D).
7. HEAVY DUTY RING SHALL ALWAYS BE INSTALLED WITH FLANGE ON TOP.
8. DURING CONSTRUCTION OF THE ROADWAY THE CONTRACTOR SHALL MAINTAIN DRAINAGE INTO OR AROUND THE DROP INLET AS APPROVED BY THE ENGINEER.
9. PAYMENT FOR CURB AND/OR CURB AND GUTTER WITHIN THE LIMITS OF DROP INLETS AND DROP INLET EXTENSIONS SHALL BE CONSIDERED INCLUDED IN PAYMENT MADE FOR DROP INLETS AND/OR DROP INLET EXTENSIONS.
10. HEAVY DUTY RING AND COVER SHALL BE CONSTRUCTED OF CAST IRON AND SHALL CONFORM TO THE REQUIREMENTS OF THE STANDARD SPECIFICATIONS FOR GRAY IRON CASTINGS AASHTO M105 CLASS 35B & AASHTO M306.
11. HEAVY DUTY RING AND COVER SHALL NOT BE PAINTED.
12. 4"×2" NOTCH SHALL BE FORMED IN ALL DROP INLETS TO SUPPORT SIDEWALK CONSTRUCTION. REFER TO DETAIL OF NOTCH FOR SIDEWALKS.
13. DIMENSIONS SHOWN FOR RING AND COVER ARE TYPICAL. THE CONTRACTOR MAY SUBSTITUTE SIMILAR CASTINGS WITH THE APPROVAL OF THE ENGINEER. REQUESTING APPROVAL FOR CASTING DESIGNS MAY BE MADE BY REFERRING TO PREVIOUSLY APPROVED DRAWINGS.

DATE REV.	REVISION	DATE FILMED
8-22-02	ADDED PAY LIMIT CURB NOTES TO SECTIONS A-A & B-B	
11-16-01	ADDED NOTE 13; REVISED SECTION B-B	
1-12-00	CORRECTED DIMENSION ON SECTION B-B & REVISED RING & COVER	
5-13-99	ADDED DETAIL OF NOTCH FOR SIDEWALKS	
7-02-98	REPLACED RING & COVER W/HEAVY DUTY RING & COVER ADDED NOTES 9,10,&11	
10-18-96	CORRECTED SPELLING	
4-26-96	ADDED NOTE 8 & REVISED (4')(8') EXTENSION TITLES	10-18-96
4-1-93	REVISED BACK OPENING & NOTE	
8-15-91	DELETE TYPE IV GRATE	
7-15-88	REVISED STEP DETAIL	
5-20-83	REVISED DETAILS OF GRATES (TYPE IV & IV-A)	
2-4-83	ADDED GENERAL NOTE NO. 4	
3-2-81	ADDED TYPE IV-A GRATE	
5-22-74	DELETED INLET (TYPE F) & GRATE (TYPE III)	
10-2-72	REVISED AND REDRAWN	

ARKANSAS STATE HIGHWAY COMMISSION

DETAILS OF DROP INLETS

(TYPE C)

STANDARD DRAWING FPC-9E

REINFORCED CONCRETE ARCH PIPE DIMENSIONS

EQUIV. DIA.	SPAN		RISE	
	AASHTO M 206	ARDOT NOMINAL	AASHTO M 206	ARDOT NOMINAL
INCHES	INCHES			
15	18	18	11	11
18	22	22	13½	14
21	26	26	15½	16
24	28½	29	18	18
30	36¼	36	22½	23
36	43⅜	44	26⅝	27
42	51⅛	51	31⅜	31
48	58½	59	36	36
54	65	65	40	40
60	73	73	45	45
72	88	88	54	54
84	102	102	62	62
90	115	115	72	72
96	122	122	77½	77
108	138	138	87⅛	87
120	154	154	96⅞	97
132	168¾	169	106½	107

THE MEASURED SPAN AND RISE SHALL NOT VARY MORE THAN ± 2 PERCENT FROM THE VALUES SPECIFIED BY AASHTO M206.

REINFORCED CONCRETE HORIZONTAL ELLIPTICAL PIPE DIMENSIONS

EQUIV. DIA.	AASHTO M 207	
	SPAN	RISE
INCHES	INCHES	
18	23	14
24	30	19
27	34	22
30	38	24
33	42	27
36	45	29
39	49	32
42	53	34
48	60	38
54	68	43
60	76	48
66	83	53
72	91	58
78	98	63
84	106	68

THE MEASURED SPAN AND RISE SHALL NOT VARY MORE THAN ± 2 PERCENT FROM THE VALUES SPECIFIED BY AASHTO M207.

CONSTRUCTION SEQUENCE

1. PLACE STRUCTURAL BEDDING MATERIAL TO GRADE. DO NOT COMPACT.
2. INSTALL PIPE TO GRADE.
3. COMPACT STRUCTURAL BEDDING OUTSIDE THE MIDDLE THIRD OF THE PIPE.
4. PLACE AND COMPACT THE HAUNCH AREA UP TO THE MIDDLE OF THE PIPE.
5. COMPLETE BACKFILL ACCORDING TO SUBSECTION 606.03.(f)(1).

NOTE: HAUNCH AND STRUCTURAL BEDDING MATERIAL WILL NOT BE PAID FOR SEPARATELY, BUT COMPENSATION WILL BE CONSIDERED TO BE INCLUDED IN THE PRICE BID PER LINEAR FOOT OF CONCRETE PIPE.

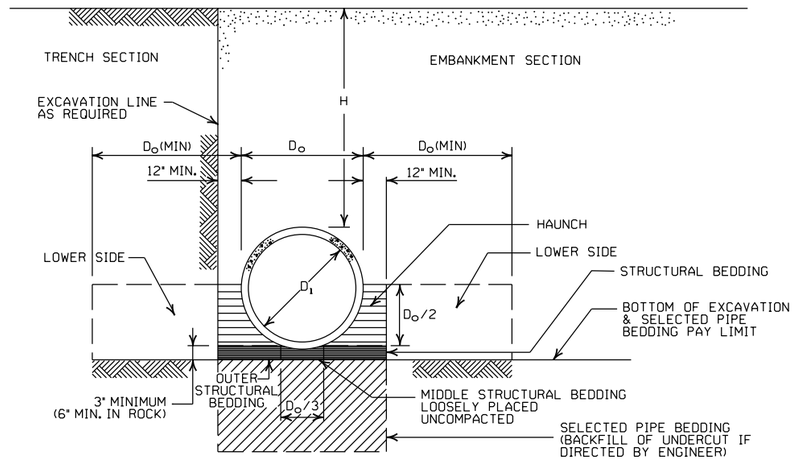
- LEGEND -

D_1 = NORMAL INSIDE DIAMETER OF PIPE
D_O = OUTSIDE DIAMETER OF PIPE
H = FILL COVER HEIGHT OVER PIPE (FEET)
MIN. = MINIMUM
= UNDISTURBED SOIL

INSTALLATION TYPE	MATERIAL REQUIREMENTS FOR HAUNCH AND STRUCTURAL BEDDING
TYPE 1	AGGREGATE BASE COURSE (CLASS 5 OR CLASS 7)
TYPE 2	SELECTED MATERIALS (CLASS SM-1, SM-2, OR SM-4) OR TYPE 1 INSTALLATION MATERIAL*
TYPE 3**	AASHTO CLASSIFICATION A-1 THRU A-6 SOIL OR TYPE 1 OR 2 INSTALLATION MATERIAL

* SM-3 WILL NOT BE ALLOWED.

** MATERIALS SHALL NOT INCLUDE ORGANIC MATERIALS OR STONES LARGER THAN 3 INCHES.



EMBANKMENT AND TRENCH INSTALLATIONS

1. MATERIAL IN THE HAUNCH AND OUTER STRUCTURAL BEDDING SHALL BE COMPACTED TO 95% OF THE MAXIMUM DENSITY ACCORDING TO THE TYPE OR CLASS OF MATERIAL USED.
2. FOR TRENCHES WITH WALLS OF NATURAL SOIL, THE DENSITY OF THE SOIL IN THE LOWER SIDE ZONE SHALL BE AS FIRM AS THE 95% DENSITY REQUIRED FOR THE HAUNCH. IF THE EXISTING SOIL DOES NOT MEET THIS CRITERIA, IT SHALL BE REMOVED AND RECOMPACTED TO 95% OF THE MAXIMUM DENSITY ACCORDING TO THE TYPE OF MATERIAL USED.
3. FOR EMBANKMENTS, THE MATERIAL IN THE LOWER SIDE ZONE SHALL BE COMPACTED TO 95% OF THE MAXIMUM DENSITY ACCORDING TO THE TYPE OR CLASS OF MATERIAL USED.

GENERAL NOTES

1. CONCRETE PIPE CULVERT CONSTRUCTION SHALL CONFORM TO ARKANSAS DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION (CURRENT EDITION), WITH APPLICABLE SUPPLEMENTAL SPECIFICATIONS AND SPECIAL PROVISIONS. UNLESS OTHERWISE NOTED IN THE PLANS, SECTION AND SUBSECTION REFER TO THE STANDARD CONSTRUCTION SPECIFICATIONS.
2. CONCRETE PIPE CULVERT DESIGN SHALL CONFORM TO AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, FIFTH EDITION (2010) WITH 2010 INTERIMS.
3. ALL PIPE SHALL CONFORM TO SECTION 606. CIRCULAR R.C. PIPE CULVERTS SHALL CONFORM TO AASHTO M170, R.C. ARCH PIPE CULVERTS SHALL CONFORM TO AASHTO M206 AND HORIZONTAL ELLIPTICAL PIPE CULVERTS SHALL CONFORM TO AASHTO M207.
4. ALL PIPE SHALL BE PROTECTED DURING CONSTRUCTION BY A COVER SUFFICIENT TO PREVENT DAMAGE FROM PASSAGE OF EQUIPMENT.
5. THE MINIMUM TRENCH WIDTH SHALL BE THE OUTSIDE DIAMETER OF THE PIPE PLUS 24 INCHES. THE MAXIMUM ALLOWABLE TRENCH WIDTH SHALL BE THE MINIMUM WIDTH PRACTICABLE FOR WORKING CONDITIONS.
6. MULTIPLE PIPE CULVERTS SHALL BE INSTALLED WITH A MINIMUM CLEARANCE OF 24 INCHES BETWEEN STRINGS OF PIPE. REFER TO STD. DWG. FES-2 FOR MINIMUM CLEARANCE WHERE FLARED END SECTIONS ARE USED.
7. IMPERVIOUS MATERIAL SHOULD BE PLACED AS DIRECTED BY THE ENGINEER AT THE ENDS OF THE CULVERT TO PREVENT LOSS OF STRUCTURAL BEDDING WHEN PERVIOUS MATERIAL IS USED FOR STRUCTURAL BEDDING AND/OR BACKFILL.
8. NOT MORE THAN ONE LIFTING HOLE MAY BE PROVIDED IN CONCRETE PIPE TO FACILITATE HANDLING. HOLE MAY BE CAST IN PLACE, CUT INTO THE FRESH CONCRETE AFTER FORMS ARE REMOVED, OR DRILLED. THE HOLE SHALL NOT BE MORE THAN TWO INCHES IN DIAMETER OR TWO INCHES SQUARE. CUTTING OR DISPLACEMENT OF REINFORCEMENT WILL NOT BE PERMITTED. SPALLED AREAS AROUND THE HOLE SHALL BE REPAIRED IN A WORKMANLIKE MANNER. LIFTING HOLE SHALL BE FILLED WITH MORTAR, CONCRETE, OR OTHER METHOD AS APPROVED BY THE ENGINEER.
9. WHEN DIRECTED BY THE ENGINEER, UNSUITABLE MATERIAL THAT IS ENCOUNTERED AT THE BOTTOM OF THE EXCAVATED TRENCH (BELOW THE AREA IDENTIFIED AS "STRUCTURAL BEDDING" ABOVE) WILL BE EXCAVATED AND REPLACED WITH SELECTED PIPE BEDDING. THE QUANTITY OF MATERIAL REQUIRED TO BACKFILL THE UNDERCUT AREA UP TO THE SELECTED PIPE BEDDING PAY LIMIT DESIGNATED ABOVE WILL BE MEASURED AND PAID FOR AS "SELECTED PIPE BEDDING."
10. WHEN THE EXISTING MATERIAL EXCAVATED FOR THE PIPE TRENCH IS DETERMINED BY THE ENGINEER TO BE UNSUITABLE FOR BACKFILLING THE PIPE (ABOVE THE AREA IDENTIFIED ABOVE AS THE HAUNCH), BORROW MATERIAL OR MATERIAL FROM THE ROADWAY EXCAVATION WILL BE USED TO BACKFILL THE PIPE. IF SUITABLE MATERIAL IS NOT AVAILABLE, THE ENGINEER MAY AUTHORIZE THE USE OF "SELECTED PIPE BACKFILL."

MINIMUM HEIGHT OF FILL "H" OVER CIRCULAR R.C. PIPE CULVERTS

	CLASS OF PIPE			
	CLASS III		CLASS IV	CLASS V
INSTALLATION TYPE	TYPE 1 OR 2	TYPE 3	ALL	ALL
PIPE ID (IN.)	FEET			
12-15	2	2.5	2	1
18-24	2.5	3	2	1
27-33	3	4	2	1
36-42	3.5	5	2	1
48	4.5	5.5	2	1
54-60	5	7	2	1
66-78	6	8	2	1
84-108	7.5	8	2	1

NOTE: FOR MINIMUM COVER VALUES, "H" SHALL INCLUDE A MINIMUM OF 12" OF PAVEMENT AND/OR BASE.

MAXIMUM HEIGHT OF FILL "H" OVER CIRCULAR R.C. PIPE CULVERTS

INSTALLATION TYPE	CLASS OF PIPE		
	CLASS III	CLASS IV	CLASS V
	FEET		
TYPE 1	21	32	50
TYPE 2	16	25	39
TYPE 3	12	20	30

NOTE: IF FILL HEIGHT EXCEEDS 50 FEET, A SPECIAL DESIGN CONCRETE PIPE WILL BE REQUIRED USING TYPE 1 INSTALLATION.

MINIMUM HEIGHT OF FILL "H" OVER R.C. ARCH & HORIZONTAL ELLIPTICAL PIPE CULVERTS

INSTALLATION TYPE	CLASS OF PIPE	
	CLASS III	CLASS IV
	FEET	
TYPE 2 OR TYPE 3	2.5	1.5

NOTE: TYPE 1 INSTALLATION WILL NOT BE ALLOWED FOR ARCH & HORIZONTAL ELLIPTICAL PIPE CULVERTS.

NOTE: FOR MINIMUM COVER VALUES, "H" SHALL INCLUDE A MINIMUM OF 12" OF PAVEMENT AND/OR BASE.

MAXIMUM HEIGHT OF FILL "H" OVER R.C. ARCH & HORIZONTAL ELLIPTICAL PIPE CULVERTS

INSTALLATION TYPE	CLASS OF PIPE	
	CLASS III	CLASS IV
	FEET	
TYPE 2	13	21
TYPE 3	10	16

NOTE: TYPE 1 INSTALLATION WILL NOT BE ALLOWED FOR ARCH & HORIZONTAL ELLIPTICAL PIPE CULVERTS.

DATE	REVISION	DATE FILMED
2-27-14	REVISED GENERAL NOTE 1.	
12-15-11	REVISED FOR LRFD DESIGN SPECIFICATIONS	
5-18-00	REVISED TYPE 3 BEDDING & ADDED NOTE	
3-30-00	REVISED INSTALLATIONS	
11-06-97	ISSUED	

ARKANSAS STATE HIGHWAY COMMISSION

CONCRETE PIPE CULVERT FILL HEIGHTS & BEDDING

STANDARD DRAWING PCC-1

INSTALLATION TYPE	•• MATERIAL REQUIREMENTS FOR STRUCTURAL BACKFILL AND STRUCTURAL BEDDING
TYPE 2	•SELECTED MATERIALS (CLASS SM-1, SM-2 OR SM-4)

• AGGREGATE BASE COURSE (CLASS 4, 5, 6, OR 7) MAY BE USED IN LIEU OF SELECTED MATERIAL.

SM3 WILL NOT BE ALLOWED.

•• STRUCTURAL BEDDING MATERIAL SHALL HAVE A MAXIMUM PARTICLE SIZE OF 1INCH. STRUCTURAL BACKFILL MATERIAL SHALL BE FREE OF ORGANIC MATERIAL, STONES LARGER THAN 1.50 INCH IN GREATEST DIMENSION, OR FROZEN LUMPS.

STRUCTURAL BACKFILL AND STRUCTURAL BEDDING MATERIAL WILL NOT BE PAID FOR SEPARATELY, BUT COMPENSATION WILL BE CONSIDERED TO BE INCLUDED IN THE PRICE BID PER LINEAR FOOT OF HDPE PIPE.

MULTIPLE INSTALLATION OF HIGH DENSITY POLYETHYLENE PIPES

PIPE DIAMETER	CLEAR DISTANCE BETWEEN PIPES
18"	1'-6"
24"	2'-0"
30"	2'-6"
36"	3'-0"
42"	3'-6"
48"	4'-0"

MINIMUM TRENCH WIDTH BASED ON FILL HEIGHT "H"

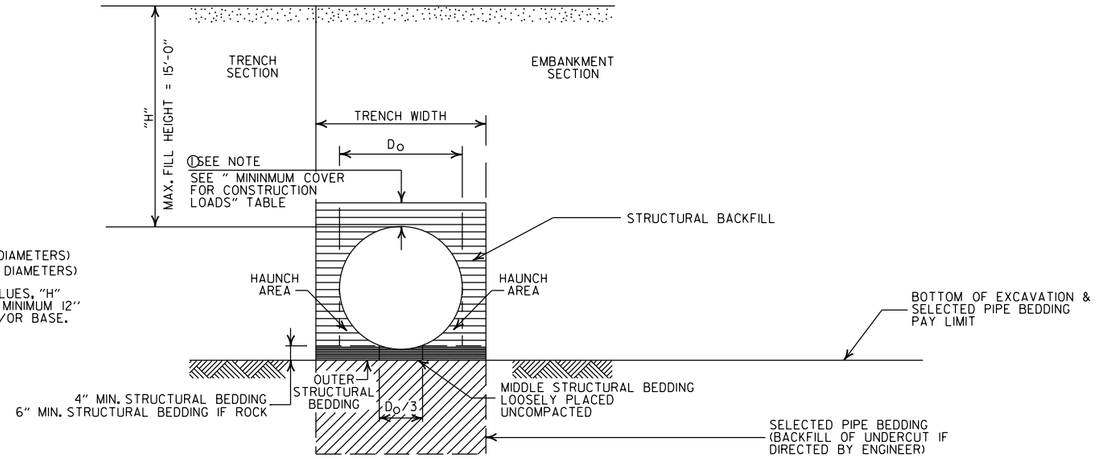
PIPE DIAMETER	TRENCH WIDTH (FEET)	
	"H" < 10'-0"	"H" >OR= 10'-0"
18"	4'-6"	4'-6"
24"	5'-0"	6'-0"
30"	5'-6"	7'-6"
36"	6'-0"	9'-0"
42"	7'-0"	10'-6"
48"	8'-0"	12'-0"

①NOTE:
18" MIN. (18" - 30" DIAMETERS)
24" MIN. (36" - 48" DIAMETERS)
MINIMUM COVER VALUES, "H" SHALL INCLUDE A MINIMUM 12" OF PAVEMENT AND/OR BASE.

MINIMUM COVER FOR CONSTRUCTION LOADS

PIPE DIAMETER	② MIN. COVER (FEET) FOR INDICATED CONSTRUCTION LOADS			
	18.0-50.0 (KIPS)	50.0-75.0 (KIPS)	75.0-110.0 (KIPS)	110.0-175.0 (KIPS)
36" OR LESS	2'-0"	2'-6"	3'-0"	3'-0"
42" OR GREATER	3'-0"	3'-0"	3'-6"	4'-0"

②MINIMUM COVER SHALL BE MEASURED FROM TOP OF PIPE TO TOP OF THE MAINTAINED CONSTRUCTION ROADWAY SURFACE. THE SURFACE SHALL BE MAINTAINED.



TYPE 2 EMBANKMENT AND TRENCH INSTALLATIONS

1. STRUCTURAL BACKFILL, EMBANKMENT, AND OUTER STRUCTURAL BEDDING MATERIAL SHALL BE COMPACTED TO 95% OF THE MAXIMUM DENSITY ACCORDING TO THE TYPE OR CLASS OF MATERIAL USED.

CONSTRUCTION SEQUENCE

1. PLACE STRUCTURAL BEDDING MATERIAL TO GRADE. DO NOT COMPACT.
2. INSTALL PIPE TO GRADE.
3. COMPACT STRUCTURAL BEDDING OUTSIDE THE MIDDLE THIRD OF THE PIPE.
4. THE STRUCTURAL BACKFILL SHALL BE PLACED AND COMPACTED IN LAYERS NOT EXCEEDING 8". THE LAYERS SHALL BE BROUGHT UP EVENLY AND SIMULTANEOUSLY TO THE ELEVATION OF THE MINIMUM COVER.
5. PIPE INSTALLATION MAY REQUIRE THE USE OF RESTRAINTS, WEIGHTING OR OTHER APPROVED METHODS IN ORDER TO HELP MAINTAIN GRADE AND ALIGNMENT.

GENERAL NOTES

1. PIPE SHALL CONFORM TO AASHTO M294, TYPE S. INSTALLATION SHALL CONFORM TO JOB SPECIAL PROVISION "PLASTIC PIPE" AND SECTION 606 OF THE STANDARD SPECIFICIATIONS FOR HIGHWAY CONSTRUCTION (CURRENT EDITION).
2. PLASTIC PIPE CULVERT DESIGN SHALL CONFORM TO AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, FIFTH EDITION (2010) WITH 2010 INTERIMS.
3. THE MAXIMUM ALLOWABLE TRENCH WIDTH SHALL BE THE MINIMUM WIDTH PLUS A SUFFICIENT WIDTH TO ENSURE WORKING ROOM TO PROPERLY AND SAFELY PLACE AND COMPACT HAUNCHING AND OTHER BACKFILL MATERIAL.
4. IMPERVIOUS MATERIAL SHOULD BE PLACED AS DIRECTED BY THE ENGINEER AT THE ENDS OF THE CULVERT TO PREVENT LOSS OF STRUCTURAL BEDDING WHEN PERVIOUS MATERIAL IS USED FOR STRUCTURAL BEDDING AND/OR BACKFILL.
5. WHEN DIRECTED BY THE ENGINEER, UNSUITABLE MATERIAL THAT IS ENCOUNTERED AT THE BOTTOM OF THE EXCAVATED TRENCH (BELOW THE AREA IDENTIFIED AS "STRUCTURAL BEDDING" ABOVE) WILL BE EXCAVATED AND REPLACED WITH SELECTED PIPE BEDDING. THE QUANTITY OF MATERIAL REQUIRED TO BACKFILL THE UNDERCUT AREA UP TO THE SELECTED PIPE BEDDING PAY LIMIT DESIGNATED ABOVE WILL BE MEASURED AND PAID FOR AS "SELECTED PIPE BEDDING."
6. WHEN THE EXISTING MATERIAL EXCAVATED FOR THE PIPE TRENCH IS DETERMINED BY THE ENGINEER TO BE UNSUITABLE FOR BACKFILLING THE PIPE (ABOVE THE AREA IDENTIFIED ABOVE AS STRUCTURAL BACKFILL), BORROW MATERIAL OR MATERIAL FROM THE ROADWAY EXCAVATION WILL BE USED TO BACKFILL THE PIPE. IF SUITABLE MATERIAL IS NOT AVAILABLE, THE ENGINEER MAY AUTHORIZE THE USE OF "SELECTED PIPE BACKFILL."
7. FOR PIPE TYPES THAT ARE NOT SMOOTH ON THE OUTSIDE (CORRUGATED OR PROFILE WALLS), BACKFILL GRADATIONS SHOULD BE SELECTED THAT WILL PERMIT THE FILLING OF THE CORRUGATION OR PROFILE VALLEY.
8. HIGH DENSITY POLYETHYLENE PIPES OF DIAMETERS OTHER THAN SHOWN WILL NOT BE ALLOWED.
9. JOINTS FOR HDPE PIPE SHALL MEET THE REQUIREMENTS FOR SOIL TIGHTNESS AS SPECIFIED IN AASHTO SECTION 26.4.2.4 AND 30.4.2 "AASHTO LRFD BRIDGE CONSTRUCTION SPECIFICATIONS." JOINTS SHALL BE INSTALLED PER MANUFACTURER'S RECOMMENDATIONS.

- LEGEND -

H = FILL HEIGHT (FT.)
D_O = OUTSIDE DIAMETER OF PIPE
MAX. = MAXIMUM
MIN. = MINIMUM

= STRUCTURAL BACKFILL MATERIAL

= UNDISTURBED SOIL

DATE	REVISION	DATE FILMED
2-27-14	REVISED GENERAL NOTE 1.	
12-15-11	REVISED GENERAL NOTES & MINIMUM COVER NOTE	
11-17-10	ISSUED	

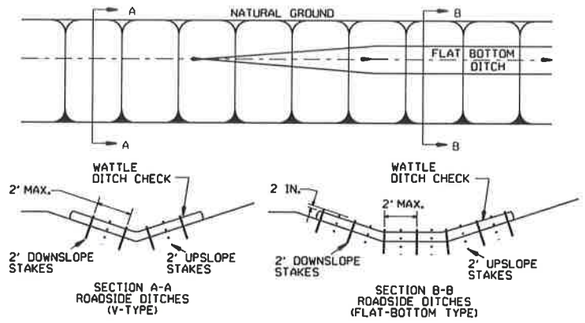
ARKANSAS STATE HIGHWAY COMMISSION

PLASTIC PIPE CULVERT (HIGH DENSITY POLYETHYLENE)

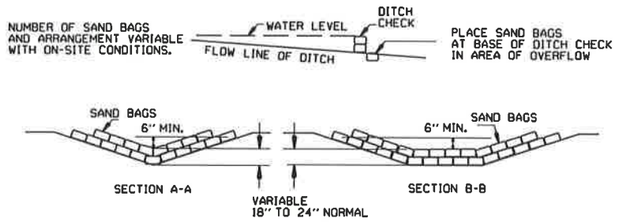
STANDARD DRAWING PCP-1

GENERAL NOTES

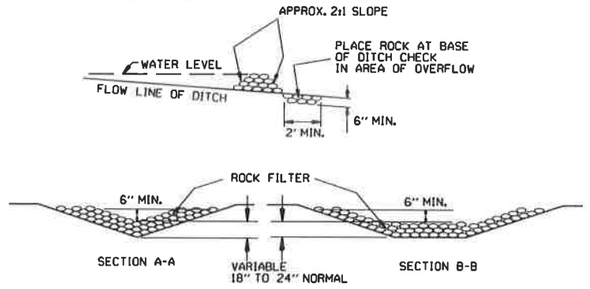
INSTALL A MINIMUM OF 2 UPSLOPE STAKES AND 4 DOWNSLOPE STAKES AT AN ANGLE TO WEDGE WATTLE TO BOTTOM OF DITCH.



WATTLE DITCH CHECK (E-1)



SAND BAG DITCH CHECK (E-5)

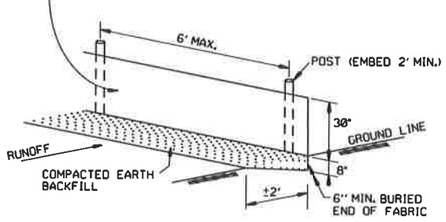


ROCK DITCH CHECK (E-6)

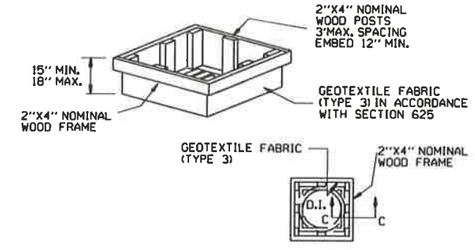
GENERAL NOTES

GEOTEXTILE FABRIC (TYPE 4) IN ACCORDANCE WITH SECTION 625

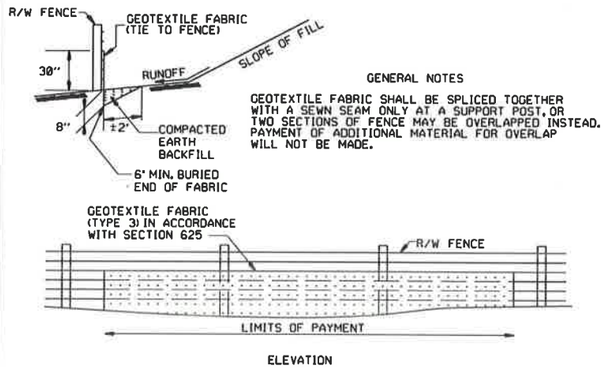
GEOTEXTILE FABRIC SHALL BE SPLICED TOGETHER WITH A SEWN SEAM ONLY AT A SUPPORT POST OR TWO SECTIONS OF FENCE MAY BE OVERLAPPED INSTEAD. PAYMENT OF ADDITIONAL MATERIAL FOR OVERLAP WILL NOT BE MADE.



SILT FENCE (E-11)



DROP INLET SILT FENCE (E-7)



GENERAL NOTES

GEOTEXTILE FABRIC SHALL BE SPLICED TOGETHER WITH A SEWN SEAM ONLY AT A SUPPORT POST, OR TWO SECTIONS OF FENCE MAY BE OVERLAPPED INSTEAD. PAYMENT OF ADDITIONAL MATERIAL FOR OVERLAP WILL NOT BE MADE.

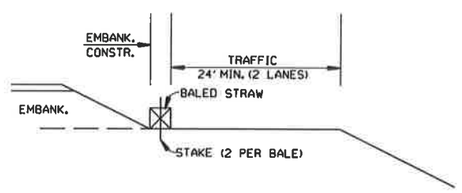
SILT FENCE ON R/W FENCE (E-4)

GENERAL NOTES

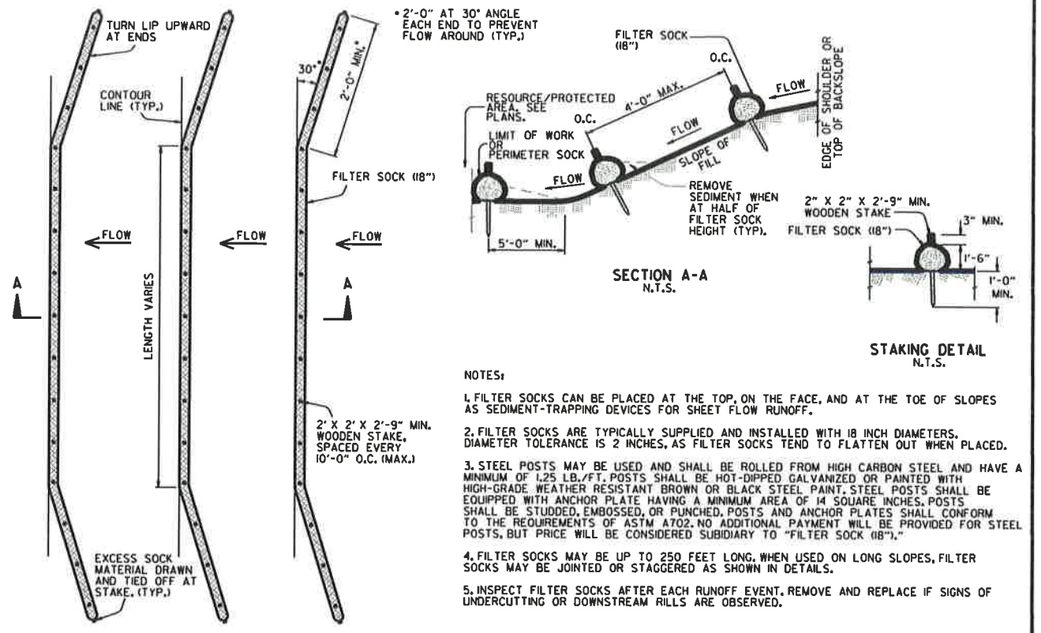
1. STRAW BALES SHALL BE INSTALLED SO THAT THE BINDINGS ARE ORIENTED AROUND THE SIDES RATHER THAN ALONG THE TOPS AND BOTTOMS OF THE BALES. THE BALES SHALL BE A MINIMUM OF 30 INCHES IN LENGTH.

2. NO GAPS SHALL BE LEFT BETWEEN BALES.

3. BALED STRAW FILTER BARRIERS COMPLETED AND ACCEPTED WILL BE MEASURED BY THE BALE IN PLACE AS AUTHORIZED BY THE ENGINEER AND WILL BE PAID FOR AT THE CONTRACT UNIT PRICE BID PER BALE FOR BALED STRAW DITCH CHECKS.



BALED STRAW FILTER BARRIER (E-2)



NOTES:

1. FILTER SOCKS CAN BE PLACED AT THE TOP, ON THE FACE, AND AT THE TOE OF SLOPES AS SEDIMENT-TRAPPING DEVICES FOR SHEET FLOW RUNOFF.

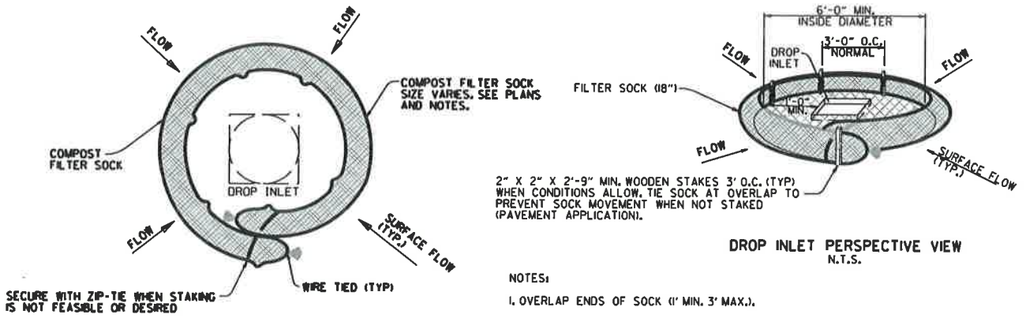
2. FILTER SOCKS ARE TYPICALLY SUPPLIED AND INSTALLED WITH 18 INCH DIAMETERS. DIAMETER TOLERANCE IS 2 INCHES, AS FILTER SOCKS TEND TO FLATTEN OUT WHEN PLACED.

3. STEEL POSTS MAY BE USED AND SHALL BE ROLLED FROM HIGH CARBON STEEL AND HAVE A MINIMUM OF 1.25 LB./FT. POSTS SHALL BE HOT-DIPPED GALVANIZED OR PAINTED WITH HIGH-GRADE WEATHER RESISTANT BROWN OR BLACK STEEL PAINT. STEEL POSTS SHALL BE EQUIPPED WITH ANCHOR PLATE HAVING A MINIMUM AREA OF 14 SQUARE INCHES. POSTS SHALL BE STUDDED, EMBOSSED, OR PUNCHED. POSTS AND ANCHOR PLATES SHALL CONFORM TO THE REQUIREMENTS OF ASTM A702. NO ADDITIONAL PAYMENT WILL BE PROVIDED FOR STEEL POSTS, BUT PRICE WILL BE CONSIDERED SUBIDIARY TO "FILTER SOCK (18")."

4. FILTER SOCKS MAY BE UP TO 250 FEET LONG. WHEN USED ON LONG SLOPES, FILTER SOCKS MAY BE JOINTED OR STAGGERED AS SHOWN IN DETAILS.

5. INSPECT FILTER SOCKS AFTER EACH RUNOFF EVENT. REMOVE AND REPLACE IF SIGNS OF UNDERCUTTING OR DOWNSTREAM RILLS ARE OBSERVED.

FILTER SOCK ALONG SLOPE (E-3)



NOTES:

1. OVERLAP ENDS OF SOCK (1' MIN. 3' MAX.).

2. USE 18" DIA. SOCK IN NON-TRAFFIC AREAS OR AREAS WHERE SAFETY IS NOT A CONCERN.

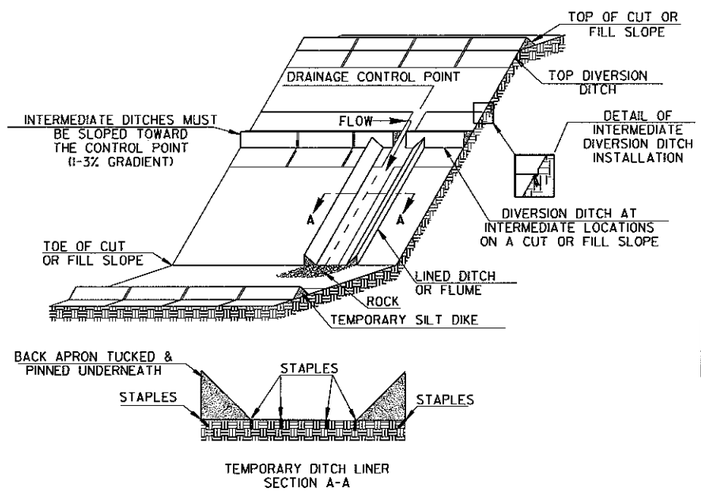
COMPOST FILTER SOCK DROP INLET PROTECTION (E-13)

DATE	REVISION	FILMED
11-16-17	ADDED FILTER SOCK E-3 AND E-13	
12-15-11	DELETED BALED STRAW DITCH CHECK & ADDED WATTLE DITCH CHECK	
11-18-98	ADDED NOTES	
07-02-98	ADDED BALED STRAW FILTER BARRIER (E-2)	
07-20-95	REVISED SILT FENCE E-4 AND E-11	7-20-95
07-15-94	REV. E-4 & E-11 MIN. 13" BURIED END OF FABRIC	
06-02-94	REVISED E-1,4,7 & 11; DELETED E-2 & 3	6-2-94
04-01-93	REDRAWN	
10-01-92	REDRAWN	
08-02-76	ISSUED R.D.M.	298-7-28-76

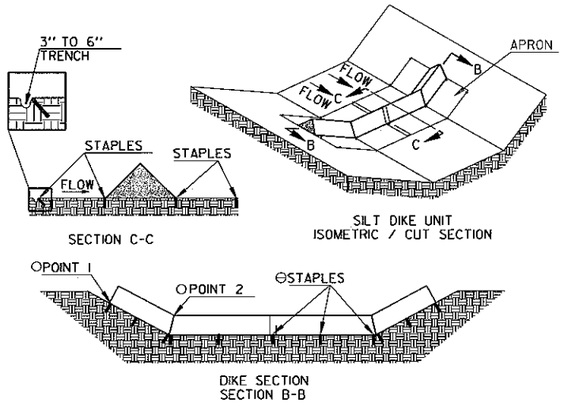
ARKANSAS STATE HIGHWAY COMMISSION

TEMPORARY EROSION CONTROL DEVICES

STANDARD DRAWING TEC-1



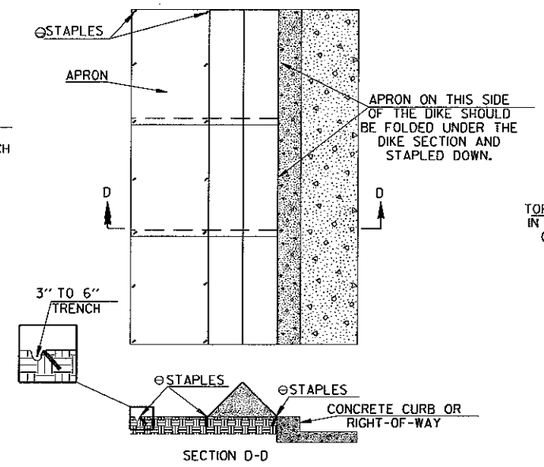
TRIANGULAR SILT DIKE INSTALLATION
FOR
DIVERSION DITCH AND/OR DITCH LINER



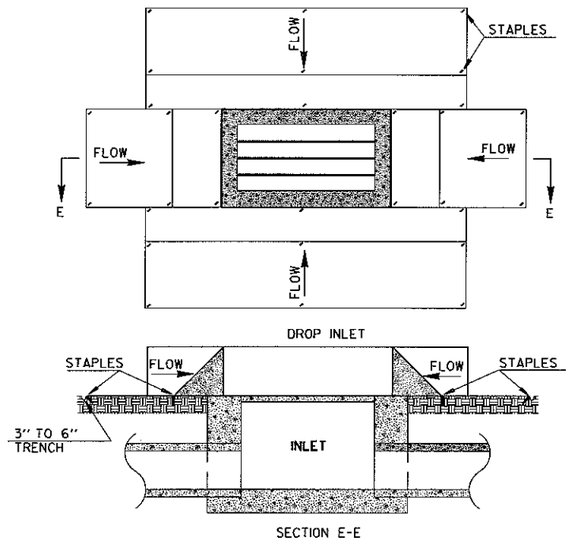
TRIANGULAR SILT DIKE INSTALLATION
FOR
ROADWAY DITCH OR DRAINAGE DITCH

○ POINT "1" MUST BE HIGHER THAN POINT "2" TO ENSURE THAT WATER FLOWS OVER THE DIKE AND NOT AROUND THE ENDS.

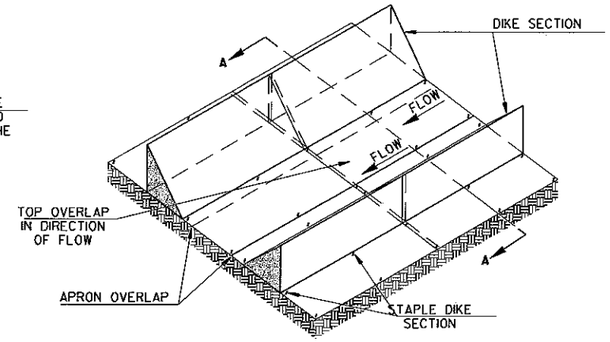
⊖ STAPLES SHALL BE PLACED WHERE THE UNITS OVERLAP AND IN THE CENTER OF THE UNIT AS SHOWN ON THE DIAGRAM.



TRIANGULAR SILT DIKE INSTALLATION
FOR
CONTINUOUS BARRIER



TRIANGULAR SILT DIKE INSTALLATION
FOR
DROP INLETS



TRIANGULAR SILT DIKE INSTALLATION
FOR
TEMPORARY DITCH LINER

GENERAL NOTES

1. THIS WORK SHALL CONSIST OF FURNISHING, INSTALLING, AND MAINTAINING THE TRIANGULAR SILT DIKE. THE DIKES SHALL BE USED AS A CONTINUOUS LINE BARRIER AT THE TOE OF SLOPE OR ACROSS THE ROADWAY DITCH TO CONTAIN SEDIMENT AND MINIMIZE EROSION, OR AS DIRECTED BY THE ENGINEER. THESE DIKES SHALL BE INSTALLED AND LOCATED AS SOON AS CONSTRUCTION WILL ALLOW OR AS DIRECTED BY THE ENGINEER.

2. TRIANGULAR SILT DIKE SHALL BE TRIANGULAR SHAPED HAVING A HEIGHT OF AT LEAST 8" TO 10" IN THE CENTER WITH EQUAL SIDES AND A 16" TO 20" BASE. THE TRIANGULAR SHAPED INNER MATERIAL SHALL BE URETHANE FOAM. THE OUTER COVER SHALL BE A WOVEN GEOTEXTILE FABRIC PLACED AROUND THE INNER MATERIAL & ALLOWED TO EXTEND BEYOND BOTH SIDES OF THE TRIANGLE 24" TO 36". THIS FABRIC SHOULD BE MILDEW RESISTANT, ROT-PROOF AND RESISTANT TO HEAT AND ULTRAVIOLET RADIATION MEETING REQUIREMENTS FOR SEDIMENT CONTROL IN AASHTO M288. THE DIKES SHALL BE ATTACHED TO THE GROUND WITH WIRE STAPLES. THE STAPLES SHALL BE NO. 11 GAUGE WIRE AND BE AT LEAST 6" TO 8" LONG. STAPLES SHALL BE PLACED AS SHOWN ON THESE DETAILS.

   THE CONTRACTOR SHALL INSPECT ALL DIKES AFTER EACH RAINFALL EVENT OF AT LEAST 0.5" OR GREATER. ANY DEFICIENCIES OR DAMAGE SHALL BE REPAIRED BY THE CONTRACTOR. ACCUMULATED SILT OR DEBRIS SHALL BE REMOVED AND RELOCATED AS DIRECTED BY THE ENGINEER. IF THE DIKES ARE DAMAGED OR INADVERTENTLY MOVED DURING THE SILT REMOVAL PROCESS, THE CONTRACTOR SHALL IMMEDIATELY REPLACE AFTER DAMAGE OCCURS.

3. ACCEPTED TRIANGULAR SILT DIKE, MEASURED AS PROVIDED ABOVE, WILL BE PAID FOR AT THE CONTRACT UNIT PRICE BID FOR TRIANGULAR SILT DIKE. PRICE BID WILL INCLUDE THE COST OF FURNISHING THE DIKES, INSTALLING, MAINTAINING AND REMOVAL WHEN DIRECTED BY THE ENGINEER.

SYMBOLOGY
SYMBOL TO BE USED TO DENOTE DEVICE ON PLANS

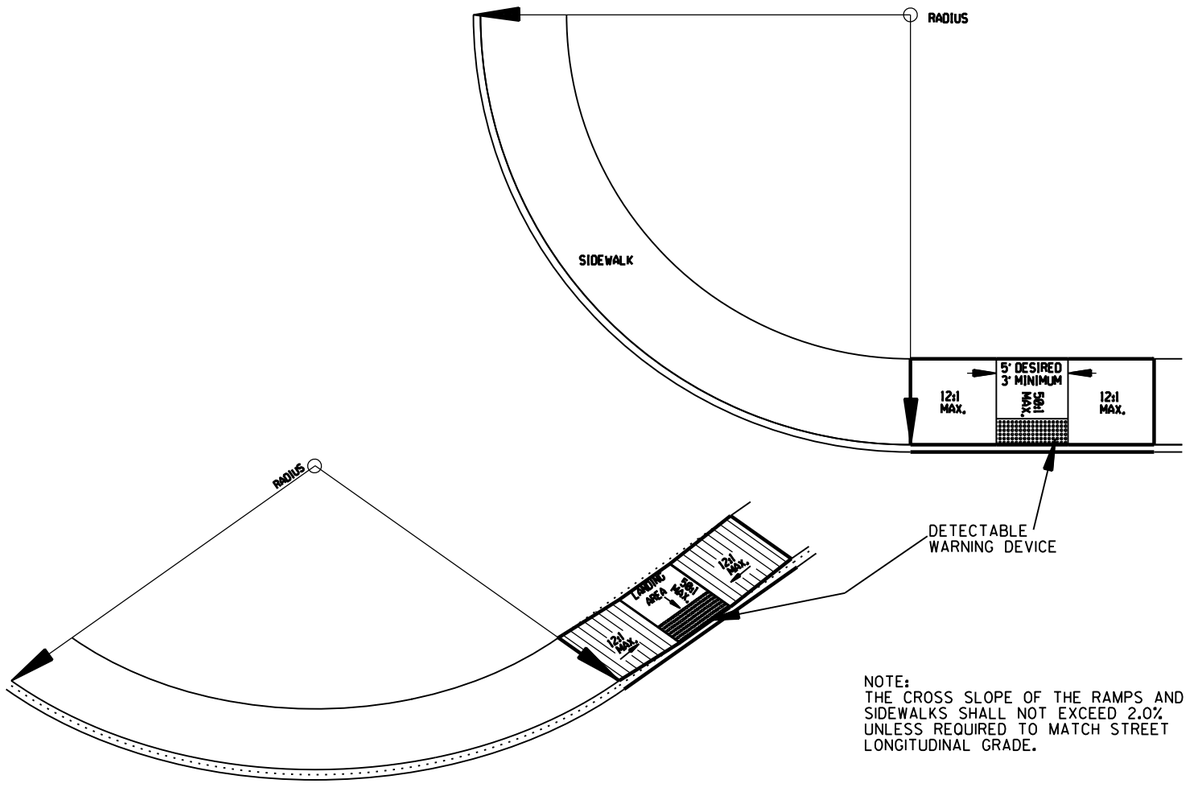
NOTE: SILT DIKE SHOULD ONLY BE USED FOR DROP INLETS IN SUMP LOCATIONS.

DATE	REVISION	FILMED
7-26-12	REVISED GENERAL NOTE 2.	
12-15-11	ISSUED	

ARKANSAS STATE HIGHWAY COMMISSION

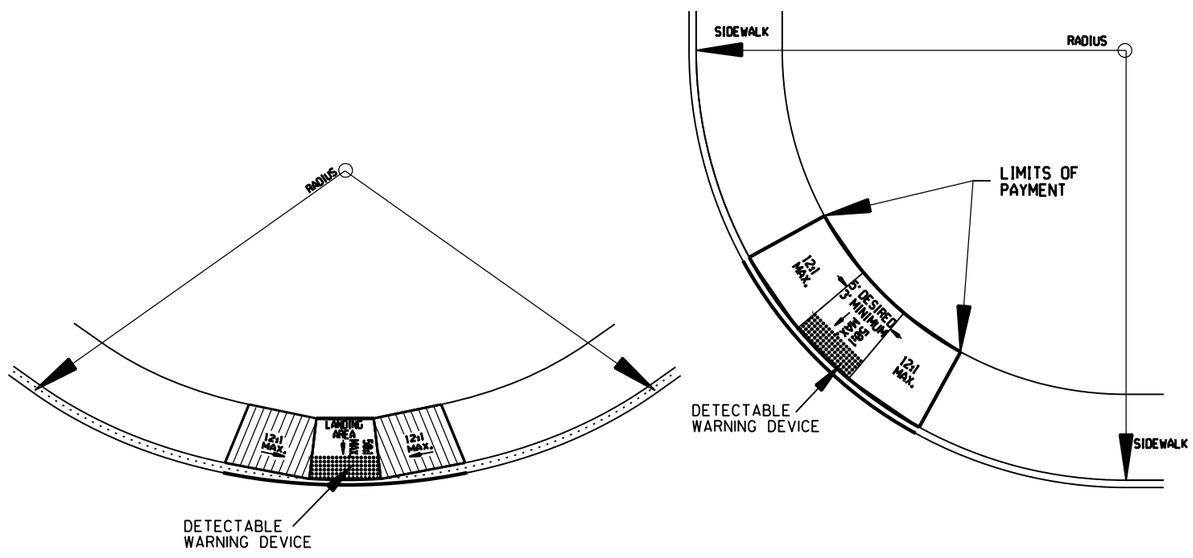
TEMPORARY EROSION CONTROL DEVICES

STANDARD DRAWING TEC-4



NOTE:
THE CROSS SLOPE OF THE RAMPS AND SIDEWALKS SHALL NOT EXCEED 2.0% UNLESS REQUIRED TO MATCH STREET LONGITUDINAL GRADE.

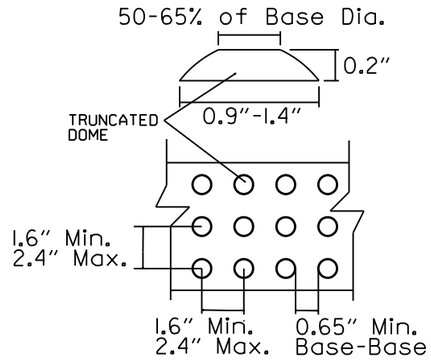
TYPE 5 RAMP



TYPE 6 RAMP

GENERAL NOTES FOR DETECTABLE WARNING DEVICES

THE DETECTABLE WARNING DEVICE SHALL BE LOCATED SO THAT THE NEAREST EDGE OF THE DEVICE IS 6 TO 8 INCHES FROM THE FACE OF THE CURB.
TRUNCATED DOMES IN THE DETECTABLE WARNING SURFACE SHALL MEET THE REQUIREMENTS OF THE GEOMETRIC CONFIGURATION SHOWN.
DOMES SHALL BE ALIGNED ON A SQUARE GRID IN THE PREDOMINANT DIRECTION OF TRAVEL TO PERMIT WHEELS TO ROLL BETWEEN DOMES.
DETECTABLE WARNING DEVICE SHALL BE 24 INCHES IN THE DIRECTION OF TRAVEL AND EXTEND THE FULL WIDTH OF THE CURB RAMP OR FLUSH SURFACE.
DETECTABLE WARNING DEVICE SHALL BE ON THE ARDOT QUALIFIED PRODUCTS LIST FOR CAST-IN-PLACE TACTILE PANELS (ADA DETECTABLE WARNING).



DETECTABLE WARNING DEVICE DETAIL

GENERAL NOTES:

IN ALTERATIONS WHEELCHAIR RAMPS ARE TO BE PROVIDED AT CURBED STREET INTERSECTIONS WITH PEDESTRIAN TRAFFIC AND MID-BLOCK CROSSWALK LOCATIONS.
THE LENGTH OF THE RAMP SHALL BE SUCH THAT THE SLOPE DOES NOT EXCEED 12:1. THE SURFACE TEXTURE OF THE RAMP SHALL CONFORM TO A CLASS 6 FINISH ACCORDING TO SECTION 802.19.
THE NORMAL GUTTER GRADE SHALL BE MAINTAINED THROUGH THE AREA OF THE RAMP.
ALL PAVEMENT MARKINGS SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES PUBLISHED BY THE FEDERAL HIGHWAY ADMINISTRATION.
THE MINIMUM THICKNESS OF THE RAMP, WALK, & LANDING SHALL BE 4".
THE MINIMUM WIDTH OF THE RAMPS SHALL BE THE EXISTING WALK WIDTH OR 36", WHICHEVER IS GREATER.
MINOR MODIFICATIONS OF THESE DETAILS, AS APPPROVED BY THE ENGINEER, MAY BE MADE TO ADJUST TO LOCAL CONDITIONS.

RAMP SELECTION CRITERIA

FIRST CHOICE	TYPE 1	CORNER LOCATIONS WITH THE WALK ADJACENT TO THE CURB (BOTH NEW CONSTRUCTION AND ALTERATIONS).
	TYPE 2	CORNER LOCATIONS WITH THE WALK OFFSET FROM THE CURB A DISTANCE INSUFFICIENT TO ALLOW THE REQUIRED RAMP SLOPE (BOTH NEW CONSTRUCTION AND ALTERATIONS).
	TYPE 3	CORNER LOCATIONS WITH THE WALK OFFSET FROM THE CURB A DISTANCE SUFFICIENT TO ALLOW THE REQUIRED RAMP SLOPE (BOTH NEW CONSTRUCTION AND ALTERATIONS).
	TYPE 4	TANGENT LOCATIONS (BOTH NEW CONSTRUCTION AND ALTERATIONS).
SECOND CHOICE	TYPE 5	TANGENT LOCATIONS (ALTERATIONS ONLY).
THIRD CHOICE	TYPE 6	CORNER LOCATIONS (ALTERATIONS ONLY). THIS RAMP MAY BE USED ONLY IF THE TYPE 5 RAMPS CANNOT BE PLACED AT THE ENDS OF THE RADIUS.
FOURTH CHOICE		IF SITE CONSTRAINTS PREVENT THE CONSTRUCTION OF ANY OF THE TYPES LISTED, THEN AND ONLY THEN CAN THE 12:1 MAX. SLOPE ON THE RAMP BE EXCEEDED TO PROVIDE ACCESS TO THE STREET LEVEL (ALTERATIONS ONLY). THE SLOPE CAN BE STEEPENED TO A 10:1 MAX. FOR A MAX. LENGTH OF 5' OR A 8:1 MAX. FOR A MAX. LENGTH OF 2'. SLOPES STEEPER THAN 8:1 ARE NOT ALLOWED UNDER ANY CIRCUMSTANCES.

NOTE: IN ALTERATIONS, THE SELECTION OF THE TYPE OF WHEELCHAIR RAMP TO BE CONSTRUCTED SHALL BE BASED ON THE AMOUNT OF RIGHT-OF-WAY AVAILABLE, AND ON THE PRESENCE OF OTHER SITE CONSTRAINTS (UTILITIES, BUILDINGS, ETC.). THE TABLE ABOVE LISTS THE ORDER IN WHICH THE RAMPS ARE TO BE CONSIDERED.

AN ALTERATION IS DEFINED AS A PROJECT THAT CHANGES OR AFFECTS THE USE OF A PEDESTRIAN PATHWAY (OVERLAYS, SIGNALIZATION PROJECTS, ETC.) BUT DOES NOT REQUIRE THE PURCHASE OF ADDITIONAL RIGHT-OF-WAY. ALL PROJECTS THAT REQUIRE THE PURCHASE OF ADDITIONAL RIGHT-OF-WAY WILL USUALLY BE CONSIDERED NEW CONSTRUCTION FOR THE PURPOSES OF THE CHART ABOVE.

DATE	REVISION	DATE FILM
10-9-03	REVISED GENERAL NOTES & ADDED NOTE.	
4-10-03	REVISED DETECTABLE WARNING DEVICE DETAIL	
8-22-02	ADDED DETECTABLE WARNING DEVICES DETAILS	
11-18-98	REV. FOURTH CHOICE NOTE	
8-12-98	REVISED TEXTURE	
7-02-98	ISSUED	

ARKANSAS STATE HIGHWAY COMMISSION

WHEELCHAIR RAMPS ALTERATIONS ONLY

STANDARD DRAWING WR-2

RE-ZONING PETITION

The property located at 1109-A North Reynolds Road in Bryant is being considered for re-zoning from R-E to C-2. The property is more particularly described as follows:

PART OF THE NORTH HALF OF THE SOUTHWEST QUARTER (N1/2 SW1/4) OF SECTION 27, TOWNSHIP 1 SOUTH, RANGE 14 WEST, SALINE COUNTY, ARKANSAS, MORE PARTICULARLY DESCRIBED AS FOLLOWS: **BEGINNING** AT A COMPUTED POINT IN THE CENTERLINE OF HIGHWAY #183 (NORTH REYNOLDS ROAD), WHICH IS 480 WEST AND 225 FEET SOUTH OF THE NORTHEAST CORNER OF THE SAID N1/2 SW1/4; THENCE S14°37'49"E - 207.85 FEET ALONG SAID CENTERLINE OF HIGHWAY #183 TO A COMPUTED POINT; THENCE LEAVING SAID CENTERLINE OF HIGHWAY #183, N88°10'53"W - 399.64 FEET TO A FOUND 5/8" REBAR; THENCE N1°41'58"E - 198.93 FEET TO A FOUND BENT 1/2" REBAR; THENCE S88°15'00"E - 341.20 FEET TO THE **POINT OF BEGINNING**, CONTAINING 1.69 ACRES, MORE OR LESS. SUBJECT TO A RIGHT OF WAY FOR (HIGHWAY #183) REYNOLDS ROAD AND UTILITY EASEMENT ALONG EAST LINE. ALSO SUBJECT TO A 10 FOOT EASEMENT FOR A DRIVEWAY.

A petition has been filed with the City of Bryant Planning Commission to re-zone the property. As part of this process a public hearing will be held April 10th, 2023 at 6:00 p.m. in the Bryant City Office Complex, 210 Southwest 3rd Street, Bryant, Arkansas 72022.

Public comments will be accepted at that time regarding this re-zoning. Since you own property within 300 feet of the tract in consideration, you have been sent this notice via certified mail as required by city ordinance.

Should you have any questions regarding this matter you may contact the City of Bryant at 501-943-0301 and ask for Truett Smith or by contacting me at the information listed below.

Vernon Williams, P.E.
GarNat Engineering, LLC
501-408-4650
garnatengineering@gmail.com

GNE

3825 Mt Carmel Rd.
Bryant, AR 72022

GarNat Engineering, LLC

P.O. Box 116
Benton, AR 72018

March 8, 2023

Mr. Truett Smith
Bryant Planning Coordinator/Planning Commission Secretary
210 SW 3rd Street
Bryant, AR 72022

Re: Rezone Application – 1109-A North Reynolds Road Parcel Number 840-14297-000

Dear Mr. Smith:

Please allow this letter and following list of enclosures to serve as my application for rezone of the referenced property located at 1109-A North Reynolds Road. We are seeking a rezone from R-E to C-2 to build chiropractic center on the property. It is my desire that this matter be included on the agenda for your April 2023 City of Bryant Planning Commission Meeting.

List of Enclosures

- Affidavit
- Rezone Application
- Rezone – Public Notice
- Property Survey

If you have questions or need any additional information, please do not hesitate to contact me.

Sincerely,
GarNat Engineering, LLC

Vernon J. Williams

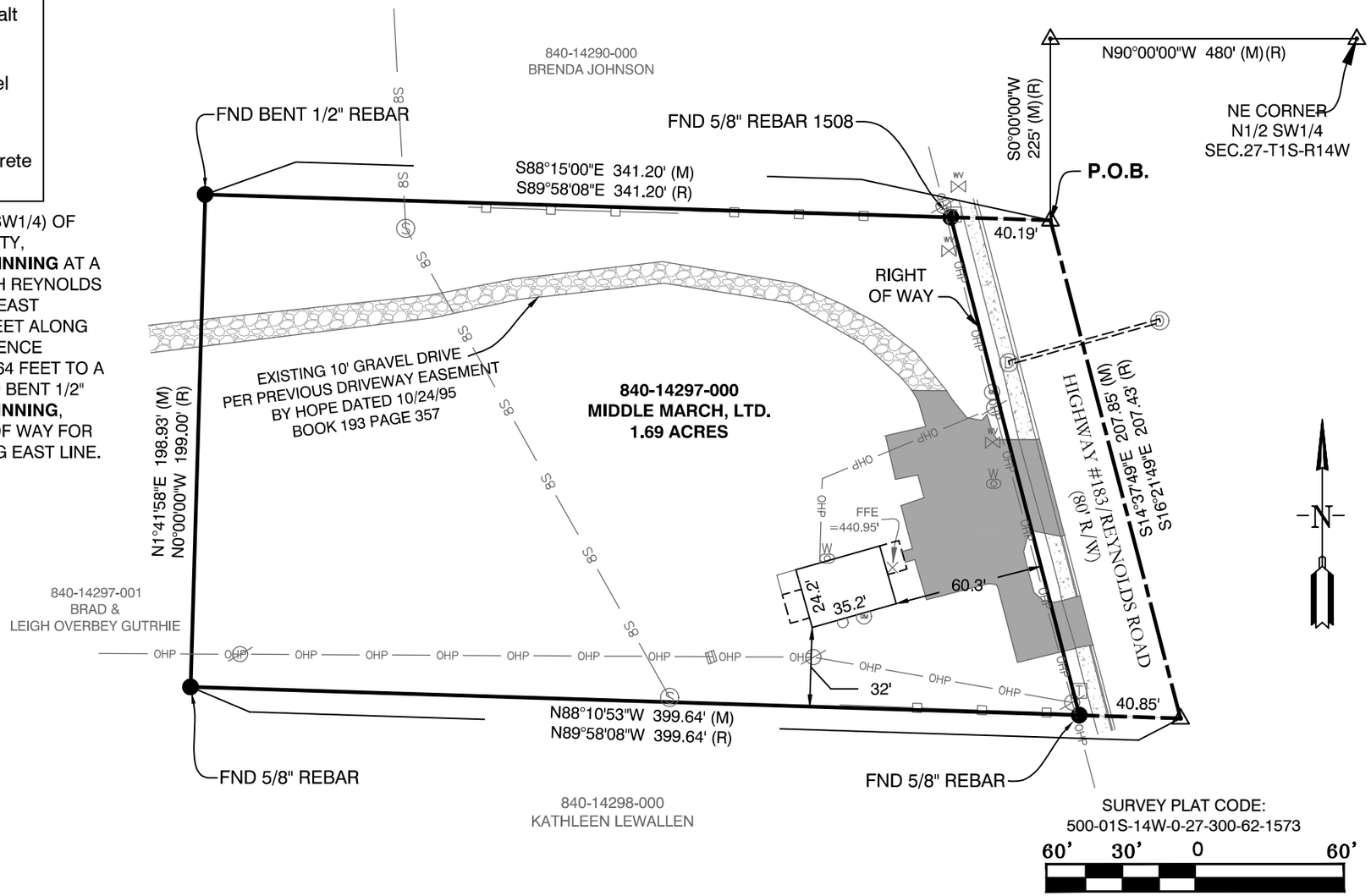
Vernon J. Williams, P.E., President

LEGEND

- Computed point
- Found monument
- Set #4 RB/Plas. Cap
- (M)-Measured
- (R)-Recorded Survey
- (P)-Platted
- -Power Pole
- -Sanitary Sewer
- -Water Valve
- -Storm Drain
- -Telephone Ped.
- -Water Meter
- -Gas Meter
- -Asphalt
- -Gravel
- -Concrete

PART OF THE NORTH HALF OF THE SOUTHWEST QUARTER (N1/2 SW1/4) OF SECTION 27, TOWNSHIP 1 SOUTH, RANGE 14 WEST, SALINE COUNTY, ARKANSAS, MORE PARTICULARLY DESCRIBED AS FOLLOWS: **BEGINNING** AT A COMPUTED POINT IN THE CENTERLINE OF HIGHWAY #183 (NORTH REYNOLDS ROAD), WHICH IS 480 WEST AND 225 FEET SOUTH OF THE NORTHEAST CORNER OF THE SAID N1/2 SW1/4; THENCE S14°37'49"E - 207.85 FEET ALONG SAID CENTERLINE OF HIGHWAY #183 TO A COMPUTED POINT; THENCE LEAVING SAID CENTERLINE OF HIGHWAY #183, N88°10'53"W - 399.64 FEET TO A FOUND 5/8" REBAR; THENCE N1°41'58"E - 198.93 FEET TO A FOUND BENT 1/2" REBAR; THENCE S88°15'00"E - 341.20 FEET TO THE **POINT OF BEGINNING**, CONTAINING 1.69 ACRES, MORE OR LESS. SUBJECT TO A RIGHT OF WAY FOR (HIGHWAY #183) REYNOLDS ROAD AND UTILITY EASEMENT ALONG EAST LINE. ALSO SUBJECT TO A 10 FOOT EASEMENT FOR A DRIVEWAY.

12-12-22



DOCUMENTS USED FOR THE PREPARATION OF THIS SURVEY:

- PREVIOUS SURVEY BY HOPE CONSULTING DATED 10/24/95

CERTIFICATIONS:

BY AFFIXING MY SEAL AND SIGNATURE, I GEORGE P. WOODEN, PS NO.1573, HEREBY CERTIFY THAT THIS DRAWING CORRECTLY DEPICTS A SURVEY COMPILED UNDER MY SUPERVISION ON AUG 16, 2020.

THIS SURVEY WAS BASED ON LEGAL DESCRIPTIONS AND TITLE WORK FURNISHED BY OTHERS AND DOES NOT REPRESENT A TITLE SEARCH.

THIS PROPERTY IS NOT LOCATED IN THE 100 YEAR FLOOD PLAIN. THE PROPERTY SHOWN ON THIS PLAT IS LOCATED IN ZONE "X" OF THE F.E.M.A. MAP PANEL 05125C0380D EFFECTIVE DATE JUNE 19, 2012.

BASIS OF BEARINGS:

BEARINGS ARE BASED UPON NORTH AMERICAN DATUM 1983, ARKANSAS SOUTH ZONE, US SURVEY FEET, GRID COORDINATES. COORDINATES WERE ESTABLISHED USING GPS AND WERE PROCESSED USING THE NATIONAL GEODETIC SURVEY'S "ONLINE POSITIONING USER SERVICE" (OPUS).

BOUNDARY/
TOPOGRAPHIC
SURVEY

1109 N REYNOLDS ROAD
BRYANT, ARKANSAS
72202
SALINE COUNTY

FOR THE USE &
BENEFIT OF:

KENNY WHITFIELD

GNE Designing our client's success

GarNat Engineering, LLC

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

3825 Mt. Carmel Rd
Bryant, AR 72022
garnatengineering@gmail.com

PROJECT NO:
22203

DATE:
DEC. 12, 2022

AFFIDAVIT

I, Michael Butler, Butler Wealth Capital, LLC certify by my signature below that I hereby authorize Vernon Williams of GarNat Engineering, LLC to act as Butler Wealth Capital, LLC's agent regarding the Planning Commission Approval of the proposed development at 1109 N Reynolds Road.

Michael Butler
Butler Wealth Capital, LLC

03/07/2023
Date

Subscribed and sworn to me a Notary Public on this 7TH day of MARCH, 2023.

Notary Public

My Commission Expires:

02-05-2031

GEORGE P. WOODEN
Notary Public-Arkansas
Saline County
My Commission Expires 02-05-2031
Commission # 12714343

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

Rezoning Application

Applicants are advised to read the Amendments section of Bryant Zoning Code prior to completing and signing this form. The Zoning Code is available at www.cityofbryant.com under the Planning and Community Development tab.

Date: 03/08/2023

Applicant or Designee:

Name VERNON WILLIAMS
Address P.O. BOX 116 BENTON, AR 72018
Phone (501) 408-4650
Email Address garnetengineering@gmail.com

Property Owner (If different from Applicant):

Name Butler Wealth Capital, LLC
Address 6 Creekwood Court, Little Rock, AR 72223
Phone 870-703-3807
Email Address

Property Information:

Address 1109-A NORTH REYNOLDS ROAD
Parcel Number 840-14297-000
Existing Zoning Classification R-E
Requested Zoning Classification C-2
Legal Description (If Acreage or Metes and Bounds description, please attach in a legible typed format)
SEE ATTACHED

Application Submission Checklist:

- ☑ Letter stating request of zoning change from (Current Zoning) to (Requested Zoning) and to be placed on the Planning Commission Agenda
- ☑ Completed Rezoning Application
- ☐ Rezoning Application Fee ($40 fee for lot and black descriptions or $125 for acreage or metes and bound descriptions)
- ☑ If someone, other than the owner, will be handling the zoning process, we will require a

letter from the owner of said property, giving him or her authority to do so.

☑ Recent surveyed plat of the property including vicinity map

Additional Requirements:

*Items below **must be completed before the public hearing can occur**. Failure to provide notices in the following manners shall require delay of the public hearing until notice has been properly made.*

☐ Publication: Public Notice shall be published by the applicant at least one (1) time fifteen (15) days prior to the public hearing at which the rezoning application will be heard. Once published please provide a proof of publication to the Community Development office. (Sample notice attached below)

☐ Posting of Property: The city shall provide signs to post on the property involved for the fifteen (15) consecutive days leading up to Public hearing. One (1) sign is required for every two hundred (200) feet of street frontage.

☐ Notification of adjacent landowners: Applicant shall attempt to inform by certified letter, return receipt requested, all owners of land within three hundred (300) feet of any boundary of the subject property of the public hearing. (Sample letter attached below)

☐ Certified list of property owners, all return receipts, and a copy of the notice shall be provided to the Community Development Department at least five (5) days prior to the public hearing.

Note: that this is not an exhaustive guideline regarding the Conditional Use Permit Process. Additional information is available in the Bryant Zoning Ordinance.

READ CAREFULLY BEFORE SIGNING

I Vernon J Williams, do hereby certify that all information contained within this application is true and correct. I further certify that the owner of the property authorizes this proposed application. I understand that I must comply with all City Codes that pertain to this project and that it is my responsibility to obtain all necessary permits as needed.

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

Conditional Use Permit Application

Applicants are advised to read the Conditional Use Permit section of Bryant Zoning Code prior to completing and signing this form. The Zoning Code is available at www.cityofbryant.com under the Planning and Community Development tab.

Date: 3/6/2023

Applicant or Designee:

Name Jonathan Hope

Address 129 N Main Street Benton, AR

Phone 501-315-2626

Email Address: jonathan@hopeconsulting.com

Project Location:

Property Address 25300 I-30 NORTH
Bryant, Arkansas

Parcel Number 840-11640-124 and 840-11640-239

Zoning Classification C-2

Property Owner (If different from Applicant):

Name FIRST SOUTHERN BAPTIST CHURCH OF BRYANT

Phone (501) 847-3014

Address 604 S Reynolds Rd, Bryant, AR 72022

Email Address _____

Additional Information:

Legal Description (Attach description if necessary)

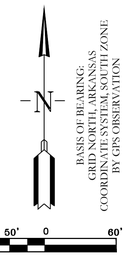
See attached Survey Exhibit

Description of Conditional Use Request (Attach any necessary drawings or images)

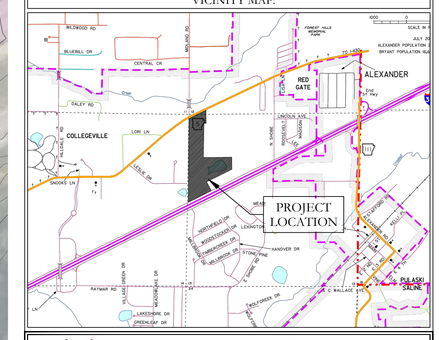
Proposed Self-Storage Facility in a C-2 Zoning District. Storage in this zoning district is allowed with a conditional use permit.

Proposed/Current Use of Property See attached Site Plan of Proposed Self-Storage Facility

TOTAL BUILDING SQ.FT. = 280,190 SQ. FT.



VICINITY MAP:



HOPE CONSULTING
ENGINEERS - SURVEYORS

117 S. Market Street,
Benton, Arkansas 72015
PH. (501)315-2626
FAX (501) 315-0024
www.hopeconsulting.com

FOR USE AND BENEFIT OF:

STUART FINLEY

OPTION-B

DATE: 02-08-2023	C.A.D. BY: B.JOHNSON	DRAWING NUMBER:	
REVISED:	CHECKED BY:	22-0800	
SHEET:	SCALE: 1" = 60'		

500	01S	14W	0	21	300	62	1762

HOPE
CONSULTING
ENGINEERS • SURVEYORS

February 28, 2023

Colton Leonard
City of Bryant
210 Southwest Third St.
Bryant, AR 72022

RE: Conditional Use Permit for Self-Storage in C-2
(Parcels 840-11640-124 & 840-11640-239)

Dear Mr. Leonard,

On behalf of our client, Hope Consulting is formally requesting the City of Bryant Staff and Planning Commission begin the review and approval process for the Conditional Use Permit for this property. A detailed drawing of the boundary of this property is shown on Exhibit "A".

The property adjoined to the east is zoned C-3 which storage is allowed by right. The property adjoined to the south is C-3 which storage is allowed by right. The property adjoined to the north is C-3 and R-1. The property adjoined to the west is zoned R-E and C-3. On sides adjacent to residential our proposed use would have a substantial building setback. An arial photo and site plan have been submitted with this application which we believe shows this "use" is appropriate for this property. The applicant understands all outdoor lighting must be shielded from neighboring properties, and any lighting must be indirect and not cause disturbance to neighbors. An arial photo of the parcel and site have been submitted with this application which we believe shows this "use" is appropriate for this location.

Please feel free to contact me with any questions or concerns or if I can be of any further assistance.

Sincerely,

Jonathan Hope

129 N Main St. Benton, Arkansas 72015
501-315-2626
www.hopeconsulting.com

HOPE
CONSULTING
ENGINEERS • SURVEYORS

EXHIBIT "A"

129 N Main St. Benton, Arkansas 72015
501-315-2626
www.hopeconsulting.com

Arkansas Department of Health

4815 West Markham Street • Little Rock, Arkansas 72205-3867 • Telephone (501) 661-2000
Governor Asa Hutchinson
José R. Romero, MD, Secretary of Health

Engineering Section, Slot 37
www.healthy.arkansas.gov/eng

Ph (501) 661-2623 Fax (501) 661-2032
After Hours Emergency (501) 661-2136

May 13, 2022

Hope Consulting Engineers Surveyors
Mr. William McFadden P.E.
117 S. Market St.
Benton, AR 72015

RE: SUBDIVISION SEWER IMPROVEMENTS AND NEW FIRE HYDRANT ENGINEERING PLAN APPROVAL
Jacob's Corner Subdivision (Lots 1-9, 11, 12) Sewer Improvements and New FH (existing waterline)
Rudolph Road, Bryant, Saline County
Hope Job Number: 20-0722
ADH Reference No. 119196

Mr. McFadden,

The submittal for the project referenced above, received at the ADH Engineering Section on April 26, 2022, has been reviewed and is hereby approved with the following conditions:

1. The Engineering Section relied upon the statements and representations made in the plans and specifications. In case any statement or representation in the aforementioned documents is found to be incorrect, this Approval may be revoked.

2. There shall be no deviation from the plans and specifications unless revised plans and specifications have been first submitted for review and written consent given.

3. The review and approval of the drawings and specifications were for functional and sanitary features and in no way constitute an analysis of the structural or plumbing design.

4. If construction on this project is not started within one year of the date affixed hereto, this Letter of Approval is void.

5. Construction inspection for this project shall be the responsibility of Hope Consulting Engineers Surveyors.

6. Materials and construction shall be in accordance with the standard specifications and details of the Salem Water Users and Bryant Utilities.

7. All materials and components installed after January 3, 2014 in drinking water systems are required to comply with the federal definition of "lead free" contained in Public Law 111-380.

One set of approved plans is being returned with this Approval letter and one set if being retained for our files. When submitting correspondence pertaining to this project, please include **ADH reference #119196**.

Sincerely,

Stephen M. Youngblood, P.E.
Engineer Supervisor
ADH Engineering Section

SMY : SMR : smr

cc: Salem Water Users (PWS 492) - Water
Bryant Utilities (PWS 486) - Sewer

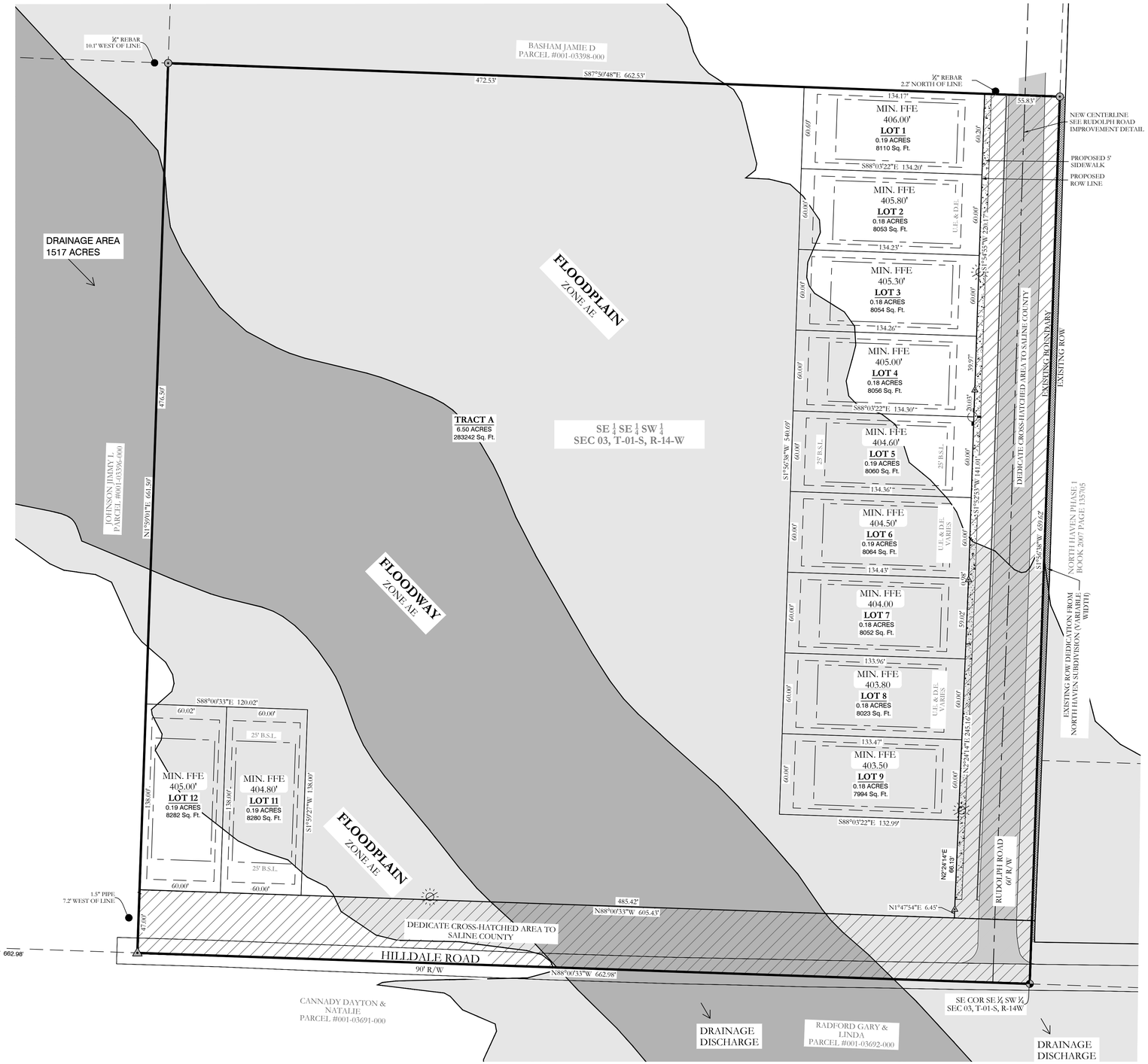
811 Know what's **below.** **Call** before you dig.

LEGAL DESCRIPTION:

THE SOUTHEAST QUARTER OF THE SOUTHEAST QUARTER OF THE SOUTHWEST QUARTER SECTION 03, TOWNSHIP 1 SOUTH, RANGE 14 WEST, SALINE COUNTY ARKANSAS.

CONTAINING 437,787.7 SQUARE FEET, OR 10.05 ACRES, MORE ORE LESS.

SUBJECT TO BUILDING LINES, EASEMENTS, MINERAL RESERVATIONS AND/OR CONVEYANCES, AND RESTRICTIONS OF RECORD, IF ANY.



REGISTERED — STATE OF ARKANSAS — NO. 1762 — SIGNATURE — JONATHAN L. HOPE — PROFESSIONAL LAND SURVEYOR

STATE OF ARKANSAS — LICENSED PROFESSIONAL ENGINEER — NO. 20876 — KAZI M ISLAM

CERTIFICATE OF AUTHORIZATION TO PRACTICE — HOPE CONSULTING, INC. — No. 1931 — ARKANSAS

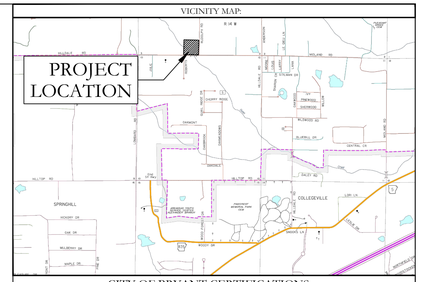
LEGEND
- Found Aliquot Corner
- Found monument
- Set ½" Rebar
- Computed point
(M)- Measured
(P)- Plat/Deed
- Fence
- Light Pole
- Fire Hydrant

BASIS OF BEARING:
GRID NORTH ARKANSAS
COORDINATE SYSTEM, SOUTH ZONE
BY GPS OBSERVATION

40' 20' 0 40'

FINAL PLAT OF
JACOB'S CORNER
A SUBDIVISION IN SALINE COUNTY, ARKANSAS

VICINITY MAP:



CITY OF BRYANT CERTIFICATIONS:

OWNER:
Name: GIRON BUILDERS INC.
Address: 3420 HILLDALE ROAD
ALEXANDER, AR 72002

DEVELOPER:
Name: GIRON BUILDERS INC.
Address: 3420 HILLDALE ROAD
ALEXANDER, AR 72002

CERTIFICATE OF OWNER:

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

Date of Execution _____ Name: _____

Source of Tile: D.R. BOOK 2020 PAGE 006574

CERTIFICATE OF FINAL SURVEYING ACCURACY:

I, Jonathan L. Hope, 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 location, size, type and material are correctly shown; and that all interior lot lines have been adjusted to "as built conditions" and are accurately described on the plat and identified on the ground in terms of length and direction of the property side as required in accord with the City of Bryant Subdivision Regulation Ordinance.

Date of Execution

Jonathan L. Hope
Registered Professional
Land Surveyor No. 1762 Arkansas

CERTIFICATE OF FINAL ENGINEERING ACCURACY:

I, Kazi Islam, hereby certify that this plat correctly represents a plat made by me, and that the engineering requirements of the City of Bryant Subdivision Rules and Regulations have been complied with.

Date of Execution

Kazi Islam
Registered Professional
Engineer, No. 20876 Arkansas

CERTIFICATE OF FINAL PLAT APPROVAL:

Pursuant to the City of Bryant Subdivision Rules and Regulations, and all of the conditions of approval having been completed, this document is hereby accepted. This certificate is hereby executed under the authority of said rules and regulations.

Date of Execution

Rick Johnson,
Bryant Planning Commission Chairman

FLOODPLAIN CERTIFICATION:

By affixing my seal and signature, I Jonathan L. Hope, PLS No. 1762, hereby certify that this drawing correctly depicts a survey compiled under my supervision.

NOTE: This survey was based on legal descriptions and title work furnished by others and does not represent a title search.

According the the Federal Emergency Management Agency (FEMA) Flood Insurance Rate Map (FIRM) for Saline County unincorporated areas, panel # 05125C0240E, dated 06/05/2020. Most of the property described hereon does lie within the 100 year flood hazard boundary.

PROPERTY SPECIFICATIONS:

OWNER: GIRON BUILDERS INC.
3420 HILLDALE ROAD
ALEXANDER, AR 72002

DEVELOPER/: SUBDIVIDER: GIRON BUILDERS INC.
3420 HILLDALE ROAD
ALEXANDER, AR 72002

ENGINEERS: HOPE CONSULTING INC.
129 N. MAIN STREET
BENTON, AR 72015

NAME OF SUBDIVISION: JACOB'S CORNER

ZONING CLASSIFICATION: PROPOSED R-2

SOURCE OF TITLE: SALINE COUNTY DOCUMENT BOOK 2020 PAGE 006574

MIN. LOT SIZE: 8,400 S.F.
NUMBER OF LOTS: 11
SOURCE OF WATER: SALEM WATER USERS
SOURCE OF SEWER: CITY OF BRYANT
SOURCE OF ELECTRIC: FIRST ELECTRIC COOP
SOURCE OF GAS: CENTERPOINT ENERGY

BUILDING SETBACKS:
FRONT - 25' OR AS SHOWN
REAR - 25' 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

LOT CORNERS: SET 1/2" REBAR WITH CAP

HOPE CONSULTING
ENGINEERS - SURVEYORS
129 North Main Street,
Benton, Arkansas 72015
PH. (501)315-2626
FAX (501) 315-0024
www.hopeconsulting.com

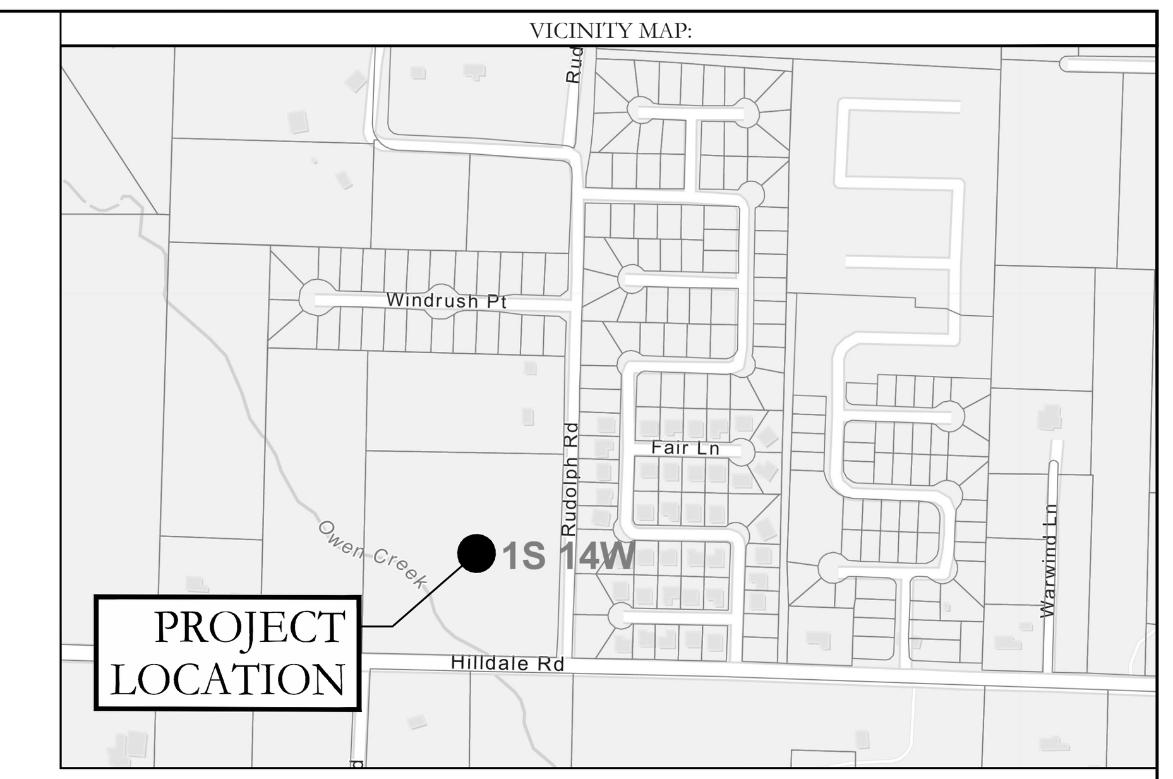
FOR USE AND BENEFIT OF:
GIRON BUILDERS INC.

FINAL PLAT
JACOB'S CORNER
A SUBDIVISION IN SALINE COUNTY, ARKANSAS

DATE:	03/08/2023	C.A.D. BY:	JPP	DRAWING NUMBER:
REVISED:		CHECKED BY:		20-0722
		SCALE: 1"= 40'		

500	01S	14W	0	03	320	62	1762

K:\LAND PROJECTS 2020\SUBDIVISIONS\2020\20-0722 GIRON SUBDIVISION\DWG\20-0722 JACOBS CORNER FINAL PLAT.DWG



SEWER LEGEND:

- CLEAN OUT
- PROPOSED SEWER MANHOLE
- EXISTING SEWER MANHOLE
- ISOLATION VALVE
- EXISTING SEWER LINE
- SEWER MAIN — TEE
- SEWER SERVICE
- GRINDER PUMP

NOTE:
PROPOSED SEWER MAINS IS TO HAVE TRACER WIRE. ALSO A NON-BIODEGRADABLE TAPE IDENTIFYING THE LINE AS "SEWER" MUST BE BURIED IN THE TRENCH ABOVE THE SEWER MAINS.

WATER LEGEND:

- EXISTING BLOW OFF
- WATER MAIN — EXISTING GATE VALVE
- REDUCER
- EXISTING FIRE HYDRANT
- EXISTING WATER SERVICE
- EXISTING 6" WATER LINE
- EXISTING 8" WATER LINE
- EXISTING WATER LINE

NOTE:
ALL FIRE HYDRANT LEADERS HAVE A GATE VALVE BETWEEN MAIN AND FIRE HYDRANT.

REGISTERED PROFESSIONAL LAND SURVEYOR — STATE OF ARKANSAS NO. 1762 — SIGNATURE — JONATHAN L. HOPE

STATE OF ARKANSAS — LICENSED PROFESSIONAL ENGINEER — NO. 20876 — KAZI TAMZIDUL ISLAM

By affixing my seal and signature, I Jonathan L. Hope, PLS No. 1762, hereby certify that this drawing correctly depicts a survey compiled under my supervision.

NOTE: This survey was based on legal descriptions and title work furnished by others and does not represent a title search.

According the the Federal Emergency Management Agency (FEMA) Flood Insurance Rate Map (FIRM) for Saline County, City of Benton, panel # 05125C0240E, dated 06/05/2020, most of the property described hereon does not lie within the 100 year flood hazard boundary.

CERTIFICATE OF AUTHORIZATION — HOPE CONSULTING, INC. — No. 1931 — ARKANSAS

HOPE CONSULTING
ENGINEERS - SURVEYORS
129 North Main Street
Benton, Arkansas 72015
Office: (501) 315-2626
Fax: (501) 315-0024
www.hopeconsulting.com

FOR USE AND BENEFIT OF:
GIRON BUILDERS INC.

JACOB'S CORNER
SANITARY SEWER AND WATER AS-BUILTS
SALINE COUNTY, ARKANSAS

DATE: 03/08/2023	C.A.D. BY: JPP	DRAWING NUMBER:
REVISED:	CHECKED BY:	20-0722
SHEET:	SCALE: 1" = 40'	

500	01S	14W	0	03	320	62	1762

K:\Land Projects 2004\Subdivisions\2020\20-0722 Giron Subdivision\Dwg\20-0722 Jacob's Corner As-Builts.dwg

HOPE
CONSULTING
ENGINEERS • SURVEYORS

March 6, 2023

Colton Leonard
City of Bryant
210 Southwest Third St., Bryant, AR 72022

RE: Jacob's Corner (Hope Job #20-0722)

Dear Mr. Truett Smith,

Hope Consulting is formally requesting the City of Bryant Development Review Committee begin the technical review and approval process for the Final Plat of Jacob's Corner.

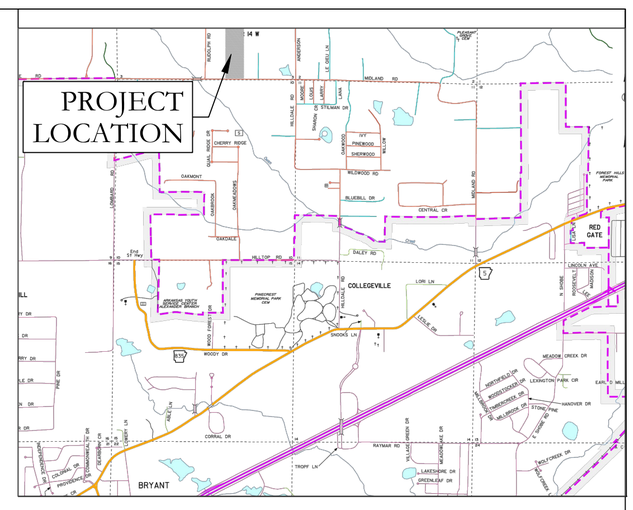
Please feel free to contact me with any questions or concerns or if I can be of any further assistance.

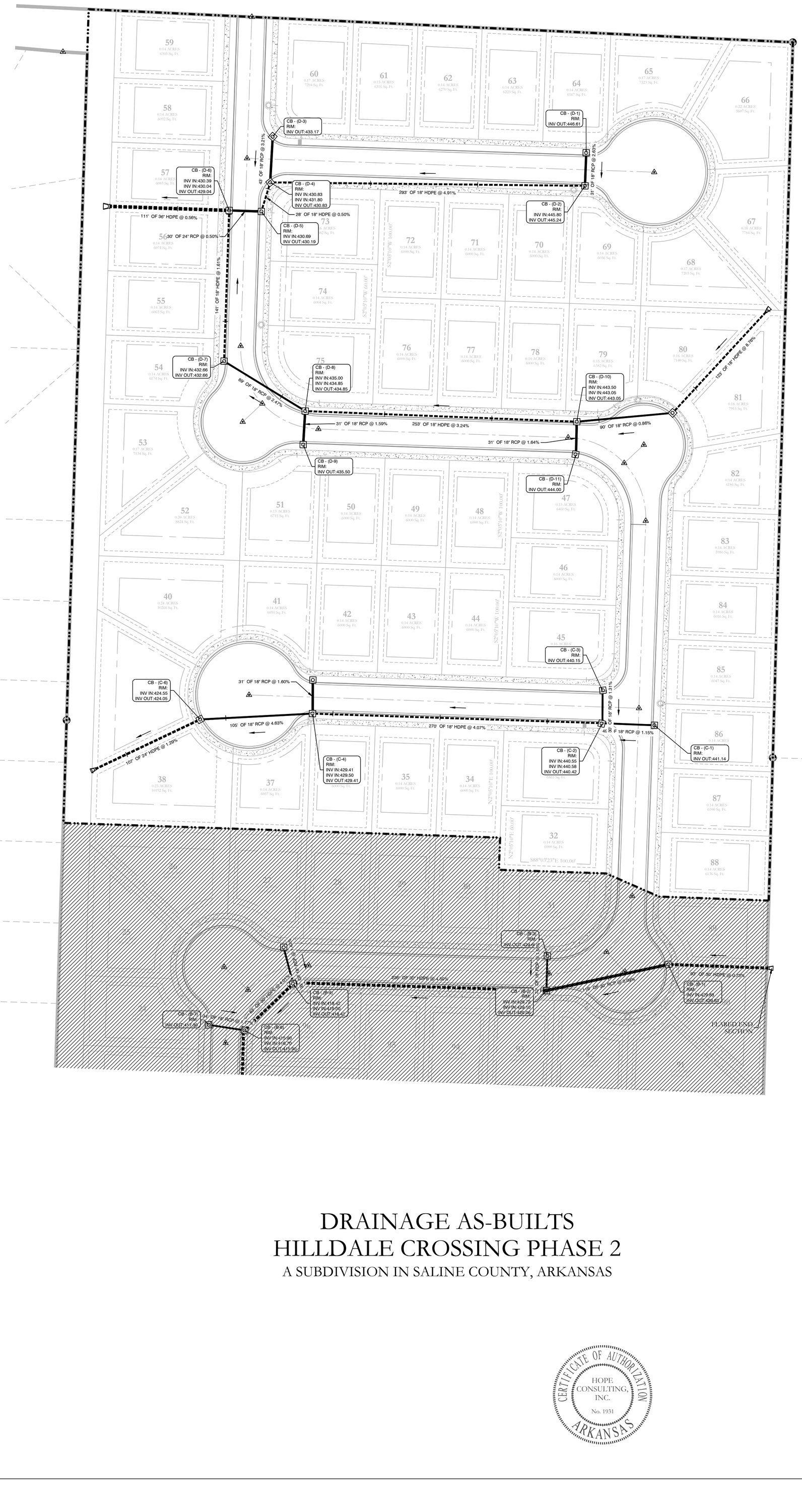
Sincerely,

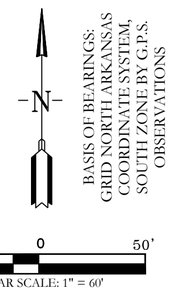
Jonathan Hope

129 N Main St. Benton, Arkansas 72015
501-315-2626
www.hopeconsulting.com

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







DRAINAGE AS-BUILTS
HILLDALE CROSSING PHASE 2
A SUBDIVISION IN SALINE COUNTY, ARKANSAS

CERTIFICATE OF AUTHORIZATION
HOPE CONSULTING, INC.
No. 1931
ARKANSAS

HOPE CONSULTING
ENGINEERS - SURVEYORS
117 S. Market Street,
Benton, Arkansas 72015
PH. (501)315-2626
FAX (501) 315-0024
www.hopeconsulting.com

FOR USE AND BENEFIT OF:
HAVENS DEVELOPMENT, LLC

DRAINAGE AS-BUILTS PLAN
HILLDALE CROSSING PHASE 2
A SUBDIVISION IN SALINE COUNTY, ARKANSAS

DATE: 12/20/2022			C.A.D. BY: B.JOHNSON		DRAWING NUMBER: 20-0169		
REVISED:			CHECKED BY:				
			SCALE: 1"=50'				
500	01S	14W	0	03	330	62	1762

K:\LAND PROJECTS 2004\SUBDIVISIONS\2020\20-0169 HILLDALE CROSSING\PHASE 2\20-0169 HILLDALE CROSSING PHASE 2-AS-BUILTS-11-29-2022.DWG

Arkansas Department of Health

4815 West Markham Street • Little Rock, Arkansas 72205-3867 • Telephone (501) 661-2000
Governor Asa Hutchinson
José R. Romero MD, Secretary of Health

Engineering Section, Slot 37 Ph (501) 661-2623 Fax (501) 661-2032
www.healthy.arkansas.gov/eng After Hours Emergency (501) 661-2136

September 14, 2020

William McFadden PE
Hope Consulting
117 South Market Street
Benton, Arkansas 72015

RE: WATER AND SEWER EXTENSION
Sam's Hill Subdivision (Lots 1- 128) | Project #20-0169
Salem Water Users (PWS 492), Bryant, Saline County
Reference: ADH Project No. 62280
ADH Project No. 112190

Dear Mr. McFadden:

The plans for the above-captioned project dated 8-28-19, and submitted to the Engineering Section on 9-4-20, have been reviewed and are hereby approved with the following conditions:

1. The Engineering Section relied upon the statements and representations made in the engineer's report, plans and specifications. In case any statement or representation in the aforementioned documents is found to be incorrect, this Approval may be revoked.

2. There shall be no deviation from the plans and specifications unless revised plans and specifications have been first submitted for review and written consent given.

3. The review and approval of the plans and specifications were for functional and sanitary features and in no way constitute an analysis of the structural design.

