Bryant Development and Review Committee Meeting

Boswell Municipal Complex - City Hall Conference Room

210 SW 3rd Street

Date: April 27, 2023 - **Time:** 9:00 AM

Call to Order

Old Business

New Business

1. Boutique and Eyelash Salon - 2112 Brandon Road - Site Plan

Michael Bolin - Requesting Site Plan Approval

- 0706-PLN-02.pdf
- 0706-APP-01.pdf

2. Hilldale Crossing PH 2 - Final Plat

Hope Consulting - Requesting Recommendation for Final Plat Approval

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

3. Cypress Valley PH 2 - Final Plat

Hope Consulting - Requesting Recommendation for Final Plat Approval

- 0658-AHD-01.pdf
- 0658-PLN-03.pdf
- 0658-ASB-01.pdf
- 0658-BOA-01.pdf
- 0658-LTR-01.pdf
- 0658-MTN-01.pdf
- 0658-BND-01.pdf

4. Midland Road Estates - Preliminary Plat

Hope Consulting - Requesting Recommendation for Preliminary Plat Approval

- 0691-RSP-01.pdf
- 0691-SWP-02.pdf
- 0691-DRN-02.pdf
- 0691-PLN-02.pdf
- 0691-GTR-01.pdf

- 0691-SWB-01.pdf
- 0691-MTN-01.pdf
- 0691-LTR-01.pdf

5. **Hilltop Landing Subdivision** - Preliminary Plat

Hope Consulting - Requesting Recommendation for Preliminary Plat Approval

- 0690-SWB-01.pdf
- 0690-MTN-01.pdf
- 0690-DRN-02.pdf
- 0690-SWP-01.pdf
- 0690-PLN-02.pdf
- 0690-RSP-01.pdf
- 0690-DRN-01.pdf
- 0690-LTR-01.pdf

6. **Farr Subdivision** - Johnswood Road

Hope Consulting - Requesting Recommendation for Subdivision Plat Approval

- 0715-PLN-01.pdf

7. **Coral Ridge Subdivision** - Setback Variances - Lots 1, 7, 11, 15, 16, 24, 28

Hope Consulting - Requesting Recommendation for Approval of Variances on Setbacks

- LOT 15 VAR-PACKET CORAL RIDGE (1).pdf
- LOT 1 VAR-PACKET CORAL RIDGE.pdf
- LOT 7 VAR-PACKET CORAL RIDGE.pdf
- LOT 11 VAR-PACKET CORAL RIDGE.pdf
- LOT 16 VAR-PACKET CORAL RIDGE.pdf
- LOT 24 VAR- PACKET CORAL RIDGE.pdf
- LOT 28 VAR-PACKET CORAL RIDGE.pdf

8. **Starbucks - 20701 I-30** - Remodel

WD Partners - Requesting Site Plan Approval for Remodel

- 0716-PLN-01.pdf

9. **REQUEST TO ADD - 2415 Raymar Road Rezoning** - R-2 to C-1

Rita Elder - Requesting Rezoning from R-2 to C-1

- 0719-PLT-01.pdf
- 0719-PROP-01.pdf
- 0719-APP-01.pdf
- 0719-MAP-01.pdf

Staff Approved

10. **Cynergy Kids Pediatric Therapy - 3417 Market Place Ave** - Sign Permit

L Graphics - Requesting Sign Permit Approval - STAFF APPROVED

- 0712-APP-01.pdf

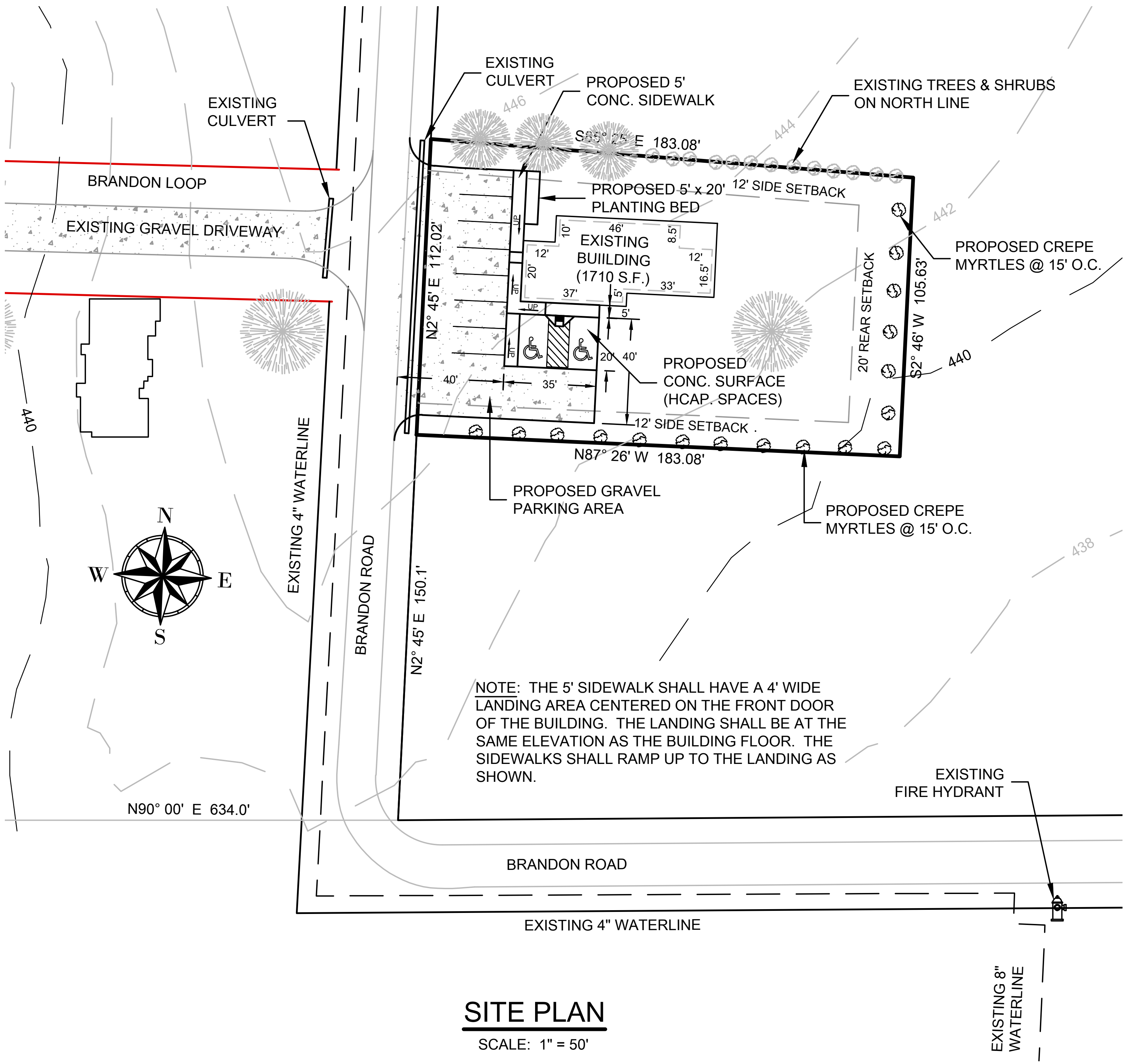
11. **Farmers Union Insurance - 3417 Market Place Ave** - Sign Permit

L Graphics - Requesting Sign Permit Approval - STAFF APPROVED

- 0711-APP-01.pdf

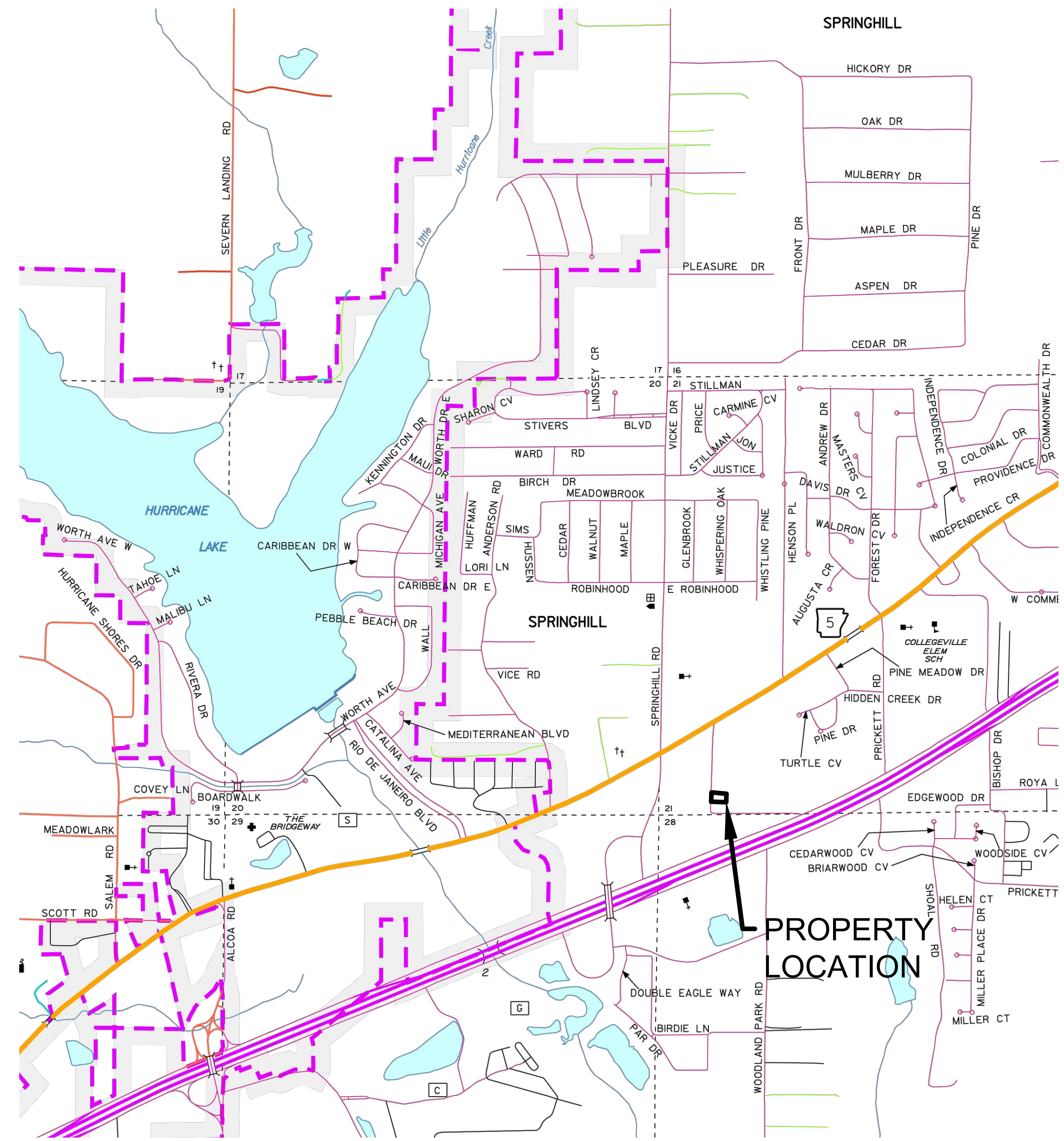
Permit Report

Adjournments



SITE PLAN

SCALE: 1" = 50'