4. If construction on this project is not started within one year of the date affixed hereto, this Letter of Approval is void.

5. Construction shall be performed according to the Salem Water Users and Bryant Sewer standard specifications and details.

6. Construction inspection for this project shall be the responsibility of William McFadden PE (Hope Consulting).

7. All materials and components installed after January 3, 2014 in drinking water systems are required to comply with the federal definition of "lead free" contained in Public Law 111-380.

One set of the plans is being retained for our files and a copy is being returned to you. When submitting correspondence pertaining to this project, please include our reference number 112190.

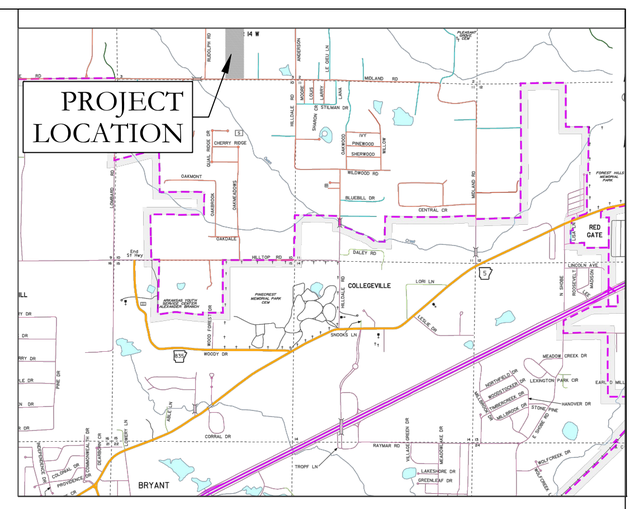
Sincerely,

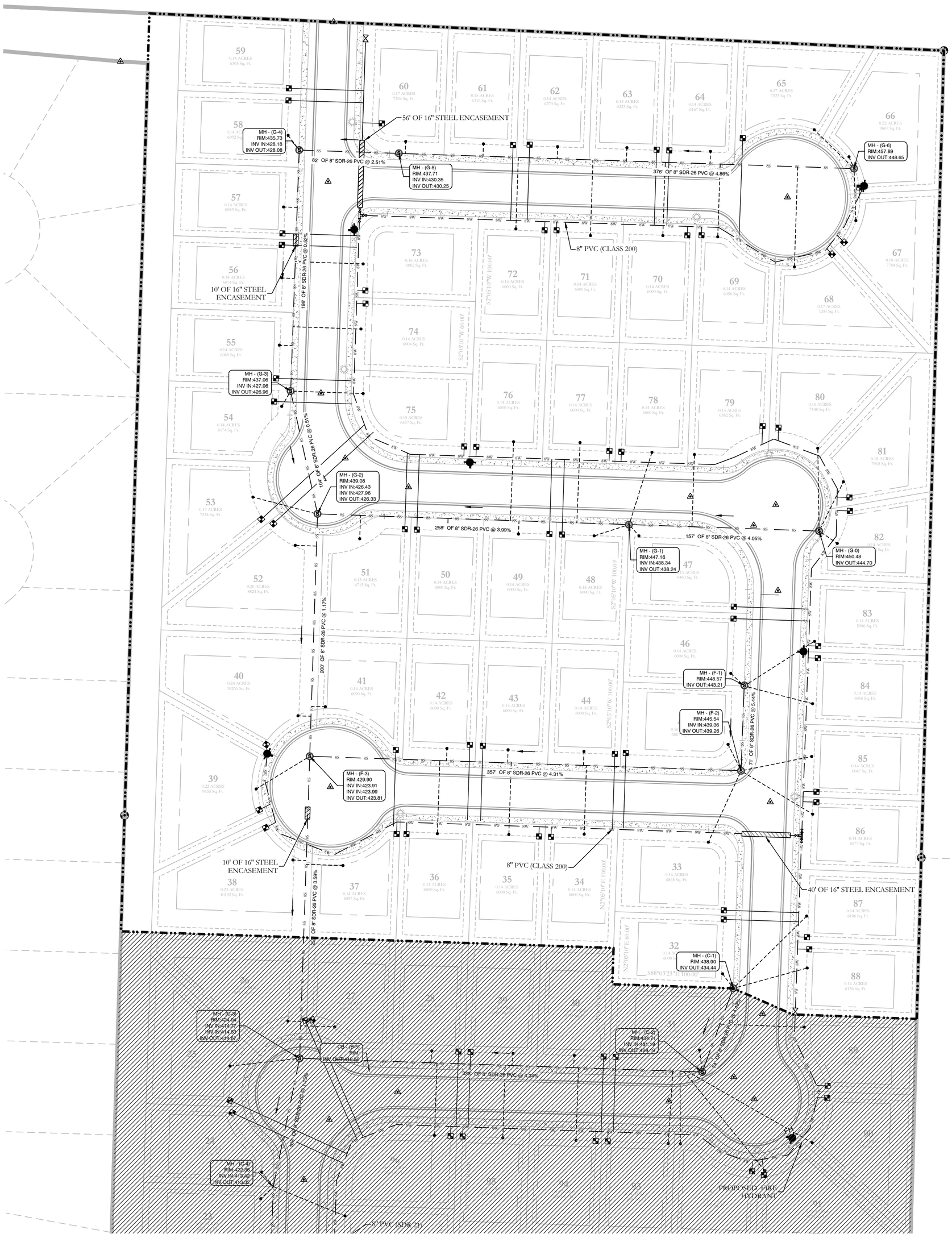
Stephen M. Youngblood, P.E.
Engineer Supervisor
Engineering Section

SMY: SGB: sgb

cc: Salem Water Association (PWS 492)
Bryant Wastewater (PSS S78)

Know what's below. Call before you dig.





SANITARY SEWER AND WATER AS-BUILTS
HILLDALE CROSSING PHASE 2
A SUBDIVISION IN SALINE COUNTY, ARKANSAS

BASIS OF BEARINGS: GRID NORTH ARKANSAS COORDINATE SYSTEM, SOUTH ZONE BY G.P.S. OBSERVATIONS

50' 25' 0 50'
BAR SCALE: 1" = 60'

SEWER LEGEND:	WATER LEGEND:	TYPICAL FIRE HYDRANT:
AIR RELEASE VALVE	3" BLOW OFF	3" BLOW OFF
CLEAN OUT	GATE VALVE	REDUCER 8"
ISOLATION VALVE	REDUCER	GATE VALVE
SEWER SERVICE	WATER LINE	FIRE HYDRANT
SEWER SERVICE	FIRE HYDRANT	
	DOUBLE WATER SERVICE	
	SINGLE WATER SERVICE	

NOTE: PROPOSED SEWER MAINS IS TO HAVE TRACER WIRE. ALSO A NON-BIODEGRADABLE TAPE IDENTIFYING THE LINE AS "SEWER" MUST BE PLACED IN THE TRENCH ABOVE THE SEWER MIANS.

NOTE: ALL FIRE HYDRANT LEADERS HAVE A GATE VALVE BETWEEN MAIN AND FIRE HYDRANT.

CERTIFICATE OF AUTHORIZATION — HOPE CONSULTING, INC. — No. 1931 — ARKANSAS

HOPE CONSULTING
ENGINEERS - SURVEYORS
117 S. Market Street,
Benton, Arkansas 72015
PH. (501)315-2626
FAX (501) 315-0024
www.hopeconsulting.com

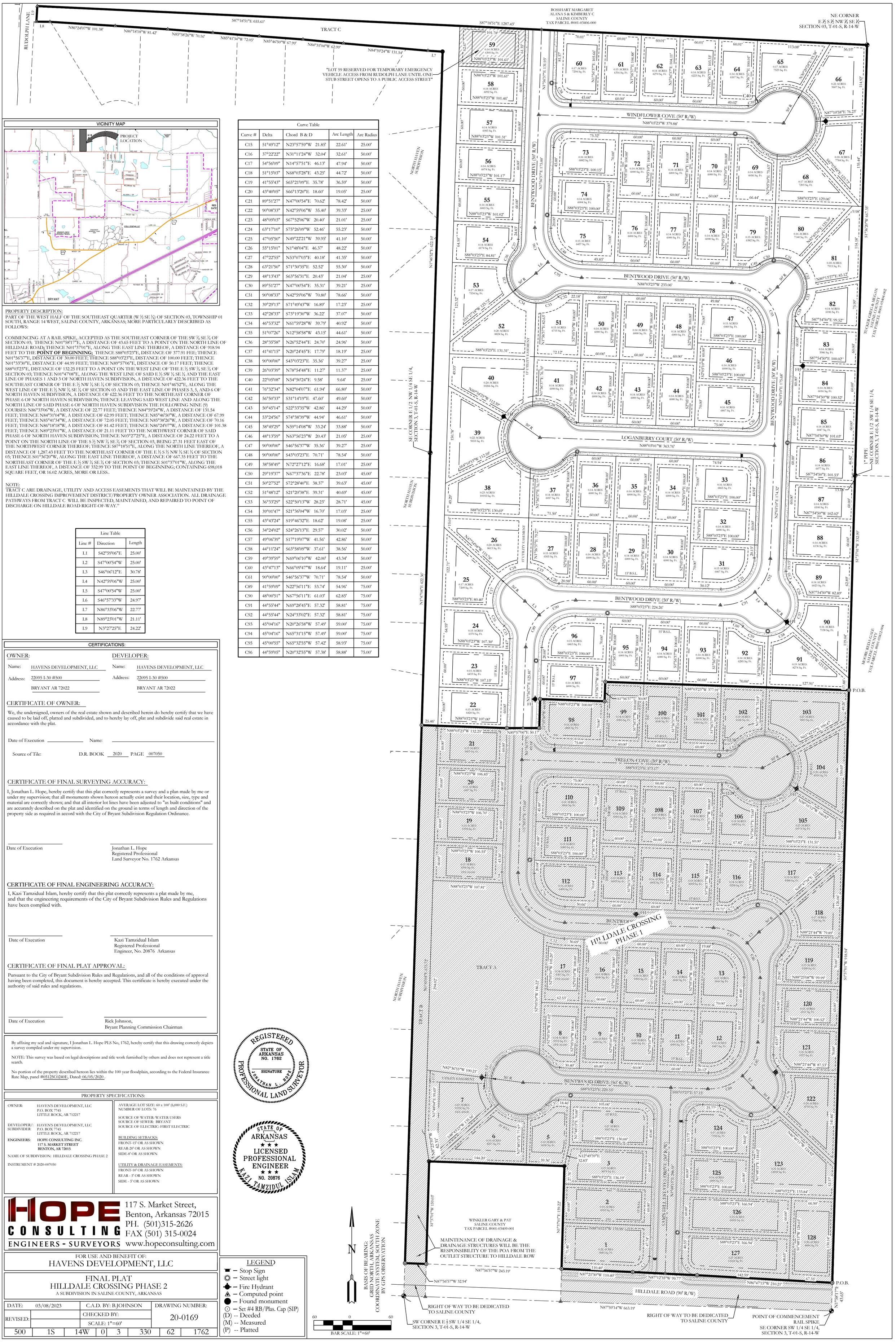
FOR USE AND BENEFIT OF:
HAVENS DEVELOPMENT, LLC

WATER & SEWER AS-BUILTS PLAN
HILLDALE CROSSING PHASE 2
A SUBDIVISION IN SALINE COUNTY, ARKANSAS

DATE: 12/20/2021		C.A.D. BY: B.JOHNSON	DRAWING NUMBER: 20-0169
REVISED:		CHECKED BY:	
		SCALE: 1"=50'	

500	01S	14W	0	03	330	62	1762

K:\LAND PROJECTS 2004\SUBDIVISIONS\2020\20-0169 HILLDALE CROSSING\PHASE 2\20-0169 HILLDALE CROSSING PHASE 2-AS-BUILTS-11-29-2022.DWG



VICINITY MAP

PROPERTY DESCRIPTION:

PART OF THE WEST HALF OF THE SOUTHEAST QUARTER (W ½ SE ¼) OF SECTION 03, TOWNSHIP 01 SOUTH, RANGE 14 WEST, SALINE COUNTY, ARKANSAS; MORE PARTICULARLY DESCRIBED AS FOLLOWS:

COMMENCING AT A RAIL SPIKE, ACCEPTED AS THE SOUTHEAST CORNER OF THE SW ¼ SE ¼ OF SECTION 03; THENCE N01°58'17"E, A DISTANCE OF 43.65 FEET TO A POINT ON THE NORTH LINE OF HILLDALE ROAD; THENCE N01°37'01"E, ALONG THE EAST LINE THEREOF, A DISTANCE OF 918.94 FEET TO THE **POINT OF BEGINNING;** THENCE S88°03'23"E, DISTANCE OF 377.91 FEE; THENCE N01°56'37"E, DISTANCE OF 30.00 FEET; THENCE S88°03'23"E, DISTANCE OF 100.00 FEET; THENCE N01°33'30"E, DISTANCE OF 44.99 FEET; THENCE N89°57'06"E, DISTANCE OF 50.17 FEET; THENCE S88°03'23"E, DISTANCE OF 132.25 FEET TO A POINT ON THE WEST LINE OF THE E ½ SW ¼ SE ¼ OF SECTION 03; THENCE N01°47'08"E, ALONG THE WEST LINE OF SAID E ½ SW ¼ SE ¼ AND THE EAST LINE OF PHASES 1 AND 3 OF NORTH HAVEN SUBDIVISION, A DISTANCE OF 422.36 FEET TO THE SOUTHEAST CORNER OF THE E ½ NW ¼ SE ¼ OF SECTION 03; THENCE N01°46'52"E, ALONG THE WEST LINE OF THE E ½ NW ¼ SE ¼ OF SECTION 03 AND THE EAST LINE OF PHASES 3, 5, AND 6 OF NORTH HAVEN SUBDIVISION, A DISTANCE OF 622.10 FEET TO THE NORTHEAST CORNER OF PHASE 6 OF NORTH HAVEN SUBDIVISION; THENCE LEAVING SAID WEST LINE AND ALONG THE NORTH LINE OF SAID PHASE 6 OF NORTH HAVEN SUBDIVISION THE FOLLOWING NINE (9) COURSES: N86°33'06"W, A DISTANCE OF 22.77 FEET; THENCE N84°59'24"W, A DISTANCE OF 131.54 FEET; THENCE N84°31'04"W, A DISTANCE OF 62.99 FEET; THENCE N85°46'50"W, A DISTANCE OF 67.99 FEET; THENCE N85°41'34"W, A DISTANCE OF 72.05 FEET; THENCE N85°38'26"W, A DISTANCE OF 70.16 FEET; THENCE N86°18'18"W, A DISTANCE OF 81.42 FEET; THENCE N86°24'07"W, A DISTANCE OF 101.38 FEET; THENCE N89°23'01"W, A DISTANCE OF 21.11 FEET TO THE NORTHWEST CORNER OF SAID PHASE 6 OF NORTH HAVEN SUBDIVISION; THENCE N03°27'25"E, A DISTANCE OF 24.22 FEET TO A POINT ON THE NORTH LINE OF THE S ½ NW ¼ SE ¼ OF SECTION 03, BEING 27.31 FEET EAST OF THE NORTHWEST CORNER THEREOF; THENCE S87°18'51"E, ALONG THE NORTH LINE THEREOF, A DISTANCE OF 1,287.43 FEET TO THE NORTHEAST CORNER OF THE E ½ S ½ NW ¼ SE ¼ OF SECTION 03; THENCE S01°36'20"W, ALONG THE EAST LINE THEREOF, A DISTANCE OF 667.35 FEET TO THE NORTHEAST CORNER OF THE E ½ SW ¼ SE ¼ OF SECTION 03; THENCE S01°37'01"W, ALONG THE EAST LINE THEREOF, A DISTANCE OF 332.99 TO THE POINT OF BEGINNING; CONTAINING 698,018 SQUARE FEET, OR 16.02 ACRES, MORE OR LESS..

NOTE:
TRACT C ARE DRAINAGE, UTILITY AND ACCESS EASEMENTS THAT WILL BE MAINTAINED BY THE HILLDALE CROSSING IMPROVEMENT DISTRICT/PROPERTY OWNER ASSOCIATION. ALL DRAINAGE PATHWAYS FROM TRACT C WILL BE INSPECTED, MAINTAINED, AND REPAIRED TO POINT OF DISCHARGE ON HILLDALE ROAD RIGHT-OF-WAY."

Line Table		
Line #	Direction	Length
L1	S42°59'06"E	25.00'
L2	S47°00'54"W	25.00'
L3	S46°06'12"E	30.78'
L4	N42°59'06"W	25.00'
L5	S47°00'54"W	25.00'
L6	S46°57'33"W	24.97'
L7	N86°33'06"W	22.77'
L8	N89°23'01"W	21.11'
L9	N3°27'25"E	24.22'

Curve Table				
Curve #	Delta	Chord B & D	Arc Length	Arc Radius
C15	51°49'12"	N23°57'59"W 21.85'	22.61'	25.00'
C16	37°22'22"	N31°11'24"W 32.04'	32.61'	50.00'
C17	54°56'09"	N14°57'51"E 46.13'	47.94'	50.00'
C18	51°15'03"	N68°03'28"E 43.25'	44.72'	50.00'
C19	41°55'43"	S65°21'09"E 35.78'	36.59'	50.00'
C20	43°40'05"	S66°13'20"E 18.60'	19.05'	25.00'
C21	89°51'27"	N47°00'54"E 70.62'	78.42'	50.00'
C22	90°08'33"	N42°59'06"W 35.40'	39.33'	25.00'
C23	48°09'03"	S67°52'06"W 20.40'	21.01'	25.00'
C24	63°17'10"	S75°26'09"W 52.46'	55.23'	50.00'
C25	47°05'50"	N49°22'21"W 39.95'	41.10'	50.00'
C26	55°15'01"	N1°48'04"E 46.37'	48.22'	50.00'
C27	47°22'55"	N53°07'03"E 40.18'	41.35'	50.00'
C28	63°21'50"	S71°30'35"E 52.52'	55.30'	50.00'
C29	48°13'43"	S63°56'31"E 20.43'	21.04'	25.00'
C30	89°51'27"	N47°00'54"E 35.31'	39.21'	25.00'
C31	90°08'33"	N42°59'06"W 70.80'	78.66'	50.00'
C32	39°29'13"	S71°49'43"W 16.89'	17.23'	25.00'
C33	42°28'33"	S73°19'30"W 36.22'	37.07'	50.00'
C34	46°53'32"	N61°59'28"W 39.79'	40.92'	50.00'
C35	51°07'26"	N12°58'58"W 43.15'	44.61'	50.00'
C36	28°35'58"	N26°52'44"E 24.70'	24.96'	50.00'
C37	41°41'15"	N20°24'45"E 17.79'	18.19'	25.00'
C38	90°00'00"	S43°03'23"E 35.36'	39.27'	25.00'
C39	26°03'39"	N78°54'48"E 11.27'	11.37'	25.00'
C40	22°05'08"	N54°50'24"E 9.58'	9.64'	25.00'
C41	76°32'34"	N82°04'07"E 61.94'	66.80'	50.00'
C42	56°50'33"	S31°14'19"E 47.60'	49.60'	50.00'
C43	50°45'14"	S22°33'35"W 42.86'	44.29'	50.00'
C44	53°24'56"	S74°38'39"W 44.94'	46.61'	50.00'
C45	38°49'29"	N59°14'08"W 33.24'	33.88'	50.00'
C46	48°13'59"	N63°56'23"W 20.43'	21.05'	25.00'
C47	90°00'00"	S46°56'37"W 35.36'	39.27'	25.00'
C48	90°00'00"	S43°03'23"E 70.71'	78.54'	50.00'
C49	38°58'49"	N72°27'12"E 16.68'	17.01'	25.00'
C50	29°19'37"	N67°37'36"E 22.78'	23.03'	45.00'
C51	50°27'52"	S72°28'40"E 38.37'	39.63'	45.00'
C52	51°48'12"	S21°20'38"E 39.31'	40.69'	45.00'
C53	36°33'29"	S22°50'13"W 28.23'	28.71'	45.00'
C54	39°01'47"	S21°36'04"W 16.70'	17.03'	25.00'
C55	43°43'24"	S19°46'32"E 18.62'	19.08'	25.00'
C56	34°24'02"	S24°26'13"E 29.57'	30.02'	50.00'
C57	49°06'39"	S17°19'07"W 41.56'	42.86'	50.00'
C58	44°11'24"	S63°58'09"W 37.61'	38.56'	50.00'
C59	49°39'59"	N69°06'10"W 42.00'	43.34'	50.00'
C60	43°47'13"	N66°09'47"W 18.64'	19.11'	25.00'
C61	90°00'00"	S46°56'37"W 70.71'	78.54'	50.00'
C89	41°59'09"	N22°56'11"E 53.74'	54.96'	75.00'
C90	48°00'51"	N67°56'11"E 61.03'	62.85'	75.00'
C91	44°55'44"	N69°28'45"E 57.32'	58.81'	75.00'
C92	44°55'44"	N24°33'02"E 57.32'	58.81'	75.00'
C93	45°04'16"	N20°26'58"W 57.49'	59.00'	75.00'
C94	45°04'16"	N65°31'15"W 57.49'	59.00'	75.00'
C95	45°00'55"	N65°32'55"W 57.42'	58.93'	75.00'
C96	44°59'05"	N20°32'55"W 57.38'	58.88'	75.00'

CERTIFICATIONS:

OWNER:
Name: HAVENS DEVELOPMENT, LLC
Address: 22095 I-30 #500
BRYANT AR 72022

DEVELOPER:
Name: HAVENS DEVELOPMENT, LLC
Address: 22095 I-30 #500
BRYANT AR 72022

CERTIFICATE OF OWNER:

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

Date of Execution _____ Name: _____

Source of Tile: D.R. BOOK 2020 PAGE 007050

CERTIFICATE OF FINAL SURVEYING ACCURACY:

I, Jonathan L. Hope, 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 location, size, type and material are correctly shown; and that all interior lot lines have been adjusted to "as built conditions" and are accurately described on the plat and identified on the ground in terms of length and direction of the property side as required in accord with the City of Bryant Subdivision Regulation Ordinance.

Date of Execution

Jonathan L. Hope
Registered Professional
Land Surveyor No. 1762 Arkansas

CERTIFICATE OF FINAL ENGINEERING ACCURACY:

I, Kazi Tamzidual Islam, hereby certify that this plat correctly represents a plat made by me, and that the engineering requirements of the City of Bryant Subdivision Rules and Regulations have been complied with.

Date of Execution

Kazi Tamzidual Islam
Registered Professional
Engineer, No. 20876 Arkansas

CERTIFICATE OF FINAL PLAT APPROVAL:

Pursuant to the City of Bryant Subdivision Rules and Regulations, and all of the conditions of approval having been completed, this document is hereby accepted. This certificate is hereby executed under the authority of said rules and regulations.

Date of Execution

Rick Johnson,
Bryant Planning Commission Chairman

By affixing my seal and signature, I Jonathan L. Hope PLS No, 1762, hereby certify that this drawing correctly depicts a survey compiled under my supervision.

NOTE: This survey was based on legal descriptions and title work furnished by others and does not represent a title search.

No portion of the property described hereon lies within the 100 year floodplain, according to the Federal Insurance Rate Map, panel #05125C0240E, Dated: 06/05/2020 .

REGISTERED
STATE OF ARKANSAS
NO. 1762
SIGNATURE
JONATHAN L. HOPE
PROFESSIONAL LAND SURVEYOR

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
NO. 20876
KAZI TAMZIDUL ISLAM

PROPERTY SPECIFICATIONS:

OWNER: HAVEN'S DEVELOPMENT, LLC
P.O. BOX 7745
LITTLE ROCK, AR 712217

DEVELOPER/: HAVEN'S DEVELOPMENT, LLC
SUBDIVIDER P.O. BOX 7745
LITTLE ROCK, AR 712217

ENGINEERS: HOPE CONSULTING INC.
117 S. MARKET STREET
BENTON, AR 72015

NAME OF SUBDIVISION: HILLDALE CROSSING PHASE 2

INSTRUMENT # 2020-007050

AVERAGE LOT SIZE: 60 x 100' (6,000 S.F.)
NUMBER OF LOTS: 76

SOURCE OF WATER: WATER USERS
SOURCE OF SEWER: BRYANT
SOURCE OF ELECTRIC: FIRST ELECTRIC

BUILDING SETBACKS:
FRONT-15' OR AS SHOWN
REAR-20' OR AS SHOWN
SIDE-8' OR AS SHOWN

UTILITY & DRAINAGE EASEMENTS:
FRONT-10' OR AS SHOWN
REAR - 5' OR AS SHOWN
SIDE - 5' OR AS SHOWN

HOPE CONSULTING
ENGINEERS - SURVEYORS
117 S. Market Street,
Benton, Arkansas 72015
PH. (501)315-2626
FAX (501) 315-0024
www.hopeconsulting.com

FOR USE AND BENEFIT OF:
HAVENS DEVELOPMENT, LLC

FINAL PLAT
HILLDALE CROSSING PHASE 2
A SUBDIVISION IN SALINE COUNTY, ARKANSAS

DATE: 03/08/2023	C.A.D. BY: B.JOHNSON	DRAWING NUMBER:
REVISED:	CHECKED BY:	20-0169
	SCALE: 1"=60'	

500	1S	14W	0	3	330	62	1762

LEGEND
- Stop Sign
- Street light
- Fire Hydrant
- Computed point
- Found monument
- Set #4 RB/Plas. Cap (SIP)
- (D) -- Deeded
- (M) -- Measured
- (P) -- Platted

HOPE
CONSULTING
ENGINEERS • SURVEYORS

March 6, 2023

Truett Smith
City of Bryant
210 Southwest Third St., Bryant, AR 72022

RE: Hilldale Crossing-Hilldale Final Plat Phase 2

Dear Truett:

On behalf of the property owner, Hope Consulting is requesting the final review of this residential subdivision project located in the Bryant ETJ. This subdivision development consists of sewer provided by Bryant, Water provided by Water Users, and Electric provided by First Electric. We are submitting to start the review for the Final plat. It is the desire of our client to be on the April Planning Commission agenda.

The developer of this project is Todd and Callie Havens of Havens Development.

Todd Havens: todd@havensdev.com
Callie Havens: callie@havensdev.com

Please feel free to contact me with any questions or concerns or if I can be of any further assistance.

Sincerely,

Jonathan Hope

129 N Main St. Benton, Arkansas 72015
501-315-2626
www.hopeconsulting.com

HILLTOP LANDING SUBDIVISION

HILLTOP ROAD & MILLER ROAD, BRYANT, AR 72022

DRAINAGE REPORT

FOR
City of Bryant, Saline County, AR

October 2022

Owner & Developer: NXT GEN HOMES LLC.

By:

HOPE
CONSULTING
ENGINEERS • SURVEYORS

TABLE OF CONTENTS

ITEM DESCRIPTION

Narrative & Summary

PROJECT TITLE

Hilltop Landing Subdivision

PROJECT PROPERTY OWNER

Nxt Gen Homes LLC.

PROJECT LOCATION

Hilltop Road and Miller Road, Bryant, AR

PROJECT DESCRIPTION

The proposed sub divisional development is on Hilltop Road and Miller Road, Bryant, AR . Total development site area is 54.0 acres.

DRAINAGE ANALYSIS

On Site Drainage- Rational method was used to determine the existing and proposed flows from proposed site. There will be four detention ponds to detain water from this development. Detailed drainage calculations considering the future expected development has been conducted to determine the required detention ponds and culvert dimensions. Summary of the calculations are below:

Detention Pond-1

- Pond is situated on the north east side of the property.
- Pre-development area 34.50 acres.
- Post-development area 36.28 acres.
- Pre-development runoff coefficient 0.47.
- Post-development runoff cumulative coefficient 0.65
- Pond has a bottom area of 15,480 sft with bottom elevation of 439.00'.
- One 42'' HDPE with 0.5% slope are proposed for outflow pipes.

Peak flows for Pre and post development phase of onsite area have been tabulated below-

Period of time	Pre-development	Post-dev. Without detention	Post-dev. With detention
	Peak Flow (cfs)	Peak Flow (cfs)	Peak Flow (cfs)
2-Year	69.54	90.29	41.60
5-Year	77.15	99.87	45.13
10-Year	89.68	117.23	49.24
25-Year	102.61	134.37	54.42
50-Year	116.82	153.15	64.25
100-Year	123.94	162.70	70.54

Detention Pond-2

- Pond is situated on the South-west side of the property.
- Pre-development area 7.2 acres.
- Post-development area 4.11 acres.
- Pre-development runoff coefficient 0.40.
- Post-development runoff cumulative coefficient 0.40
- Pond has a bottom area of 18,270 sft with bottom elevation of 511.00'.
- One 12'' HDPE with 9% slope are proposed for outflow pipes.

Peak flows for Pre and post development phase of onsite area have been tabulated below-

Period of time	Pre-development	Post-dev. Without detention	Post-dev. With detention
	Peak Flow (cfs)	Peak Flow (cfs)	Peak Flow (cfs)
2-Year	12.77	6.629	0.387
5-Year	14.20	7.333	0.462
10-Year	16.42	8.607	0.613
25-Year	18.77	9.865	0.773
50-Year	21.35	11.24	0.959
100-Year	22.64	11.95	1.059

Detention Pond-3

- Pond is situated on the south east side of the property.
- Pre-development area 2.25 acres.
- Post-development area 3.21 acres.
- Pre-development runoff coefficient 0.47.
- Post-development runoff cumulative coefficient 0.65
- Pond has a bottom area of 5,512 sft with bottom elevation of 495.00'.
- One 18'' HDPE with 7.47% slope are proposed for outflow pipes.

Peak flows for Pre and post development phase of onsite area have been tabulated below-

Period of time	Pre-development	Post-dev. Without detention	Post-dev. With detention
	Peak Flow (cfs)	Peak Flow (cfs)	Peak Flow (cfs)
2-Year	5.039	9.942	2.797
5-Year	5.635	11.12	3.269
10-Year	6.430	12.69	3.910
25-Year	7.337	14.48	4.642
50-Year	8.326	16.43	5.424
100-Year	8.825	17.40	5.810

Detention Pond-4

- Pond is situated on the West side of the property.
- Pre-development area 14.40 acres.
- Post-development area 13.97 acres.
- Pre-development runoff coefficient 0.47.
- Post-development runoff cumulative coefficient 0.65
- Pond has a bottom area of 3725.16 sft with bottom elevation of 508.00'.
- One 36" HDPE with 3.79% slope is proposed for outflow pipes.

Peak flows for Pre and post development phase of onsite area have been tabulated below-

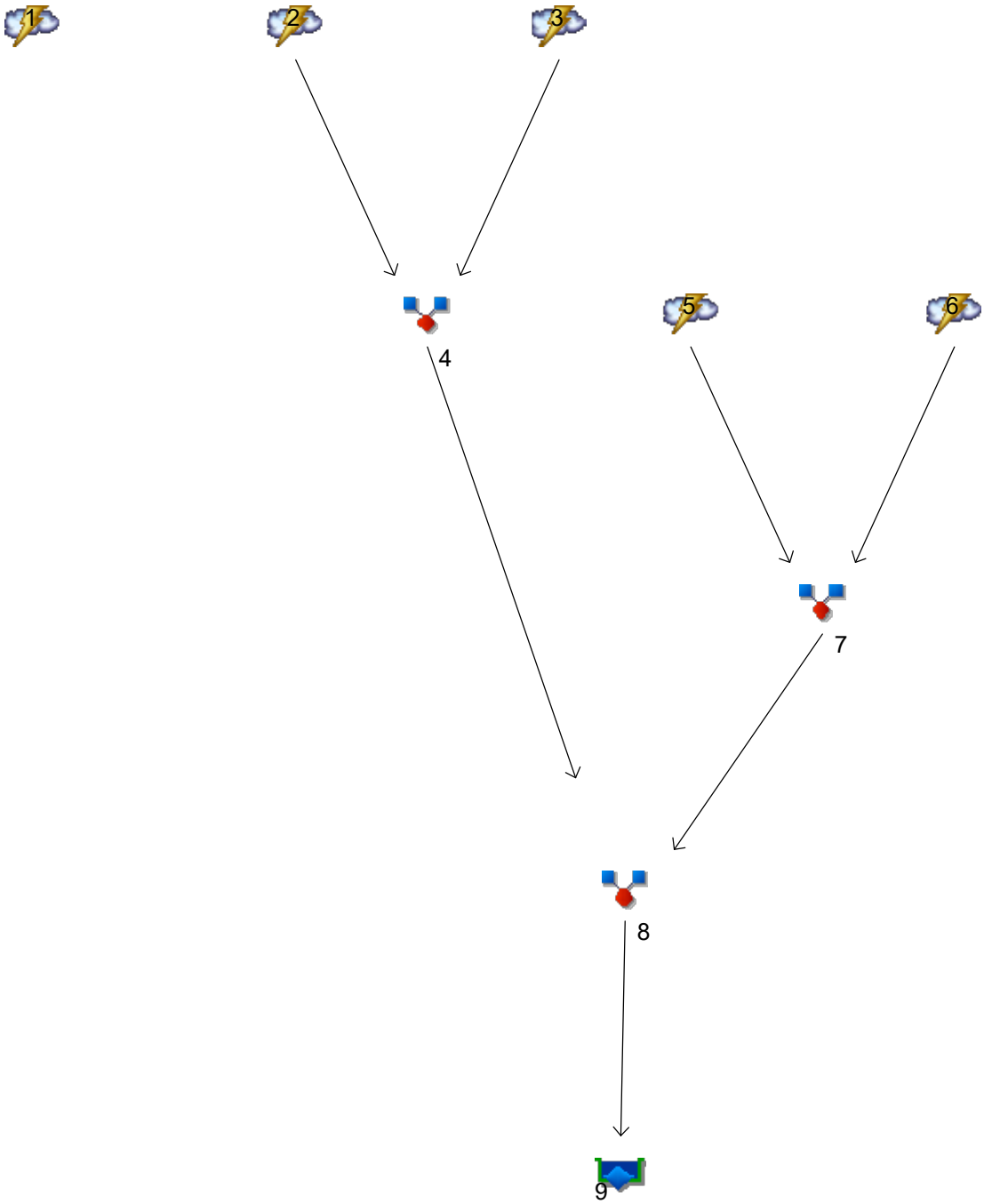
Period of time	Pre-development	Post-dev. Without detention	Post-dev. With detention
	Peak Flow (cfs)	Peak Flow (cfs)	Peak Flow (cfs)
2-Year	31.09	43.27	27.37
5-Year	34.66	48.39	30.47
10-Year	39.81	55.21	34.08
25-Year	45.47	63.00	37.59
50-Year	51.67	71.49	41.26
100-Year	54.77	75.78	42.99

CONCLUSION

From the onsite drainage calculation, it is seen that there is decrease in flow for all storm events due to the proposed detention ponds.

Hydrograph Summary Report

Watershed Model Schematic



Legend

Hyd.	Origin	Description
1	Rational	Pre Development
2	Rational	Post development-1a
3	Rational	post development-1b
4	Combine	combine-1
5	Rational	post development-2a
6	Rational	post development-2b
7	Combine	combine-2
8	Combine	<no description>
9	Reservoir	detention pond 1

Multi-Hydrograph Plot

Hyd. No. 1

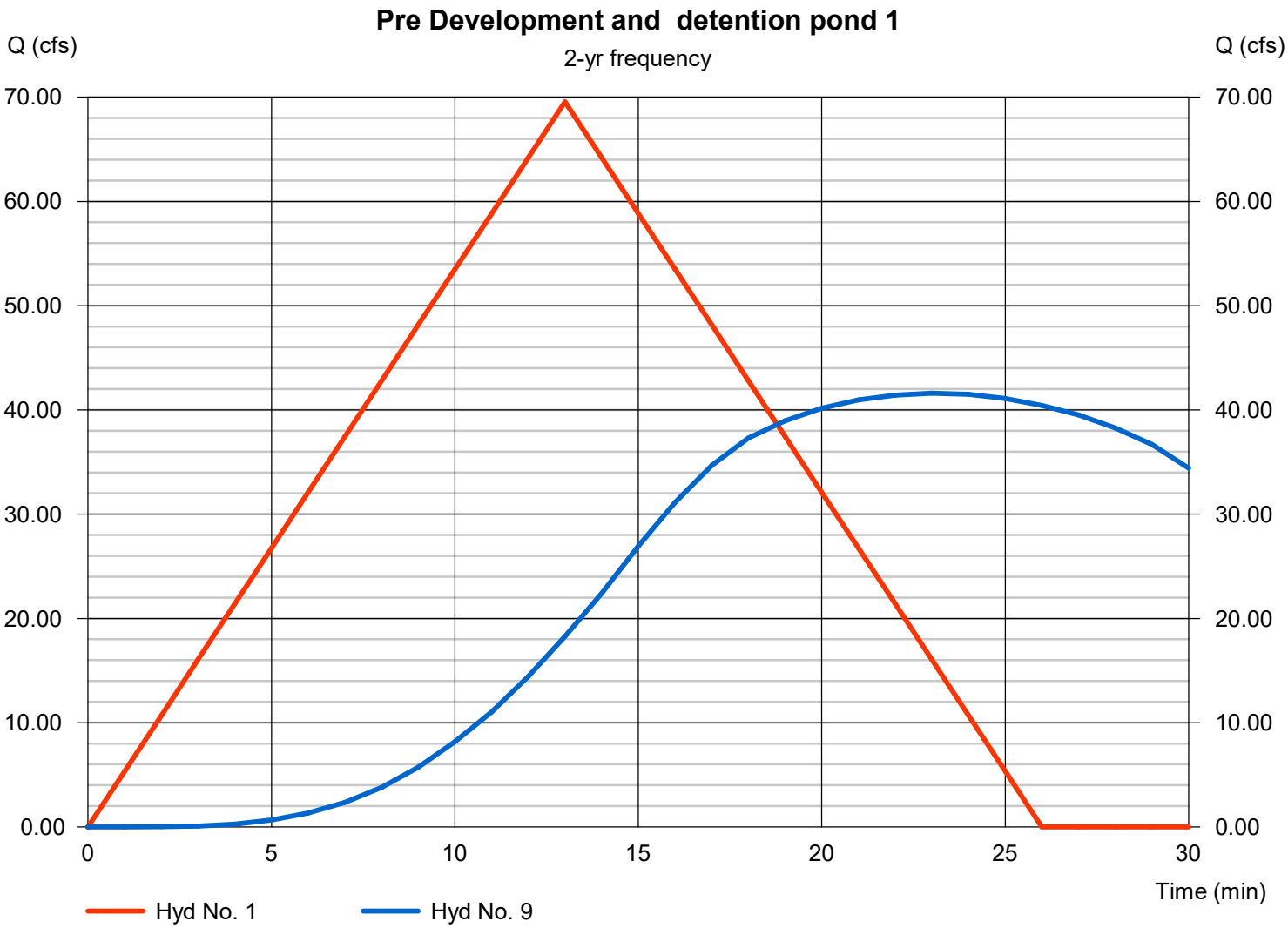
Pre Development

Hydrograph type	=	Rational
Peak discharge	=	69.54 cfs
Time to peak	=	13 min
Hyd. Volume	=	54,242 cuft

Hyd. No. 9

detention pond 1

Hydrograph type	=	Reservoir
Peak discharge	=	41.60 cfs
Time to peak	=	23 min
Hyd. Volume	=	81,225 cuft



Multi-Hydrograph Plot

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2023

Hyd. No. 1

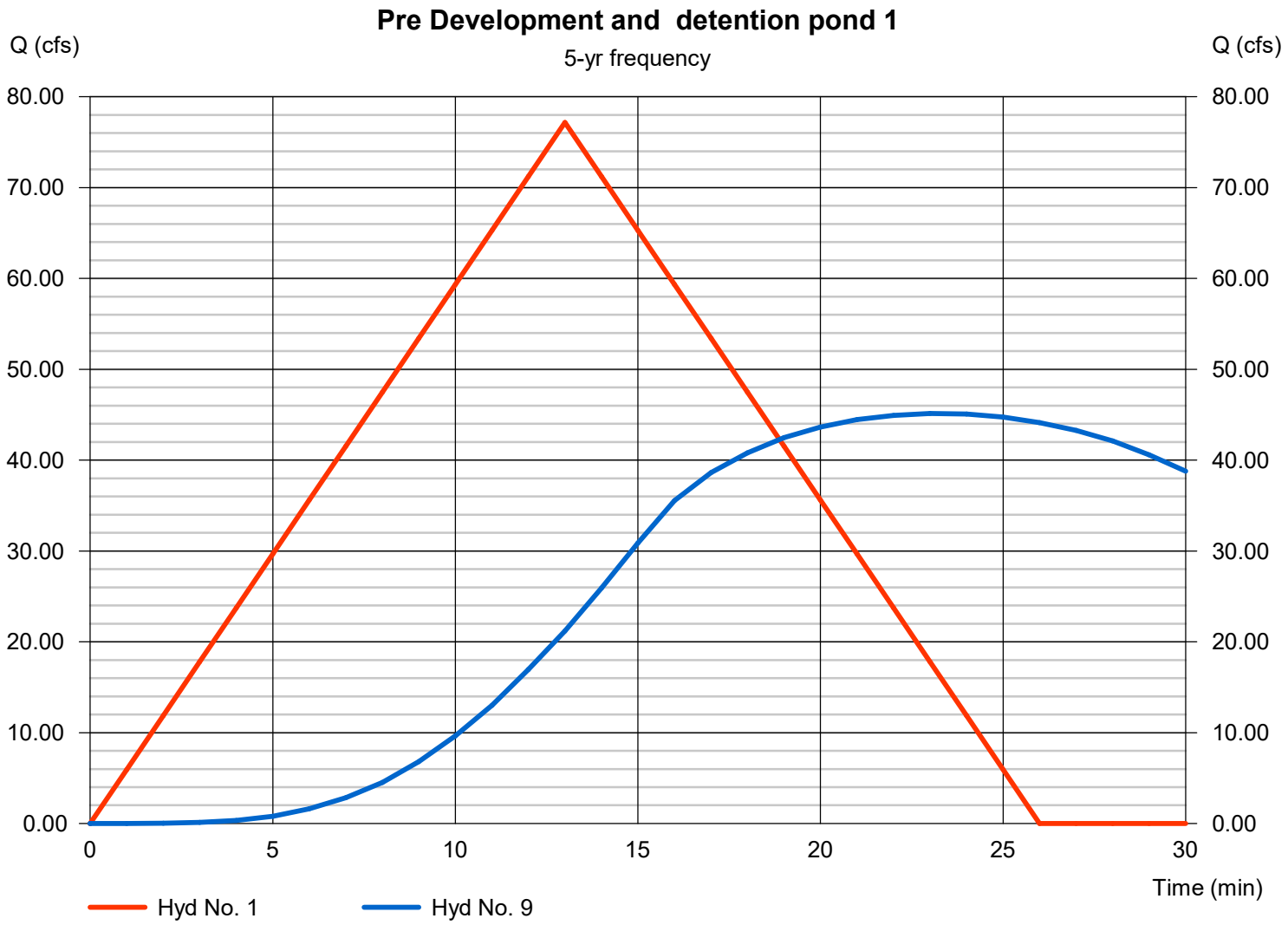
Pre Development

Hydrograph type	=	Rational
Peak discharge	=	77.15 cfs
Time to peak	=	13 min
Hyd. Volume	=	60,181 cuft

Hyd. No. 9

detention pond 1

Hydrograph type	=	Reservoir
Peak discharge	=	45.13 cfs
Time to peak	=	23 min
Hyd. Volume	=	89,848 cuft



Multi-Hydrograph Plot

Hyd. No. 1

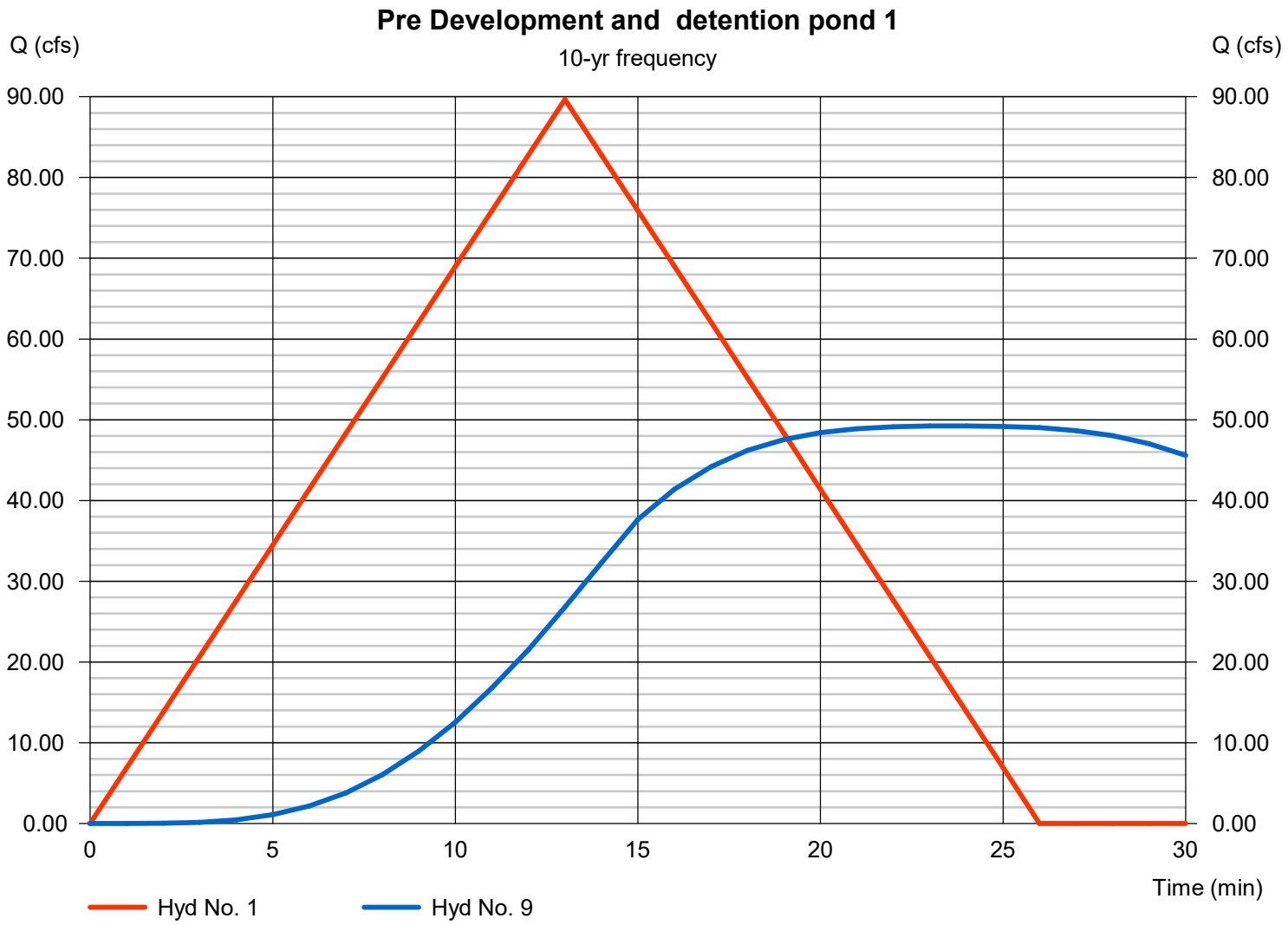
Pre Development

Hydrograph type	=	Rational
Peak discharge	=	89.68 cfs
Time to peak	=	13 min
Hyd. Volume	=	69,947 cuft

Hyd. No. 9

detention pond 1

Hydrograph type	=	Reservoir
Peak discharge	=	49.24 cfs
Time to peak	=	24 min
Hyd. Volume	=	105,468 cuft



Multi-Hydrograph Plot

Hyd. No. 1

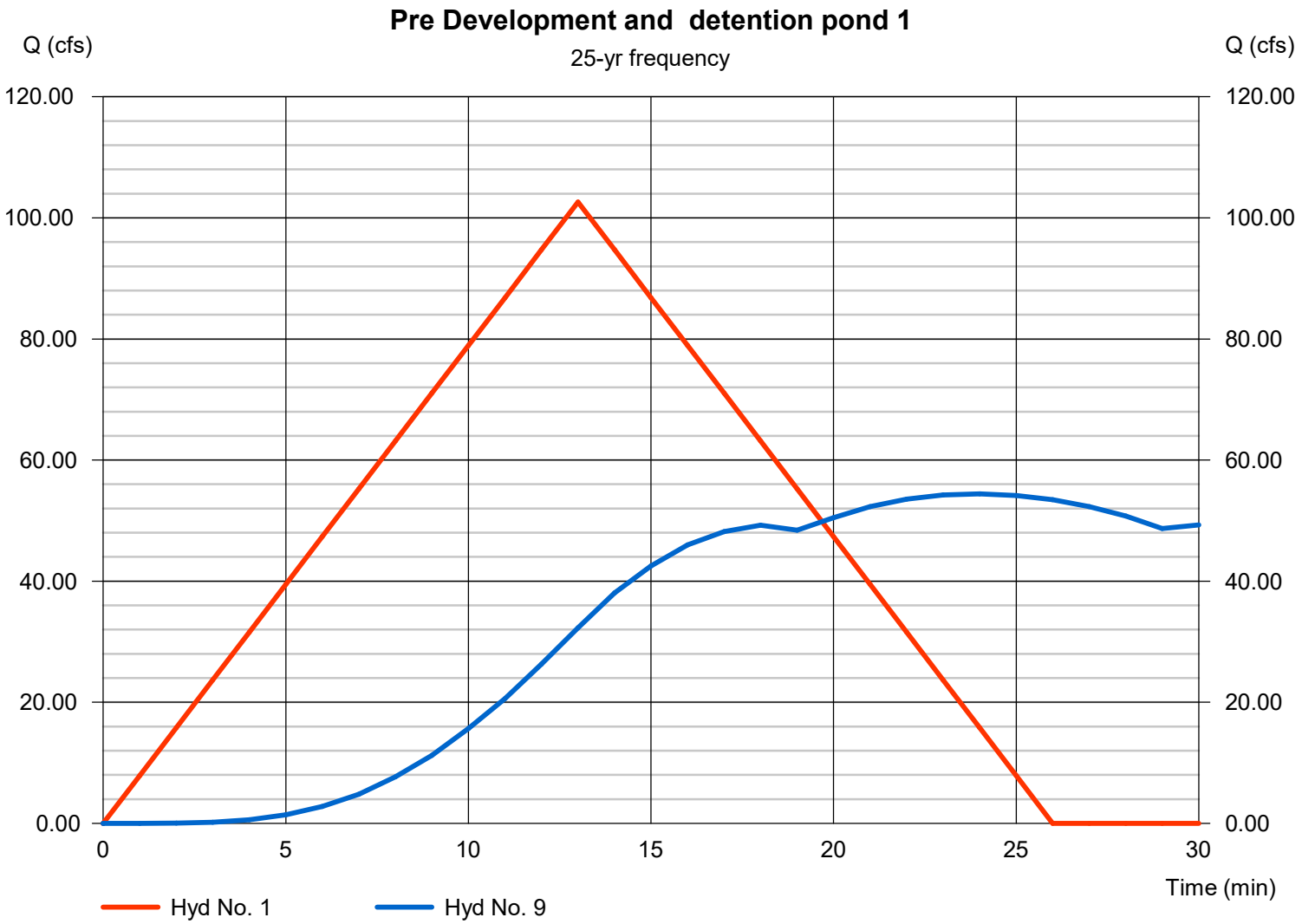
Pre Development

Hydrograph type	=	Rational
Peak discharge	=	102.61 cfs
Time to peak	=	13 min
Hyd. Volume	=	80,038 cuft

Hyd. No. 9

detention pond 1

Hydrograph type	=	Reservoir
Peak discharge	=	54.42 cfs
Time to peak	=	24 min
Hyd. Volume	=	120,893 cuft



Multi-Hydrograph Plot

Hyd. No. 1

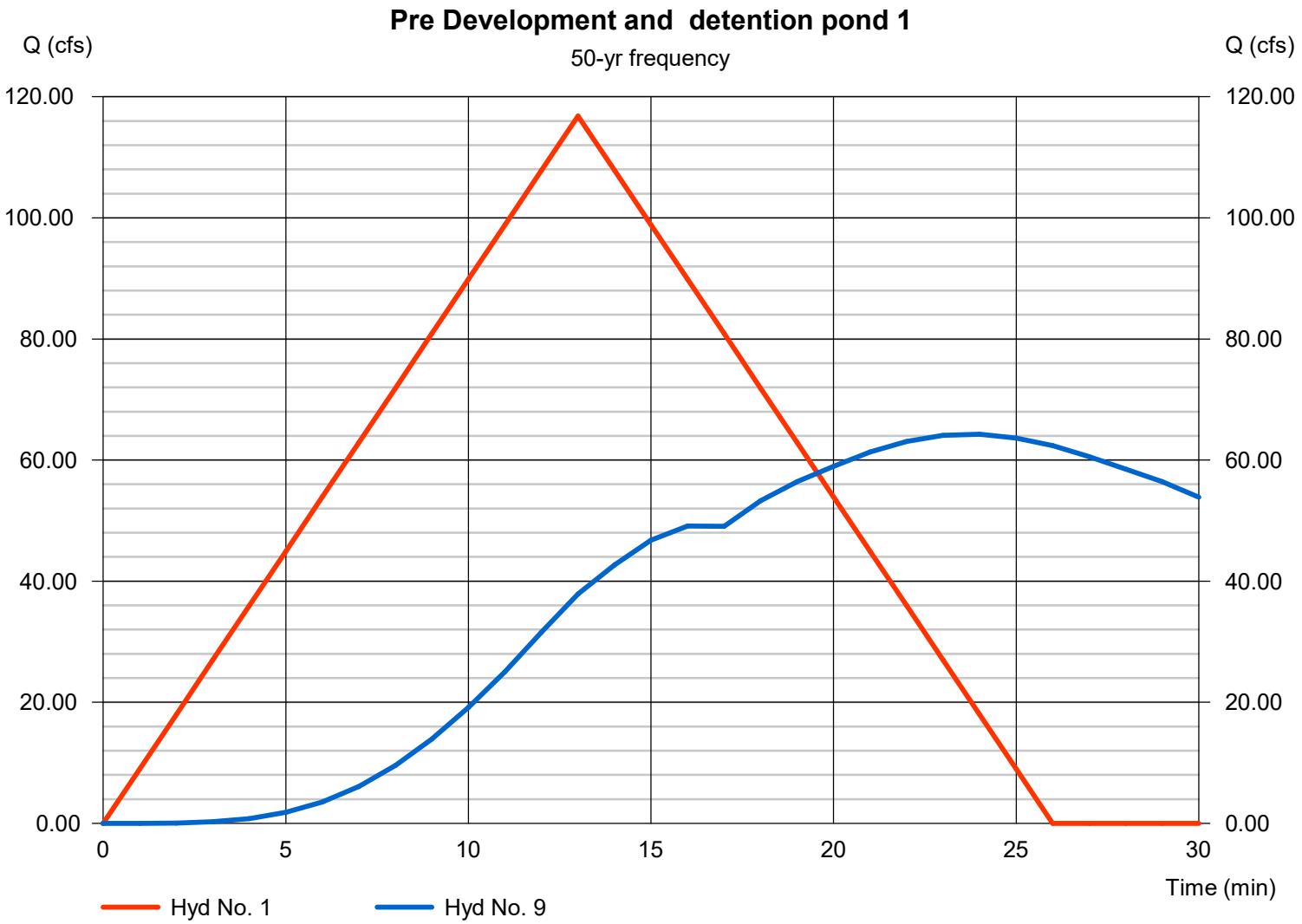
Pre Development

Hydrograph type	=	Rational
Peak discharge	=	116.82 cfs
Time to peak	=	13 min
Hyd. Volume	=	91,121 cuft

Hyd. No. 9

detention pond 1

Hydrograph type	=	Reservoir
Peak discharge	=	64.25 cfs
Time to peak	=	24 min
Hyd. Volume	=	137,798 cuft



Multi-Hydrograph Plot

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2023

Hyd. No. 1

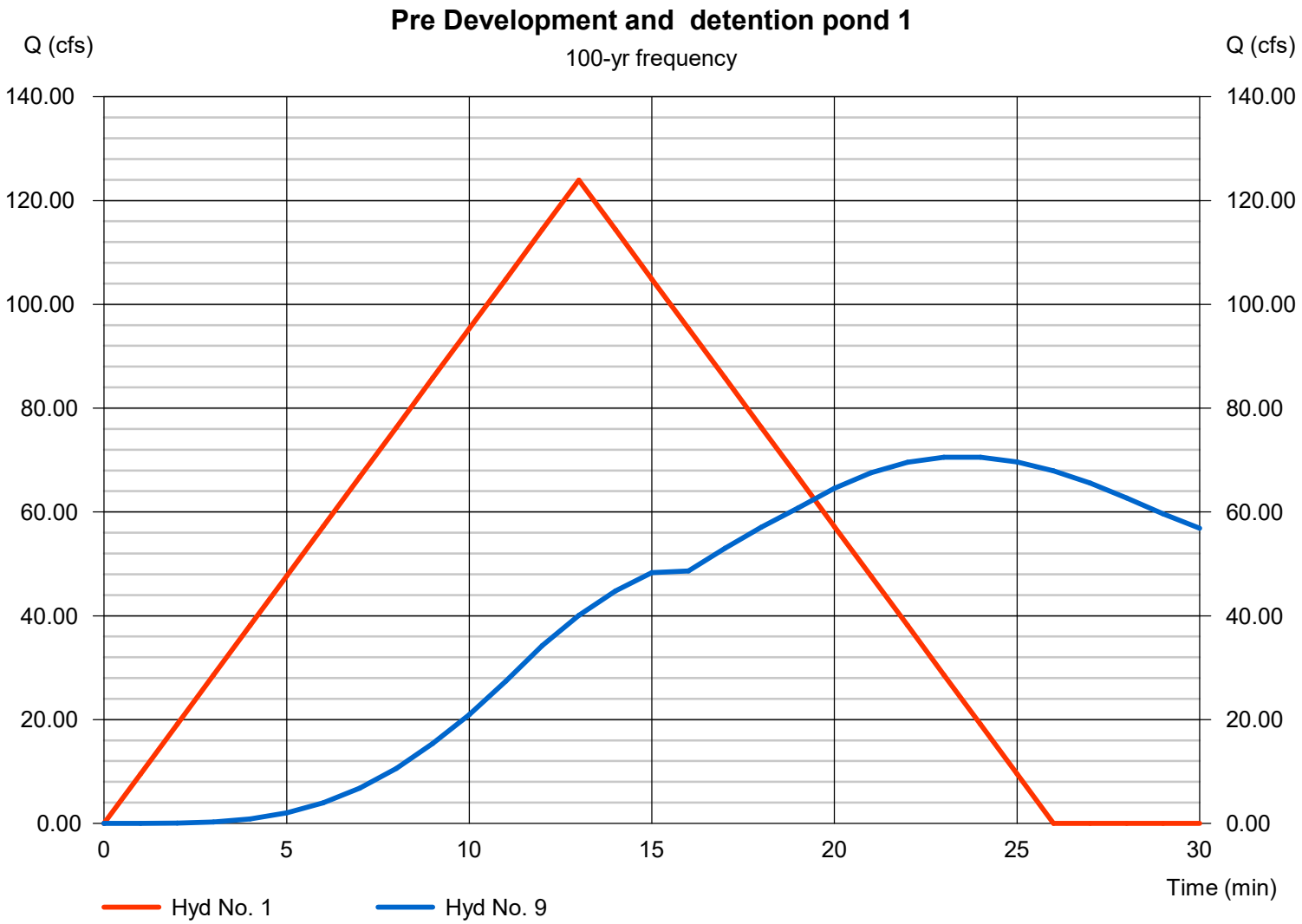
Pre Development

Hydrograph type	=	Rational
Peak discharge	=	123.94 cfs
Time to peak	=	13 min
Hyd. Volume	=	96,675 cuft

Hyd. No. 9

detention pond 1

Hydrograph type	=	Reservoir
Peak discharge	=	70.54 cfs
Time to peak	=	23 min
Hyd. Volume	=	146,395 cuft



Pond Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2023 Thursday, 10 / 6 / 2022

Pond No. 2 - Detention Pond 1

Pond Data

Trapezoid -Bottom L x W = 258.0 x 60.0 ft, Side slope = 3.00:1, Bottom elev. = 439.00 ft, Depth = 5.00 ft

Stage / Storage Table

Stage (ft)	Elevation (ft)	Contour area (sqft)	Incr. Storage (cuft)	Total storage (cuft)
0.00	439.00	15,480	0	0
0.50	439.50	16,443	7,980	7,980
1.00	440.00	17,424	8,466	16,446
1.50	440.50	18,423	8,961	25,407
2.00	441.00	19,440	9,465	34,872
2.50	441.50	20,475	9,978	44,850
3.00	442.00	21,528	10,500	55,350
3.50	442.50	22,599	11,031	66,381
4.00	443.00	23,688	11,571	77,952
4.50	443.50	24,795	12,120	90,072
5.00	444.00	25,920	12,678	102,750

Culvert / Orifice Structures

	[A]	[B]	[C]	[PrfRsr]
Rise (in)	= 42.00	Inactive	Inactive	0.00
Span (in)	= 42.00	0.00	0.00	0.00
No. Barrels	= 1	0	0	0
Invert El. (ft)	= 439.00	0.00	0.00	0.00
Length (ft)	= 215.00	0.00	0.00	0.00
Slope (%)	= 0.50	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

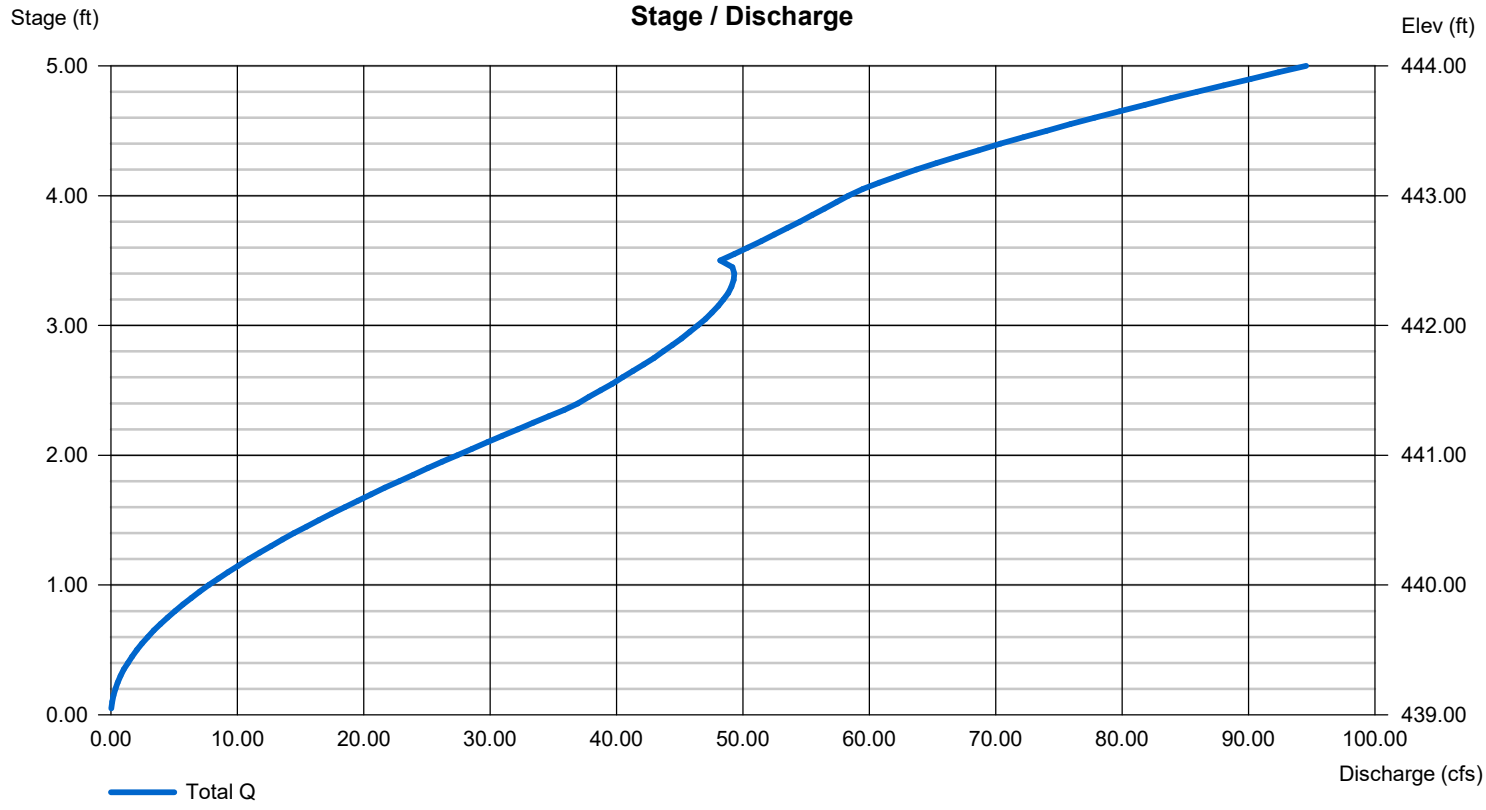
Weir Structures

	[A]	[B]	[C]	[D]
Crest Len (ft)	= 6.00	Inactive	Inactive	0.00
Crest El. (ft)	= 443.00	0.00	0.00	0.00
Weir Coeff.	= 3.33	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).



Hydrograph Summary Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2023

Hyd. No.	Hydrograph type (origin)	Peak flow (cfs)	Time interval (min)	Time to Peak (min)	Hyd. volume (cuft)	Inflow hyd(s)	Maximum elevation (ft)	Total strge used (cuft)	Hydrograph Description
1	Rational	69.54	1	13	54,242	------	------	------	Pre Development
2	Rational	60.00	1	15	53,998	------	------	------	Post development-1a
3	Rational	5.960	1	15	5,364	------	------	------	post development-1b
4	Combine	65.96	1	15	59,362	2, 3	------	------	combine-1
5	Rational	18.19	1	15	16,367	------	------	------	post development-2a
6	Rational	6.149	1	15	5,534	------	------	------	post development-2b
7	Combine	24.33	1	15	21,901	5, 6	------	------	combine-2
8	Combine	90.29	1	15	81,262	4, 7	------	------	<no description>
9	Reservoir	41.60	1	23	81,225	8	441.67	48,360	detention pond B

Hydrograph Summary Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2023

Hyd. No.	Hydrograph type (origin)	Peak flow (cfs)	Time interval (min)	Time to Peak (min)	Hyd. volume (cuft)	Inflow hyd(s)	Maximum elevation (ft)	Total strge used (cuft)	Hydrograph Description
1	Rational	77.15	1	13	60,181	------	------	------	Pre Development
2	Rational	66.36	1	15	59,728	------	------	------	Post development-1a
3	Rational	6.592	1	15	5,933	------	------	------	post development-1b
4	Combine	72.96	1	15	65,661	2, 3	------	------	combine-1
5	Rational	20.11	1	15	18,103	------	------	------	post development-2a
6	Rational	6.801	1	15	6,121	------	------	------	post development-2b
7	Combine	26.92	1	15	24,225	5, 6	------	------	combine-2
8	Combine	99.87	1	15	89,885	4, 7	------	------	<no description>
9	Reservoir	45.13	1	23	89,848	8	441.90	53,237	detention pond B

Hydrograph Summary Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2023

Hyd. No.	Hydrograph type (origin)	Peak flow (cfs)	Time interval (min)	Time to Peak (min)	Hyd. volume (cuft)	Inflow hyd(s)	Maximum elevation (ft)	Total strge used (cuft)	Hydrograph Description
1	Rational	89.68	1	13	69,947	------	------	------	Pre Development
2	Rational	77.90	1	15	70,107	------	------	------	Post development-1a
3	Rational	7.738	1	15	6,964	------	------	------	post development-1b
4	Combine	85.63	1	15	77,071	2, 3	------	------	combine-1
5	Rational	23.61	1	15	21,249	------	------	------	post development-2a
6	Rational	7.983	1	15	7,185	------	------	------	post development-2b
7	Combine	31.59	1	15	28,434	5, 6	------	------	combine-2
8	Combine	117.23	1	15	105,505	4, 7	------	------	<no description>
9	Reservoir	49.24	1	24	105,468	8	442.34	62,868	detention pond B

Hydrograph Summary Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2023

Hyd. No.	Hydrograph type (origin)	Peak flow (cfs)	Time interval (min)	Time to Peak (min)	Hyd. volume (cuft)	Inflow hyd(s)	Maximum elevation (ft)	Total strge used (cuft)	Hydrograph Description
1	Rational	102.61	1	13	80,038	------	------	------	Pre Development
2	Rational	89.29	1	15	80,357	------	------	------	Post development-1a
3	Rational	8.869	1	15	7,982	------	------	------	post development-1b
4	Combine	98.15	1	15	88,339	2, 3	------	------	combine-1
5	Rational	27.06	1	15	24,356	------	------	------	post development-2a
6	Rational	9.151	1	15	8,235	------	------	------	post development-2b
7	Combine	36.21	1	15	32,591	5, 6	------	------	combine-2
8	Combine	134.37	1	15	120,930	4, 7	------	------	<no description>
9	Reservoir	54.42	1	24	120,893	8	442.80	73,230	detention pond B

Hydrograph Summary Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2023

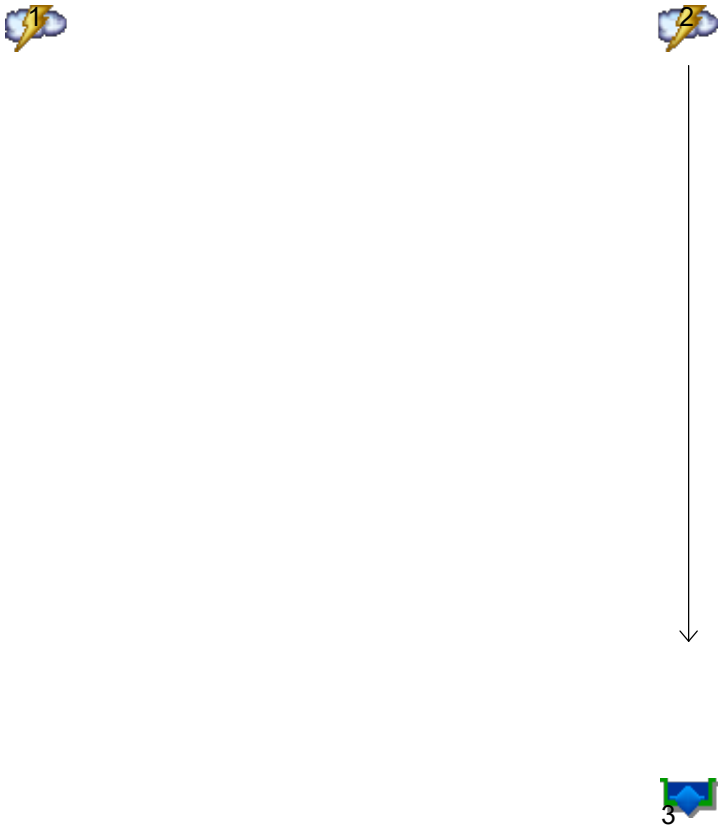
Hyd. No.	Hydrograph type (origin)	Peak flow (cfs)	Time interval (min)	Time to Peak (min)	Hyd. volume (cuft)	Inflow hyd(s)	Maximum elevation (ft)	Total strge used (cuft)	Hydrograph Description
1	Rational	116.82	1	13	91,121	------	------	------	Pre Development
2	Rational	101.77	1	15	91,590	------	------	------	Post development-1a
3	Rational	10.11	1	15	9,098	------	------	------	post development-1b
4	Combine	111.88	1	15	100,688	2, 3	------	------	combine-1
5	Rational	30.85	1	15	27,761	------	------	------	post development-2a
6	Rational	10.43	1	15	9,387	------	------	------	post development-2b
7	Combine	41.27	1	15	37,147	5, 6	------	------	combine-2
8	Combine	153.15	1	15	137,835	4, 7	------	------	<no description>
9	Reservoir	64.25	1	24	137,798	8	443.22	83,213	detention pond B

Hydrograph Summary Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2023

Hyd. No.	Hydrograph type (origin)	Peak flow (cfs)	Time interval (min)	Time to Peak (min)	Hyd. volume (cuft)	Inflow hyd(s)	Maximum elevation (ft)	Total strge used (cuft)	Hydrograph Description
1	Rational	123.94	1	13	96,675	------	------	------	Pre Development
2	Rational	108.11	1	15	97,303	------	------	------	Post development-1a
3	Rational	10.74	1	15	9,665	------	------	------	post development-1b
4	Combine	118.85	1	15	106,968	2, 3	------	------	combine-1
5	Rational	32.77	1	15	29,492	------	------	------	post development-2a
6	Rational	11.08	1	15	9,972	------	------	------	post development-2b
7	Combine	43.85	1	15	39,464	5, 6	------	------	combine-2
8	Combine	162.70	1	15	146,433	4, 7	------	------	<no description>
9	Reservoir	70.54	1	23	146,395	8	443.40	87,762	detention pond B

Watershed Model Schematic



Legend

Hyd.	Origin	Description
1	Rational	Pre development
2	Rational	Post development
3	Reservoir	detention pond

Multi-Hydrograph Plot

Hyd. No. 1

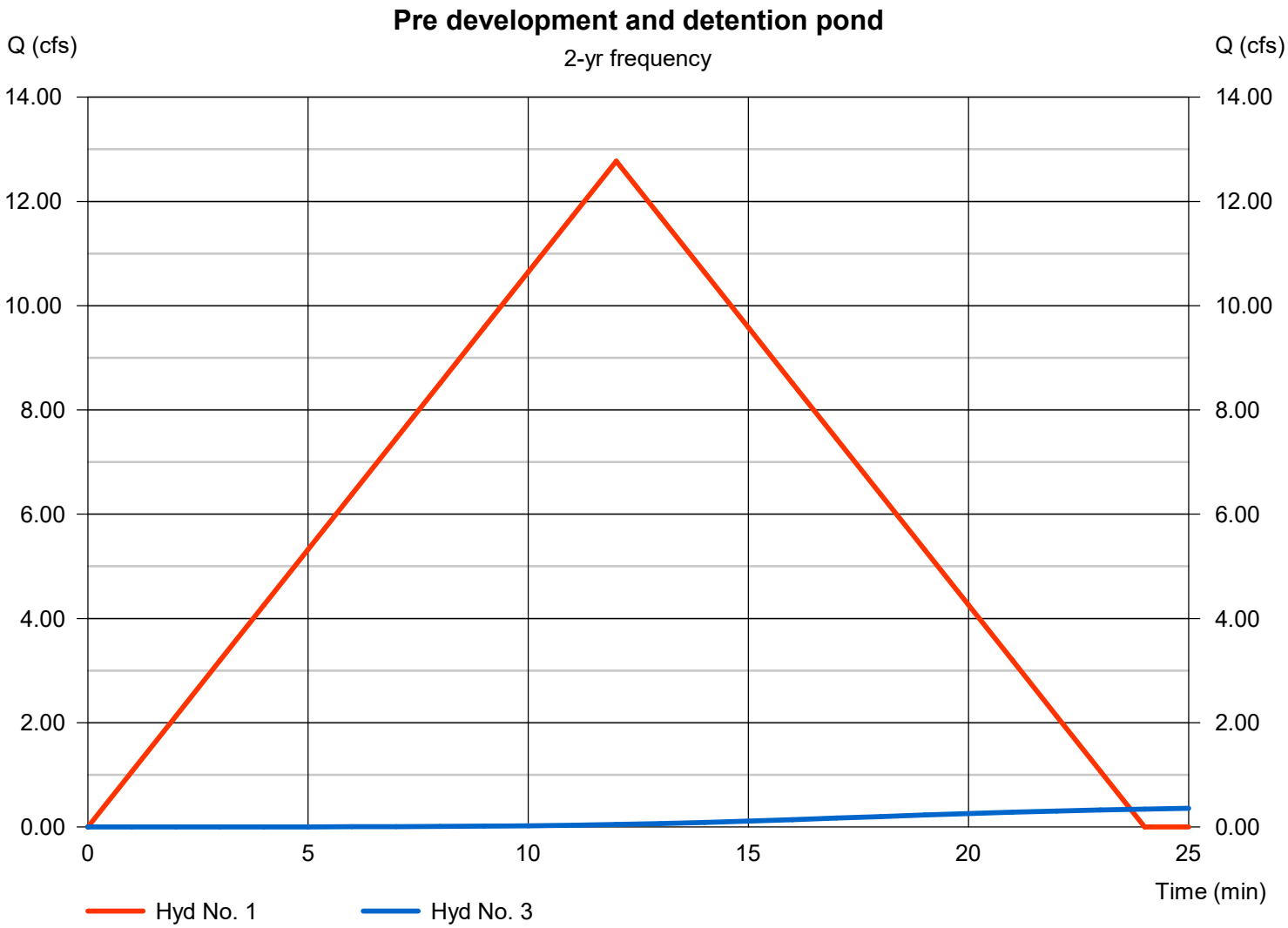
Pre development

Hydrograph type	=	Rational
Peak discharge	=	12.77 cfs
Time to peak	=	12 min
Hyd. Volume	=	9,197 cuft

Hyd. No. 3

detention pond

Hydrograph type	=	Reservoir
Peak discharge	=	0.39 cfs
Time to peak	=	29 min
Hyd. Volume	=	5,573 cuft



Multi-Hydrograph Plot

Hyd. No. 1

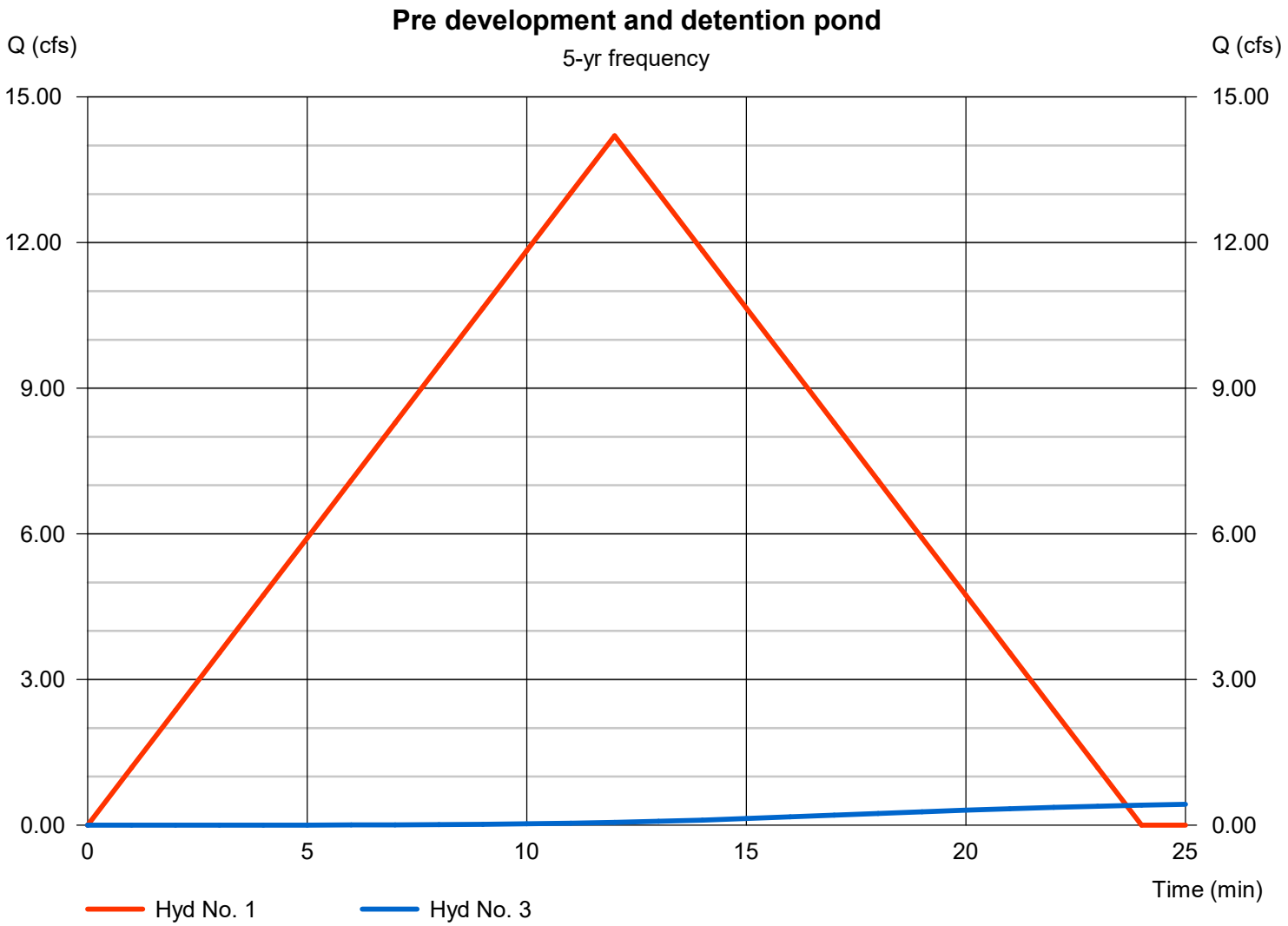
Pre development

Hydrograph type	=	Rational
Peak discharge	=	14.20 cfs
Time to peak	=	12 min
Hyd. Volume	=	10,226 cuft

Hyd. No. 3

detention pond

Hydrograph type	=	Reservoir
Peak discharge	=	0.46 cfs
Time to peak	=	29 min
Hyd. Volume	=	6,203 cuft



Multi-Hydrograph Plot

Hyd. No. 1

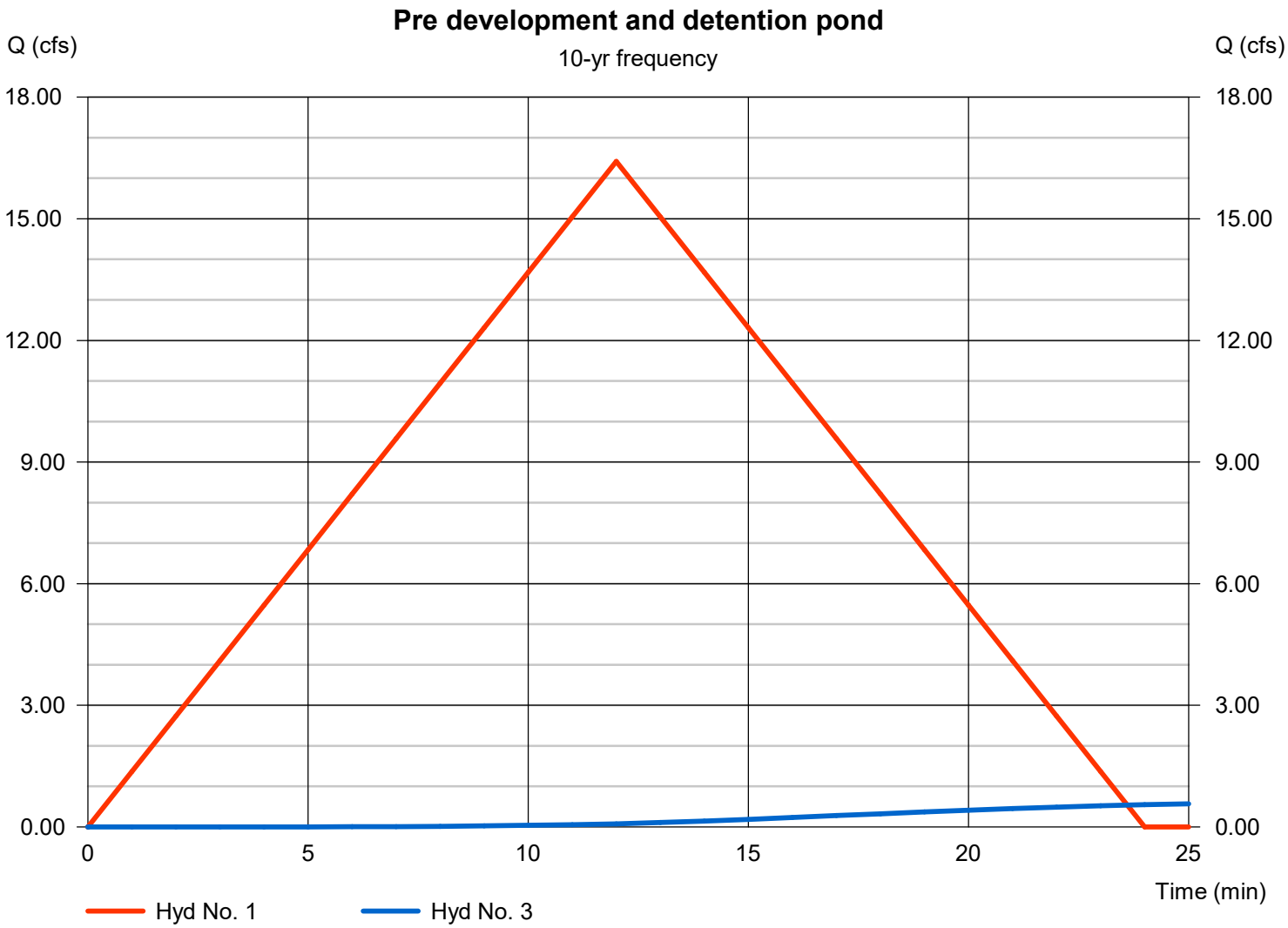
Pre development

Hydrograph type	=	Rational
Peak discharge	=	16.42 cfs
Time to peak	=	12 min
Hyd. Volume	=	11,819 cuft

Hyd. No. 3

detention pond

Hydrograph type	=	Reservoir
Peak discharge	=	0.61 cfs
Time to peak	=	29 min
Hyd. Volume	=	7,345 cuft



Multi-Hydrograph Plot

Hyd. No. 1

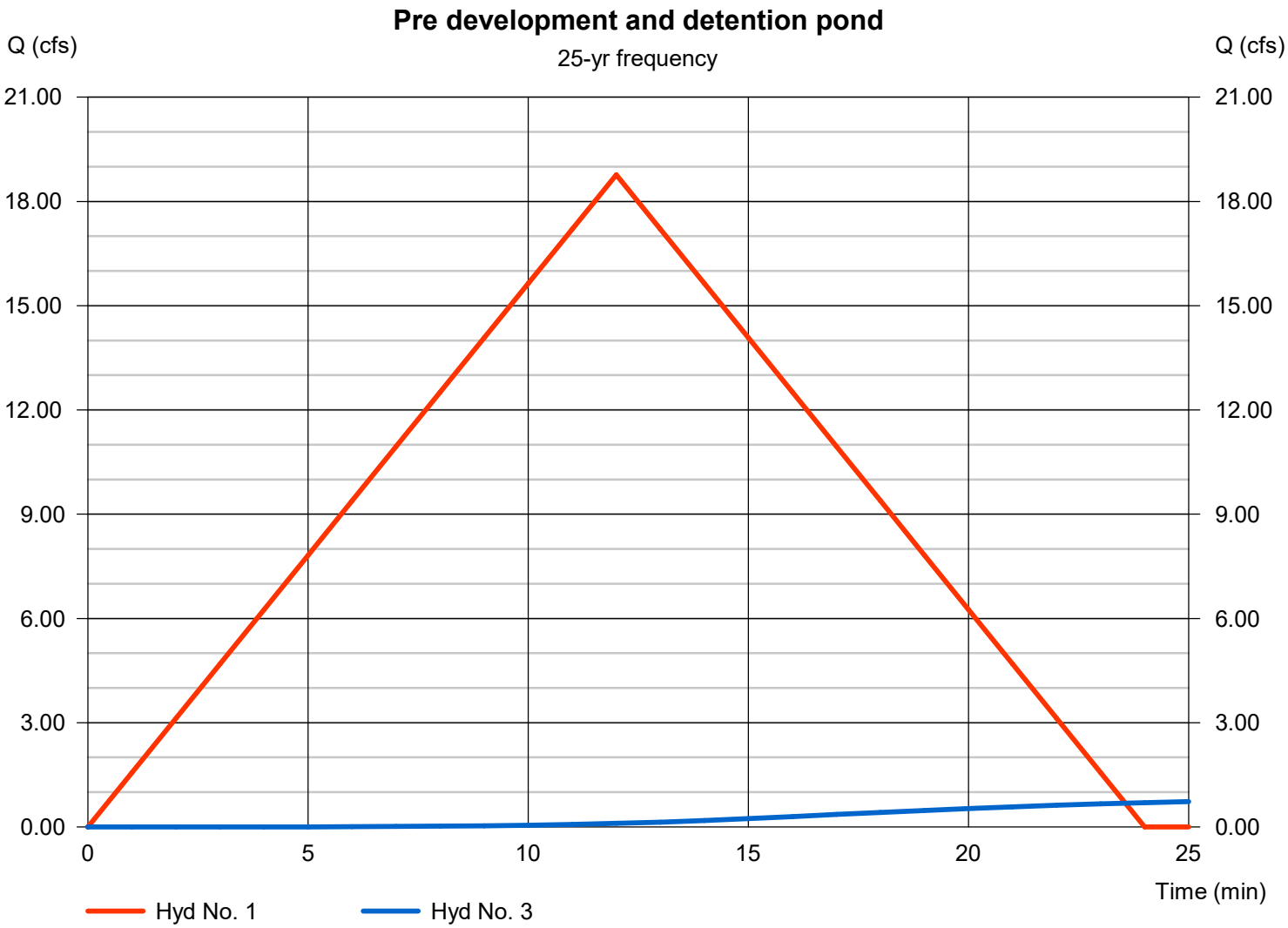
Pre development

Hydrograph type	=	Rational
Peak discharge	=	18.77 cfs
Time to peak	=	12 min
Hyd. Volume	=	13,512 cuft

Hyd. No. 3

detention pond

Hydrograph type	=	Reservoir
Peak discharge	=	0.77 cfs
Time to peak	=	29 min
Hyd. Volume	=	8,475 cuft



Multi-Hydrograph Plot

Hyd. No. 1

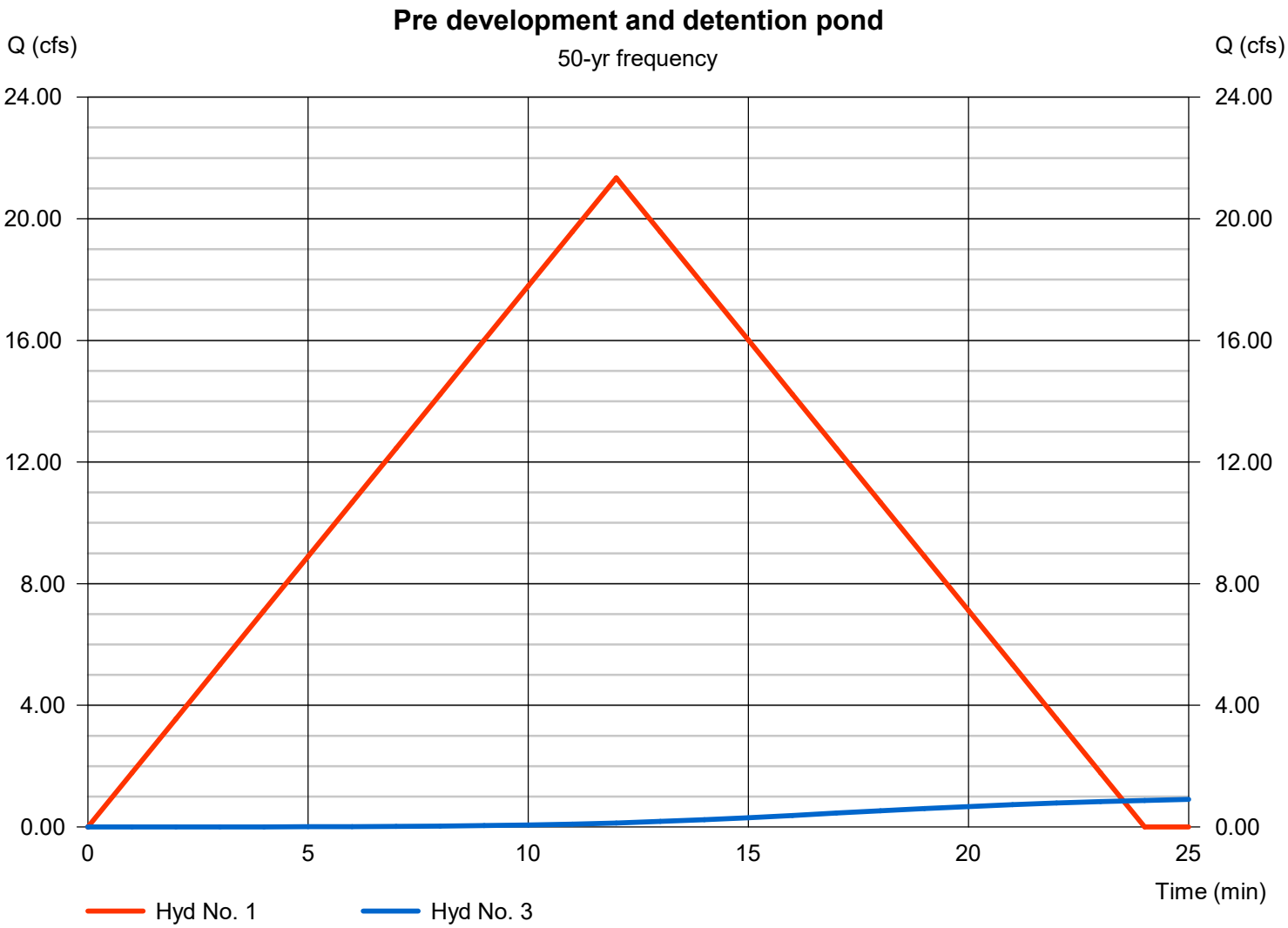
Pre development

Hydrograph type	=	Rational
Peak discharge	=	21.35 cfs
Time to peak	=	12 min
Hyd. Volume	=	15,370 cuft

Hyd. No. 3

detention pond

Hydrograph type	=	Reservoir
Peak discharge	=	0.96 cfs
Time to peak	=	29 min
Hyd. Volume	=	9,713 cuft



Multi-Hydrograph Plot

Hyd. No. 1

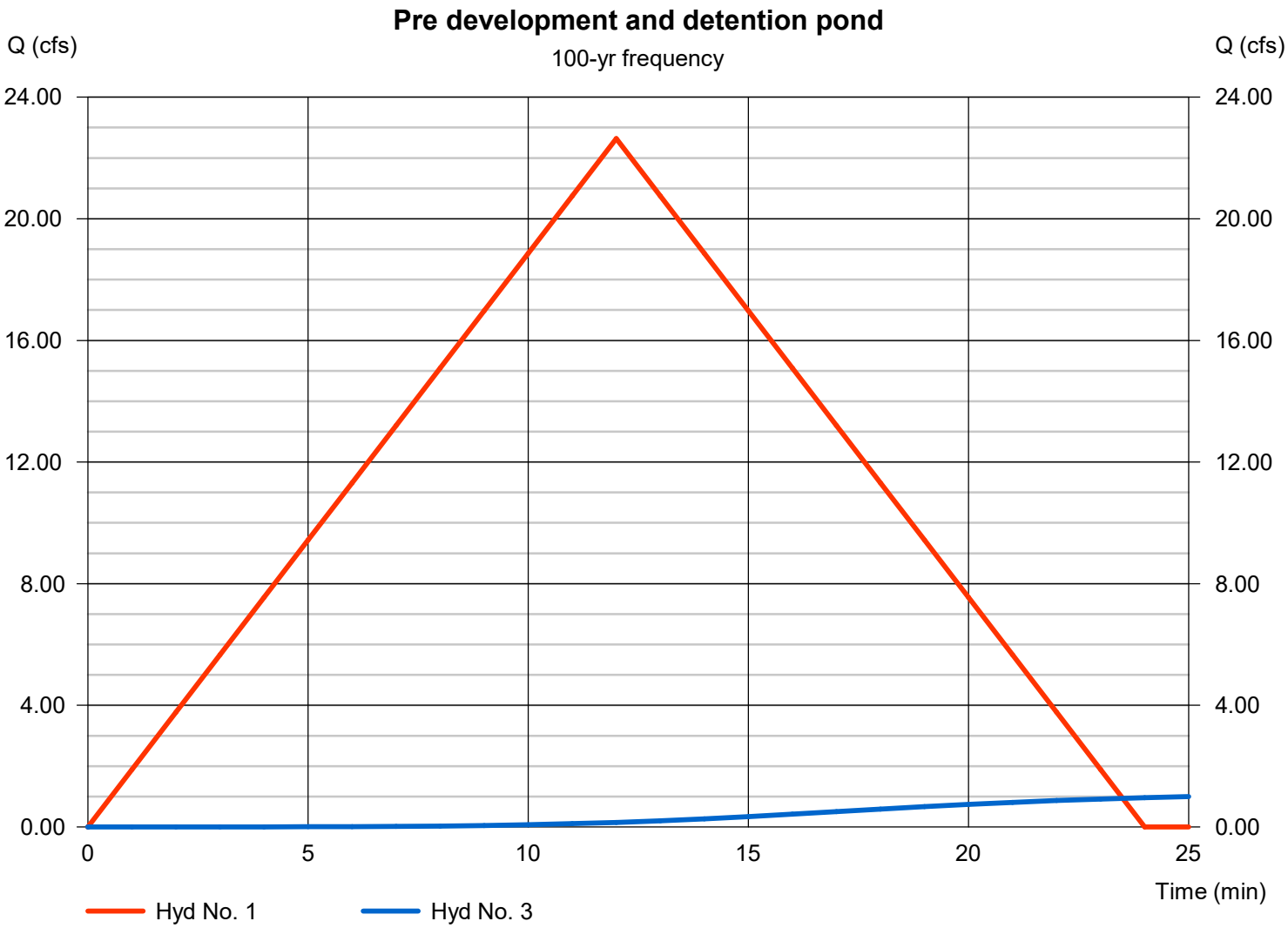
Pre development

Hydrograph type	=	Rational
Peak discharge	=	22.64 cfs
Time to peak	=	12 min
Hyd. Volume	=	16,299 cuft

Hyd. No. 3

detention pond

Hydrograph type	=	Reservoir
Peak discharge	=	1.06 cfs
Time to peak	=	29 min
Hyd. Volume	=	10,343 cuft



Pond Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2023 Thursday, 10 / 6 / 2022

Pond No. 1 - Detention Pond 2

Pond Data

Trapezoid -Bottom L x W = 145.0 x 126.0 ft, Side slope = 3.00:1, Bottom elev. = 511.00 ft, Depth = 2.00 ft

Stage / Storage Table

Stage (ft)	Elevation (ft)	Contour area (sqft)	Incr. Storage (cuft)	Total storage (cuft)
0.00	511.00	18,270	0	0
0.20	511.20	18,597	3,687	3,687
0.40	511.40	18,926	3,752	7,439
0.60	511.60	19,259	3,818	11,257
0.80	511.80	19,594	3,885	15,142
1.00	512.00	19,932	3,953	19,095
1.20	512.20	20,273	4,020	23,115
1.40	512.40	20,617	4,089	27,204
1.60	512.60	20,964	4,158	31,362
1.80	512.80	21,313	4,228	35,590
2.00	513.00	21,666	4,298	39,888

Culvert / Orifice Structures

	[A]	[B]	[C]	[PrfRsr]
Rise (in)	= 12.00	Inactive	Inactive	0.00
Span (in)	= 12.00	0.00	0.00	0.00
No. Barrels	= 1	0	0	0
Invert El. (ft)	= 511.00	0.00	0.00	0.00
Length (ft)	= 64.00	0.00	0.00	0.00
Slope (%)	= 9.00	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

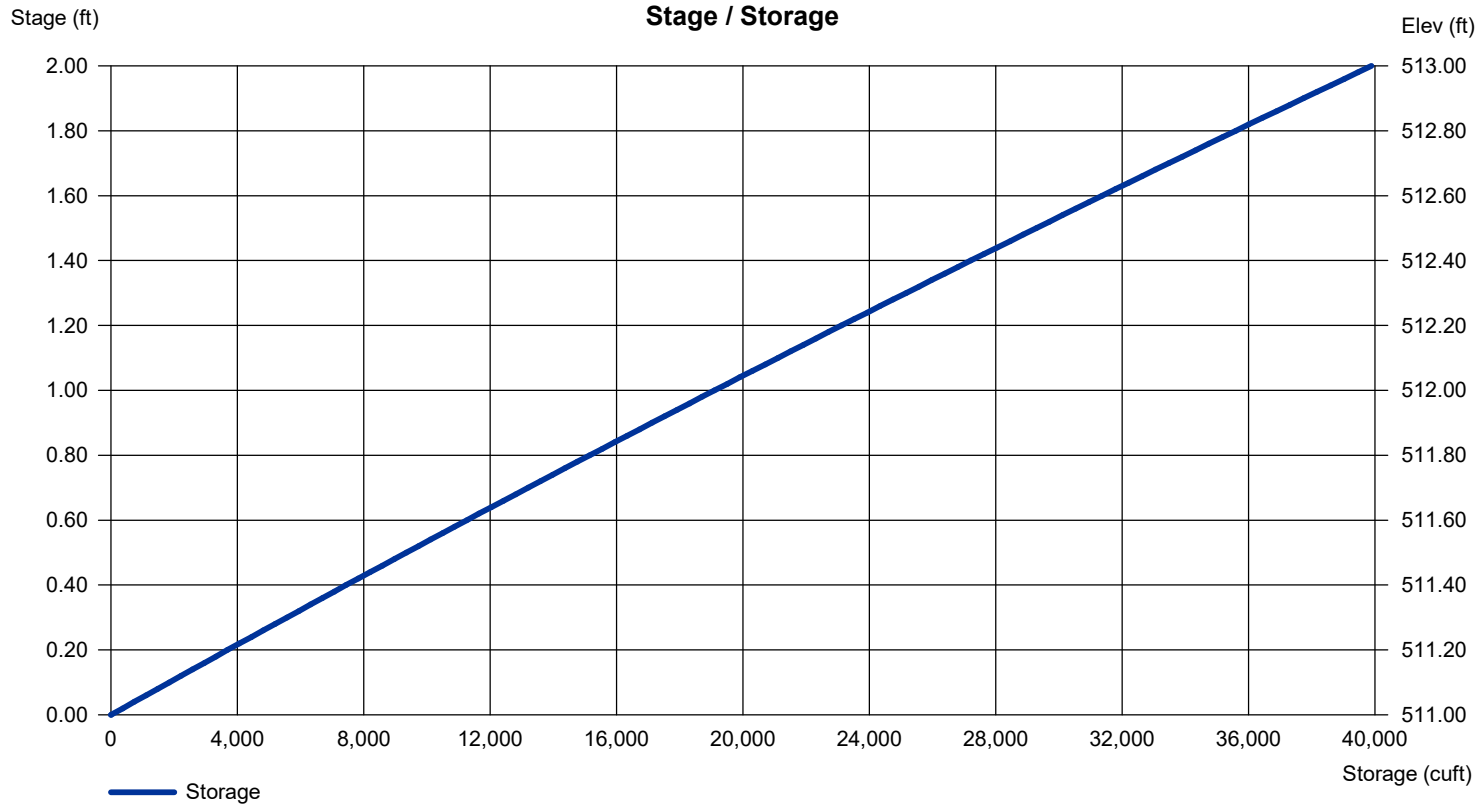
Weir Structures

	[A]	[B]	[C]	[D]
Crest Len (ft)	= 6.00	0.00	0.00	0.00
Crest El. (ft)	= 512.00	0.00	0.00	0.00
Weir Coeff.	= 3.33	3.33	3.33	3.33
Weir Type	= Rect	---	---	---
Multi-Stage	= No	No	No	No

Exfil.(in/hr) = 0.000 (by Contour)

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).



Hydrograph Summary Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2023

Hyd. No.	Hydrograph type (origin)	Peak flow (cfs)	Time interval (min)	Time to Peak (min)	Hyd. volume (cuft)	Inflow hyd(s)	Maximum elevation (ft)	Total strge used (cuft)	Hydrograph Description
1	Rational	12.77	1	12	9,197	------	------	------	Pre development
2	Rational	6.629	1	15	5,966	------	------	------	Post development
3	Reservoir	0.387	1	29	5,573	2	511.31	5,693	detention pond

Hydrograph Summary Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2023

Hyd. No.	Hydrograph type (origin)	Peak flow (cfs)	Time interval (min)	Time to Peak (min)	Hyd. volume (cuft)	Inflow hyd(s)	Maximum elevation (ft)	Total strge used (cuft)	Hydrograph Description
1	Rational	14.20	1	12	10,226	------	------	------	Pre development
2	Rational	7.333	1	15	6,599	------	------	------	Post development
3	Reservoir	0.462	1	29	6,203	2	511.34	6,272	detention pond

Hydrograph Summary Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2023

Hyd. No.	Hydrograph type (origin)	Peak flow (cfs)	Time interval (min)	Time to Peak (min)	Hyd. volume (cuft)	Inflow hyd(s)	Maximum elevation (ft)	Total strge used (cuft)	Hydrograph Description
1	Rational	16.42	1	12	11,819	------	------	------	Pre development
2	Rational	8.607	1	15	7,746	------	------	------	Post development
3	Reservoir	0.613	1	29	7,345	2	511.39	7,310	detention pond

Hydrograph Summary Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2023

Hyd. No.	Hydrograph type (origin)	Peak flow (cfs)	Time interval (min)	Time to Peak (min)	Hyd. volume (cuft)	Inflow hyd(s)	Maximum elevation (ft)	Total strge used (cuft)	Hydrograph Description
1	Rational	18.77	1	12	13,512	------	------	------	Pre development
2	Rational	9.865	1	15	8,879	------	------	------	Post development
3	Reservoir	0.773	1	29	8,475	2	511.45	8,325	detention pond

Hydrograph Summary Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2023

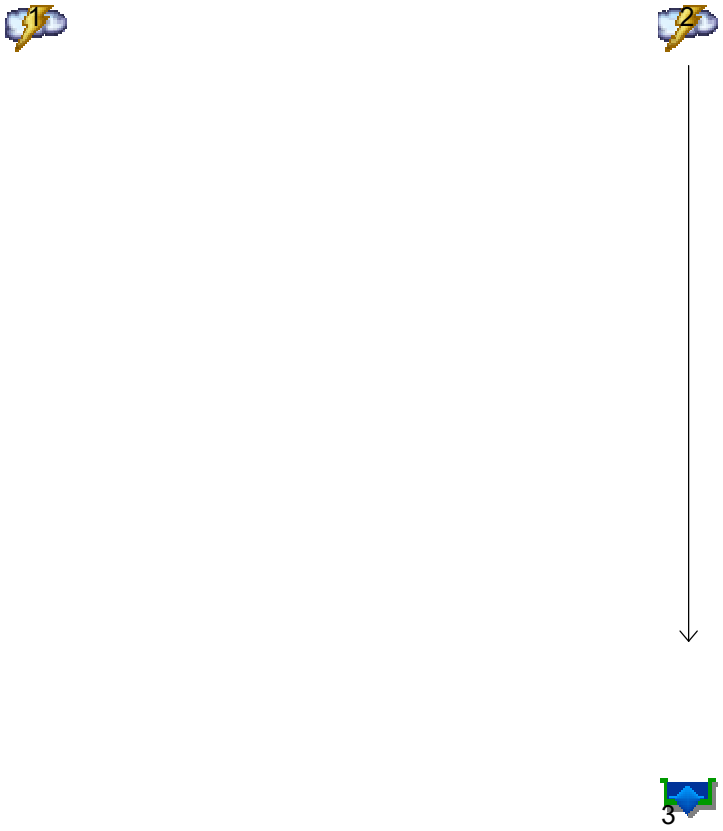
Hyd. No.	Hydrograph type (origin)	Peak flow (cfs)	Time interval (min)	Time to Peak (min)	Hyd. volume (cuft)	Inflow hyd(s)	Maximum elevation (ft)	Total strge used (cuft)	Hydrograph Description
1	Rational	21.35	1	12	15,370	------	------	------	Pre development
2	Rational	11.24	1	15	10,120	------	------	------	Post development
3	Reservoir	0.959	1	29	9,713	2	511.50	9,427	detention pond

Hydrograph Summary Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2023

Hyd. No.	Hydrograph type (origin)	Peak flow (cfs)	Time interval (min)	Time to Peak (min)	Hyd. volume (cuft)	Inflow hyd(s)	Maximum elevation (ft)	Total strge used (cuft)	Hydrograph Description
1	Rational	22.64	1	12	16,299	------	------	------	Pre development
2	Rational	11.95	1	15	10,751	------	------	------	Post development
3	Reservoir	1.059	1	29	10,343	2	511.53	9,983	detention pond

Watershed Model Schematic



Multi-Hydrograph Plot

Hyd. No. 1

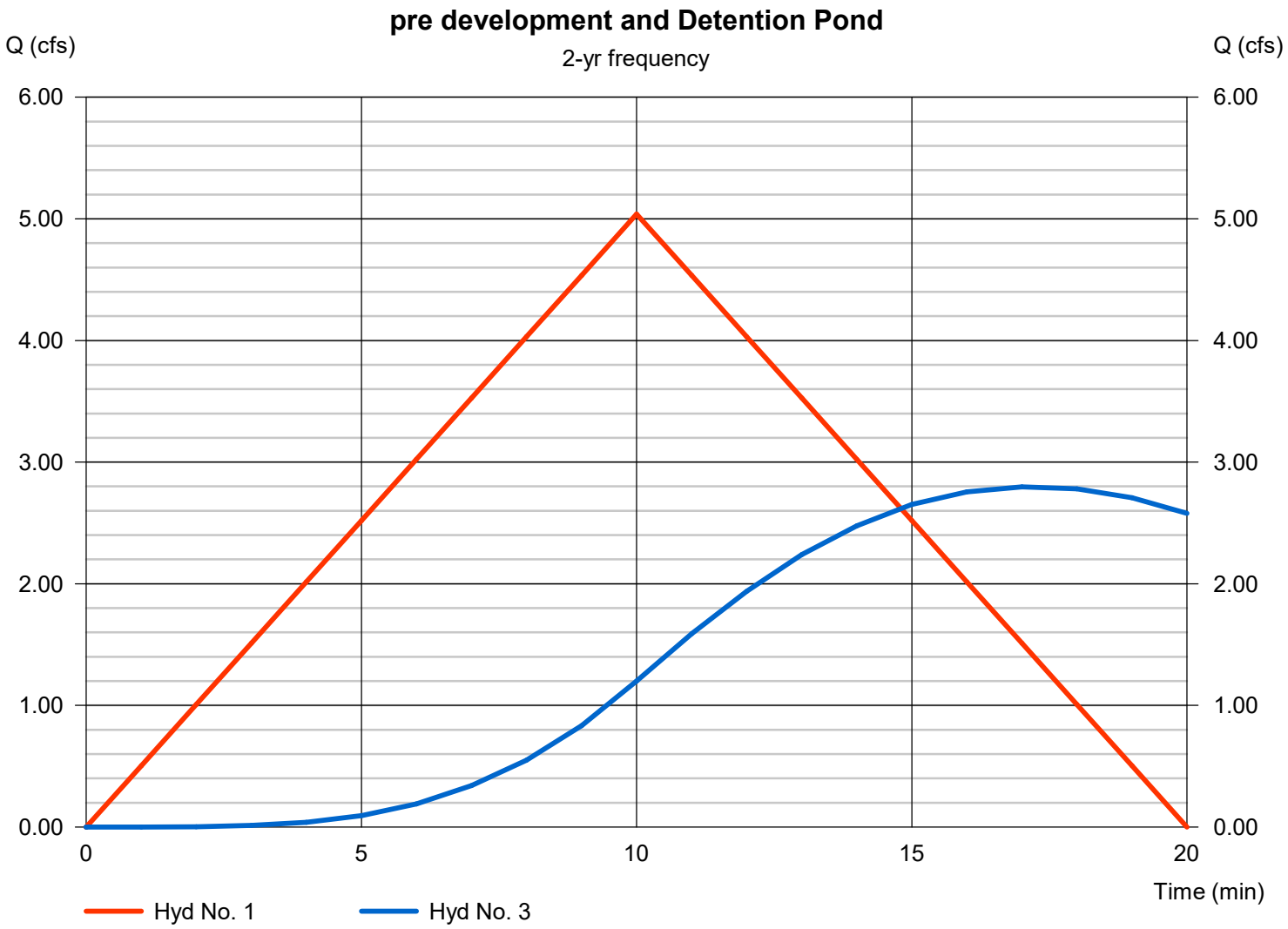
pre development

Hydrograph type	=	Rational
Peak discharge	=	5.039 cfs
Time to peak	=	10 min
Hyd. Volume	=	3,023 cuft

Hyd. No. 3

Detention Pond

Hydrograph type	=	Reservoir
Peak discharge	=	2.80 cfs
Time to peak	=	17 min
Hyd. Volume	=	5,925 cuft



Multi-Hydrograph Plot

Hyd. No. 1

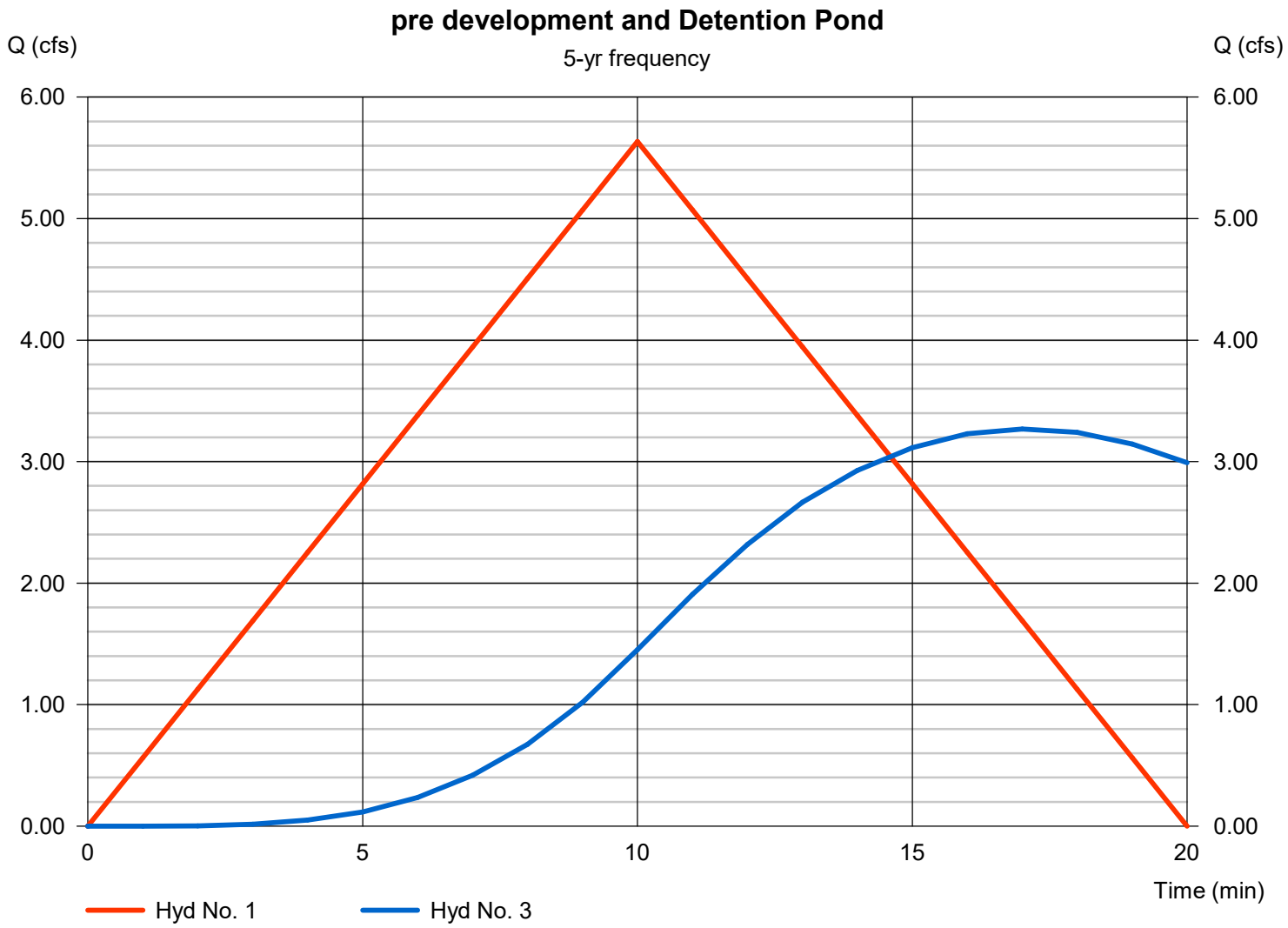
pre development

Hydrograph type	=	Rational
Peak discharge	=	5.635 cfs
Time to peak	=	10 min
Hyd. Volume	=	3,381 cuft

Hyd. No. 3

Detention Pond

Hydrograph type	=	Reservoir
Peak discharge	=	3.27 cfs
Time to peak	=	17 min
Hyd. Volume	=	6,630 cuft



Multi-Hydrograph Plot

Hyd. No. 1

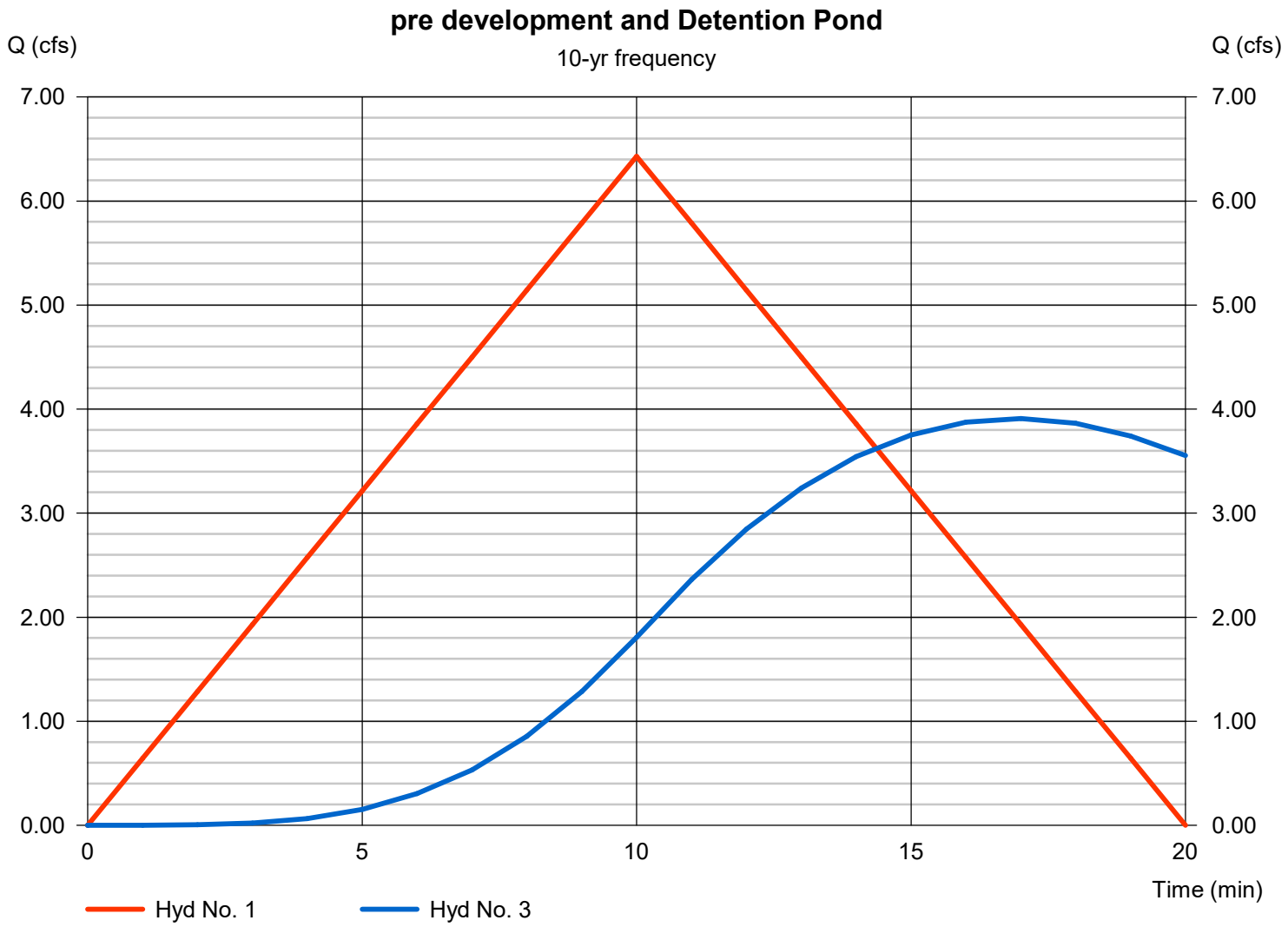
pre development

Hydrograph type	=	Rational
Peak discharge	=	6.430 cfs
Time to peak	=	10 min
Hyd. Volume	=	3,858 cuft

Hyd. No. 3

Detention Pond

Hydrograph type	=	Reservoir
Peak discharge	=	3.91 cfs
Time to peak	=	17 min
Hyd. Volume	=	7,571 cuft



Multi-Hydrograph Plot

Hyd. No. 1

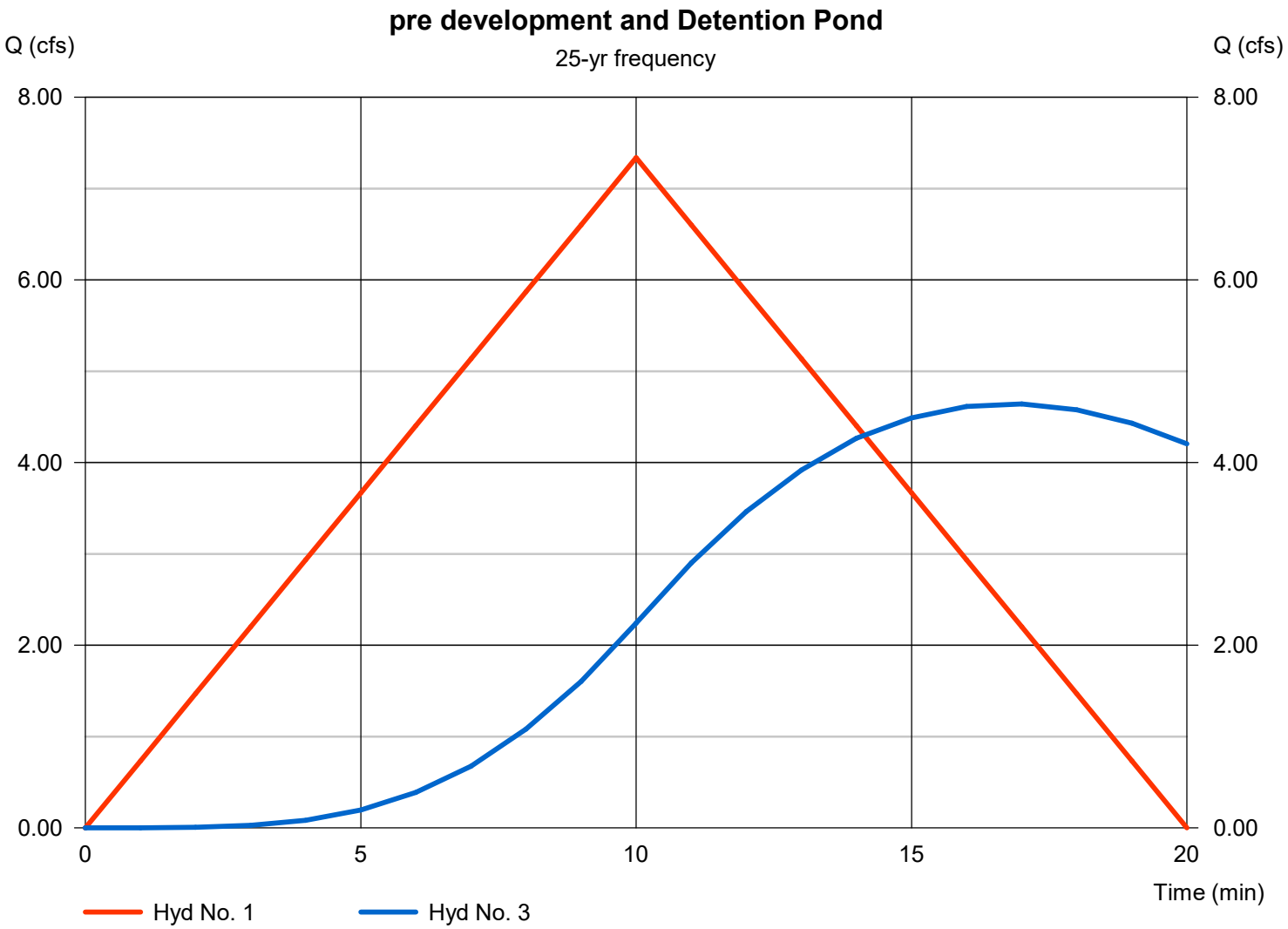
pre development

Hydrograph type	=	Rational
Peak discharge	=	7.337 cfs
Time to peak	=	10 min
Hyd. Volume	=	4,402 cuft

Hyd. No. 3

Detention Pond

Hydrograph type	=	Reservoir
Peak discharge	=	4.64 cfs
Time to peak	=	17 min
Hyd. Volume	=	8,645 cuft



Multi-Hydrograph Plot

Hyd. No. 1

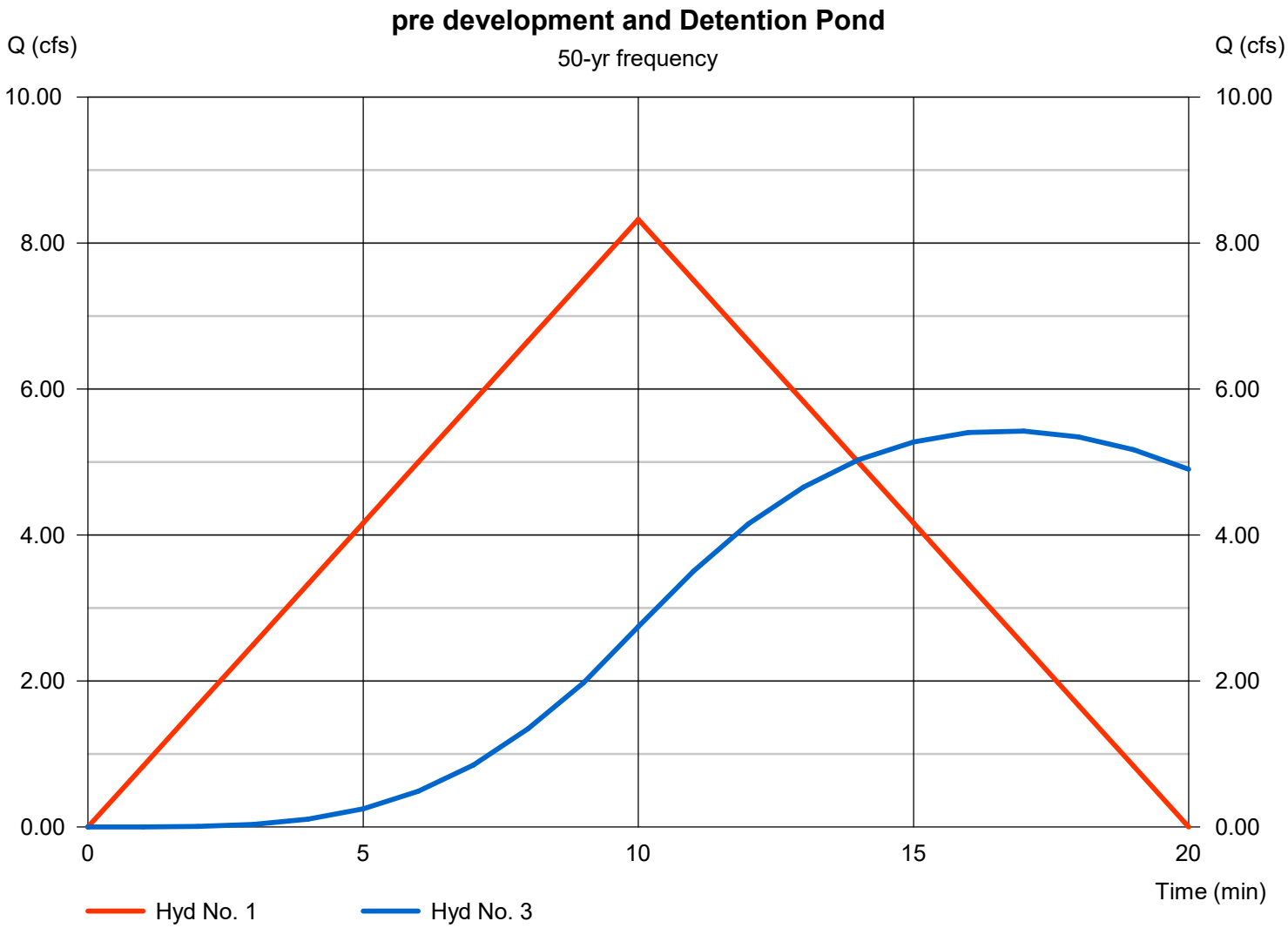
pre development

Hydrograph type	=	Rational
Peak discharge	=	8.326 cfs
Time to peak	=	10 min
Hyd. Volume	=	4,995 cuft

Hyd. No. 3

Detention Pond

Hydrograph type	=	Reservoir
Peak discharge	=	5.42 cfs
Time to peak	=	17 min
Hyd. Volume	=	9,816 cuft



Multi-Hydrograph Plot

Hyd. No. 1

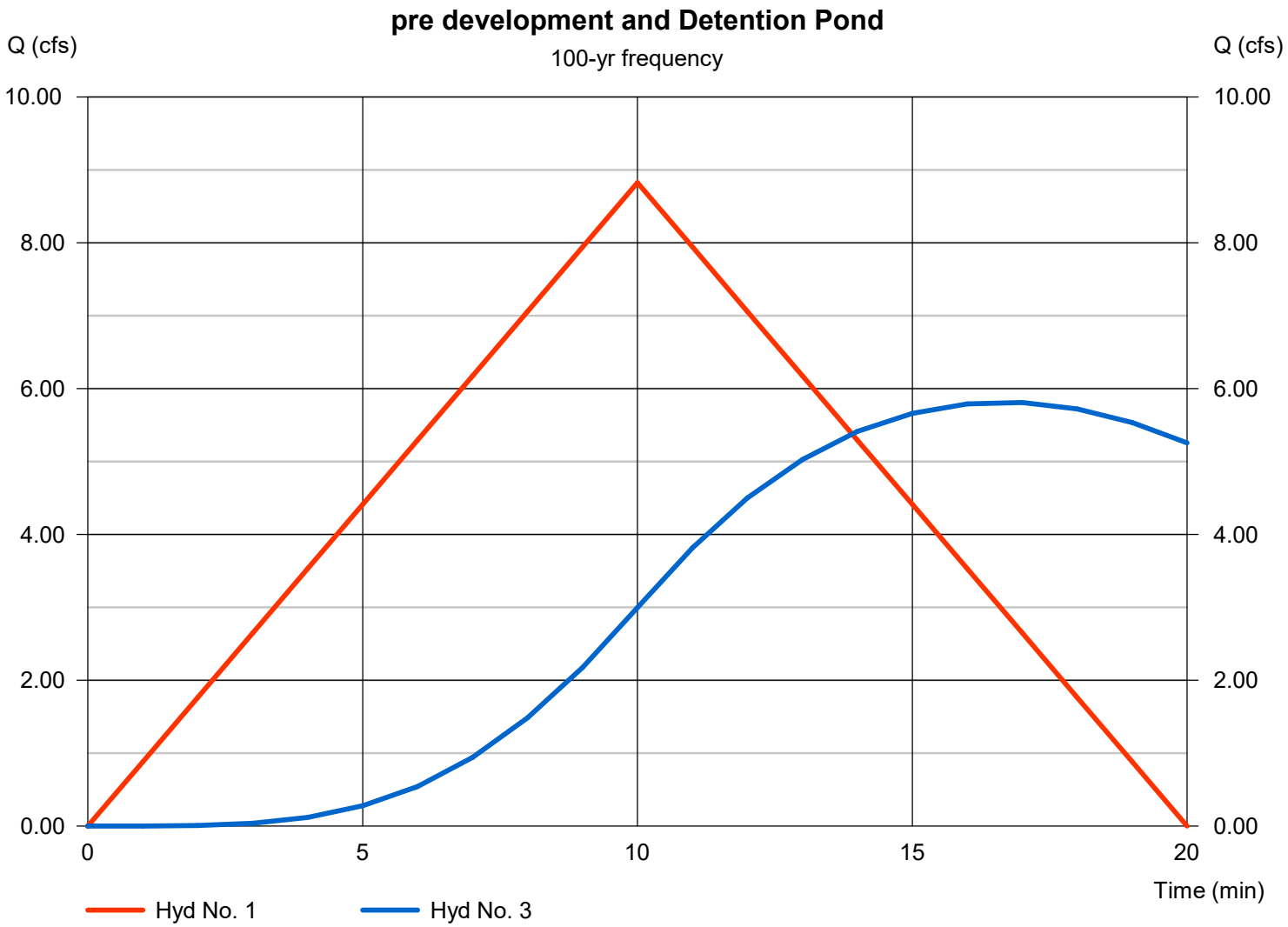
pre development

Hydrograph type	=	Rational
Peak discharge	=	8.825 cfs
Time to peak	=	10 min
Hyd. Volume	=	5,295 cuft

Hyd. No. 3

Detention Pond

Hydrograph type	=	Reservoir
Peak discharge	=	5.81 cfs
Time to peak	=	17 min
Hyd. Volume	=	10,406 cuft



Pond Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2023 Thursday, 03 / 2 / 2023

Pond No. 1 - Detention Pond -3

Pond Data

Trapezoid -Bottom L x W = 106.0 x 52.0 ft, Side slope = 3.00:1, Bottom elev. = 495.00 ft, Depth = 2.50 ft

Stage / Storage Table

Stage (ft)	Elevation (ft)	Contour area (sqft)	Incr. Storage (cuft)	Total storage (cuft)
0.00	495.00	5,512	0	0
0.25	495.25	5,751	1,408	1,408
0.50	495.50	5,995	1,468	2,876
0.75	495.75	6,243	1,530	4,406
1.00	496.00	6,496	1,592	5,998
1.25	496.25	6,753	1,656	7,654
1.50	496.50	7,015	1,721	9,375
1.75	496.75	7,281	1,787	11,162
2.00	497.00	7,552	1,854	13,016
2.25	497.25	7,827	1,922	14,938
2.50	497.50	8,107	1,992	16,930

Culvert / Orifice Structures

	[A]	[B]	[C]	[PrfRsr]
Rise (in)	= 18.00	0.00	0.00	0.00
Span (in)	= 18.00	0.00	0.00	0.00
No. Barrels	= 1	0	0	0
Invert El. (ft)	= 495.00	0.00	0.00	0.00
Length (ft)	= 33.00	0.00	0.00	0.00
Slope (%)	= 7.47	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

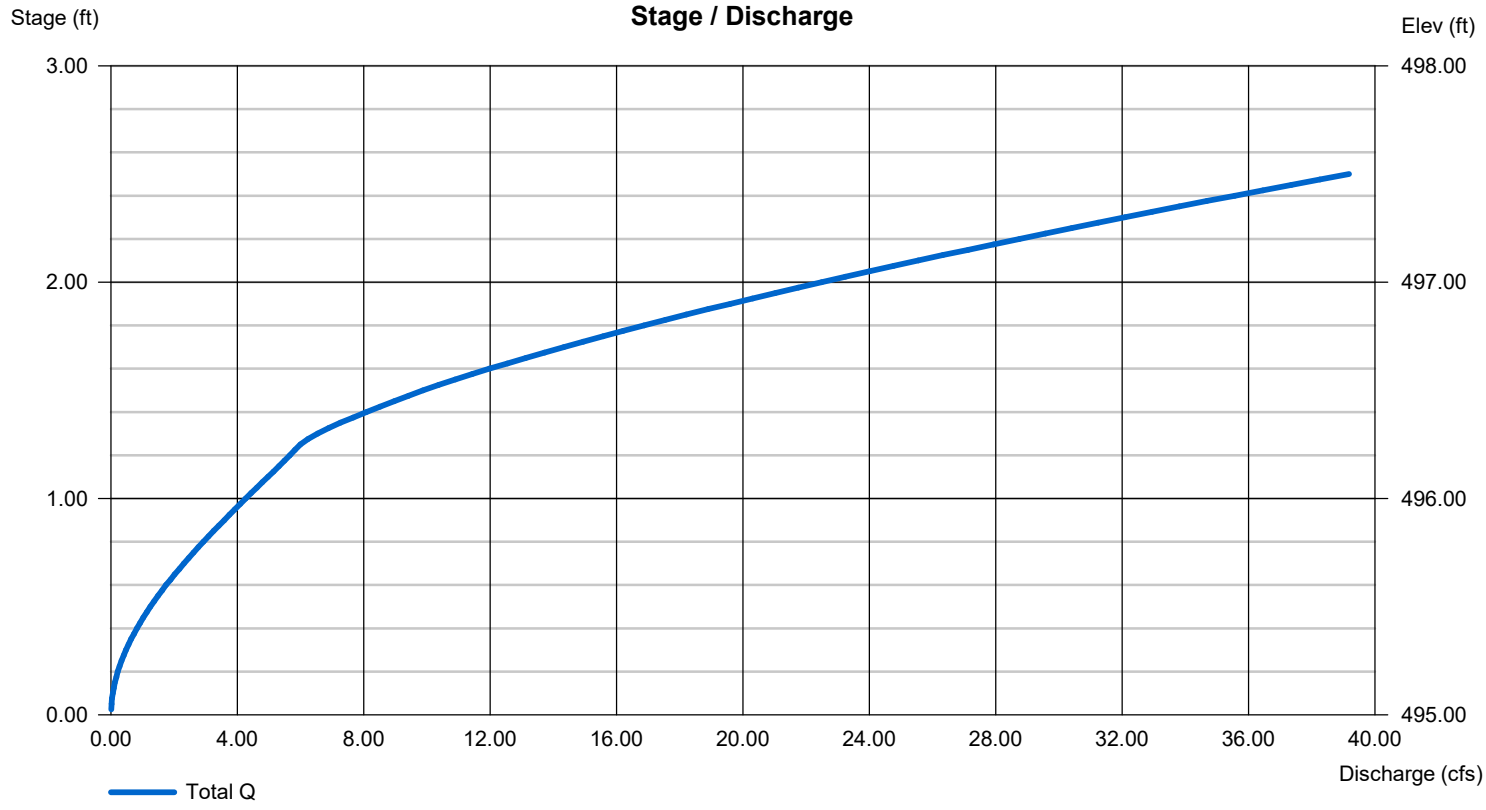
Weir Structures

	[A]	[B]	[C]	[D]
Crest Len (ft)	= 6.00	0.00	0.00	0.00
Crest El. (ft)	= 496.25	0.00	0.00	0.00
Weir Coeff.	= 3.33	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).



Hydrograph Summary Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2023

Hyd. No.	Hydrograph type (origin)	Peak flow (cfs)	Time interval (min)	Time to Peak (min)	Hyd. volume (cuft)	Inflow hyd(s)	Maximum elevation (ft)	Total strge used (cuft)	Hydrograph Description
1	Rational	5.039	1	10	3,023	------	------	------	pre development
2	Rational	9.942	1	10	5,965	------	------	------	post development
3	Reservoir	2.797	1	17	5,925	2	495.78	4,598	Detention Pond

Hydrograph Summary Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2023

Hyd. No.	Hydrograph type (origin)	Peak flow (cfs)	Time interval (min)	Time to Peak (min)	Hyd. volume (cuft)	Inflow hyd(s)	Maximum elevation (ft)	Total strge used (cuft)	Hydrograph Description
1	Rational	5.635	1	10	3,381	------	------	------	pre development
2	Rational	11.12	1	10	6,671	------	------	------	post development
3	Reservoir	3.269	1	17	6,630	2	495.85	5,064	Detention Pond

Hydrograph Summary Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2023

Hyd. No.	Hydrograph type (origin)	Peak flow (cfs)	Time interval (min)	Time to Peak (min)	Hyd. volume (cuft)	Inflow hyd(s)	Maximum elevation (ft)	Total strge used (cuft)	Hydrograph Description
1	Rational	6.430	1	10	3,858	------	------	------	pre development
2	Rational	12.69	1	10	7,612	------	------	------	post development
3	Reservoir	3.910	1	17	7,571	2	495.95	5,674	Detention Pond

Hydrograph Summary Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2023

Hyd. No.	Hydrograph type (origin)	Peak flow (cfs)	Time interval (min)	Time to Peak (min)	Hyd. volume (cuft)	Inflow hyd(s)	Maximum elevation (ft)	Total strge used (cuft)	Hydrograph Description
1	Rational	7.337	1	10	4,402	------	------	------	pre development
2	Rational	14.48	1	10	8,686	------	------	------	post development
3	Reservoir	4.642	1	17	8,645	2	496.05	6,359	Detention Pond

Hydrograph Summary Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2023

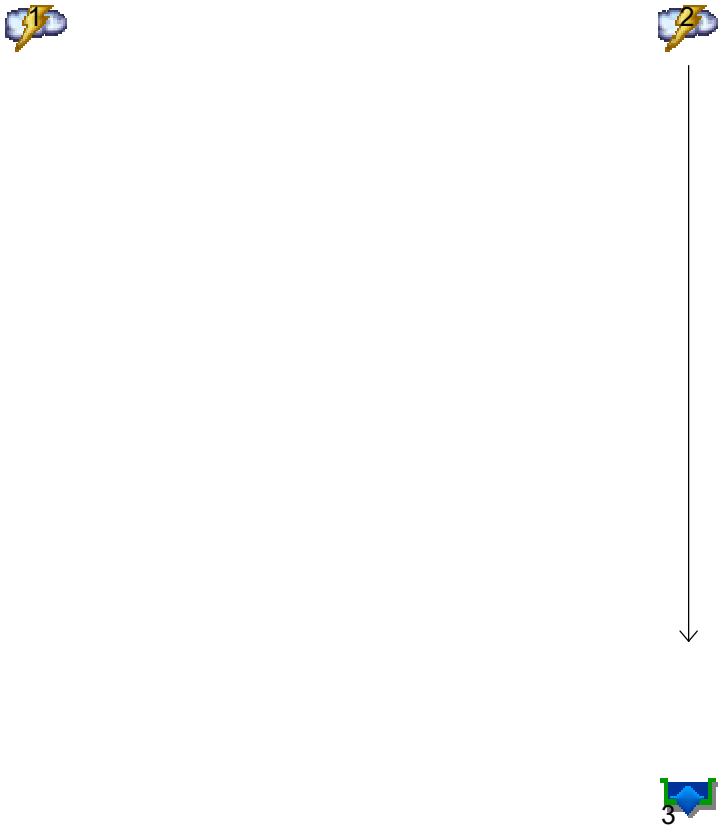
Hyd. No.	Hydrograph type (origin)	Peak flow (cfs)	Time interval (min)	Time to Peak (min)	Hyd. volume (cuft)	Inflow hyd(s)	Maximum elevation (ft)	Total strge used (cuft)	Hydrograph Description
1	Rational	8.326	1	10	4,995	------	------	------	pre development
2	Rational	16.43	1	10	9,856	------	------	------	post development
3	Reservoir	5.424	1	17	9,816	2	496.17	7,100	Detention Pond

Hydrograph Summary Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2023

Hyd. No.	Hydrograph type (origin)	Peak flow (cfs)	Time interval (min)	Time to Peak (min)	Hyd. volume (cuft)	Inflow hyd(s)	Maximum elevation (ft)	Total strge used (cuft)	Hydrograph Description
1	Rational	8.825	1	10	5,295	------	------	------	pre development
2	Rational	17.41	1	10	10,447	------	------	------	post development
3	Reservoir	5.810	1	17	10,406	2	496.22	7,475	Detention Pond

Watershed Model Schematic



Legend

Hyd.	Origin	Description
1	Rational	pre development
2	Rational	post development
3	Reservoir	Reservior

Multi-Hydrograph Plot

Hyd. No. 1

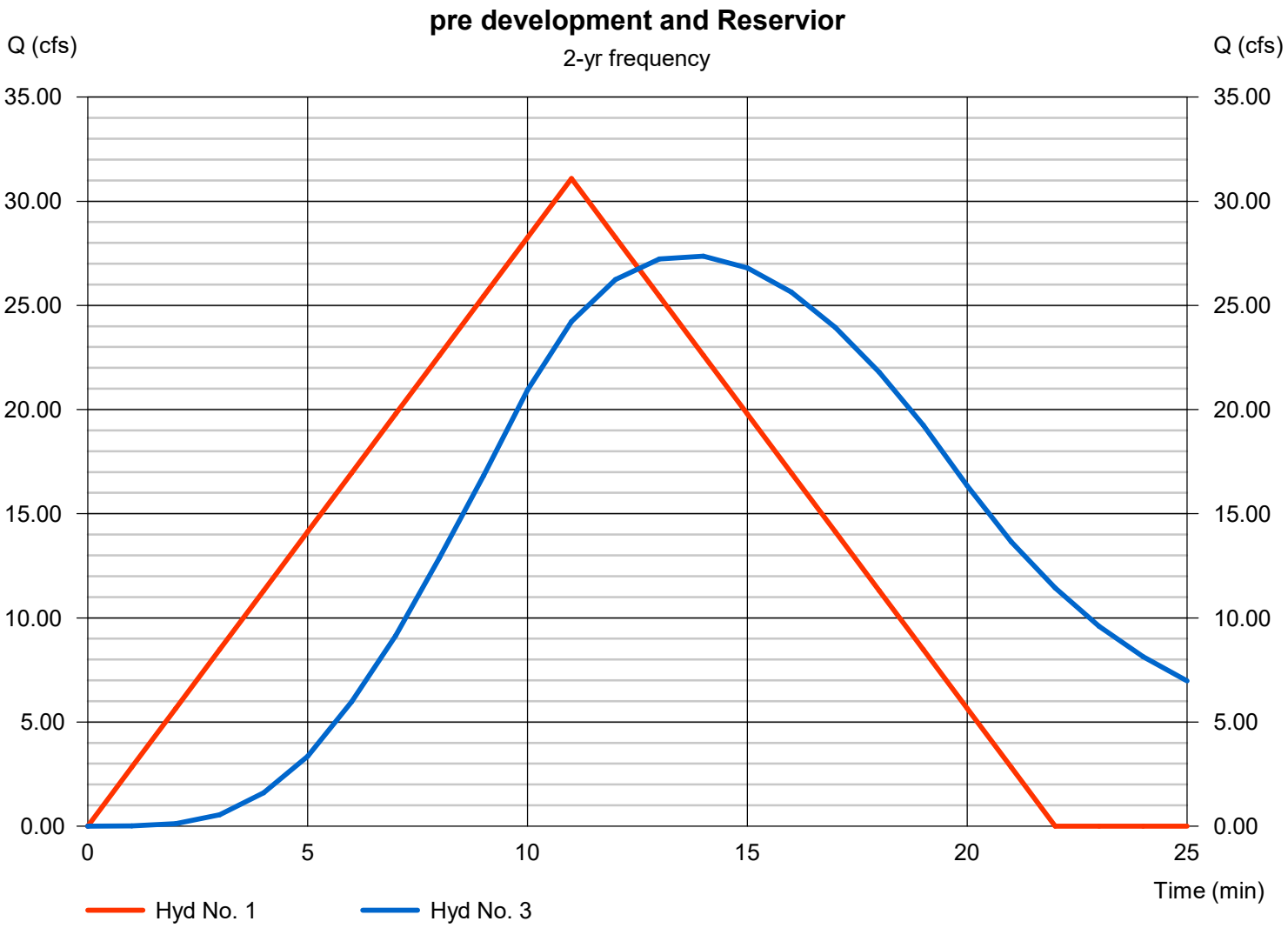
pre development

Hydrograph type	=	Rational
Peak discharge	=	31.09 cfs
Time to peak	=	11 min
Hyd. Volume	=	20,519 cuft

Hyd. No. 3

Reservior

Hydrograph type	=	Reservoir
Peak discharge	=	27.37 cfs
Time to peak	=	14 min
Hyd. Volume	=	25,949 cuft



Multi-Hydrograph Plot

Hyd. No. 1

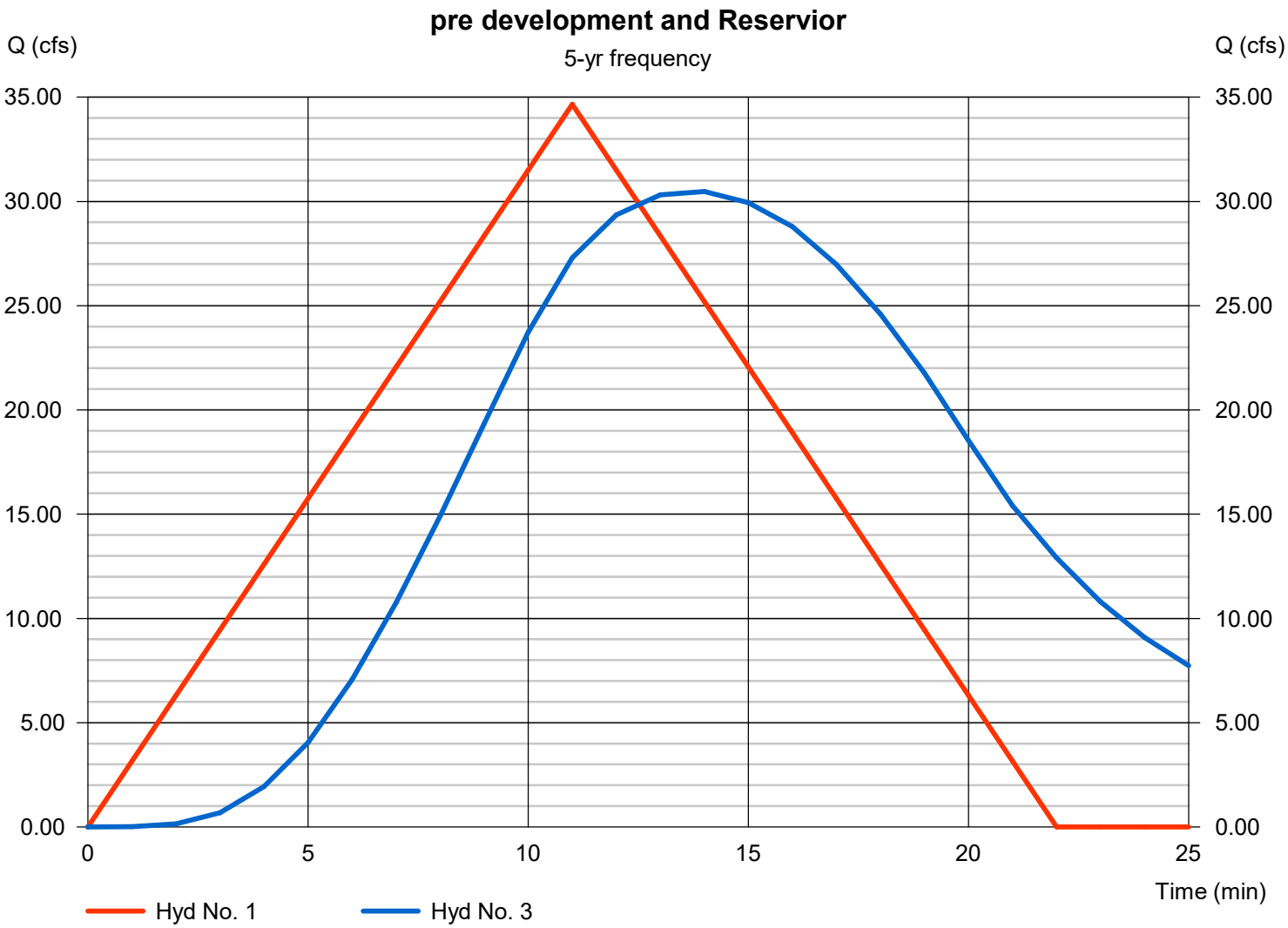
pre development

Hydrograph type	=	Rational
Peak discharge	=	34.66 cfs
Time to peak	=	11 min
Hyd. Volume	=	22,873 cuft

Hyd. No. 3

Reservior

Hydrograph type	=	Reservoir
Peak discharge	=	30.47 cfs
Time to peak	=	14 min
Hyd. Volume	=	29,019 cuft



Multi-Hydrograph Plot

Hyd. No. 1

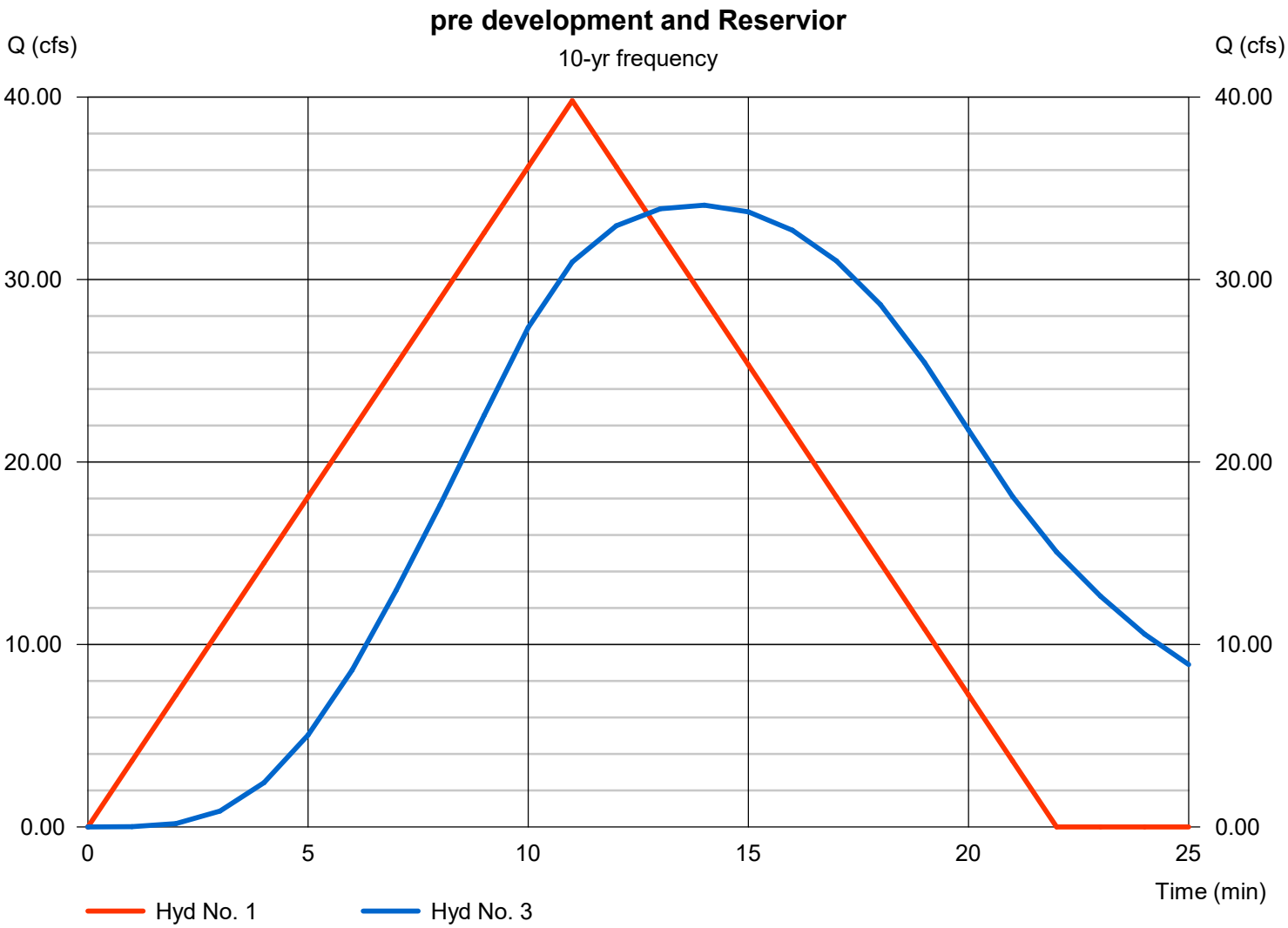
pre development

Hydrograph type	=	Rational
Peak discharge	=	39.81 cfs
Time to peak	=	11 min
Hyd. Volume	=	26,276 cuft

Hyd. No. 3

Reservior

Hydrograph type	=	Reservoir
Peak discharge	=	34.08 cfs
Time to peak	=	14 min
Hyd. Volume	=	33,115 cuft



Multi-Hydrograph Plot

Hyd. No. 1

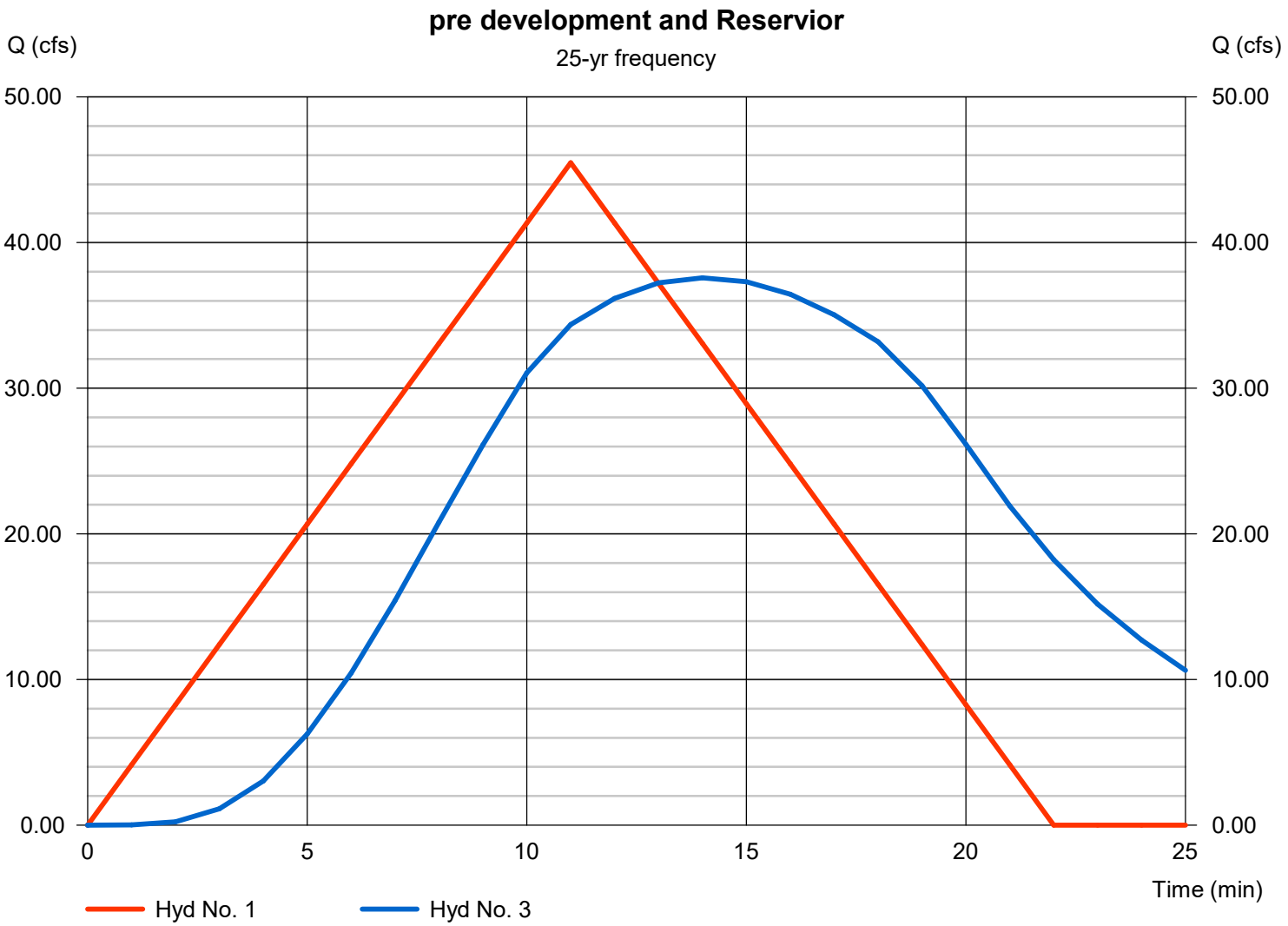
pre development

Hydrograph type	=	Rational
Peak discharge	=	45.47 cfs
Time to peak	=	11 min
Hyd. Volume	=	30,012 cuft

Hyd. No. 3

Reservior

Hydrograph type	=	Reservoir
Peak discharge	=	37.59 cfs
Time to peak	=	14 min
Hyd. Volume	=	37,790 cuft



Multi-Hydrograph Plot

Hyd. No. 1

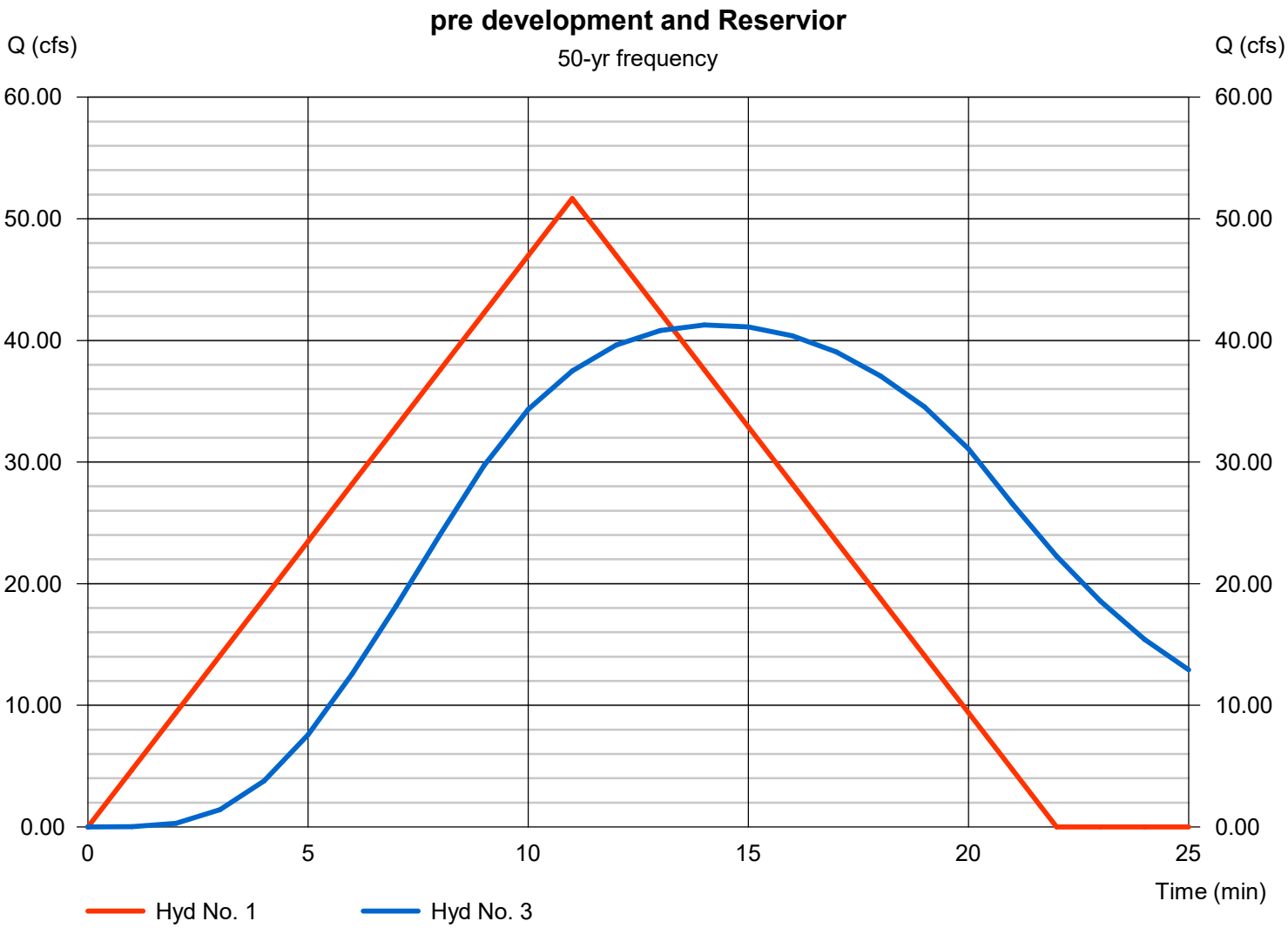
pre development

Hydrograph type	=	Rational
Peak discharge	=	51.67 cfs
Time to peak	=	11 min
Hyd. Volume	=	34,102 cuft

Hyd. No. 3

Reservior

Hydrograph type	=	Reservoir
Peak discharge	=	41.26 cfs
Time to peak	=	14 min
Hyd. Volume	=	42,883 cuft



Multi-Hydrograph Plot

Hyd. No. 1

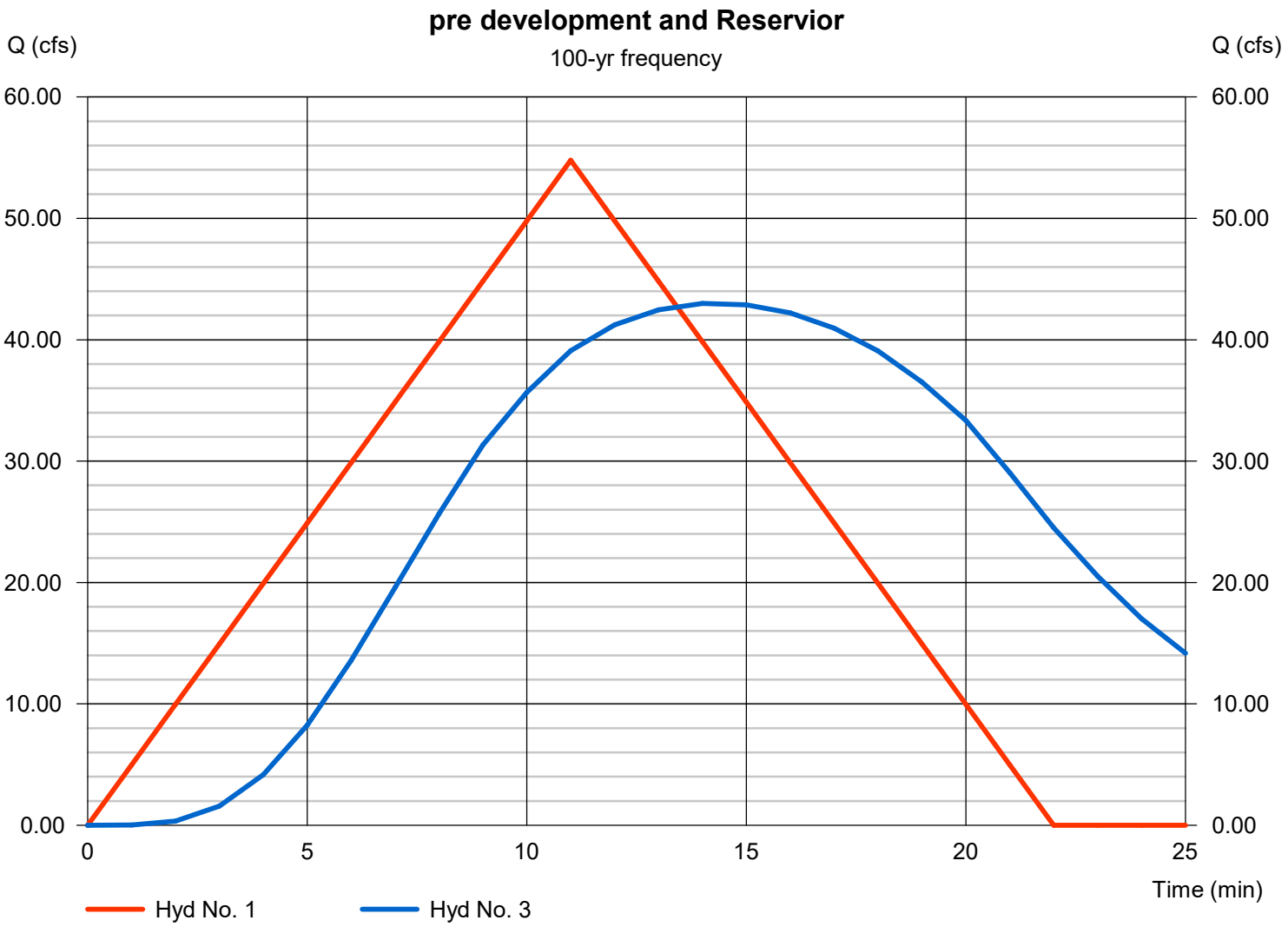
pre development

Hydrograph type	=	Rational
Peak discharge	=	54.77 cfs
Time to peak	=	11 min
Hyd. Volume	=	36,151 cuft

Hyd. No. 3

Reservior

Hydrograph type	=	Reservoir
Peak discharge	=	42.99 cfs
Time to peak	=	14 min
Hyd. Volume	=	45,453 cuft



Pond Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2023 Tuesday, 02 / 14 / 2023

Pond No. 1 - Detention Pond -4

Pond Data

Trapezoid -Bottom L x W = 74.0 x 50.3 ft, Side slope = 3.00:1, Bottom elev. = 508.00 ft, Depth = 5.00 ft

Stage / Storage Table

Stage (ft)	Elevation (ft)	Contour area (sqft)	Incr. Storage (cuft)	Total storage (cuft)
0.00	508.00	3,725	0	0
0.50	508.50	4,107	1,957	1,957
1.00	509.00	4,507	2,153	4,110
1.50	509.50	4,925	2,357	6,468
2.00	510.00	5,361	2,571	9,038
2.50	510.50	5,815	2,793	11,832
3.00	511.00	6,287	3,025	14,857
3.50	511.50	6,777	3,265	18,122
4.00	512.00	7,285	3,515	21,637
4.50	512.50	7,811	3,773	25,410
5.00	513.00	8,355	4,041	29,451

Culvert / Orifice Structures

	[A]	[B]	[C]	[PrfRsr]
Rise (in)	= 36.00	Inactive	Inactive	0.00
Span (in)	= 36.00	24.00	24.00	0.00
No. Barrels	= 1	1	1	0
Invert El. (ft)	= 508.00	511.00	513.00	0.00
Length (ft)	= 86.00	0.50	0.00	0.00
Slope (%)	= 3.79	0.01	0.00	n/a
N-Value	= .013	.013	.013	n/a
Orifice Coeff.	= 0.50	0.60	0.60	0.60
Multi-Stage	= n/a	No	No	No

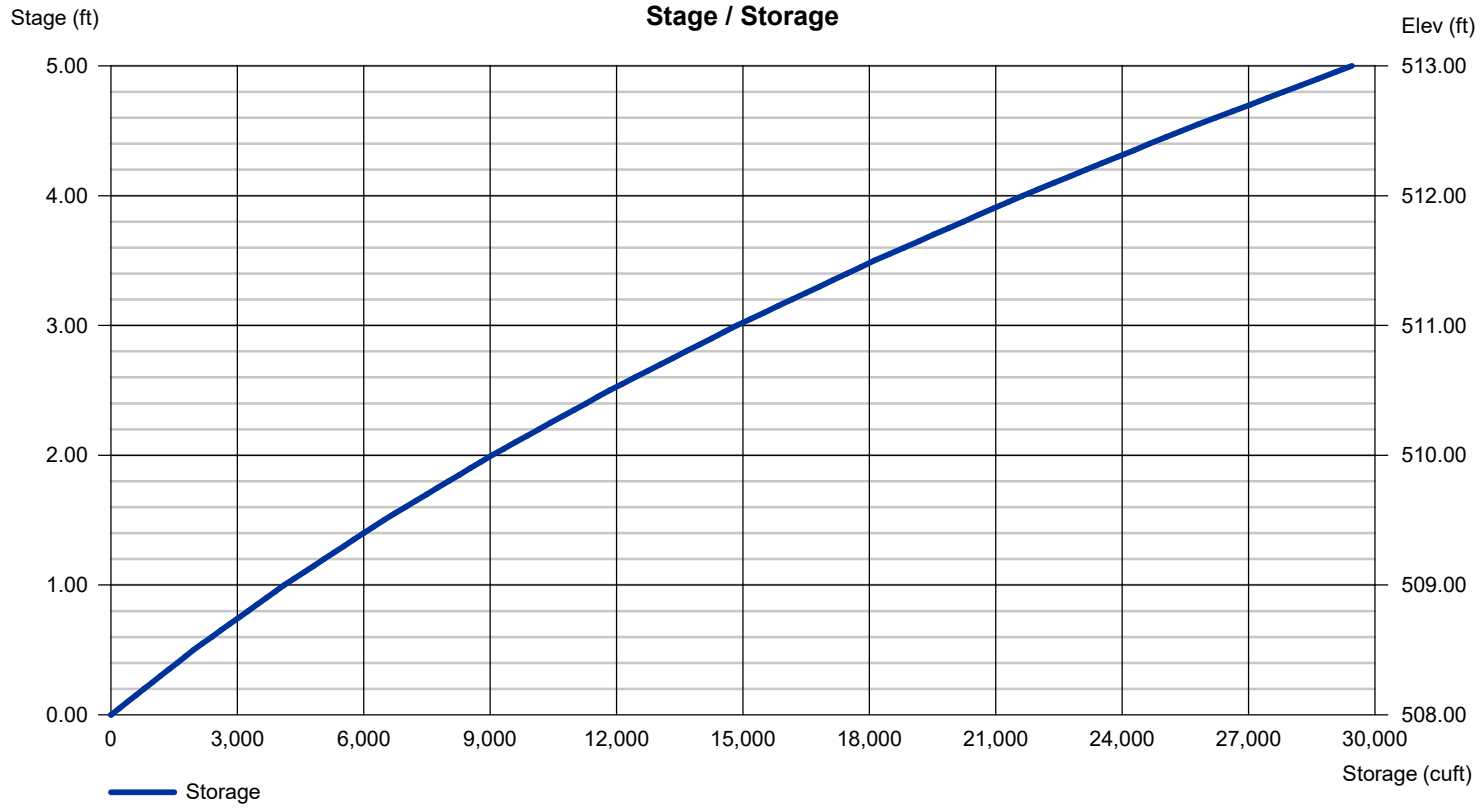
Weir Structures

	[A]	[B]	[C]	[D]
Crest Len (ft)	Inactive	5.00	Inactive	0.00
Crest El. (ft)	= 512.00	512.00	511.00	0.00
Weir Coeff.	= 3.33	3.33	3.33	3.33
Weir Type	= Rect	Rect	Rect	---
Multi-Stage	= No	No	No	No

Exfil.(in/hr) = 0.000 (by Contour)

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).



Hydrograph Summary Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2023

Hyd. No.	Hydrograph type (origin)	Peak flow (cfs)	Time interval (min)	Time to Peak (min)	Hyd. volume (cuft)	Inflow hyd(s)	Maximum elevation (ft)	Total strge used (cuft)	Hydrograph Description
1	Rational	31.09	1	11	20,519	------	------	------	pre development
2	Rational	43.27	1	10	25,961	------	------	------	post development
3	Reservoir	27.37	1	14	25,949	2	510.44	11,523	Reservior

Hydrograph Summary Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2023

Hyd. No.	Hydrograph type (origin)	Peak flow (cfs)	Time interval (min)	Time to Peak (min)	Hyd. volume (cuft)	Inflow hyd(s)	Maximum elevation (ft)	Total strge used (cuft)	Hydrograph Description
1	Rational	34.66	1	11	22,873	------	------	------	pre development
2	Rational	48.39	1	10	29,031	------	------	------	post development
3	Reservoir	30.47	1	14	29,019	2	510.65	12,716	Reservior

Hydrograph Summary Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2023

Hyd. No.	Hydrograph type (origin)	Peak flow (cfs)	Time interval (min)	Time to Peak (min)	Hyd. volume (cuft)	Inflow hyd(s)	Maximum elevation (ft)	Total strge used (cuft)	Hydrograph Description
1	Rational	39.81	1	11	26,276	------	------	------	pre development
2	Rational	55.21	1	10	33,127	------	------	------	post development
3	Reservoir	34.08	1	14	33,115	2	510.93	14,413	Reservior

Hydrograph Summary Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2023

Hyd. No.	Hydrograph type (origin)	Peak flow (cfs)	Time interval (min)	Time to Peak (min)	Hyd. volume (cuft)	Inflow hyd(s)	Maximum elevation (ft)	Total strge used (cuft)	Hydrograph Description
1	Rational	45.47	1	11	30,012	------	------	------	pre development
2	Rational	63.00	1	10	37,802	------	------	------	post development
3	Reservoir	37.59	1	14	37,790	2	511.26	16,533	Reservior

Hydrograph Summary Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2023

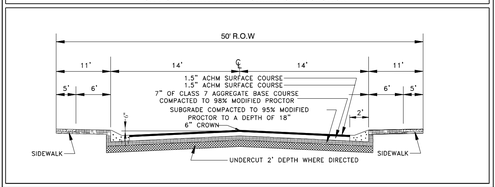
Hyd. No.	Hydrograph type (origin)	Peak flow (cfs)	Time interval (min)	Time to Peak (min)	Hyd. volume (cuft)	Inflow hyd(s)	Maximum elevation (ft)	Total strge used (cuft)	Hydrograph Description
1	Rational	51.67	1	11	34,102	------	------	------	pre development
2	Rational	71.49	1	10	42,895	------	------	------	post development
3	Reservoir	41.26	1	14	42,883	2	511.62	18,945	Reservior

Hydrograph Summary Report

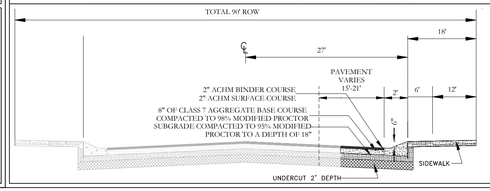
Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2023

Hyd. No.	Hydrograph type (origin)	Peak flow (cfs)	Time interval (min)	Time to Peak (min)	Hyd. volume (cuft)	Inflow hyd(s)	Maximum elevation (ft)	Total strge used (cuft)	Hydrograph Description
1	Rational	54.77	1	11	36,151	------	------	------	pre development
2	Rational	75.78	1	10	45,465	------	------	------	post development
3	Reservoir	42.99	1	14	45,453	2	511.80	20,214	Reservior

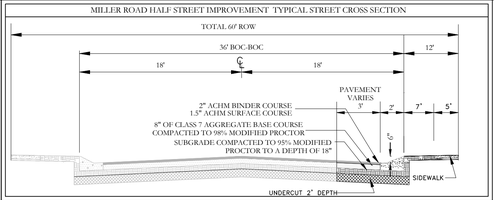
CITY OF BRYANT TYPICAL STREET CROSS SECTION



HILLTOP ROAD HALF STREET IMPROVEMENT TYPICAL STREET CROSS SECTION



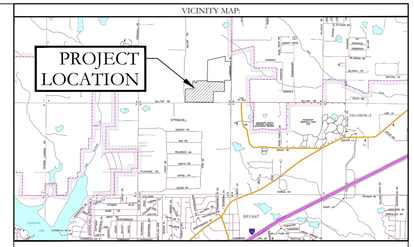
MILLER ROAD HALF STREET IMPROVEMENT TYPICAL STREET CROSS SECTION



NOTE:

TRACTS A,B, C, D AND E WILL BE UTILIZED FOR DRAINAGE AND UTILITIES PURPOSES AND WILL MAINTAINED BY THE PROPERTY OWNERS ASSOCIATION (POA) OR IMPROVEMENT DISTRICT.

VICINITY MAP:



OWNER:

Name: NXT GEN HOMES LLC
Address: 19218 SUMMERSHADE DRIVE
BRYANT, AR 72022

DEVELOPER:

Name: NXT GEN HOMES LLC
Address: 19218 SUMMERSHADE DRIVE
BRYANT, AR 72022

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 of Execution ____________ Name: ______________________

Source of Tile: 2021-009870

CERTIFICATE OF PRELIMINARY SURVEYING ACCURACY:

I, Jonathan L. Hope, hereby certify that this proposed preliminary plat correctly represents a survey completed by me, or under my supervision on ______________, 2023; that the boundary lines shown hereon correspond with the description in the deeds cited in the above Source Title; and that all monuments which were found or placed on the property are correctly described and located..

____
Date of Execution

Signed: ______________________
Jonathan L. Hope
Registered Professional
Land Surveyor No. 1762
Arkansas

CERTIFICATE OF PRELIMINARY ENGINEERING ACCURACY:

I, Kazi Tamzidual Islam, 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 location, 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 of Execution

____
Kazi Tamzidual Islam
Registered Professional
Engineer, No. 20876 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 of further provisions of said Rules and Regulations.

____
Date of Execution

Signed: ______________________
Rick Johnson, Chairman
Bryant Planning Commission

CERTIFICATE OF AUTHORIZATION
HOPE CONSULTING, INC.
No. 1931
ARKANSAS

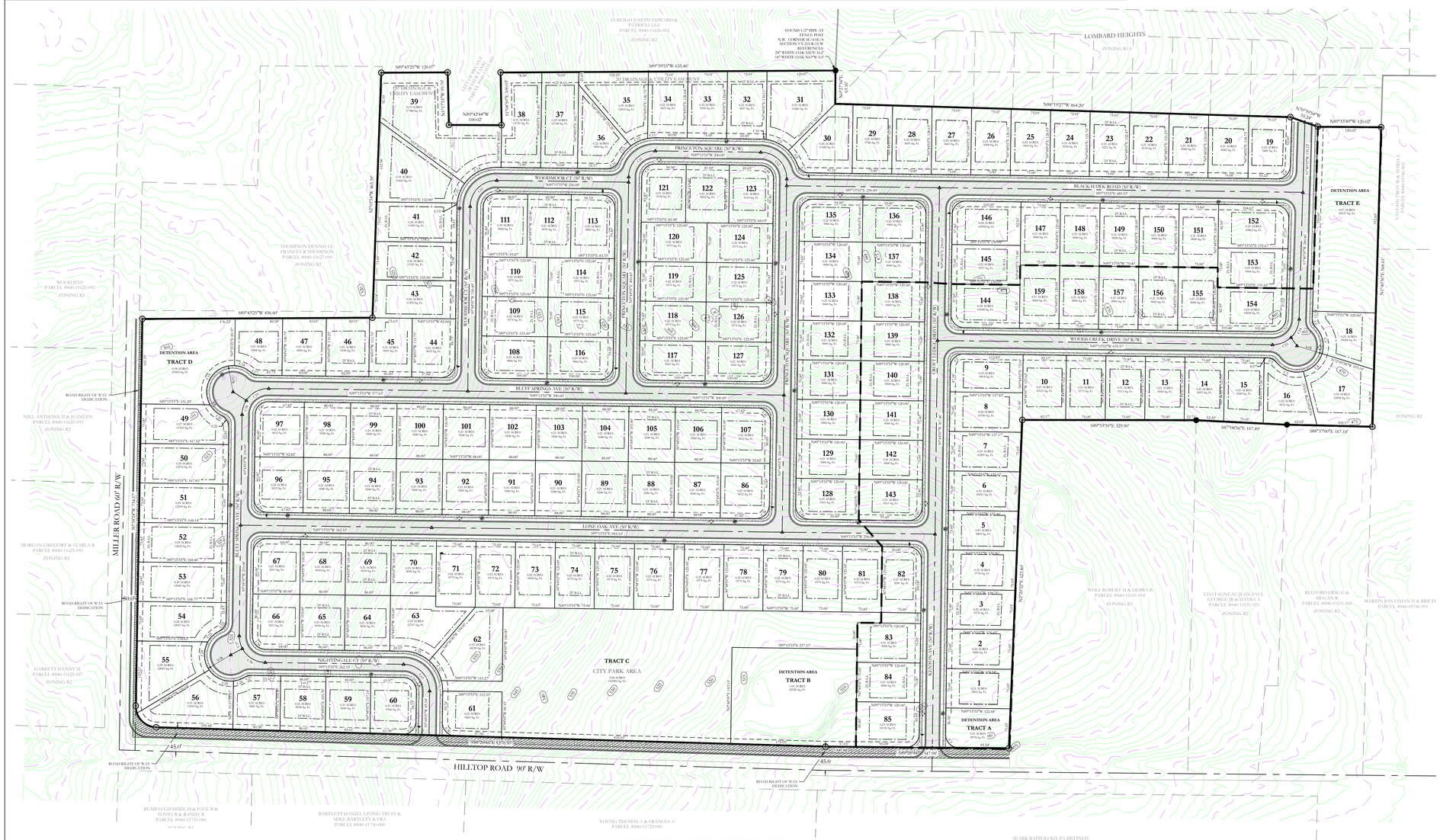
REGISTERED PROFESSIONAL LAND SURVEYOR
STATE OF ARKANSAS
NO. 1762
SIGNATURE
JONATHAN L. HOPE

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
NO. 20876
KAZI TAMZIDUL ISLAM

By affixing my seal and signature, I Jonathan L. Hope, Arkansas PLS No, 1762, hereby certify that this drawing correctly depicts a survey compiled by me or under my direct supervision.

NOTE: This survey was based on legal descriptions and title work furnished by others and does not represent a title search.

No portion of the property described hereon lies within the 100 year floodplain, according to the Flood Insurance Rate Map, panel # 05125C0225E, Dated: 06/05/2020 .



PRELIMINARY PLAT
HILLTOP MANOR SUBDIVISION

A SUBDIVISION IN THE CITY OF BRYANT, SALINE COUNTY, ARKANSAS.

Curve #	Delta	Chord B & D	Arc Length	Arc Radius
C1	80°19'56"	S39°25'53"E 32.25'	35.05'	25.00'
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C3	49°41'45"	N64°25'03"W 21.01'	21.68'	25.00'
C4	58°41'46"	S46°30'55"W 49.01'	51.22'	50.00'
C5	60°59'27"	S13°19'42"E 50.75'	53.22'	50.00'
C6	45°30'04"	S21°04'23"E 19.34'	19.85'	25.00'
C7	68°14'54"	N55°08'28"W 28.05'	29.78'	25.00'
C8	23°57'58"	N33°00'00"W 31.14'	31.37'	75.00'
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C13	28°19'57"	S38°28'45"W 36.71'	37.09'	75.00'
C14	54°34'22"	S63°26'54"W 68.77'	71.44'	75.00'
C15	30°32'24"	S20°53'31"W 39.51'	39.98'	75.00'
C16	90°00'00"	S45°44'05"W 35.36'	39.27'	25.00'
C16	66°25'19"	S57°31'26"W 27.39'	28.98'	25.00'
C17	40°23'20"	N69°04'15"W 17.26'	17.62'	25.00'
C18	38°01'52"	N67°53'31"W 32.58'	33.19'	50.00'
C19	122°32'15"	S31°49'26"W 87.69'	106.93'	50.00'
C19	4°53'14"	S3°10'42"W 6.40'	6.40'	75.00'
C20	34°18'21"	S46°35'53"E 29.49'	29.94'	50.00'
C21	64°29'08"	S31°30'29"E 26.68'	28.14'	25.00'
C22	62°42'23"	S32°05'16"W 26.02'	27.36'	25.00'
C23	33°55'08"	S46°28'54"W 29.17'	29.60'	50.00'
C24	57°46'06"	S0°38'17"W 48.30'	50.41'	50.00'
C25	61°03'50"	S65°23'32"E 50.80'	53.29'	50.00'
C26	25°15'28"	N71°26'49"E 21.86'	22.04'	50.00'
C27	35°38'12"	N76°25'58"E 15.30'	15.55'	25.00'
C28	90°00'00"	S44°15'55"E 35.36'	39.27'	25.00'
C29	90°55'09"	S46°11'39"W 35.64'	39.67'	25.00'
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C31	15°27'58"	N6°59'54"W 20.18'	20.24'	75.00'
C32	34°29'22"	N31°58'34"W 44.47'	45.15'	75.00'
C33	40°02'41"	N69°14'35"W 51.36'	52.42'	75.00'
C34	90°00'00"	N44°15'55"W 35.36'	39.27'	25.00'
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C44	90°00'00"	N44°15'55"W 35.36'	39.27'	25.00'
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C45	90°00'00"	N45°44'05"E 35.36'	39.27'	25.00'
C46	90°00'00"	S44°15'55"E 35.36'	39.27'	25.00'
C47	90°00'00"	S45°44'05"W 35.36'	39.27'	25.00'
C48	90°00'00"	N44°15'55"W 35.36'	39.27'	25.00'
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C50	90°00'00"	N45°44'05"E 35.36'	39.27'	25.00'
C51	90°56'34"	S43°47'38"E 35.65'	39.68'	25.00'
C52	89°03'26"	S46°12'22"W 35.06'	38.86'	25.00'
C53	90°00'00"	N44°15'55"W 35.36'	39.27'	25.00'
C56	90°00'00"	N45°44'05"E 35.36'	39.27'	25.00'

SEARK RADIOLOGY PA DEFINED

LEGAL DESCRIPTION:
ALL OF THE SOUTHEAST QUARTER OF THE NORTHEAST QUARTER AND PART OF THE FRACTIONAL NORTHEAST QUARTER OF THE NORTHEAST QUARTER AND ALL THAT PART OF THE SOUTHWEST QUARTER OF THE NORTHEAST QUARTER OF SECTION 4, TOWNSHIP 3 SOUTH, RANGE 20 WEST OF THE FIFTH PRINCIPAL MERIDIAN, GARLAND COUNTY, ARKANSAS DESCRIBED AS FOLLOWS:

BEGINNING AT A FOUND 1/2" CAPPED REBAR AR LS# 1024 FOUND AT THE SW CORNER OF THE SW 1/4, NE 1/4; **THENCE**, N 89°38'29" E ALONG THE EAST SOUTH LINE THEREOF A DISTANCE OF 1283.05 FEET TO A FOUND 60-D NAIL AT A FENCE CORNER AND BEING THE SE CORNER OF THE SW 1/4 NE 1/4; **THENCE**, N 89°59'56" E ALONG THE SOUTH LINE THEREOF A DISTANCE OF 1368.52 FEET TO A FOUND BRIDGE SPIKE BEING THE SE CORNER SE 1/4 NE 1/4;**THENCE**, N 01°13'00" E A DISTANCE OF 1320.16 FEET TO A 1" PIPE FOUND AT THE NE CORNER OF THE SE 1/4 NE 1/4; **THENCE**, N 02°44'51" E ALONG THE EAST LINE THEREOF A DISTANCE OF 816.61 FEET TO A 1/2" ALUMINUM CAPPED REBAR AT THE INTERSECTION OF SAID EAST LINE AND THE SOUTH RIGHT OF WAY LINE OF U.S. HIGHWAY 270 (ALBERT PIKE);
THENCE, ALONG SAID SOUTH LINE THE FOLLOWING COURSES:
N 83°58'56" W A DISTANCE OF 201.14 FEET;
N 65°38'55" W A DISTANCE OF 318.36 FEET;
N 54°50'43" W A DISTANCE OF 400.08 FEET;
N 64°42'59" W A DISTANCE OF 187.67 FEET;
N 73°41'47" W A DISTANCE OF 187.61 FEET;
S 89°53'45" W A DISTANCE OF 129.12 FEET TO A 1/2" CAPPED REBAR AR LS#1414 FOUND ON THE WEST LINE OF THE FRACTIONAL NE 1/4 NE 1/4; **THENCE**, S 01°17'39" W A DISTANCE OF 1286.53 FEET TO A 1" PIPE FOUND AT THE AT THE NE CORNER OF THE SW 1/4 NE 1/4 AS SHOWN ON SURVEY BY LEWIS & CLARK SURVEYING DATED 11/03/20;, SAID POINT BEING 64.78 FEET NORTH OF A FOUND ALUMINUM CAPPED REBAR MARKING THE TECHNICAL NE CORNER AS SHOWN ON SURVEY BY DON MICHAEL BRADY 4/13/2002;
THENCE, S 88°31'10" W A DISTANCE OF 1322.70 FEET TO A FOUND 2" PIPE AS SHOWN ON THE DON M. BRADY SURVEY DATED 4/13/02; **THENCE**, S 07°04'59" W ALONG A FENCE LINE A DISTANCE OF 27.99 FEET TO A 1/2" CAPPED REBAR AR LS#1414; **THENCE**, S 68°13'40" W ALONG A FENCE LINE A DISTANCE OF 34.98 FEET TO A 1/2" ALUMINUM CAPPED REBAR FOUND ON THE WEST LINE OF THE SW 1/4 NE 1/4; **THENCE**, S 01°33'48" W ALONG THE WEST LINE THEREOF A DISTANCE OF 1298.25 FEET TO THE **POINT OF BEGINNING** AND CONTAINING 113.35 ACRES (60,608.115 SQ FT) MORE OR LESS;

-N-

BASIS OF BEARINGS:
GRID NORTH ARKANSAS
COORDINATE SYSTEM,
SOUTH ZONE BY G.P.S.
OBSERVATIONS

100' 50' 0 100'

LEGEND
- ◐ - Aliquot Corner
- ● - Found monument
- ⊙ - Set ½" Rebar
- △ - Computed point
- (M)- Measured
- (P) - Plat/Deed
- —x—x— - Fence

PROPERTY SPECIFICATIONS:

OWNER: NXT GEN HOMES LLC
19218 SUMMERSHADE DRIVE
BRYANT, AR 72022

DEVELOPER/: SUBDIVIDER NXT GEN HOMES LLC
19218 SUMMERSHADE DRIVE
BRYANT, AR 72022

ENGINEERS: HOPE CONSULTING INC.
129 N MAIN STREET
BENTON, AR 72015

NAME OF SUBDIVISION: HILLTOP MANOR

NUMBER OF LOTS: 159
EXISTING ZONING: R2

PROPOSED DENSITY 3.85 HOMES PER ACRE
SOURCE OF WATER: CITY OF BRYANT
SOURCE OF SEWER: CITY OF BRYANT
SOURCE OF ELECTRIC: ENTERGY
SOURCE OF GAS: SUMMIT

BUILDING SETBACKS:
FRONT-25' OR AS SHOWN
REAR-25' OR AS SHOWN
SIDE-8' OR AS SHOWN

UTILITY & DRAINAGE EASEMENTS:
FRONT-10' OR AS SHOWN
REAR - 5' OR AS SHOWN
SIDE - 5' OR AS SHOWN

HOPE CONSULTING
ENGINEERS - SURVEYORS

129 N. Main Street,
Benton, Arkansas 72015
PH. (501)315-2626
FAX (501) 315-0024
www.hopeconsulting.com

FOR USE AND BENEFIT OF:

NXT GEN HOMES LLC

PRELIMINARY PLAT
HILLTOP MANOR SUBDIVISION

A SUBDIVISION IN THE CITY OF BRYANT, SALINE COUNTY, ARKANSAS.

DATE: 03/10/2023	C.A.D. BY: B.JOHNSON	DRAWING NUMBER: 20-1341	
REVISED:	CHECKED BY:		
SHEET:	SCALE: 1"= 100'		

500	01S	14W	0	09	200	62	1762

K:\Land Projects 2004\Subdivisions\2020\20-1341 Miller & HIlltop\CIVIL\DWG\20-1341-New Layout R6 75' WIDE LOTS.dwg

K:\Land Projects 2004\Subdivisions\2020\20-1341 Miller & HIlltop\CIVIL\DWG\20-1341-New Layout R6 75' WIDE LOTS.dwg, 3/10/2023 11:53:45 AM, DWG To PDF.pc3

HOPE
CONSULTING
ENGINEERS • SURVEYORS

March 6, 2022

Truett Smith
City of Bryant
210 Southwest Third St., Bryant, AR 72022

RE: Request for Residential Subdivision Plat and CD Approval
Parcel #: 840-11625-125

Dear Mr. Truett Smith,

I represent NXT Gen Homes LLC, in the above-captioned matter. This 54 acre piece of property is located inside the City of Bryant. This property has access to Bryant water and sewer. This development will be for single family residential homes and remain in the R-2 Zoning District.

Hilltop Manor will create a mixture of lot and home sizes in a unique neighborhood. TOur clients neighborhoods have been extremely successful in West Little Rock. They are excited to bring their unique home and neighborhood culture to Bryant.

It is our goal to be included on the April 10th, 2023 Planning Commission agenda.

Please feel free to contact me with any questions or concerns or if I can be of any further assistance.

Sincerely,

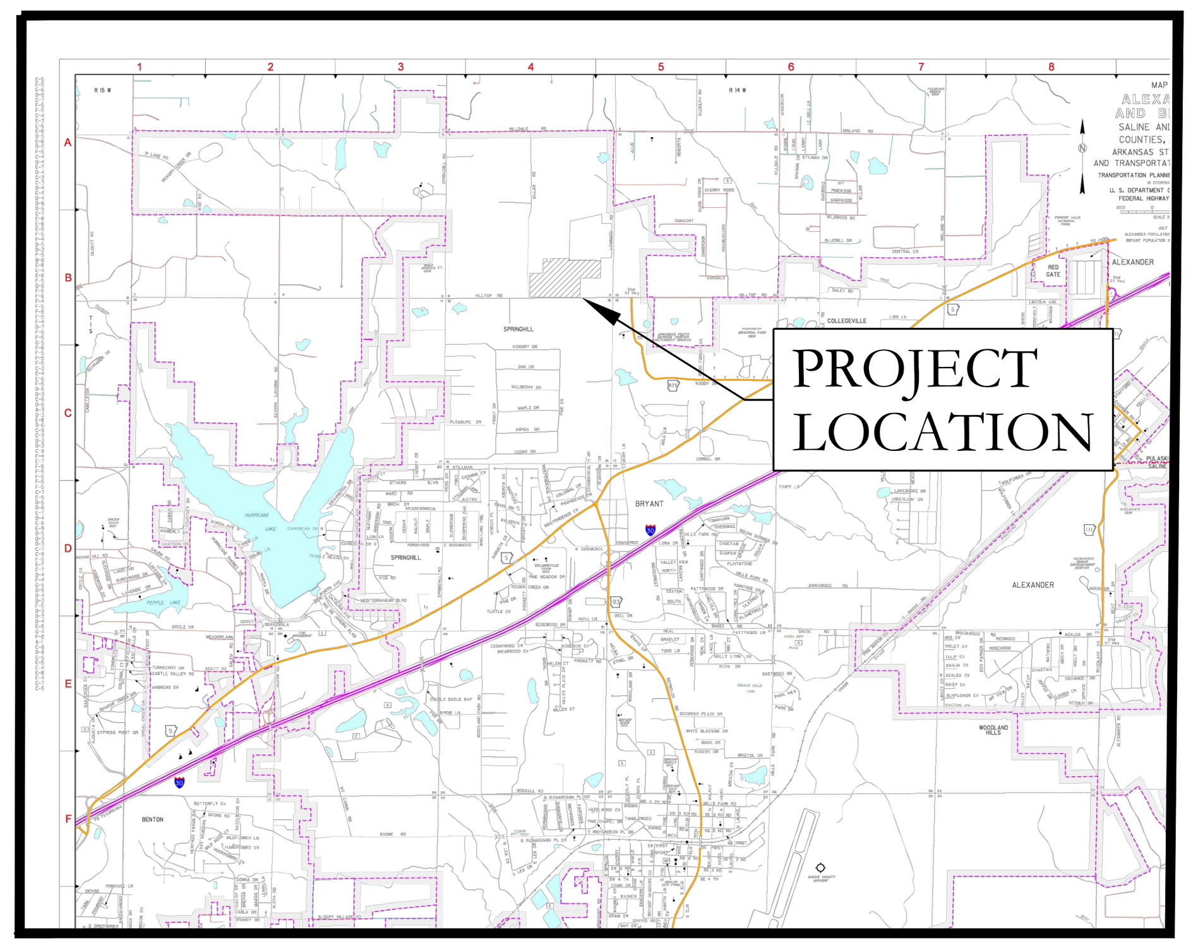
Jonathan Hope

Jonathan Hope
Hope Consulting, Inc.