VICINITY MAP

SCALE: 1" = 2000'

Legal Description – 2112 Brandon Road, Bryant, AR

All that part of the SW ¼ of the SW ¼ Section 21, Township 1 South, Range 14 West, Saline County, Arkansas, more particularly described as follows: Commencing at the SW corner of said SW ¼ SW ¼, run thence N 90° 00' E for 634' to the East line of Brandon Road; run thence N 02° 45' E along said road for 150.1' to the Point of Beginning of land herein described; thence West parallel with the South line for 203' to the Point of Beginning of the land herein described; run thence N 02° 45' E along said road for 112.02'; thence S 85° 25' E for 183.08' thence S 02° 46' W for 105.63'; thence N 87° 26' W for 183.08' to the Point of Beginning. Tract contains 0.46 acres, more or less.

NAME OF DEVELOPMENT: BOUTIQUE & EYELASH SALON

CURRENT ZONING: C1

NAME AND ADDRESS OF OWNER: R & RJ HOLDINGS
2205 BRANDON RD.
BRYANT, ARKANSAS 72022

NAME AND ADDRESS OF DEVELOPER: R & RJ HOLDINGS
2205 BRANDON RD.
BRYANT, ARKANSAS 72022

PHYSICAL ADDRESS OF PROJECT: 2112 BRANDON ROAD
BRYANT, ARKANSAS 72022

MICHAEL BOLIN & ASSOCIATES, INC.
CONSULTING ENGINEERS
P.O. BOX 605, BENTON, AR 72018, (501) 776-2692
FAX (501) 776-2619 EMAIL: cmbolin@sbcglobal.net

BRYANT, ARKANSAS
R & RJ HOLDINGS

SITE PLAN
BOUTIQUE & EYELASH SALON
2112 BRANDON ROAD

PLAN & DETAILS

STATE OF ARKANSAS REGISTERED PROFESSIONAL ENGINEER No. 4197 C. MICHAEL BOLIN

AS-BUILT DATE:

CONTACT PERSON: M. BOLIN

SCALE: AS SHOWN

DATE: MARCH 2023

SITE PLAN
PLAN
&
DETAILS

JOB NO.

SHEET NO. 1 OF 1

Bryant Planning Commission

SMALL SCALE DEVELOPMENT
COMMERCIAL BUILDING
CHECKLIST

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

PC MEETING DATE:	THURSDAY OF EACH WEEK
TIME:	9:00 A.M.
PLACE:	ADMINISTRATION CONFERENCE ROOM-BRYANT OFFICE COMPLEX
AGENDA DEADLINE:	5:00 P.M. FRIDAY PRIOR TO SCHEDULED MEETING DATE

REQUIREMENTS FOR SUBMISSION

1. COMPLETED CHECKLIST (SUBDIVISION OR BUILDING)
2. ADA/ABA FORM COMPLETED
3. TWO FULL SETS OF BUILDING PLANS
4. 12 FOLDED COPIES OF SITE PLAN (MINIMUM SIZE 17" X 34") THAT INCLUDES THE FOLLOWING:
   A, VICINITY MAP
   B. LEGAL DESCRIPTION
   C. LANDSCAPING PLAN
5.` 12 FOLDED COPIES OF FLOOR PLAN
6. 12 COPIES OF FRONT AND REAR BUILDING ELEVATIONS
7. A CD IN .PDF FORMAT
8. COPY OF ADEQ STORMWATER POLLUTION PREVENTION PLAN FOR PROPERTY PARCEL CONTAINING ONE ACRE OR LARGER.
9. 2 COPIES OF STORMWATER DETENTION PLAN
10. $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.

Michael Bol
SIGNATURE

4/4/2023
DATE

City of Bryant Commercial Building Checklist

Name of Development BOUTIQUE & EYELASH SALON

Site Location 2112 BRANDON ROAD Current zoning C-1

Owner________ Phone________

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.
- N/A EXISTING BUILDING 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.
- N/A 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 0 ft. Side 5 ft. CNR Side N/A ft. Back 55 ft.	✓	
Parking requirements can be satisfied Floor Space 1710 sq.ft. divided by 300 = 5.7 (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)

1. C-1 Zoning - Neighborhood Commercial

	YES	NO
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	N/A	

2. C-2 Zoning - Lots fronting along roadways designated as Interstate 30 and frontage roads, State Highway 5 and 183

	YES	NO
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.

	YES	NO
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. 12 ~~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. 12 ~~20~~ copies of Landscaping Plan (folded to no larger than 8 ½ X 14 size)
- 32. 12 ~~20~~ copies of building floor plan (folded to no larger than 8 ½ X 14 size)
- N/A 33. Copy of Stormwater Detention approval
- N/A 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 BOUTIQUE & EYELASH SALON in the City of Bryant, Arkansas complies with the above regulations, laws and codes.

Bonnie Beard	Michael [signature]
Owner	Engineer/Architect
2205 BRANDON ROAD	501-231-6558
Mailing Address	Phone #
BRYANT, AR 72022	4/4/2023
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**________

Signature of Owner
(if owner-builder) Ronnie Beard **Date** 4-4-23

Application of Permit Approved: ________________________ **Date**________
Commission - Chairman

Bryant Water & Sewer Department

GREASE TRAP STANDARDS

The City of Bryant requires all commercial buildings comply with plumbing codes found in the Arkansas State Plumbing Code, Latest Edition. **All new construction, remodeling, and modifications must conform** to these plumbing standards for places of public accommodation and commercial facilities. These guidelines contain general design standards for construction and site elements relating to plumbing.

As of 7/27/04, the Bryant Sewer & Water Commission requires stringent specification standards for commercial or public businesses that involve any food preparation on the premise. The new standard requires calculations, and associated data to be submitted to the Bryant Water Utilities General Manager concurrent with the proposed building plumbing plans along with a grease trap calculation form. Building Permits will not be issued until this form has been received and approved by the Bryant Water Utilities General Manager.

All new buildings or strip centers containing sections designated for commercial enterprise are encouraged to provide a stub-out for a separate waste line for future grease interceptor installation. The owner of a new strip center shall consider suitable physical property space and sewer gradient that will be conducive for the installation of an exterior, in-ground grease interceptor(s) for any flex space contained within the strip center. Physical Property Restrictions and sewer gradient shall not be a defense for failure to install an exterior, in-ground grease interceptor.

I hereby certify that I have read and examined the above notice and will comply with all guidelines of the City of Bryant Water & Sewer Department. I further understand that copies of the Grease Interceptor Design and Structural Criteria regulations will be available from the Bryant Water/Wastewater Plant (501-847-8083) during business hours.

Project Name ____________________

Signature of Contractor
or Authorized Agent____________________ Date__________

Signature of Owner
(if owner-builder) Ronnie Beard Date 4-4-23

Calculations
Approved: ____________________ Date__________
Bryant Water Utilities General Manager

Bryant Planning Commission

Subdivision Checklist

Approved by
Bryant Planning Commission
07/14/2003 Revised 6/18/2007

Instructions

The attached checklist must be completed by the owner and subdivision engineer and must be submitted along with the Preliminary Plat Plan and other specified documentation for review and approval by the Planning Commission. The owner may not begin developing the subdivision until the review of the Preliminary Plat plan is approved.

No changes or alterations can be made to the approved Preliminary Plat Plan without Planning Commission approval.

When all lots have been surveyed, the utilities and drainage measures are in place, and roads have been constructed, the owner and engineer will submit a Final Plat Plan for approval by the Commission. This Final Plat Plan will incorporate all approved changes and will be verified by the City Engineer. No lots will be sold or rights-of-way and easements conveyed until the Final Plat has been submitted and approved.

Fees due to City of Bryant upon submission of Preliminary Plat application

- \$300.00 + \$3.00 per lot - for Subdivision preliminary plat review $300+(192*$3)=$876
- \$250.00 or \$25.00 per lot (**whichever is greater**) - Stormwater Detention and Drainage Plan Engineering Fee 128*$25.00=$4,800
- A Surety Bond or Cashier's check in the amount of 10% of the estimated development cost must be furnished within 10 days after Preliminary Plat approval.