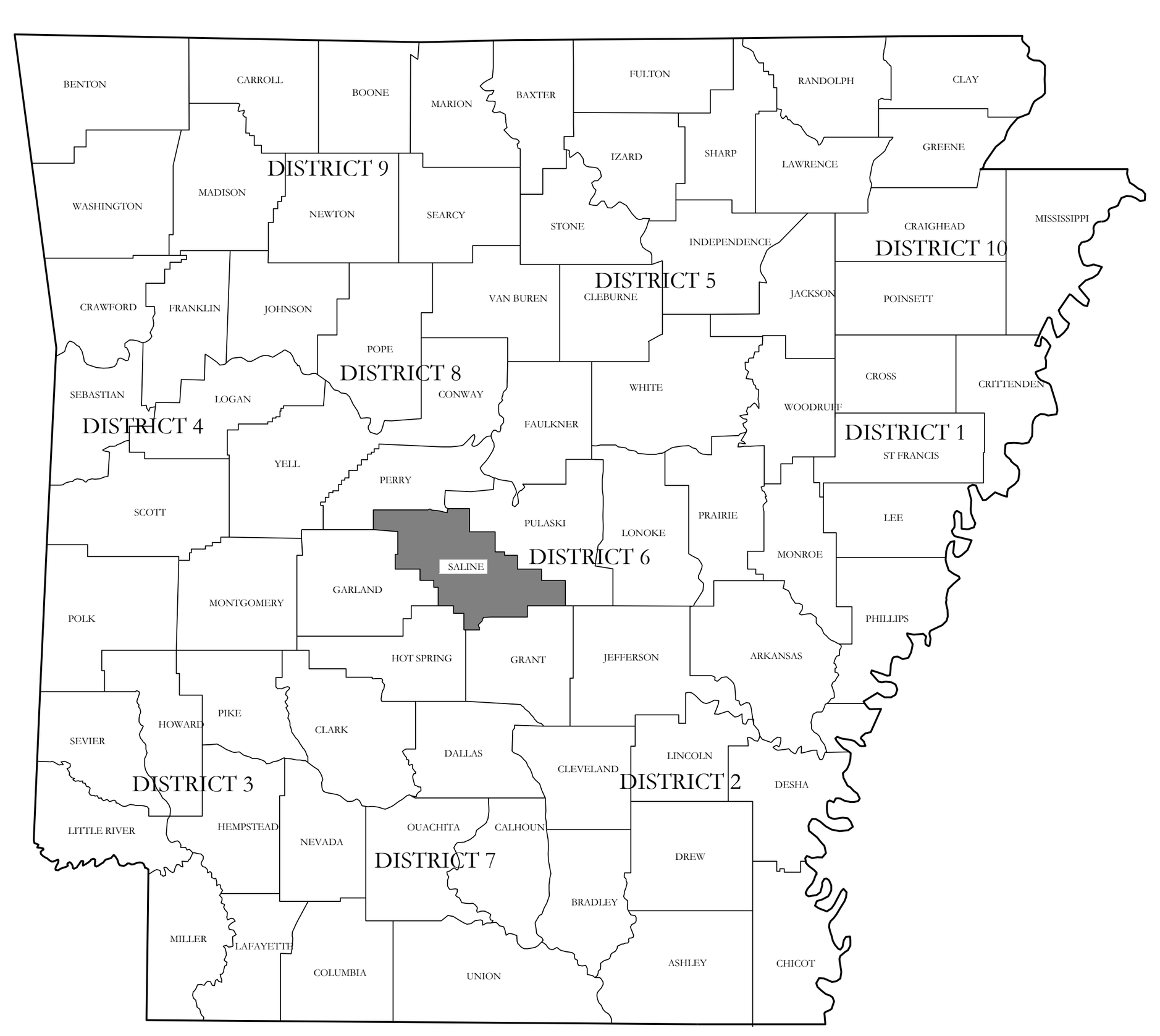
117 South Market St. Benton, Arkansas 72015
501-315-2626
www.hopeconsulting.com

CONSTRUCTION PLANS
HILLTOP LANDING

HILLTOP ROAD & MILLER ROAD ,BRYANT, AR



VICINITY MAP



PREPARED BY:

HOPE CONSULTING
ENGINEERS - SURVEYORS

129 N. Main Street,
Benton, Arkansas 72015
PH. (501)315-2626
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www.hopeconsulting.com

DRAWING INDEX

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Benton, Arkansas 72015
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www.hopeconsulting.com

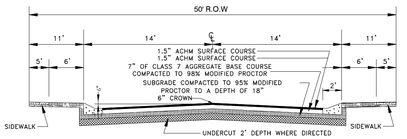
FOR USE AND BENEFIT OF:
NXT GEN HOMES LLC.

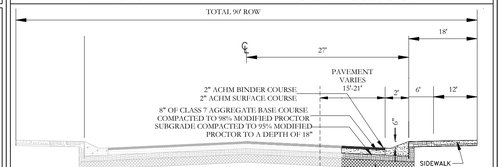
HILLTOP LANDING
A SUBDIVISION IN THE CITY OF BRYANT, AR
HILLTOP ROAD & MILLER ROAD, BRYANT, AR

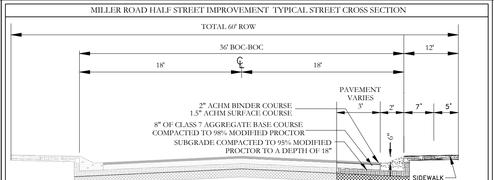
DATE:	02/16/2023	C.A.D. BY:		DRAWING NUMBER:
REVISED:		CHECKED BY:		20-1341
SHEET:		SCALE:		

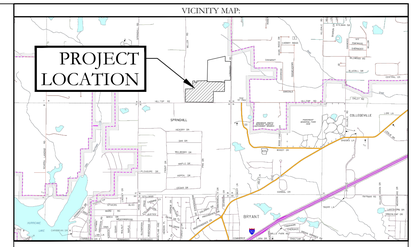
500	01S	14W	0	9	200	62	1762

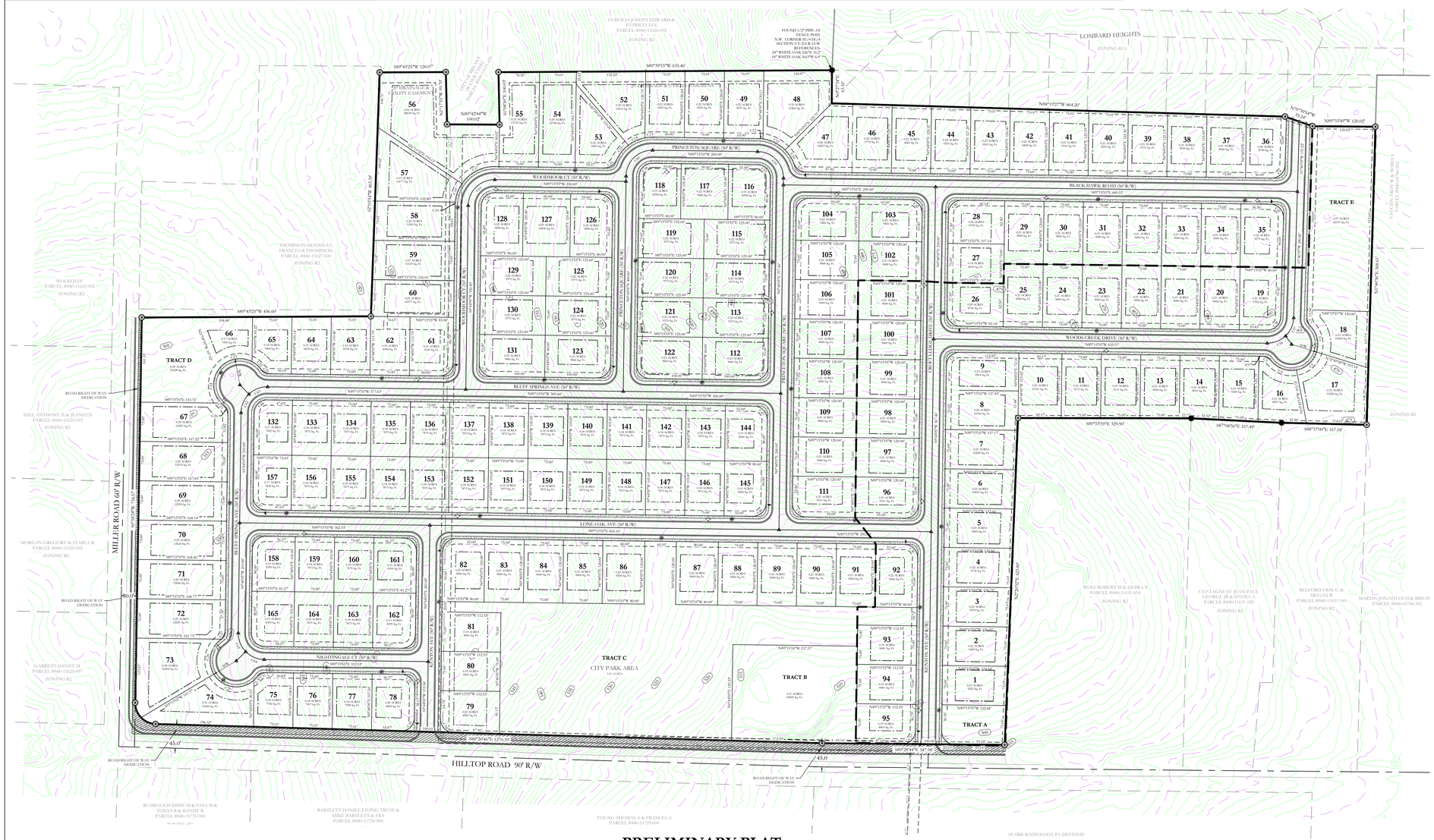
K:\LAND PROJECTS 2004\SUBDIVISIONS\2020\20-1341 MILLER & HILLTOP\CIVIL\DWG\20-1341-CONSTRUCTION DRAWING FULL PHASE 75' WIDE LOTS_03-08-2023.DWG











CITY OF BRYANT TYPICAL STREET CROSS SECTION

HILLTOP ROAD HALF STREET IMPROVEMENT TYPICAL STREET CROSS SECTION

MILLER ROAD HALF STREET IMPROVEMENT TYPICAL STREET CROSS SECTION

NOTE:

TRACTS A,B, C, D AND E WILL BE UTILIZED FOR DRAINAGE AND UTILITIES PURPOSES AND WILL MAINTAINED BY THE PROPERTY OWNERS ASSOCIATION (POA) OR IMPROVEMENT DISTRICT.

VICINITY MAP:

OWNER:

Name: NXT GEN HOMES LLC
Address: 19218 SUMMERSHADE DRIVE
BRYANT, AR 72022

DEVELOPER:

Name: NXT GEN HOMES LLC
Address: 19218 SUMMERSHADE DRIVE
BRYANT, AR 72022

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 of Execution ______________ Name: ______________________________

Source of Tile: 2021-009870

CERTIFICATE OF PRELIMINARY SURVEYING ACCURACY:

I, Jonathan L. Hope, hereby certify that this proposed preliminary plat correctly represents a survey completed by me, or under my supervision on _______________, 2023; that the boundary lines shown hereon correspond with the description in the deeds cited in the above Source Title; and that all monuments which were found or placed on the property are correctly described and located..

_________________________ Signed: ______________________________
Date of Execution
Jonathan L. Hope
Registered Professional
Land Surveyor No. 1762
Arkansas

CERTIFICATE OF PRELIMINARY ENGINEERING ACCURACY:

I, Kazi Tamzidual Islam, 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 location, 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.

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Rick Johnson, Chairman
Bryant Planning Commission

HOPE CONSULTING, INC. No. 1931

STATE OF ARKANSAS NO. 1762 JONATHAN L. HOPE

NO. 20876 KAZI TAMZIDUL ISLAM

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C41	90°56'34"	S43°47'38"E 35.65'	39.68'	25.00'
C42	90°00'00"	S44°15'55"E 35.36'	39.27'	25.00'
C43	90°00'00"	S45°44'05"W 35.36'	39.27'	25.00'
C44	90°00'00"	N44°15'55"W 35.36'	39.27'	25.00'
C45	90°00'00"	N44°15'55"W 35.36'	39.27'	25.00'
C46	90°00'00"	N45°44'05"E 35.36'	39.27'	25.00'
C47	90°00'00"	S44°15'55"E 35.36'	39.27'	25.00'
C48	90°00'00"	S45°44'05"W 35.36'	39.27'	25.00'
C49	90°00'00"	S44°15'55"E 35.36'	39.27'	25.00'
C50	90°00'00"	S45°44'05"W 35.36'	39.27'	25.00'
C51	90°00'00"	N44°15'55"W 35.36'	39.27'	25.00'
C52	90°00'00"	N45°44'05"E 35.36'	39.27'	25.00'
C53	90°00'00"	S44°15'55"E 35.36'	39.27'	25.00'
C54	90°00'00"	S45°44'05"W 35.36'	39.27'	25.00'
C55	90°00'00"	N44°15'55"W 35.36'	39.27'	25.00'
C56	90°00'00"	N45°44'05"E 35.36'	39.27'	25.00'

LEGAL DESCRIPTION:
ALL OF THE SOUTHEAST QUARTER OF THE NORTHEAST QUARTER AND PART OF THE FRACTIONAL NORTHEAST QUARTER OF THE NORTHEAST QUARTER AND ALL THAT PART OF THE SOUTHWEST QUARTER OF THE NORTHEAST QUARTER OF SECTION 4, TOWNSHIP 3 SOUTH, RANGE 20 WEST OF THE FIFTH PRINCIPAL MERIDIAN, GARLAND COUNTY, ARKANSAS DESCRIBED AS FOLLOWS:

BEGINNING AT A FOUND 1/2" CAPPED REBAR AR LS# 1024 FOUND AT THE SW CORNER OF THE SW 1/4, NE 1/4; **THENCE**, N 89°38'29" E ALONG THE EAST SOUTH LINE THEREOF A DISTANCE OF 1283.05 FEET TO A FOUND 60-D NAIL AT A FENCE CORNER AND BEING THE SE CORNER OF THE SW 1/4 NE 1/4; **THENCE**, N 89°59'56" E ALONG THE SOUTH LINE THEREOF A DISTANCE OF 1368.52 FEET TO A FOUND BRIDGE SPIKE BEING THE SE CORNER SE 1/4 NE 1/4;**THENCE**, N 01°13'00" E A DISTANCE OF 1320.16 FEET TO A 1" PIPE FOUND AT THE NE CORNER OF THE SE 1/4 NE 1/4; **THENCE**, N 02°44'51" E ALONG THE EAST LINE THEREOF A DISTANCE OF 816.61 FEET TO A 1/2" ALUMINUM CAPPED REBAR AT THE INTERSECTION OF SAID EAST LINE AND THE SOUTH RIGHT OF WAY LINE OF U.S. HIGHWAY 270 (ALBERT PIKE);
THENCE, ALONG SAID SOUTH LINE THE FOLLOWING COURSES:
N 83°58'56" W A DISTANCE OF 201.14 FEET;
N 65°38'55" W A DISTANCE OF 318.36 FEET;
N 54°50'43" W A DISTANCE OF 400.08 FEET;
N 64°42'59" W A DISTANCE OF 187.67 FEET;
N 73°41'47" W A DISTANCE OF 187.61 FEET;
S 89°53'45" W A DISTANCE OF 129.12 FEET TO A 1/2" CAPPED REBAR AR LS#1414 FOUND ON THE WEST LINE OF THE FRACTIONAL NE 1/4 NE 1/4; **THENCE**, S 01°17'39" W A DISTANCE OF 1286.53 FEET TO A 1" PIPE FOUND AT THE AT THE NE CORNER OF THE SW 1/4 NE 1/4 AS SHOWN ON SURVEY BY LEWIS & CLARK SURVEYING DATED 11/03/20;, SAID POINT BEING 64.78 FEET NORTH OF A FOUND ALUMINUM CAPPED REBAR MARKING THE TECHNICAL NE CORNER AS SHOWN ON SURVEY BY DON MICHAEL BRADY 4/13/2002;
THENCE, S 88°31'10" W A DISTANCE OF 1322.70 FEET TO A FOUND 2" PIPE AS SHOWN ON THE DON M. BRADY SURVEY DATED 4/13/02; **THENCE**, S 07°04'59" W ALONG A FENCE LINE A DISTANCE OF 27.99 FEET TO A 1/2" CAPPED REBAR AR LS#1414; **THENCE**, S 68°13'40" W ALONG A FENCE LINE A DISTANCE OF 34.98 FEET TO A 1/2" ALUMINUM CAPPED REBAR FOUND ON THE WEST LINE OF THE SW 1/4 NE 1/4; **THENCE**, S 01°33'48" W ALONG THE WEST LINE THEREOF A DISTANCE OF 1298.25 FEET TO THE **POINT OF BEGINNING** AND CONTAINING 113.35 ACRES (60,608.115 SQ FT) MORE OR LESS;

-N-

BASIS OF BEARINGS:
GRID NORTH ARKANSAS
COORDINATE SYSTEM,
SOUTH ZONE BY G.P.S.
OBSERVATIONS

100' 50' 0 100'

LEGEND

- ◕ - Aliquot Corner
- ● - Found monument
- ⊙ - Set ½" Rebar
- △ - Computed point
- (M) - Measured
- (P) - Plat/Deed
- —x——x— - Fence

By affixing my seal and signature, I Jonathan L. Hope, Arkansas PLS No, 1762, hereby certify that this drawing correctly depicts a survey compiled by me or under my direct supervision.

NOTE: This survey was based on legal descriptions and title work furnished by others and does not represent a title search.

No portion of the property described hereon lies within the 100 year floodplain, according to the Flood Insurance Rate Map, panel # 05125C0225E, Dated: 06/05/2020 .

PROPERTY SPECIFICATIONS:

OWNER: NXT GEN HOMES LLC
19218 SUMMERSHADE DRIVE
BRYANT, AR 72022

DEVELOPER/: SUBDIVIDER NXT GEN HOMES LLC
19218 SUMMERSHADE DRIVE
BRYANT, AR 72022

ENGINEERS: HOPE CONSULTING INC.
129 N MAIN STREET
BENTON, AR 72015

NAME OF SUBDIVISION: HILLTOP MANOR

NUMBER OF LOTS: 165
EXISTING ZONING: R2

PROPOSED DENSITY 3.85 HOMES PER ACRE
SOURCE OF WATER: CITY OF BRYANT
SOURCE OF SEWER: CITY OF BRYANT
SOURCE OF ELECTRIC: ENTERGY
SOURCE OF GAS: SUMMIT

BUILDING SETBACKS:
FRONT-25' OR AS SHOWN
REAR-25' OR AS SHOWN
SIDE-8' OR AS SHOWN

UTILITY & DRAINAGE EASEMENTS:
FRONT-10' OR AS SHOWN
REAR - 5' OR AS SHOWN
SIDE - 5' OR AS SHOWN

HOPE
CONSULTING
ENGINEERS - SURVEYORS

129 N. Main Street,
Benton, Arkansas 72015
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FAX (501) 315-0024
www.hopeconsulting.com

FOR USE AND BENEFIT OF:

NXT GEN HOMES LLC

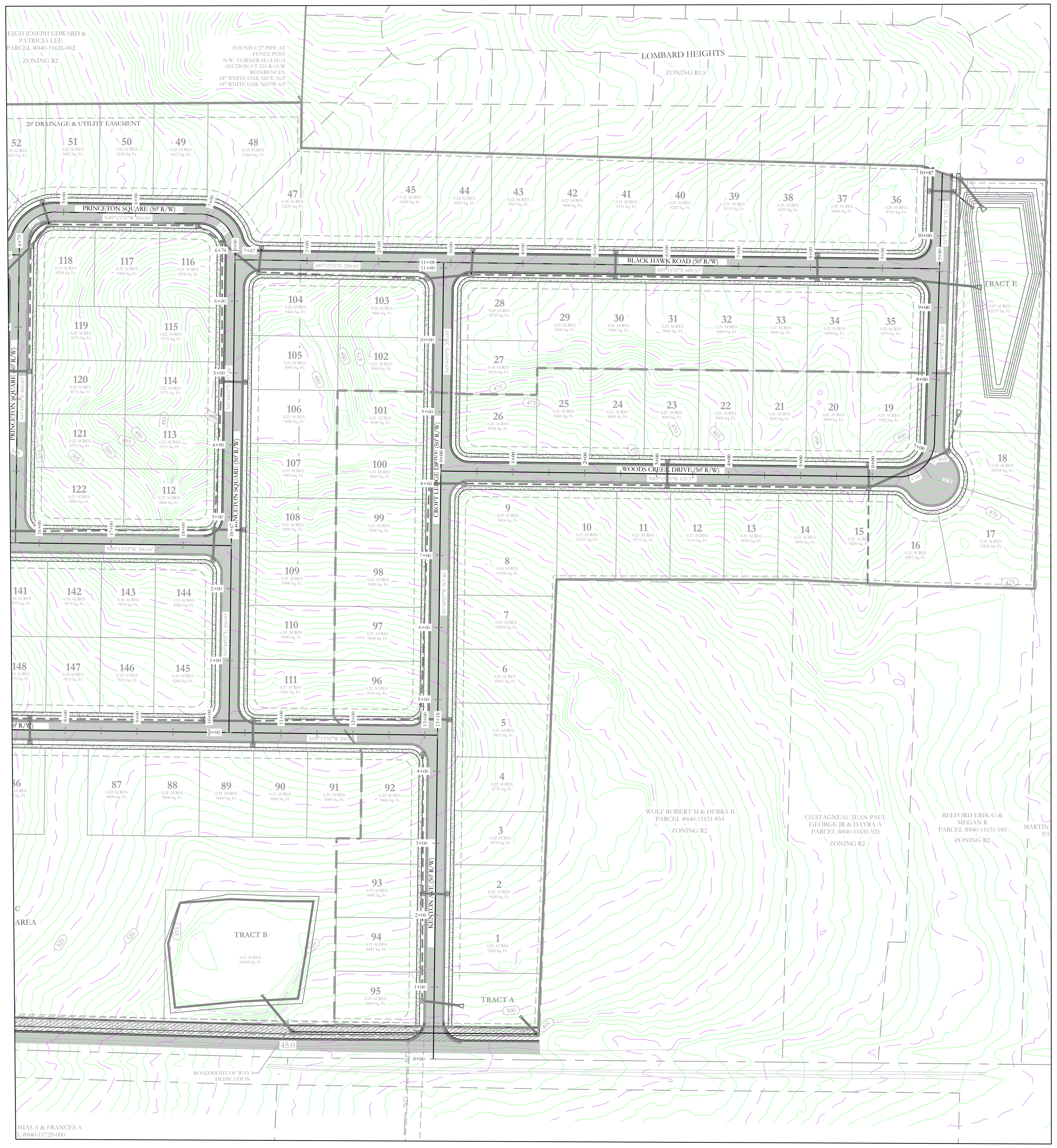
PRELIMINARY PLAT
HILLTOP MANOR SUBDIVISION

A SUBDIVISION IN THE CITY OF BRYANT, SALINE COUNTY, ARKANSAS.

DATE: 03/08/2023		C.A.D. BY: B.JOHNSON	DRAWING NUMBER: 20-1341
REVISED:		CHECKED BY:	
SHEET:		SCALE: 1"= 100'	

500	01S	14W	0	09	200	62	1762

K:\Land Projects 2004\Subdivisions\2020\20-1341 Miller & Hilltop\CIVIL\DWG\20-1341-New Layout R6 75' WIDE LOTS.dwg



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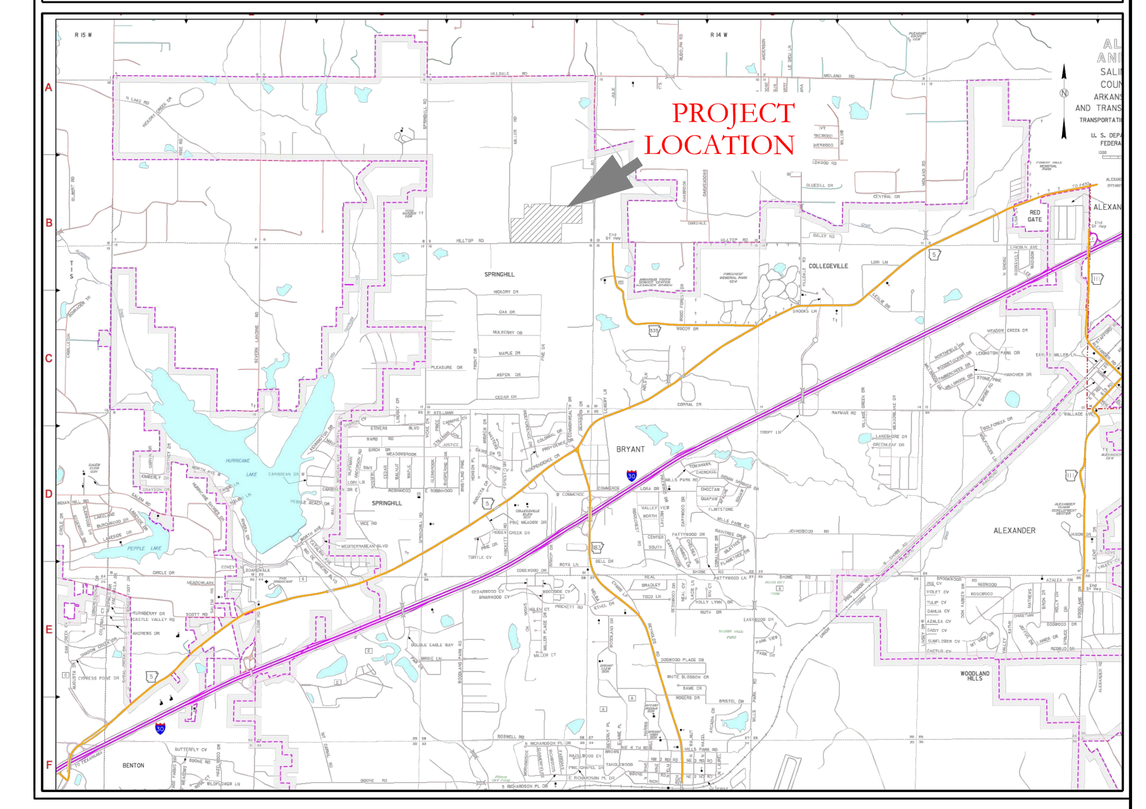
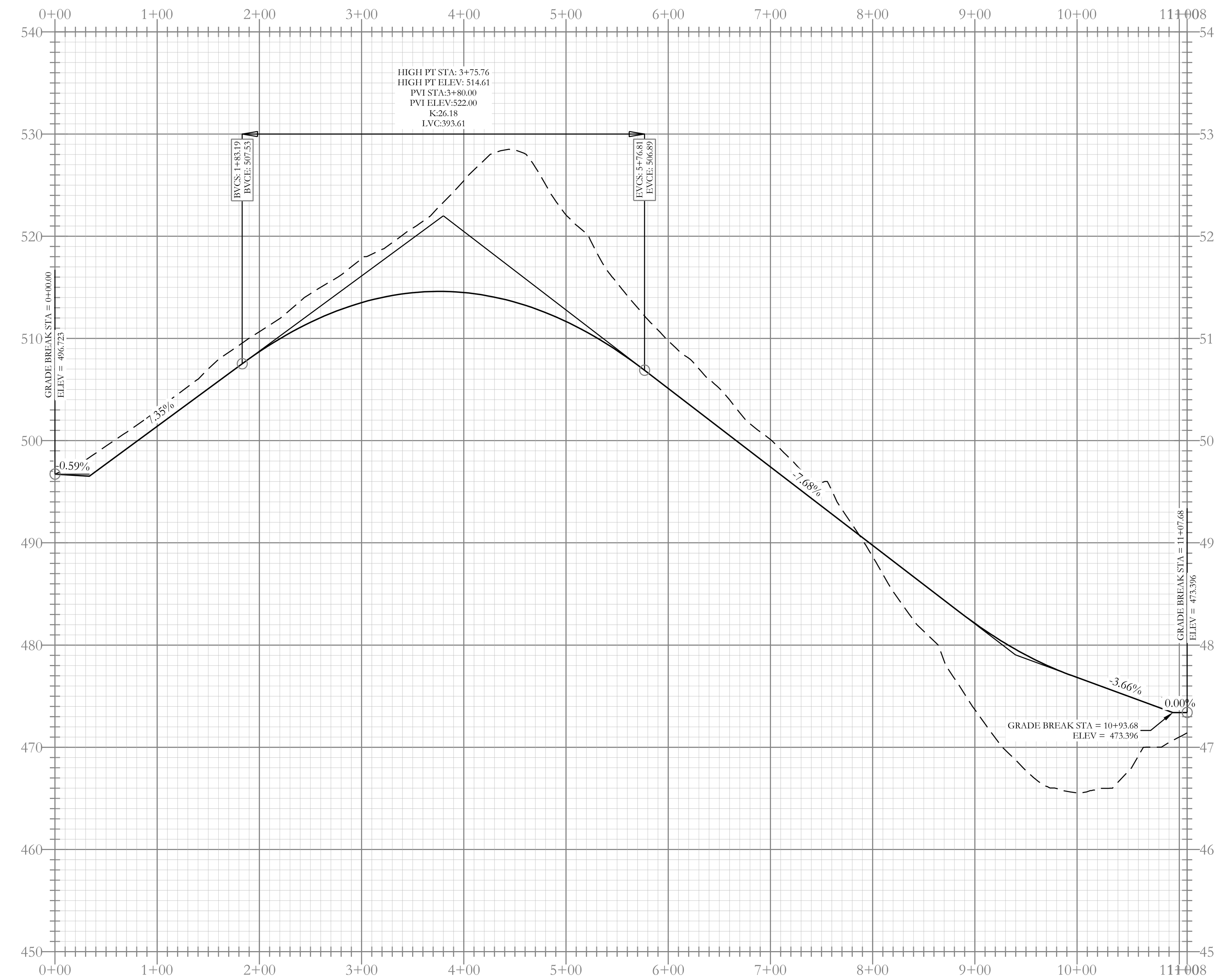
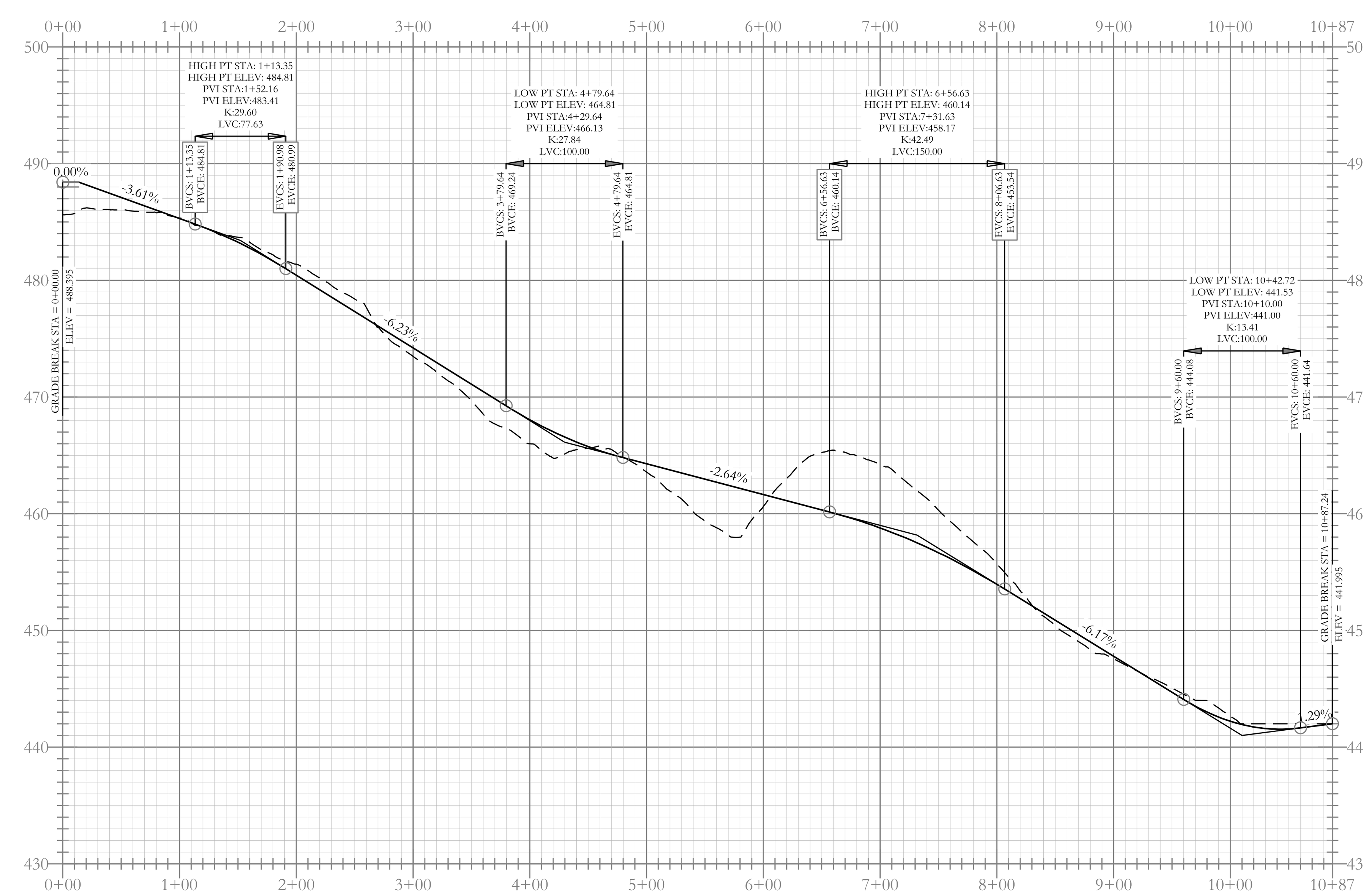


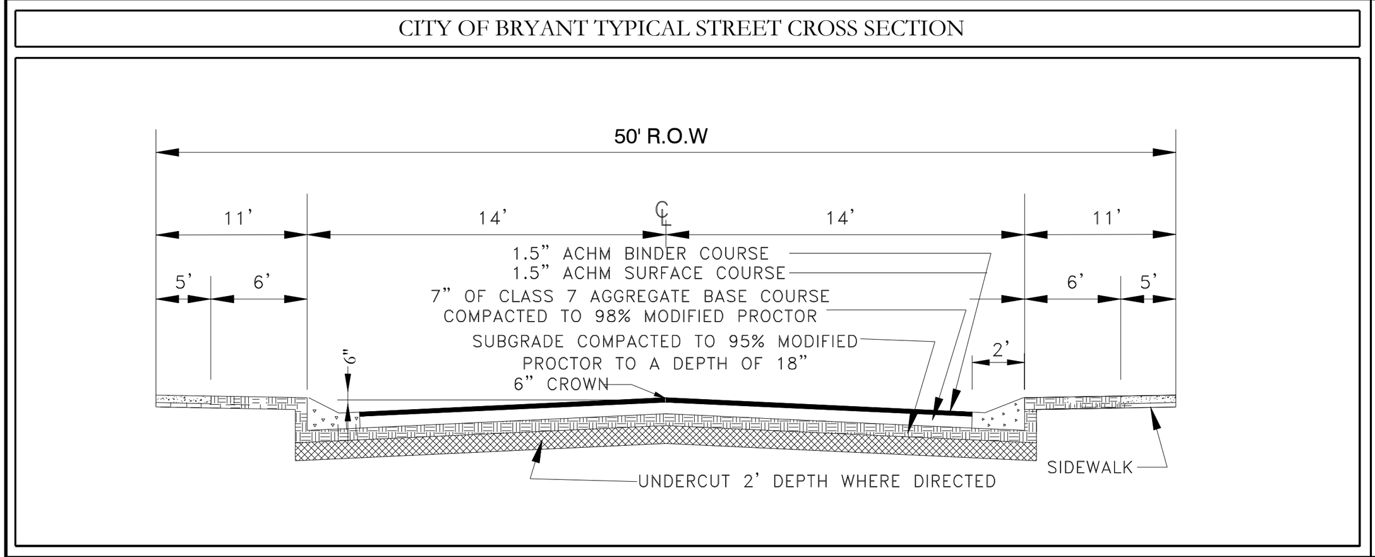


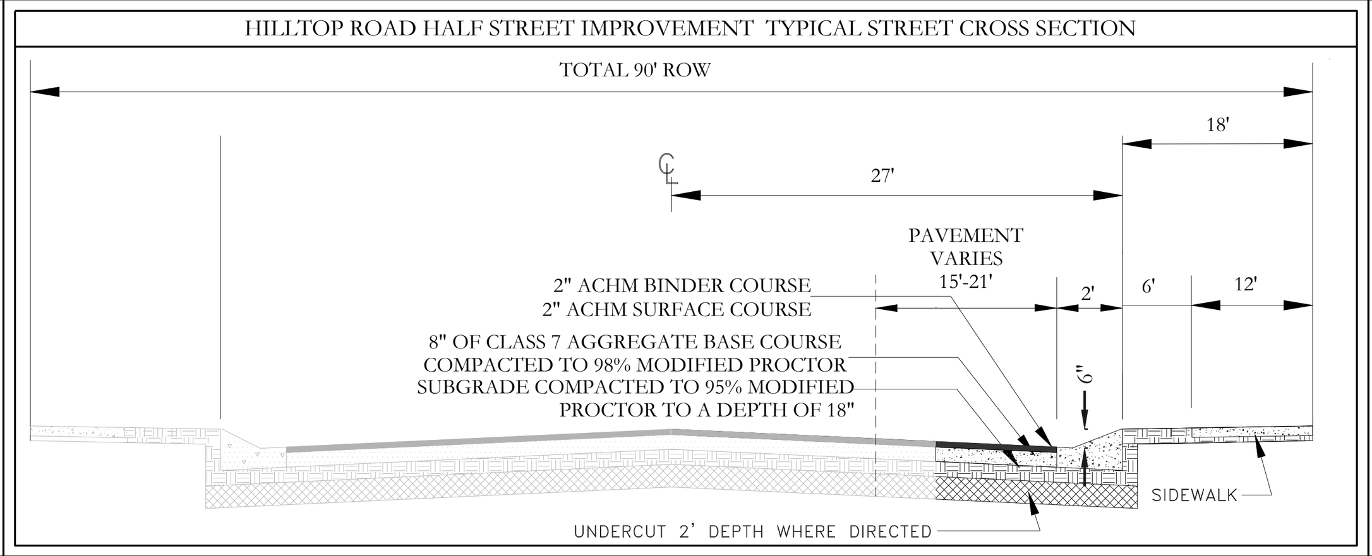
Croft Ledge Drive Profile

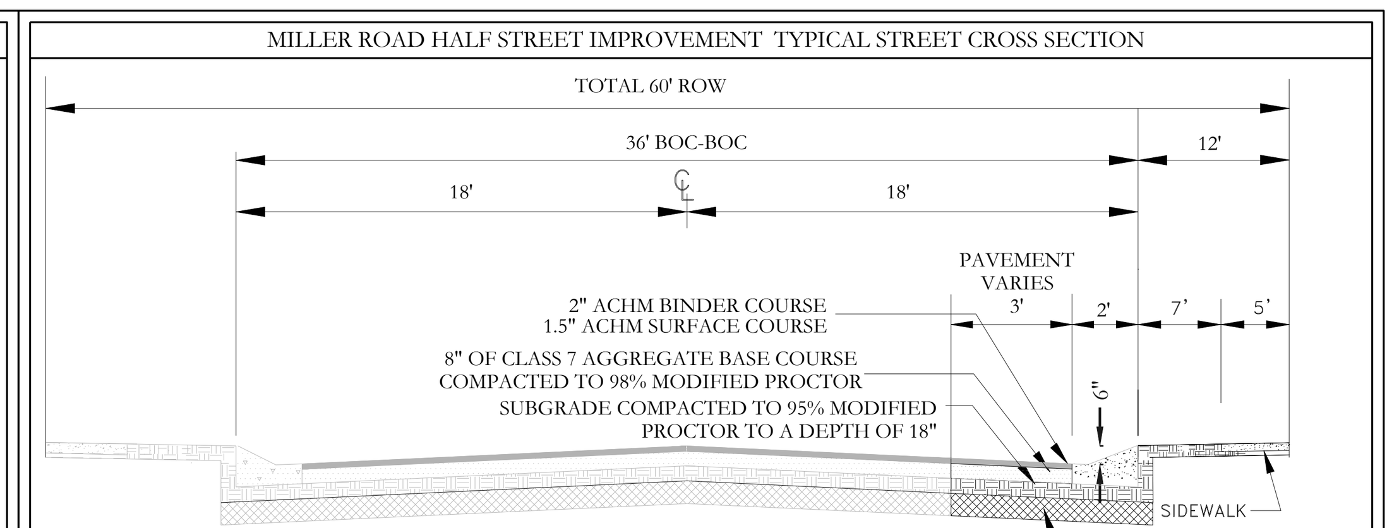


Wood Creek Drive Profile

HDPE
RCP







BASIS OF BEARING: GRID NORTH, ARKANSAS COORDINATE SYSTEM, SOUTH ZONE BY GPS OBSERVATION

CERTIFICATE OF AUTHORIZATION HOPE CONSULTING, INC. No. 1931 ARKANSAS

STATE OF ARKANSAS LICENSED PROFESSIONAL ENGINEER No. 20876

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ENGINEERS - SURVEYORS
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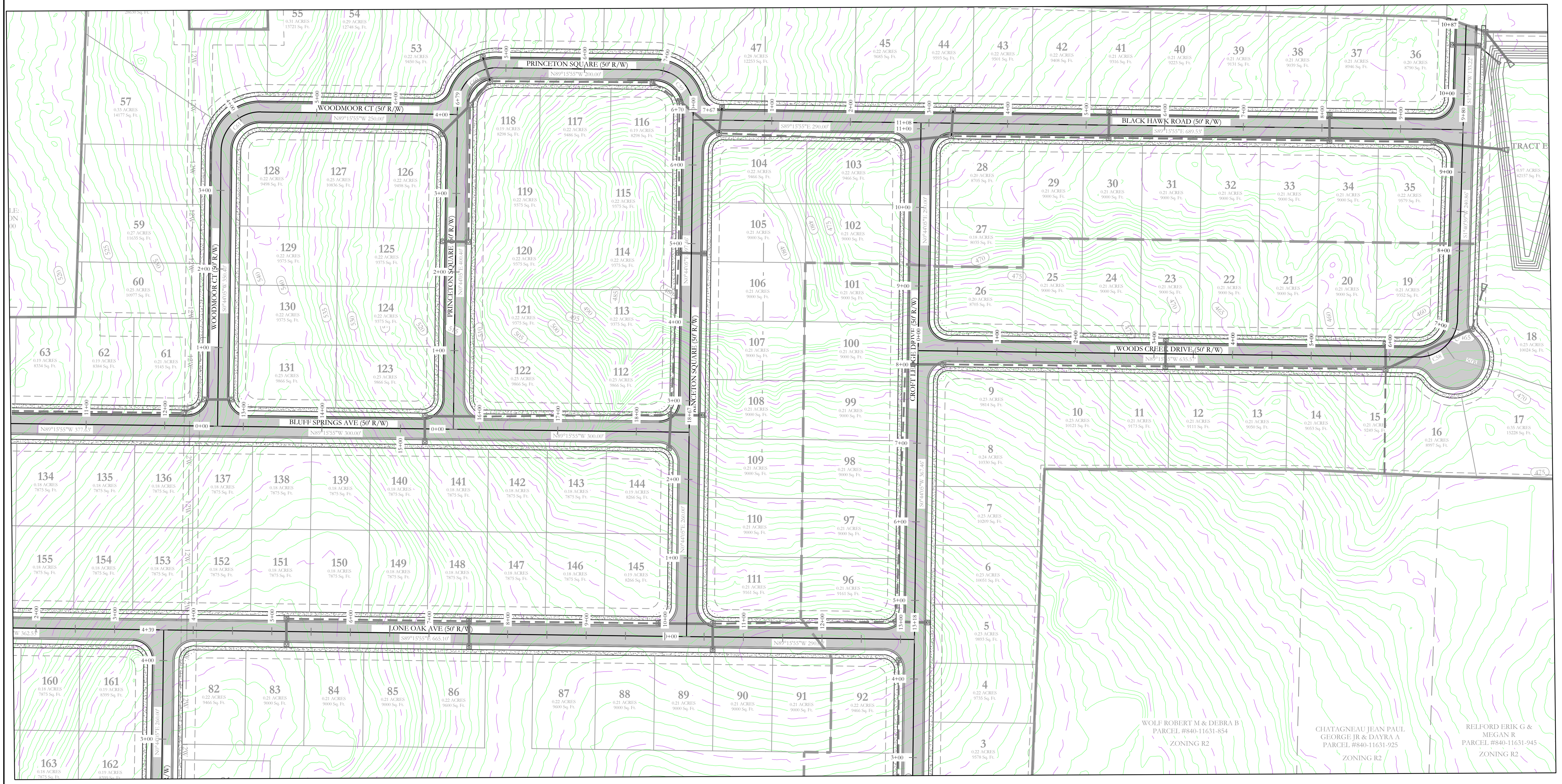
FOR USE AND BENEFIT OF:
NXT GEN HOMES LLC.

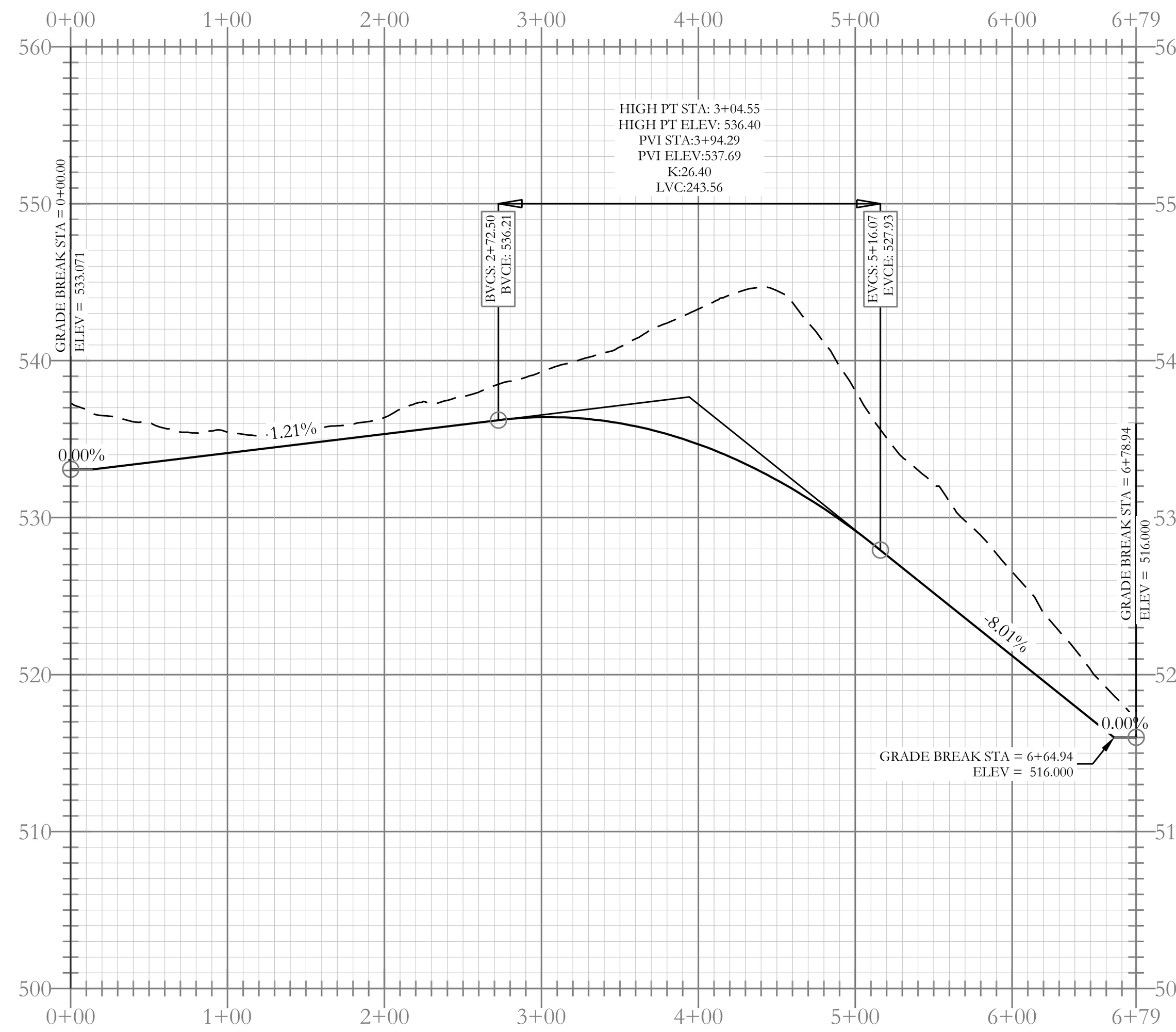
HILLTOP LANDING
STREET PLAN & PROFILE
A SUBDIVISION IN THE CITY OF BRYANT, SALINE COUNTY, ARKANSAS

DATE: 03/08/2023	C.A.D. BY:		DRAWING NUMBER:
REVISED:	CHECKED BY:		20-1341
SHEET: C-1.0	SCALE: 1" = 100'		

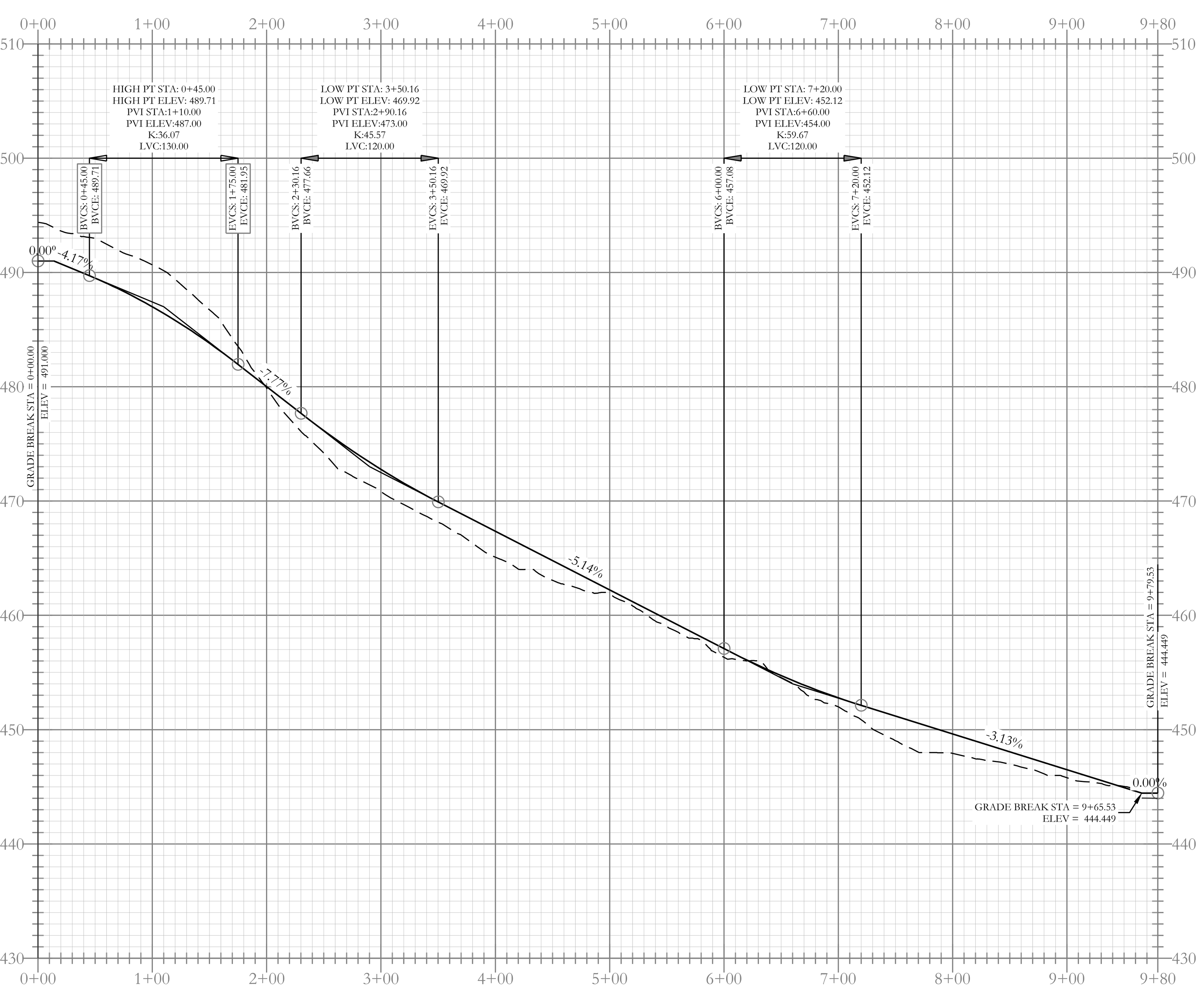
500	01S	14W	0	09	200	62	1762

K:\LAND PROJECTS 2004\SUBDIVISIONS\2020\20-1341 MILLER & HILLTOP\CIVIL\DWG\20-1341-CONSTRUCTION DRAWING FULL PHASE 75 WIDE LOTS_03-08-2023.DWG

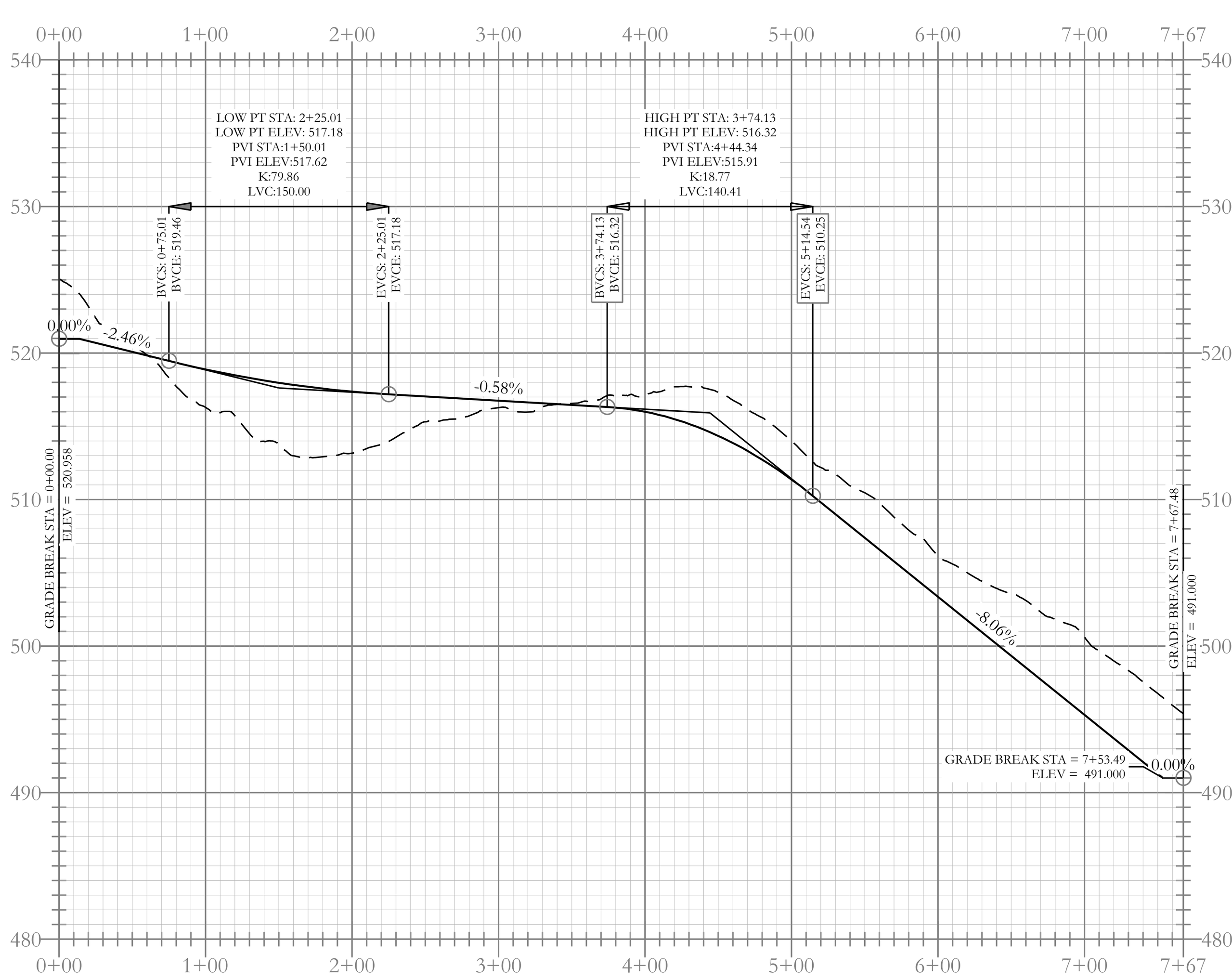




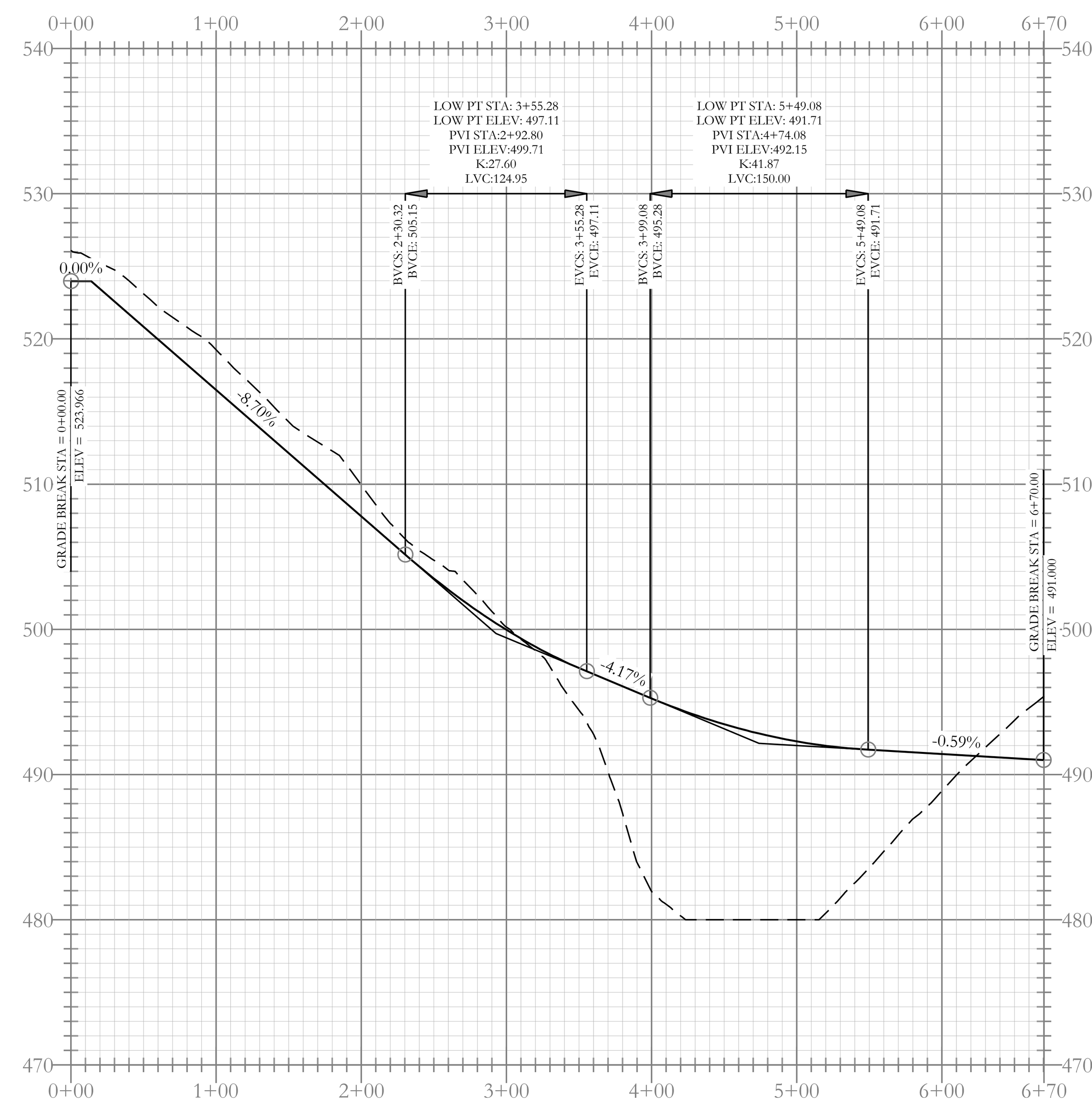
Woodmoor Ct Profile



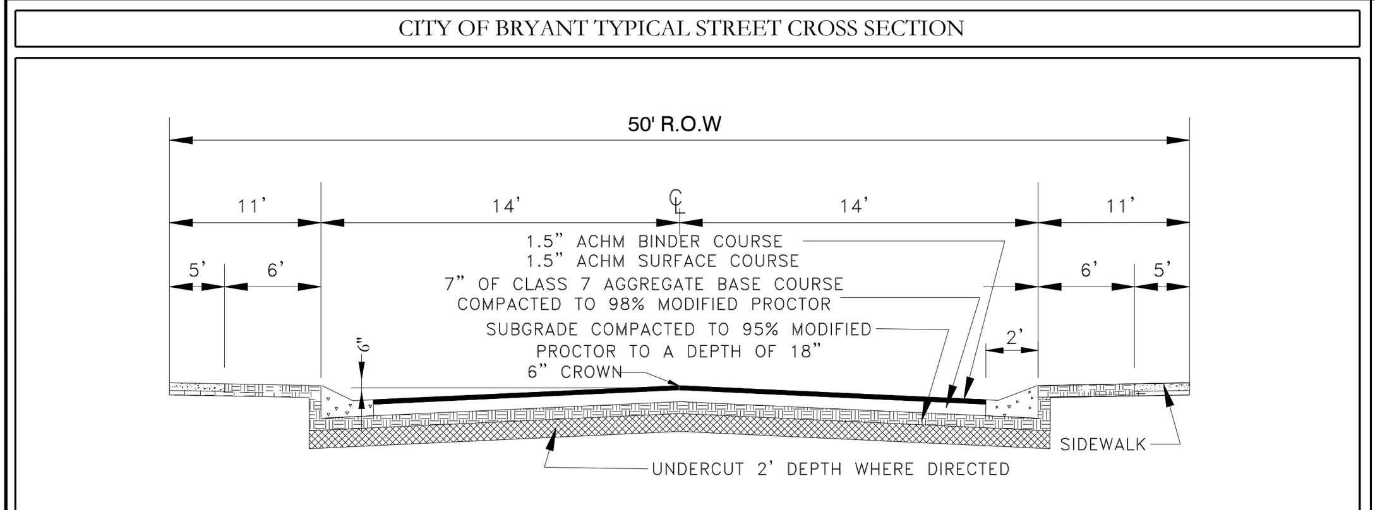
Black Hawk Profile



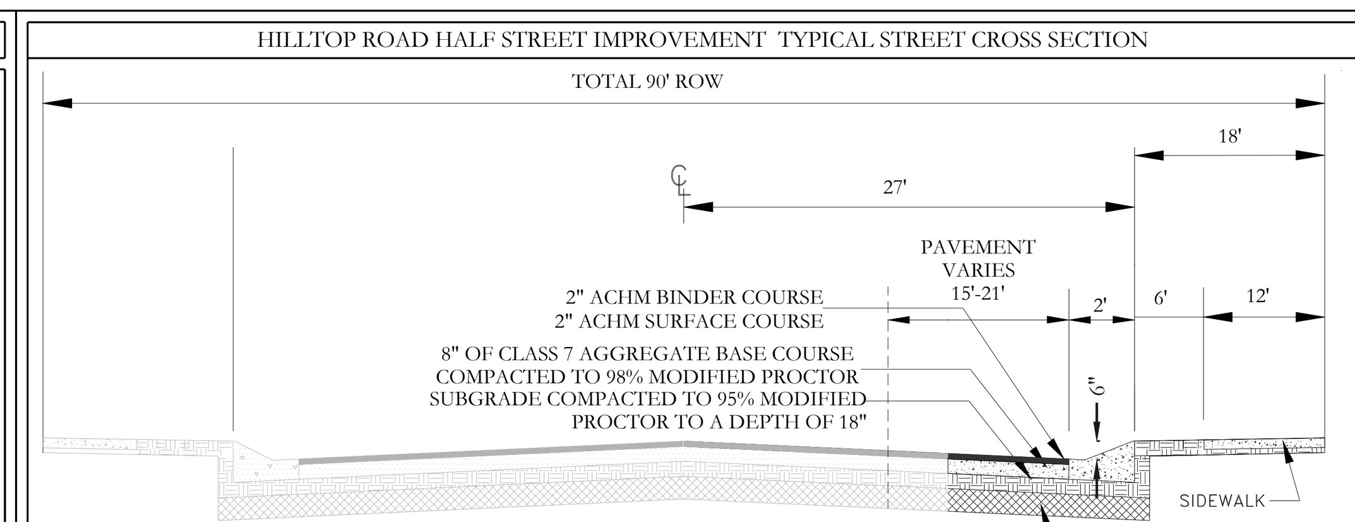
Princeton Square Profile



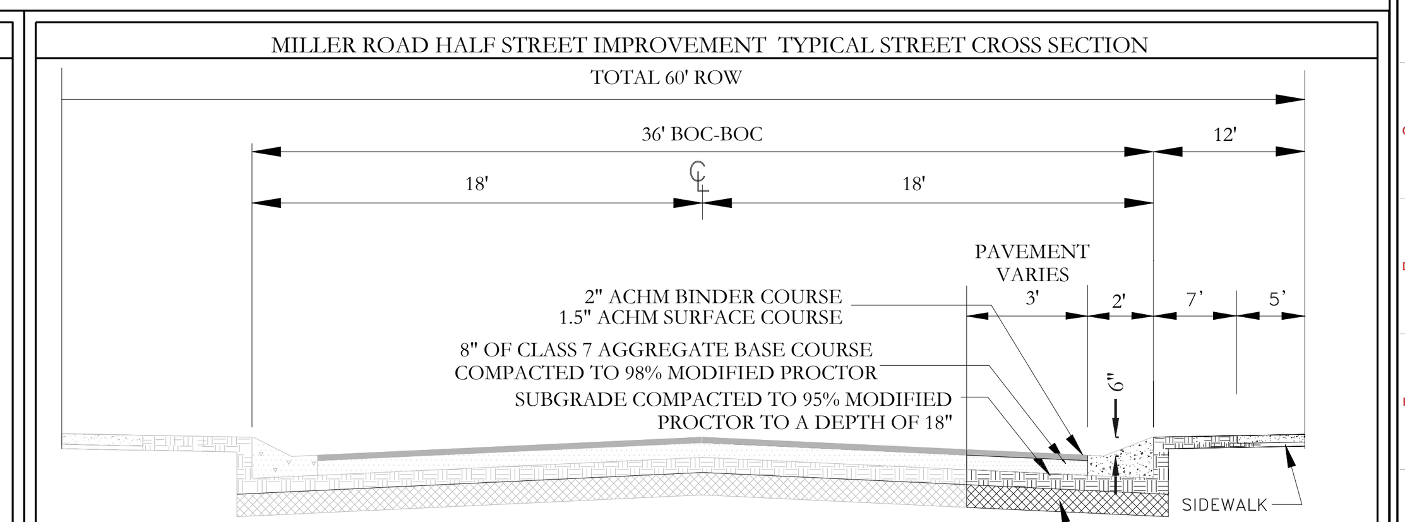
Princeton Square Profile



CITY OF BRYANT TYPICAL STREET CROSS SECTION



HILLTOP ROAD HALF STREET IMPROVEMENT TYPICAL STREET CROSS SECTION



MILLER ROAD HALF STREET IMPROVEMENT TYPICAL STREET CROSS SECTION

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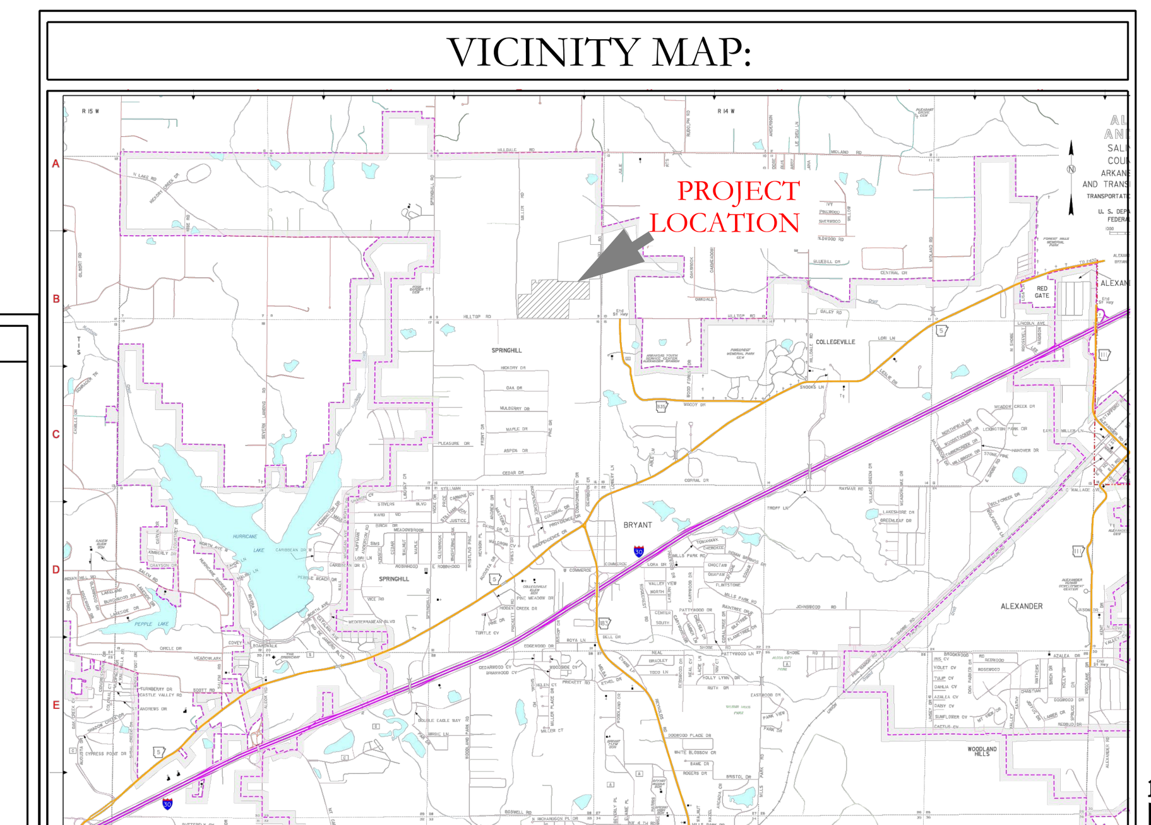
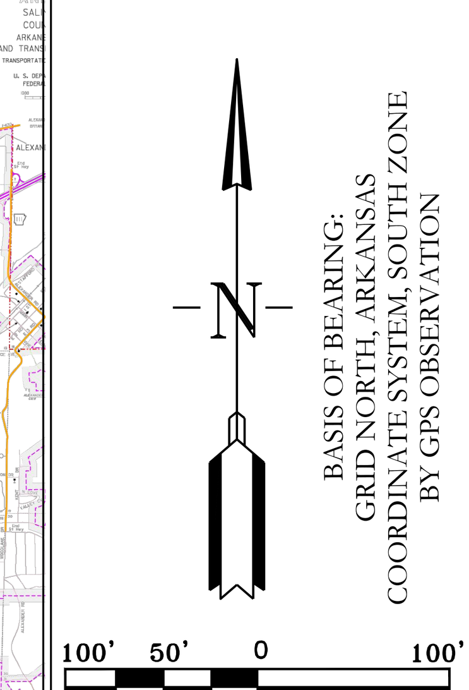
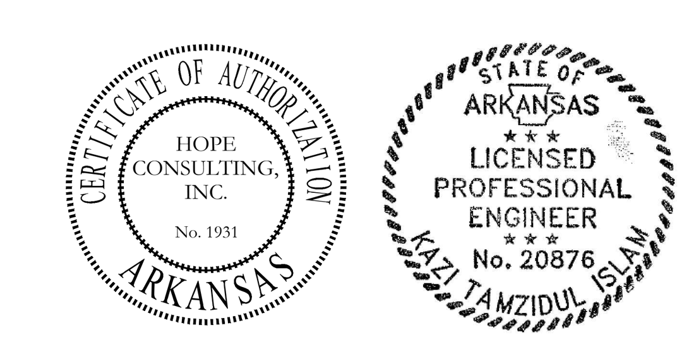




BASIS OF BEARING:
GRID NORTH, ARKANSAS
COORDINATE SYSTEM, SOUTH ZONE
BY GPS OBSERVATION



HDPE (dashed line)
RCP (solid line)

HOPE CONSULTING
ENGINEERS - SURVEYORS

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Benton, Arkansas 72015
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FAX (501) 315-0024
www.hopeconsulting.com

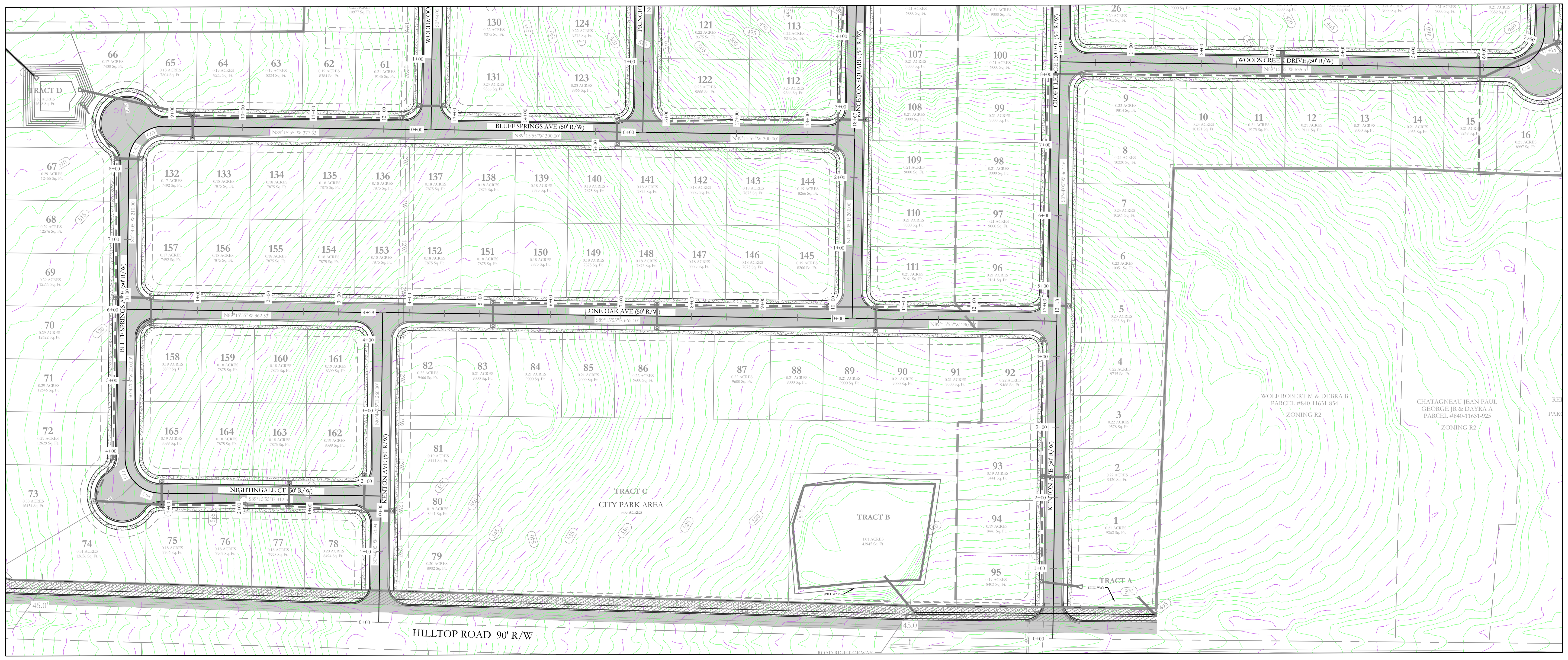
FOR USE AND BENEFIT OF:
NXT GEN HOMES LLC.

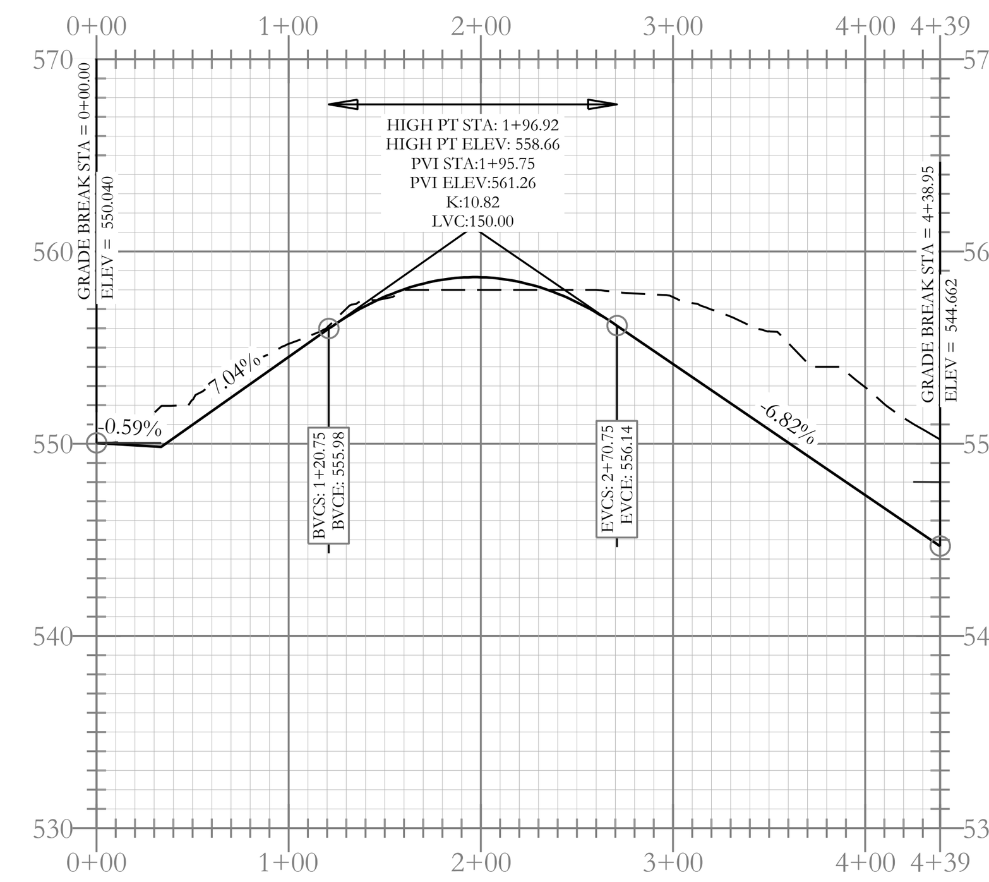
HILLTOP LANDING
STREET PLAN & PROFILE
A SUBDIVISION IN THE CITY OF BRYANT, SALINE COUNTY, ARKANSAS

DATE: 03/08/2023	C.A.D. BY:	DRAWING NUMBER:	
REVISED:	CHECKED BY:	20-1341	
SHEET: C-1.1	SCALE: 1" =120'		

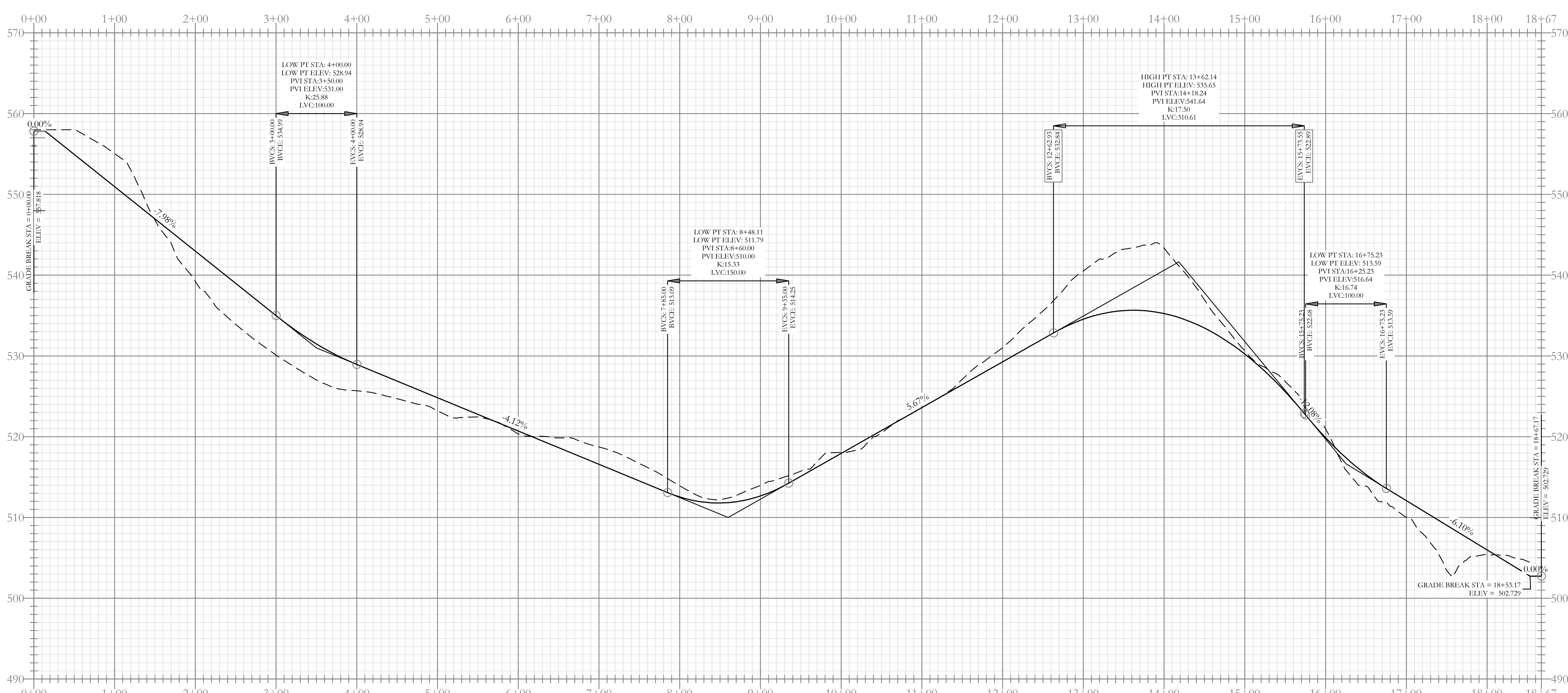
500	01S	14W	0	09	200	62	1762

K:\LAND PROJECTS 2004\SUBDIVISIONS\2020\20-1341 MILLER & HILLTOP\CIVIL\DWG\20-1341-CONSTRUCTION DRAWING FULL PHASE 75' WIDE LOTS_03-08-2023.DWG

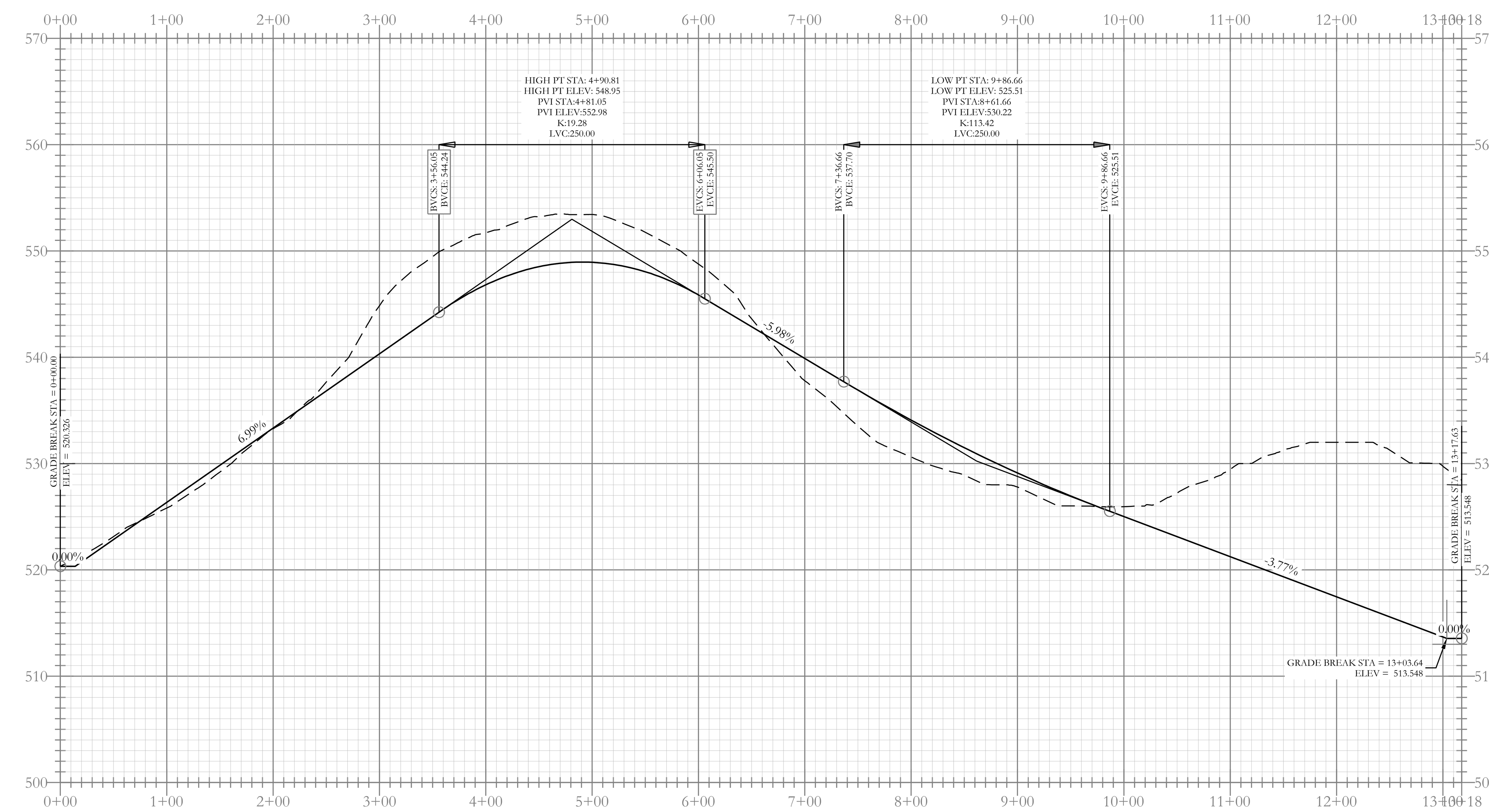




Kenton Ave Profile



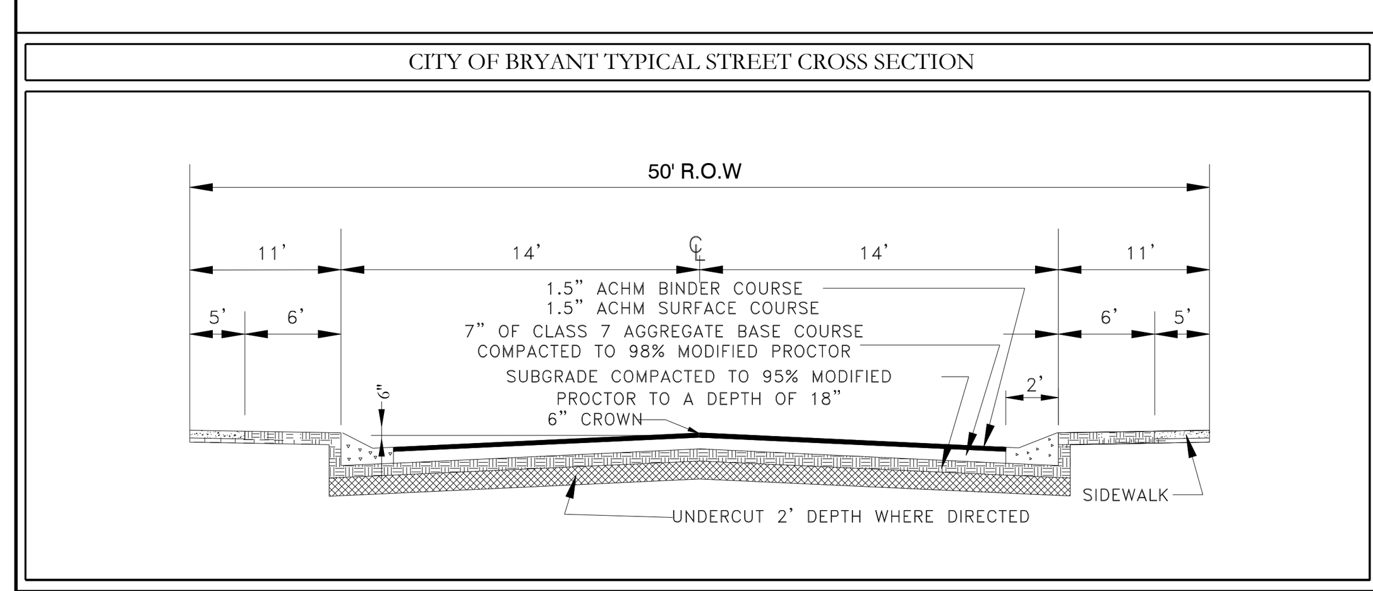
Nightingale Ct-Bluff Springs Ave Profile

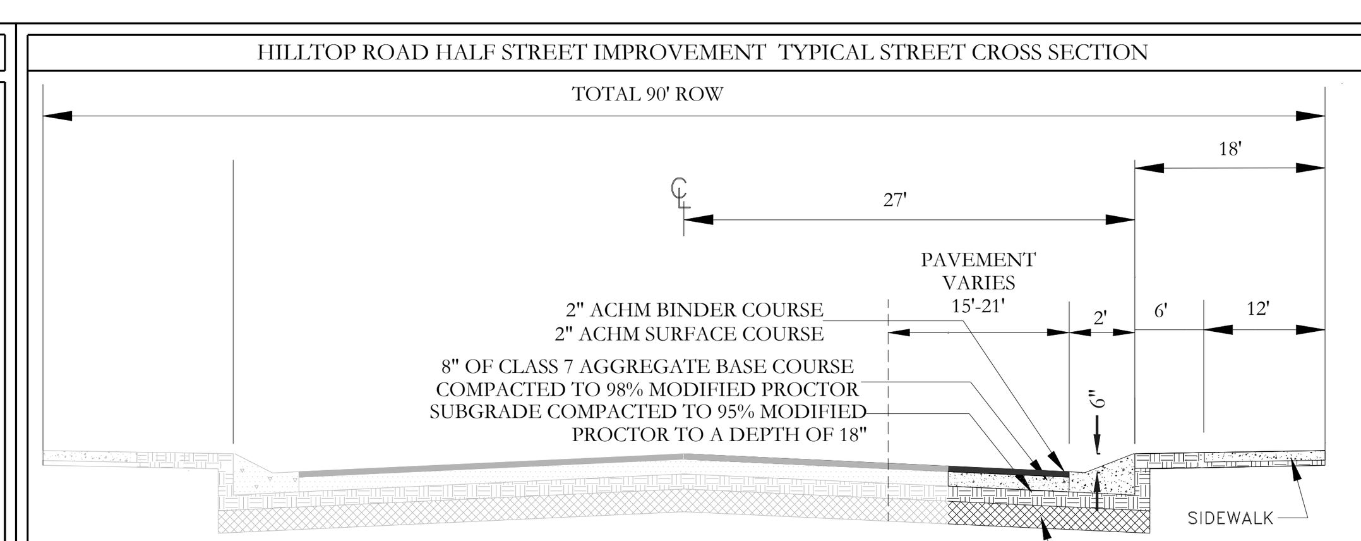


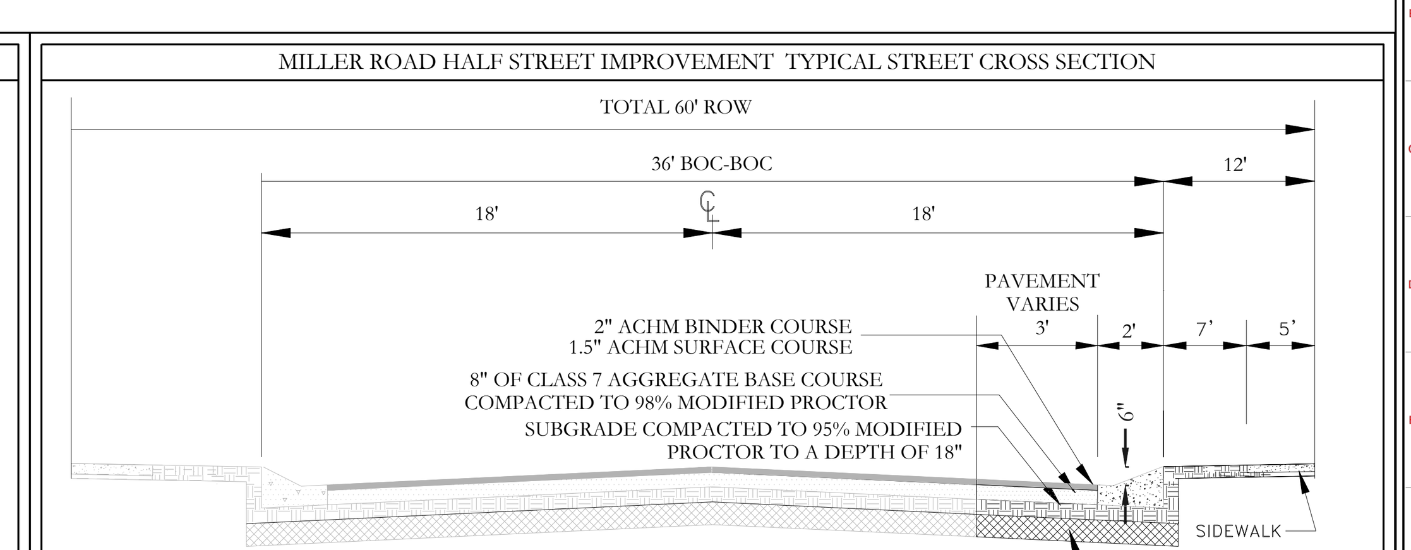
Lone Oak Ave Profile

HDPE

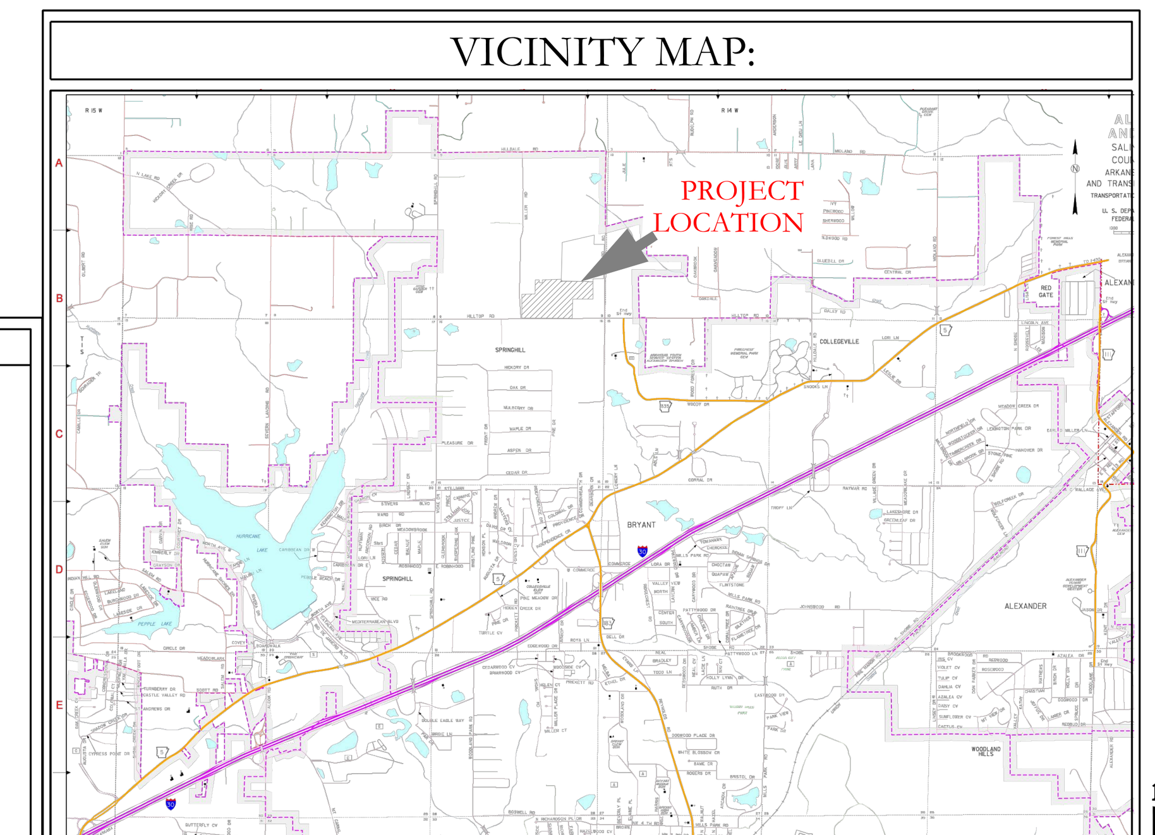
RCP

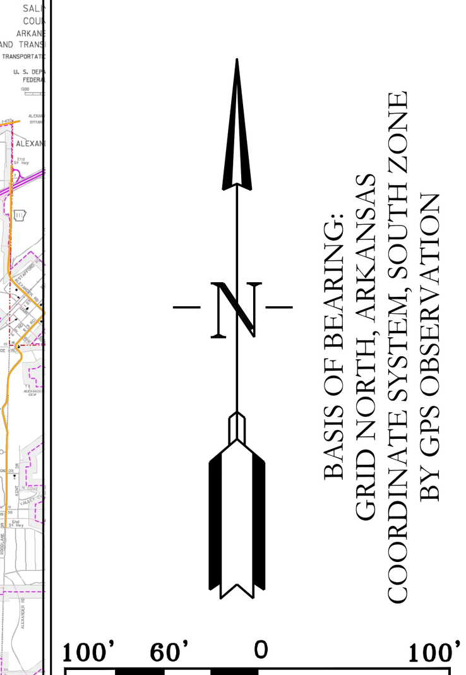




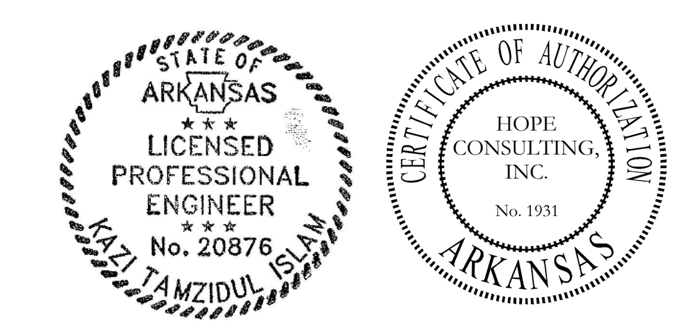


VICINITY MAP:





BASIS OF BEARING:
GRID NORTH, ARKANSAS
COORDINATE SYSTEM, SOUTH ZONE
BY GPS OBSERVATION



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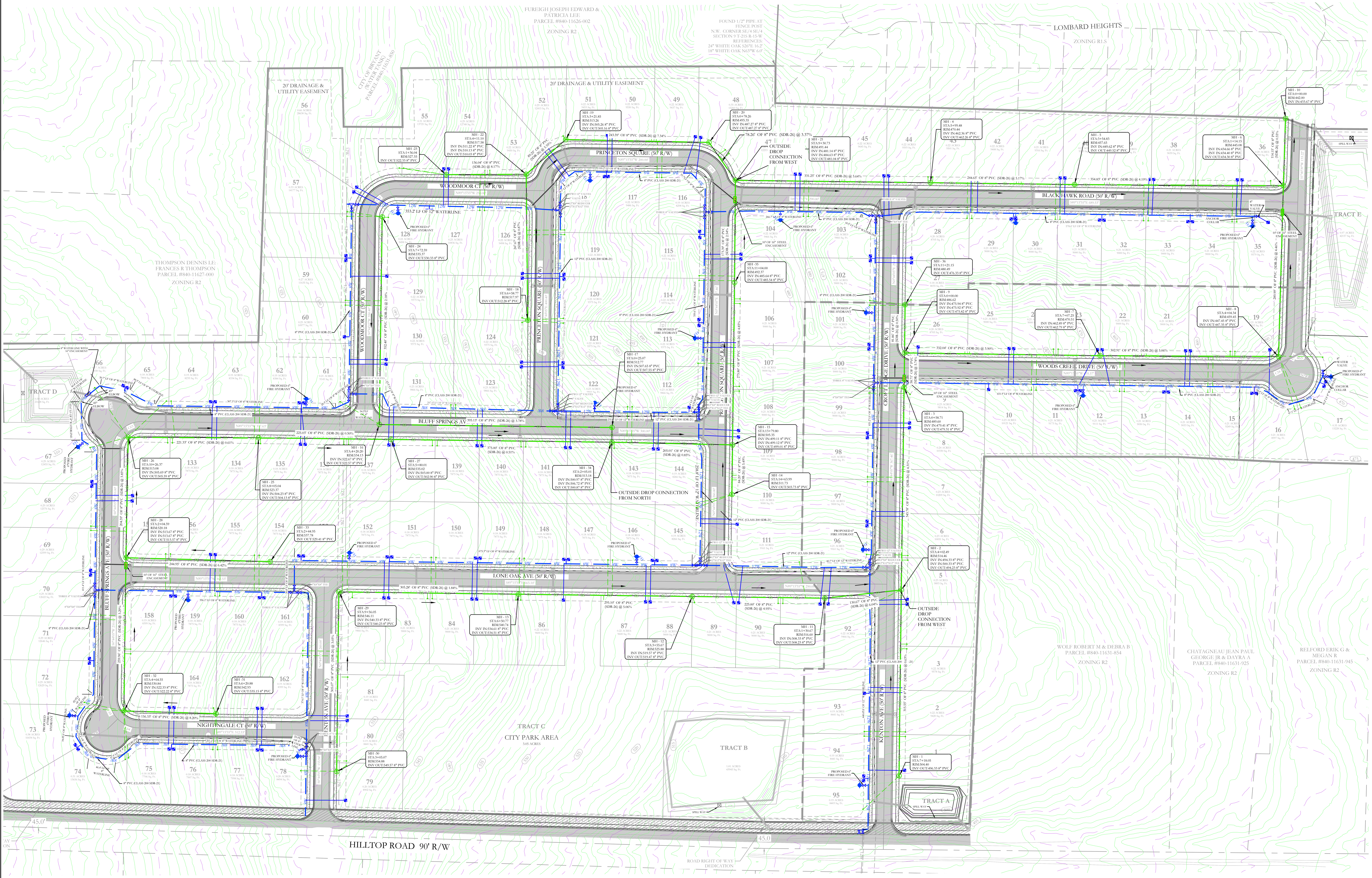
FOR USE AND BENEFIT OF:
NXT GEN HOMES LLC.