Fees due to Bryant Water and Sewer Department upon submission of Final Plat application

- \$100 per lot - Water/Sewer Impact Fee
- \$100 per Subdivision Phase - Water/Sewer Flushing Fee

Fees due to City of Bryant upon submission of Final Plat application

- \$25.00 + \$1.00 per lot - for Subdivision Final Plat review

Subdivision Review= $376
Stormwater Review= $4,800
Total Fee Required= $5,176

City of Bryant Subdivision Checklist

Subdivision/Project Name Midland Road Subdivision

Contact Person Jonathan Hope **Phone** 501-860-0467

Mailing Address 129 N Main Street Street Benton, Arkansas

I. Basic Information Needed On The Plat

√ ▲ 1. Name of Subdivision/Project
√ ▲ 2. Current zoning N/A Proposed R-1.S
√ ▲ 3. Name and Address of owner of Record
√ ▲ 4. Illustrate Source of Title giving deed record book and page number
√ ▲ 5. Name & address of the sub-divider
√ ▲ 6. Date of Survey
√ ▲ 7. Vicinity map locating streets, highways, section lines, railroad, schools, & parks within ½ mile
√ ▲ 8. Legal description of the property with exact boundary lines
√ ▲ 9. Acreage of property
√ ▲ 10. Number of Lots
√ ▲ 11. Lot area in square feet
√ ▲ 12. Lot lines with appropriate dimensions
√ ▲ 13. Building setback lines
√ ▲ 14. Preliminary Engineering certificate seal and signature on each page
√ ▲ 15. Certificate of Engineering Accuracy
√ ▲ 16. Certificate of Owner
√ ▲ 17. Certificate of Final Plat Approval
√ ▲ 18. Certificate of Recording
√ ▲ 19. Show scale (not less than 1" = 100')
√ ▲ 20. North Arrow
√ ▲ 21. Show Title block
√ ▲ 22. Show adjoining property owners
√ ▲ 23. Layout of all proposed streets including traffic control devices (stop signs, speed limit, etc.)
√ 24. Layout of all subdivision entrance street upgrades
√ ▲ 25. Layout of all proposed alleys
√ ▲ 26. Layout of all proposed sidewalk systems
√ ▲ 27. Layout identifies any FEMA flood plain and flood way property within the 100-year flood elevation. (Provide Corp of Engineers 404 Permit if required)
√ ▲ 28. Drainage easements for stormwater run-off and detention giving dimensions, locations, and purpose
√ ▲ 29. Layout accommodates Master Street Plan segments within the boundaries
√ ▲ 30. Street layout ties to existing adjoining subdivision stub-out streets and provides stub-out streets for future adjoining subdivisions.
√ ▲ 31. Street width and right-of-way properly shown for each functional classification
√ ▲ 32. Street centerlines showing angles of deflection, intersection, radii, length oftangents and arcs, and degree of curvature with basis of curve data
√ ▲ 33. Typical cross section of streets
√ ▲ 34. Location and name of existing streets
√ ▲ 35. New street names that are not similar to existing street names
√ ▲ 36. Show street lights
√ ▲ 37. Show Fire Hydrant placement

√ ▲ 38. Show and label all permanent & proposed easements
√ ▲ 39. Any proposed open space must be shown
√ ▲ 40. Show the direction and flow of all water courses entering the tract
√ ▲ 41. Show the direction and flow of all water courses leaving the tract
√ ▲ 42. The drainage area of all water courses above the points of entry.
√ ▲ 43. The downstream drainage channel and drainage structures substantially impacted by the subdivision/project.
√ ▲ 44. Show source of water supply
√ ▲ 45. Show location of waste water connection to municipal main & sanitary sewer layout
√ ▲ 46. A phasing plan outlining the boundaries for each phase

II. Additional Information Needed, But Not Necessarily On The Plat

√ ▲ 47. Natural features within the proposed subdivision including drainage channels, bodies of water, wooded areas, and other significant features
√ ▲ 48. Existing streets, buildings, water courses, railroads. Culverts, utilities and easement on and adjacent to the tract.
√ ▲ 49. Where method of disposal of wastewater is other than connection to a public waste water system, detailed information shall accompany the plat.
√ ▲ 50. Calculations and field notes, including drainage calculations along with support drawing
51. Stormwater detention plan approval from City Engineer (attach copy of approval)
√ ▲ 52. The Certificate of Preliminary Engineering Accuracy on each set of street and drainage plans.
√ ▲ 53. ADA Accessibility Standard Form completed (and attached)
√ ▲ 54. A Bill of Assurance has been prepared for this subdivision (and attached)
√ ▲ 55. All lots comply with minimum square footage area and minimum lot width at the front building line
√ ▲ 56. Street pavement design will be as specified by City or AHTD design procedures, approved by the City Engineer.
√ ▲ 57. Made the "One Call" prior to site clearance or other excavation activity

III. Preliminary Plat Attachments
(Application will not be accepted until all attachment requirements are met)

√ ▲ 58. **Letter to Planning Commission** stating your request
√ ▲ 59. Completed **Checklist**
√ ▲ 60. **Completed agreement to provide performance assurance**
√ ▲ 61. **Subdivider Performance Bond or Cashier's Check** for infrastructure installation
√ ▲ 62. Landscaping plan of any proposed common open space
√ ▲ 63. **Draft of Bill of Assurance** proposed for the subdivision (if applicable)
√ ▲ 64. **20 copies of Preliminary Plat Plan (folded)** that includes vicinity map (minimum size 17" X 34" paper)
√ ▲ 65. **Two (2) IBM compatible diskettes or CDR's** with pertinent data and Plat in CAD compatible .DXF electronic file format
√ ▲ 66. Copy of **Stormwater Detention approval**
√ ▲ 67. 2 copies **Plan and profile** of all streets
√ ▲ 68. Receipt for **$300.00 + $3.00 per lot for preliminary Subdivision fee**
√ ▲ 69. Receipt for **$250.00 or $25.00 per lot (whichever is greater) for Stormwater Detention and Drainage Plan review**
√ ▲ 70. Copy of **ADEQ Stormwater Pollution Prevention Plan** for property parcel containing one acre or larger.

III. Final Plat Attachments

(APPLICATION WILL NOT BE ACCEPTED UNTIL ALL ATTACHMENT REQUIREMENTS ARE MET)

- ▲ 71. **Letter to Planning Commission** stating your request
- ▲ 72. Completed **Checklist**
- ▲ 73. **20 copies of Final Plat Plan (folded)** that includes vicinity map (minimum size 17" X 34" paper)
- ▲ 74. **Two (2) IBM compatible diskettes or CDR's** with pertinent data and Plat in CAD compatible .DXF electronic file format
- ▲ 75. **Bill of Assurance** including provisions set out in Title 15 Subdivision Regulations 15.16.01
- ▲ 76. Copy of **Water & Sewer Commission approval** or....
- ▲ 77. State Health Department approval of any new water supply and/or sewage system.
- ▲ 78. **Letter submitted by a Registered Professional Engineer, certifying that all infrastructure improvements and installations have been installed** in accordance with the submitted construction plans and drawings and the standards established by the City of Bryant and are functioning properly.
- ▲ 79. Infrastructure Maintenance Bond or Cashier's check.
- ▲ 80. Check for **$25.00 + $1.00 per lot for final Subdivision fee**
- ▲ 81. Check for **Water Sewer impact fees ($100.00 Flushing Fee and $100.00 impact fee per lot)**

Midland Road Subdivision
Name of Subdivision

Jonathan Hope
Surveyor

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

Owner Signature

Kazi Islam
Engineer Signature

CITY USE

Preliminary Plat Approved ______________________

Planning Commission Date ______________________

Final Plat Approved ______________________

Planning Commission Date ______________________

Proof of Recording - County ______________________

County Clerk ______________________ Date ______________________

City of Bryant Stormwater Department
1019 SW 2nd St.
Bryant, Arkansas 72022
Office (501) 943-0453; Fax (501) 943-0851

WARRANTY BOND PROCEDURES

For Stormwater Infrastructure Public & Private

These procedures are applicable to Stormwater Infrastructure that is to be dedicated to the public and maintained by the City of Bryant and for Private Stormwater Infrastructure that will be connected to overall City of Bryant Stormwater Infrastructure.

In accordance with Ordinance No. 2019-32 Article V., The City of Bryant Stormwater Department will require a Maintenance Warranty Bond as part of the process for approving Stormwater Infrastructure. The purpose of the bond is to cover the cost of correcting deficiencies not addressed by the developer during the warranty period and to insure no adverse effects will occur to the overall function of the City of Bryant Stormwater Infrastructure.

ORDINANCE 2019-32 ARTICLE V. STORMWATER INFRASTRUCTURE WARRANTY BOND.

1. **Stormwater Infrastructure Warranty Bond.** A one year maintenance bond against defects in workmanship shall be required by the Administrative Authority for any portion of the stormwater management facilities privately owned or stormwater management improvements dedicated to the city, said maintenance bond is to be provide by cashier's check, irrevocable letter of credit or acceptable surety authorized to do business in the State of Arkansas. All forms of maintenance bonds shall be subject to approval by the Administrative Authority. The value of the bond shall be an amount equal to 100% of the value of the privately owned stormwater management facilities or stormwater system improvements being privately owned or dedicated to the city. A cost list must be provide to prove and verify the amount of the maintenance bond. The cost list shall include cost of stormwater infrastructure construction and components (piping, weirs, spillway structures, junction boxes, trickle channels, inlets, grates, riprap and site stabilization).

2. **Procedurals.** These procedures are applicable to Stormwater Infrastructure that is to be dedicated to the public and maintained by the City of Bryant and for Private Stormwater Infrastructure that will be connected to overall City of Bryant Stormwater Infrastructure.

   In accordance with Ordinance No. 2019-32 Article V., City of Bryant Stormwater Department will require a Maintenance Warranty Bond as part of the process for approving Stormwater Infrastructure. The bond will be equal to 100% of the cost of construction of the Stormwater Infrastructure System at the time of completion of the Stormwater Infrastructure System. The purpose of the bond is to cover the cost of correcting deficiencies not addressed by the developer during the warranty period and to insure no adverse effects will occur to the overall function of the City of Bryant Stormwater Infrastructure.

3. **Determining the Maintenance Warranty Bond Amount.** During the final inspection process, the City of Bryant Stormwater Department will verify and approve the Warranty Bond estimate for all Stormwater Infrastructure within the proposed unit using:

(a) The Warranty Bond cost list estimate shall be presented to the City of Bryant Stormwater Department by formal letter. The formal letter shall include project name, developer contact information and "Cost List for Construction of Stormwater Infrastructure Components" including but not limited to piping, weirs, spillway structures, junction boxes, trickle channels, riprap, inlets, grates, weirs and site stabilization;

(b) The Bond amount will need to be re-evaluated if more than 18 months have passed from the time of the estimate review to the time of providing the bond to the City of Bryant Stormwater Department;

4. **Submitting the bond to the city.** After requesting a final inspection of the Stormwater Infrastructure and approval of completion by the City of Bryant Stormwater Department, the developer must provide the City of Bryant Stormwater Department with a bond equal to amount determined in Article V. Section 3. of this document. The Bond must be for a period of 12 months and be a financial guarantee in the form of a bond, letter of credit, or trust agreement executed by a surety company authorized to do business in the State of Arkansas. The Bond must be payable to the City of Bryant Public Works Department, conditioned that the developer will maintain the Stormwater Infrastructure in accordance with the Stormwater Management Manual Ordinance No. 2019-31 and the Stormwater Management Ordinance No. 2019-32.

5. **Warranty period.** After the Stormwater Infrastructure construction passes the final inspection and the one year warranty bond is received, the one year maintenance warranty period will begin. The one-year warranty period will start on the date the Maintenance Warranty Bond is received and accepted. There shall be no separate warranty period start dates for Stormwater Infrastructure within a single unit.

6. **Follow-up inspection.** The City of Bryant Stormwater Department will conduct a follow-up inspection within the tenth month of the warranty period but in no event any later than two months prior to the bond expiring. The City of Bryant Stormwater Department will issue a punch list of deficiencies that will be sent to the developer or contractor for the unit. If no deficiencies are found and camera video passes inspection, release of the bond will proceed as set out and as listed in Article V. Section 10 of this document.

7. **Correcting Deficiencies and Camera Video.** The developer must contact the City of Bryant Stormwater Department at least 24 hours before correcting any decencies or performing camera video. The developer shall also camera all stormwater infrastructure to ensure that there is no sediment laden infrastructure. Upon notification by the developer that all deficiencies have been corrected and camera video has been completed, the City of Bryant Stormwater Department will re-inspect to verify compliance with correction of deficiencies and reviewing the camera video to assure the stormwater infrastructure is not sediment laden or defective.

8. **Calling in the bond.** If the developer does not contact the City of Bryant Stormwater Department, deficiencies have not been corrected and the stormwater infrastructures has not been camera videoed by the end of the 11th month or one (1) month prior to the expiration of the Bond, the City of Bryant Stormwater Department will prepare an estimate and list of work to be done to bring the stormwater infrastructure into compliance. The City of Bryant Stormwater Department will contact the bonding agency to submit the cost estimates for correcting the deficiencies.

9. **Requesting Acceptance.** Once all deficiencies have been corrected, the City of Bryant Stormwater Department will prepare the paperwork for the Stormwater Infrastructure within the unit accepted for maintenance by the City of Bryant 'if dedicated', or paperwork will be prepared to release the bond if infrastructure is a private unit.

10. **Bond Release.** The Bond will be released once the City of Bryant has accepted the Stormwater Infrastructure for maintenance 'if dedicated', and an acceptance letter has been written by the City of Bryant Public Works. If all compliance has been met with a private Stormwater Infrastructure Unit(s) then the City of Bryant Stormwater Department shall contact the developer by formal letter and release the bond. No partial release of the Bond will be allowed at any time.

ATTENTION: DO NOT FILL OUT INFORMATION BELOW UNTIL YOU ARE PRESENT WITH A NOTARY PUBLIC.
(THIS DOCUMENT MUST BE NOTARIZED)

By filling out the information below, signing and dating, you are hereby acknowledging that you have read, understand and agree to adhere to the Stormwater Infrastructure Warranty Bond Procedures and Processes listed in this document. You the applicant are hereby responsible for upholding, without limitation, the Stormwater Infrastructure Warranty Bond Procedures.

Hilldale Crossing
Name of Project Site/Addition

Todd Havens
Applicant Name
(Print)

[signature]
Applicant Name
(Signature)

Haven's Development, LLC
Applicant Business Name

2615 N Prickett Road Bryant, Arkasnas
Applicant Mailing Address

Notarization

State of Arkansas

County of Saline

Subscribed and sworn before me, a Notary Public, on this 18th **day of** April, 2023.

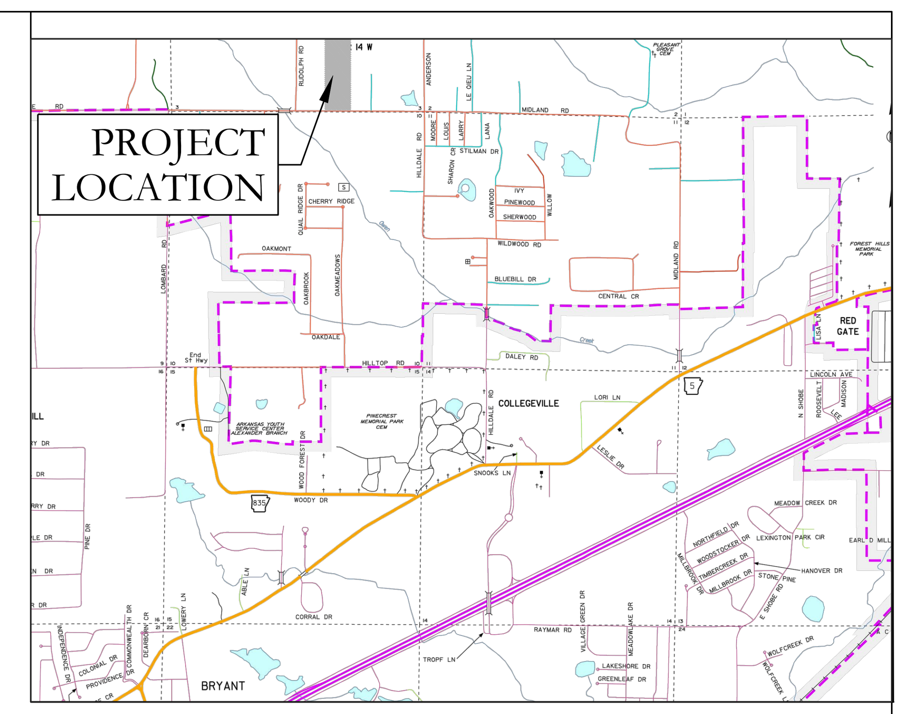
[signature]
Signature of Notary

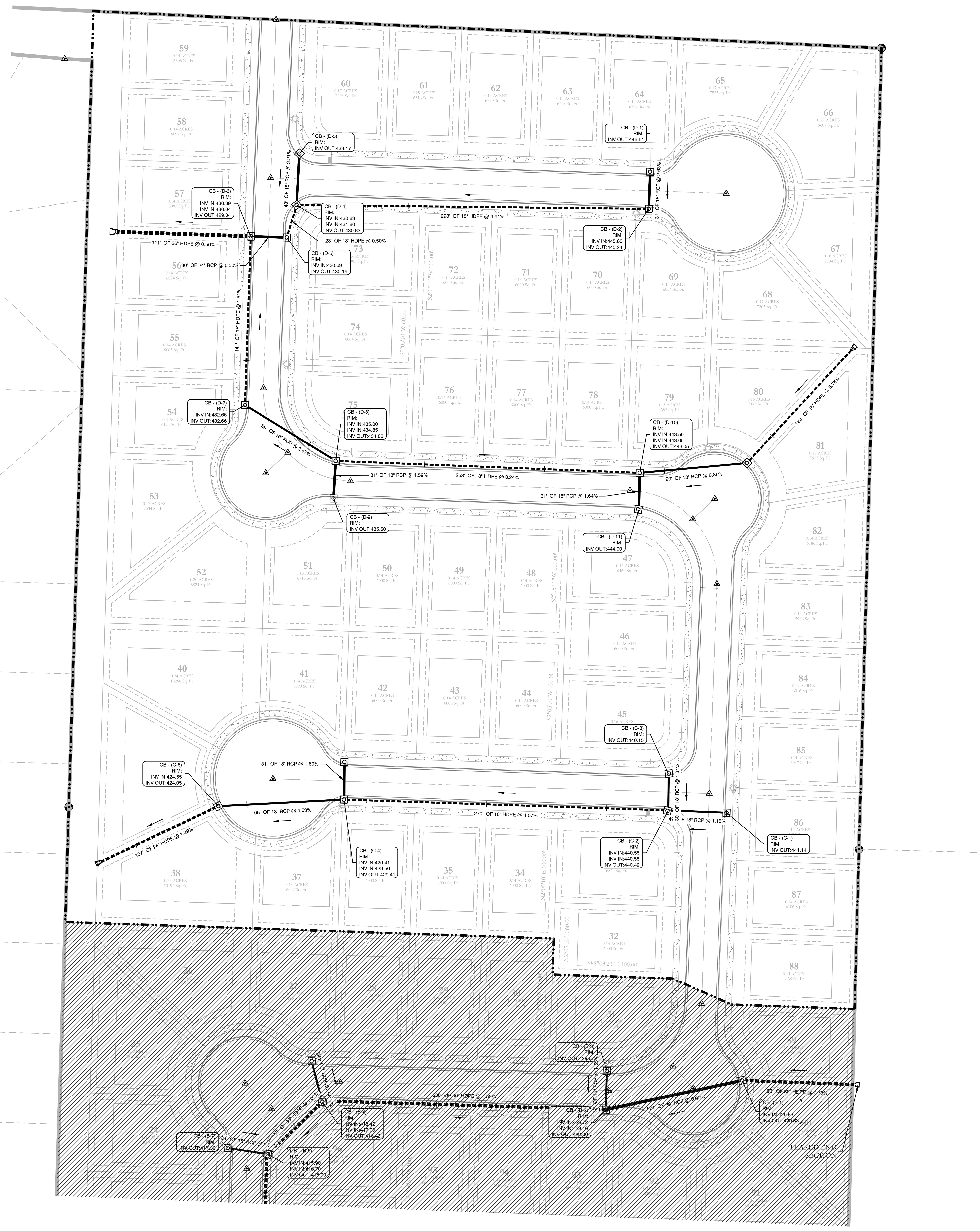
Nov. 5, 2030
My commission expires:

Notary Seal Stamp Here:

STATE OF ARKANSAS NOTARY PUBLIC
MELANIE A. GENTRY
MY COMMISSION # 12379607
EXPIRES: November 5, 2030
Saline County

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





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

50' 25' 0 50'

BAR SCALE: 1" = 60'

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.