HILLTOP LANDING
STREET PLAN & PROFILE
A SUBDIVISION IN THE CITY OF BRYANT, SALINE COUNTY, ARKANSAS

DATE: 03/08/2023	C.A.D. BY:	DRAWING NUMBER:
REVISED:	CHECKED BY:	20-1341
SHEET: C-1.2	SCALE: 1" = 120'	

500	01S	14W	0	09	200	62	1762

K:\LAND PROJECTS 2004\SUBDIVISIONS\2020\20-1341 MILLER & HILLTOP\CIVIL\DWG\20-1341-CONSTRUCTION DRAWING FULL PHASE 75 WIDE LOTS_03-08-2023.DWG



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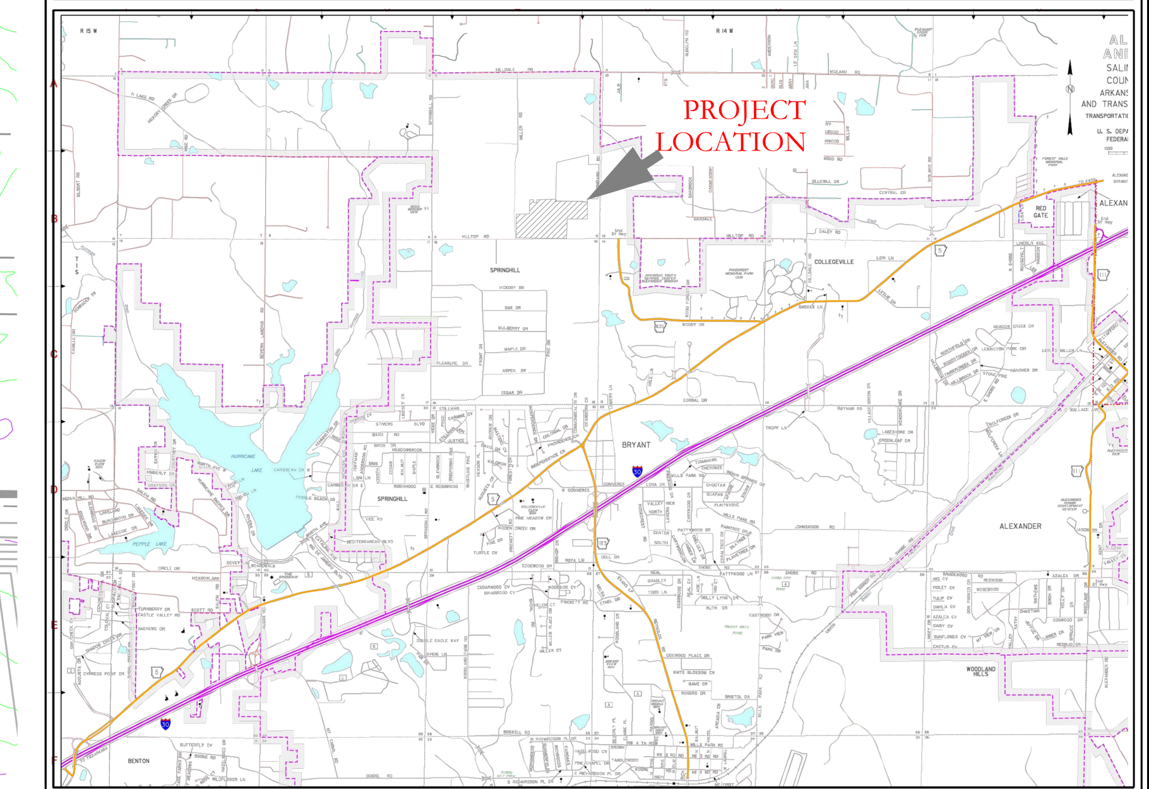

SEWER CONSTRUCTION NOTES:

1. ALL SEWER CONSTRUCTION SHALL BE DONE IN ACCORDANCE WITH BRYANT UTILITIES' "MASTER SPECIFICATIONS FOR DESIGN AND CONSTRUCTION OF WATER AND SEWER UTILITIES" 2015 EDITION.
2. USE SDR-26 PVC SEWER PIPE EXCEPT WHERE INDICATED OTHERWISE ON THE PLANS OR WHERE DUCTILE IRON PIPE IS REQUIRED FOR COVER.
3. USE DUCTILE IRON PIPE WHERE 3' MINIMUM COVER CANNOT BE MAINTAINED, OR AS INDICATED.
4. ALL LONG-SIDE SEWER SERVICES SHALL BE SCHEDULE 40 OR SDR 21 PIPE.
5. FINISH GRADE HEIGHT ON MANHOLES NEED TO BE 4-6 INCHES ABOVE CURB LINE.
6. ALL MANHOLES WILL BE XYPEX.
7. THE LIFT STATION PROPERTY MUST BE DEEDED TO THE CITY OF BRYANT .
8. STATION MUST BE SET UP THROUGH JACK TYLER.
9. INSTEAD OF FLOATS, THERE WILL NEED TO BE PROBES.
10. SAFETY LIGHT MUST BE INSTALLED (NO WOOD) .
11. EVERYTHING IN WET WELL MUST BE STAINLESS STEEL INCLUDING CHAINS.
12. ALL LIFT STATIONS MUST HAVE WOVEN MONOFILAMENT GEOTEXTILE MATERIAL COVERING THE WHOLE PROPERTY OF THE LIFT STATION WITH THE GRAVEL ON TOP TO CONTROL WEEDS AND GRASS CAUSING PROBLEMS IN THE DRIVE TO THE LIFT STATION AND THE GATED AREA OF THE LIFT STATION.
13. LIFT STATION MUST HAVE A ROLLING GATE, OR GATES THAT SWING OUT FOR OUR JET VAC/ PUMP TRUCK TO GET INTO.
14. ALL PANELS MUST HAVE THE ROOF COVER AND MUST BE STEEL FRAME AND PANEL ROOF DESIGN COVERING 5 FEET ON ALL SIDES OF THE PANELS.
15. AT STORM DRAIN CROSSING OR ANY DRAINAGE DITCHES CROSSING, THE SEWER INFRASTRUCTURE WILL NEED TO BE STEEL INCASED, FIVE FEET ON EITHER SIDE.
16. NO STEPS IN MANHOLES.
17. CONTRACTOR IS RESPONSIBLE FOR LOCATING ALL BURIED UTILITIES PRIOR TO CONSTRUCTION.
18. ELECTRICAL CONDUIT COMING OUT OF THE CONTROL BOX WILL NEED TO BE 3". CONDUIT SHOULD BE PLUGGED WITH PUTTY NOT SPRAY IN FOAM TO RESTRICT GASES FROM ENTERING THE CONTROL BOX THAT CAUSES CORROSION.
19. THE LIFT STATION ROOF NEEDS TO BE METAL OR OTHER MATERIAL, NOT WOOD, ALSO THE LIGHT POLE CAN NOT BE WOOD.
20. RPZ WILL NEED TO BE IN A WEATHERPROOF BOX.

WATER CONSTRUCTION NOTES:

1. ALL WATER CONSTRUCTION SHALL BE DONE IN ACCORDANCE WITH BRYANT UTILITIES' "MASTER SPECIFICATIONS FOR DESIGN AND CONSTRUCTION OF WATER AND SEWER UTILITIES" 2015 EDITION.
2. LONG-SIDE WATER SERVICE LINES SHALL BE ENCASED, INCLUDING THE LINES BENEATH THE CUL-DE-SAC.
3. ALL SERVICE CROSSINGS SHALL BE 1" DRISCO SERVICE LINE ENCASED IN A 2" PVC SLEEVE.
4. ALL WATER MAIN FITTINGS SHALL BE MEGALUG BRAND MECHANICAL JOINT FITTINGS

HDPE

RCP

SUBDIVISION UTILITY PLAN

STATE OF ARKANSAS LICENSED PROFESSIONAL ENGINEER No. 20876

CERTIFICATE OF AUTHORIZATION HOPE CONSULTING, INC. No. 1931 ARKANSAS

N

BASIS OF BEARING: GRID NORTH, ARKANSAS COORDINATE SYSTEM, SOUTH ZONE BY GPS OBSERVATION

80 40 0 80

WATER LEGEND:

- DUAL WATER METERS
- SINGLE WATER METER
- GATE VALVE
- 45º FITTING
- 90º FITTING
- TEE FITTING
- CROSS FITTING
- FH FIRE HYDRANT

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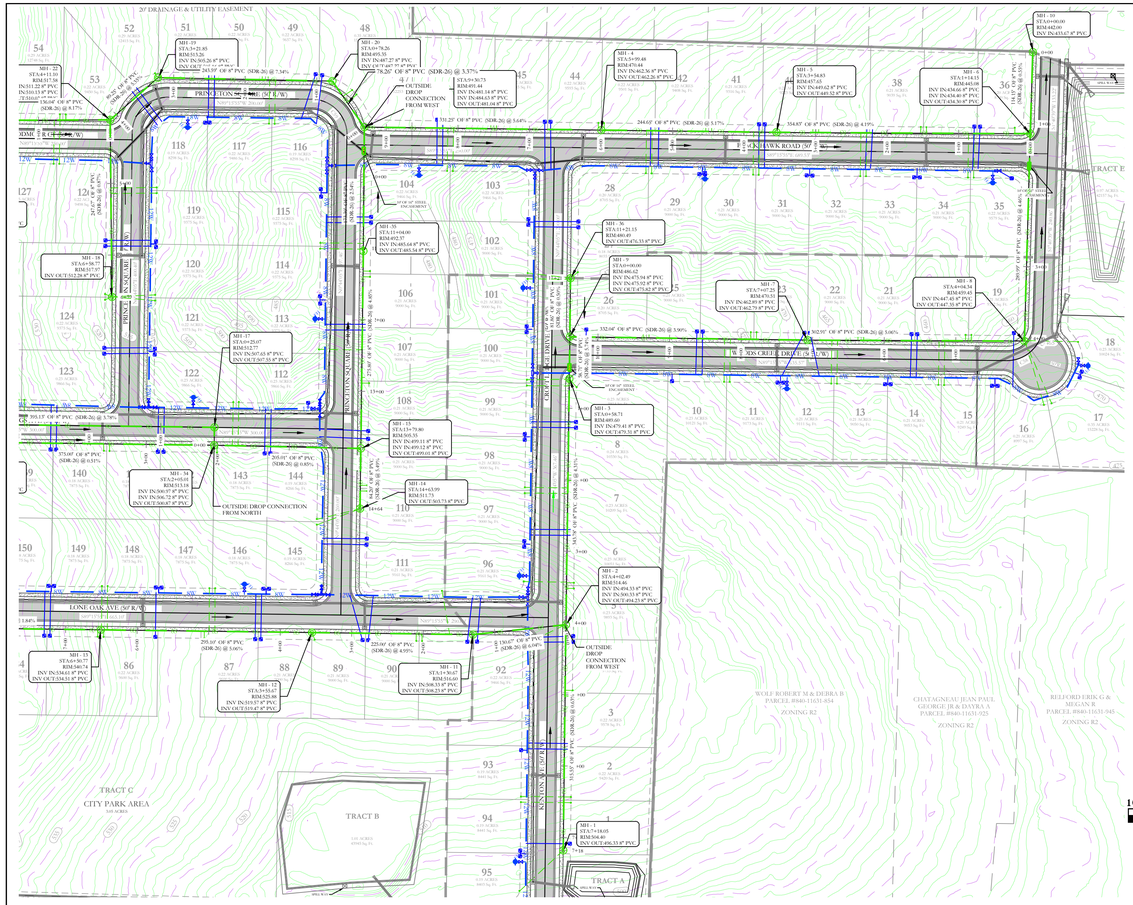
FOR USE AND BENEFIT OF:
NXT GEN HOMES LLC.

HILLTOP LANDING
UTILITY PLAN
A SUBDIVISION IN THE CITY OF BRYANT, SALINE COUNTY, ARKANSAS

DATE:	03/08/2023	C.A.D. BY:		DRAWING NUMBER:
REVISED:		CHECKED BY:		20-1341
SHEET:	C-2.0	SCALE:	1" = 80'	

500	01S	14W	0	09	200	62	1762

K:\LAND PROJECTS 2004\SUBDIVISIONS\2020\20-1341 MILLER & HILLTOP\CIVIL\DWG\20-1341-CONS



Sewer D Profile

Sewer A Profile

Sewer C Profile

Sewer Entrance Profile

CERTIFICATE OF AUTHORIZATION
HOPE CONSULTING, INC.
No. 1931
ARKANSAS

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 20876
KAZI TAMZIDUL ISLAM

VICINITY MAP:

HOPE CONSULTING
ENGINEERS - SURVEYORS

129 N. Main Street,
Benton, Arkansas 72015
PH. (501)315-2626
FAX (501) 315-0024
www.hopeconsulting.com

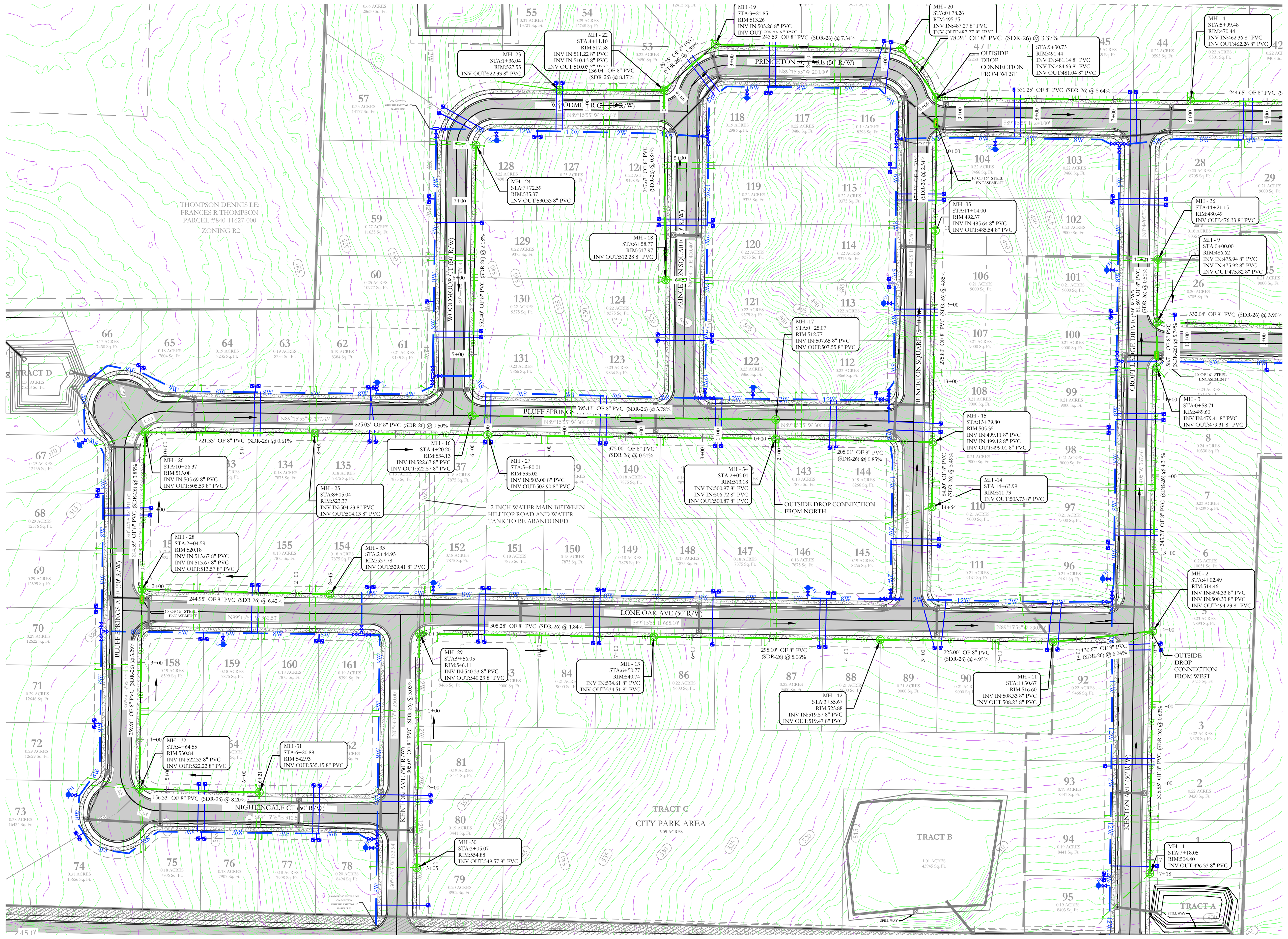
FOR USE AND BENEFIT OF:
NXT GEN HOMES LLC.

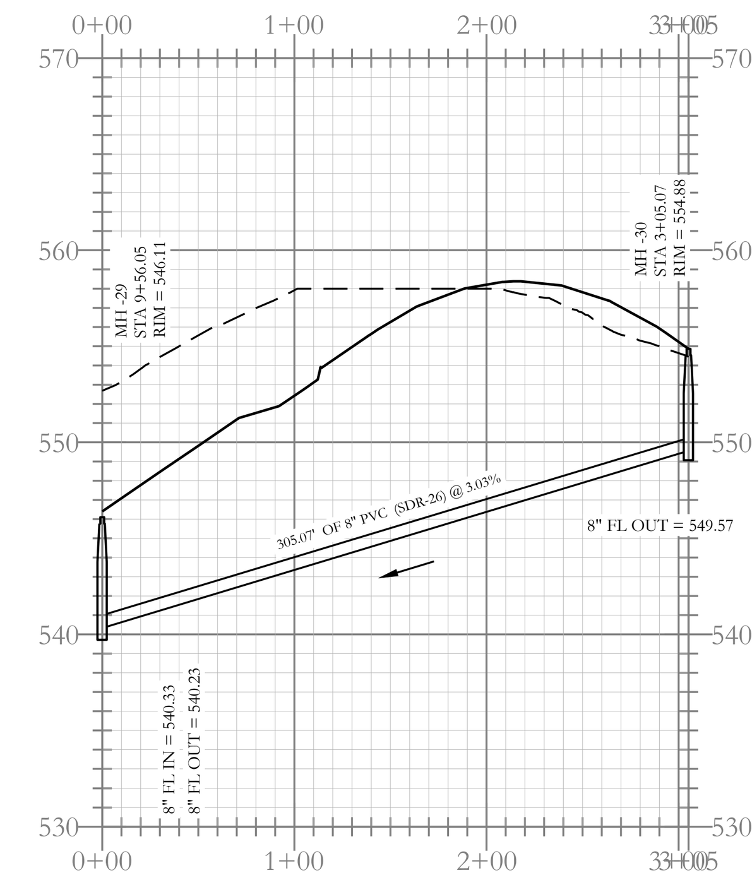
HILLTOP LANDING
SEWER PLAN AND PROFILE
A SUBDIVISION IN THE CITY OF BRYANT, SALINE COUNTY, ARKANSAS

DATE:	03/08/2023	C.A.D. BY:		DRAWING NUMBER:
REVISED:		CHECKED BY:		20-1341
SHEET:	C-2.1	SCALE:	1" =120'	

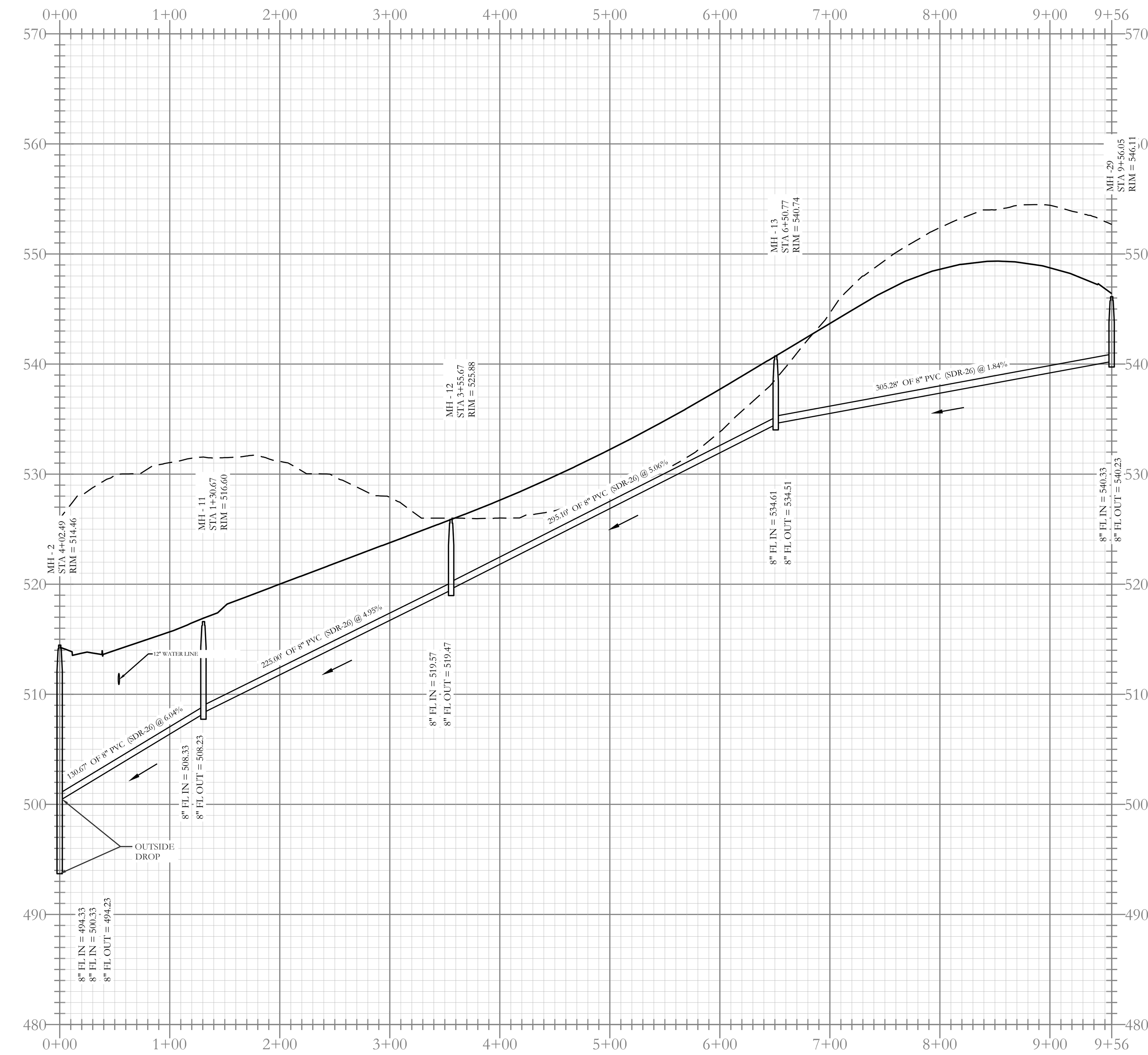
500	01S	14W	0	09	200	62	1762

K:\LAND PROJECTS 2004\SUBDIVISIONS\2020\20-1341 MILLER & HILLTOP\CIVIL\DWG\20-1341-CONSTRUCTION DRAWING FULL PHASE 75' WIDE LOTS_03-08-2023.DWG

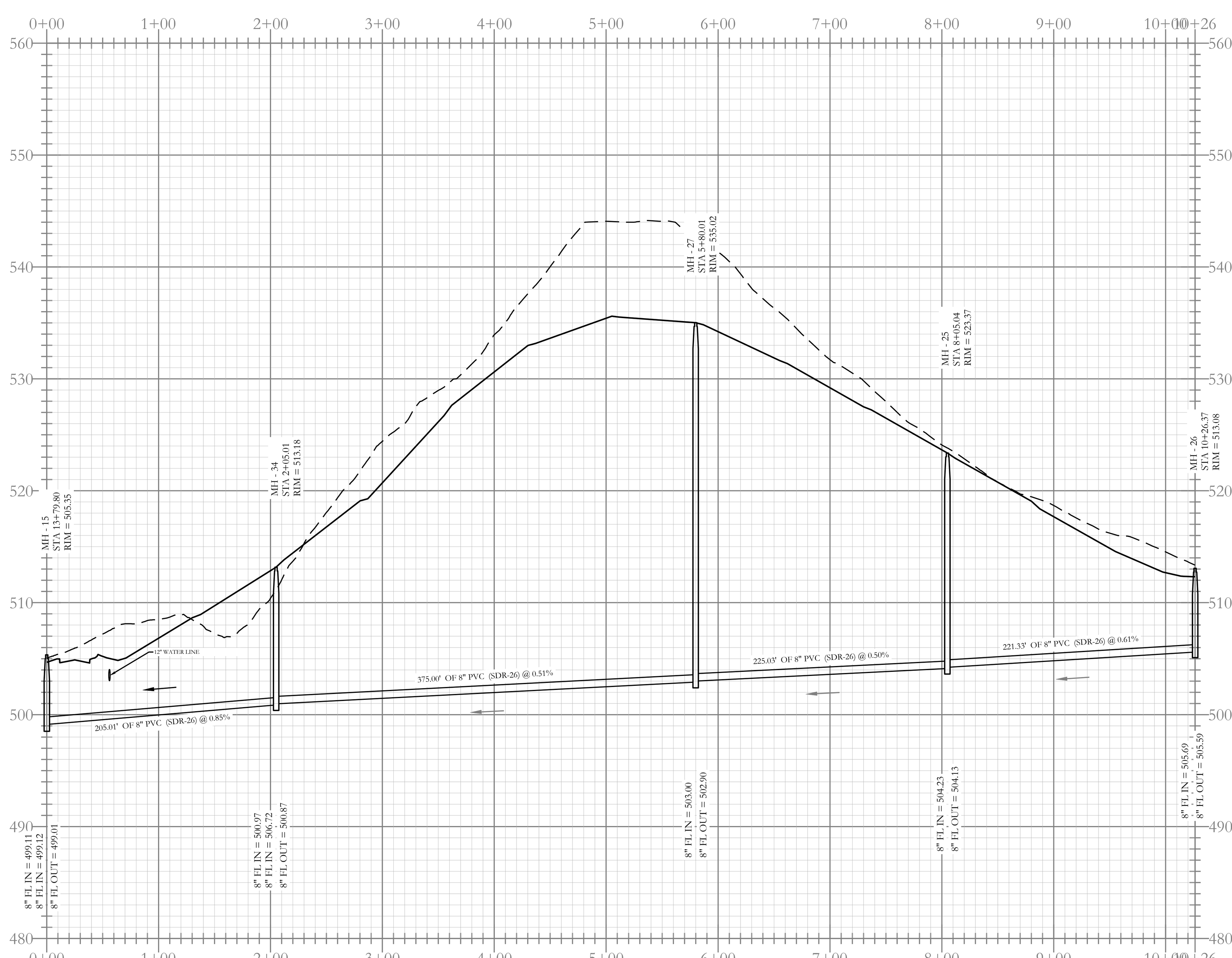




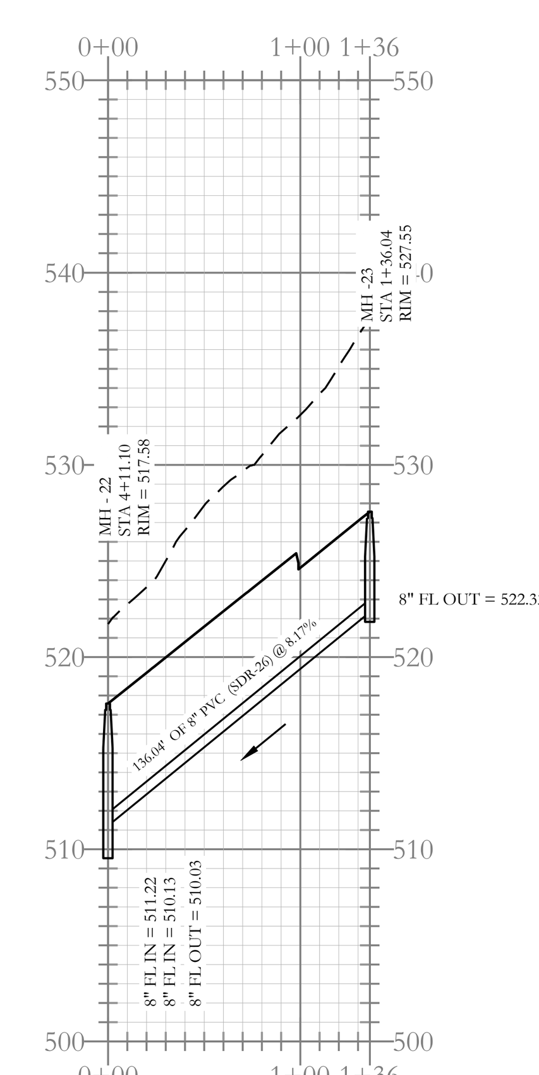
Sewer Entrance-2 Profile



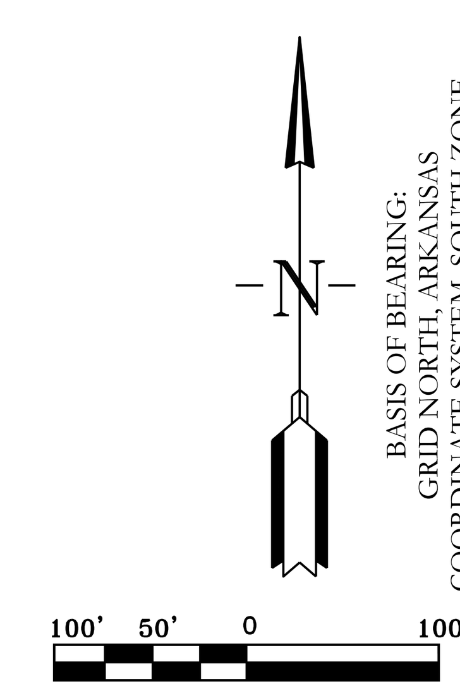
Sewer F-1 Profile



Sewer E-2 Profile

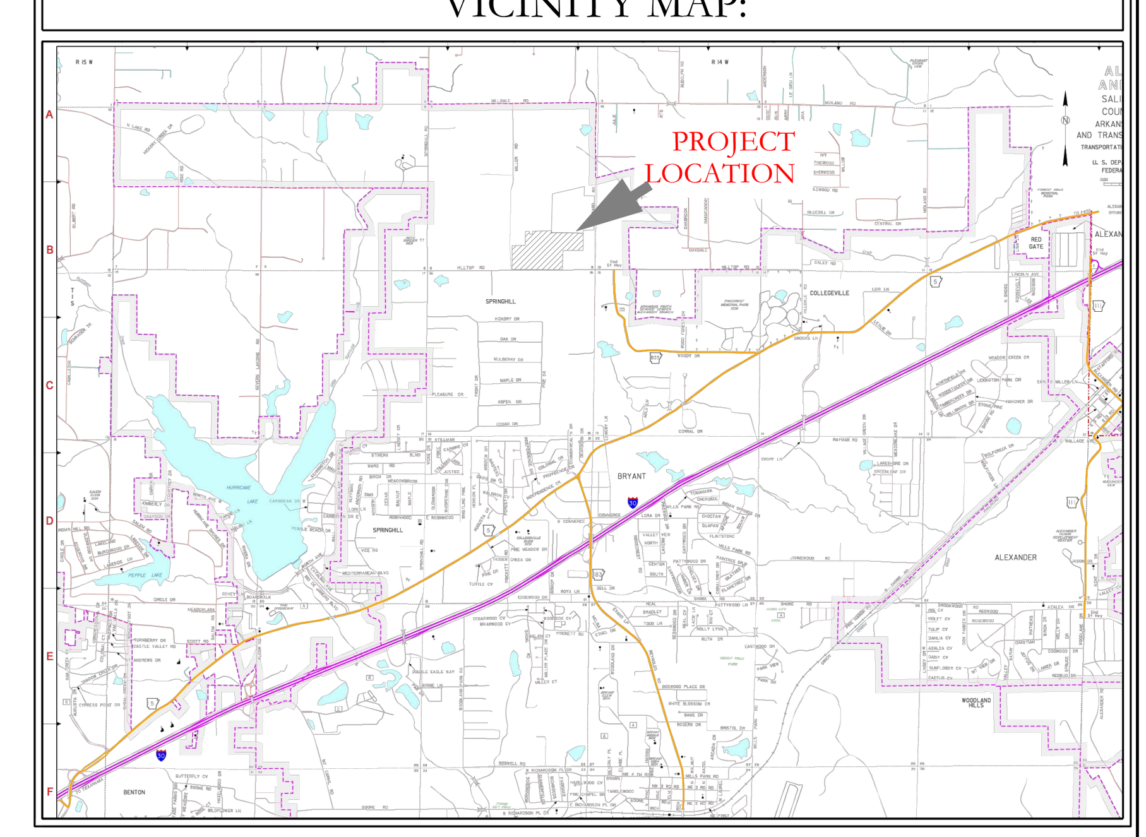


Sewer B-1 Profile



BASIS OF BEARING:
GRID NORTH, ARKANSAS
COORDINATE SYSTEM, SOUTH ZONE
BY GPS OBSERVATION.

VICINITY MAP:



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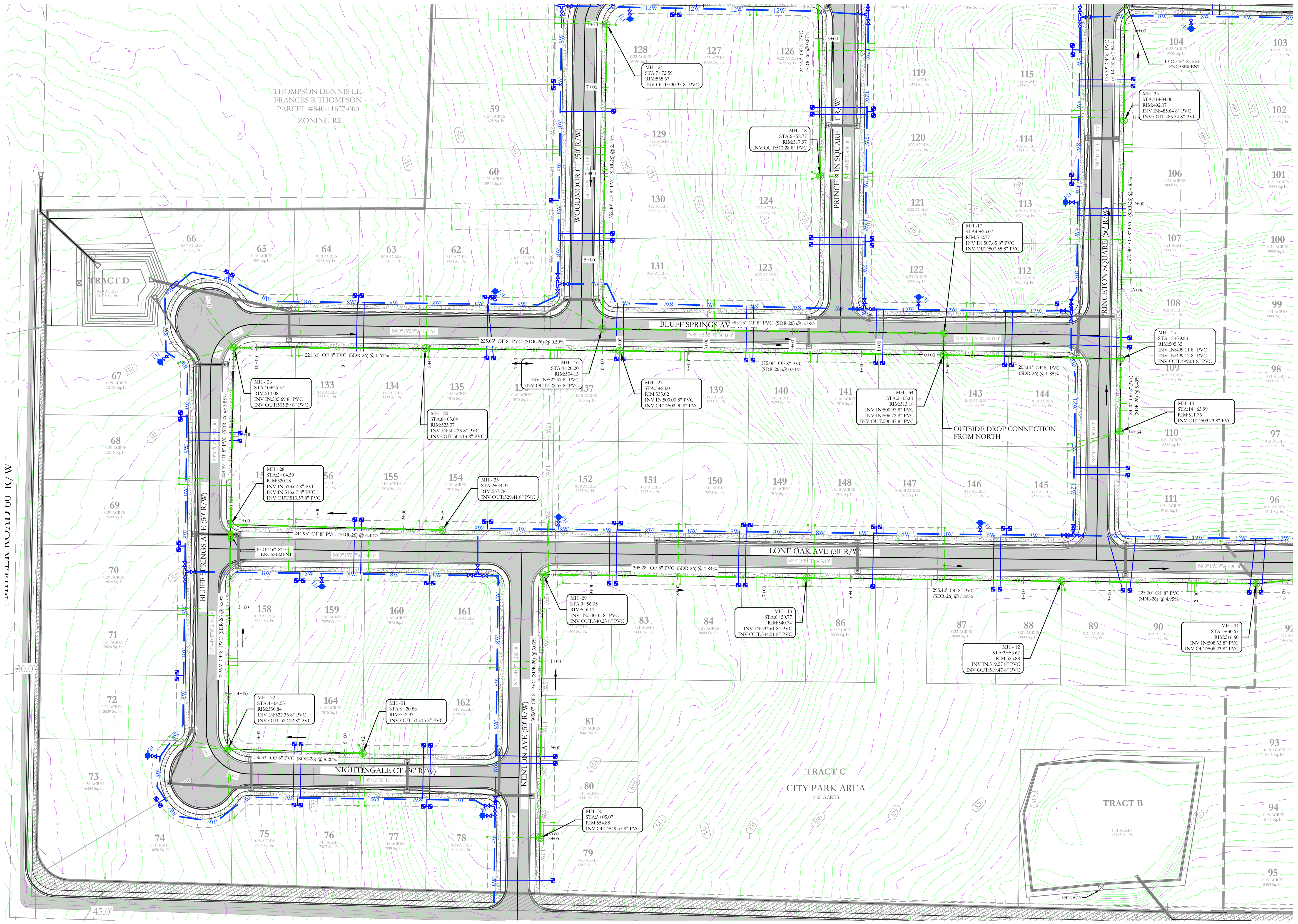
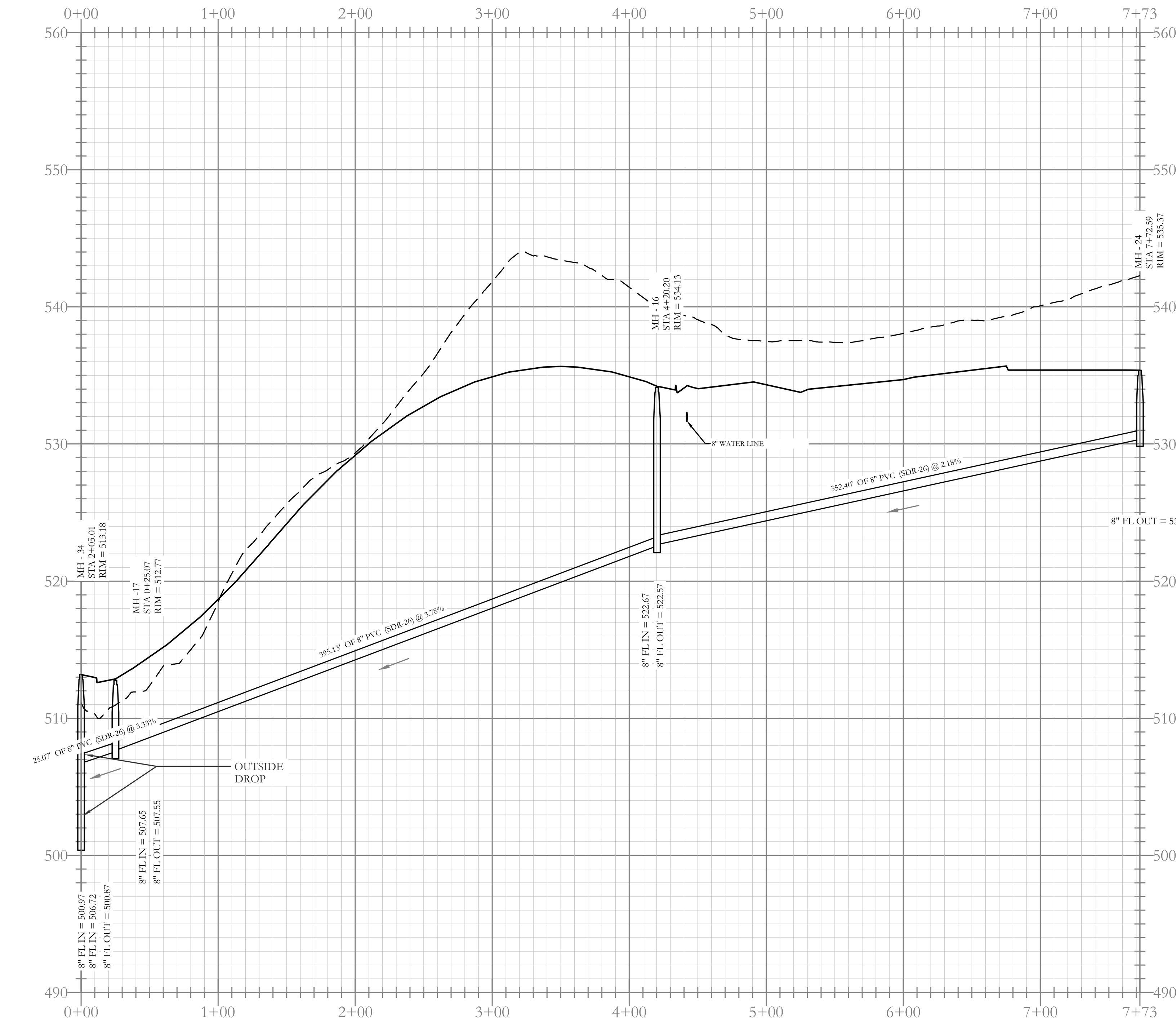
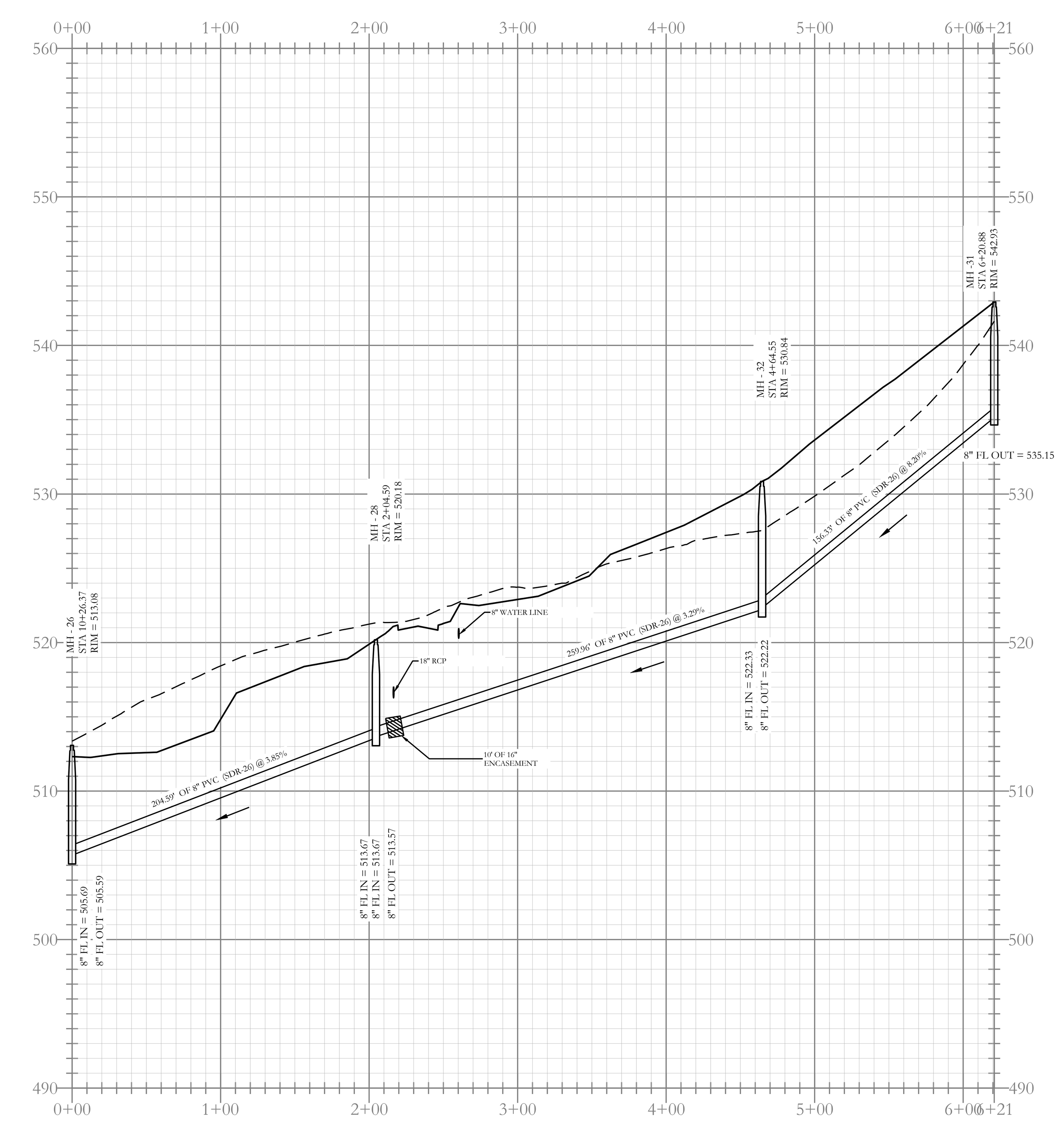
SHEET:	C-2.2	SCALE:	1" =120'		

500	01S	14W	0	09	200	62	1762





Sewer B-2 Profile



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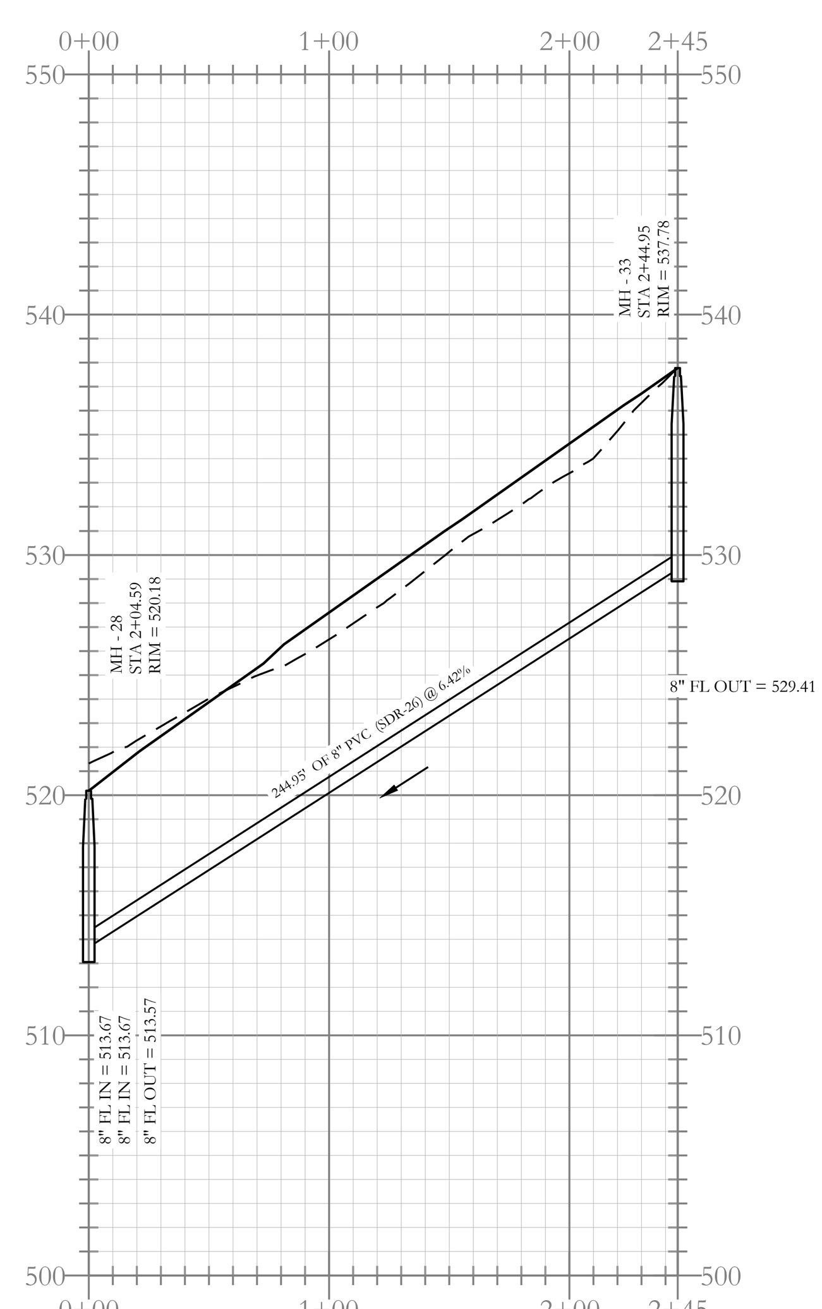
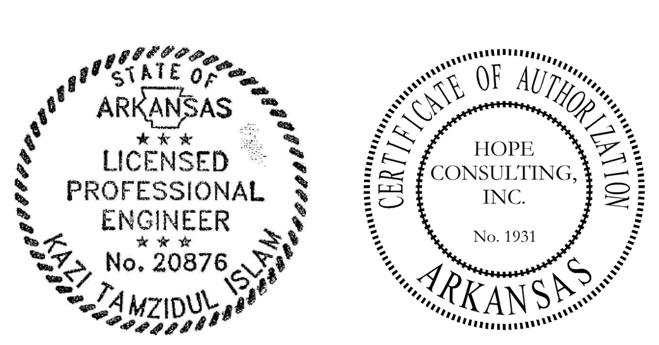
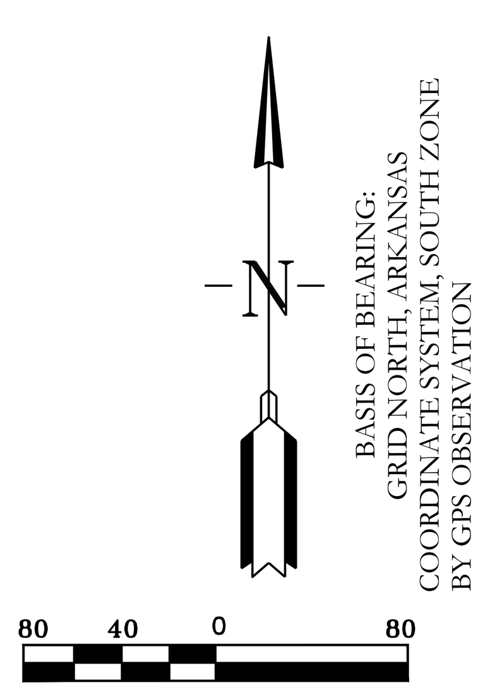


Sewer F-2 Profile





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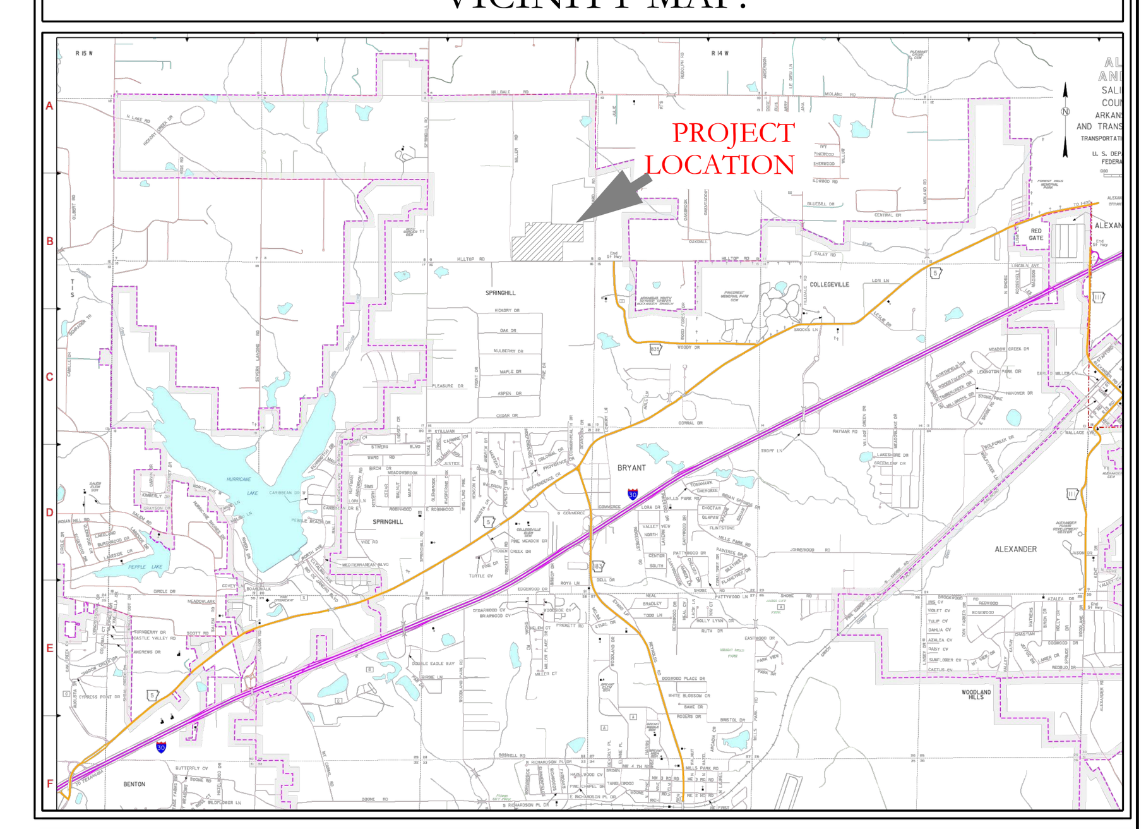

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DATE:	03/08/2023	C.A.D. BY:	DRAWING NUMBER:
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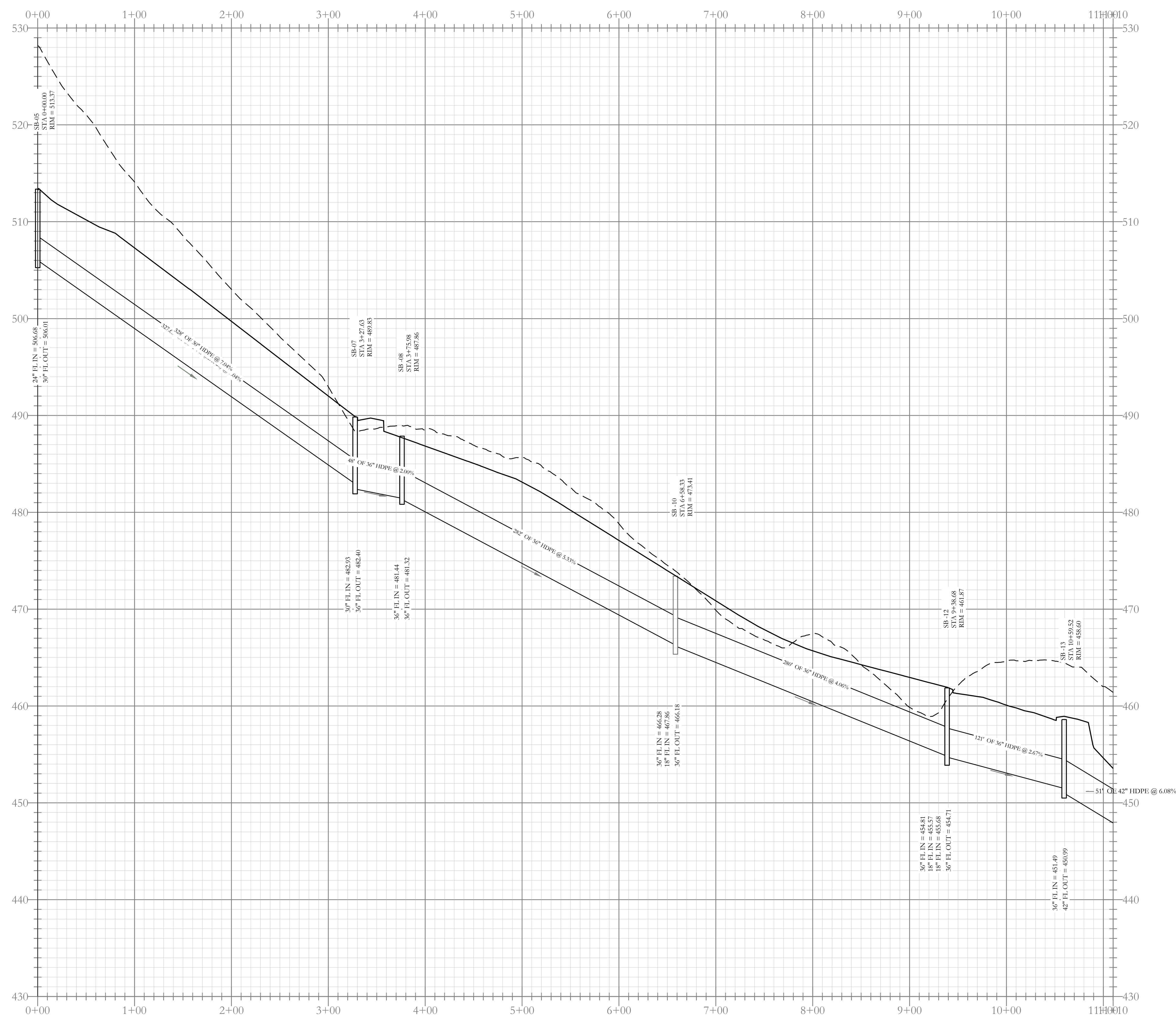
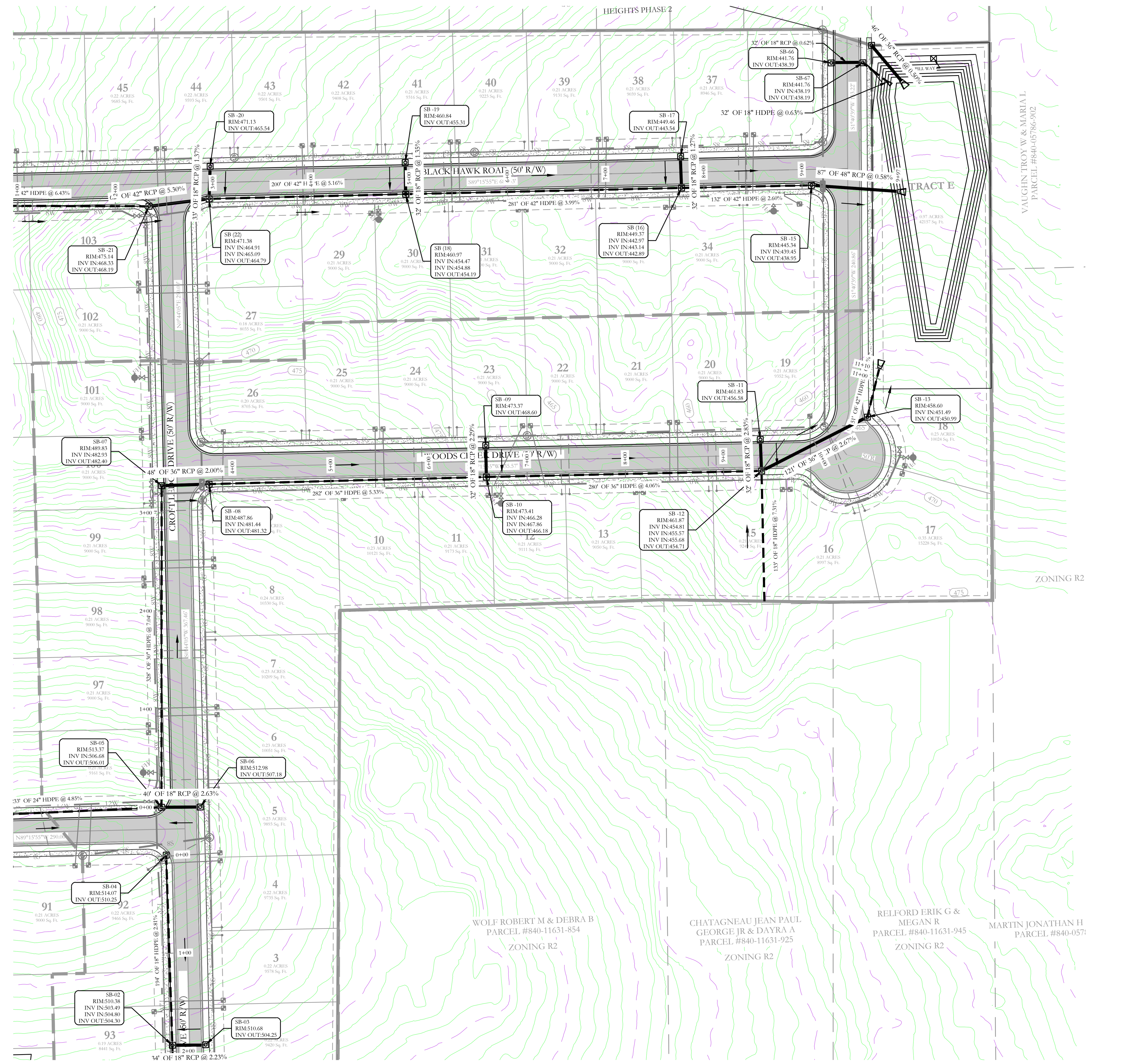
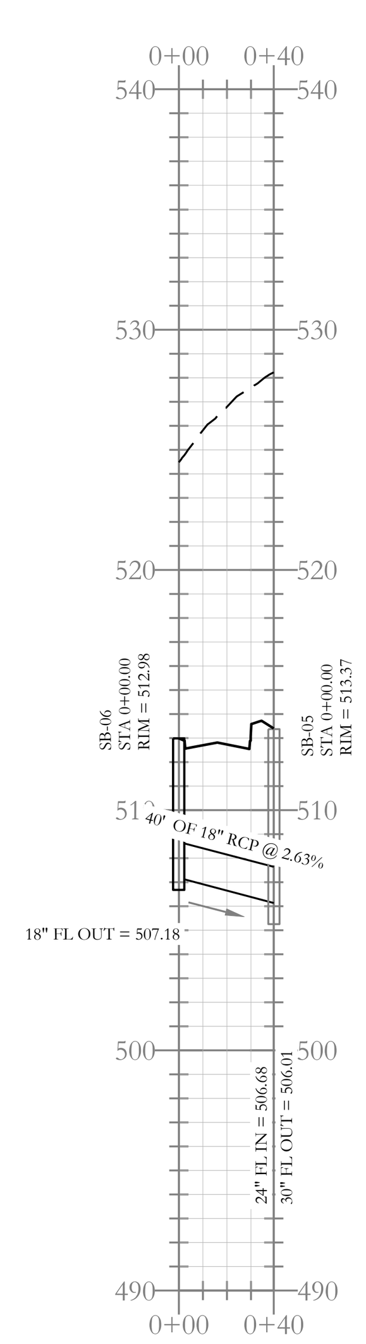
SHEET:	C-2.3	SCALE: 1" =80'	

500	01S	14W	0	09	200	62	1762

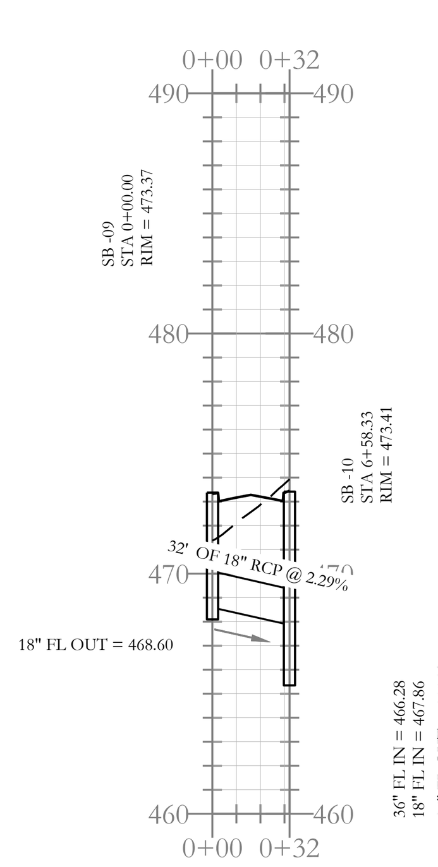


Stormwater A Profile

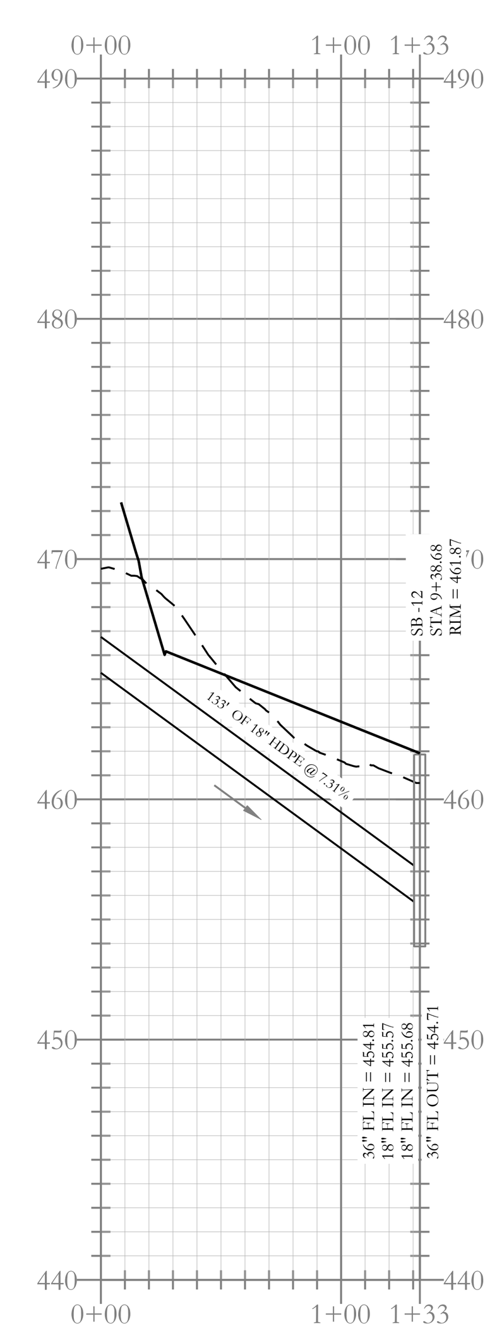




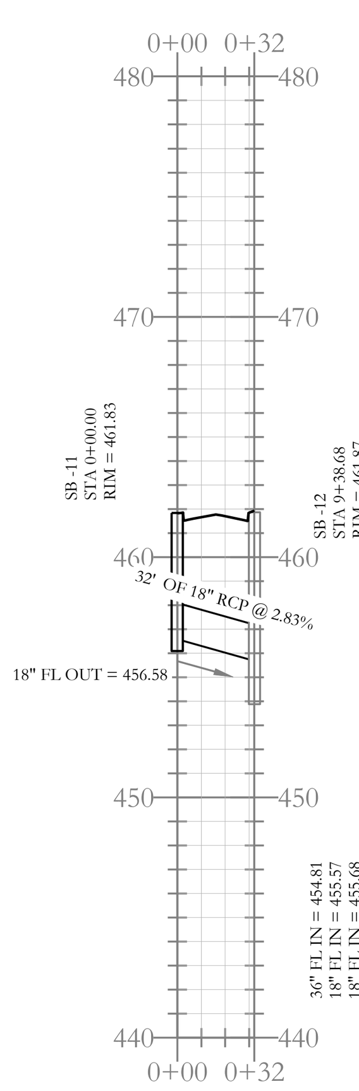
Stormwater A(i) Profile



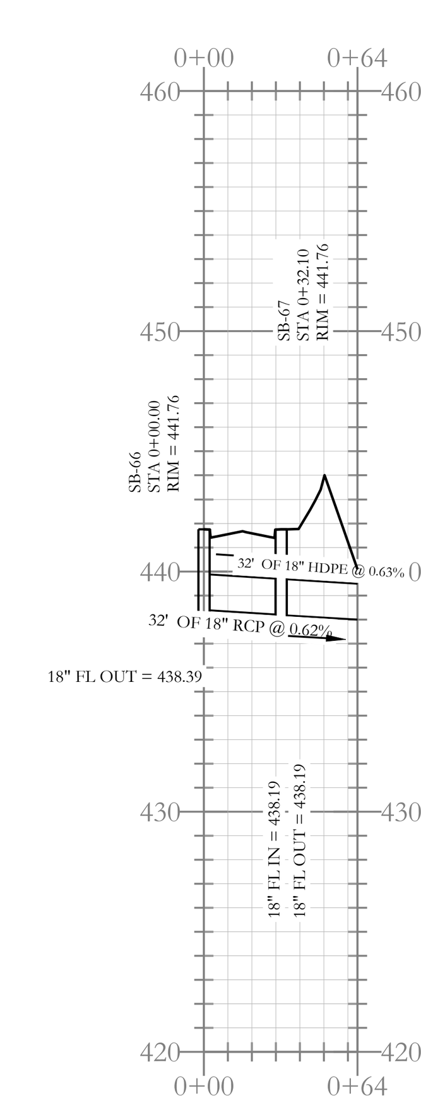
Stormwater A(ii) Profile



Stormwater A(iii)-Pipe behind the property Profile



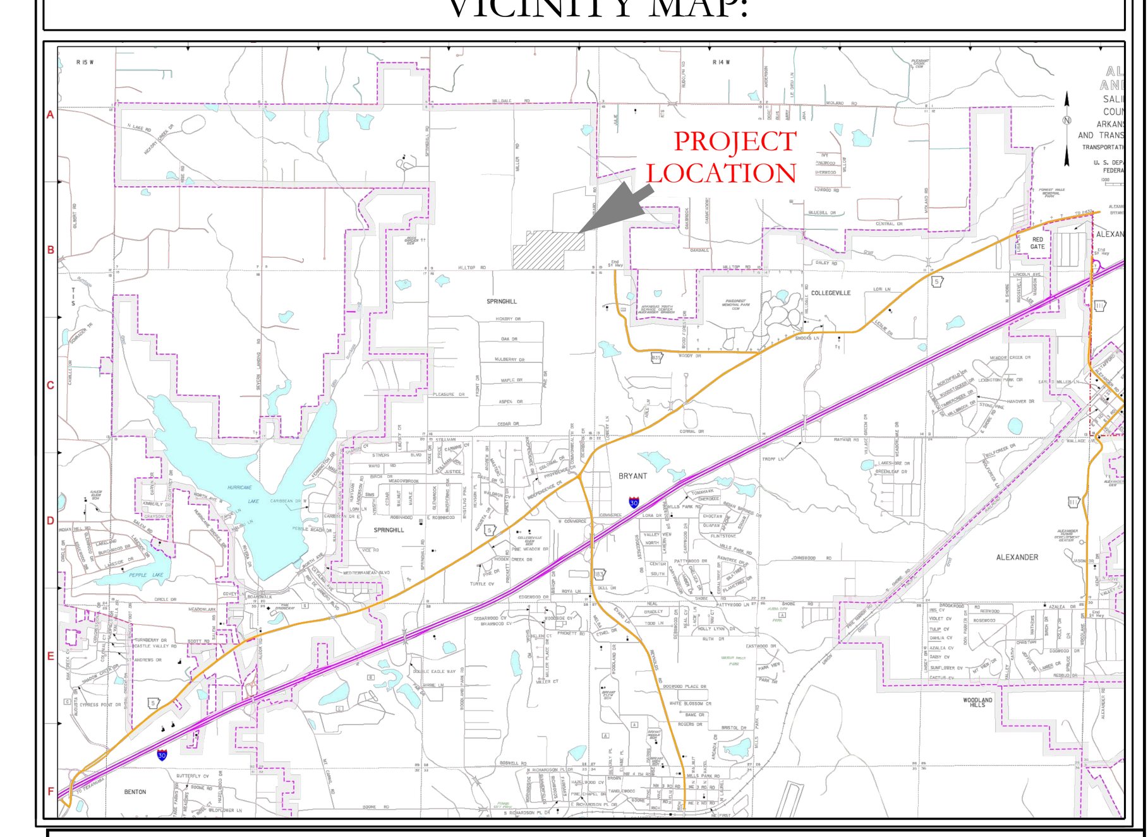
Stormwater A(iv) Profile



Stormwater A(v) Profile

- - - HDPE
—— RCP

VICINITY MAP:



BASIS OF BEARING:
GRID NORTH, ARKANSAS
COORDINATE SYSTEM, SOUTH ZONE
BY GPS OBSERVATION

CERTIFICATE OF AUTHORIZATION
HOPE CONSULTING, INC.
No. 1551
ARKANSAS

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 20876
KAZI TAMZIDUL ISLAM

80 40 0 80

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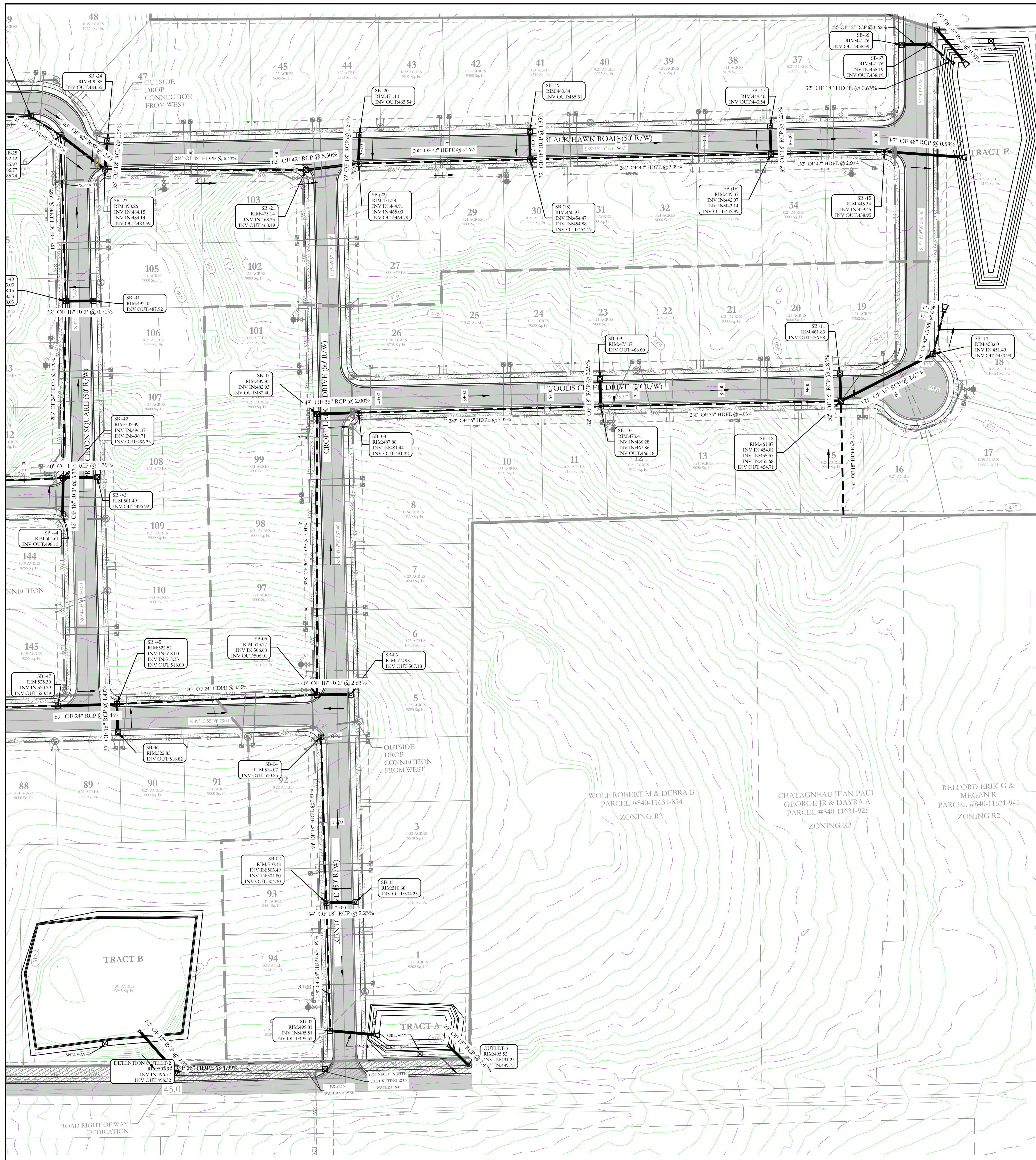
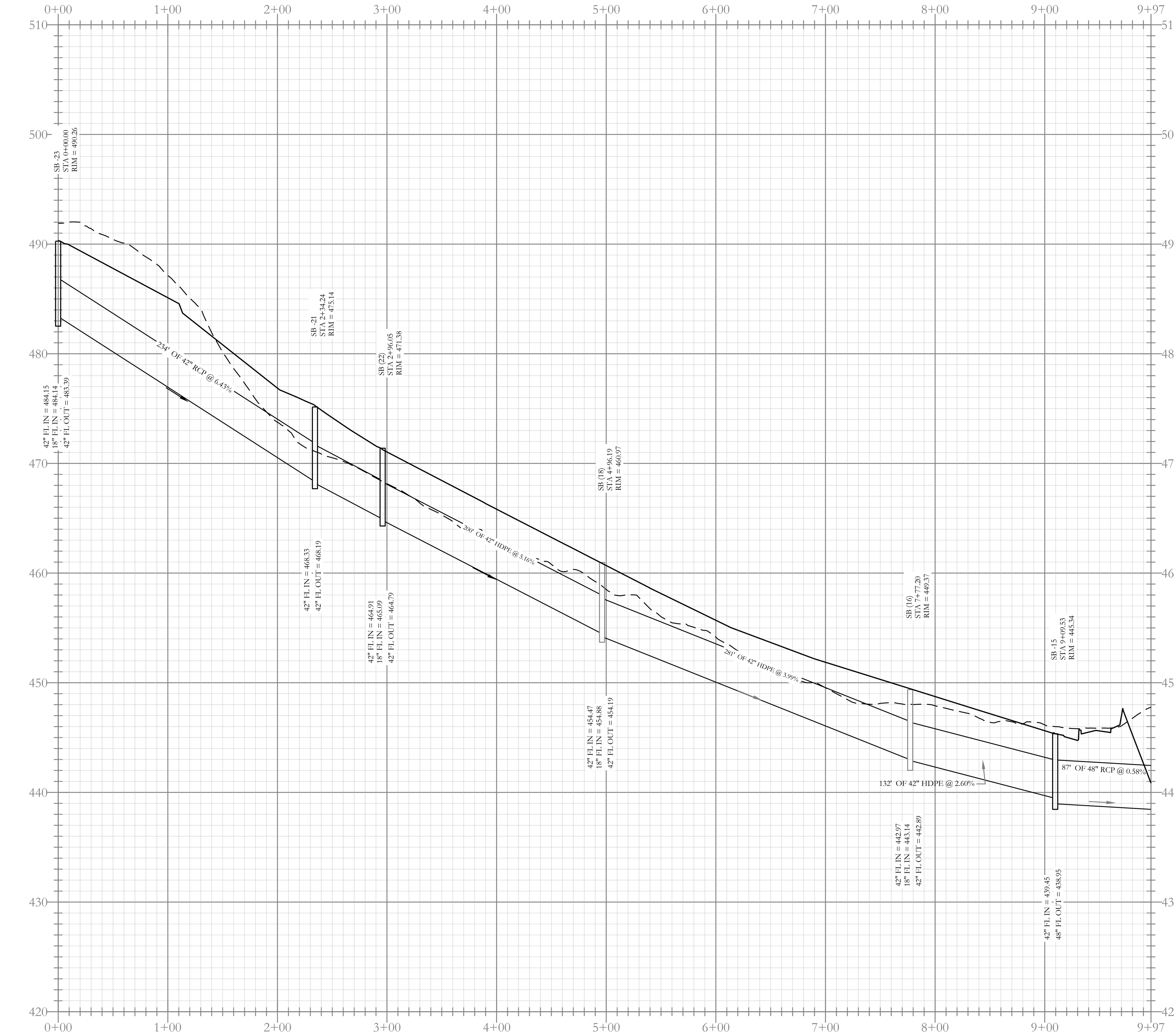
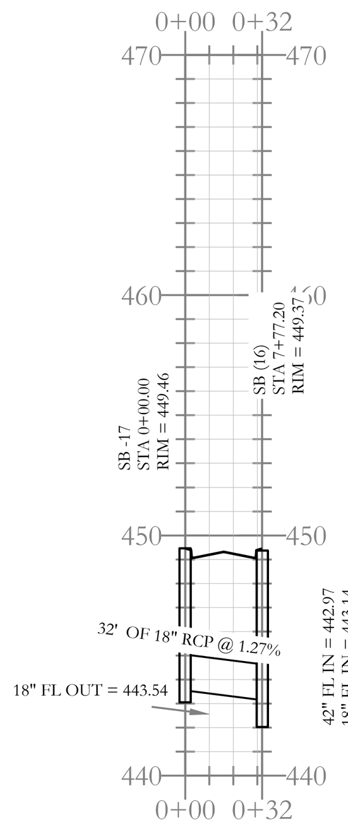
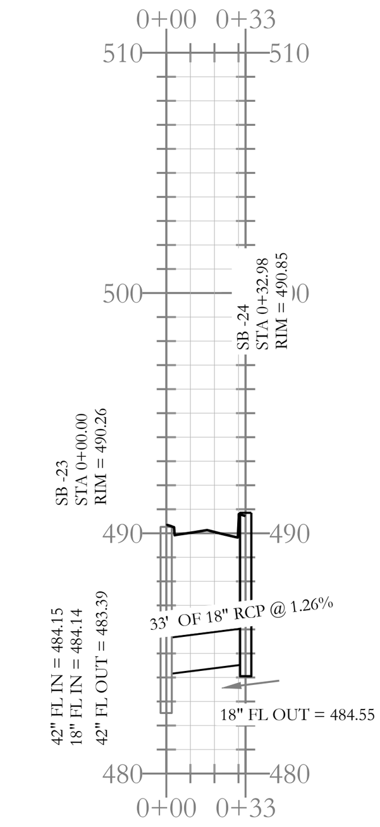




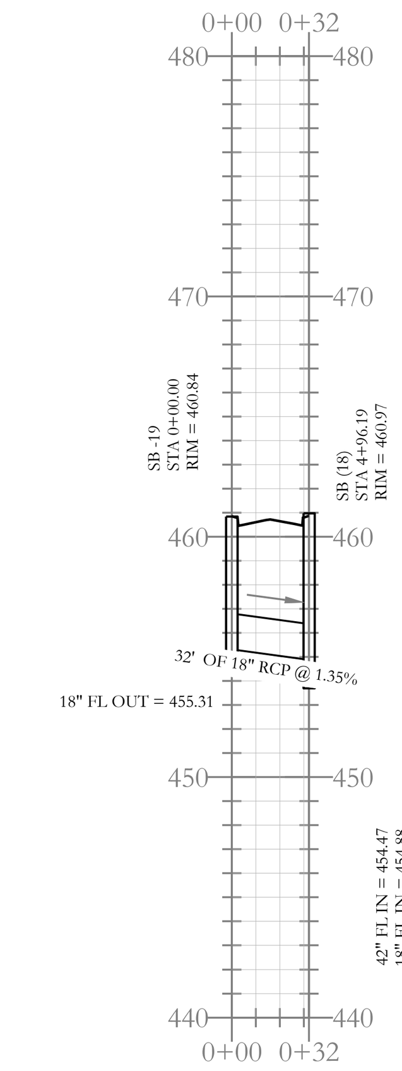
Stormwater G Profile



Stormwater G(b) Profile



Stormwater G(c) Profile



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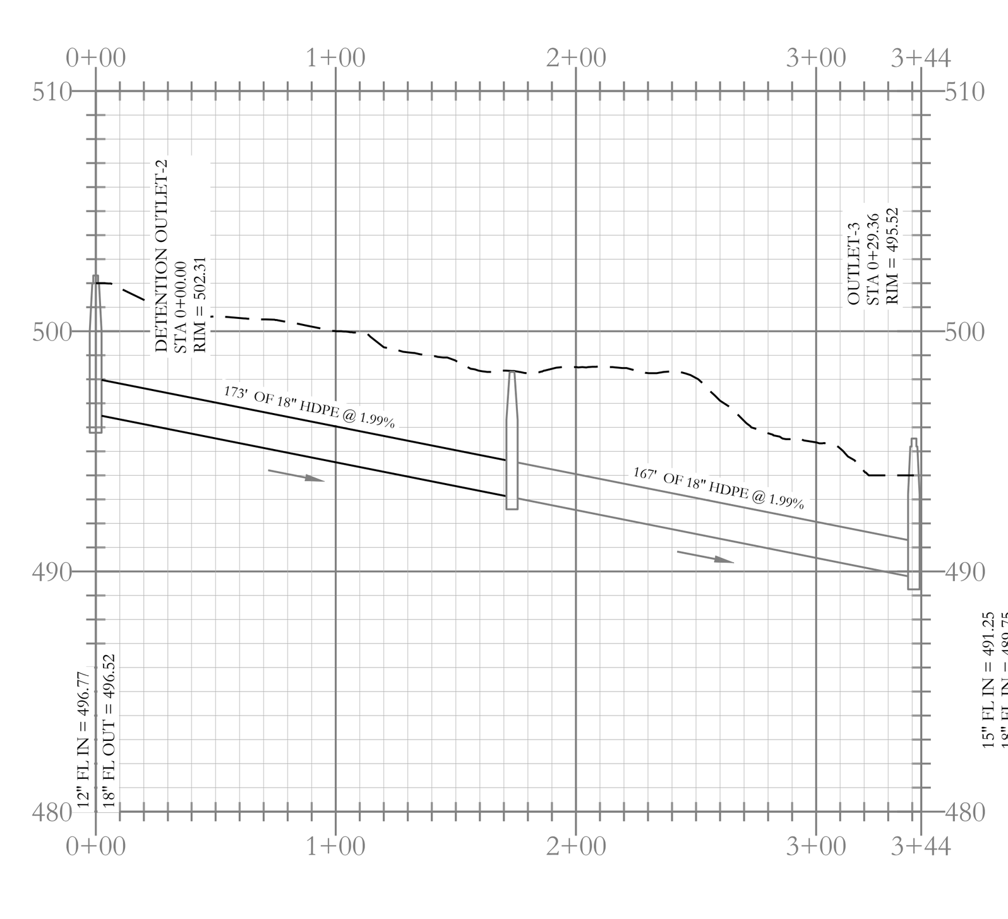
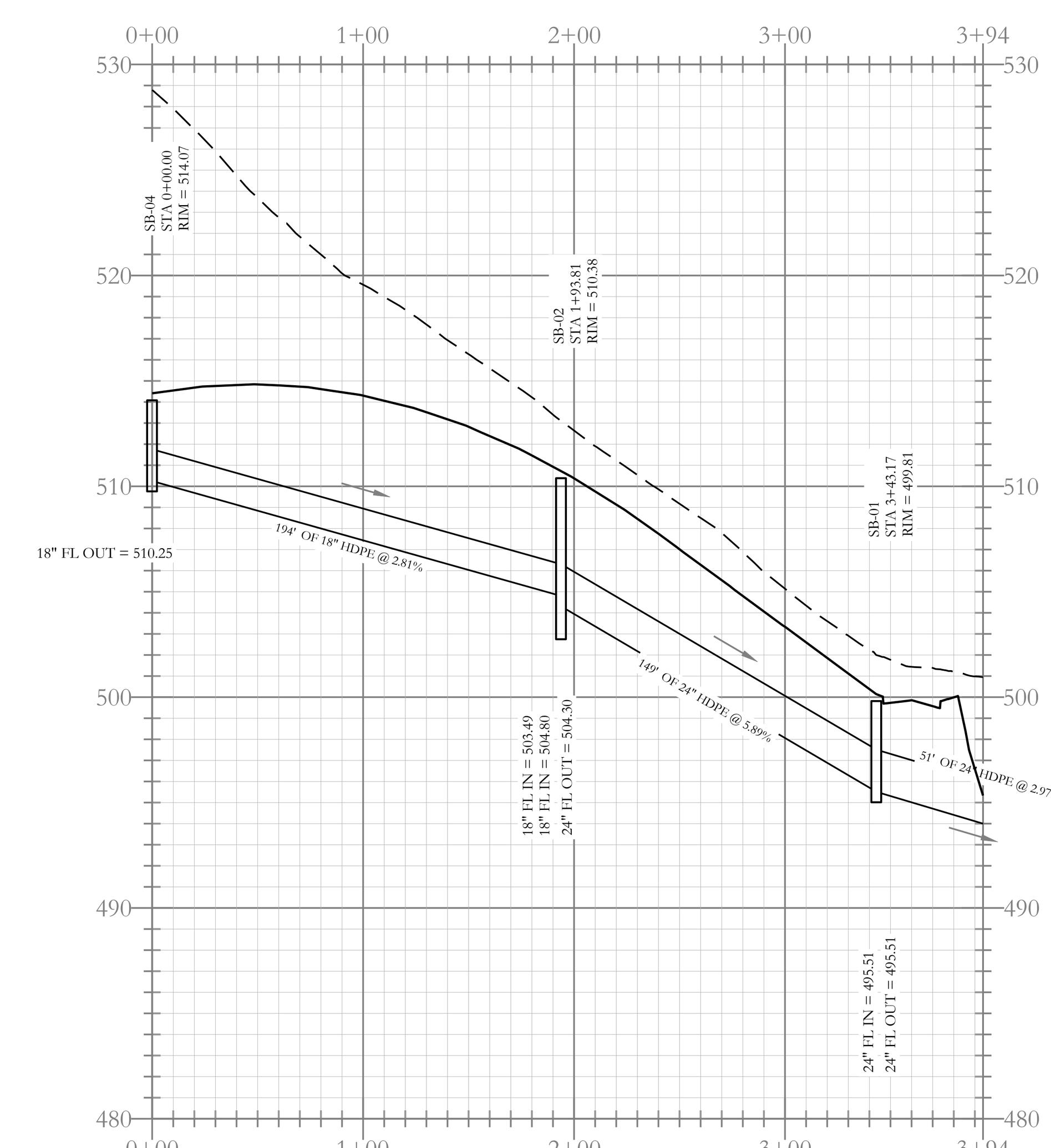
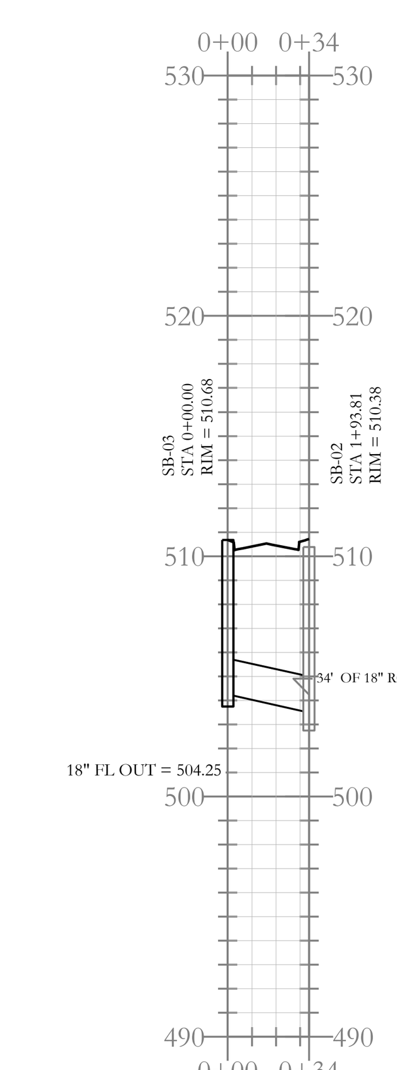


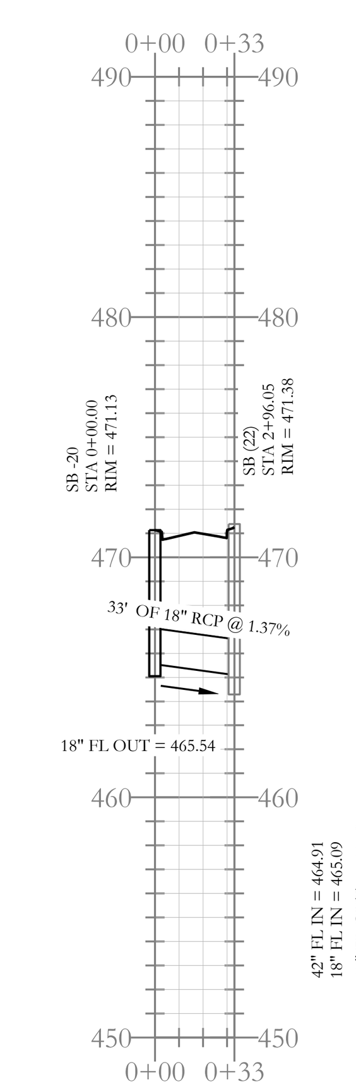
Detention Outlet to ditch Profile



Stormwater Entrance Profile



Stormwater Entrance-i Profile



Stormwater G(d) Profile

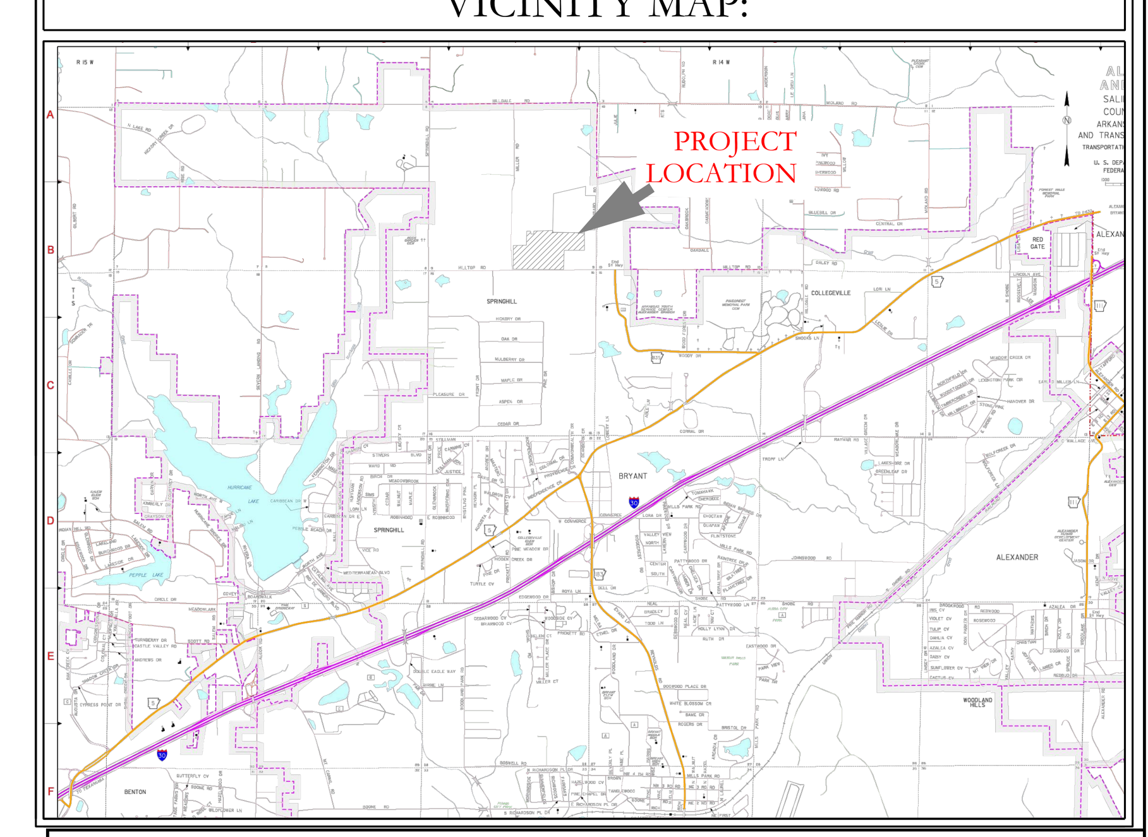
BASIS OF BEARING:
GRID NORTH, ARKANSAS
COORDINATE SYSTEM, SOUTH ZONE
BY GPS OBSERVATION

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 20876
KAZI TAMZIDUL ISLAM

CERTIFICATE OF AUTHORIZATION
HOPE CONSULTING, INC.
No. 1938
ARKANSAS

— — — HDPE
——— RCP

VICINITY MAP:



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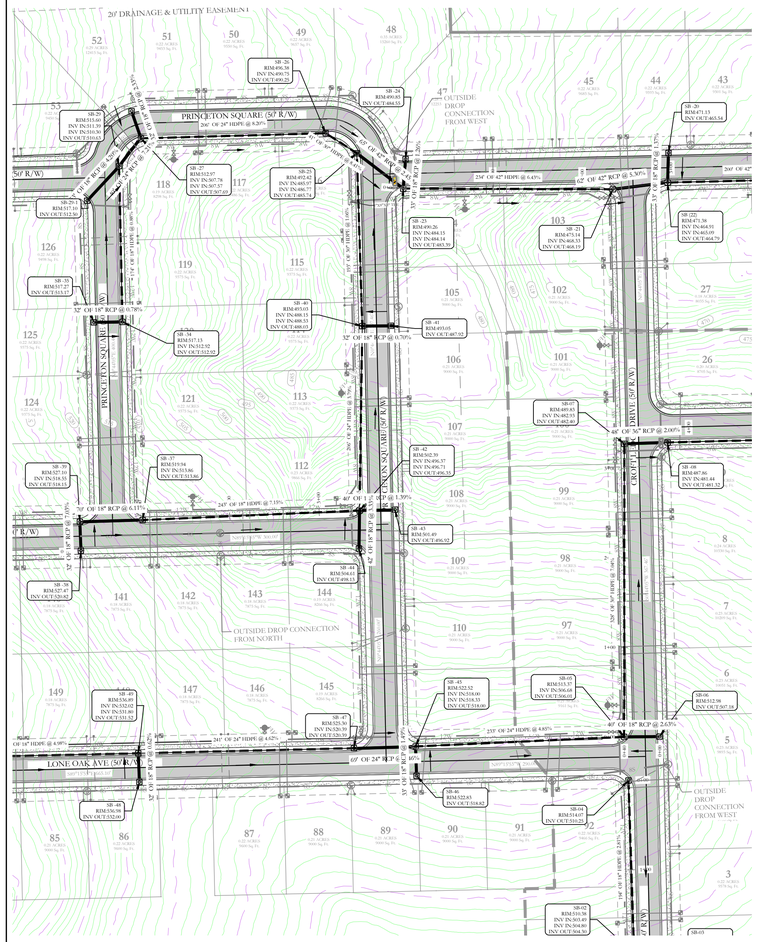
SHEET:	C-3.2	SCALE:	1" = 80'	

500	01S	14W	0	09	200	62	1762



Stormwater C Profile

Stormwater C-1 Profile

Stormwater D Profile

Stormwater D-1 Profile

Stormwater C-2 Profile

N

BASIS OF BEARING:
GRID NORTH ARKANSAS
COORDINATE SYSTEM, SOUTH ZONE
BY GPS OBSERVATION

ARKANSAS LICENSED PROFESSIONAL ENGINEER No. 20876 KAZI TAMZIDUL ISLAM

HOPE CONSULTING, INC. No. 1953

80 40 0 80

- - - -	HDPE
———	RCP

VICINITY MAP:

Stormwater E-1 Profile

Stormwater F Profile

Stormwater D-2 Profile

Stormwater F-a Profile

Stormwater F-b Profile

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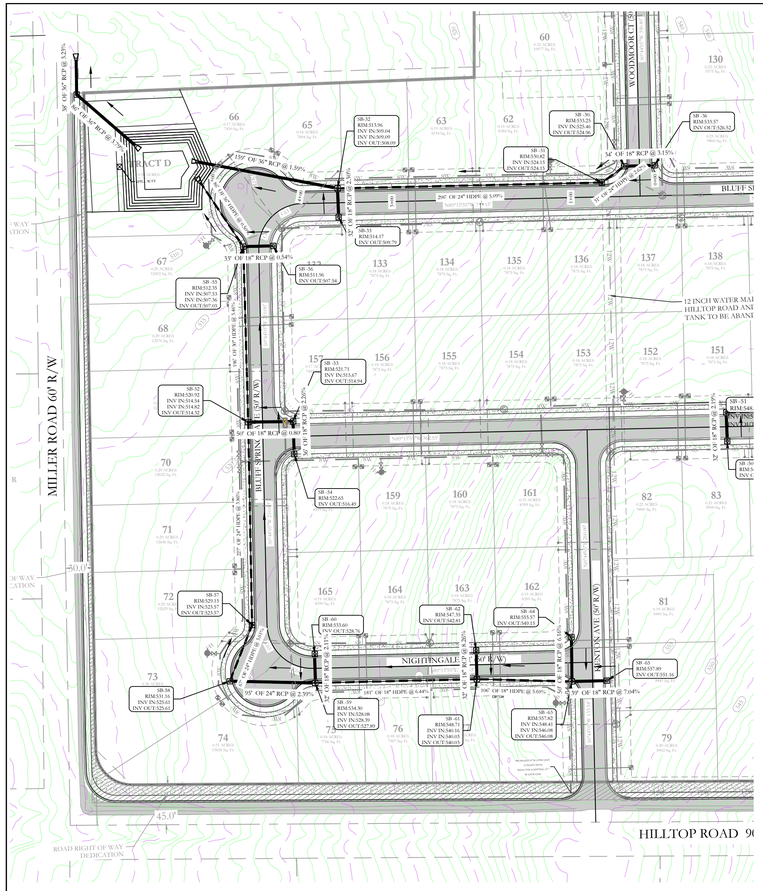
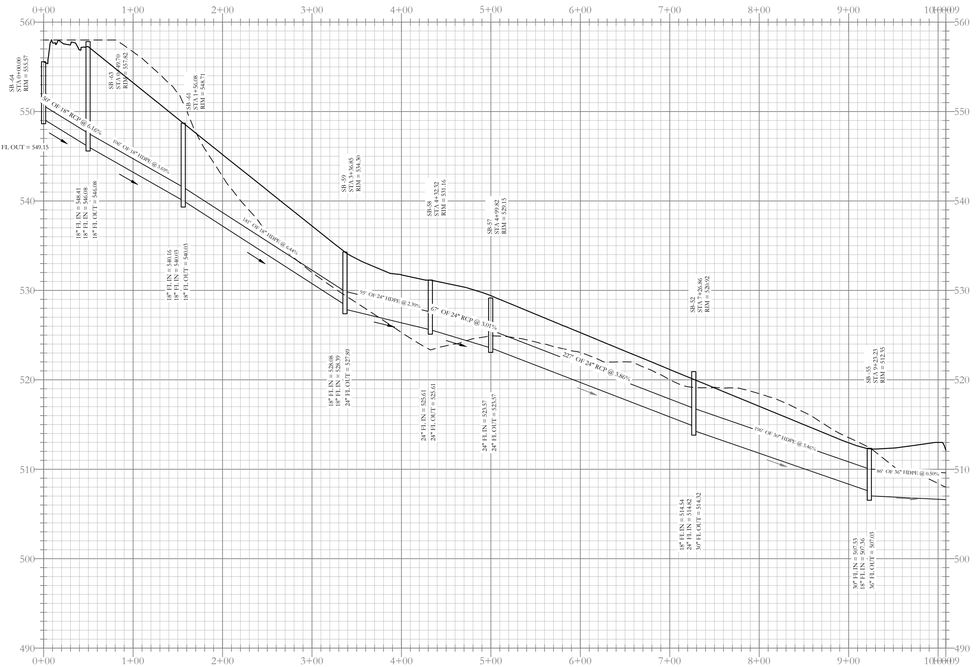
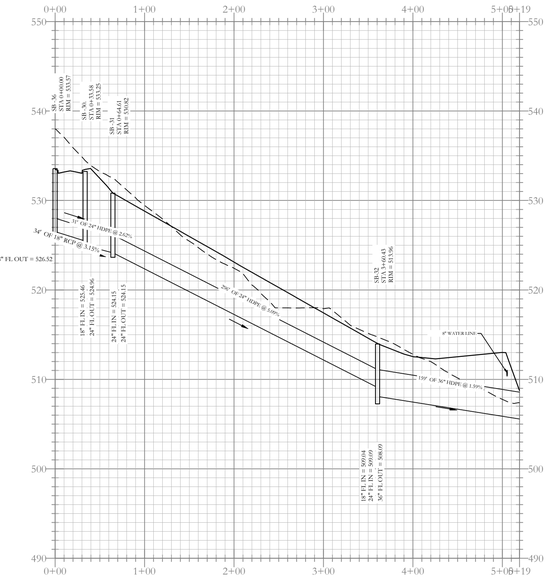




Stormwater E-2 Profile



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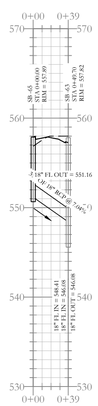
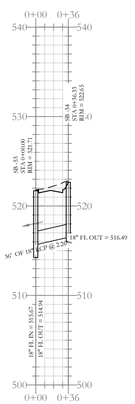
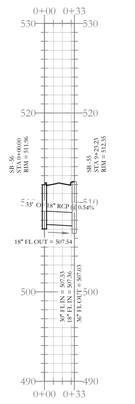


Stormwater Entrance-2 Profile



Stormwater F-c Profile



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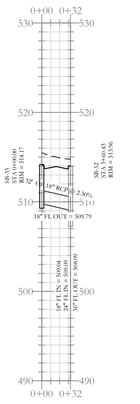
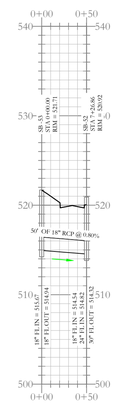
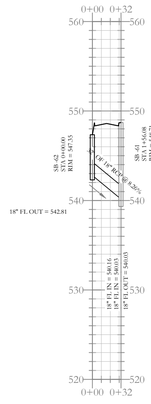


Stormwater E-b Profile



Stormwater E-c Profile



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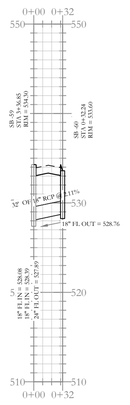
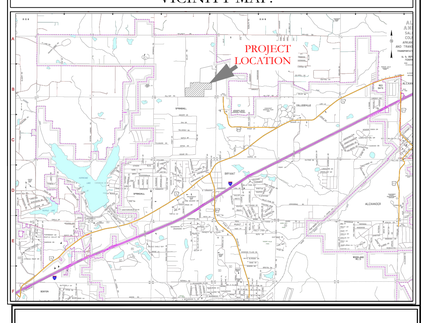


Stormwater E-e Profile



VICINITY MAP:

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BASIS OF BEARING:
GRID NORTH, ARKANSAS
COORDINATE SYSTEM, SOUTH ZONE
BY GPS OBSERVATION

80 40 0 80

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 20876
KAZI TAMZIDUL ISLAM

CERTIFICATE OF AUTHORIZATION
HOPE CONSULTING, INC.
No. 1931
ARKANSAS

– – – – HDPE

——— RCP

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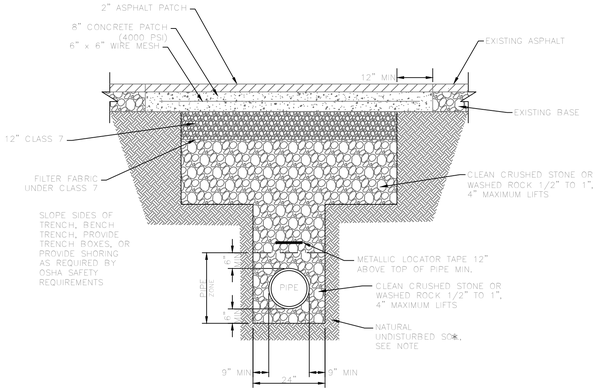
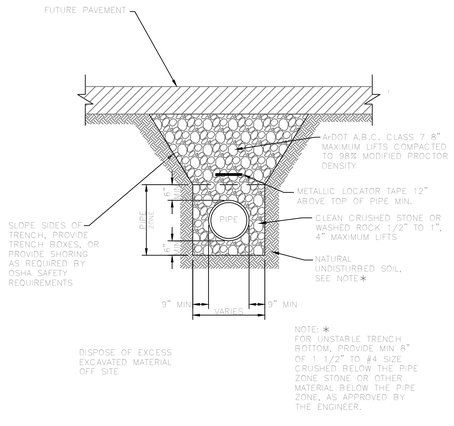


PVC SEWER TRENCH UNDER EXISTING ASPHALT STREET

N.T.S.