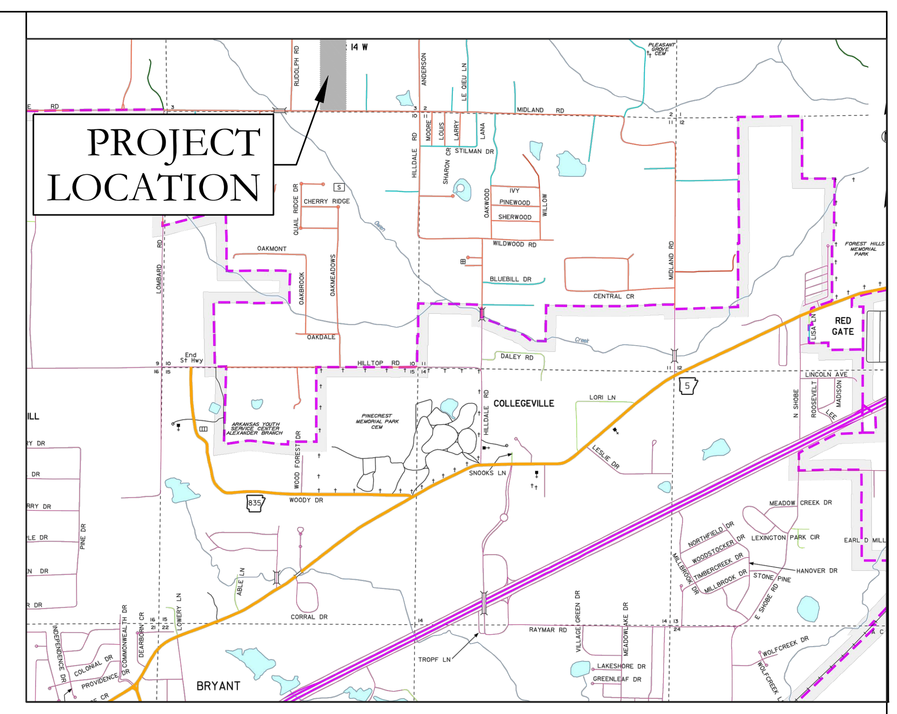
Sincerely,

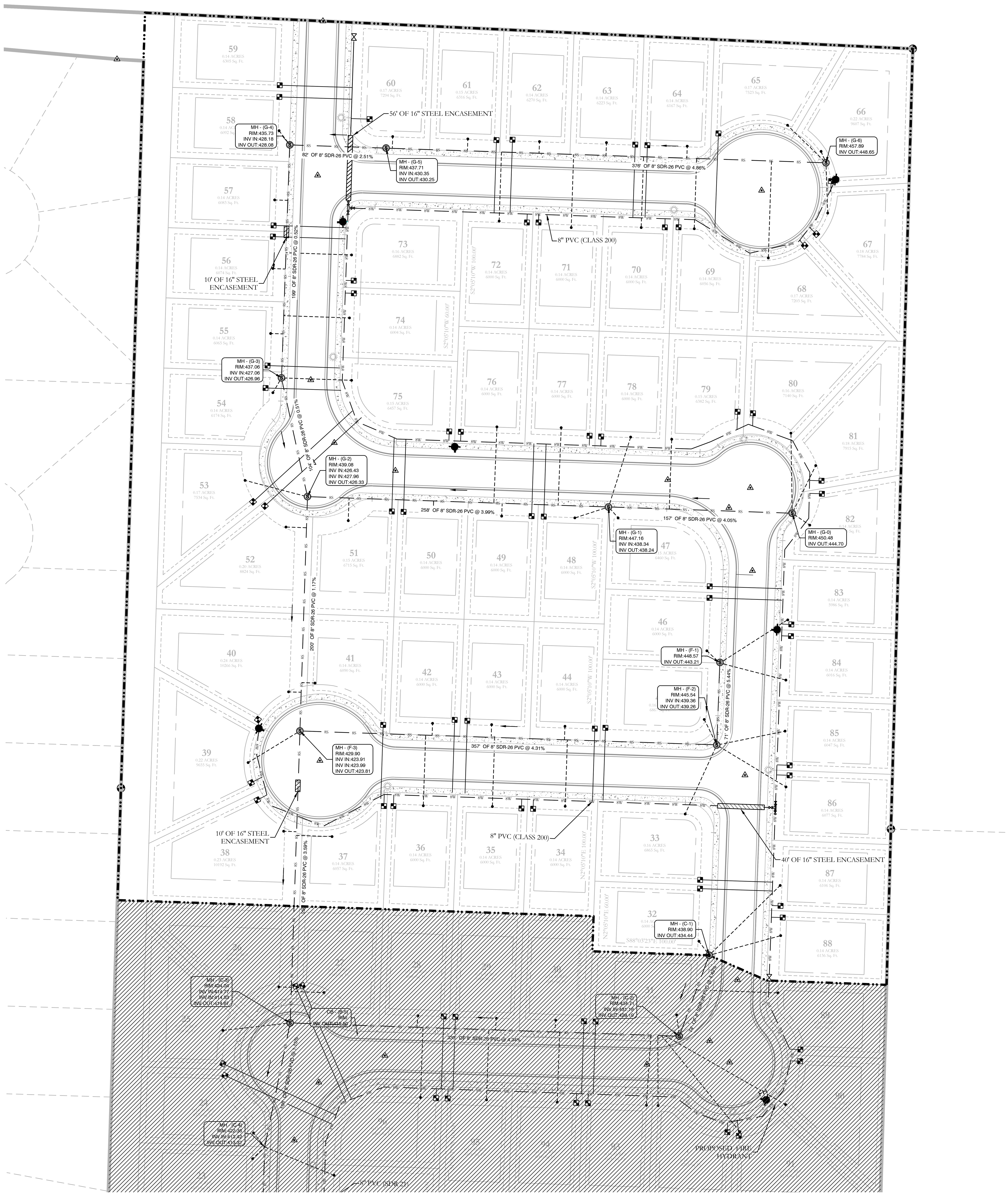
Stephen Youngblood

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

SMY: SGB: sgb

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





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

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

SANITARY SEWER AND WATER AS-BUILTS
HILLDALE CROSSING PHASE 2

A SUBDIVISION IN SALINE COUNTY, ARKANSAS

SEWER LEGEND:

- AR — AIR RELEASE VALVE
- CO — CLEAN OUT
- ISOLATION VALVE
- SEWER SERVICE
- 8S — SEWER SERVICE

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 MIANS.

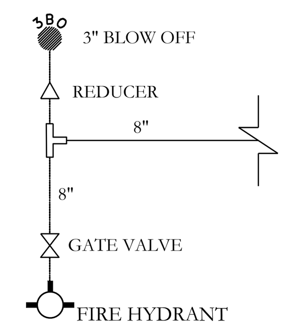
(2 TO 6 FEET FROM EDGE OF PAVEMENT)

WATER LEGEND:

- 3BO — 3" BLOW OFF
- WATER MAIN WV — GATE VALVE
- REDUCER
- 8W — WATER LINE
- FIRE HYDRANT
- DOUBLE WATER SERVICE
- SINGLE WATER SERVICE

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

TYPICAL FIRE HYDRANT:



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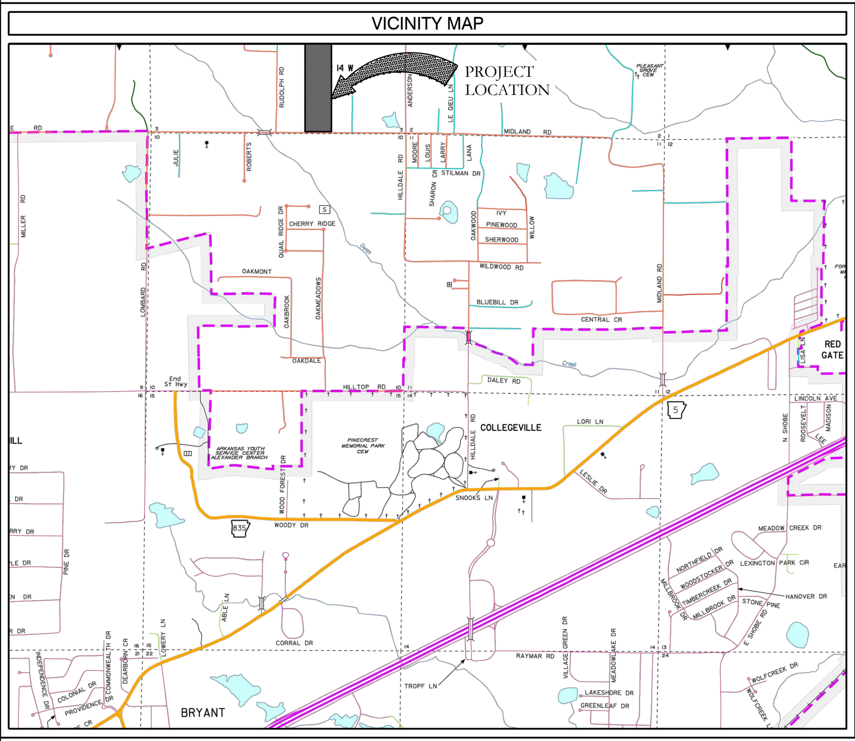
FOR USE AND BENEFIT OF:
HAVENS DEVELOPMENT, LLC

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 622.36 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."

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'

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'

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.

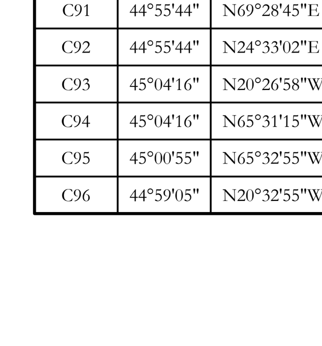
Date of Execution

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 .



PROPERTY SPECIFICATIONS:

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

DEVELOPER/: SUBDIVIDER HAVEN'S DEVELOPMENT, LLC
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

N

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

60 0 60
BAR SCALE: 1"=60'

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

Jonathan Hope

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

April 5, 2022

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

RE: SUBDIVISION WATER AND SEWER IMPROVEMENTS ENGINEERING PLAN APPROVAL
Cypress Valley Subdivision Ph. 2 (25 Lots) Water and Gravity Sewer Improvements
Lots 24-38, Lots 45, 47-49, Lots 56-60, Lot 124, and Detention Areas Tract A and Tract B
Springwood Circle, Bryant, Saline County (Outside City Limits)
Hope Job Number: 21-0421
ADH Related: 55535 (Under "Magnolia Village Phase II")
ADH Reference No. 118352

Mr. McFadden,

The resubmittal for the project referenced above, received by the ADH Engineering Section online plan submission portal on March 15, 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 latest edition of the standard specifications and details of the City of Bryant Water and Sewer 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.

When submitting correspondence pertaining to this project, please include the **ADH reference number 118352**.

Sincerely,

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

SMY: SMR: smr

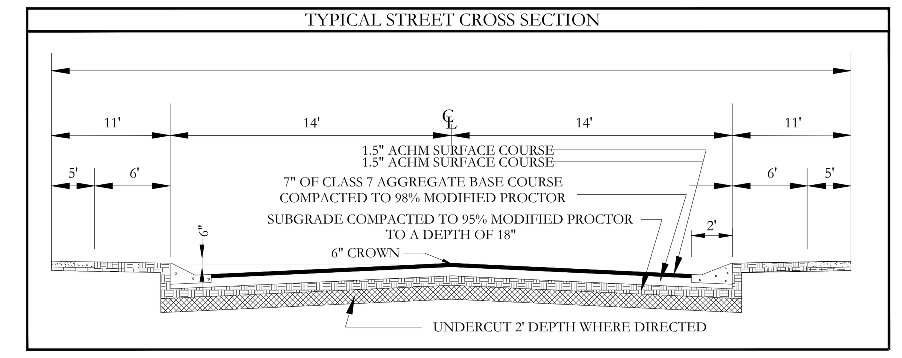
cc: City of Bryant Utilities (PWS 486)

NOTES

DOCUMENTS USED IN THE PREPARATION OF THIS SURVEY:
- MAGNOLIA VILLAGE PHASE 1 FINAL PLAT FILED ON FEB. 27, 2007, SALINE COUNTY CIRCUIT CLERK, BOOK 07, PAGE 20887
- WARRANTY DEED, BOOK 10 PAGE 059270 FILED FOR RECORD ON JULY 10, 2010 SALINE COUNTY
-CYPRESS VALLEY PHASE 1 FINAL PLAT FILED ON JANUARY 31, 2012, SALINE COUNTY CIRCUIT CLERK, BOOK 2012, PAGE 6940
- DELTON BROWN SURVEY SIGNED ON JANUARY 23, 2004, FILED FOR RECORD ON MARCH 5, 2004, SALINE COUNTY CIRCUIT CLERK, BOOK 04, PAGE 18723
-NO OTHER DOCUMENTS WERE PROVIDED FOR, NOR ARE REFERENCED ON THIS SURVEY.

-AREAS AS SURVEYED
-IN SW/4 SW/4 5.72 ACRES
-IN SE/4 SW/4 2.78 ACRES

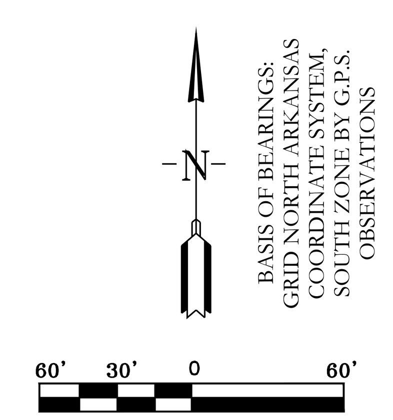
TYPICAL STREET CROSS SECTION



PART OF THE SE/4 SW/4 OF SECTION 10, TOWNSHIP 1 SOUTH, RANGE 14 WEST, IN SALINE COUNTY, ARKANSAS, MORE PARTICULARLY DESCRIBED AS FOLLOWS: COMMENCING AT THE SOUTHWEST CORNER OF THE NW/4 SW/4 OF SECTION 10, A FOUND 1/2" REBAR; THENCE S88°21'12"E 25.00 TO THE SOUTHWEST CORNER OF PHASE 1, MAGNOLIA VILLAGE, A FOUND 1/2" REBAR; THENCE AT PLATTED BEARING OF S88°21'12"E ALONG THE SOUTH BOUNDARY OF MAGNOLIA VILLAGE SUBDIVISION 635.00 FEET; THENCE S87°00'06"E 111.53 FEET TO A FOUND 5/8" REBAR; THENCE N88°08'26"E 50.33 FEET TO A FOUND 5/8" REBAR; THENCE S88°14'50"E 119.44 FEET TO A FOUND 5/8" REBAR; THENCE S88°16'00"E 122.25 FEET TO THE **POINT OF BEGINNING**, A FOUND 5/8" REBAR; THENCE S88°21'12"E 388.01 FEET ALONG SOUTH LINE OF MAGNOLIA VILLAGE PHASE 1 TO A SET 1/2" REBAR AND CAP; THENCE LEAVING THE SOUTH LINE OF MAGNOLIA VILLAGE PHASE 1 S2°13'39"W 780.22 FEET TO A FOUND 5/8" REBAR WITH CAP #1211, THENCE N88°18'50"W 30.04 FEET TO A FOUND #5 REBAR WITH CAP #1211, THENCE S02°16'52"W 193.55 FEET TO A FOUND #5 REBAR WITH CAP #1702, THENCE N87°58'28"W 354.55 FEET TO THE EAST BOUNDARY OF CYPRESS VALLEY PHASE 1; THENCE N02°02'17"E 135.20 FEET ALONG THE EAST BOUNDARY OF CYPRESS VALLEY PHASE 1; CONTINUING ALONG SAID BOUNDARY N01°57'11"E 50.00 FEET; N02°04'09"E 270.00 FEET; N01°52'16"E 50.00 FEET; N02°04'09"E 270.00 FEET; N01°57'13"E 50.00 FEET; N02°02'17"E 146.17 FEET TO THE SOUTH LINE OF MAGNOLIA VILLAGE PHASE 1, A FOUND #4 REBAR WITH HOPE CAP #1702 AND THE POINT OF BEGINNING. CONTAINING AN AREA OF 8.5 ACRES.

NOTE:

1. TRACT A & TRACT B WILL BE UTILIZED AS A DETENTION BASIN, DRAINAGE AND UTILITY EASEMENTS MAINTAINED BY THE PROPERTY OWNERS ASSOCIATION.



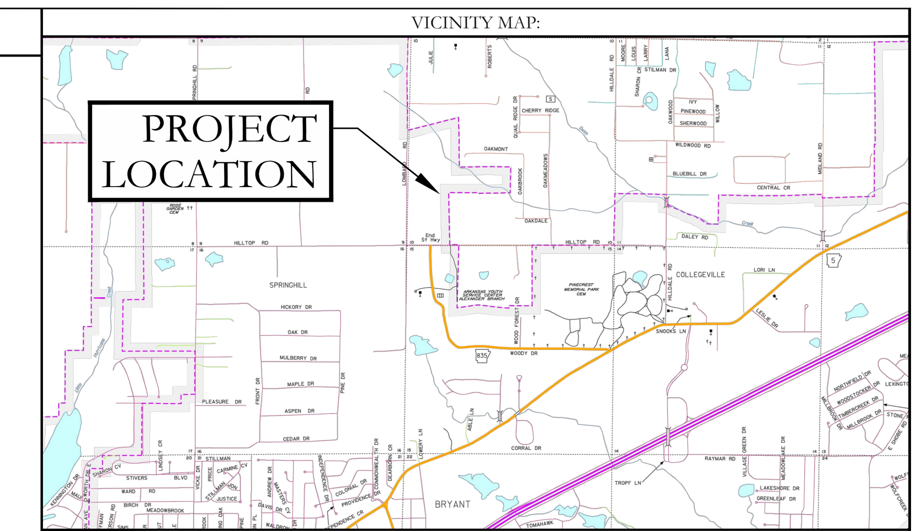
Curve Table				
Curve #	Delta	Chord B & D	Arc Length	Arc Radius
C1	32°27'18"	N71°45'33"W 41.91'	42.47'	74.98'
C2	41°47'14"	N34°38'18"W 53.48'	54.68'	74.98'
C3	15°48'49"	N5°50'16"W 20.63'	20.69'	74.98'
C4	27°34'25"	N11°43'04"W 11.92'	12.03'	25.00'
C5	70°47'54"	N9°53'36"E 57.93'	61.78'	50.00'
C6	43°52'13"	N67°13'39"E 37.36'	38.28'	50.00'
C7	56°48'23"	S62°26'03"E 47.57'	49.57'	50.00'
C8	54°19'08"	S61°05'40"E 22.67'	23.54'	24.83'
C9	89°56'39"	N47°02'28"E 35.34'	39.25'	25.00'
C10	89°58'06"	N43°00'08"W 35.35'	39.26'	25.00'
C12	89°58'07"	N43°00'08"W 35.35'	39.26'	25.00'
C13	90°02'42"	N42°57'08"W 55.18'	61.29'	39.00'

FINAL PLAT
CYPRESS VALLEY SUBDIVISION PHASE 2
A SUBDIVISION IN THE CITY OF BRYANT, SALINE COUNTY, ARKANSAS

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

Know what's below. Call before you dig.