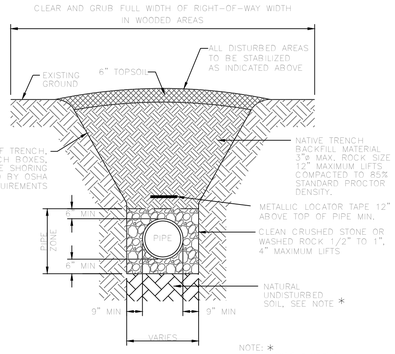


PVC SEWER TRENCH UNDER FUTURE ASPHALT STREET

N.T.S.

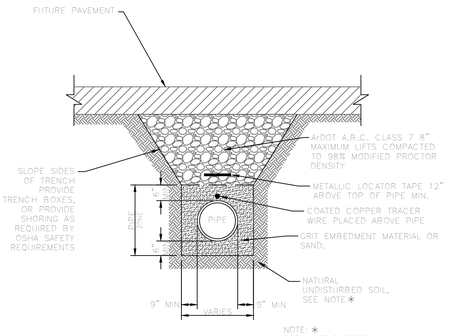
SOIL STABILIZATION REQUIREMENTS:

1. IN LAWN AREAS, DISTURBED SOIL SHALL BE STABILIZED BY PLACEMENT OF SOD TO MATCH EXISTING.
2. IN FIELDS OR WOODED AREAS, DISTURBED SOIL SHALL BE STABILIZED BY SEEDING.



PVC SEWER TRENCH IN UNPAVED AREAS

N.T.S.

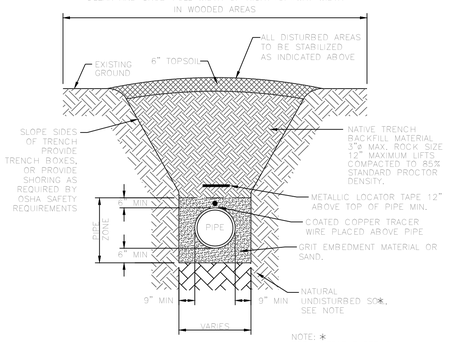


PVC WATER LINE TRENCH UNDER FUTURE ASPHALT STREET

N.T.S.

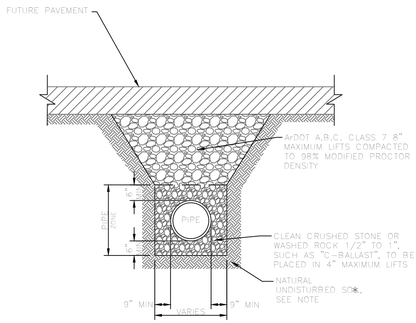
SOIL STABILIZATION REQUIREMENTS:

1. IN LAWN AREAS, DISTURBED SOIL SHALL BE STABILIZED BY PLACEMENT OF SOD TO MATCH EXISTING.
2. IN FIELDS OR WOODED AREAS, DISTURBED SOIL SHALL BE STABILIZED BY SEEDING.



PVC WATER LINE TRENCH IN UNPAVED AREAS

N.T.S.

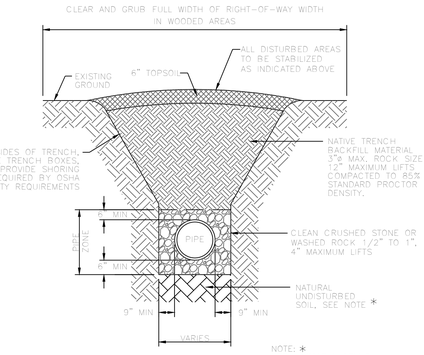


DRAINAGE PIPE TRENCH UNDER FUTURE ASPHALT STREET

N.T.S.

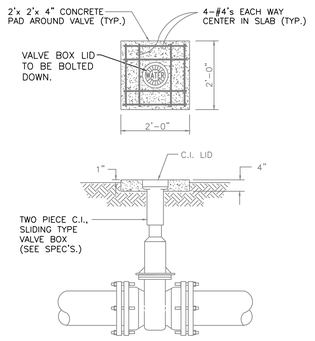
SOIL STABILIZATION REQUIREMENTS:

1. IN LAWN AREAS, DISTURBED SOIL SHALL BE STABILIZED BY PLACEMENT OF SOD TO MATCH EXISTING.
2. IN FIELDS OR WOODED AREAS, DISTURBED SOIL SHALL BE STABILIZED BY SEEDING.



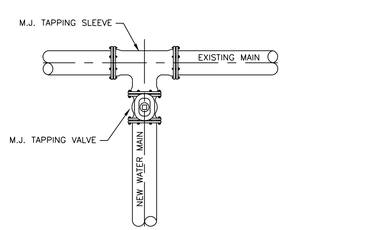
DRAINAGE PIPES IN UNPAVED AREAS

N.T.S.



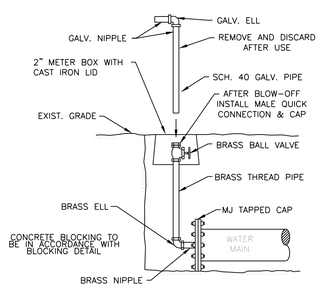
DETAIL-VALVE BOX

N.T.S.



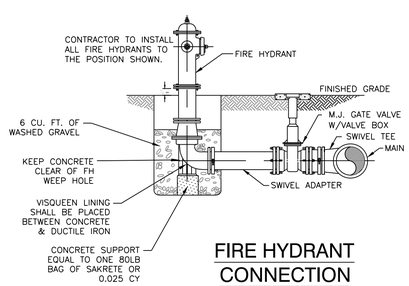
WATER MAIN CONNECTION DETAIL

N.T.S.



2" BLOW-OFF RISER

N.T.S.



FIRE HYDRANT CONNECTION

NTS

HOPE CONSULTING
ENGINEERS - SURVEYORS
129 N. Main Street,
Benton, Arkansas 72015
PH. (501)315-2626
FAX (501) 315-0024
www.hopeconsulting.com

FOR USE AND BENEFIT OF:
NXT GEN HOMES LLC.

HILLTOP LANDING
TRENCH DETAILS
A SUBDIVISION IN THE CITY OF BRYANT, SALINE COUNTY, ARKANSAS

DATE: 03/08/2023	C.A.D. BY:		DRAWING NUMBER:
REVISED:	CHECKED BY:		20-1341
SHEET: C-4.0	SCALE: 1" = 20"		

500	01S	14W	0	09	200	62	1762

K:\LAND PROJECTS 2004\SUBDIVISIONS\2020\20-1341 MILLER & HILLTOP\CIVIL\DWG\20-1341 CONSTRUCTION DRAWING FULL PHASE 35' WIDE LOTS_05.08.2021.DWG

SPECIFICATIONS

SUBGRADE MATERIAL

A. Subgrade soils shall be all materials used for subgrade including in-situ materials and fill materials.
B. Subrades for pavement shall be stabilized by mechanical compaction. Stabilization methods such as fabrics and chemical stabilization may be submitted for approval when supported by engineering data and calculations to substantiate the adequacy of the stabilized procedure.
C. Subgrade shall be compacted to 95 percent modified proctor density minimum. Moisture content shall be +/- 3% of optimum moisture unless otherwise supported by the site specific geotechnical data and approved by City.
D. Subgrade shall be prepared in such a manner that the base course shall be placed on a firm foundation that is stable and free from soft spots, pumping, dust pockets, wheel ruts, or other defects.
E. The top 24 inches of the subgrade shall be a material not susceptible to frost action unless modified with cement, lime or another method approved specifically by the City to resist frost action. Soils classified as A-4 and A-5 including sandy silts, fine silty sand or lean clays are highly susceptible to frost action.
F. In-situ soils meeting the requirements outlined in these specifications may be utilized as subgrade material. In-situ soils used as subgrade shall be scarified to a minimum depth of 8-inches below finish subgrade, recompacted and tested as described below. Fill material for subgrade shall be placed in lifts not to exceed 8-inches compacted depth.
G. Methods and procedures for establishing the total depth of soil replacement and/or modification shall be as specified by the design engineer and geotechnical investigations. The adequacy of in-situ soils and fill materials as pavement subgrade shall be evaluated based upon the soils classification, liquid limit, and plasticity index.
H. Soils with a liquid limit greater than 40, or a plasticity index greater than 15 shall be undercut and removed from the street section or improved by a design method of stabilization approved by the City.
I. Quality control testing shall be as specified below.
J. Undercut 24" of soil below finished street base course. Proof roll to verify stability.
K. Backfill the undercut subgrade with Class 7 aggregate or soil meeting the requirements of this section and compact in lifts not exceeding 8".

BASE COURSE

A. Base course material shall be crushed stone meeting the requirements of ArDOT Class 7 aggregate base course as specified in the latest edition of ArDOT Standard Specifications.
B. Base course shall be compacted to 98 percent modified proctor density minimum. Moisture content shall be +/- 3% of optimum moisture.

SURFACE COURSE

A. Surface course for flexible pavement designs shall utilize plant mix bituminous base and binder courses conforming to ArDOT Standard Specifications.

CURB AND GUTTER

A. Curb and gutter shall be Portland Cement Concrete with a minimum 28-day compressive strength of 4,000 psi. Concrete shall be air-entrained with a maximum of 4-inch slump.
B. Compaction requirements under curb and gutter shall conform to the requirements for street subgrade materials. Compaction requirements shall extend to a minimum of 1 foot behond the back of curb and gutter removing all soft spots and replacing with suitable material.
C. Curb and gutter shall conform to the typical detail within these specifications or ArDOT Standard Roadway Drawing Details for curbing.
D. Expansion joints shall be made with 1/2-inch preformed expansion joint filler of a non-extruding type. Expansion joints shall be placed at intervals not exceeding 195 feet, intersection radii, driveways, stationary structures, and sidewalks.
E. Contraction joints shall be sawed or fromed at intervals not greater than 20 feet. Depth of saw-cut hall be 1 1/2-inch and have a width of 1/4-inch. Contraction joints shall be sealed in accordance with ArDOT Standard Specifications.
F. Forms shall be made of metal or wood and shall be properly braced. The minimum length of each section of form used shall be 10 feet. Each section of form shall be uniform and free from undesirable bends or warps. Forms shall be of such cross section and strength and so secured as to resist the pressure of the impact and vibration on any equipment which they support without springing or settlement.
G. Curb and gutter placed with slip form or extruding equipment will be acceptable providing it complies with all of the above requirements.
H. After curing, the curb shall be immediately backfilled to within 4 inches of the top curb to eliminatethe possibility of washing beneath the curb. The remaining 4 inches shall be topsoil.
I. Cold weather protection shall meet the requirements of the latest edition of ArDOT Standard Specifications.

SIDEWALKS

General

A. Sidewalks shall be Portland Cement Concrete with a minimum 28-day compressive strength of 4,000 psi.
B. Sidewalks shall be on both sides of streets in line with sidewalks on opposite corners of roads.
C. All sidewalks including ramps shall meet all current Federal Americans with Disabilities (ADA) design guidelines or requirements.
D. Traverse slopes shall not exceed 2 percent.
E. Subgrade under sidewalks shall be compacted to 90 percent modified proctor density minimum.
F. Sidewalks shall not be placed upon grassy or organic materials.
G. Sidewalks which extend or link existing sidewalks shall adjoin the existing sidewalks to form a continuous, even pathway.
H. Utility poles, utility boxes, mailboxes, fire hydrants, and other similar obstructions shall not be located in sidewalks Sidewalk location may vary at the discretion of the City to avoid such obstacles.

Minimum thickness and reinforcement

A. Sidewalks shall have a minimum thickness of 4 inches.
B. Sidewalks shall be reinforced, at a minimum, with woven wire fabric reinforcement.

Contraction and expansion joints

A. Contraction joints shall be provided perpendicular to the sidewalk at intervals equal to the sidewalk width.
B. Expansion joints shall be constructed perpendicular to the sidewalk at intervals equal to five times the sidewalk width. Expansion joints shall be made with 1/2-inch preformed expansion joint filler of a non-extruding type. Expansion joints shall be placed at driveways, drop inlets, and curbs.

Quality control testing and inspection by the City

A. Subgrade and formwork for sidewalks shall be inspected by the City prior to pouring of the sidewalk.
B. All testing of materials and construction shall be provided and paid for by the Developer/Owner.
C. All field tests required for a project shall be witnessed by the City, contractor, or their authorized representatives.
D. All testing shall be accomplished by a testing firm approved by the City and shall be performed under the supervision of a licensed Professional Engineer.
E. Sampling and testing locations shall be subject to approval by the City.
F. Density tests on subgrades shall be taken every 300 feet or portion thereof.
G. The City shall be notified at least one day in advance of the need to inspect subgrade and formwork of sidewalks.

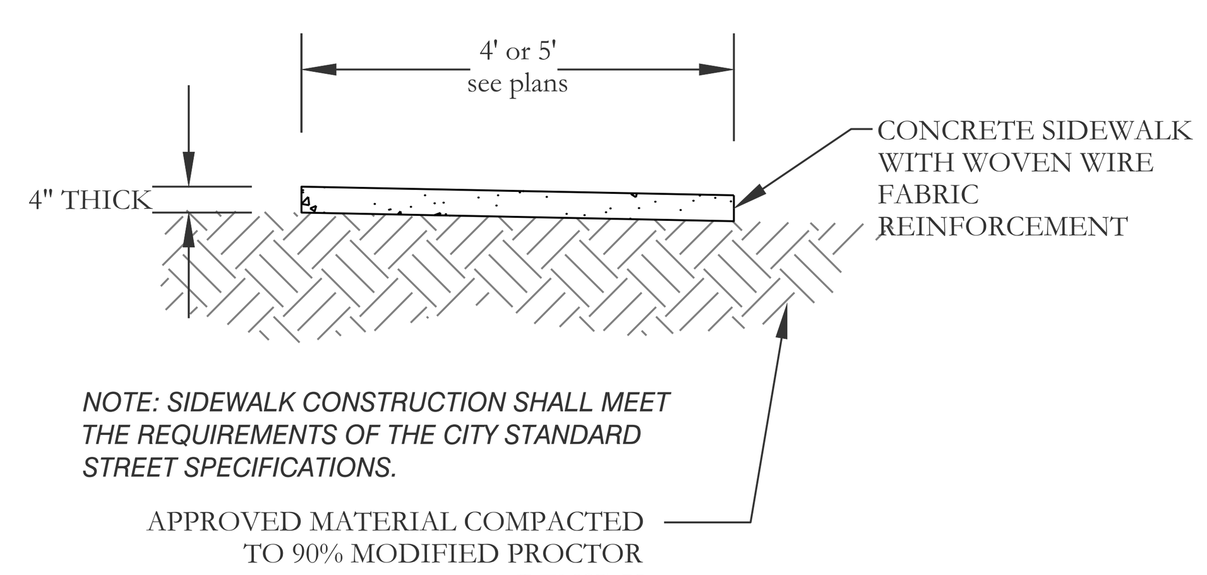
Subgrade

A. Subgrade soils shall be all materials used for subgrade including in-situ materials and fill materials.
B. Subgrade shall be compacted to 90 percent modified proctor desnity minimum. Moisture content shall be +/- 3% of optimum moisture unless otherwise supported by the site specific geotechnical data and approved by City.
C. Subgrade shall be prepared in such a manner that the base course shall be placed on a firm foundation that is stable and free from soft spots, pumping, dust pockets, wheel ruts, or other defects.
D. The top 24 inches of the subgrade shall be a material not susceptible to frost action unless modified with cement, lime or another method approved specifically by the City to resist frost action. Soils classified as A-4 and A-5 including sandy silts, fine silty sand or lean clays are highly susceptible to frost action.

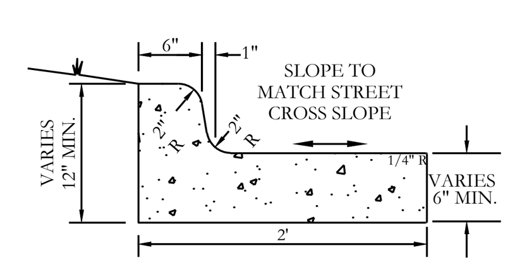
QUALITY CONTROL TESTING AND INSPECTIONS

General

A. Materials and construction employed in street improvements shall be subject to inspection and quality control testing. All testing of materials and construction shall be provided and paid for by the Developer/Owner.
B. The Developer/Owner shall provide for inspections of street improvements during construction. The inspections shall be accomplished under the supervision of the Engineer of Record. The Engineer of Record shall provide certification that all materials and construction conform to the approved plans and specifications and with these minimum street standards.
C. The Engineer of Record shall furnish inspection whenever a critical construction activity is taking place. This means that a representative of the Engineer of Record must be on-site whenever a critical construction activity is taking place.
D. All field tests required for a project shall be witnessed by the City, Engineer of Record, contractor, or other authorized representatives.
E. The City shall be notified at least one day in advance of any test(s). It is the responsibility of the contractor to coordinated the scheduling of all tests with the City.



Typical Sidewalk Detail



STANDARD CURB & GUTTER
NOT TO SCALE

TYPICAL CURB DETAILS & NOTES
NOT TO SCALE

Typical Curb & Gutter Detail

4,000 psi concrete

HOPE CONSULTING
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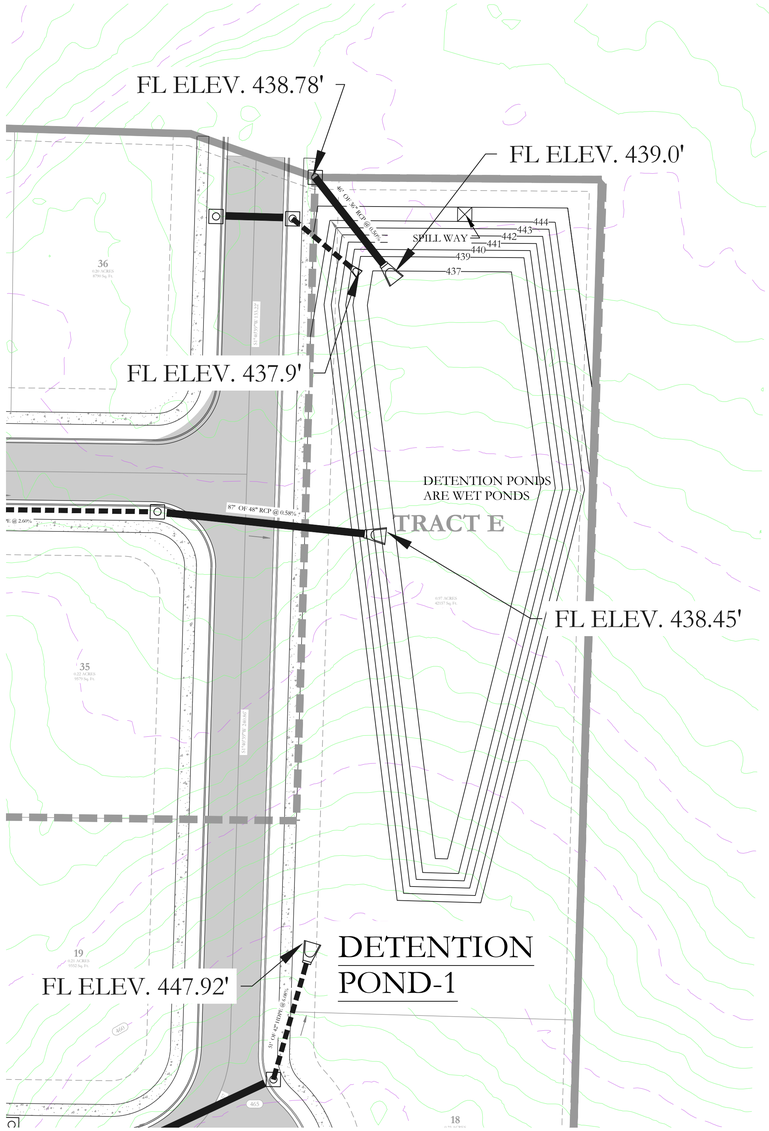
FOR USE AND BENEFIT OF:
NXT GEN HOMES LLC.

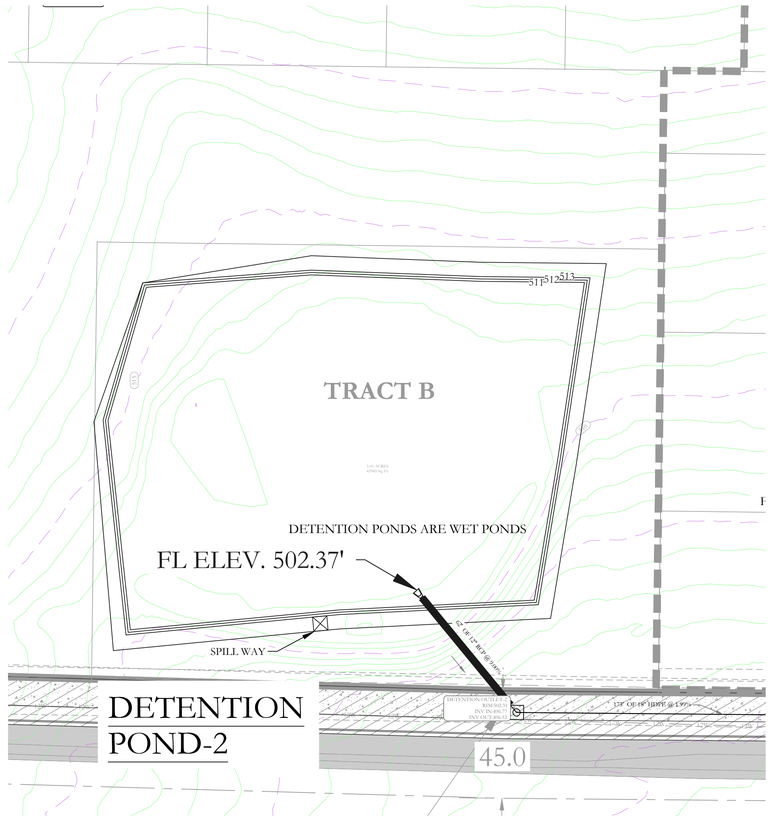
HILLTOP LANDING
CIVIL SPECIFICATIONS
A SUBDIVISION IN THE CITY OF BRYANT, SALINE COUNTY, ARKANSAS

DATE:	03/08/2023	C.A.D. BY:		DRAWING NUMBER:
REVISED:		CHECKED BY:		20-1341
SHEET:	C-5.0	SCALE:	1' = 20"	

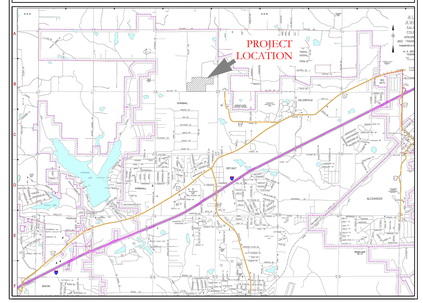
500	01S	14W	0	09	200	62	1762

K:\LAND PROJECTS 2004\SUBDIVISIONS\2020\20-1341 MILLER & HILLTOP\CIVIL\DWG\20-1341-CONSTRUCTION DRAWING FULL PHASE 75 WIDE LOTS_03-08-2023.DWG



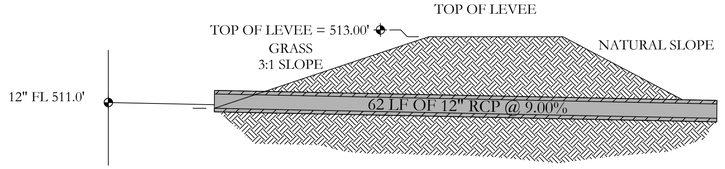


VICINITY MAP:

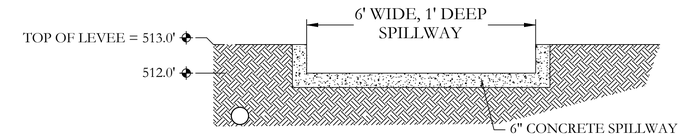


EARTHEN SLOPE NOTE:
ALL EARTHEN DETENTION POND SLOPES ON BOTH THE INTERIOR AND EXTERIOR OF THE POND SHALL HAVE A MAXIMUM SLOPE OF 3:1.

NOTE:
ALL DETENTION BASINS WILL BE REQUIRED TO BE STABILIZED WITH SOLID SOD STABILIZATION PER THE STORMWATER MANAGEMENT MANUAL.



OUTLET SECTION
NTS



SPILLWAY END VIEW
NTS

DETENTION POND -2

DETENTION POND MAINTENANCE PLAN

Background
The detention ponds are located on the periphery of the subdivision.They are designed to temporarily detain stormwater to meet water quantity criteria before discharging off the property.

Routine Maintenance
The property owners association will maintain the drainage easements located in Tract "B" and Tract "E". Routine maintenance will include but not be limited to:
-Mowing of the bank slopes and area around the pond on a monthly basis during the growing season and as needed during the cooler months.

-The outlet pipe from the pond and other areas will be inspected monthly for debris which could inhibit the proper flow of discharge. Any debris will be removed immediately and disposed of or placed in a location to prevent future maintenance and to not cause impact up or downstream of the structure.

-Trash will be removed from around the pond to prevent entering the pond. Generally, the site should be kept free of loose trash which could be carried off site by wind or rain.

-Inspect the pond and outlet pipe for non-routine maintenance need.

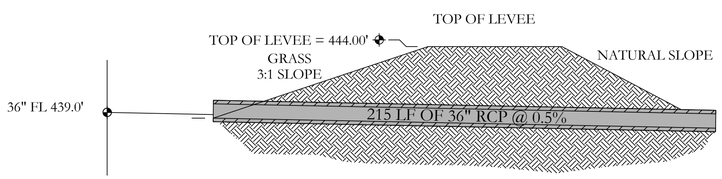
Periodic or Non-Routine Maintenance
The routine inspection of the ponds areas and discharge pipes will identify needed repairs and non-routine maintenance. These items may include but not be limited to:

-Re-growth of trees on or around the pond bank. These should be cut and removed from the pond area.

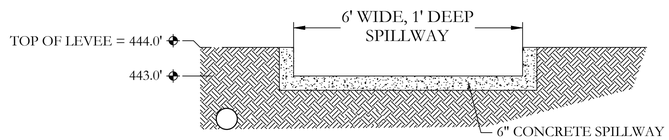
-Sediment from the site may accumulate in the pond bottom and reduce the pond to below design volume requirements. The pond should be excavated if the pond bottom elevation reached a level that allows excessive aquatic growth or reduces the pond efficiency such, that the sediments are passing the discharge structure and release off site.

-Stabilization or re-grading of side slopes may be required periodically or after excessive rain events. Any disturbance of slopes should be reseeded or may require installation of erosion control materials until seeding can reestablish adequate grasses to prevent future erosion.

-Any other maintenance or repairs which would minimize other maintenance to the pond or outfall structures.



OUTLET SECTION
NTS

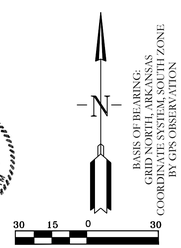


SPILLWAY END VIEW
NTS

DETENTION POND-1

CERTIFICATE OF AUTHORIZATION
HOPE CONSULTING, INC.
No. 1931
ARKANSAS

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 20876
KAZI TAMZIDUL ISLAM



BASIS OF BEARING:
GRID NORTH, ARKANSAS
COORDINATE SYSTEM, SOUTH ZONE
BY GPS OBSERVATION

HOPE CONSULTING
ENGINEERS - SURVEYORS
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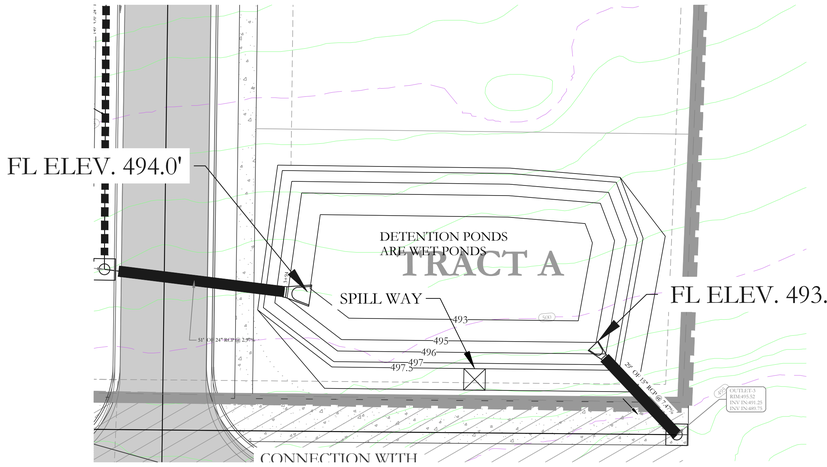
FOR USE AND BENEFIT OF:
NXT GEN HOMES LLC.

HILLTOP LANDING
DETENTION POND
A SUBDIVISION IN THE CITY OF BRYANT, SALINE COUNTY, ARKANSAS

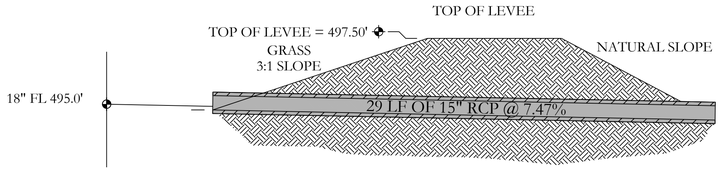
DATE:	03/08/2023	C.A.D. BY:	DRAWING NUMBER:
REVISED:		CHECKED BY:	20-1341
SHEET:	C-6.0	SCALE: 1"=30'	

500	01S	14W	0	09	200	62	1762

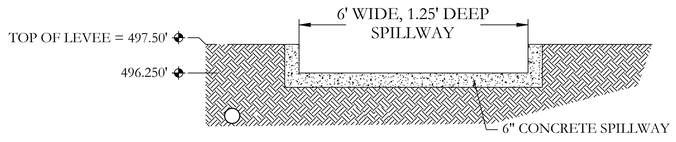
K:\LAND PROJECTS 2004\SUBDIVISIONS\2020\20-1341 MILLER & HILLTOP\CIVIL\DWG\20-1341-CONSTRUCTION DRAWING FULL PHASE 75' WIDE LOTS_05-06-2023.DWG



DETENTION POND-3



OUTLET SECTION
NTS



SPILLWAY END VIEW
NTS

DETENTION POND MAINTENANCE PLAN

Background
The detention ponds are located on the perphery of the subdivision. They are designed to temporarily detain stormwater to meet water quantity criteria before discharging off the property.

Routine Maintenance
The property owners association will maintain the drainage easements located in Tract "A" and Tract "D".
Routine maintenance will include but not be limited to:
-Mowing of the bank slopes and area around the pond on a monthly basis during the growing season and as needed during the cooler months.

-The outlet pipes from the ponds and other areas will be inspected monthly for debris which could inhibit the proper flow of discharge. Any debris will be removed immediately and disposed of or placed in a location to prevent future maintenance and to not cause impact up or downstream of the structure.

-Trash will be removed from around the pond to prevent entering the pond. Generally, the site should be kept free of loose trash which could be carried off site by wind or rain.

-Inspect the pond and outlet pipe for non-routine maintenance need.

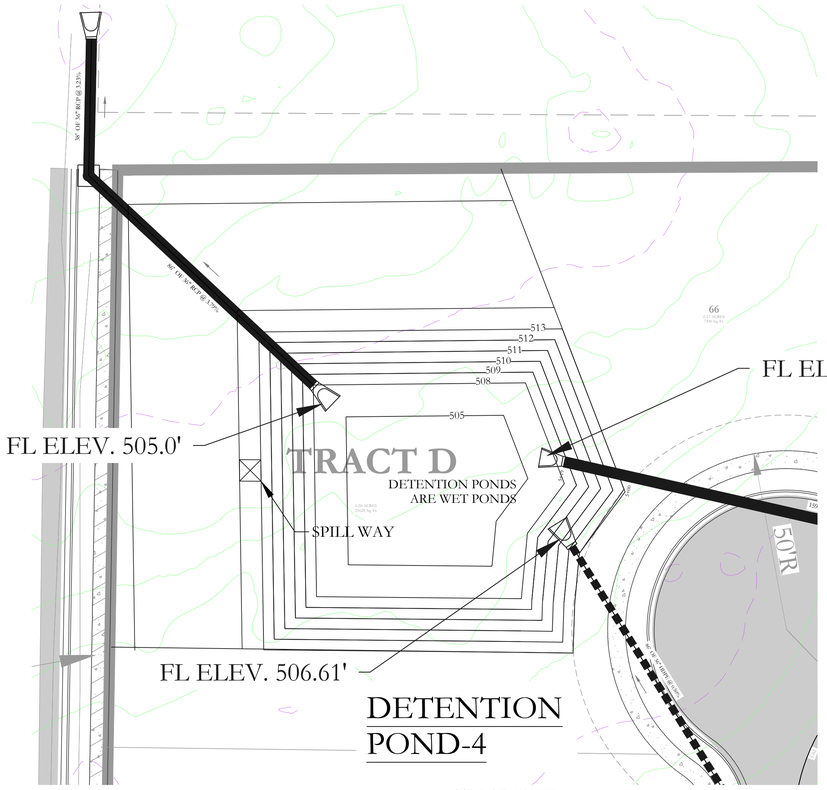
Periodic or Non-Routine Maintenance
The routine inspection of the pond areas and discharge pipes will identify needed repairs and non-routine maintenance. These items may include but not be limited to:

-Re-growth of trees on or around the pond bank. These should be cut and removed from the pond areas.

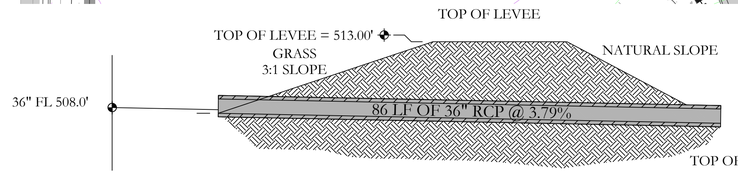
-Sediment from the site may accumulate in the pond bottom and reduce the pond to below design volume requirements. The pond should be excavated if the pond bottom elevation reached a level that allows excessive aquatic growth or reduces the pond efficiency such, that the sediments are passing the discharge structure and release off site.

-Stabilization or re-grading of side slopes may be required periodically or after excessive rain events. Any disturbance of slopes should be reseeded or may require installation of erosion control materials until seeding can reestablish adequate grasses to prevent future erosion.

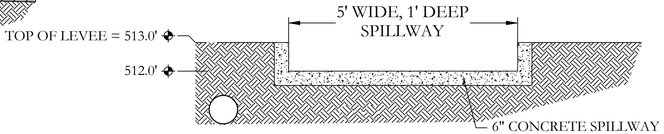
-Any other maintenance or repairs which would minimize other maintenance to the pond or outfall structures.



DETENTION POND-4



OUTLET SECTION
NTS



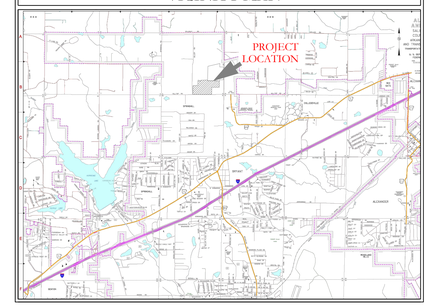
SPILLWAY END VIEW
NTS

DETENTION POND -4

EARTHEN SLOPE NOTE:
ALL EARTHEN DETENTION POND SLOPES ON BOTH THE INTERIOR AND EXTERIOR OF THE POND SHALL HAVE A MAXIMUM SLOPE OF 3:1.

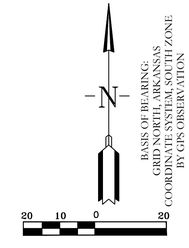
NOTE:
ALL DETENTION BASINS WILL BE REQUIRED TO BE STABILIZED WITH SOLID SOD STABILIZATION PER THE STORMWATER MANAGEMENT MANUAL.

VICINITY MAP:



STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 20876
KEVIN TAMZIOU, P.E.

CERTIFICATE OF AUTHORIZATION
HOPE CONSULTING, INC.
No. 1931
ARKANSAS



BASIS OF BEARING:
GRID NORTH, ARKANSAS
COORDINATE SYSTEM, SOUTH ZONE
BY GPS OBSERVATION

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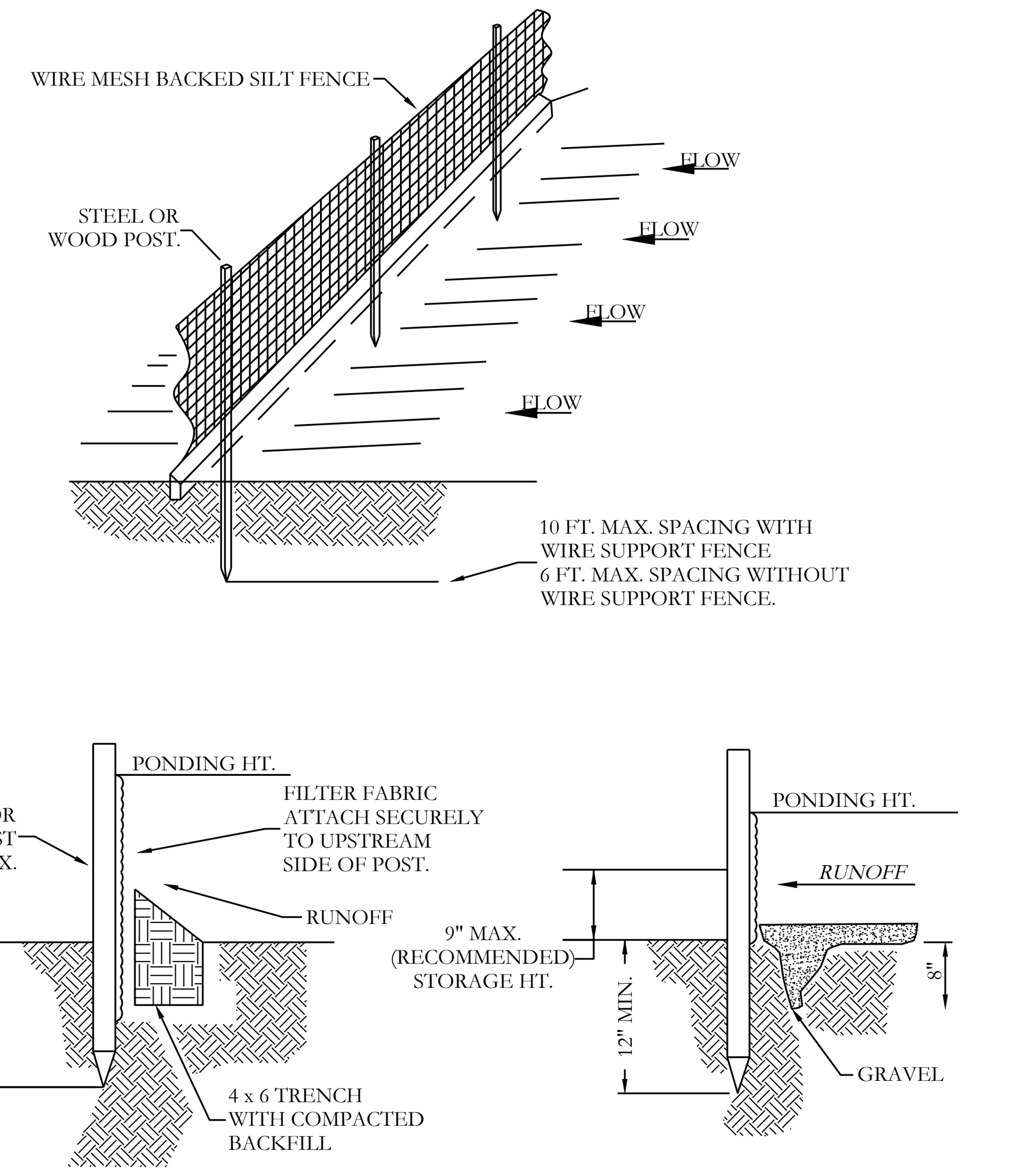
FOR USE AND BENEFIT OF:
NXT GEN HOMES LLC.

HILLTOP LANDING
DETENTION POND
A SUBDIVISION IN THE CITY OF BRYANT, SALINE COUNTY, ARKANSAS

DATE: 03/08/2023	C.A.D. BY:	DRAWING NUMBER:	
REVISED:	CHECKED BY:	20-1341	
SHEET: C-6.0	SCALE: 1"=20'		

500	01S	14W	0	09	200	62	1762

K:\LAND PROJECTS 2004\SUBDIVISIONS\2020\20-1341 MILLER & HILLTOP\CIVIL\DWG\20-1341-CONSTRUCTION DRAWING FULL PHASE 75' WIDE LOTS_05-08-2023.DWG



STANDARD DETAIL
TRENCH WITH NATIVE BACKFILL

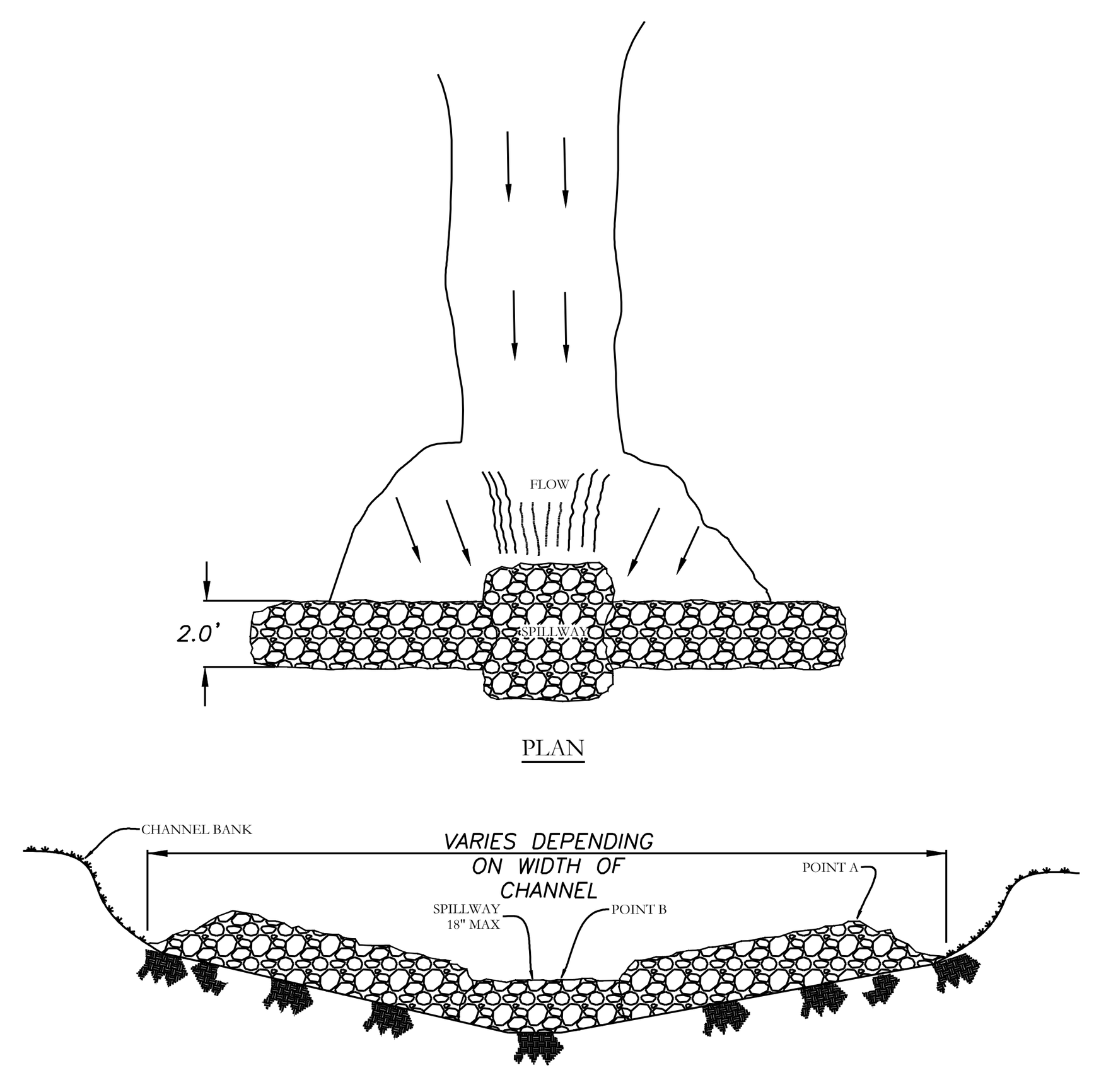
ALTERNATE DETAIL
TRENCH WITH GRAVEL

NOTE:
1.) INSPECT AND REPAIR FENCE AFTER EACH STORM EVENT AND REMOVE SEDIMENT WHEN NECESSARY.

2.) REMOVED SEDIMENT SHALL BE DEPOSITED TO AN AREA THAT WILL NOT CONTRIBUTE SEDIMENT OFF-SITE AND CAN BE PERMANENTLY STABILIZED.

3.) SILT FENCE SHALL BE PLACED ON SLOPE CONTOURS TO MAXIMIZE PONDING EFFICIENCY.

SILT FENCE

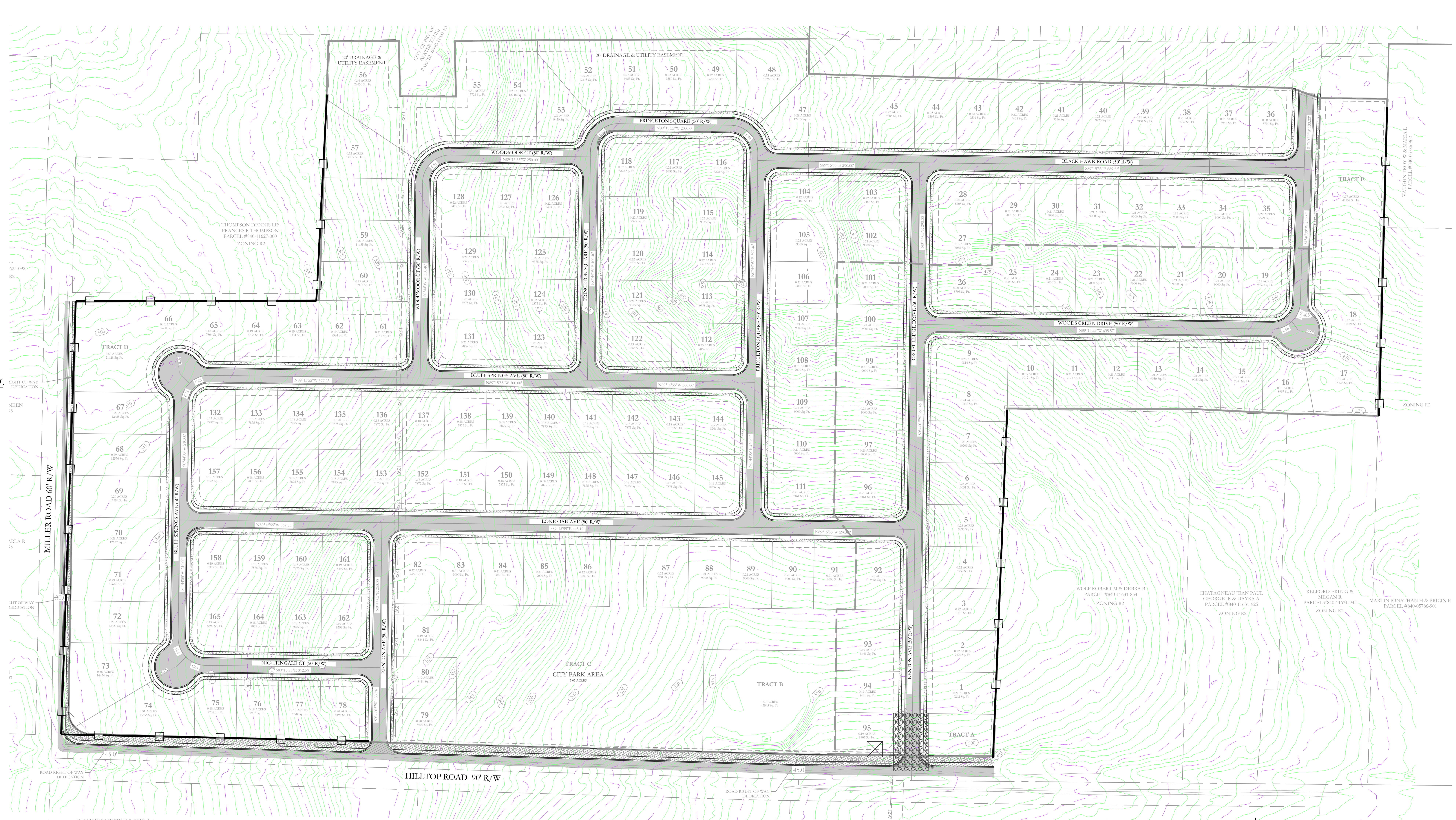


VIEW LOOKING UPSTREAM

NOTES:

1.) POINT 'A' MUST BE HIGHER THAN POINT 'B' (SPILLWAY HEIGHT)
2.) PLACE RIP-RAP BARRIER PERPENDICULAR TO THE FLOW WITH TIGHT GROUPING. USE STRAW, ROCKS, OR FILTER FABRIC TO FILL ANY GAPS AND TAMP BACKFILL MATERIAL TO PREVENT EROSION OR FLOW AROUND THE DAM.
3.) SPILLWAY HEIGHT SHALL NOT EXEED 18"-24".
4.) INSPECT AFTER EACH SIGNIFICANT STORM, MAINTAIN AND REPAIR PROMPTLY.

RIP-RAP CHECK DAM

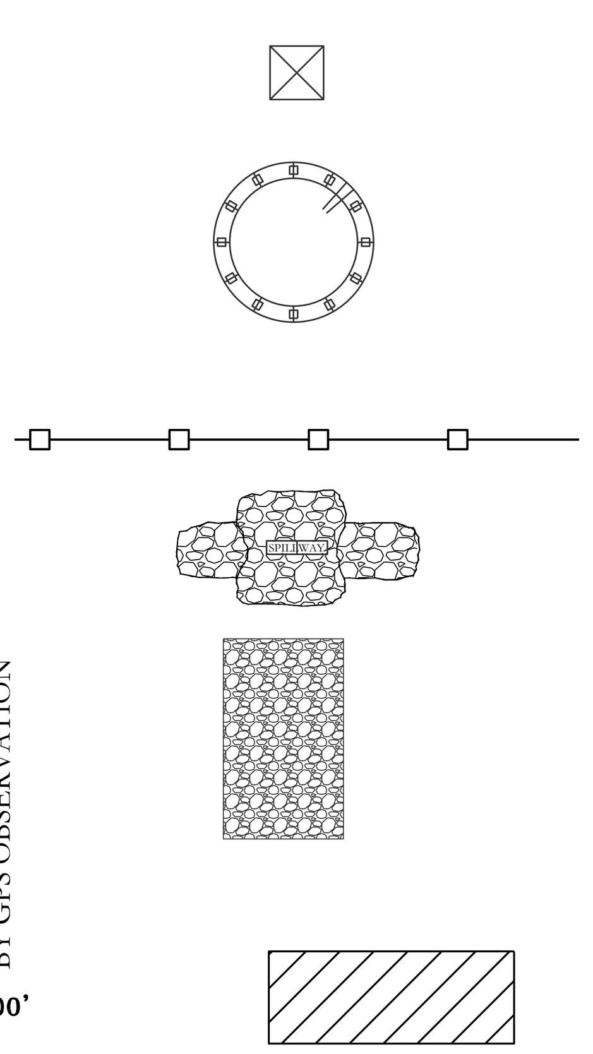


N
BASIS OF BEARING: GRID NORTH, ARKANSAS COORDINATE SYSTEM, SOUTH ZONE BY GPS OBSERVATION
100 50 0 100

CERTIFICATE OF AUTHORIZATION
HOPE CONSULTING, INC.
No. 1551
ARKANSAS

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 20876
KAZI TAMZIDUL ISLAM

ERC LEGEND



SITE POSTING

CONC. WASHOUT DETENTION AREA

SILT FENCE

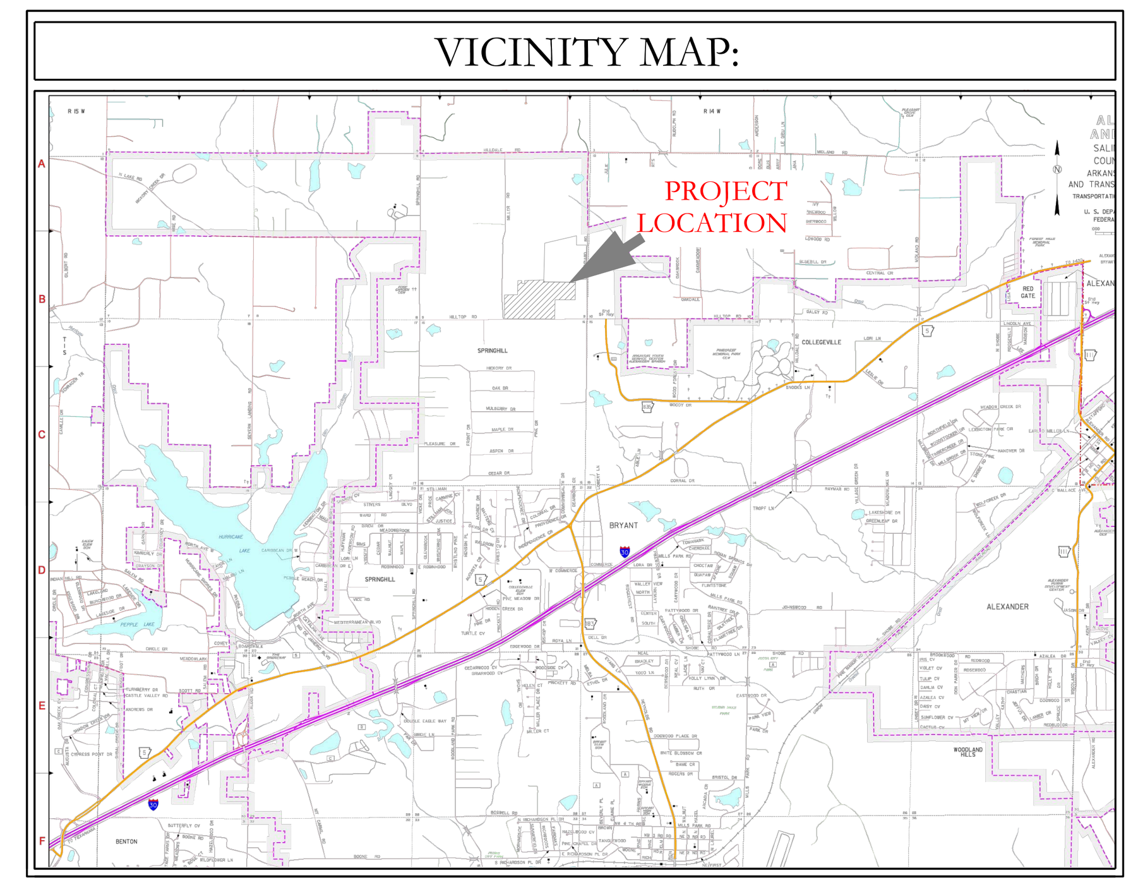
RIP RAP CHECK DAM

CONSTRUCTION ENTRANCE

DISTURBED AREA

N
BASIS OF BEARING: GRID NORTH, ARKANSAS COORDINATE SYSTEM, SOUTH ZONE BY GPS OBSERVATION
100' 50' 0 100'

VICINITY MAP:



HOPE CONSULTING
ENGINEERS - SURVEYORS

129 N. Main Street,
Benton, Arkansas 72015
PH. (501)315-2626
FAX (501) 315-0024
www.hopeconsulting.com

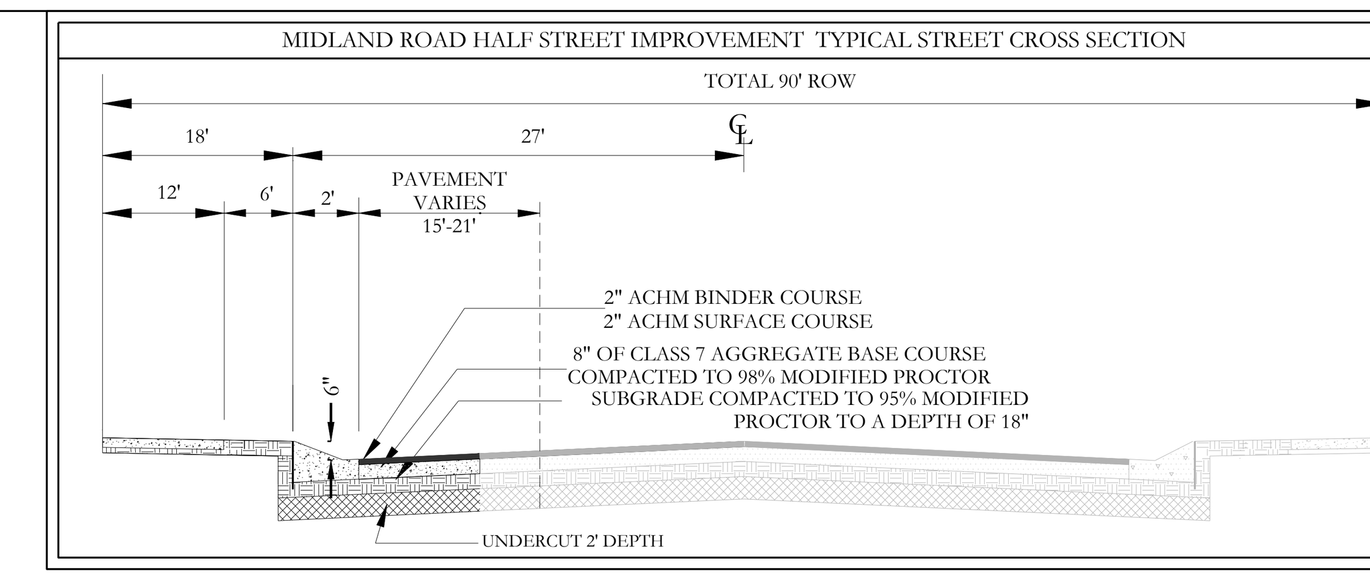
FOR USE AND BENEFIT OF:
NXT GEN HOMES LLC.

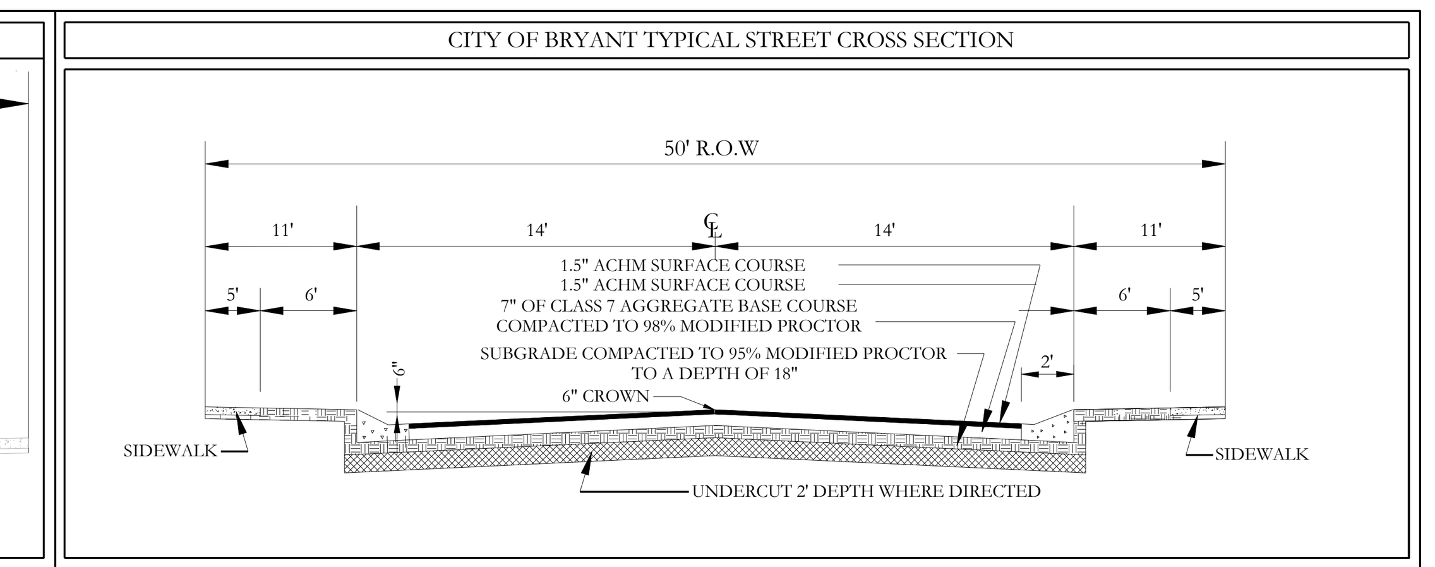
HILLTOP LANDING
EROSION CONTROL PLAN
A SUBDIVISION IN THE CITY OF BRYANT, SALINE COUNTY, ARKANSAS

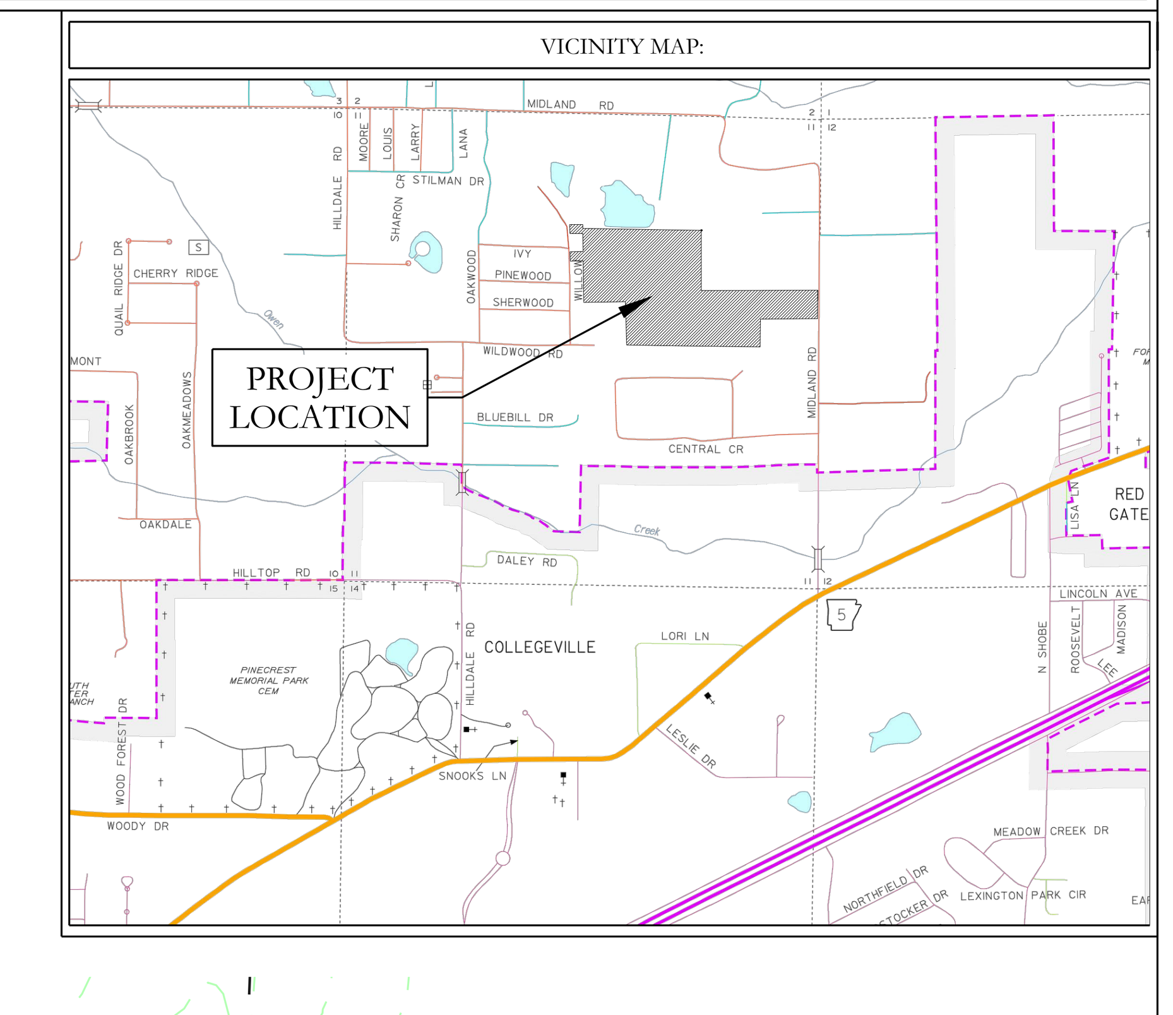
DATE:	03/08/2023	C.A.D. BY:		DRAWING NUMBER:
REVISED:		CHECKED BY:		20-1341
SHEET:	C-7.0	SCALE:	1" =100'	

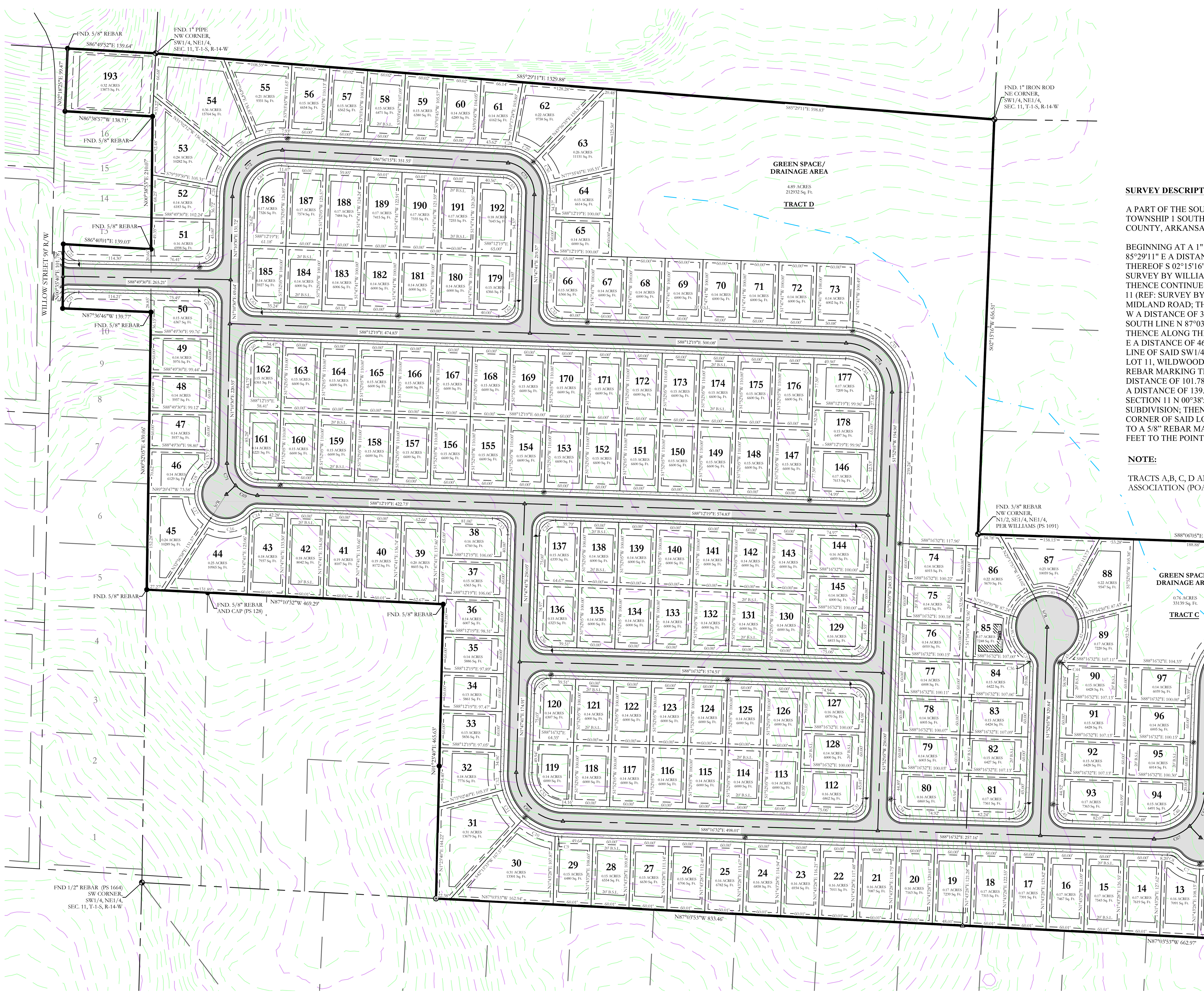
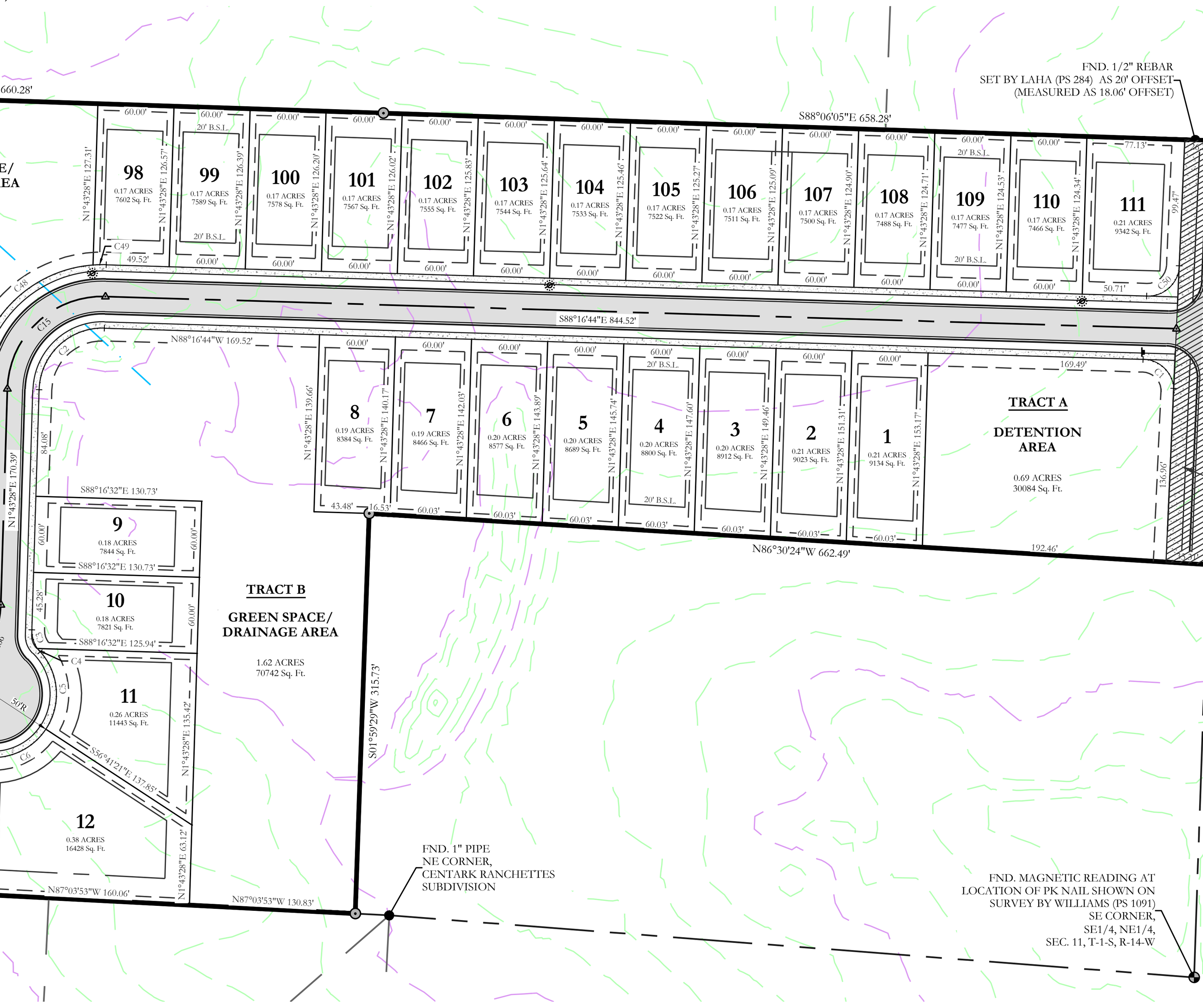
500	01S	14W	0	09	200	62	1762

K:\LAND PROJECTS 2004\SUBDIVISIONS\2020\20-1341 MILLER & HILLTOP\CIVIL\DWG\20-1341-CONSTRUCTION DRAWING FULL PHASE 75' WIDE LOTS_03-08-2023.DWG







SURVEY DESCRIPTION:

A PART OF THE SOUTHWEST QUARTER OF THE NORTHEAST QUARTER, AND THE SOUTHEAST QUARTER OF THE NORTHEAST QUARTER OF SECTION 11, TOWNSHIP 1 SOUTH, RANGE 14 WEST, SALINE COUNTY, ARKANSAS; AND LOTS 11, 12, 17, AND 18, OF WILDWOOD TERRACE SUBDIVISION TO SALINE COUNTY, ARKANSAS AS SHOWN AND RECOREDED IN SALINE COUNTY BOOK 108, PAGE 272; ALL MORE PARTICULARLY DESCRIBED AS FOLLOWS:

BEGINNING AT A 1" PIPE MARKING THE NORTHWEST CORNER OF SAID SW1/4, NE1/4, OF SECTION 11; THENCE ALONG THE NORTH LINE THEREOF S 85°29'11" E A DISTANCE OF 1,329.88 FEET TO A 1" IRON ROD MARKING THE NORTHEAST CORNER OF SAID SW1/4, NE1/4; THENCE ALONG THE EAST LINE THEREOF S 02°15'16" W A DISTANCE OF 656.51 FEET TO A 3/8" REBAR MARKING THE NW CORNER OF THE N1/2, SE1/4, NE1/4, OF SECTION 11 (REF: SURVEY BY WILLIAMS PS #1091); THENCE LEAVING SAID EAST LINE S 88°06'05" E A DISTANCE OF 660.28 FEET TO A 1/2" REBAR & CAP (PS #1664); THENCE CONTINUE S 88°06'05" E A DISTANCE OF 658.28 FEET TO THE COMPUTED LOCATION OF THE NE CORNER OF SAID S1/2, SE1/4, NE1/4 OF SECTION 11 (REF: SURVEY BY WILLIAMS PS #1091; THENCE ALONG THE EAST LINE THEREOF S 01°20'58" W A DISTANCE OF 334.18 FEET TO A IRON SPIKE IN MIDLAND ROAD; THENCE LEAVING SAID EAST LINE N 86°30'24" W A DISTANCE OF 662.49 FEET TO A 1/2" REBAR AND CAP (PS #1664); THENCE S 01°59'29" W A DISTANCE OF 315.73 FEET TO A 1/2" REBAR AND CAP (PS #1664) ON THE SOUTH LINE OF SAID SE1/4, NE1/4, OF SECTION 11; THENCE ALONG SAID SOUTH LINE N 87°03'53" W A DISTANCE OF 662.97 FEET TO THE COMPUTED LOCATION OF THE SE CORNER OF SAID SW1/4, NE1/4 OF SECTION 11; THENCE ALONG THE SOUTH LINE THEREOF N 87°03'53" W A DISTANCE OF 833.46 FEET TO A 1/2" REBAR; THENCE LEAVING SAID SOUTH LINE N 01°23'40" E A DISTANCE OF 465.63 FEET TO A 1/2" REBAR; THENCE N 87°10'32" W A DISTANCE OF 469.29 FEET TO A 1/2" REBAR AND CAP (PS #1664) ON THE WEST LINE OF SAID SW1/4, NE1/4; THENCE ALONG SAID WEST LINE N 00°52'05" E A DISTANCE OF 439.06 FEET TO A 1/2" REBAR MARKING THE SW CORNER OF LOT 11, WILDWOOD TERRACE SUBDIVISION; THENCE ALONG THE SOUTH LINE OF SAID LOT 11 N 87°36'46" W A DISTANCE OF 139.77 FEET TO A 5/8" REBAR MARKING THE SW CORNER OF SAID LOT 11; THENCE ALONG THE WEST LINE OF LOTS 11 AND 12, OF SAID WILDWOOD TERRACE N 00°35'40" E A DISTANCE OF 101.78 FEET TO A 5/8" REBAR MARKING THE NW CORNER OF SAID LOT 12; THENCE ALONG THE NORTH LINE OF SAID LOT 12 S 86°40'01" E A DISTANCE OF 139.03 FEET TO A 5/8" REBAR MARKING THE NE CORNER OF SAID LOT 12; THENCE ALONG THE WEST LINE OF SAID SW1/4, NE1/4, OF SECTION 11 N 00°38'53" E A DISTANCE OF 210.07 FEET TO A 1/2" REBAR MARKING THE SE CORNER OF LOT 17 OF SAID WILDWOOD TERRACE SUBDIVISION; THENCE LEAVING THE SOUTH LINE OF SAID LOT 17 N 86°38'57" W A DISTANCE OF 138.71 FEET TO A 1/2" IRON PIPE MARKING THE SW CORNER OF SAID LOT 17; THENCE ALONG THE WEST LINES OF LOTS 17 AND 18 OF SAID WILDWOOD TERRACE N 02°18'25" E A DISTANCE OF 99.47 FEET TO A 5/8" REBAR MARKING THE NW CORNER OF SAID LOT 18; THENCE ALONG THE NORTH LINE OF SAID LOT 18 S 86°49'52" E A DISTANCE OF 139.64 FEET TO THE POINT OF BEGINNING; CONTAINING 2,140,251.37 SQUARE FEET, OR 49.133 ACRES, MORE OR LESS.

NOTE:

TRACTS A,B, C, D AND E WILL BE UTILIZED FOR DRAINAGE AND UTILITIES PURPOSES AND WILL MAINTAINED BY THE PROPERTY OWNERS ASSOCIATION (POA) OR IMPROVEMENT DISTRICT.

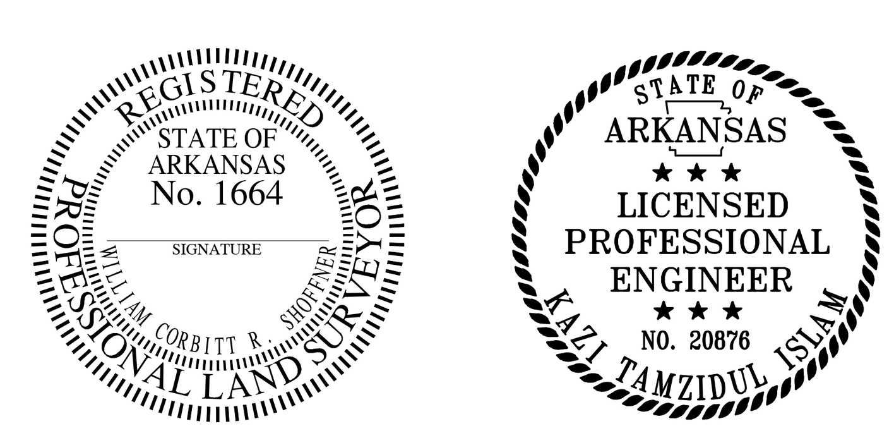
Curve Table					
Curve #	Length	Radius	Delta	Chord Direction	Chord Length
C1	36.44	25.00	83.51	N46° 31' 18"W	33.30
C2	78.54	50.00	90.00	S46° 43' 28"W	70.71
C3	15.74	25.00	36.08	S16° 19' 00"E	15.48
C4	3.29	25.00	7.54	S38° 07' 47"E	3.29
C5	65.64	50.00	75.21	S4° 17' 44"E	61.02
C6	50.98	50.00	58.41	S62° 31' 03"W	48.80
C7	38.12	50.00	43.68	N66° 26' 09"W	37.20
C8	19.06	25.00	43.68	N66° 26' 09"W	18.60
C10	59.54	100.00	34.12	N65° 16' 17"W	58.67
C11	57.73	100.00	33.08	N31° 40' 27"W	56.93
C12	29.55	100.00	16.93	N6° 40' 12"W	29.44
C13	39.27	25.00	90.00	N43° 12' 19"W	35.36
C14	19.69	25.00	45.13	S69° 13' 41"W	19.19
C15	117.81	75.00	90.00	S46° 43' 28"W	106.07
C16	69.10	50.00	79.18	S83° 21' 33"W	63.73
C17	50.36	50.00	57.70	N28° 11' 54"W	48.26
C18	42.37	50.00	48.55	N24° 55' 38"E	41.11
C19	20.96	25.00	48.03	N25° 11' 17"E	20.35
C20	39.27	25.00	90.00	N43° 49' 30"W	35.36
C21	39.40	25.00	90.29	S46° 01' 44"W	35.45
C22	39.02	25.00	89.42	S44° 06' 55"E	35.18
C23	39.27	25.00	90.00	N46° 10' 30"E	35.36
C24	15.42	100.00	8.83	N5° 35' 30"E	15.40
C25	50.54	100.00	28.96	N24° 29' 09"E	50.00
C26	50.54	100.00	28.96	N53° 26' 27"E	50.00

Curve Table					
Curve #	Length	Radius	Delta	Chord Direction	Chord Length
C27	43.88	100.00	25.14	N80° 29' 25"E	43.53
C28	9.46	75.00	7.23	S83° 19' 25"E	9.45
C29	44.05	75.00	33.65	S62° 53' 00"E	43.42
C30	44.05	75.00	33.65	S29° 13' 50"E	43.42
C31	18.59	75.00	14.20	S5° 18' 17"E	18.54
C32	39.27	25.00	90.00	S43° 12' 19"E	35.36
C33	147.27	100.00	84.38	S40° 19' 16"E	134.32
C34	39.33	25.00	90.14	S43° 12' 13"E	35.40
C35	39.21	25.00	89.86	N46° 47' 47"E	35.31
C36	0.94	25.00	2.15	N0° 47' 36"E	0.94
C37	20.09	25.00	46.04	N23° 18' 05"W	19.55
C38	55.98	50.00	64.14	N14° 14' 58"W	53.10
C39	43.73	50.00	50.11	N42° 52' 47"E	42.35
C40	50.36	50.00	57.71	S83° 12' 24"E	48.26
C41	35.14	50.00	40.26	S34° 13' 06"E	34.42
C42	55.98	50.00	64.14	S17° 59' 09"W	53.10
C43	19.96	25.00	45.75	S27° 10' 54"W	19.44
C44	1.06	25.00	2.44	S3° 05' 13"W	1.06
C45	39.33	25.00	90.14	S43° 12' 13"E	35.40
C46	78.54	50.00	90.00	N46° 43' 28"E	70.71
C47	30.06	100.00	17.22	N10° 20' 12"E	29.95
C48	116.52	100.00	66.76	N52° 19' 49"E	110.04
C49	10.49	100.00	6.01	N88° 43' 05"E	10.49
C50	38.91	25.00	89.18	N47° 08' 03"E	35.10
C51	39.21	25.00	89.86	N46° 47' 47"E	35.31

Curve Table					
Curve #	Length	Radius	Delta	Chord Direction	Chord Length
C52	78.60	50.00	90.07	S43° 14' 26"E	70.75
C53	39.24	25.00	89.93	S46° 45' 34"W	35.33
C54	39.33	25.00	90.14	N43° 12' 13"W	35.40
C55	39.21	25.00	89.86	N46° 47' 47"E	35.31
C56	39.30	25.00	90.07	S43° 14' 26"E	35.38
C57	39.30	25.00	90.07	N43° 10' 07"W	35.38
C58	39.24	25.00	89.93	N46° 49' 53"E	35.33
C59	39.00	25.00	89.38	S43° 30' 55"E	35.16
C60	39.54	25.00	90.62	S46° 29' 05"W	35.55
C61	78.60	50.00	90.07	N43° 10' 07"W	70.76
C62	39.27	25.00	90.00	N46° 47' 41"E	35.36
C63	39.00	25.00	89.38	S43° 30' 55"E	35.16
C64	80.19	50.00	91.89	S47° 07' 07"W	71.87
C65	38.72	25.00	88.73	N42° 34' 17"W	34.96
C66	58.90	75.00	45.00	N24° 13' 28"E	57.40
C67	61.60	75.00	47.06	N70° 15' 11"E	59.88
C68	117.90	75.00	90.07	S43° 14' 26"E	106.13
C69	39.00	50.00	44.69	S65° 51' 37"E	38.02
C71	39.00	50.00	44.69	S21° 10' 12"E	38.02
C72	120.28	75.00	91.89	S47° 07' 07"W	107.80
C73	77.43	50.00	88.73	N42° 34' 17"W	69.92
C74	117.91	75.00	90.07	N43° 10' 07"W	106.13
C247	39.27	25.00	90.00	S46° 47' 41"W	35.36

PRELIMINARY PLAT
MIDLAND ROAD ESTATES

A SUBDIVISION IN THE CITY OF BRYANT, SALINE COUNTY, ARKANSAS.



By affixing my seal and signature, I Willaim Cobitt R. Shoffner PLS No, 1762, hereby certify that this drawing correctly depicts a survey compiled under my supervision.

NOTE: This survey was based on legal descriptions and title work furnished by others and does not represent a title search.

No portion of the property described hereon lies within the 100 year floodplain, according to the Federal Insurance Rate Map, panel #05125C0365e, Dated: 06/05/2020 .

CERTIFICATIONS:

OWNER:

Name: HAVEN'S DEVELOPMENT, LLC
Address: 2615 N. PRICKETT ROAD, SUITE 5
BRYANT, AR 72022

DEVELOPER:

Name: HAVEN'S DEVELOPMENT, LLC
Address: 2615 N. PRICKETT ROAD, SUITE 5
BRYANT, AR 72022

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.

Source of Tile: 2021-009870

Date of Execution ____________ Name: ______________________

CERTIFICATE OF PRELIMINARY SURVEYING ACCURACY:

I, Corbitt R. Shoffner, hereby certify that this proposed preliminary plat correctly represents a survey completed by me, or under my supervision on _______________, 2023; that the boundary lines shown hereon correspond with the description in the deeds cited in the above Source Title; and that all monuments which were found or placed on the property are correctly described and located..

Date of Execution

Signed: ______________________
Jonathan L. Hope
Registered Professional
Land Surveyor No. 1762 Arkansas

CERTIFICATE OF PRELIMINARY ENGINEERING ACCURACY:

I, Kazi Tamzidul Islam, 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 location, 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 of Execution

Kazi Tamzidual Islam
Registered Professional
Engineer, No. 20876 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 of further provisions of said Rules and Regulations.

Date of Execution

Signed: ______________________
Rick Johnson, Chairman
Bryant Planning Commission

PROPERTY SPECIFICATIONS:

OWNER: HAVEN'S DEVELOPMENT, LLC
2615 N. PRICKETT ROAD, SUITE 5
BRYANT, AR 72022

DEVELOPER/: SUBDIVIDER HAVEN'S DEVELOPMENT, LLC
2615 N. PRICKETT ROAD, SUITE 5
BRYANT, AR 72022

ENGINEERS: HOPE CONSULTING INC.
129 N. MAIN STREET
BENTON, AR 72015

NAME OF SUBDIVISION: MIDLAND ROAD ESTATES

ZONING CLASSIFICATION: R-1S

SOURCE OF TITLE: SALINE COUNTY DOCUMENT
BOOK PAGE

MIN. LOT SIZE: 6,000 S.F.
NUMBER OF LOTS: 198
SOURCE OF WATER: CITY OF BRYANT
SOURCE OF SEWER: CITY OF BRYANT
SOURCE OF ELECTRIC: FIRST ELECTRIC COOP
SOURCE OF GAS: CENTERPOINT ENERGY

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 1/2" REBAR WITH CAP

HOPE CONSULTING
ENGINEERS - SURVEYORS
129 N. Main Street,
Benton, Arkansas 72015
PH. (501)315-2626
FAX (501) 315-0024
www.hopeconsulting.com

FOR USE AND BENEFIT OF:

HAVEN'S DEVELOPMENT, LLC

PRELIMINARY PLAT
MIDLAND ROAD ESTATES
A SUBDIVISION IN THE CITY OF BRYANT, SALINE COUNTY, ARKANSAS.

DATE:	03/08/2023	C.A.D. BY: B.JOHNSON		DRAWING NUMBER:
REVISED:		CHECKED BY:		23-0024
SHEET:		SCALE: 1" = 100'		
500		0		

K:\Land Projects 2004\Subdivisions\2023\23-0024 Havens Midland Road Subdivision S11 T1S R14W\23-0024-Prelminary Plat.dwg

HOPE
CONSULTING
ENGINEERS • SURVEYORS

March 6, 2022

Truett Smith
City of Bryant
210 Southwest Third St., Bryant, AR 72022

RE: Request for Residential Subdivision Plat and CD Approval
Parcel #: 001-03734-000, 001-03744-000, 370-00105-000, and 370-00106-000

Dear Mr. Truett Smith,

I represent Havens Development LLC, in the above-captioned development. This 50 acre piece of property is located adjacent to the City of Bryant. We are proposing a off site sewer main extension to the south to access to Bryant sewer. Salem Water Users is available on the east side of Midland Road for water. This development will be for single family neighborhood and be proposed into the R-1.S Zoning District. I am requesting a modification from the Walk Bike Drive Code to remove the east/ west collector street through this property. Our client does not own the property on Midland or Wildwood where the maps shows the connection. Creekside Subdivsion to the east also had this collector removed from their plat at this location.

It is our goal to be included on the April 10th, 2023 Planning Commission agenda.

Please feel free to contact me with any questions or concerns or if I can be of any further assistance.

Sincerely,

Jonathan Hope
Hope Consulting, Inc.

117 South Market St. Benton, Arkansas 72015
501-315-2626
www.hopeconsulting.com

GNE

GarNat Engineering, LLC

Designing our client's success

P.O. Box 116 (72018)
3825 Mt Carmel Road
Bryant, Arkansas 72022
PH: (501) 408-4650
FX: (888) 900-3068
garnatengineering@gmail.com

March 10, 2023

Mr. Truett Smith
Bryant Planning Coordinator/Planning Commission Secretary
210 SW 3rd Street
Bryant, AR 72022

Re: Variance Request for A New Elite Volleyball Academy Gym
Parcel Number 840-11661-034

Dear Mr. Smith:

Please allow this letter and following list of variances and enclosures to serve as my application for variance approval of the referenced project.

List of Variances

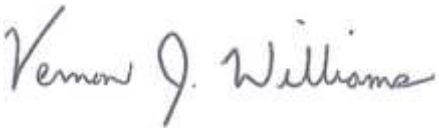
- The rear tract (east of our property) owned by the Whitley James Matthew & Melania is zoned R-1.S. We request a variance of 25' setback from this property.

List of Enclosures

- Variance Application.
- Draft of Completed Public Notice.
- Draft of the Newspaper Advertising.

If you have questions or need any additional information, please do not hesitate to contact me.

Sincerely,
GarNat Engineering, LLC



Vernon J. Williams, P.E., President

GNE

3825 Mt Carmel Rd.
Bryant, AR 72022

GarNat Engineering, LLC

P.O. Box 116
Benton, AR 72018

March 10, 2023

Mr. Truett Smith
Bryant Planning Coordinator/Planning Commission Secretary
210 SW 3rd Street
Bryant, AR 72022

Re: Rezone Application – A New Elite Volleyball Academy Gym
Parcel Number 840-11661-034

Dear Mr. Smith:

Please allow this letter and following list of enclosures to serve as my application for rezone of the referenced property located near intersection of Bryant Pkwy & Henry Ave. We are seeking a rezone from R-2 to C-2 to build a volleyball academy. It is my desire that this matter be included on the agenda for your April 2023 City of Bryant Planning Commission Meeting.

List of Enclosures

- Affidavit
- Rezone Application
- Rezone – Public Notice
- Property Survey

If you have questions or need any additional information, please do not hesitate to contact me.

Sincerely,
GarNat Engineering, LLC

Vernon J. Williams

Vernon J. Williams, P.E., President

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

Rezoning Application

Applicants are advised to read the Amendments section of Bryant Zoning Code prior to completing and signing this form. The Zoning Code is available at www.cityofbryant.com under the Planning and Community Development tab.

Date: 03/10/2023

Applicant or Designee:

Name Vernon Williams
Address P.O. Box 116, Benton, AR 72018
Phone (501) 408-4650
Email Address garnatengineering@gmail.com

Property Owner (If different from Applicant):

Name John Eckart
Address 39 Duew Duive, Little Rock, AR 72223
Phone (786) 256-0080
Email Address Johneckart@nwarjr.com

Property Information:

Address Intersection of Henry Ave & Christy Ln
Parcel Number 840-11661-034
Existing Zoning Classification R-2
Requested Zoning Classification C-2
Legal Description (If Acreage or Metes and Bounds description, please attach in a legible typed format)
See attached.

Application Submission Checklist:

- ☑ Letter stating request of zoning change from (Current Zoning) to (Requested Zoning) and to be placed on the Planning Commission Agenda
- ☑ Completed Rezoning Application
- ☐ Rezoning Application Fee ($40 fee for lot and black descriptions or $125 for acreage or metes and bound descriptions)
- ☑ If someone, other than the owner, will be handling the zoning process, we will require a

letter from the owner of said property, giving him or her authority to do so.

☑ Recent surveyed plat of the property including vicinity map

Additional Requirements:

*Items below **must be completed before the public hearing can occur**. Failure to provide notices in the following manners shall require delay of the public hearing until notice has been properly made.*

☐ Publication: Public Notice shall be published by the applicant at least one (1) time fifteen (15) days prior to the public hearing at which the rezoning application will be heard. Once published please provide a proof of publication to the Community Development office. (Sample notice attached below)

☐ Posting of Property: The city shall provide signs to post on the property involved for the fifteen (15) consecutive days leading up to Public hearing. One (1) sign is required for every two hundred (200) feet of street frontage.

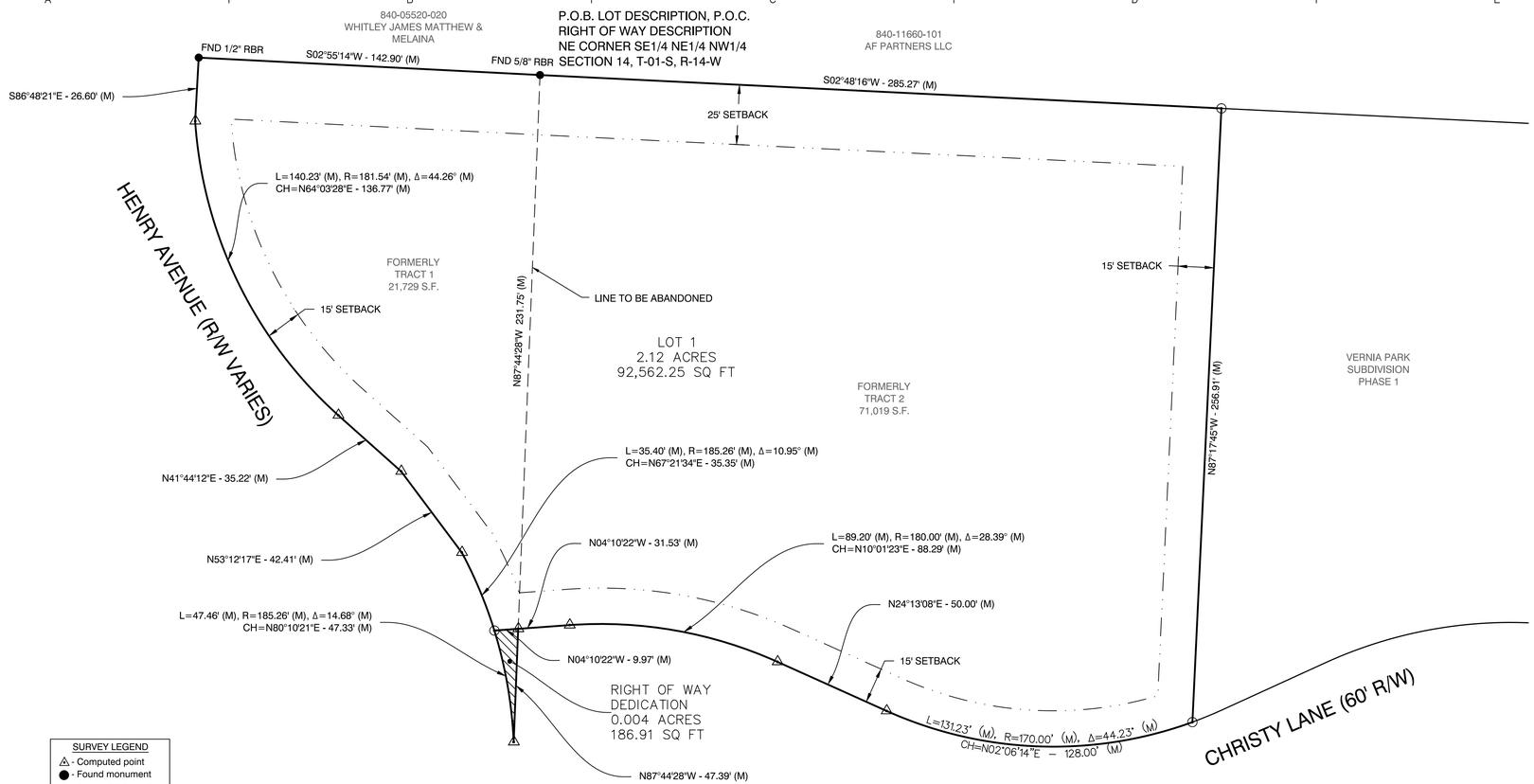
☐ Notification of adjacent landowners: Applicant shall attempt to inform by certified letter, return receipt requested, all owners of land within three hundred (300) feet of any boundary of the subject property of the public hearing. (Sample letter attached below)

☐ Certified list of property owners, all return receipts, and a copy of the notice shall be provided to the Community Development Department at least five (5) days prior to the public hearing.

Note: that this is not an exhaustive guideline regarding the Conditional Use Permit Process. Additional information is available in the Bryant Zoning Ordinance.

READ CAREFULLY BEFORE SIGNING

I Vernon J Williams, do hereby certify that all information contained within this application is true and correct. I further certify that the owner of the property authorizes this proposed application. I understand that I must comply with all City Codes that pertain to this project and that it is my responsibility to obtain all necessary permits as needed.



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

VERNIA PARK NORTHEAST SUBDIVISION PHASE 1 FINAL PLAT

PLAT CERTIFICATES:

OWNER:
Name: EVA Real Estate, LLC
Address: P.O. Box 241273, Little Rock, AR 72223

DEVELOPER:
Name: EVA Real Estate, LLC
Address: P.O. Box 241273, Little Rock, AR 72223

CERTIFICATE OF RECORDING:

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: _____
Tanja Eckart
EVA Real Estate, LLC

Source of Title: SALINE COUNTY, ARKANSAS
Saline County Document# _____

CERTIFICATE OF 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 SURVEYING ACCURACY:

I, George P. Wooden, hereby certify that this 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 FINAL PLAT APPROVAL:

Pursuant to the City of Bryant Subdivision Rules and Regulations, this document was given approval by the Bryant Planning Commission. All of the document is hereby accepted, and this certificate executed under the authority of said rules and regulations.

Date: _____ Signed: _____
Rick Johnson, Chairman
Bryant Planning Commission

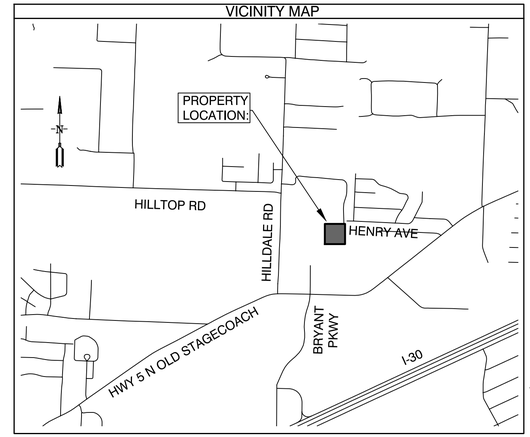
30' 15' 0 30'

SURVEY PLAT CODE:
500-01S-14W-0-14-410-62-1573

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

GarNat Engineering, LLC
No. 2174
CERTIFICATE OF AUTHORIZATION
ARKANSAS

VICINITY MAP



PROPERTY DESCRIPTION:

LOT 1 - 2.12 ACRES (92,562 SQUARE FEET)
PART OF THE SOUTHEAST QUARTER OF THE NORTHEAST QUARTER OF THE NORTHWEST QUARTER (SE1/4 NE1/4 NW1/4) AND PART OF THE NORTHEAST QUARTER OF THE NORTHEAST QUARTER OF THE NORTHWEST QUARTER (NE1/4 NE1/4 NW1/4) ALL IN SECTION 14, TOWNSHIP 01 SOUTH, RANGE 14 WEST, SALINE COUNTY, ARKANSAS, MORE PARTICULARLY DESCRIBED AS FOLLOWS: **BEGINNING** AT A FOUND 5/8" REBAR FOR THE NORTHEAST CORNER OF THE SAID SE1/4 NE1/4 NW1/4; THENCE S 02°48'16" W, ALONG THE EAST LINE OF SAID SE1/4 NE1/4 NW1/4, FOR A DISTANCE OF 285.27 FEET TO A SET 1/2" REBAR WITH CAP #1573; THENCE N 87°17'45" W, LEAVING SAID EAST LINE, A DISTANCE OF 256.91 FEET TO A SET 1/2" REBAR WITH CAP #1573 LOCATED ON THE EAST RIGHT OF WAY LINE OF CHRISTY LANE; THENCE ALONG THE SAID EAST RIGHT OF WAY THE FOLLOWING CALLS: THENCE ALONG A CURVE TO THE RIGHT WITH A RADIUS OF 170 FEET AND A LENGTH OF 131.23 FEET, WHOSE CHORD BEARS N 02°06'14" E - 128.00 FEET, THENCE N 24°13'08" E - 50.00 FEET, THENCE ALONG A CURVE TO THE LEFT WITH A RADIUS OF 180 FEET AND A LENGTH OF 89.20 FEET, WHOSE CHORD BEARS N 10°01'23" E - 88.29 FEET, THENCE N 04°10'22" W - 31.53 FEET TO A SET 1/2" REBAR WITH CAP #1573 LOCATED AT THE INTERSECTION WITH THE SOUTH RIGHT OF WAY OF HENRY AVENUE; THENCE ALONG THE SAID SOUTH RIGHT OF WAY THE FOLLOWING CALLS: THENCE ALONG A CURVE TO THE LEFT WITH A RADIUS OF 185.26 FEET AND A LENGTH OF 35.40 FEET, WHOSE CHORD BEARS N 67°21'34"E - 35.35 FEET, THENCE N 53°12'17" E - 42.41 FEET, THENCE N 41°44'12" E - 35.22 FEET, THENCE ALONG A CURVE TO THE RIGHT WITH A RADIUS OF 181.54 FEET AND A LENGTH OF 140.23 FEET, WHOSE CHORD BEARS N 64°03'28" E - 136.77 FEET, THENCE S 86°48'21" E - 26.60 FEET TO A FOUND 1/2" REBAR LOCATED ON THE EAST LINE OF THE SAID NE1/4 NE1/4 NW1/4; THENCE S 02°55'14" W, LEAVING SAID SOUTH RIGHT OF WAY OF HENRY AVENUE AND ALONG THE EAST LINE OF THE SAID NE1/4 NE1/4 NW1/4 FOR A DISTANCE OF 142.90 FEET TO THE **POINT OF BEGINNING**, CONTAINING 2.12 ACRES, MORE OR LESS. SUBJECT TO ANY EASEMENTS OF RECORD AND THE RIGHTS OF WAY OF HENRY AVENUE AND CHRISTY LANE. LESS AND EXCEPT RIGHT OF WAY DEDICATION BELOW.

RIGHT OF WAY DEDICATION - 0.004 ACRES (187 SQUARE FEET)
PART OF THE NORTHEAST QUARTER OF THE NORTHEAST QUARTER OF THE NORTHWEST QUARTER (NE1/4 NE1/4 NW1/4) SECTION 14, TOWNSHIP 01 SOUTH, RANGE 14 WEST, SALINE COUNTY, ARKANSAS, MORE PARTICULARLY DESCRIBED AS FOLLOWS: **COMMENCING** AT A FOUND 5/8" REBAR FOR THE SOUTHEAST CORNER OF THE SAID NE1/4 NE1/4 NW1/4; THENCE N 87°44'28" W, ALONG THE SOUTH LINE OF SAID NE1/4 NE1/4 NW1/4, FOR A DISTANCE OF 231.75 FEET TO A COMPUTED POINT ON THE EAST RIGHT OF WAY OF CHRISTY LANE FOR THE **POINT OF BEGINNING**; THENCE CONTINUING N 87°44'28" W, ALONG SAID SOUTH LINE, A DISTANCE OF 47.39 FEET TO A POINT OF INTERSECTION WITH THE SOUTH RIGHT OF WAY OF HENRY AVENUE; THENCE ALONG SAID SOUTH RIGHT OF WAY AND A CURVE TO THE LEFT WITH A RADIUS OF 185.26 FEET AND A LENGTH OF 47.46 FEET, WHOSE CHORD BEARS N 80°10'21" E - 47.33 FEET TO A SET 1/2" REBAR WITH CAP #1573; THENCE S 04°10'22" E, LEAVING SAID SOUTH RIGHT OF WAY OF HENRY AVENUE FOR A DISTANCE OF 9.97 FEET TO THE **POINT OF BEGINNING**, CONTAINING 0.004 ACRES (187 SQUARE FEET), MORE OR LESS.

PROPERTY SPECIFICATIONS:

ZONING CLASSIFICATION: C-2

SOURCE OF WATER: CITY OF BRYANT
SOURCE OF SEWER: CITY OF BRYANT

BUILDING SETBACKS (SB):
FRONT - 15'
REAR - 25'
INTERIOR (SIDE) - 15' UNLESS OTHERWISE NOTED
EXTERIOR - 15'

LOT CORNERS: SET #4 REBAR WITH CAP

DOCUMENTS USED:

- VERNIA PARK SUBDIVISION PHASE 1 FINAL PLAT BY ZANE ROBBINS PLS #1853

BASIS OF BEARINGS:

BENCHMARK(S) PROVIDED ARE REBAR AND COORDINATES ON BENCHMARKS ARE NORTH AMERICAN DATUM 1983, ARKANSAS SOUTH ZONE, US SURVEY FEET, GRID COORDINATES AND ELEVATIONS ARE NAVD 1988. COORDINATES AND ELEVATIONS WERE ESTABLISHED USING GPS AND WERE PROCESSED USING THE NATIONAL GEODETIC SURVEY'S "ONLINE POSITIONING USER SERVICE" (OPUS).

CERTIFICATIONS:

BY AFFIXING MY SEAL AND SIGNATURE, I GEORGE P. WOODEN, PS NO.1573, HEREBY CERTIFY THAT THIS DRAWING CORRECTLY DEPICTS A SURVEY COMPILED UNDER MY SUPERVISION ON MARCH 10, 2023.

THIS SURVEY WAS BASED ON LEGAL DESCRIPTIONS AND TITLE WORK FURNISHED BY OTHERS AND DOES NOT REPRESENT A TITLE SEARCH.

THIS PROPERTY IS NOT LOCATED IN THE 100 YEAR FLOOD PLAIN. THE PROPERTY SHOWN ON THIS PLAT IS LOCATED IN ZONE "X" OF THE F.E.M.A. MAP PANEL 05125C0240E EFFECTIVE DATE JUNE 05, 2020.

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

VERNIA PARK NORTHEAST
SUBDIVISION PHASE 1
HENRY AVENUE
BRYANT, ARKANSAS 72019

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

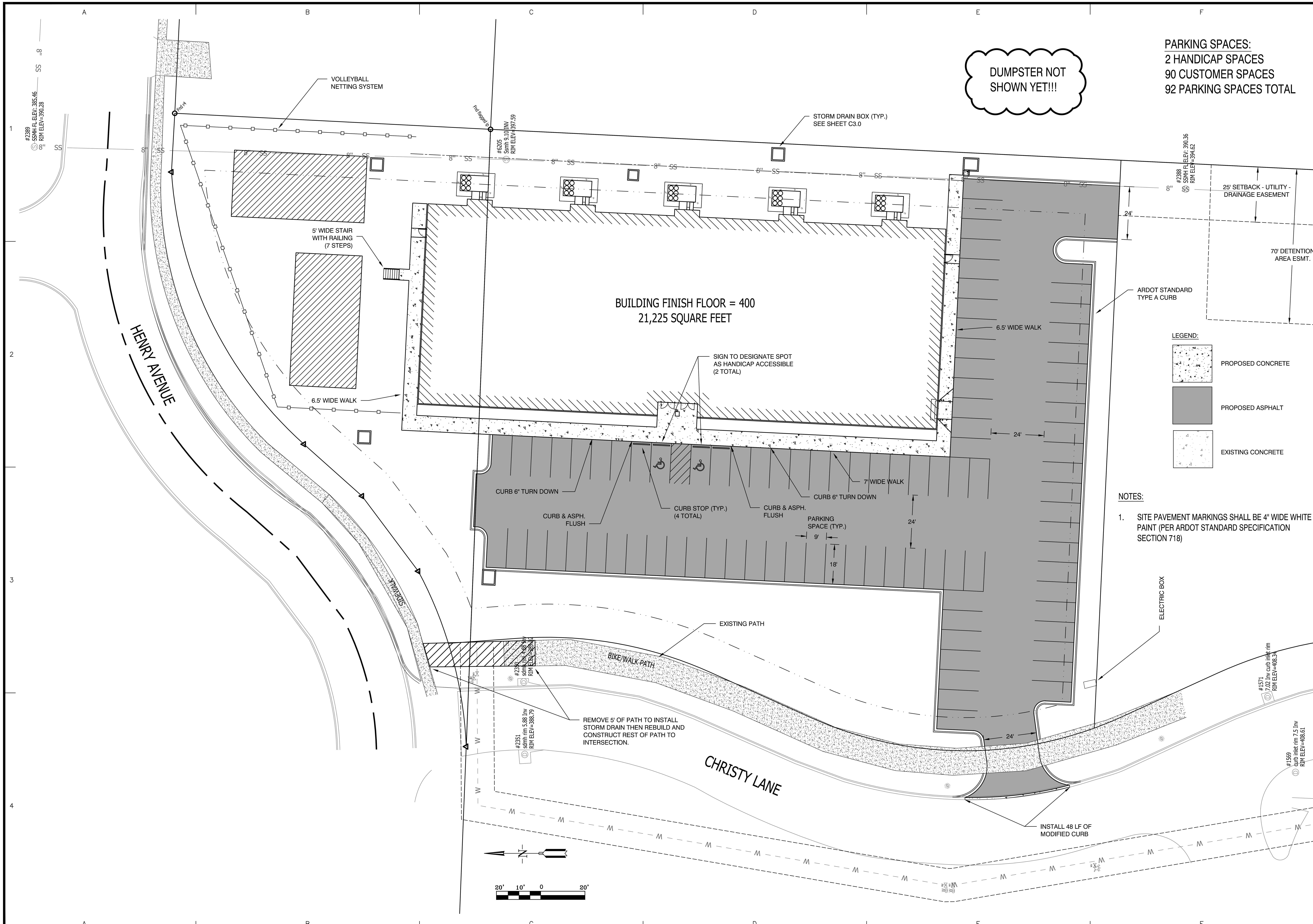
CONTENTS:
FINAL PLAT

PROJECT NO:
22140

DATE:
MARCH 10, 2023

SHEET NO:
V1.0

a:\Projects\2022 Projects\22140 Vernia Office Park\Drawings\Survey\22140-John Eckert-New Lot-Subdivision-030323.dwg


PARKING SPACES:
2 HANDICAP SPACES
90 CUSTOMER SPACES
92 PARKING SPACES TOTAL
DUMPSTER NOT SHOWN YET!!!
VOLLEYBALL NETTING SYSTEM
STORM DRAIN BOX (TYP.) SEE SHEET C3.0
5' WIDE STAIR WITH RAILING (7 STEPS)
BUILDING FINISH FLOOR = 400
21,225 SQUARE FEET
SIGN TO DESIGNATE SPOT AS HANDICAP ACCESSIBLE (2 TOTAL)
6.5' WIDE WALK
7' WIDE WALK
CURB 6" TURN DOWN
CURB & ASPH. FLUSH
CURB STOP (TYP.) (4 TOTAL)
PARKING SPACE (TYP.)
9'
18'
24'
25' SETBACK - UTILITY - DRAINAGE EASEMENT
70' DETENTION AREA ESMT.
ARDOT STANDARD TYPE A CURB
LEGEND:
PROPOSED CONCRETE
PROPOSED ASPHALT
EXISTING CONCRETE
NOTES:
1. SITE PAVEMENT MARKINGS SHALL BE 4" WIDE WHITE PAINT (PER ARDOT STANDARD SPECIFICATION SECTION 718)
HENRY AVENUE
SIDEWALK
EXISTING PATH
BIKE/WALK PATH
ELECTRIC BOX
REMOVE 5' OF PATH TO INSTALL STORM DRAIN THEN REBUILD AND CONSTRUCT REST OF PATH TO INTERSECTION.
CHRISTY LANE
INSTALL 48 LF OF MODIFIED CURB
#2389 SSMH FL ELEV: 385.46 RIM ELEV=390.28
#6205 Ssmh 9.10 INV RIM ELEV=397.59
#2388 SSMH FL ELEV: 390.36 RIM ELEV=394.62
#2351 sdmh rim 5.88 Inv RIM ELEV=388.79
#1571 7.02 Inv curb inlet rim RIM ELEV=408.34
#1569 curb inlet rim 7.5 Inv RIM ELEV=408.61
N
20' 10' 0 20'

BY | REVISION | DATE

GNE Designing our client's success

GarNat Engineering, LLC

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

A NEW ELITE VOLLEYBALL ACADEMY GYM FOR JOHN ECKART VERNIA OFFICE PARK BRYANT, ARKANSAS

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

03-13-2023

CONTENTS:

SITE PLAN

PROJECT NO: 22140

DATE: MARCH 13, 2023

SHEET NO:

C1.0

GNE

3825 Mt Carmel Rd.
Bryant, AR 72022

GarNat Engineering, LLC

P.O. Box 116
Benton, AR 72018

March 8, 2023

Mr. Truett Smith
Bryant Planning Coordinator/Planning Commission Secretary
210 SW 3rd Street
Bryant, AR 72022

Re: Large Scale Development Commercial Building – A New Elite Voleyball

Dear Mr. Smith:

Please accept this letter and following list of enclosures to serve as my application for approval of the referenced large scale development. It is my desire that this matter be included on the agenda for your May 2023 City of Bryant Planning Commission Meeting.

List of Enclosures

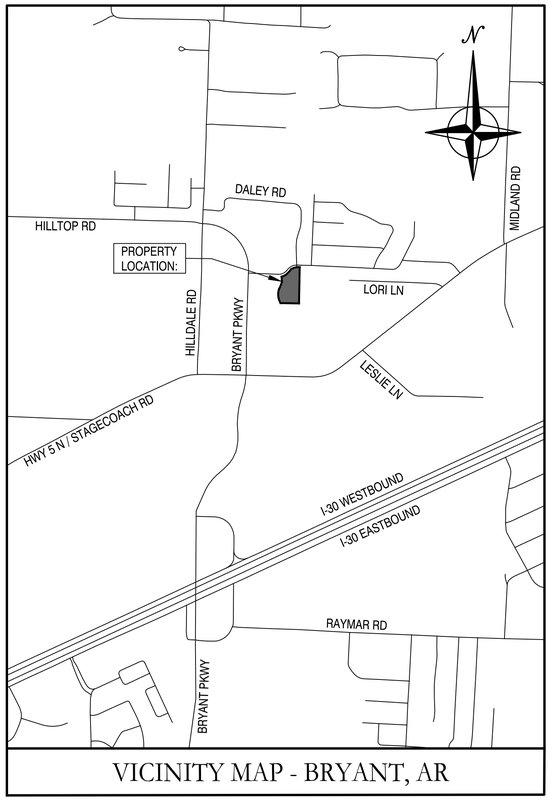
- 2 Full Set Plans
- Affidavit
- 8 copies of Site Plan
- Drainage Study
- Bryant Large Development Checklist
- ADA/ABA Form

If you have questions or need any additional information, please do not hesitate to contact me.

Sincerely,
GarNat Engineering, LLC

Vernon J. Williams, P.E., President

A NEW ELITE VOLLEYBALL ACADEMY GYM
FOR JOHN ECKART
VERNIA OFFICE PARK
BRYANT, ARKANSAS



VICINITY MAP - BRYANT, AR

Prepared by:

GarNat Engineering, LLC

Designing our client's success

www.garnatengineering.com

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

3825 Mt Carmel Road
Bryant, AR 72022
Fx (888) 900-3068

ARKANSAS

03-13-2023

DRAWING INDEX:

ARDOT STANDARD DRAWINGS:

CG-1	CURBING DETAILS
FPC-9	DETAILS OF DROP INLETS & JUNCTION BOXES
FPC-9E	DETAILS OF DROP INLETS (TYPE C)
PCC-1	CONCRETE PIPE CULVERT FILL HEIGHTS & BEDDING
PCP-1	PLASTIC PIPE CULVERT (HIGH DENSITY POLYETHYLENE)
SI-1	DETAILS OF SPECIAL ITEMS
TEC-1	TEMPORARY EROSION CONTROL DEVICES
TEC-4	TEMPORARY EROSION CONTROL DEVICES

1. SAFETY

1.1. JOBSITE SAFETY IS THE SOLE AND EXCLUSIVE RESPONSIBILITY OF THE GENERAL CONTRACTOR.

1.2. THIS RESPONSIBILITY COVERS THEIR OWN WORK FORCE, ALL SUBCONTRACTORS, VISITING PERSONNEL, OFFICIALS, AND THE GENERAL PUBLIC WHICH MAY HAVE ACCESS TO THE JOBSITE.

1.3. THE CONTRACTOR SHALL EXERCISE COMPLETE CONTROL OVER WHO HAS ACCESS TO THE JOBSITE TO ENSURE JOBSITE SAFETY.

1.4. THE CONTRACTOR SHALL CONFORM TO ALL SECURITY AND SAFETY REQUIREMENTS OF THE OWNER.

1.5. ANY SAFETY OR OTHER TRAINING REQUIRED BY THE OWNER FOR THE WORK FORCE MUST BE PROVIDED BY THE CONTRACTOR AT THE CONTRACTOR'S EXPENSE.

2. PERMITS

2.1. CONTRACTOR SHALL SECURE ALL REQUIRED PERMITS AS REQUIRED BY REGULATING AUTHORITIES OR BY THE OWNER. CONTRACTOR SHALL BE FULLY RESPONSIBLE FOR THE TERMS AND CONDITIONS ASSOCIATED WITH EACH REQUIRED PERMIT, AS WELL AS ADHERING TO THE RULES AND REGULATIONS OF EACH REGULATING AUTHORITY

3. CONTRACT DOCUMENTS

3.1. ALL WORK SHALL CONFORM TO THE PLANS, THESE NOTES, AND SPECIFICATIONS IN ALL RESPECTS AND SHALL BE SUBJECT TO APPROVAL BY THE ENGINEER.

4. INDEMNITY

4.1. BY ACCEPTING THE CONTRACT FOR THIS WORK, THE CONTRACTOR, AT THEIR OWN EXPENSE AND RISK, HEREBY RELEASES AND AGREES TO INDEMNIFY, DEFEND AND HOLD HARMLESS THE OWNER, GARNAT ENGINEERING, THEIR OFFICERS, AGENTS, EMPLOYEES, CONSULTANTS, AND REPRESENTATIVES FOR DAMAGE TO THE PROPERTY OR INJURY TO, OR DEATH, OF ANY PERSONS, FROM ANY AND ALL CLAIMS, DEMANDS, ACTIONS OF ANY KIND WHATSOEVER ARISING OUT OF AND IN CONNECTION WITH THE AGREEMENT OR PROSECUTION OF WORK UNDER IT, WHETHER SUCH CLAIMS, DEMANDS, ACTIONS, OR LIABILITY ARE CAUSED BY THE CONTRACTOR, IT'S AGENTS, EMPLOYEES, SUBCONTRACTORS, PRODUCTS INSTALLED ON THE PROJECT OR CAUSED BY ANY OTHER PARTY.

5. CONSTRUCTION PROCEDURES, MATERIALS AND WORKMANSHIP SHALL BE IN ACCORDANCE WITH THE CURRENT EDITIONS OF THE FOLLOWING STANDARDS UNLESS OTHERWISE MODIFIED ON THE DRAWINGS OR IN THESE NOTES OR SPECIFICATIONS.

5.1. STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION - ARKANSAS HIGHWAY AND TRANSPORTATION DEPARTMENT

5.2. INTERNATIONAL BUILDING CODE

5.3. ACI 315 MANUAL OF STANDARD PRACTICES FOR DETAILING REINFORCED CONCRETE STRUCTURES

5.4. CRSI RECOMMENDED PRACTICE FOR PLACING REINFORCING STEEL.

5.5. CITY OF BRYANT STANDARD SPECIFICATIONS.

5.6. LATEST EDITIONS OF AWWA, ASTM, ADH, AND TEN STATES STANDARDS.

6. SITE

6.1. CONTRACTOR WILL BE RESPONSIBLE FOR PROTECTION OF ALL PROPERTY CORNERS.

6.2. CONTRACTOR IS NOT TO PERFORM WORK BEYOND THE DESIGNATED WORK LIMITS WITHOUT FIRST OBTAINING WRITTEN AUTHORIZATION FROM THE PROJECT ENGINEER OR OWNER.

6.3. CONTRACTOR IS RESPONSIBLE FOR REPAIRING THE DAMAGE DONE TO ANY EXISTING ITEM DURING CONSTRUCTION SUCH AS BUT NOT LIMITED TO: DRAINAGE, UTILITIES, PAVEMENT, STRIPING, CURB, ETC. REPAIRS SHALL BE EQUAL TO, OR BETTER THAN EXISTING CONDITIONS.

6.4. CONTRACTOR TO REMOVE OR RELOCATE, WHEN APPLICABLE, ALL ITEMS, SHOWN TO BE REMOVED OR RELOCATED AND NOT SHOWN WITHIN CONSTRUCTION LIMITS AND WHERE REQUIRED TO ALLOW FOR NEW CONSTRUCTION AS SHOWN.

6.5. CONTRACTOR TO ADJUST ALL EXISTING AND PROPOSED MANHOLES, VALVE BOXES, ETC. TO FINISH GRADE, WHERE REQUIRED.

7. STRUCTURES

7.1. ALL STORM STRUCTURES SHALL HAVE A SMOOTH UNIFORM POURED MORTAR INVERT IN TO INVERT OUT.

7.2. BEDDING FOR STORM STRUCTURES SHALL CONSIST OF A MINIMUM OF 6-INCHES OF COMPACTED #57 STONE ON TOP OF COMPACTED SUBGRADE.

7.3. AREAS EXPOSED BY EXCAVATION OR STRIPPING AND ON WHICH SUBGRADE PREPARATIONS ARE TO BE PERFORMED SHALL BE SCARIFIED TO MINIMUM DEPTH OF 0'-8" AND COMPACTED TO MINIMUM OF 95% OPTIMUM DENSITY. ANY AREAS THAT FAIL COMPACTION ARE TO BE STABLIZED AS DIRECTED BY THE ENGINEER.

8. PRIOR TO PLACING FILL IN LOW AREAS, SUCH AS PREVIOUSLY EXISTING CREEKS, PONDS, OR LAKES, PERFORM FOLLOWING PROCEDURES:

8.1. DRAIN WATER OUT BY GRAVITY WITH DITCH HAVING FLOW LINE LOWER THAN LOWEST ELEVATION IN LOW AREA. IF DRAINAGE CANNOT BE PERFORMED BY GRAVITY DITCH, USE ADEQUATE PUMP TO OBTAIN THE SAME RESULTS.

8.2. AFTER DRAINAGE OF LOW AREA IS COMPLETE, REMOVE MULCH, MUD DEBRIS, AND OTHER UNSUITABLE MATERIAL BY USING ACCEPTABLE EQUIPMENT AND METHODS THAT WILL KEEP NATURAL SOILS UNDERLYING LOW AREA DRY AND UNDISTURBED.

9. UTILITIES

9.1. AN ATTEMPT HAS BEEN MADE TO APPROXIMATELY LOCATE UTILITIES ON THE DRAWINGS.

9.2. UTILITIES SHOWN ON THE DRAWINGS WERE LOCATED BY VISUAL OBSERVATION, AND BY TRANSCRIBING FROM RECORD MAPS AND PLANS.

9.3. NO EXCAVATIONS WERE MADE TO CONFIRM SUB-SURFACE UTILITIES. NEITHER THE SURVEYOR NOR PROJECT ENGINEER GUARANTEES THAT ALL UTILITIES HAVE BEEN SHOWN, OR THAT THOSE SHOWN ARE FULLY ACCURATE.

9.4. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL ADJUSTMENTS AND/OR RELOCATION OF EXISTING UTILITIES THAT ARE DAMAGED AS A RESULT OF WORK OF THIS PROJECT.

9.5. CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING AND PROPERLY DISCONNECTING, ABANDONING, RELOCATING, AND/OR ADJUSTING ALL AFFECTED UTILITIES WITHIN THE PROJECT AREA.

9.6. ALL UTILITY WORK SHALL BE COORDINATED AND EXECUTED IN ACCORDANCE WITH THE OWNER AND/OR GOVERNING UTILITY COMPANY CODES, SPECIFICATIONS, STANDARDS, AND REQUIREMENTS.

9.7. DESIGN AND ALIGNMENT OF UNDERGROUND TELEPHONE, TV CABLE, GAS AND ELECTRIC SERVICES SHALL BE PROVIDED BY THE INDIVIDUAL UTILITIES AND ARE NOT NECESSARILY SHOWN WITH THESE PLANS. CONTRACTOR SHALL PROVIDE CONDUITS SIZED TO ACCOMMODATE UTILITY ROUTING WITH PULL STRINGS WHERE NECESSARY.

9.8. CONTRACTOR TO PROVIDE ALL NECESSARY APPURTENANCES NECESSARY FOR COMPLETE UTILITY SERVICES WHICH ARE NOT PROVIDED BY THE UTILITY COMPANY.

10. DISPOSAL OF DEBRIS, WASTE OR SPOIL

10.1. BURNING OF DEBRIS AND WASTE IS NOT ALLOWED. CONTRACTOR MAY BE REQUIRED TO PROPERLY HAUL AWAY AND DISPOSE OF ANY WASTE MATERIAL REMOVED FROM THE SITE.

10.2. ANY WASTE OR SPOIL MATERIAL WHICH IS EXCAVATED FROM THE JOB SITE IS TO BE DISPOSED OF AS DIRECTED BY THE ENGINEER OR OWNER.

10.3. REMOVAL AND DISPOSAL OF EXCAVATED WASTE MATERIAL IS CONSIDERED SUBSIDIARY TO ALL OTHER ITEMS IN THE PROJECT, AND WILL NOT BE PAID FOR SEPARATELY.

10.4. CONTRACTOR SHALL FOLLOW ALL LOCAL, STATE AND FEDERAL REGULATIONS IN DISPOSING OF DEMOLISHED MATERIAL REMOVED FROM THIS SITE.

10.5. CONTRACTOR SHALL REMOVE FROM SITE AND DISPOSE OF MATERIAL ENCOUNTERED IN GRADING OPERATIONS THAT, IN OPINION OF THE ENGINEER, IS UNSUITABLE OR UNDESIRABLE FOR BACKFILLING OR SUBGRADE PURPOSES. DISPOSE OF IN A MANNER SATISFACTORY TO ENGINEER. BACKFILL UNDERCUT AREAS WITH LAYERS OF SUITABLE MATERIAL AND COMPACT AS SPECIFIED HEREIN.

11. SUBSTITUTIONS

11.1. SUBSTITUTIONS ARE NOT ALLOWED WITHOUT PRIOR APPROVAL FROM THE PROJECT ENGINEER.

12. ENVIRONMENTAL

12.1. THE CONTRACTOR IS TO MEET ALL ENVIRONMENTAL REQUIREMENTS OF THE OWNER AND ANY REGULATORY AGENCY HAVING AUTHORITY OVER THIS SITE.

12.2. THE CONTRACTOR IS TO UTILIZE BEST MANAGEMENT PRACTICES (BMP'S) FOR CONTROL OF EROSION DURING ALL CONSTRUCTION PHASES OF THIS PROJECT.

12.3. MININUM BMP'S REQUIRED FOR THE PROJECT ARE LISTED ON SHEET THESE PLANS. CONTRACTOR SHALL PROVIDE THESE BMP'S AND ANY OTHERS REQUIRED FOR THE PROJECT.

12.4. IF A STORMWATER POLLUTION PREVENTION PLAN (SWPPP) IS REQUIRED FOR THE CONSTRUCTION PHASE OF THIS PROJECT, THE CONTRACTOR SHALL FOLLOW ALL REQUIREMENTS FOR EROSION CONTROL INCLUDED IN THE SWPPP DOCUMENTS.

12.5. CONTRACTOR SHALL KEEP WORK AREA CLEAN AND FREE OF ACCUMULATED TRASH AND DEBRIS. CONTRACTOR SHALL BE RESPONSIBLE FOR IMPLEMENTING MEASURES TO AVOID TRACKING OF MUD, DIRT, ROCKS, AND DEBRIS ONTO AREAS OUTSIDE THE PROJECT AREA. CONTRACTOR SHALL CLEAN PAVEMENTS WHEN NECESSARY OR AS OTHERWISE DIRECTED, AND SHALL CONTROL DUST BY SWEEPING AND WATERING AS NEEDED. DE-TRACKING MAY BE REQUIRED AT ALL ENTRANCES.

13. FINAL SITE CONDITIONS

13.1. ALL DISTURBED AREAS NOT RECEIVING PAVEMENT OR LANDSCAPING SHALL HAVE VEGETATION ESTABLISHED AT TIME OF FINAL INSPECTION.

13.2. ALL UNSURFACED AREAS DISTURBED BY GRADING OPERATIONS SHALL RECEIVE 4 INCHES OF TOPSOIL. CONTRACTOR SHALL APPLY STABILIZATION FABRIC TO ALL SLOPE 2H:1V OR STEEPER UNTIL A HEALTHY STAND OF GRASS IS OBTAINED.

13.3. ALL CUT OR FILL SLOPES SHALL BE 3H:1V OR FLATTER UNLESS OTHERWISE NOTED.

13.4. CONTRACTOR SHALL ASSURE POSITIVE DRAINAGE AWAY FROM BUILDINGS FOR ALL NATURAL AND PAVED AREAS

13.5. UPON PARTIAL OR FINAL COMPLETION OF GRADING WORK, SPREAD TOPSOIL, SEED, FERTILIZER, AND MULCH IN ACCORDANCE WITH THE PROJECT SPECIFICATIONS AND THE STORM WATER POLLUTION PREVENTION PLAN.

BY	REVISION	DATE

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

A NEW ELITE VOLLEYBALL ACADEMY GYM FOR JOHN ECKART
VERNIA OFFICE
BRYANT, ARKANSAS

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

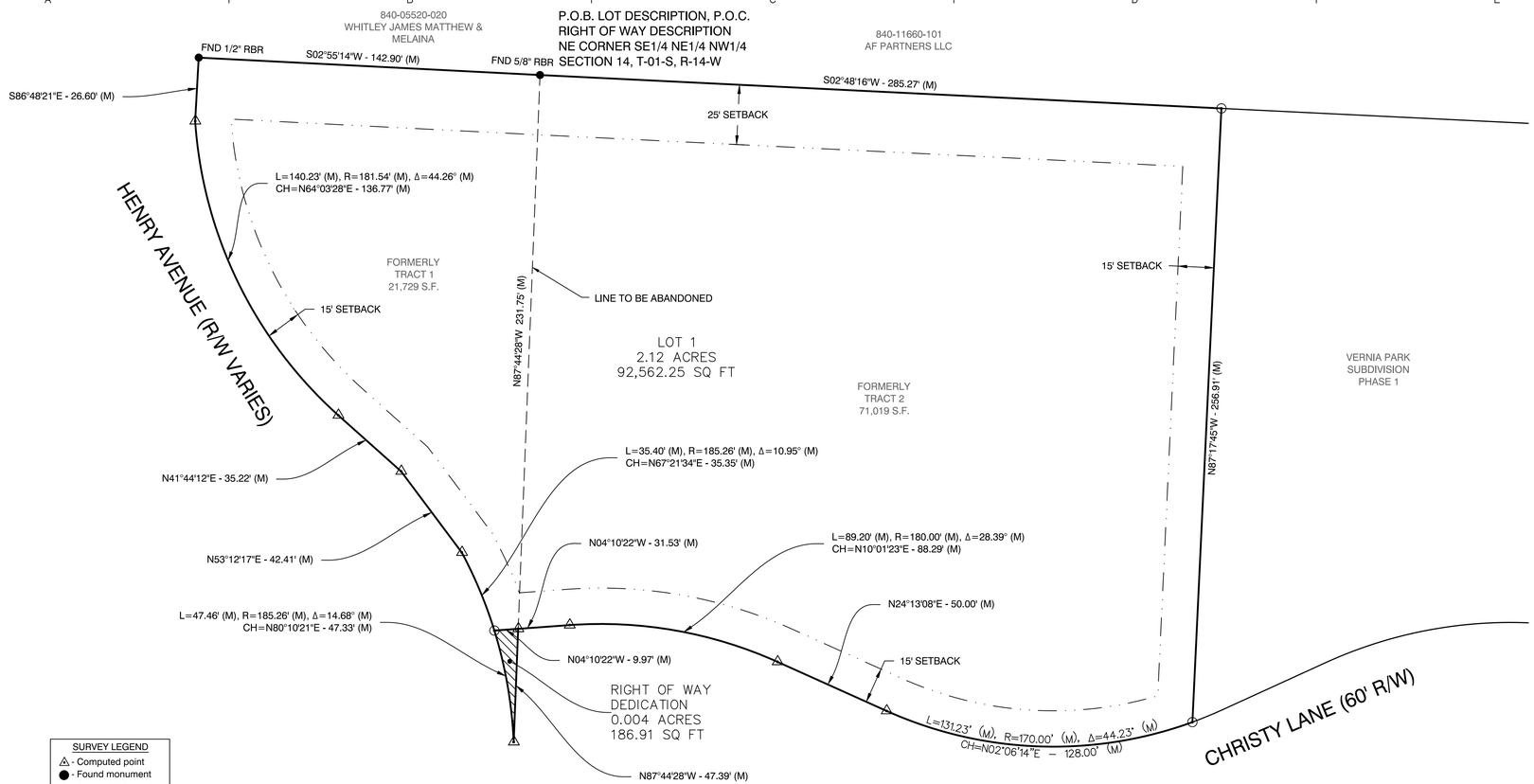
03-13-2023

CONTENTS: GENERAL NOTES

PROJECT NO: 20022

DATE: FEB. 8, 2023

SHEET NO: G1.0



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

VERNIA PARK NORTHEAST SUBDIVISION PHASE 1 FINAL PLAT

PLAT CERTIFICATES:

OWNER:
Name: EVA Real Estate, LLC
Address: P.O. Box 241273, Little Rock, AR 72223

DEVELOPER:
Name: EVA Real Estate, LLC
Address: P.O. Box 241273, Little Rock, AR 72223

CERTIFICATE OF RECORDING:

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: _____
Tanja Eckart
EVA Real Estate, LLC

Source of Title: SALINE COUNTY, ARKANSAS
Saline County Document# _____

CERTIFICATE OF 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 SURVEYING ACCURACY:

I, George P. Wooden, hereby certify that this 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 FINAL PLAT APPROVAL:

Pursuant to the City of Bryant Subdivision Rules and Regulations, this document was given approval by the Bryant Planning Commission. All of the document is hereby accepted, and this certificate executed under the authority of said rules and regulations.

Date: _____ Signed: _____
Rick Johnson, Chairman
Bryant Planning Commission

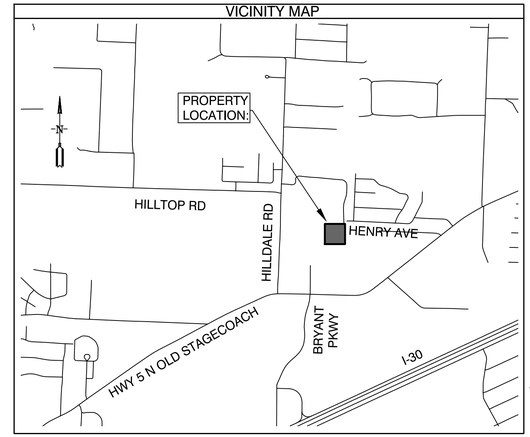
30' 15' 0 30'

SURVEY PLAT CODE:
500-01S-14W-0-14-410-62-1573

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

GarNat Engineering, LLC
No. 2174
CERTIFICATE OF AUTHORIZATION
ARKANSAS

VICINITY MAP



PROPERTY DESCRIPTION:

LOT 1 - 2.12 ACRES (92,562 SQUARE FEET)
PART OF THE SOUTHEAST QUARTER OF THE NORTHEAST QUARTER OF THE NORTHWEST QUARTER (SE1/4 NE1/4 NW1/4) AND PART OF THE NORTHEAST QUARTER OF THE NORTHEAST QUARTER OF THE NORTHWEST QUARTER (NE1/4 NE1/4 NW1/4) ALL IN SECTION 14, TOWNSHIP 01 SOUTH, RANGE 14 WEST, SALINE COUNTY, ARKANSAS, MORE PARTICULARLY DESCRIBED AS FOLLOWS: **BEGINNING** AT A FOUND 5/8" REBAR FOR THE NORTHEAST CORNER OF THE SAID SE1/4 NE1/4 NW1/4; THENCE S 02°48'16" W, ALONG THE EAST LINE OF SAID SE1/4 NE1/4 NW1/4, FOR A DISTANCE OF 285.27 FEET TO A SET 1/2" REBAR WITH CAP #1573; THENCE N 87°17'45" W, LEAVING SAID EAST LINE, A DISTANCE OF 256.91 FEET TO A SET 1/2" REBAR WITH CAP #1573 LOCATED ON THE EAST RIGHT OF WAY LINE OF CHRISTY LANE; THENCE ALONG THE SAID EAST RIGHT OF WAY THE FOLLOWING CALLS: THENCE ALONG A CURVE TO THE RIGHT WITH A RADIUS OF 170 FEET AND A LENGTH OF 131.23 FEET, WHOSE CHORD BEARS N 02°06'14" E - 128.00 FEET, THENCE N 24°13'08" E - 50.00 FEET, THENCE ALONG A CURVE TO THE LEFT WITH A RADIUS OF 180 FEET AND A LENGTH OF 89.20 FEET, WHOSE CHORD BEARS N 10°01'23" E - 88.29 FEET, THENCE N 04°10'22" W - 31.53 FEET TO A SET 1/2" REBAR WITH CAP #1573 LOCATED AT THE INTERSECTION WITH THE SOUTH RIGHT OF WAY OF HENRY AVENUE; THENCE ALONG THE SAID SOUTH RIGHT OF WAY THE FOLLOWING CALLS: THENCE ALONG A CURVE TO THE LEFT WITH A RADIUS OF 185.26 FEET AND A LENGTH OF 35.40 FEET, WHOSE CHORD BEARS N 67°21'34"E - 35.35 FEET, THENCE N 53°12'17" E - 42.41 FEET, THENCE N 41°44'12" E - 35.22 FEET, THENCE ALONG A CURVE TO THE RIGHT WITH A RADIUS OF 181.54 FEET AND A LENGTH OF 140.23 FEET, WHOSE CHORD BEARS N 64°03'28" E - 136.77 FEET, THENCE S 86°48'21" E - 26.60 FEET TO A FOUND 1/2" REBAR LOCATED ON THE EAST LINE OF THE SAID NE1/4 NE1/4 NW1/4; THENCE S 02°55'14" W, LEAVING SAID SOUTH RIGHT OF WAY OF HENRY AVENUE AND ALONG THE EAST LINE OF THE SAID NE1/4 NE1/4 NW1/4 FOR A DISTANCE OF 142.90 FEET TO THE **POINT OF BEGINNING**, CONTAINING 2.12 ACRES, MORE OR LESS. SUBJECT TO ANY EASEMENTS OF RECORD AND THE RIGHTS OF WAY OF HENRY AVENUE AND CHRISTY LANE. LESS AND EXCEPT RIGHT OF WAY DEDICATION BELOW.

RIGHT OF WAY DEDICATION - 0.004 ACRES (187 SQUARE FEET)
PART OF THE NORTHEAST QUARTER OF THE NORTHEAST QUARTER OF THE NORTHWEST QUARTER (NE1/4 NE1/4 NW1/4) SECTION 14, TOWNSHIP 01 SOUTH, RANGE 14 WEST, SALINE COUNTY, ARKANSAS, MORE PARTICULARLY DESCRIBED AS FOLLOWS: **COMMENCING** AT A FOUND 5/8" REBAR FOR THE SOUTHEAST CORNER OF THE SAID NE1/4 NE1/4 NW1/4; THENCE N 87°44'28" W, ALONG THE SOUTH LINE OF SAID NE1/4 NE1/4 NW1/4, FOR A DISTANCE OF 231.75 FEET TO A COMPUTED POINT ON THE EAST RIGHT OF WAY OF CHRISTY LANE FOR THE **POINT OF BEGINNING**; THENCE CONTINUING N 87°44'28" W, ALONG SAID SOUTH LINE, A DISTANCE OF 47.39 FEET TO A POINT OF INTERSECTION WITH THE SOUTH RIGHT OF WAY OF HENRY AVENUE; THENCE ALONG SAID SOUTH RIGHT OF WAY AND A CURVE TO THE LEFT WITH A RADIUS OF 185.26 FEET AND A LENGTH OF 47.46 FEET, WHOSE CHORD BEARS N 80°10'21" E - 47.33 FEET TO A SET 1/2" REBAR WITH CAP #1573; THENCE S 04°10'22" E, LEAVING SAID SOUTH RIGHT OF WAY OF HENRY AVENUE FOR A DISTANCE OF 9.97 FEET TO THE **POINT OF BEGINNING**, CONTAINING 0.004 ACRES (187 SQUARE FEET), MORE OR LESS.

PROPERTY SPECIFICATIONS:

ZONING CLASSIFICATION: C-2

SOURCE OF WATER: CITY OF BRYANT
SOURCE OF SEWER: CITY OF BRYANT

BUILDING SETBACKS (SB):
FRONT - 15'
REAR - 25'
INTERIOR (SIDE) - 15' UNLESS OTHERWISE NOTED
EXTERIOR - 15'

LOT CORNERS: SET #4 REBAR WITH CAP

DOCUMENTS USED:

- VERNIA PARK SUBDIVISION PHASE 1 FINAL PLAT BY ZANE ROBBINS PLS #1853

BASIS OF BEARINGS:

BENCHMARK(S) PROVIDED ARE REBAR AND COORDINATES ON BENCHMARKS ARE NORTH AMERICAN DATUM 1983, ARKANSAS SOUTH ZONE, US SURVEY FEET, GRID COORDINATES AND ELEVATIONS ARE NAVD 1988. COORDINATES AND ELEVATIONS WERE ESTABLISHED USING GPS AND WERE PROCESSED USING THE NATIONAL GEODETIC SURVEY'S "ONLINE POSITIONING USER SERVICE" (OPUS).

CERTIFICATIONS:

BY AFFIXING MY SEAL AND SIGNATURE, I GEORGE P. WOODEN, PS NO.1573, HEREBY CERTIFY THAT THIS DRAWING CORRECTLY DEPICTS A SURVEY COMPILED UNDER MY SUPERVISION ON MARCH 10, 2023.

THIS SURVEY WAS BASED ON LEGAL DESCRIPTIONS AND TITLE WORK FURNISHED BY OTHERS AND DOES NOT REPRESENT A TITLE SEARCH.

THIS PROPERTY IS NOT LOCATED IN THE 100 YEAR FLOOD PLAIN. THE PROPERTY SHOWN ON THIS PLAT IS LOCATED IN ZONE "X" OF THE F.E.M.A. MAP PANEL 05125C0240E EFFECTIVE DATE JUNE 05, 2020.

BY	REVISION	DATE

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VERNIA PARK NORTHEAST
SUBDIVISION PHASE 1
HENRY AVENUE
BRYANT, ARKANSAS 72019

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

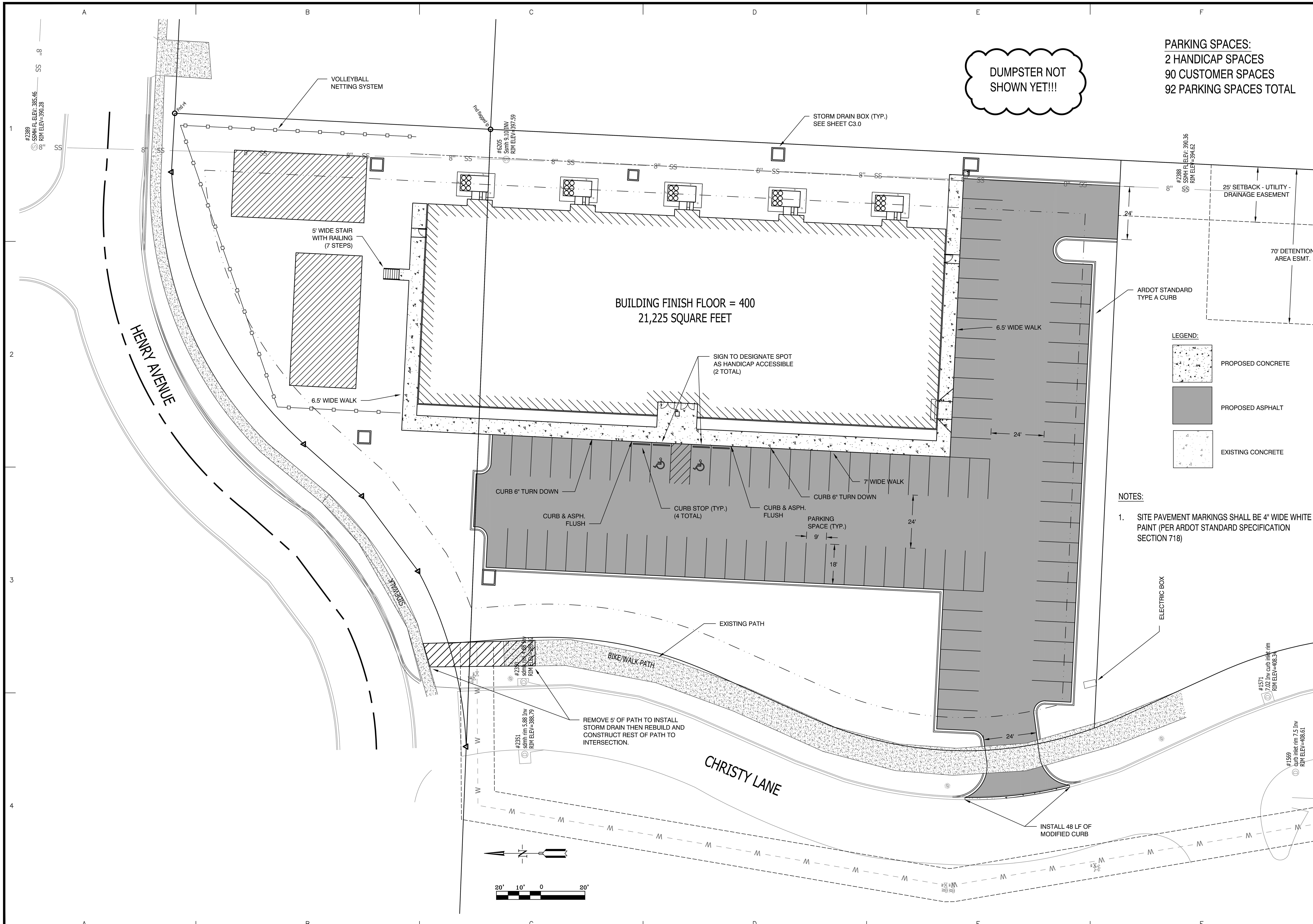
CONTENTS:
FINAL PLAT

PROJECT NO:
22140

DATE:
MARCH 10, 2023

SHEET NO:
V1.0

a:\Projects\2022 Projects\22140 Vernia Office Park\Drawings\Survey\22140-John Eckert-New Lot-Subdivision-030323.dwg


PARKING SPACES:
2 HANDICAP SPACES
90 CUSTOMER SPACES
92 PARKING SPACES TOTAL
DUMPSTER NOT SHOWN YET!!!
VOLLEYBALL NETTING SYSTEM
STORM DRAIN BOX (TYP.) SEE SHEET C3.0
25' SETBACK - UTILITY - DRAINAGE EASEMENT
70' DETENTION AREA ESMT.
5' WIDE STAIR WITH RAILING (7 STEPS)
BUILDING FINISH FLOOR = 400
21,225 SQUARE FEET
ARDOT STANDARD TYPE A CURB
6.5' WIDE WALK
SIGN TO DESIGNATE SPOT AS HANDICAP ACCESSIBLE (2 TOTAL)
LEGEND:
PROPOSED CONCRETE
PROPOSED ASPHALT
EXISTING CONCRETE
7' WIDE WALK
CURB 6" TURN DOWN
CURB & ASPH. FLUSH
CURB STOP (TYP.) (4 TOTAL)
PARKING SPACE (TYP.)
9'
18'
24'
NOTES:
1. SITE PAVEMENT MARKINGS SHALL BE 4" WIDE WHITE PAINT (PER ARDOT STANDARD SPECIFICATION SECTION 718)
HENRY AVENUE
SIDEWALK
EXISTING PATH
BIKE/WALK PATH
ELECTRIC BOX
REMOVE 5' OF PATH TO INSTALL STORM DRAIN THEN REBUILD AND CONSTRUCT REST OF PATH TO INTERSECTION.
CHRISTY LANE
INSTALL 48 LF OF MODIFIED CURB
#2389 SSMH FL ELEV: 385.46 RIM ELEV=390.28
#6205 Ssmh 9.10 INV RIM ELEV=397.59
#2388 SSMH FL ELEV: 390.36 RIM ELEV=394.62
#2351 sdmh rim 5.88 Inv RIM ELEV=388.79
#1571 7.02 Inv curb inlet rim RIM ELEV=408.34
#1569 curb inlet rim 7.5 Inv RIM ELEV=408.61
N
20' 10' 0 20'

A NEW ELITE VOLLEYBALL ACADEMY GYM FOR JOHN ECKART VERNIA OFFICE PARK BRYANT, ARKANSAS

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

03-13-2023

BY | REVISION | DATE

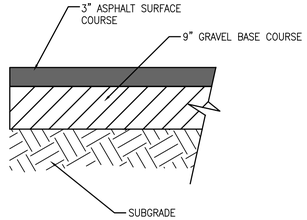
CONTENTS:

SITE PLAN

PROJECT NO: 22140

DATE: MARCH 13, 2023

SHEET NO: C1.0



ASPHALT PAVING 1

NOT TO SCALE

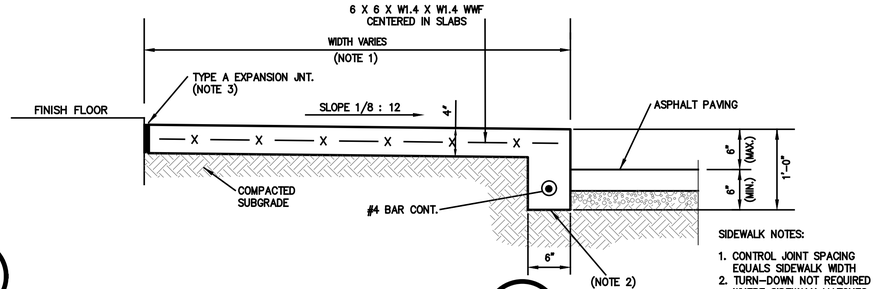
NOTES:

1. ASPHALT SURFACE COURSE SHALL MEET MATERIAL AND INSTALLATION REQUIREMENTS OF SECTION 407 OF AHTD STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION, LATEST EDITION.

2. ASPHALT BINDER COURSE SHALL MEET MATERIAL & INSTALLATION REQUIREMENTS OF SECTION 406 OF AHTD STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION, LATEST EDITION.

3. GRAVEL BASE COURSE SHALL MEET MATERIAL AND INSTALLATION REQUIREMENTS FOR AHTD CLASS 7 AGGREGATE BASE COURSE IN SECTION 303 OF AHTD STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION, LATEST EDITION.

4. SUBGRADE SHALL BE COMPACTED TO A UNIFORM DENSITY OF NOT LESS THAN 95% OF THE MODIFIED PROCTOR.

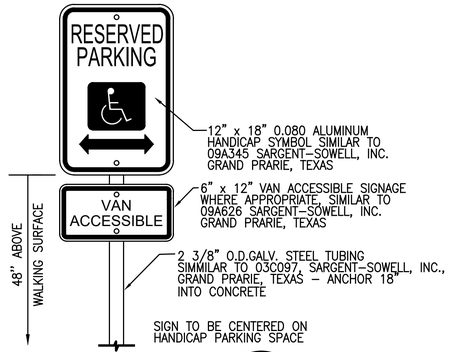


SIDEWALK DETAIL 2

NOT TO SCALE

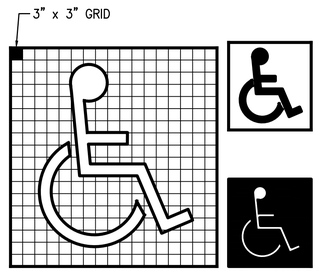
SIDEWALK NOTES:

1. CONTROL JOINT SPACING EQUALS SIDEWALK WIDTH
2. TURN-DOWN NOT REQUIRED WHERE SIDEWALK MATCHES SURROUNDING GRADE
3. EXPANSION JOINT REQUIRED AT ALL ADJACENT CONCRETE. NOT REQUIRED AT ASPHALT PAVING OR SOIL



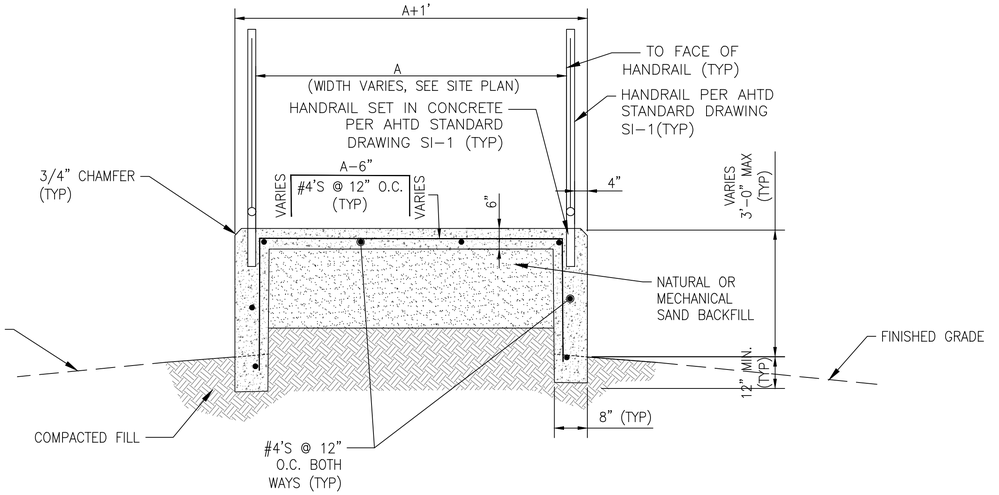
TYP. H.C. SIGN 3

NOT TO SCALE



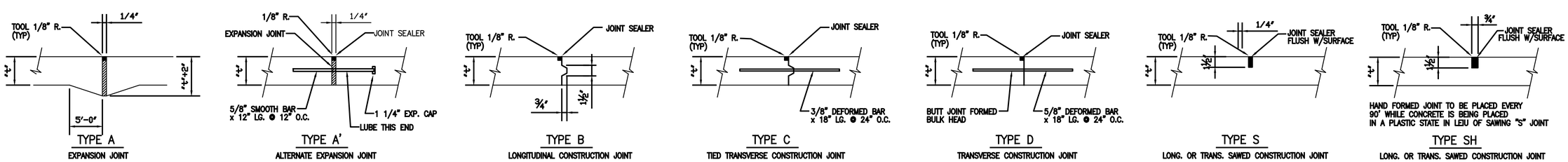
H.C. PAVEMENT EMBLEM 4

NOT TO SCALE



RAISED SIDEWALK WITH HANDRAILS 5

NOT TO SCALE



CONCRETE JOINTING DETAILS 6

NOT TO SCALE

NOTE: ALL JOINT SPACING NOT TO EXCEED 15'-0" INTERVALS

BY	REVISION	DATE

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A NEW ELITE VOLLEYBALL ACADEMY GYM
FOR JOHN ECKART
VERNIA OFFICE PARK
BRYANT, ARKANSAS

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

03-10-2023

CONTENTS:
SITE DETAILS

PROJECT NO: 22140

DATE: MAR 2023

SHEET NO: C1.1

S02°37'45"W - 516.60' (M)

#2389
SSMH FL ELEV=385.46
RIM ELEV=390.06

8" SS

Find #4

Find Ridgepole

#6205
Ssmh 9.10 INV
RIM ELEV=397.59

CUT-IN 8" X 6" WYE
EXTEND SEWER SERVICE
TO BUILDING

6" SCH 40 SEWER SERVICE

#2388
SSMH FL ELEV= 390.36
RIM ELEV=394.62

25' SETBACK - UTILITY -
DRAINAGE EASEMENT

70' DETENTION
AREA ESMT.

3W

6W

8" X 6" MJ TEE WITH
PLUG IN RUN & 6" GATE
VALVE ON BRANCH (
BEGIN FIRE MAIN)

3" SDR-21 PVC
WATER SERVICE

6" D.I. FIRE MAIN

6" D.I. FIRE MAIN

8W

8" DR-18 PVC WATER LINE

PRIVATE FIRE
HYDRANT

ELECTRIC BOX

HENRY AVENUE

SIDEWALK

BIKE/WALK PATH

#2350
sdmh rim 4.68 Inv
RIM ELEV=389.32

PROPOSED 2"
WATER METER

EXTEND EXISTING
WATER LINE

#2351
sdmh rim 5.88 Inv
RIM ELEV=388.79

#1571
7.02 Inv curb inlet rim
RIM ELEV=408.32

#1569
curb inlet rim 7.5 Inv
RIM ELEV=408.61

NOTES:

1. ALL WATER AND SEWER WORK SHALL COMPLY WITH THE REQUIREMENTS OF CITY OF BRYANT STANDARD SPECIFICATIONS FOR DESIGN OF WATER AND SEWER AND THE ARKANSAS PLUMBING CODE. CITY OF BRYANT STANDARD SPECIFICATIONS ARE AVAILABLE FOR DOWNLOAD FROM WWW.CITYOFBRYANT.COM

2. ALL GAS WORK SHALL COMPLY WITH THE REQUIREMENTS OF SUMMIT UTILITIES AND ARKANSAS PLUMBING CODE.

20' 10' 0 20'

BY	REVISION	DATE

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

03-13-2023

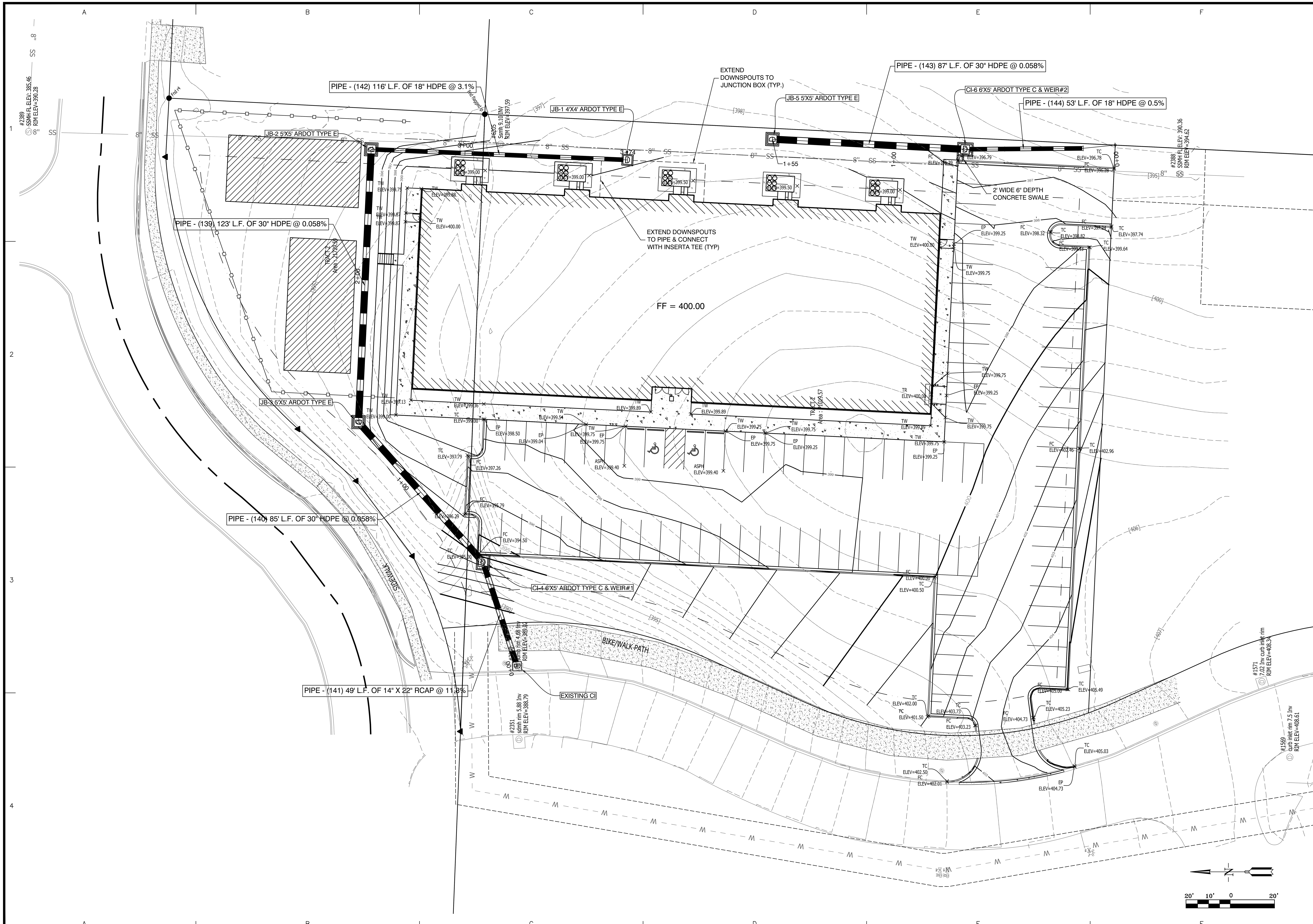
CONTENTS:

UTILITY PLAN

PROJECT NO: 22140

DATE: MARCH 13, 2023

SHEET NO: C2.0


PIPE - (142) 116' L.F. OF 18" HDPE @ 3.1%
JB-1 4'X4' ARDOT TYPE E
JB-2 5'X5' ARDOT TYPE E
EXTEND DOWNSPOUTS TO JUNCTION BOX (TYP.)
JB-5 5'X5' ARDOT TYPE E
PIPE - (143) 87' L.F. OF 30" HDPE @ 0.058%
CI-6 6'X5' ARDOT TYPE C & WEIR#2
PIPE - (144) 53' L.F. OF 18" HDPE @ 0.5%
2' WIDE 6" DEPTH CONCRETE SWALE
PIPE - (139) 123' L.F. OF 30" HDPE @ 0.058%
EXTEND DOWNSPOUTS TO PIPE & CONNECT WITH INSERTA TEE (TYP)
FF = 400.00
JB-3 5'X5' ARDOT TYPE E
PIPE - (140) 85' L.F. OF 30" HDPE @ 0.058%
CI-4 6'X5' ARDOT TYPE C & WEIR#1
SIDEWALK
BIKE/WALK PATH
PIPE - (141) 49' L.F. OF 14" X 22" RCAP @ 11.8%
EXISTING CI
20' 10' 0 20'

A NEW ELITE VOLLEYBALL ACADEMY GYM
FOR JOHN ECKART
VERNIA OFFICE PARK
BRYANT, ARKANSAS

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

03-10-2023

REVISION	DATE	BY

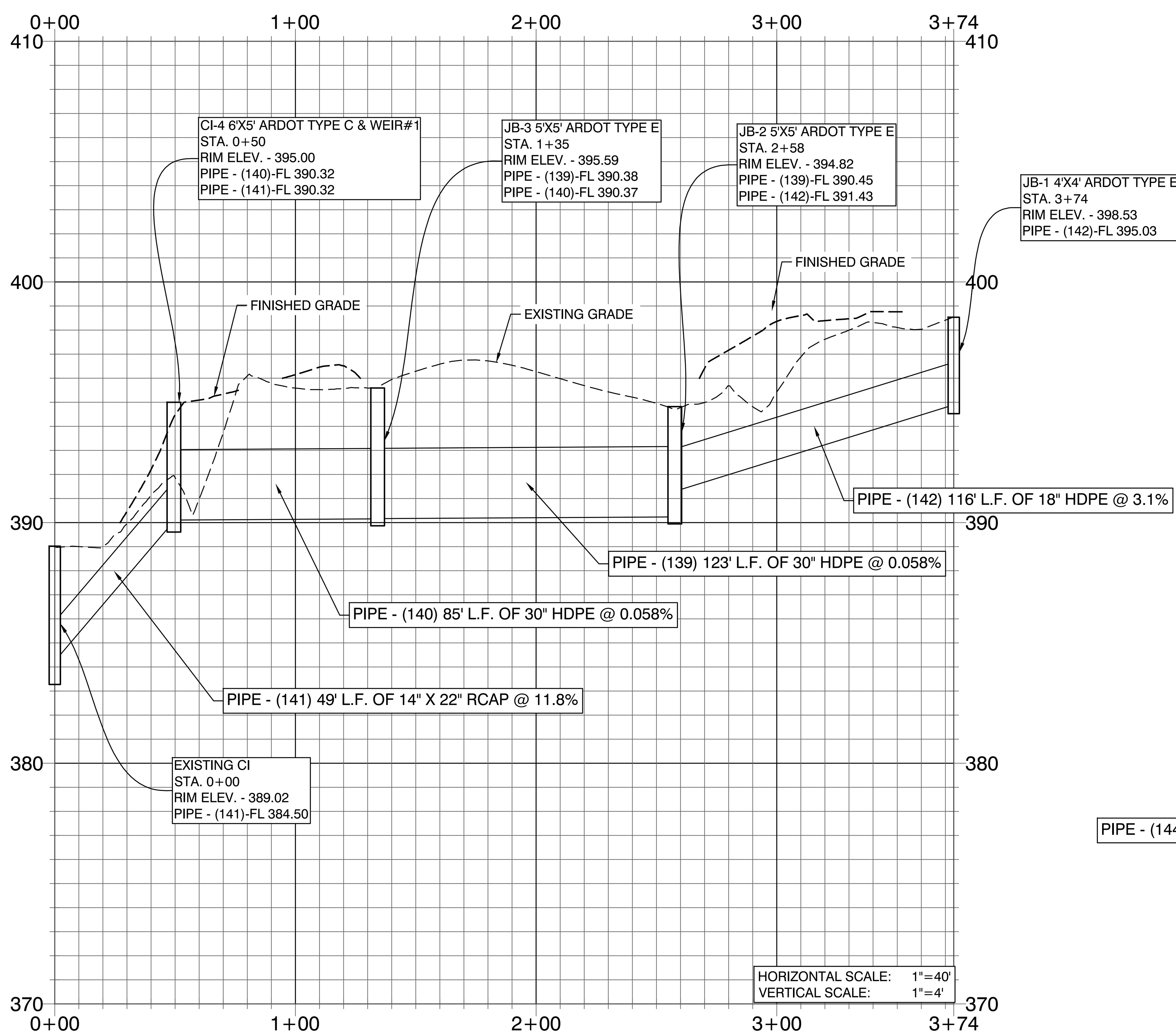
CONTENTS:
GRADING & DRAINAGE PLAN

PROJECT NO: 22140

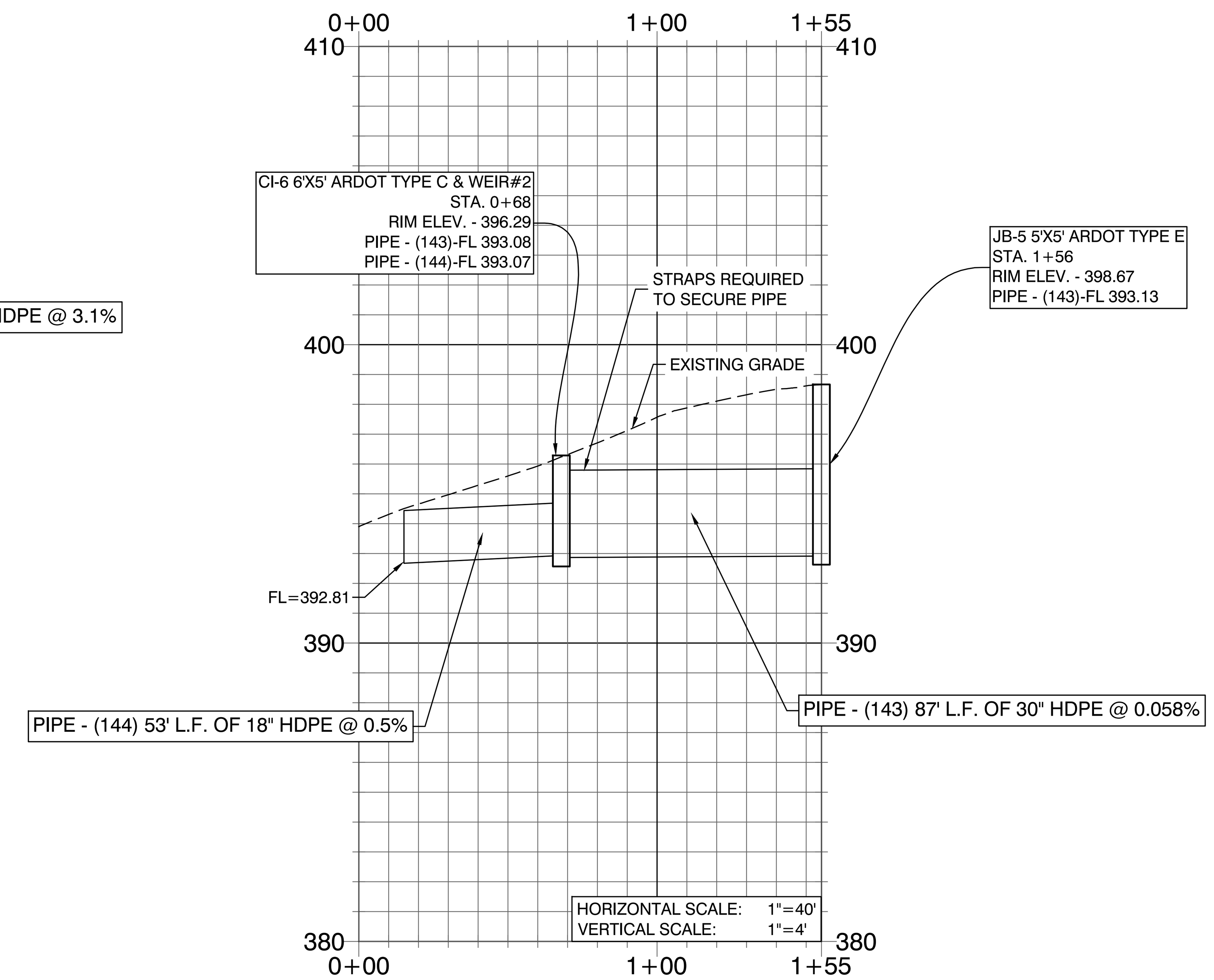
DATE: DATE

SHEET NO: C3.0

NORTH STORM DETENTION PROFILE



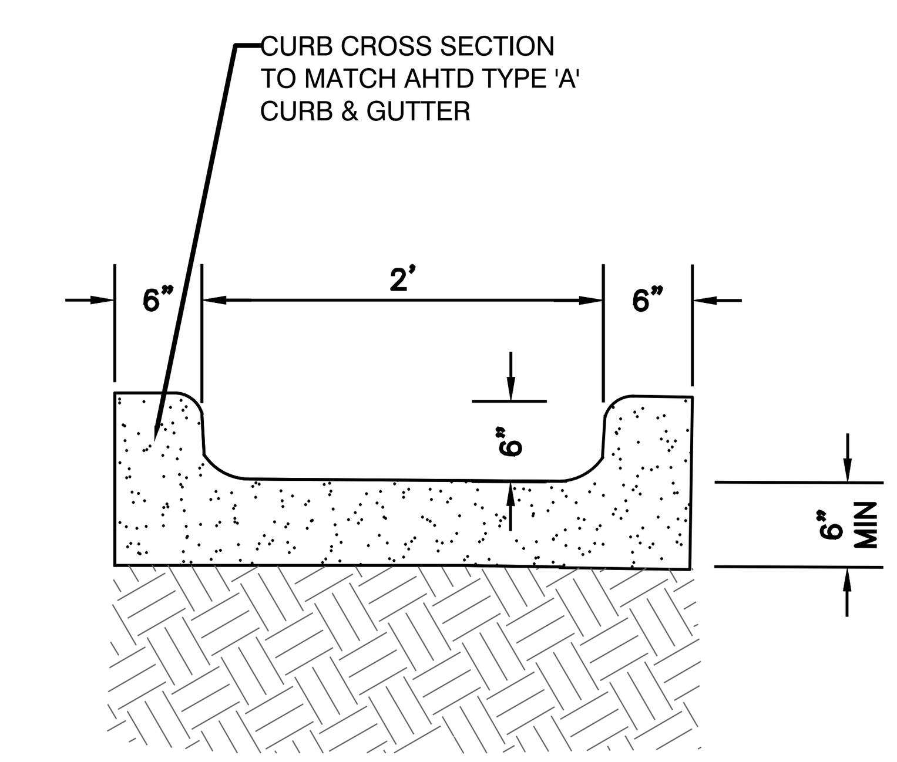
SOUTH STORM DETENTION PROFILE



HDPE PIPE MINIMUM
COVER REQUIREMENTS:

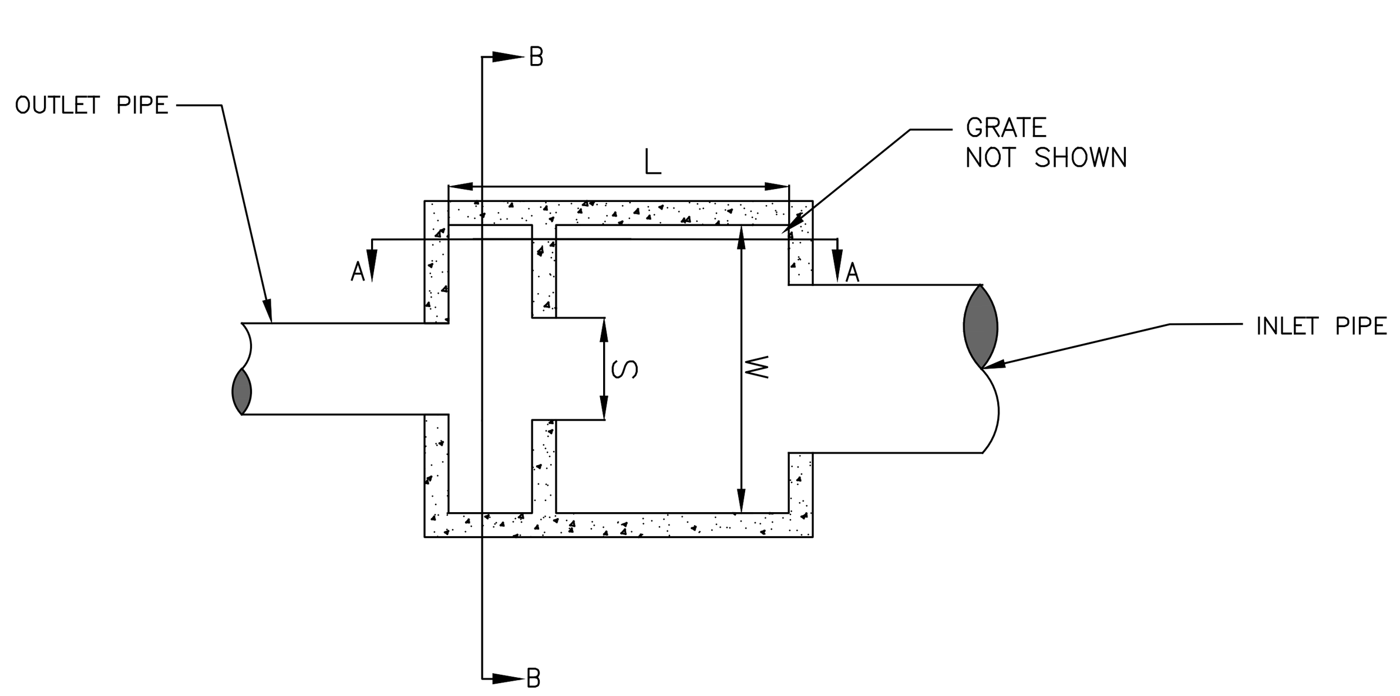
30" HDPE - 22" MIN. COVER

IF THERE IS NOT MINIMUM COVER
THEN THE PIPE NEEDS STRAPS
TO BE SECURED.**



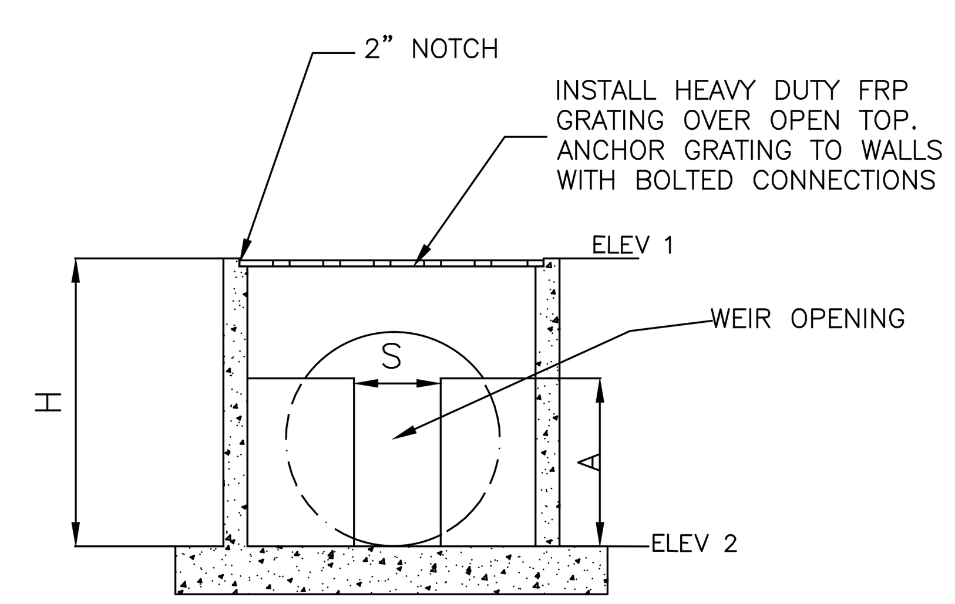
CONCRETE SWALE

NOT TO SCALE



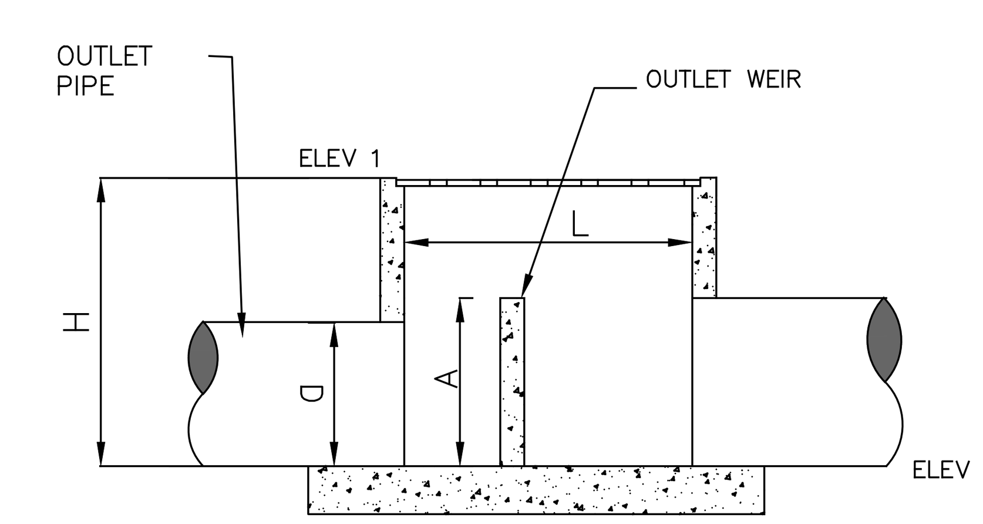
OUTLET STRUCTURE - WEIR PLAN VIEW

NOT TO SCALE



OUTLET STRUCTURE - WEIR SECTION B-B

NOT TO SCALE



OUTLET STRUCTURE - WEIR SECTION A-A

NOT TO SCALE

OUTLET STRUCTURE								
OUTLET STRUCTURE	L	W	H	ELEV 1	ELEV 2	S	A	D
WEIR#1	6'-0"	5'-0"	4'-8"	395.00	390.32	0'-8"	2'-6"	14"X22"
WEIR#2	6'-0"	5'-0"	3'-3"	396.30	393.08	0'-4"	2'-6"	18"

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.

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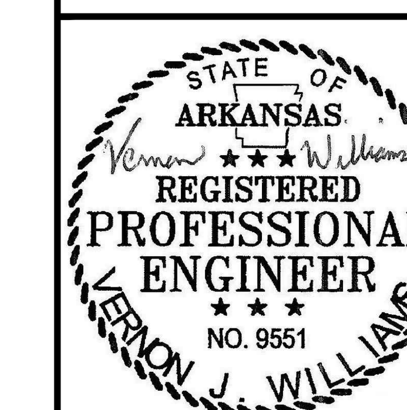


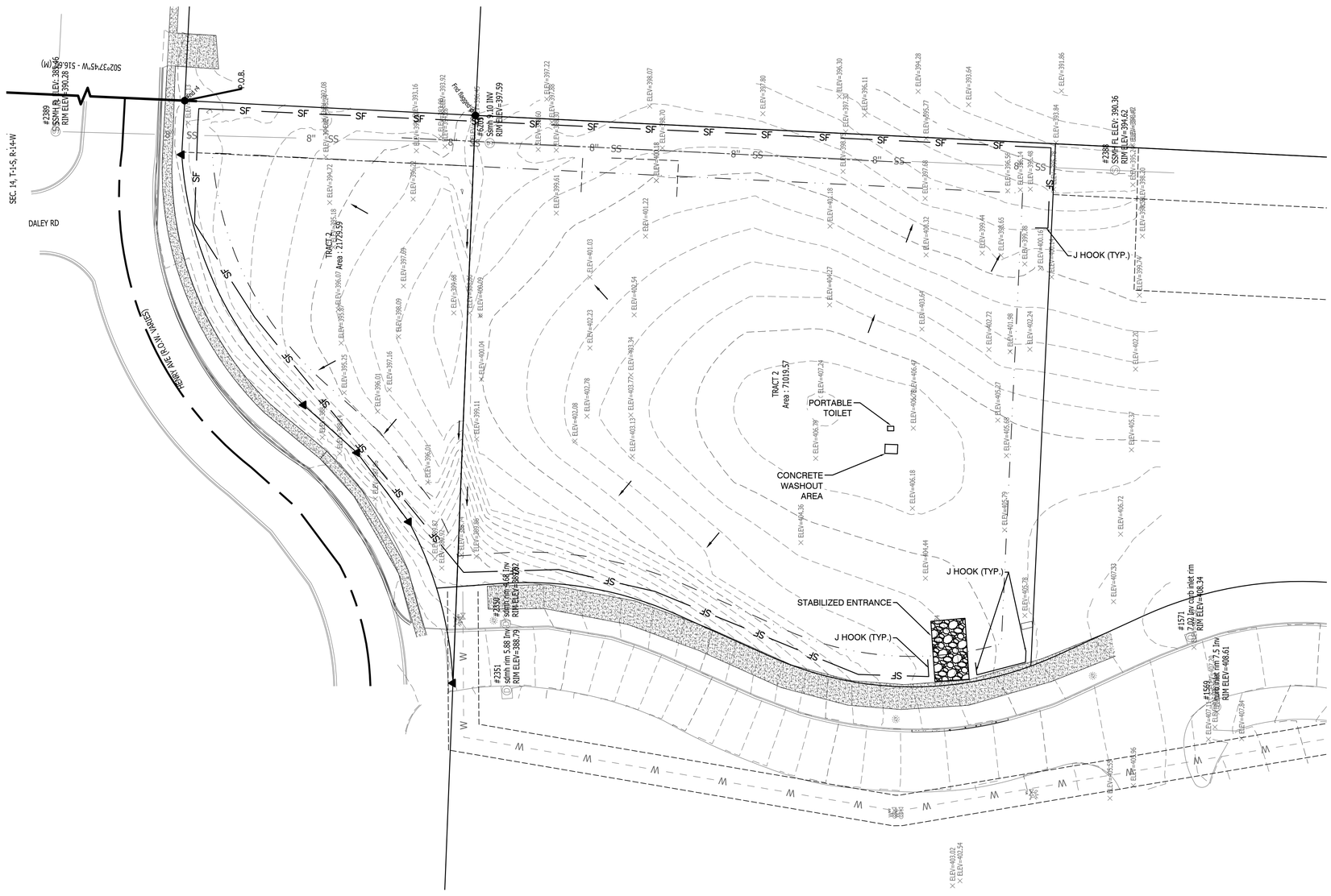
03-10-2023

CONTENTS:
DRAINAGE PROFILES & DRAINAGE DETAILS

PROJECT NO: 22140

DATE: DATE

SHEET NO: C3.1



BMP NOTES:

1. ALL WASH WATER (CONCRETE TRUCKS, VEHICLE CLEANING, EQUIPMENT CLEANING, ETC.) SHALL BE DETAINED AND PROPERLY TREATED OR DISPOSED.

2. DUST ON THE SITE SHALL BE CONTROLLED. THE USE OF MOTOR OILS AND OTHER PETROLEUM BASED OR TOXIC LIQUIDS FOR DUST SUPPRESSION OPERATIONS IS PROHIBITED.

3. RUBBISH, TRASH, GARBAGE, LITTER, OR OTHER SUCH MATERIALS SHALL BE DEPOSITED INTO SEALED CONTAINERS. MATERIAL SHALL BE PREVENTED FROM LEAVING THE PREMISES THROUGH THE ACTION OF WIND OR STORMWATER DISCHARGE INTO DRAINAGE DITCHES OR WATERS OF THE STATE.

4. DISTURBED PORTIONS OF THE SITE WHERE CONSTRUCTION ACTIVITY HAS STOPPED FOR AT LEAST 14 DAYS, SHALL BE TEMPORARILY SEEDED. THESE AREAS SHALL BE SEEDED NO LATER THAN 14 DAYS FROM THE LAST CONSTRUCTION ACTIVITY OCCURRING IN THESE AREAS.

5. DISTURBED PORTIONS OF THE SITE WHERE CONSTRUCTION ACTIVITY HAS PERMANENTLY STOPPED SHALL BE PERMANENTLY SEEDED. THESE AREAS SHALL BE SEEDED NO LATER THAN 14 DAYS AFTER THE LAST CONSTRUCTION ACTIVITY OCCURRING IN THESE AREAS. REFER TO THE GRADING PLAN AND/OR LANDSCAPE PLAN.

6. IF THE ACTION OF VEHICLES TRAVELING OVER THE SITE IS NOT SUFFICIENT TO REMOVE THE MAJORITY OF DIRT OR MUD, THEN THE TIRES MUST BE WASHED BEFORE THE VEHICLES ENTER A PUBLIC ROAD. IF WASHING IS USED, PROVISIONS MUST BE MADE TO INTERCEPT THE WASH WATER AND TRAP THE SEDIMENT BEFORE IT IS CARRIED OFF OF THE SITE.

7. ALL MATERIALS SPILLED, DROPPED, WASHED OR TRACKED FROM VEHICLES ONTO ROADWAYS OR INTO STORM DRAINS MUST BE REMOVED IMMEDIATELY.

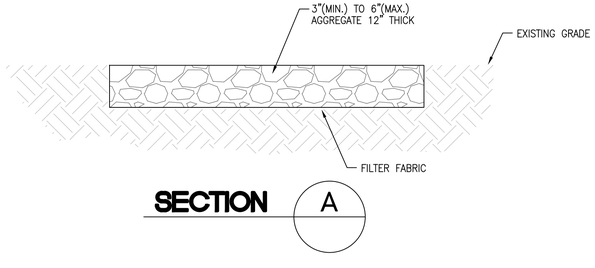
8. CONTRACTORS OR SUBCONTRACTORS WILL BE RESPONSIBLE FOR REMOVING SEDIMENT IN THE DETENTION POND AND ANY SEDIMENT THAT MAY HAVE COLLECTED IN THE STORM SEWER DRAINAGE SYSTEMS IN CONJUNCTION WITH THE STABILIZATION OF THE SITE.

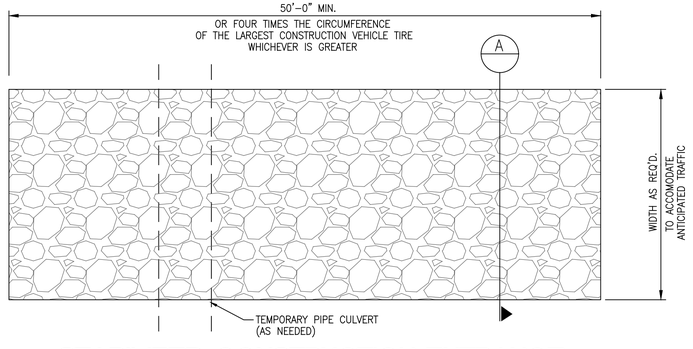
9. ON-SITE & OFF SITE SOIL STOCKPILE AND BORROW AREAS SHALL BE PROTECTED FROM EROSION AND SEDIMENTATION THROUGH IMPLEMENTATION OF BEST MANAGEMENT PRACTICES. STOCKPILE AND BORROW AREA LOCATIONS SHALL BE NOTED ON THE SITE MAP AND PERMITTED IN ACCORDANCE WITH GENERAL PERMIT REQUIREMENTS.

10. ALL CONSTRUCTION SHALL BE STABILIZED AT THE END OF EACH WORKING DAY, THIS INCLUDES BACKFILLING OF TRENCHES FOR UTILITY CONSTRUCTION AND PLACEMENT OF GRAVEL OR BITUMINOUS PAVING FOR ROAD CONSTRUCTION.