VICINITY MAP:



OWNER:
Name: Kennedy Development, LLC
Address: 1229 Hot Springs Hwy
Benton, AR 72089

DEVELOPER:
Name: Kennedy Development, LLC
Address: 1229 Hot Springs Hwy
Benton, AR 72089

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 Title: 2021-010792

CERTIFICATE OF 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 followed.

Date of Execution

Kazi Islam
Registered Professional
Engineer, No. 20876
Arkansas

CERTIFICATE OF FINAL APPROVAL:

Pursuant to the City of Bryant Subdivision Rules and Regulations, this document was given approval by the Bryant Planning Commission at a meeting held ____________, 20 ______. All of the document is hereby accepted, and this certificate executed under the authority of said rules and regulations.

Date of Execution

Rick Jordan,
Bryant Planning Commission

PROPERTY SPECIFICATIONS:

OWNER: KENNEDY DEVELOPMENT LLC
1229 HOT SPRINGS HWY
BENTON, AR 72015

DEVELOPER/: SUBDIVIDER KENNEDY DEVELOPMENT LLC
1229 HOT SPRINGS HWY
BENTON, AR 72015

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

NAME OF SUBDIVISION: CYPRESS VALLEY PHASE 2

SOURCE OF TITLE: DEED BOOK 2021, PAGE 10792

ZONING: PROPOSED R-2

NUMBER OF LOTS: 25

SOURCE OF WATER: CITY OF BRYANT
SOURCE OF SEWER: CITY OF BRYANT
SOURCE OF ELECTRIC: ENTERGY
SOURCE OF GAS: CENTERPOINT

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

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 # 05125C0240E, Dated: 06/05/2020.

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:

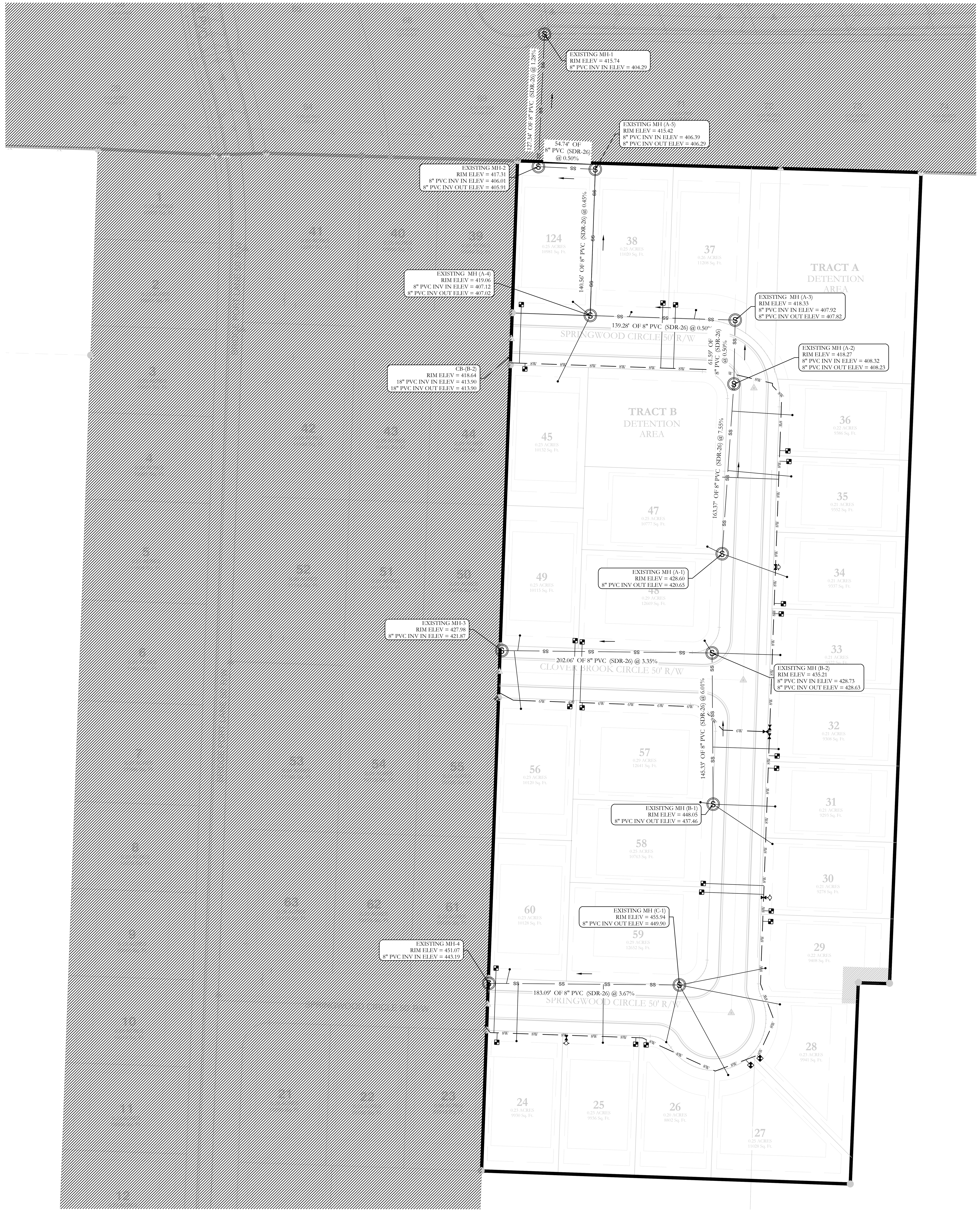
KENNEDY DEVELOPMENT, LLC

FINAL PLAT
CYPRESS VALLEY SUBDIVISION PHASE 2
A SUBDIVISION IN THE CITY OF BRYANT, SALINE COUNTY, ARKANSAS

DATE: 01/13/2023	C.A.D. BY:	DRAWING NUMBER:
REVISED:	CHECKED BY:	21-0421
SHEET:	SCALE: 1"= 60'	

500	01S	14W	0	10	300	62	1762

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



SEWER CONSTRUCTION NOTES:

1. ALL SEWER INSTALLATION TO BE IN ACCORDANCE WITH THE CITY OF BRYANT " STANDARD SPECIFICATIONS FOR DESIGN AND CONSTRUCTION OF WATER LINES AND SEWER LINES, 2015 EDITION"
2. ALL SEWER LINES CROSSING UNDER ALL CONCRETE STORM DRAINS OR ANY STORM DRAIN 30-INCH DIAMETER AND LARGER, OR ALL STORM DRAINS WITH MULTIPLE PIPE RUNS, SHALL BE STEEL ENCASED A MINIMUM OF 5 FEET EITHER SIDE OF THE STORM DRAIN.
3. FORCE MAIN WILL BE TESTED IN ACCORDANCE WITH BRYANT WATER/WASTEWATER SPECIFICATION SECTION 5200-1.03.A.4
4. SANITARY SEWER FORCE MAIN SHALL BE INSTALLED IN ACCORDANCE WITH BRYANT WATER/WASTEWATER SPECIFICATIONS.
5. CONNECTING MANHOLE FROM FORCE MAIN SHALL BE REQUIRED TO BE COATED WITH AN EPOXY COATING ACCORDANCE WITH BRYANT WATER/WASTEWATER SPECIFICATION SECTION 1200-1.07A.1.I

WATER UTILITY NOTES:

ALL NEW 8-INCH AND 6-INCH WATER MAINS TO BE C900 DR 14 PVC

ALL WATER AND SEWER INSTALLATION TO BE IN ACCORDANCE WITH THE CITY OF BRYANT "STANDARD SPECIFICATIONS FOR DESIGN AND CONSTRUCTION OF WATER LINES AND SEWER LINES, 2015 EDITION"

WATER LINES UNDER CULVERTS, CREEKS, CONCRETE CHANNELS, RETAINING WALLS, OR OTHER DIFFICULT AND/OR DANGEROUS TO MAINTAIN AREAS SHALL BE ENCASED IN A SMOOTH STEEL ENCASEMENT PIPE. THE STEEL ENCASEMENT SHALL EXTEND FIVE FEET EITHER SIDE OF THE AREA.

EACH WATER SERVICE METER MUST HAVE ITS OWN SERVICE LINE CONNECTION TO THE MAIN (INCLUDES DOUBLE METERS DISPLAYED AS ONE SERVICE LINE ON THE PLAN).

THE SEWER/WATER MAIN CROSSINGS THAT REQUIRE ENCASEMENT REQUIRE TEN (10) LINEAR FEET OF PIPE ON EITHER SIDE OF THE CROSSING.

ADH RULES PERTAINING TO PUBLIC WATER SYSTEMS NOTES REGARDING CROSS-CONNECTIONS AND SEPARATIONS OF WATER AND SEWER- WATER AND SEWER WILL BE 10 FEET APART IN PARALLEL AND IN THE CASE OF WATER CROSSING SEWER WATER LINE SHOULD BE MINIMUM 18" ABOVE SEWER LINE. AT THE EVENT OF WATER CROSSING BELOW SWER EITHER ONE OF THE PIPE WILL NEED TO BE ENCASED.

SEWER LEGEND:

SEWER SERVICE
SEWER MAIN — SS — SS — SEWER MANHOLE
SERVICE DETAIL

NOTE:
USE SDR-26 PVC SEWER PIPE EXCEPT WHERE DUCTILE IRON PIPE REQUIRED FOR COVER. USE DUCTILE IRON PIPE WHERE 3' MINIMUM COVE CANNOT BE MAINTAINED.
CONTRACTOR IS RESPONSIBLE FOR LOCATING ALL BURIED UTILITIES PRIOR TO CONSTRUCTION.