TOTAL SITE: 2.13 ACRES (INCLUDES R-0-W)

TOTAL DISTURBED AREA: 2.13 ACRES (INCLUDES R-O-W)





STABILIZED CONSTRUCTION ENTRANCE

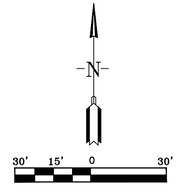
NOT TO SCALE

LEGEND:

500 EXISTING CONTOURS

DIRECTION OF OVERLAND FLOW

SF SILT FENCING



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

A NEW ELITE VOLLEYBALL ACADEMY GYM FOR JOHN ECKART VERNIA OFFICE PARK BRYANT, ARKANSAS

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

03-10-2023

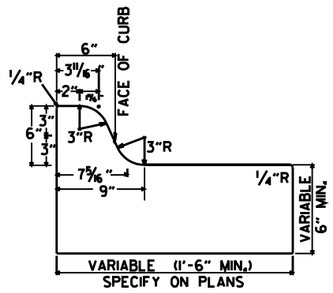
CONTENTS:

EROSION CONTROL PLAN

PROJECT NO: 22140

DATE: DATE

SHEET NO: C4.0



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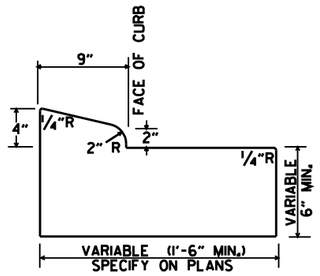

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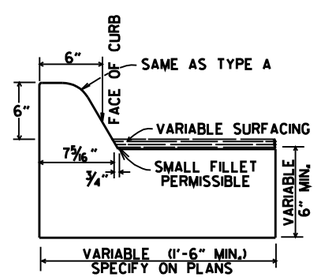

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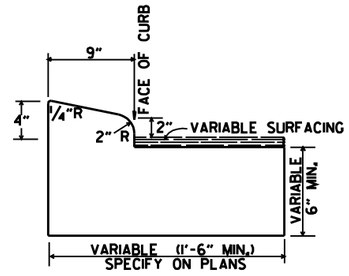

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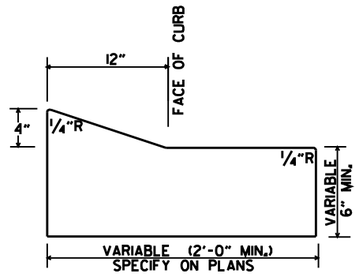

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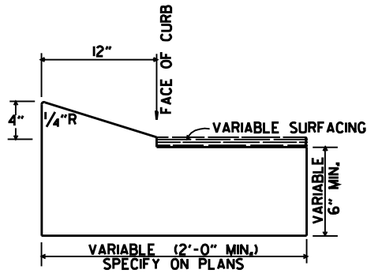
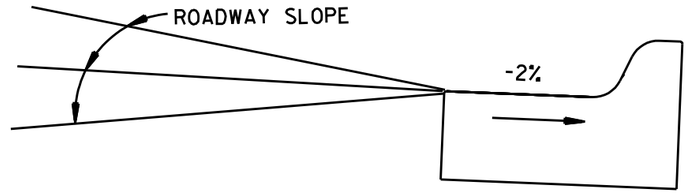


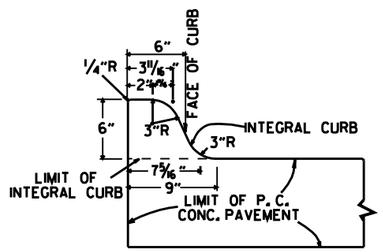
TYPE E-2

CONCRETE COMBINATION CURB AND GUTTER



DETAIL OF GUTTER SLOPE

GUTTER SHALL BE CONSTRUCTED ON 2% SLOPE AWAY FROM ROADWAY, REGARDLESS OF ROADWAY SLOPE.



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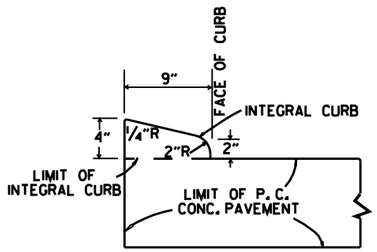

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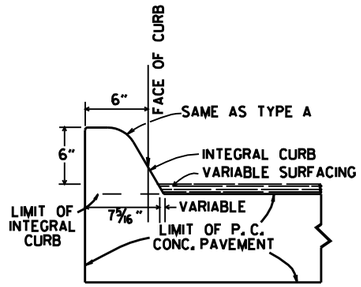
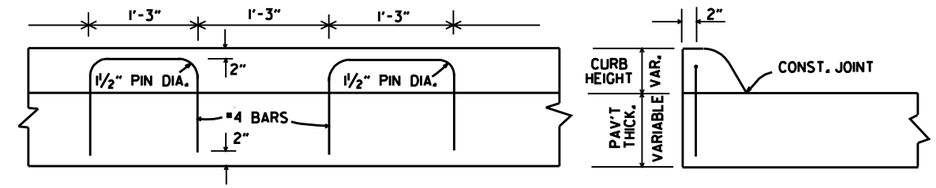
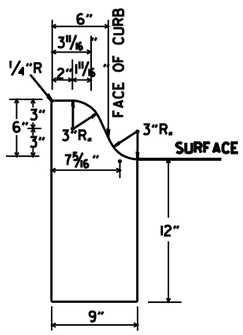


TYPE C

INTEGRAL CURB



ALTERNATE CONSTRUCTION METHOD FOR INTEGRAL CURB



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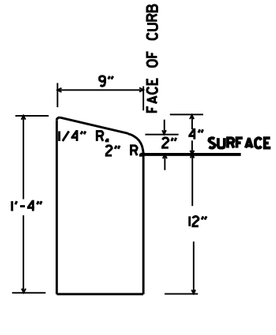

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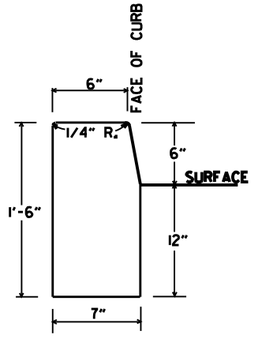
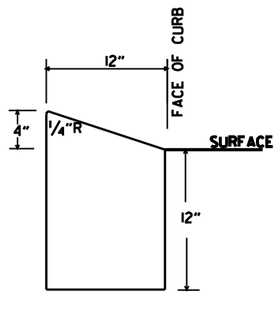
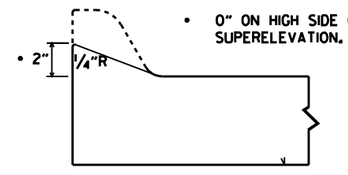


TYPE D



TYPE E

CONCRETE CURB



NOTE: USE MODIFIED CURB AS SPECIFIED ON STD. DR-1. COMPENSATION FOR MODIFIED CURB WILL BE CONSIDERED INCLUDED IN THE PRICE BID FOR THE TYPE OF CURB OR CURB AND GUTTER SPECIFIED.

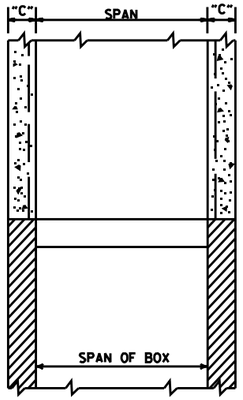
DETAILS OF MODIFIED CURB

DATE	REVISION	DATE FILMED
11-29-07	REVISED GUTTER SLOPE & MODIFIED CURB DETAILS	
11-10-05	ADDED DETAILS OF TYPE E CURBS	
11-16-01	REVISED CONCRETE CURB TYPE B	
11-18-98	REVISED MODIFIED CURB	
6-2-94	ADDED NOTE TO SPECIAL MODIFIED CURB	
8-5-93	CORRECTED GUTTER SLOPE	8-5-93
10-1-92	ADDED DETAILS OF GUTTER SLOPE	10-1-92
5-24-90	ADDED DETAILS OF MODIFIED CURB	5-24-90
11-30-89	VARIBLE DEPTH TYPE A & B I	11-30-89
7-15-88	REVISED MODIFIED CURB	630-7-15-88
11-1-73	REVISED MODIFIED CURB	500-11-1-73
10-2-72	REVISED AND REDRAWN	52-10-2-72

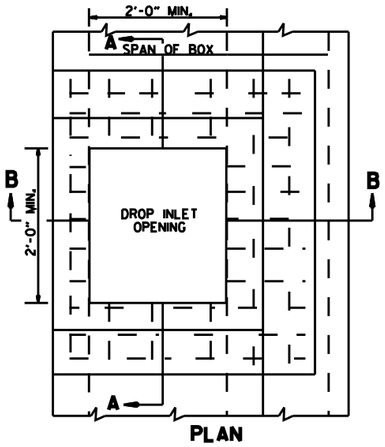
ARKANSAS STATE HIGHWAY COMMISSION

CURBING DETAILS

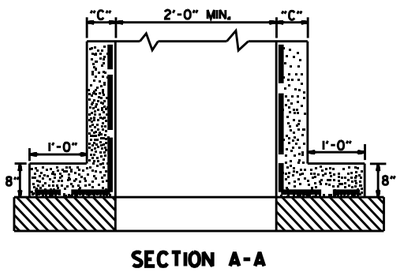
STANDARD DRAWING CG-1



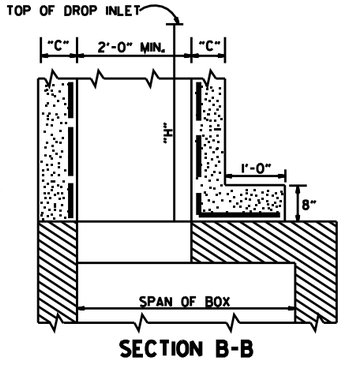
SECTION B-B



PLAN

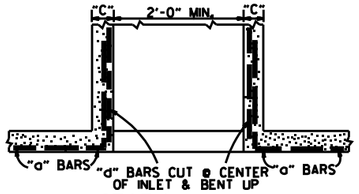


SECTION A-A

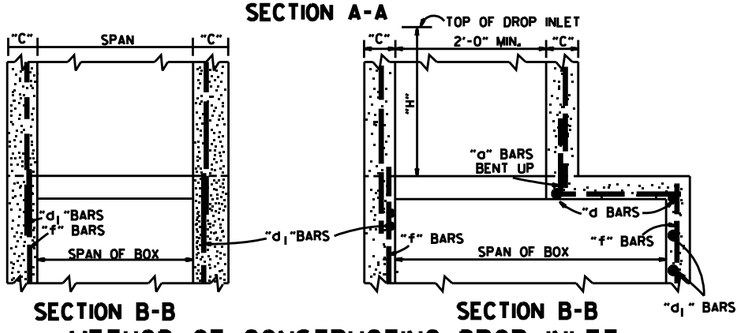


SECTION B-B

METHOD OF CONSTRUCTING DROP INLET ON EXISTING R.C. BOX CULVERT



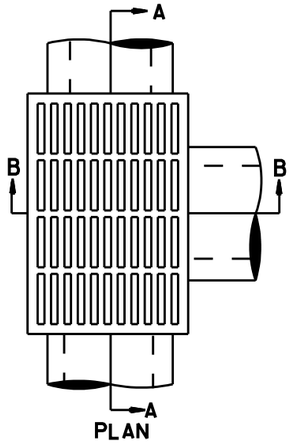
SECTION A-A



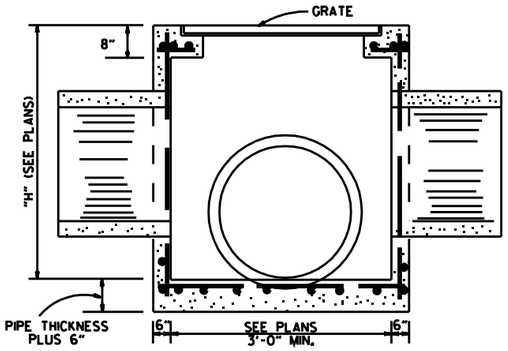
SECTION B-B SECTION B-B

METHOD OF CONSTRUCTING DROP INLET ON NEW R.C. BOX CULVERT

NOTE: "C" DIMENSIONS AND REINFORCING BAR SIZES, SHALL CONFORM TO THOSE SHOWN ON STANDARD DRAWING FOR DROP INLET.

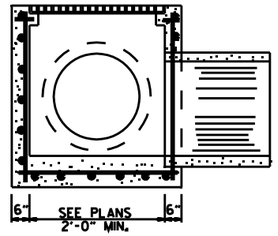


PLAN



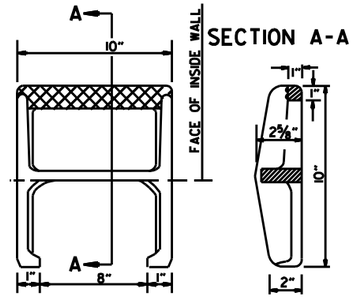
SECTION A-A

NOTE: REINF. BARS TO BE #4 BARS ON 6" CTRS. WITH 1½" MIN. COVER. THIS TYPE DROP INLET TO BE USED WHERE NOT SUBJECTED TO TRAFFIC.



SECTION B-B

DROP INLET (TYPE E)



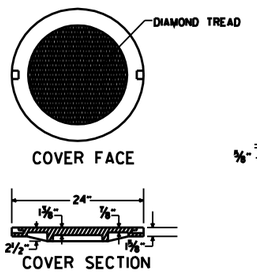
SECTION A-A

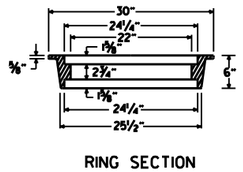
APPROX. WEIGHT = 11 LBS. (CAST IRON)

PLAN

NOTE: THIS DETAIL IS TYPICAL. OTHERS MAY BE USED WITH PRIOR APPROVAL OF THE ENGINEER.

DETAIL OF STEP FOR DROP INLET

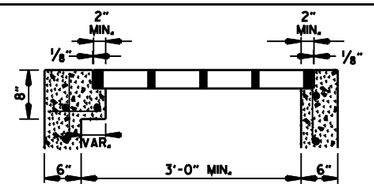




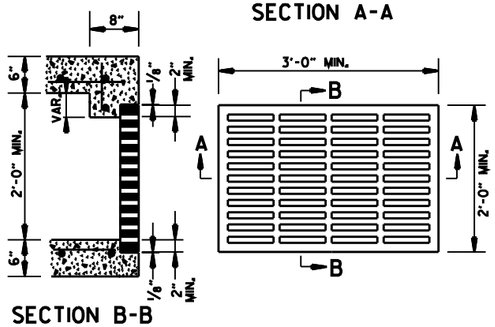
RING SECTION

APPROXIMATE TOTAL WEIGHT = 333 LBS.

HEAVY DUTY RING & COVER



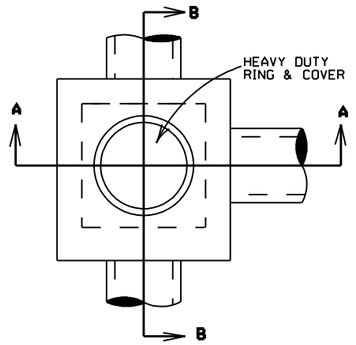
SECTION A-A



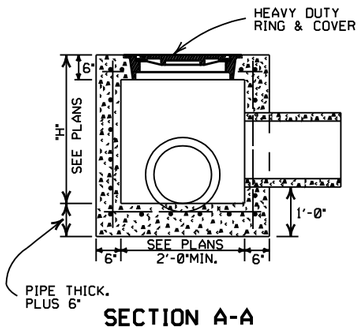
SECTION B-B

APPROXIMATE MINIMUM WATERWAY OPENING = 260 SQ. IN.

GRATE FOR TYPE E DROP INLET

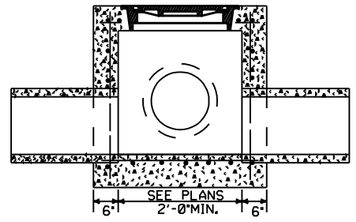


PLAN



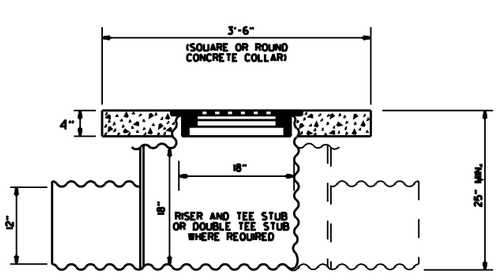
SECTION A-A

NOTE: REINF. BARS TO BE #4 BARS ON 6" CTRS. WITH 1½" MIN. COVER. THIS TYPE JUNCTION BOX TO BE USED WHERE NOT SUBJECTED TO TRAFFIC.

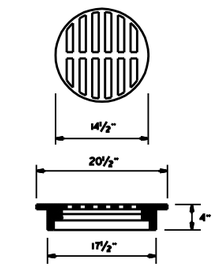


SECTION B-B

JUNCTION BOX (TYPE E)



NOTE: CONCRETE COLLAR TO BE CAST IN PLACE. 12" PIPE CULVERTS TO BE MEASURED AND PAID FOR AS " 12" SIDE DRAIN ".



USE NEENAH R-5901-C OR EQUIVALENT BICYCLE SAFE FRAME AND GRATE

DETAIL OF YARD DRAIN

GENERAL NOTES:

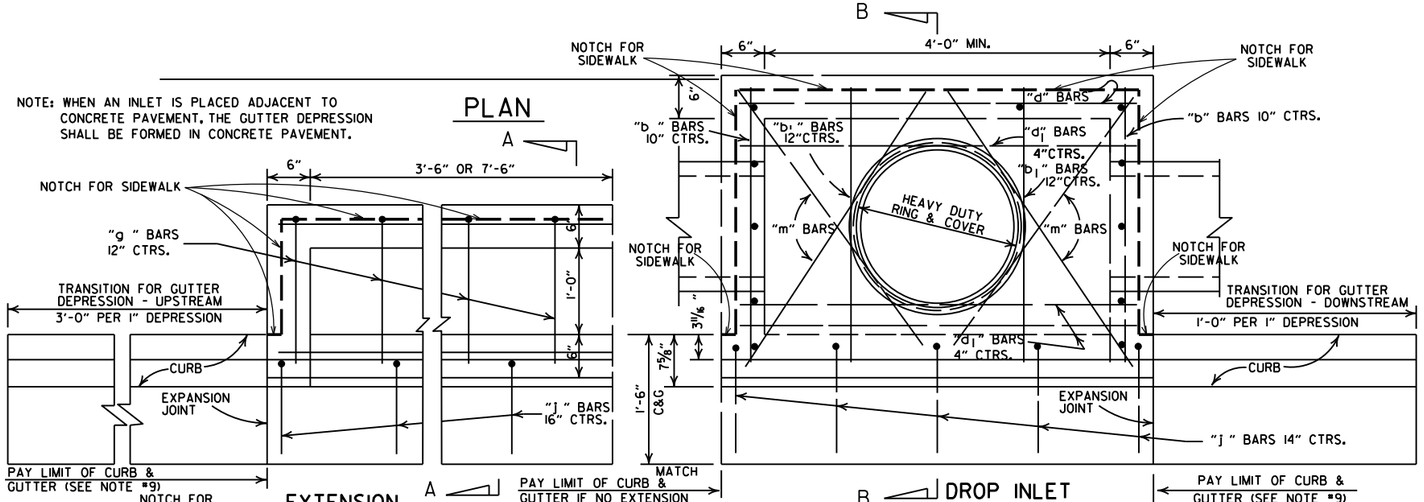
1. ALL EXPOSED CORNERS SHALL BE ¾" CHAMFERED.
2. STEPS SHALL BE INSTALLED ON 16" CENTERS ON ALL INLETS 4'-0" HIGH OR OVER, OR AS APPROVED BY THE ENGINEER.
3. EXPANSION JOINT MATERIAL SHALL BE ¾" PREFORMED FIBER.
4. GRATE OR GRATE AND FRAME SHALL BE CONSTRUCTED OF CAST IRON AND SHALL CONFORM TO THE REQUIREMENTS OF THE STANDARD SPECIFICATIONS FOR GRAY IRON CASTINGS AASHTO M 105 CLASS 35B. GRATE MAY BE USED WITHOUT FRAME.
5. GRATE AND FRAME SHALL NOT BE PAINTED.
6. GRATE SHALL BE BICYCLE SAFE.
7. HEAVY DUTY RING SHALL ALWAYS BE INSTALLED WITH FLANGE ON TOP.
8. HEAVY DUTY RING AND COVER SHALL BE CONSTRUCTED OF CAST IRON AND SHALL CONFORM TO THE REQUIREMENTS OF THE STANDARD SPECIFICATIONS FOR GRAY IRON CASTINGS AASHTO M105 CLASS 35B & AASHTO M306.
9. HEAVY DUTY RING AND COVER SHALL NOT BE PAINTED.
10. DIMENSIONS SHOWN FOR RING AND COVER ARE TYPICAL. THE CONTRACTOR MAY SUBSTITUTE SIMILAR CASTINGS WITH THE APPROVAL OF THE ENGINEER. REQUESTING APPROVAL FOR CASTING DESIGNS MAY BE MADE BY REFERRING TO PREVIOUSLY APPROVED DRAWINGS.

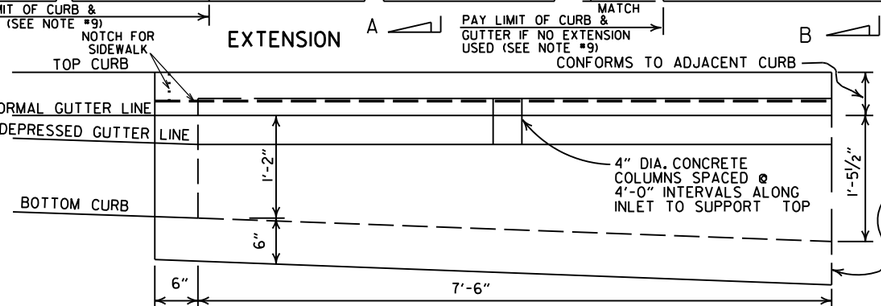
DATE REV.	REVISION	DATE FILMED
11-16-01	ADDED NOTE 10	
1-12-00	REVISED HEAVY DUTY RING & COVER	
7-02-98	CHANGED GRATE DETAIL, DELETED DI(TYPE D), REPLACED RING & COVER W/HEAVY DUTY RING & COVER, ADDED JUNCTION BOX (TYPE E)	
6-26-97	ADDED DIMENSION TO TYPE IV-A	
10-18-96	ADDED DETAIL OF YARD DRAIN	
8-15-91	DELETE TYPE IV GRATE	
7-15-88	REVISED STEP DETAIL	
5-20-83	REVISED DETAILS OF GRATES (TYPE IV & IV-A)	
2-4-83	ADDED GENERAL NOTE NO. 4	
3-2-81	ADDED TYPE IV-A GRATE	
5-22-74	DELETED INLET (TYPE F) & GRATE (TYPE III)	
10-2-72	REVISED AND REDRAWN	

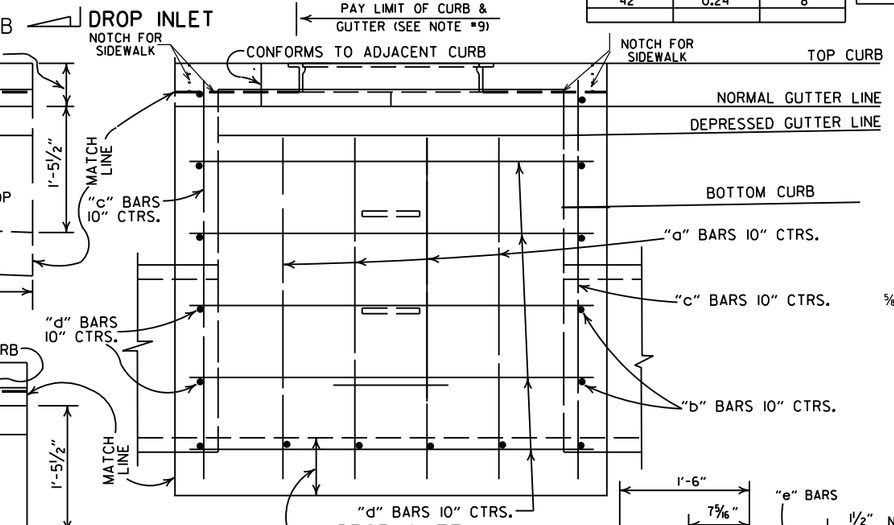
ARKANSAS STATE HIGHWAY COMMISSION

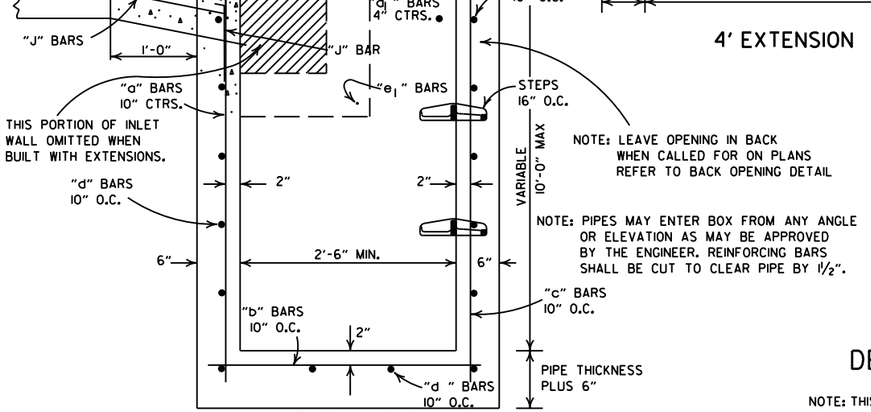
DETAILS OF DROP INLETS & JUNCTION BOXES

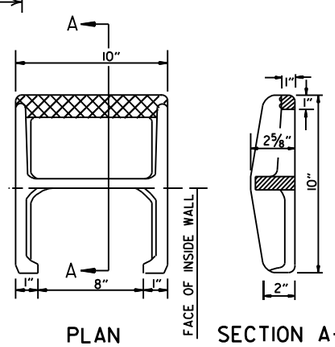
STANDARD DRAWING FPC-9

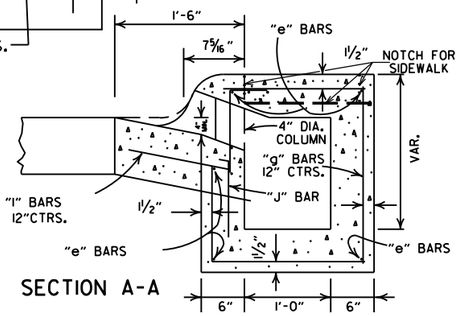












4'-0" LENGTH DROP INLET

PIPE SIZE	MIN. WIDTH	HEIGHT 5'-0" CLASS A CONC. CU. YDS.	HEIGHT 5'-0" REINF. STEEL POUNDS	PLUS OR MINUS PER LIN. FT. OF HEIGHT CLASS A CONC. CU. YDS.	PLUS OR MINUS PER LIN. FT. OF HEIGHT REINF. STEEL POUNDS
18"	2'-6"	1.77	156	0.28	22
24"	2'-6"	1.79	156	0.28	22
30"	3'-2"	2.39	205	0.30	26
36"	3'-8"	2.63	236	0.32	28
42"	4'-4"	2.95	250	0.34	30
48"	4'-10"	3.21	265	0.36	32

NOTE: QUANTITIES ARE APPROXIMATE AND ARE SHOWN FOR BIDDER INFORMATION ONLY.

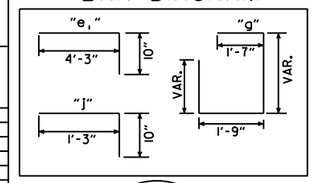
DROP INLET EXTENSION

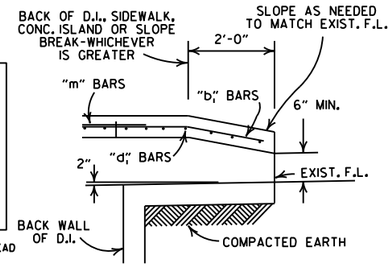
4'-0" CLASS A CONC. CU. YDS.	4'-0" REINF. STEEL POUNDS	8'-0" CLASS A CONC. CU. YDS.	8'-0" REINF. STEEL POUNDS
0.58	38	0.87	72
DEDUCT FROM QUANTITY COMPUTED FOR EACH EXTENSION ADDED.			
0.04	3		

DEDUCT FROM QUANTITY COMPUTED FOR EACH PIPE ENTERING INLET

INSIDE DIA. PIPE	CLASS A CONC.	REINF. STEEL
INCHES	CU. YDS.	POUNDS
18	0.05	2
24	0.09	3
30	0.13	4
42	0.24	8

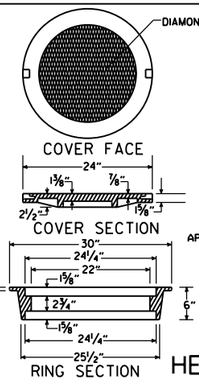
BAR DIAMOND





BACK OPENING

WHEN OPENING IN BACK IS CALLED FOR ON PLANS EXTEND OPENING AS SHOWN IN DETAIL. PAYMENT TO BE INCLUDED IN PRICE BID FOR DROP INLET (TYPE C).



HEAVY DUTY RING & COVER

APPROXIMATE TOTAL WEIGHT = 333 LBS.

GENERAL NOTES:
1. ALL EXPOSED CORNERS TO HAVE ¾" CHAMFER.
2. STEPS SHALL BE INSTALLED IN ALL INLETS 4'-0" HIGH AND OVER OF AS APPROVED BY THE ENGINEER.
3. ALL REINF. BARS SHALL BE #4 AND HAVE 1½" COVER.
4. DROP INLETS AND EXTENSION ON CURVED SECTIONS SHALL CONFORM TO THE CURVATURE OF THE CURB.
5. THIS DROP INLET MAY BE CONSTRUCTED ON NEW OR EXISTING R.C. BOX CULVERT AS SHOWN ON F.P.C.-9.
6. WHEN PLANS CALL FOR DROP INLET OVER 10'-0" HIGH, FLOOR AND WALLS SHALL BE CONSTRUCTED AS SHOWN FOR TYPE "RM" DROP INLET (FPC-9D).
7. HEAVY DUTY RING SHALL ALWAYS BE INSTALLED WITH FLANGE ON TOP.
8. DURING CONSTRUCTION OF THE ROADWAY THE CONTRACTOR SHALL MAINTAIN DRAINAGE INTO OR AROUND THE DROP INLET AS APPROVED BY THE ENGINEER.
9. PAYMENT FOR CURB AND/OR CURB AND GUTTER WITHIN THE LIMITS OF DROP INLETS AND DROP INLET EXTENSIONS SHALL BE CONSIDERED INCLUDED IN PAYMENT MADE FOR DROP INLETS AND/OR DROP INLET EXTENSIONS.
10. HEAVY DUTY RING AND COVER SHALL BE CONSTRUCTED OF CAST IRON AND SHALL CONFORM TO THE REQUIREMENTS OF THE STANDARD SPECIFICATIONS FOR GRAY IRON CASTINGS AASHTO M105 CLASS 35B & AASHTO M306.
11. HEAVY DUTY RING AND COVER SHALL NOT BE PAINTED.
12. 4"×2" NOTCH SHALL BE FORMED IN ALL DROP INLETS TO SUPPORT SIDEWALK CONSTRUCTION. REFER TO DETAIL OF NOTCH FOR SIDEWALKS.
13. DIMENSIONS SHOWN FOR RING AND COVER ARE TYPICAL. THE CONTRACTOR MAY SUBSTITUTE SIMILAR CASTINGS WITH THE APPROVAL OF THE ENGINEER. REQUESTING APPROVAL FOR CASTING DESIGNS MAY BE MADE BY REFERRING TO PREVIOUSLY APPROVED DRAWINGS.

DATE REV.	REVISION	DATE FILMED
8-22-02	ADDED PAY LIMIT CURB NOTES TO SECTIONS A-A & B-B	
11-16-01	ADDED NOTE 13; REVISED SECTION B-B	
1-12-00	CORRECTED DIMENSION ON SECTION B-B & REVISED RING & COVER	
5-13-99	ADDED DETAIL OF NOTCH FOR SIDEWALKS	
7-02-98	REPLACED RING & COVER W/HEAVY DUTY RING & COVER ADDED NOTES 9,10,&11	
10-18-96	CORRECTED SPELLING	
4-26-96	ADDED NOTE 8 & REVISED (4')(8') EXTENSION TITLES	10-18-96
4-1-93	REVISED BACK OPENING & NOTE	
8-15-91	DELETE TYPE IV GRATE	
7-15-88	REVISED STEP DETAIL	
5-20-83	REVISED DETAILS OF GRATES (TYPE IV & IV-A)	
2-4-83	ADDED GENERAL NOTE NO. 4	
3-2-81	ADDED TYPE IV-A GRATE	
5-22-74	DELETED INLET (TYPE F) & GRATE (TYPE III)	
10-2-72	REVISED AND REDRAWN	

ARKANSAS STATE HIGHWAY COMMISSION

DETAILS OF DROP INLETS

(TYPE C)

STANDARD DRAWING FPC-9E

REINFORCED CONCRETE ARCH PIPE DIMENSIONS

EQUIV. DIA.	SPAN		RISE	
	AASHTO M 206	ARDOT NOMINAL	AASHTO M 206	ARDOT NOMINAL
INCHES	INCHES			
15	18	18	11	11
18	22	22	13½	14
21	26	26	15½	16
24	28½	29	18	18
30	36¼	36	22½	23
36	43⅜	44	26⅝	27
42	51⅛	51	31⅜	31
48	58½	59	36	36
54	65	65	40	40
60	73	73	45	45
72	88	88	54	54
84	102	102	62	62
90	115	115	72	72
96	122	122	77½	77
108	138	138	87⅛	87
120	154	154	96⅞	97
132	168¾	169	106½	107

THE MEASURED SPAN AND RISE SHALL NOT VARY MORE THAN ± 2 PERCENT FROM THE VALUES SPECIFIED BY AASHTO M206.

REINFORCED CONCRETE HORIZONTAL ELLIPTICAL PIPE DIMENSIONS

EQUIV. DIA.	AASHTO M 207	
	SPAN	RISE
INCHES	INCHES	
18	23	14
24	30	19
27	34	22
30	38	24
33	42	27
36	45	29
39	49	32
42	53	34
48	60	38
54	68	43
60	76	48
66	83	53
72	91	58
78	98	63
84	106	68

THE MEASURED SPAN AND RISE SHALL NOT VARY MORE THAN ± 2 PERCENT FROM THE VALUES SPECIFIED BY AASHTO M207.

CONSTRUCTION SEQUENCE

1. PLACE STRUCTURAL BEDDING MATERIAL TO GRADE. DO NOT COMPACT.
2. INSTALL PIPE TO GRADE.
3. COMPACT STRUCTURAL BEDDING OUTSIDE THE MIDDLE THIRD OF THE PIPE.
4. PLACE AND COMPACT THE HAUNCH AREA UP TO THE MIDDLE OF THE PIPE.
5. COMPLETE BACKFILL ACCORDING TO SUBSECTION 606.03.(f)(1).

NOTE: HAUNCH AND STRUCTURAL BEDDING MATERIAL WILL NOT BE PAID FOR SEPARATELY, BUT COMPENSATION WILL BE CONSIDERED TO BE INCLUDED IN THE PRICE BID PER LINEAR FOOT OF CONCRETE PIPE.

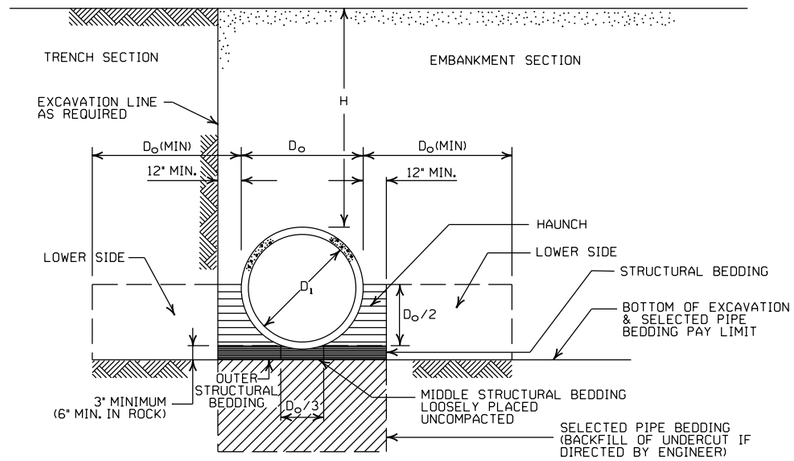
- LEGEND -

D_1 = NORMAL INSIDE DIAMETER OF PIPE
D_O = OUTSIDE DIAMETER OF PIPE
H = FILL COVER HEIGHT OVER PIPE (FEET)
MIN. = MINIMUM
= UNDISTURBED SOIL

INSTALLATION TYPE	MATERIAL REQUIREMENTS FOR HAUNCH AND STRUCTURAL BEDDING
TYPE 1	AGGREGATE BASE COURSE (CLASS 5 OR CLASS 7)
TYPE 2	SELECTED MATERIALS (CLASS SM-1, SM-2, OR SM-4) OR TYPE 1 INSTALLATION MATERIAL*
TYPE 3**	AASHTO CLASSIFICATION A-1 THRU A-6 SOIL OR TYPE 1 OR 2 INSTALLATION MATERIAL

* SM-3 WILL NOT BE ALLOWED.

** MATERIALS SHALL NOT INCLUDE ORGANIC MATERIALS OR STONES LARGER THAN 3 INCHES.



EMBANKMENT AND TRENCH INSTALLATIONS

1. MATERIAL IN THE HAUNCH AND OUTER STRUCTURAL BEDDING SHALL BE COMPACTED TO 95% OF THE MAXIMUM DENSITY ACCORDING TO THE TYPE OR CLASS OF MATERIAL USED.
2. FOR TRENCHES WITH WALLS OF NATURAL SOIL, THE DENSITY OF THE SOIL IN THE LOWER SIDE ZONE SHALL BE AS FIRM AS THE 95% DENSITY REQUIRED FOR THE HAUNCH. IF THE EXISTING SOIL DOES NOT MEET THIS CRITERIA, IT SHALL BE REMOVED AND RECOMPACTED TO 95% OF THE MAXIMUM DENSITY ACCORDING TO THE TYPE OF MATERIAL USED.
3. FOR EMBANKMENTS, THE MATERIAL IN THE LOWER SIDE ZONE SHALL BE COMPACTED TO 95% OF THE MAXIMUM DENSITY ACCORDING TO THE TYPE OR CLASS OF MATERIAL USED.

GENERAL NOTES

1. CONCRETE PIPE CULVERT CONSTRUCTION SHALL CONFORM TO ARKANSAS DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION (CURRENT EDITION), WITH APPLICABLE SUPPLEMENTAL SPECIFICATIONS AND SPECIAL PROVISIONS. UNLESS OTHERWISE NOTED IN THE PLANS, SECTION AND SUBSECTION REFER TO THE STANDARD CONSTRUCTION SPECIFICATIONS.
2. CONCRETE PIPE CULVERT DESIGN SHALL CONFORM TO AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, FIFTH EDITION (2010) WITH 2010 INTERIMS.
3. ALL PIPE SHALL CONFORM TO SECTION 606. CIRCULAR R.C. PIPE CULVERTS SHALL CONFORM TO AASHTO M170, R.C. ARCH PIPE CULVERTS SHALL CONFORM TO AASHTO M206 AND HORIZONTAL ELLIPTICAL PIPE CULVERTS SHALL CONFORM TO AASHTO M207.
4. ALL PIPE SHALL BE PROTECTED DURING CONSTRUCTION BY A COVER SUFFICIENT TO PREVENT DAMAGE FROM PASSAGE OF EQUIPMENT.
5. THE MINIMUM TRENCH WIDTH SHALL BE THE OUTSIDE DIAMETER OF THE PIPE PLUS 24 INCHES. THE MAXIMUM ALLOWABLE TRENCH WIDTH SHALL BE THE MINIMUM WIDTH PRACTICABLE FOR WORKING CONDITIONS.
6. MULTIPLE PIPE CULVERTS SHALL BE INSTALLED WITH A MINIMUM CLEARANCE OF 24 INCHES BETWEEN STRINGS OF PIPE. REFER TO STD. DWG. FES-2 FOR MINIMUM CLEARANCE WHERE FLARED END SECTIONS ARE USED.
7. IMPERVIOUS MATERIAL SHOULD BE PLACED AS DIRECTED BY THE ENGINEER AT THE ENDS OF THE CULVERT TO PREVENT LOSS OF STRUCTURAL BEDDING WHEN PERVIOUS MATERIAL IS USED FOR STRUCTURAL BEDDING AND/OR BACKFILL.
8. NOT MORE THAN ONE LIFTING HOLE MAY BE PROVIDED IN CONCRETE PIPE TO FACILITATE HANDLING. HOLE MAY BE CAST IN PLACE, CUT INTO THE FRESH CONCRETE AFTER FORMS ARE REMOVED, OR DRILLED. THE HOLE SHALL NOT BE MORE THAN TWO INCHES IN DIAMETER OR TWO INCHES SQUARE. CUTTING OR DISPLACEMENT OF REINFORCEMENT WILL NOT BE PERMITTED. SPALLED AREAS AROUND THE HOLE SHALL BE REPAIRED IN A WORKMANLIKE MANNER. LIFTING HOLE SHALL BE FILLED WITH MORTAR, CONCRETE, OR OTHER METHOD AS APPROVED BY THE ENGINEER.
9. WHEN DIRECTED BY THE ENGINEER, UNSUITABLE MATERIAL THAT IS ENCOUNTERED AT THE BOTTOM OF THE EXCAVATED TRENCH (BELOW THE AREA IDENTIFIED AS "STRUCTURAL BEDDING" ABOVE) WILL BE EXCAVATED AND REPLACED WITH SELECTED PIPE BEDDING. THE QUANTITY OF MATERIAL REQUIRED TO BACKFILL THE UNDERCUT AREA UP TO THE SELECTED PIPE BEDDING PAY LIMIT DESIGNATED ABOVE WILL BE MEASURED AND PAID FOR AS "SELECTED PIPE BEDDING."
10. WHEN THE EXISTING MATERIAL EXCAVATED FOR THE PIPE TRENCH IS DETERMINED BY THE ENGINEER TO BE UNSUITABLE FOR BACKFILLING THE PIPE (ABOVE THE AREA IDENTIFIED ABOVE AS THE HAUNCH), BORROW MATERIAL OR MATERIAL FROM THE ROADWAY EXCAVATION WILL BE USED TO BACKFILL THE PIPE. IF SUITABLE MATERIAL IS NOT AVAILABLE, THE ENGINEER MAY AUTHORIZE THE USE OF "SELECTED PIPE BACKFILL."

MINIMUM HEIGHT OF FILL "H" OVER CIRCULAR R.C. PIPE CULVERTS

	CLASS OF PIPE			
	CLASS III		CLASS IV	CLASS V
INSTALLATION TYPE	TYPE 1 OR 2	TYPE 3	ALL	ALL
PIPE ID (IN.)	FEET			
12-15	2	2.5	2	1
18-24	2.5	3	2	1
27-33	3	4	2	1
36-42	3.5	5	2	1
48	4.5	5.5	2	1
54-60	5	7	2	1
66-78	6	8	2	1
84-108	7.5	8	2	1

NOTE: FOR MINIMUM COVER VALUES, "H" SHALL INCLUDE A MINIMUM OF 12" OF PAVEMENT AND/OR BASE.

MAXIMUM HEIGHT OF FILL "H" OVER CIRCULAR R.C. PIPE CULVERTS

INSTALLATION TYPE	CLASS OF PIPE		
	CLASS III	CLASS IV	CLASS V
	FEET		
TYPE 1	21	32	50
TYPE 2	16	25	39
TYPE 3	12	20	30

NOTE: IF FILL HEIGHT EXCEEDS 50 FEET, A SPECIAL DESIGN CONCRETE PIPE WILL BE REQUIRED USING TYPE 1 INSTALLATION.

MINIMUM HEIGHT OF FILL "H" OVER R.C. ARCH & HORIZONTAL ELLIPTICAL PIPE CULVERTS

INSTALLATION TYPE	CLASS OF PIPE	
	CLASS III	CLASS IV
	FEET	
TYPE 2 OR TYPE 3	2.5	1.5

NOTE: TYPE 1 INSTALLATION WILL NOT BE ALLOWED FOR ARCH & HORIZONTAL ELLIPTICAL PIPE CULVERTS.

NOTE: FOR MINIMUM COVER VALUES, "H" SHALL INCLUDE A MINIMUM OF 12" OF PAVEMENT AND/OR BASE.

MAXIMUM HEIGHT OF FILL "H" OVER R.C. ARCH & HORIZONTAL ELLIPTICAL PIPE CULVERTS

INSTALLATION TYPE	CLASS OF PIPE	
	CLASS III	CLASS IV
	FEET	
TYPE 2	13	21
TYPE 3	10	16

NOTE: TYPE 1 INSTALLATION WILL NOT BE ALLOWED FOR ARCH & HORIZONTAL ELLIPTICAL PIPE CULVERTS.

DATE	REVISION	DATE FILMED
2-27-14	REVISED GENERAL NOTE 1.	
12-15-11	REVISED FOR LRFD DESIGN SPECIFICATIONS	
5-18-00	REVISED TYPE 3 BEDDING & ADDED NOTE	
3-30-00	REVISED INSTALLATIONS	
11-06-97	ISSUED	

ARKANSAS STATE HIGHWAY COMMISSION

CONCRETE PIPE CULVERT FILL HEIGHTS & BEDDING

STANDARD DRAWING PCC-1

INSTALLATION TYPE	•• MATERIAL REQUIREMENTS FOR STRUCTURAL BACKFILL AND STRUCTURAL BEDDING
TYPE 2	•SELECTED MATERIALS (CLASS SM-1, SM-2 OR SM-4)

• AGGREGATE BASE COURSE (CLASS 4, 5, 6, OR 7) MAY BE USED IN LIEU OF SELECTED MATERIAL.

SM3 WILL NOT BE ALLOWED.

•• STRUCTURAL BEDDING MATERIAL SHALL HAVE A MAXIMUM PARTICLE SIZE OF 1INCH. STRUCTURAL BACKFILL MATERIAL SHALL BE FREE OF ORGANIC MATERIAL, STONES LARGER THAN 1.50 INCH IN GREATEST DIMENSION, OR FROZEN LUMPS.

STRUCTURAL BACKFILL AND STRUCTURAL BEDDING MATERIAL WILL NOT BE PAID FOR SEPARATELY, BUT COMPENSATION WILL BE CONSIDERED TO BE INCLUDED IN THE PRICE BID PER LINEAR FOOT OF HDPE PIPE.

MULTIPLE INSTALLATION OF HIGH DENSITY POLYETHYLENE PIPES

PIPE DIAMETER	CLEAR DISTANCE BETWEEN PIPES
18"	1'-6"
24"	2'-0"
30"	2'-6"
36"	3'-0"
42"	3'-6"
48"	4'-0"

MINIMUM TRENCH WIDTH BASED ON FILL HEIGHT "H"

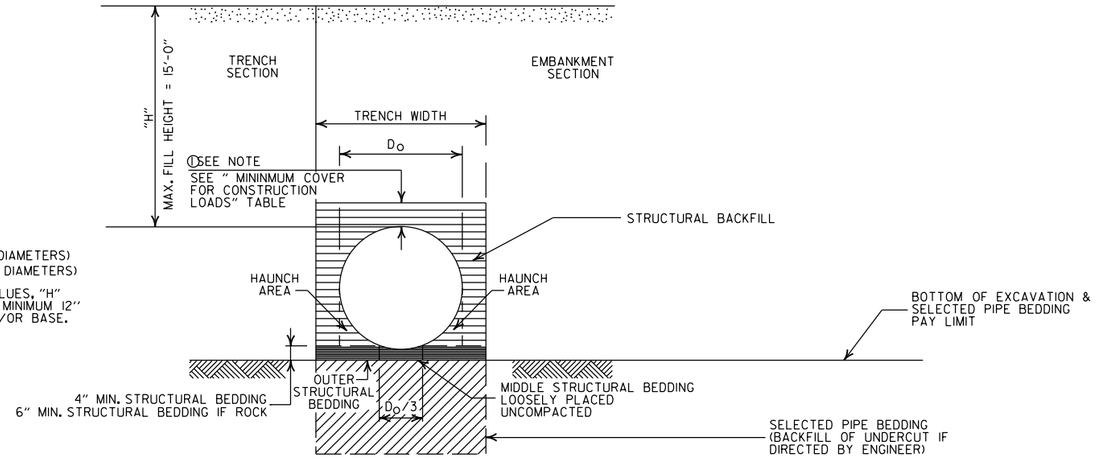
PIPE DIAMETER	TRENCH WIDTH (FEET)	
	"H" < 10'-0"	"H" >OR= 10'-0"
18"	4'-6"	4'-6"
24"	5'-0"	6'-0"
30"	5'-6"	7'-6"
36"	6'-0"	9'-0"
42"	7'-0"	10'-6"
48"	8'-0"	12'-0"

①NOTE:
18" MIN. (18" - 30" DIAMETERS)
24" MIN. (36" - 48" DIAMETERS)
MINIMUM COVER VALUES, "H" SHALL INCLUDE A MINIMUM 12" OF PAVEMENT AND/OR BASE.

MINIMUM COVER FOR CONSTRUCTION LOADS

PIPE DIAMETER	② MIN. COVER (FEET) FOR INDICATED CONSTRUCTION LOADS			
	18.0-50.0 (KIPS)	50.0-75.0 (KIPS)	75.0-110.0 (KIPS)	110.0-175.0 (KIPS)
36" OR LESS	2'-0"	2'-6"	3'-0"	3'-0"
42" OR GREATER	3'-0"	3'-0"	3'-6"	4'-0"

②MINIMUM COVER SHALL BE MEASURED FROM TOP OF PIPE TO TOP OF THE MAINTAINED CONSTRUCTION ROADWAY SURFACE. THE SURFACE SHALL BE MAINTAINED.



TYPE 2 EMBANKMENT AND TRENCH INSTALLATIONS

1. STRUCTURAL BACKFILL, EMBANKMENT, AND OUTER STRUCTURAL BEDDING MATERIAL SHALL BE COMPACTED TO 95% OF THE MAXIMUM DENSITY ACCORDING TO THE TYPE OR CLASS OF MATERIAL USED.

CONSTRUCTION SEQUENCE

1. PLACE STRUCTURAL BEDDING MATERIAL TO GRADE. DO NOT COMPACT.
2. INSTALL PIPE TO GRADE.
3. COMPACT STRUCTURAL BEDDING OUTSIDE THE MIDDLE THIRD OF THE PIPE.
4. THE STRUCTURAL BACKFILL SHALL BE PLACED AND COMPACTED IN LAYERS NOT EXCEEDING 8". THE LAYERS SHALL BE BROUGHT UP EVENLY AND SIMULTANEOUSLY TO THE ELEVATION OF THE MINIMUM COVER.
5. PIPE INSTALLATION MAY REQUIRE THE USE OF RESTRAINTS, WEIGHTING OR OTHER APPROVED METHODS IN ORDER TO HELP MAINTAIN GRADE AND ALIGNMENT.

GENERAL NOTES

1. PIPE SHALL CONFORM TO AASHTO M294, TYPE S. INSTALLATION SHALL CONFORM TO JOB SPECIAL PROVISION "PLASTIC PIPE" AND SECTION 606 OF THE STANDARD SPECIFICIATIONS FOR HIGHWAY CONSTRUCTION (CURRENT EDITION).
2. PLASTIC PIPE CULVERT DESIGN SHALL CONFORM TO AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, FIFTH EDITION (2010) WITH 2010 INTERIMS.
3. THE MAXIMUM ALLOWABLE TRENCH WIDTH SHALL BE THE MINIMUM WIDTH PLUS A SUFFICIENT WIDTH TO ENSURE WORKING ROOM TO PROPERLY AND SAFELY PLACE AND COMPACT HAUNCHING AND OTHER BACKFILL MATERIAL.
4. IMPERVIOUS MATERIAL SHOULD BE PLACED AS DIRECTED BY THE ENGINEER AT THE ENDS OF THE CULVERT TO PREVENT LOSS OF STRUCTURAL BEDDING WHEN PERVIOUS MATERIAL IS USED FOR STRUCTURAL BEDDING AND/OR BACKFILL.
5. WHEN DIRECTED BY THE ENGINEER, UNSUITABLE MATERIAL THAT IS ENCOUNTERED AT THE BOTTOM OF THE EXCAVATED TRENCH (BELOW THE AREA IDENTIFIED AS "STRUCTURAL BEDDING" ABOVE) WILL BE EXCAVATED AND REPLACED WITH SELECTED PIPE BEDDING. THE QUANTITY OF MATERIAL REQUIRED TO BACKFILL THE UNDERCUT AREA UP TO THE SELECTED PIPE BEDDING PAY LIMIT DESIGNATED ABOVE WILL BE MEASURED AND PAID FOR AS "SELECTED PIPE BEDDING."
6. WHEN THE EXISTING MATERIAL EXCAVATED FOR THE PIPE TRENCH IS DETERMINED BY THE ENGINEER TO BE UNSUITABLE FOR BACKFILLING THE PIPE (ABOVE THE AREA IDENTIFIED ABOVE AS STRUCTURAL BACKFILL), BORROW MATERIAL OR MATERIAL FROM THE ROADWAY EXCAVATION WILL BE USED TO BACKFILL THE PIPE. IF SUITABLE MATERIAL IS NOT AVAILABLE, THE ENGINEER MAY AUTHORIZE THE USE OF "SELECTED PIPE BACKFILL."
7. FOR PIPE TYPES THAT ARE NOT SMOOTH ON THE OUTSIDE (CORRUGATED OR PROFILE WALLS), BACKFILL GRADATIONS SHOULD BE SELECTED THAT WILL PERMIT THE FILLING OF THE CORRUGATION OR PROFILE VALLEY.
8. HIGH DENSITY POLYETHYLENE PIPES OF DIAMETERS OTHER THAN SHOWN WILL NOT BE ALLOWED.
9. JOINTS FOR HDPE PIPE SHALL MEET THE REQUIREMENTS FOR SOIL TIGHTNESS AS SPECIFIED IN AASHTO SECTION 26.4.2.4 AND 30.4.2 "AASHTO LRFD BRIDGE CONSTRUCTION SPECIFICATIONS." JOINTS SHALL BE INSTALLED PER MANUFACTURER'S RECOMMENDATIONS.

- LEGEND -

H = FILL HEIGHT (FT.)
D_O = OUTSIDE DIAMETER OF PIPE
MAX. = MAXIMUM
MIN. = MINIMUM

= STRUCTURAL BACKFILL MATERIAL

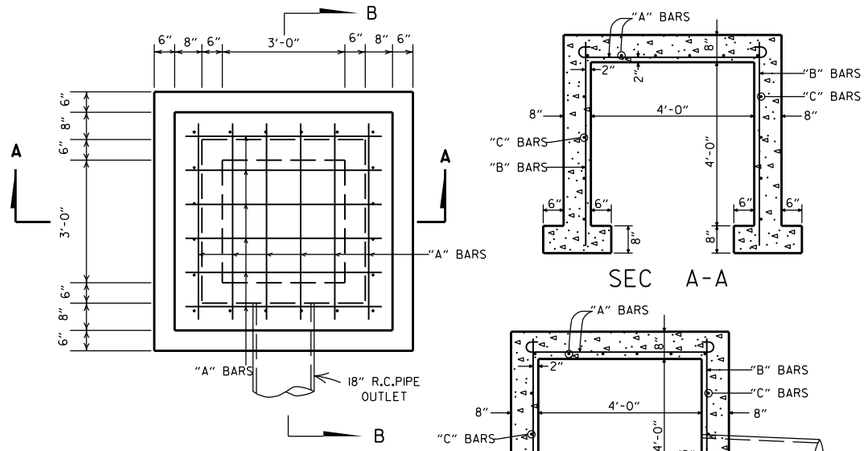
= UNDISTURBED SOIL

DATE	REVISION	DATE FILMED
2-27-14	REVISED GENERAL NOTE 1.	
12-15-11	REVISED GENERAL NOTES & MINIMUM COVER NOTE	
11-17-10	ISSUED	

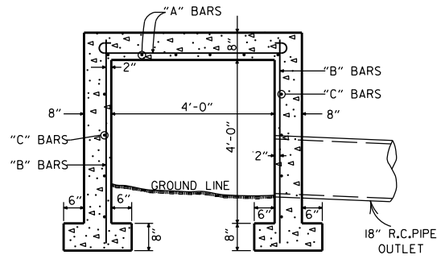
ARKANSAS STATE HIGHWAY COMMISSION

PLASTIC PIPE CULVERT (HIGH DENSITY POLYETHYLENE)

STANDARD DRAWING PCP-1



SEC A-A



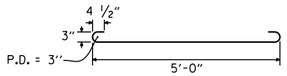
SEC B-B

NOTE: MAX FILL HEIGHT ABOVE TOP OF BOX = 13'-0".

STEEL SCHEDULE

BARS	NUMBER	LENGTH	SPACING
"A"	12	6'-0"	10"
"B"	20	5'-0"	10 ½"
"C"	16	5'-0"	12"

ALL STEEL TO BE #4 BARS



"A" BARS

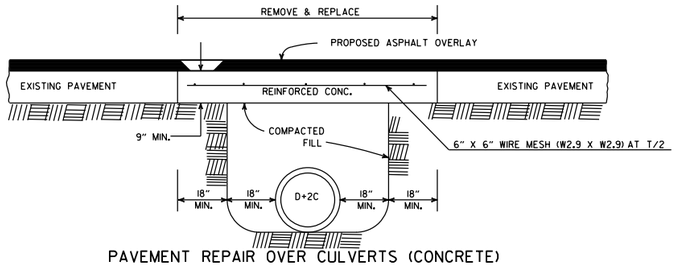
QUANTITIES

CONCRETE 3.31 CU. YDS.
REINFORCING STEEL 168 LB.

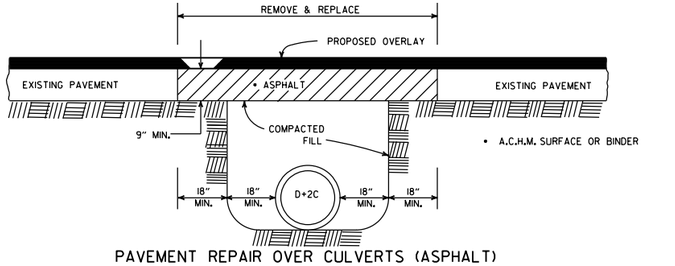
GENERAL NOTE:

THE PAY ITEMS FOR REINFORCED CONCRETE SPRING BOXES SHALL BE FOR THE QUANTITIES OF CONCRETE OF THE CLASS SPECIFIED, REINFORCING STEEL, EXCAVATION FOR STRUCTURES AND 18" R.C. PIPE CULVERT.

REINFORCED CONCRETE SPRING BOX



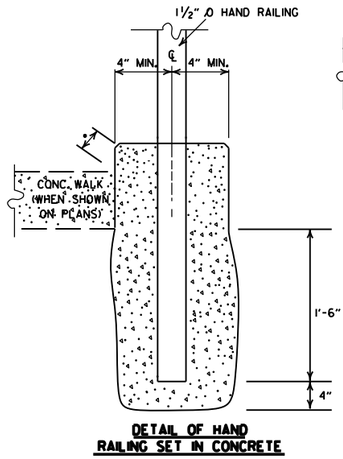
PAVEMENT REPAIR OVER CULVERTS (CONCRETE)



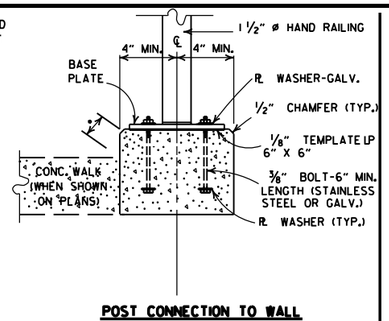
PAVEMENT REPAIR OVER CULVERTS (ASPHALT)

DETAIL SHOWING REPAIR OF EXISTING PAVEMENT AT CULVERT INSTALLATIONS

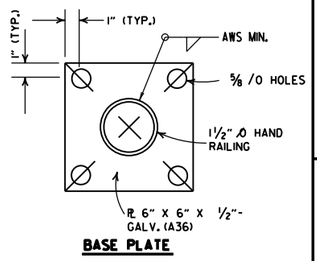
• A 2" MIN. HIGH CURB IS REQUIRED WHEN CONCRETE WALK IS ADJACENT TO THE HAND RAILING. PAYMENT FOR CURB SHALL BE CONSIDERED INCLUDED IN THE PRICE BID FOR CONCRETE WALKS.



DETAIL OF HAND RAILING SET IN CONCRETE

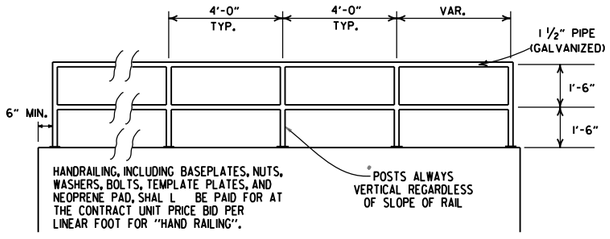


POST CONNECTION TO WALL

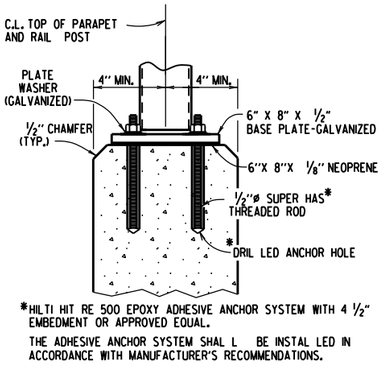


BASE PLATE

POST CONNECTION DETAILS



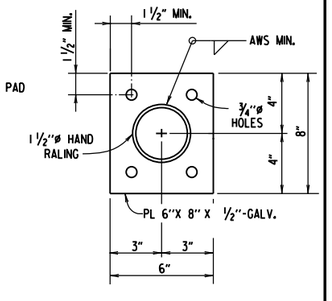
HAND RAILING SHALL CONFORM TO SECTION 633.



*HILTI HIT RE 500 EPOXY ADHESIVE ANCHOR SYSTEM WITH 4 ½" EMBEDMENT OR APPROVED EQUAL.

THE ADHESIVE ANCHOR SYSTEM SHALL BE INSTALLED IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS.

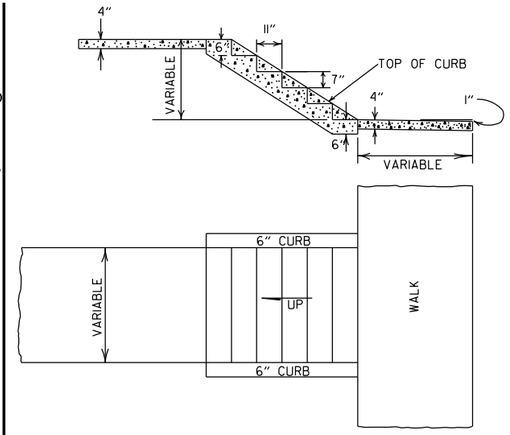
POST CONNECTION TO WALL



BASE PLATE

DETAILS OF ALTERNATE POST ANCHOR SYSTEM
(EPOXY ADHESIVE ANCHORS)

HAND RAILING DETAILS



GENERAL NOTES

1. RISE AND TREAD DIMENSIONS OF STEPS MAY BE VARIED AS DIRECTED BY THE ENGINEER, HOWEVER, TREAD WIDTHS SHALL BE 11" MIN. ALL STEPS IN A FLIGHT SHALL HAVE CONSISTENT TREAD & RISER DIMENSIONS.
2. 1" TRANSVERSE EXPANSION JOINTS SHALL BE PLACED IN CONCRETE WALKS AT 45' INTERVALS.

DETAILS OF CONCRETE STEPS & WALKS

9-12-13	REVISED REINFORCED CONCRETE SPRING BOX	
7-26-12	REMOVED RETAINING WALL DETAILS & REVISED HAND RAILING DETAILS	
4-17-08	REV. JOINT & FOOTING STEP DETAILS	
11-29-07	REVISED RETAINING WALL DRAINAGE	
5-25-06	REVISED PVMT REPAIR OVER CULVERTS (CONC); REVISED REINFORCED CONC SPRING BOX	
10-9-03	REVISED PIPE RAILING DETAILS TO HAND RAILING DETAILS	
4-10-03	REVISED RETAINING WALL DRAWING	
8-22-02	ADDED HAND RAILING DETAIL	
11-16-01	REVISED PVMT REPAIR OVER CULVERTS (CONC); CORRECTED SPELLING IN GENERAL NOTES	
11-18-98	ADDED GENERAL NOTES TO CONCRETE STEPS & WALKS	
7-02-98	ENLARGED PIPE	
4-03-97	ADDED NOTE TO STEEL BAR SCHED.	
10-18-96	CORRECTED SPELLING	
4-26-94	ADD WEEP HOLE;REV. JOINT SPACING IN RET. WALL	
6-2-94	CHANGED CONST. TO CONTRACTION JOINT	
10-1-92	CHANGED MESH FABRIC TO WIRE MESH	10-1-92
8-15-91	DELETED HDWL MODIFICATION DETAIL	8-15-91
11-8-90	DELETED COLD MIX FROM CULV'T. REPAIR	11-8-90
11-30-89	REV. RETAINING WALL STEEL SCHEDULE	11-30-89
11-17-88	V. BARS BEHIND ARROW	665-11-17-88
7-15-88	REV. PAVEMENT REPAIR ADDED HDWL. MODS, DEL. PIPE UNDERDRAINS	649-7-15-88
11-1-84	REV. TRENCH FOR PIPE UNDERDRAIN	510-11-1-84
1-4-83	ELIMINATED CONC. CLASS & ADDED CHAMFER NOTE	682-1-4-83
3-2-81	SPELLING OF "UNDERDRAIN"	721-3-2-81
4-20-79	REV. UNDERDRAIN DET& PAVEMENT REPAIR	674-4-20-79
2-2-76	12"MIN. GRAN. MAT'L. OVER PIPE	919-2-2-76
4-10-75	REM. SPECS. FOR GRAN. MAT'L.	568-4-10-75-853
5-22-74	GRANULAR MAT'L. TO BE SB-3	567-5-22-74-740
10-2-72	REVISED AND REDRAWN	564-10-16-72
DATE	REVISION	DATE FILMED

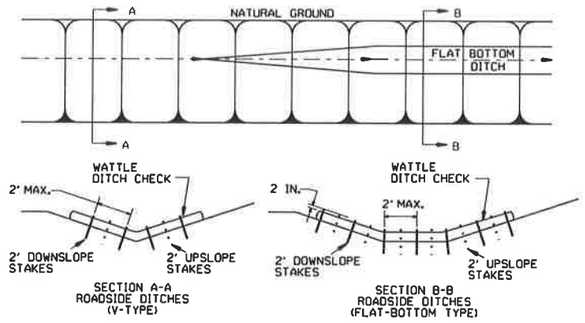
ARKANSAS STATE HIGHWAY COMMISSION

DETAILS OF SPECIAL ITEMS

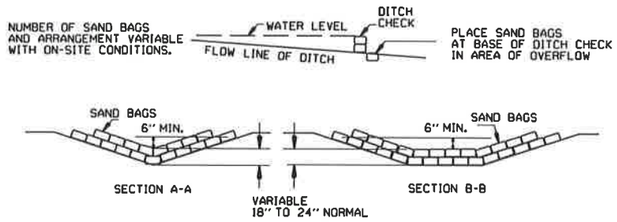
STANDARD DRAWING SI - 1

GENERAL NOTES

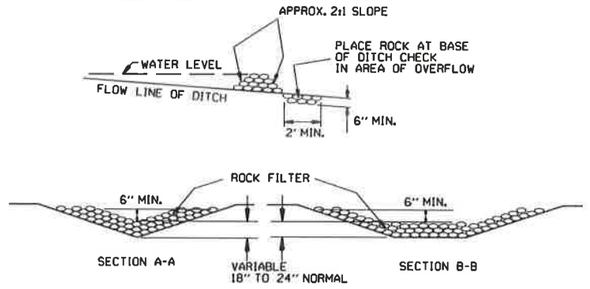
INSTALL A MINIMUM OF 2 UPSLOPE STAKES AND 4 DOWNSLOPE STAKES AT AN ANGLE TO WEDGE WATTLE TO BOTTOM OF DITCH.



WATTLE DITCH CHECK (E-1)



SAND BAG DITCH CHECK (E-5)

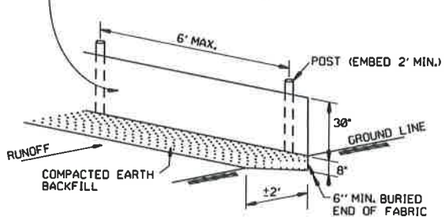


ROCK DITCH CHECK (E-6)

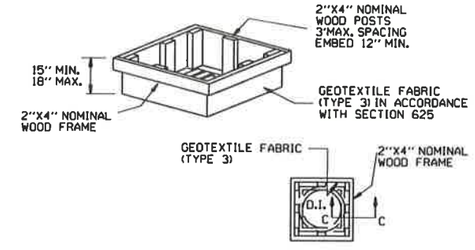
GENERAL NOTES

GEOTEXTILE FABRIC (TYPE 4) IN ACCORDANCE WITH SECTION 625

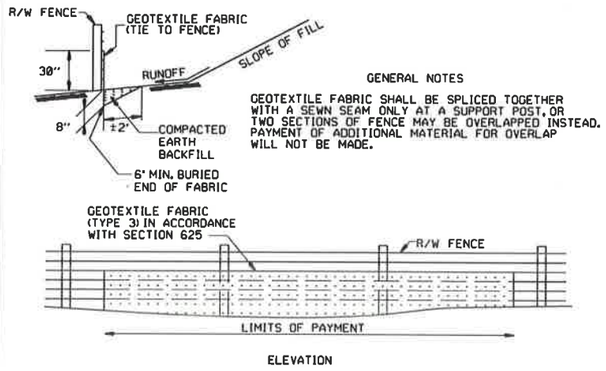
GEOTEXTILE FABRIC SHALL BE SPLICED TOGETHER WITH A SEWN SEAM ONLY AT A SUPPORT POST OR TWO SECTIONS OF FENCE MAY BE OVERLAPPED INSTEAD. PAYMENT OF ADDITIONAL MATERIAL FOR OVERLAP WILL NOT BE MADE.



SILT FENCE (E-11)



DROP INLET SILT FENCE (E-7)



GENERAL NOTES

GEOTEXTILE FABRIC SHALL BE SPLICED TOGETHER WITH A SEWN SEAM ONLY AT A SUPPORT POST, OR TWO SECTIONS OF FENCE MAY BE OVERLAPPED INSTEAD. PAYMENT OF ADDITIONAL MATERIAL FOR OVERLAP WILL NOT BE MADE.

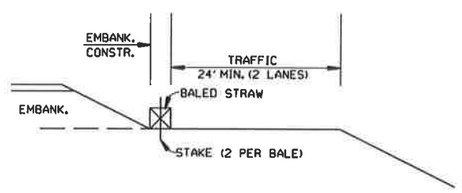
SILT FENCE ON R/W FENCE (E-4)

GENERAL NOTES

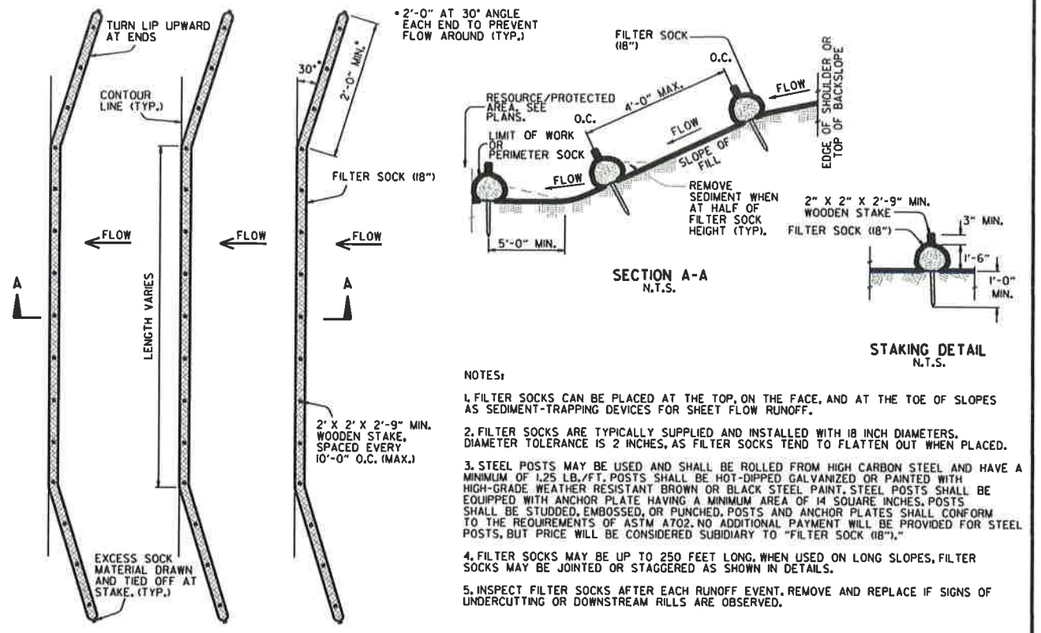
1. STRAW BALES SHALL BE INSTALLED SO THAT THE BINDINGS ARE ORIENTED AROUND THE SIDES RATHER THAN ALONG THE TOPS AND BOTTOMS OF THE BALES. THE BALES SHALL BE A MINIMUM OF 30 INCHES IN LENGTH.

2. NO GAPS SHALL BE LEFT BETWEEN BALES.

3. BALED STRAW FILTER BARRIERS COMPLETED AND ACCEPTED WILL BE MEASURED BY THE BALE IN PLACE AS AUTHORIZED BY THE ENGINEER AND WILL BE PAID FOR AT THE CONTRACT UNIT PRICE BID PER BALE FOR BALED STRAW DITCH CHECKS.



BALED STRAW FILTER BARRIER (E-2)



NOTES:

1. FILTER SOCKS CAN BE PLACED AT THE TOP, ON THE FACE, AND AT THE TOE OF SLOPES AS SEDIMENT-TRAPPING DEVICES FOR SHEET FLOW RUNOFF.

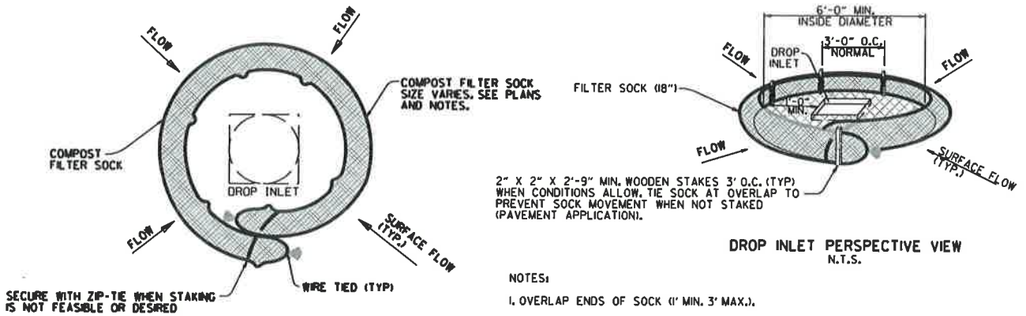
2. FILTER SOCKS ARE TYPICALLY SUPPLIED AND INSTALLED WITH 18 INCH DIAMETERS. DIAMETER TOLERANCE IS 2 INCHES, AS FILTER SOCKS TEND TO FLATTEN OUT WHEN PLACED.

3. STEEL POSTS MAY BE USED AND SHALL BE ROLLED FROM HIGH CARBON STEEL AND HAVE A MINIMUM OF 1.25 LB./FT. POSTS SHALL BE HOT-DIPPED GALVANIZED OR PAINTED WITH HIGH-GRADE WEATHER RESISTANT BROWN OR BLACK STEEL PAINT. STEEL POSTS SHALL BE EQUIPPED WITH ANCHOR PLATE HAVING A MINIMUM AREA OF 14 SQUARE INCHES. POSTS SHALL BE STUDDED, EMBOSSED, OR PUNCHED. POSTS AND ANCHOR PLATES SHALL CONFORM TO THE REQUIREMENTS OF ASTM A702. NO ADDITIONAL PAYMENT WILL BE PROVIDED FOR STEEL POSTS, BUT PRICE WILL BE CONSIDERED SUBIDIARY TO "FILTER SOCK (18")."

4. FILTER SOCKS MAY BE UP TO 250 FEET LONG. WHEN USED ON LONG SLOPES, FILTER SOCKS MAY BE JOINTED OR STAGGERED AS SHOWN IN DETAILS.

5. INSPECT FILTER SOCKS AFTER EACH RUNOFF EVENT. REMOVE AND REPLACE IF SIGNS OF UNDERCUTTING OR DOWNSTREAM RILLS ARE OBSERVED.

FILTER SOCK ALONG SLOPE (E-3)



NOTES:

1. OVERLAP ENDS OF SOCK (1' MIN. 3' MAX.).

2. USE 18" DIA. SOCK IN NON-TRAFFIC AREAS OR AREAS WHERE SAFETY IS NOT A CONCERN.

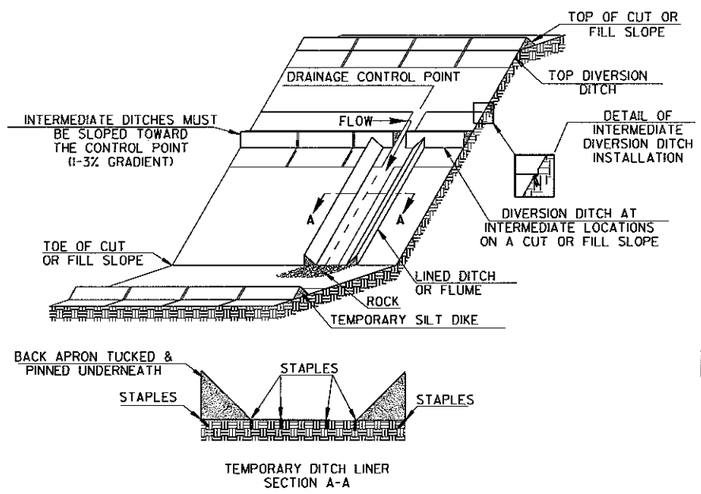
COMPOST FILTER SOCK DROP INLET PROTECTION (E-13)

DATE	REVISION	FILMED
11-16-17	ADDED FILTER SOCK E-3 AND E-13	
12-15-11	DELETED BALED STRAW DITCH CHECK & ADDED WATTLE DITCH CHECK	
11-18-98	ADDED NOTES	
07-02-98	ADDED BALED STRAW FILTER BARRIER (E-2)	
07-20-95	REVISED SILT FENCE E-4 AND E-11	7-20-95
07-15-94	REV. E-4 & E-11 MIN. 13" BURIED END OF FABRIC	
06-02-94	REVISED E-1,4,7 & 11; DELETED E-2 & 3	6-2-94
04-01-93	REDRAWN	
10-01-92	REDRAWN	
08-02-76	ISSUED R.D.M.	298-7-28-76

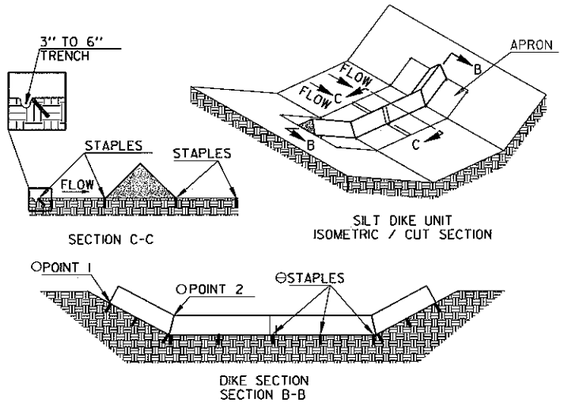
ARKANSAS STATE HIGHWAY COMMISSION

TEMPORARY EROSION CONTROL DEVICES

STANDARD DRAWING TEC-1



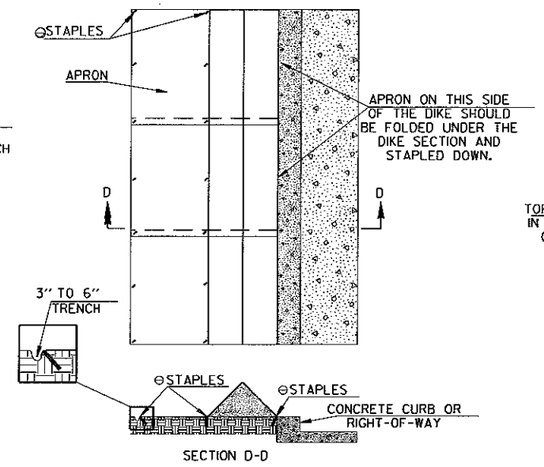
TRIANGULAR SILT DIKE INSTALLATION
FOR
DIVERSION DITCH AND/OR DITCH LINER



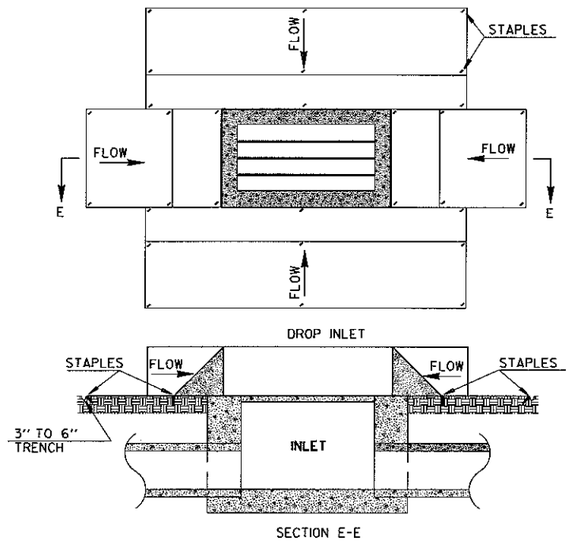
TRIANGULAR SILT DIKE INSTALLATION
FOR
ROADWAY DITCH OR DRAINAGE DITCH

○ POINT "1" MUST BE HIGHER THAN POINT "2" TO ENSURE THAT WATER FLOWS OVER THE DIKE AND NOT AROUND THE ENDS.

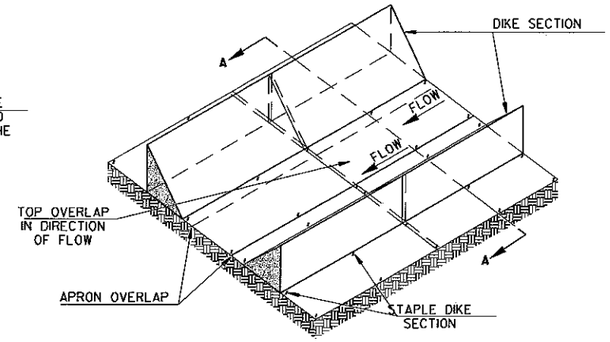
⊖ STAPLES SHALL BE PLACED WHERE THE UNITS OVERLAP AND IN THE CENTER OF THE UNIT AS SHOWN ON THE DIAGRAM.



TRIANGULAR SILT DIKE INSTALLATION
FOR
CONTINUOUS BARRIER



TRIANGULAR SILT DIKE INSTALLATION
FOR
DROP INLETS



TRIANGULAR SILT DIKE INSTALLATION
FOR
TEMPORARY DITCH LINER

GENERAL NOTES

1. THIS WORK SHALL CONSIST OF FURNISHING, INSTALLING, AND MAINTAINING THE TRIANGULAR SILT DIKE. THE DIKES SHALL BE USED AS A CONTINUOUS LINE BARRIER AT THE TOE OF SLOPE OR ACROSS THE ROADWAY DITCH TO CONTAIN SEDIMENT AND MINIMIZE EROSION, OR AS DIRECTED BY THE ENGINEER. THESE DIKES SHALL BE INSTALLED AND LOCATED AS SOON AS CONSTRUCTION WILL ALLOW OR AS DIRECTED BY THE ENGINEER.

2. TRIANGULAR SILT DIKE SHALL BE TRIANGULAR SHAPED HAVING A HEIGHT OF AT LEAST 8" TO 10" IN THE CENTER WITH EQUAL SIDES AND A 16" TO 20" BASE. THE TRIANGULAR SHAPED INNER MATERIAL SHALL BE URETHANE FOAM. THE OUTER COVER SHALL BE A WOVEN GEOTEXTILE FABRIC PLACED AROUND THE INNER MATERIAL & ALLOWED TO EXTEND BEYOND BOTH SIDES OF THE TRIANGLE 24" TO 36". THIS FABRIC SHOULD BE MILDEW RESISTANT, ROT-PROOF AND RESISTANT TO HEAT AND ULTRAVIOLET RADIATION MEETING REQUIREMENTS FOR SEDIMENT CONTROL IN AASHTO M288. THE DIKES SHALL BE ATTACHED TO THE GROUND WITH WIRE STAPLES. THE STAPLES SHALL BE NO. 11 GAUGE WIRE AND BE AT LEAST 6" TO 8" LONG. STAPLES SHALL BE PLACED AS SHOWN ON THESE DETAILS.

   THE CONTRACTOR SHALL INSPECT ALL DIKES AFTER EACH RAINFALL EVENT OF AT LEAST 0.5" OR GREATER. ANY DEFICIENCIES OR DAMAGE SHALL BE REPAIRED BY THE CONTRACTOR. ACCUMULATED SILT OR DEBRIS SHALL BE REMOVED AND RELOCATED AS DIRECTED BY THE ENGINEER. IF THE DIKES ARE DAMAGED OR INADVERTENTLY MOVED DURING THE SILT REMOVAL PROCESS, THE CONTRACTOR SHALL IMMEDIATELY REPLACE AFTER DAMAGE OCCURS.

3. ACCEPTED TRIANGULAR SILT DIKE, MEASURED AS PROVIDED ABOVE, WILL BE PAID FOR AT THE CONTRACT UNIT PRICE BID FOR TRIANGULAR SILT DIKE. PRICE BID WILL INCLUDE THE COST OF FURNISHING THE DIKES, INSTALLING, MAINTAINING AND REMOVAL WHEN DIRECTED BY THE ENGINEER.

SYMBOLOGY
SYMBOL TO BE USED TO DENOTE DEVICE ON PLANS

NOTE: SILT DIKE SHOULD ONLY BE USED FOR DROP INLETS IN SUMP LOCATIONS.

DATE	REVISION	FILMED
7-26-12	REVISED GENERAL NOTE 2.	
12-15-11	ISSUED	

ARKANSAS STATE HIGHWAY COMMISSION

TEMPORARY EROSION CONTROL DEVICES

STANDARD DRAWING TEC-4

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: 2.17.2023

Sign Co. or Sign Owner

Name Action Signs
Address 2700 John Harden Dr
City, State, Zip Jacksonville, AR 72076
Phone 501.457.7391
Email Address tim@actionsignandneon.com

Property Owner

Name Wendy's
Address 2206 N Reynolds Road
City, State, Zip Bryant, AR 72022
Phone 501.229.9361
Email Address nsimpson@livecoteam.com

GENERAL INFORMATION

Name of Business Wendy's

Address/Location of sign 2206 N Reynolds Road 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.

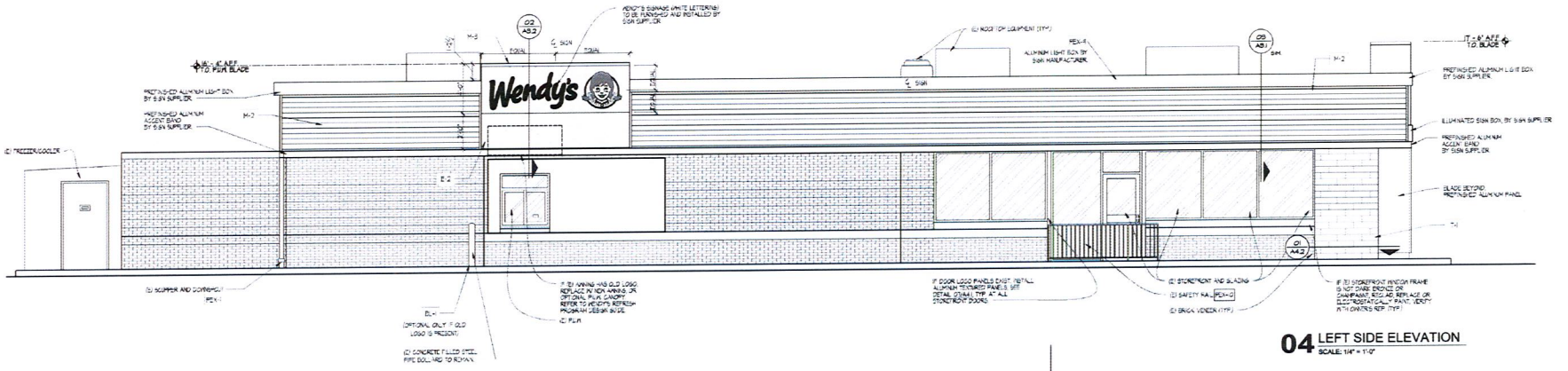
READ CAREFULLY BEFORE SIGNING

I _____, 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

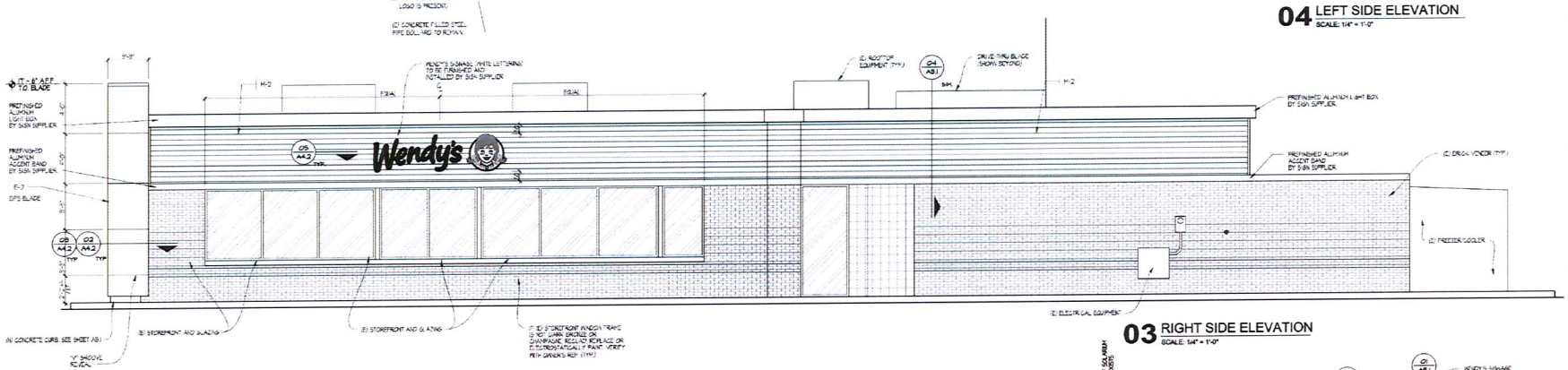
that no sign may be placed in public right of way. I understand that I must comply with all Building and Electrical Codes and that it is my responsibility to obtain all necessary permits.

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

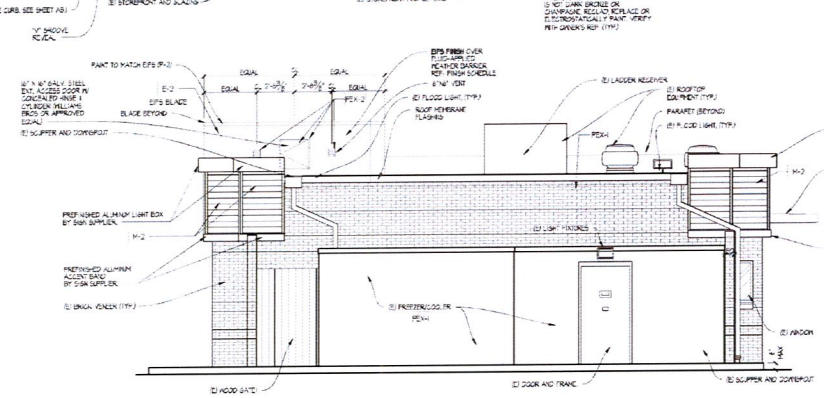
SIGN	Type (Façade, Pole, Monument, other)	Dimensions (Height, Length, Width)	Sqft (Measured in whole as rectangle)	Height of Sign (Measured from lot surface)		Column for Admin Certifying Approval
				Top of Sign	Bottom of Sign	
A	Wall Sign (Left)	3'x11'	33'	16'	13	
B	Wall Sign (Right)	3'x11'	33'	13.5'	10.5'	
C	Wall Sign (Front)	3'x11'	33'	17'	14'	
E	Wall Sign (Front)	9"x12'	9'	11'	10'	
F	Pole Sign Faces	16'x19'	304'			
G	Readerboard Pole Faces	5'x9'	45'			



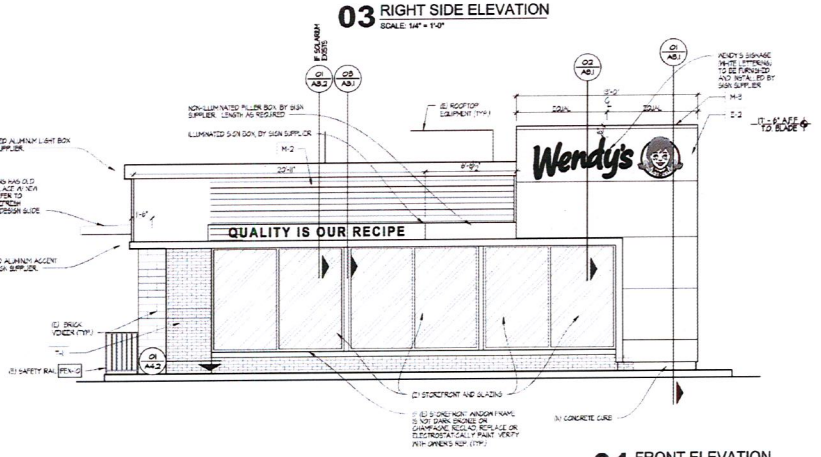
04 LEFT SIDE ELEVATION
SCALE: 1/4" = 1'-0"



03 RIGHT SIDE ELEVATION
SCALE: 1/4" = 1'-0"



02 REAR ELEVATION
SCALE: 1/4" = 1'-0"



01 FRONT ELEVATION
SCALE: 1/4" = 1'-0"

SITE NUMBER:
BUILDING TYPE:
ASSET TYPE: FREESTA
CLASSIFICATION: RE
OWNER: COMPANY/FRAN
BASE VERSION: 2022 S
UPGRADE CLASSIFICATION:
PROJECT YEAR:
DESIGN TYPE: (2.0) UM B
DRAWING RELEASE: 2022 S

McIntos

The McIntosh Group
1850 South Boulder
Tulsa, Oklahoma 74
Telephone 918.585.
Telefax 918.583.72

PROJECT TYPE: 30
REFRES

Wendy's

2206 N REYNOLDS RD
BRYANT AR 72022

REV.	DATE	DESCRIPTION

ISSUE DATE: 01/28/2022
PROJECT NUMBER: T.B.D.
DRAWN BY: XXX
CHECKED BY: XXX

SEAL
REGISTERED ARCHITECT
ALFRED PAGANO
No. 3987
STATE OF ARKANSAS
LICENSE NUMBER: 1004
EXPIRATION: 12/31/

SHEET NAME
EXTERIOR ELEVATIONS

SHEET NUMBER
A2.1

Folder Name
L:\Service and Install\PICTURES\WENDYS - BRYANT\2.17.23

Designer

File Name
2206 N reynolds rd bryant AR 72022 quote 2.2.23.fs

Job Number

Description

ACTION SIGNS
SIGNS WITH DIRECTION

P. O. Box 188
Jacksonville, AR 72076
2700 John Harden Dr.
Jacksonville, AR 72076

Ph 501-457-7391
Ph/Text 501-712-0012
Fax 501-457-7393

ARTWORK APPROVAL **MUST** BE MADE IN WRITING.
THIS CAN BE DONE BY A SIMPLE EMAIL, TEXT, OR FAX
WITH THE APPROVED ARTWORK ATTACHED.
PRODUCTION WILL NOT START OTHERWISE.

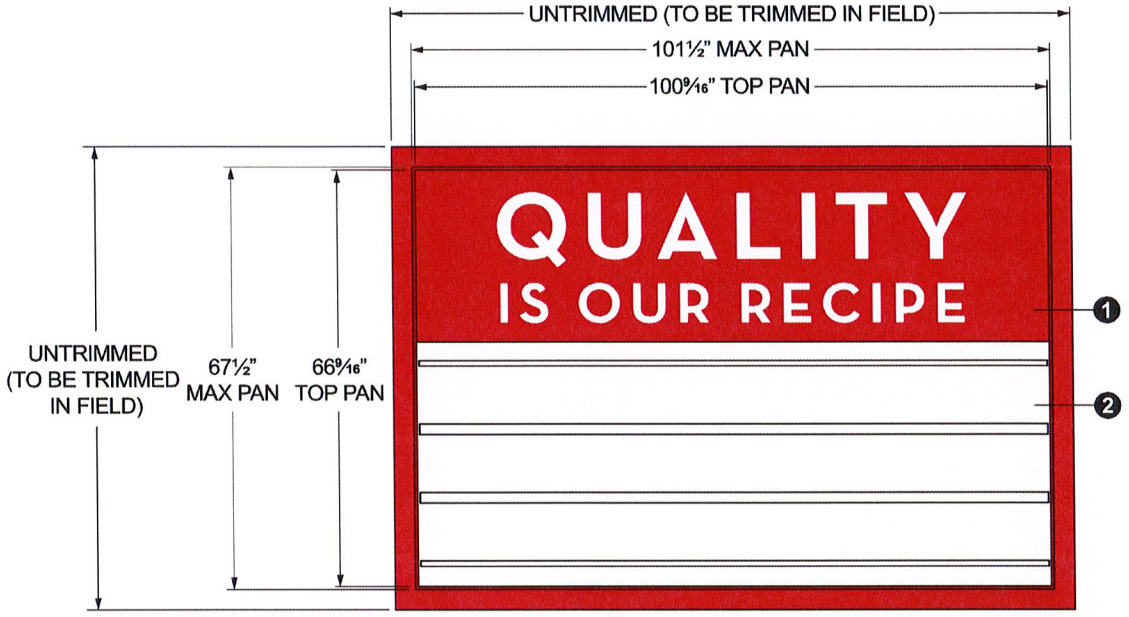
Customer	Name	Design Time	Design Time Pricing
Phone	Email	Date 2/17/2023	Minutes

Design time is at a rate of $60 per hour, in 15 minute increments. Your first 15 minutes is *FREE*.

COLORS SHOWN ARE FOR REFERENCE ONLY. COLORS MAY VARY.

READER BOARD &
FEATUREBOARD REPLACEMENT

6′ x 9′
NSS#: 81008512



MATERIALS & SPECS

1. 1¾" deep pan formed ³⁄₁₆" modified acrylic with ½" deep embossed copy
2. 3 lines of 8" copy

- PMS 186c - Background
- White (letters)

rev 6/17

National Sign Systems®
4200 Lyman Court
Hilliard Ohio, 43026
800.544.6726
614.850.2540
sales@natsignsys.com
nationalsignsystems.com

HI-RISE FACE REPLACEMENT

WHR 220

NSS#: 81007533

MATERIALS & SPECS

Actual: 214 ft² | Nearest Rectangle: 280 ft²

1. Face - (2) translucent vinyl flex faces decorated first surface

- PMS 186c - hair, freckles
- PMS 201c - hair, outline
- PMS 698c - face, neck
- PMS 299c - bow, shirt, brooch
- PMS 439c - outline
- White

rev 6/17

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4200 Lyman Court
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sales@natsignsys.com
nationalsignsystems.com

City of Bryant, Arkansas
Community Development
210 SW 3rd Street Bryant, AR 72022
501-943-0943 Colton –
Cleonard@cityofbryant.com

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: 2/15/23

Sign Co. or Sign Owner

Name Aero Signs LLC
Address 3308 PIKE AVE
City, State, Zip NLR, AR 72118
Phone 501-246-4952
Email Address sales@aero-signs.com

Property Owner

Name Pecan Tree Co.
Address 219 Brown Lane
City, State, Zip Bryant, AR 72022
Phone 501.607.3188 / 501.847.7077
Email Addres. judy@masalaenterprises.biz

GENERAL INFORMATION

Name of Business Alliance Technical Group
Address/Location of sign 219 Brown Lane 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.

READ CAREFULLY BEFORE SIGNING

I _____, 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


Alliance
TECHNICAL GROUP
38"X96
101 VYM


30"X72
Alliance
TECHNICAL GROUP