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

WATER LEGEND:

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

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FOR USE AND BENEFIT OF:
CYPRESS VALLEY

WATER & SEWER ASBUILTS
CYPRESS VALLY, PHASE 2
A SUBDIVISION IN THE CITY OF BRYANT, SALINE COUNTY, ARKANSAS

DATE: 04/18/2023	C.A.D. BY: JPP	DRAWING NUMBER: 21-0421
REVISED:	CHECKED BY:	
SHEET:	SCALE: 1"= 50'	

500	01S	14W	0	10	300	62	1762

K:\Land Projects 2004\Subdivisions\2021\21-0421 Cypress Valley Phase 2\CIVIL\DWG\21-0421 Cypress Valley Phase 2_As-Built-01-25-23.dwg

FILED
SALINE COUNTY
CIRCUIT CLERK
2012 JAN 31 AM 10: 11
BY: ______

12 006931

DECLARATION OF COVENANTS, CONDITIONS AND RESTRICTIONS OF CYPRESS VALLEY

A PLANNED DEVELOPMENT

PART A. PREAMBLE

WHEREAS, B&C EXCAVATING, INC., are the owners of the following described land situated in Saline County, Arkansas, to-wit:

SEE EXHIBIT "A" ATTACHED AND MADE A PART HEREOF

WHEREAS, B&C Excavating, Inc., Inc. took title to said land in Warranty Deed filed as Instrument No. 10 044484 of the records of Saline County, Arkansas.

WHEREAS, B&C Excavating, Inc., have caused said land to be surveyed and a plat thereof made, dividing said land into lots and streets, as shown on said plat and showing the dimensions of each lot and the width of the streets as shown on said plat for the purpose of making said land an Addition to the City of Bryant, Saline County, Arkansas, known as Cypress Valley.

NOW, THEREFORE, in consideration of the purposes herein stated, B&C Excavating, Inc., does hereby designate said land above described as shown by said plat, which is hereto attached and to be forever known as Cypress Valley, Phase I, an addition to the City of Bryant, Saline County, Arkansas, and that hereafter ay conveyance by owners of said land by lot and phase number shall forever be held to be a good and legal description and the streets on said plat in said addition are hereby dedicated as public streets for the use and benefit of the public as such. The use of the land in said Addition is subject to the following Protective and Restrictive Covenants, which shall also be known as the Bill of Assurance.

PART B. PROTECTIVE AND RESTRICTIVE COVENANTS – BILL OF ASSURANCE

B-1 LAND USE AND BUILDING TYPE. All lots shall be used for residential purposes only. No business of any nature or kind shall at any time be conducted in any building located on any of said lots except for real estate sales and marketing of lots and homes during the construction phase. No building shall be erected, altered, placed, or permitted to remain on any lot the other than one detached single-family dwelling not to exceed two storesi in height, excluding basement area. Carports or single car garages are not allowed. All must have at least a two-car garage. Garages may not be enclosed at a later date without the approval of the Architectural Control Committee and the construction of another two-car garage.

B-2 FENCING USE AND TYPE. If any builder or homeowner wishes to erect a fence only wood privacy fences shall be allowed. Also, no fence shall extend forward from the actual structure or the lot building line, whichever is further back from the street, except that a house erected on a corner lot may have a side fence no closer than 15 feet to the street on the side of a corner lot, such fence to begin at least 15 feet behind the front property line. All perimeter boundaries may follow the lot line. All fencing so placed shall have the finished side towards the streets where applicable. When fencing is installed, the finished side must face out unless the Architectural Control Committee allows otherwise. All fencing must be constructed 3 inches above finish grade to allow for proper drainage.

B-3 ARCHITECTURAL CONTROL. No dwelling or structure shall be erected, placed or altered on any lot until the construction plans and specifications and a plan showing the location of the structure have been approved by the Architectural Control Committee as to quality of workmanship and materials, harmony and integrity of external grade elevation, and intended objectives for Architectural Control Committee to achieve a subdivision that accomplishes the desired architectural design in the structures and subdivision aesthetics. The roof pitch shall be at least 8/12. All shingles shall be of architectural design. All above grade foundations shall be covered with brick or rock. Masonite is strictly prohibited in the construction of any structure.

The term "structure" is defined to include any and all types of fences, antennas, basketball goals, swimming pools, and television satellite dishes, which to no event shall be placed in front of dwellings, or be visible from the street. All satellite dishes and antennas must be approved by the Architectural Control Committee. Approval shall be provided in Part D below.

No basketball goals are allowed in front yards, on lots with side-load garages, or on corner lots, basketball goals are allowed in back yard only.

All gutters must be the "seamless" type, match the color of the house, and be shaped to be ion contact with e fascia, soffit, and walls at all times.

B-4 DWELLING COST, QUALITY AND SIZE. No dwelling shall be permitted on any lot at a cost of less than $60.00 per square foot of heated space, based upon cost levels prevalent on the date these covenants are recorded, it being the intention and purpose of the covenants to assure that all dwellings shall be of a quality of workmanship and materials substantially the same or better than that which can be produced on the date these covenants are recorded, at the minimum cost stated herein for the minimum permitted dwelling size. The floor area of the main structure, exclusive one-story open floor area of the main structure shall be not less than 1,450 square feet of heated space. A dwelling of more than one story, the ground floor area of the main structure shall be not less than 1,100 square feet and with the second floor area would provide a total floor area equal to or great than 1,800 square feet, exclusive of basements.

B-5 DWELLING LOCATION. No dwelling shall be located on any lot nearer to any street line than the minimum building set back lines as shown on the recorded plat. In any event, no dwelling shall be located on any lot nearer than 25 feet to a front lot line or nearer than 25 feet to the rear lot line. Further, no dwelling shall be located on any interior lot nearer than 7 feet to the interior lot line. For the purposes of this covenant, eaves, steps, and open porches shall not be considered as part of the dwelling. No lot shall be subdivided and no more than one dwelling shall be permitted on any one lot.

B-6 LOT AREA AND WIDTH. No dwelling shall be erected or placed on any lot having a width of less than 50 feet at the minimum set back line as shown by said plat.

B-7 EASEMENTS. Easements for installation and maintenance of utilities and drainage facilities are reserved as shown on the recorded plat.

B-8 NUISANCES. No noxious or offensive activities shall be carried out upon any lot, nor shall anything be done or kept thereon which may be or may become an annoyance or nuisance to the neighborhood, or may adversely affect the value of other dwellings.

B-9 TEMPORARY STRUCTURES. No structures of a temporary character, motor home, trailer, travel trailer, basement, tent, shack, garage, barn, or other out building shall be used on any lot at any time as a residence either temporarily or permanently.

B-10 OUT BUILDINGS. One building for storage shall be permitted, provided, however, that it shall not be more than eight and one half feet from the ground where it should be permanently anchored. Further, prior to the construction and/or installation of any such storage building, a privacy fence shall be erected as shown in B-2, above. All out buildings must be approved by the Architectural Control Committee, may not be located on easements, and must meet all requirements of the City of Bryant.

B-11 SIGNS. No sign of any kind shall be displayed to the public view on any lot, except one professional sign of not more than 1.5 square feet, or signs used by a builder/developer to advertise the property during the construction and sales period.

B-12 OWNER AND BUILDING/CONTRACTOR RESPONSIBILITY. Any property owner or building/contractor shall ensure that any contractor performing services for the property owner shall comply with the provisions of this Bill of Assurance, and shall be responsible for the actions of contractors to the contrary. No person shall damage in any way the utilities or streets in any manner, and any damage so inflicted shall become the responsibility of the person who creates the damage. It is the responsibility of the building contractors on each lot to install all sidewalks required by the City of Bryant.

B-13 LIVESTOCK AND POULTRY. No animals, livestock, or poultry of any kind shall be raised, bred, or kept on any lot, except that dogs and cats may be kept on any lot provided that they are not kept, bred, or maintained for any commercial purpose, and provided that facilities for maintenance of the same are installed, and that the keeping of the same does not constitute a nuisance. Hunting dogs are expressly prohibited.

B-14 GARBAGE AND REFUSE DISPOSAL. No lot or easement shall be used or maintained as a dumping ground for rubbish. Trash, garbage, and other waste shall not be kept except in sanitary containers. All incinerators or other equipment for the storage or disposal of such material shall be kept in a clean and sanitary condition, and not be permitted at any time or location which is visible from the front of the lot.

B-15 OIL AND MINING OPERATIONS. No oil drilling, development operation, refining, quarrying, or mining operations of any kind shall be permitted upon or in any lot, nor shall oil wells, tanks, tunnels, mineral excavations, or shafts be permitted upon or in any lot. No derrick or structure designed for use in boring for oil or natural gas shall be erected, maintained, or permitted upon any lot.

B-16 WATER SUPPLY. No individual water supply systems shall be permitted on any lot. The same shall be served by the City Water Department of the City of Bryant, Arkansas.

B-17 SEWAGE DISPOSAL. No individual sewage disposal system shall be permitted on any lot. Sewage connections must be made with the City Sewage System of the City of Bryant, Arkansas.

B-18 SIGHT DISTANCE AT INTERSECTIONS. No fence, wall, hedge, or shrub planting which obstructs sight lines at elevations between 2 and 6 feet above the roadways shall be placed or permitted to remain on any lot corner within the triangular area formed by the street property lines and the line connecting them at points 25 feet from the intersection of street right-of-way lines, or in the case of a rounded property corner, from the intersection of the street property lines extended. The same sight line limitations shall apply on any lot within 10 feet from the intersection of the street property line with the edge of a driveway. No tree shall be permitted to remain within such distances of such intersections unless the foliage line is maintained at sufficient height to prevent obstruction of such sight lines.

B-19 LAND NEAR WATER COURSES. No building shall be placed nor shall any material or refuse be placed or stored on any lot within 20 feet of the property line of any part or edge of any water course, except that clean fill may be placed nearer, provided that the natural water course is not altered or blocked by such fill.

B-20 BUILDERS. All building must be performed by competent builders. The Architectural Control Committee reserves the right to submit for approval the name of any contractor selected by a property owner to an architect of the choosing of the Architectural Control Committee.

B-21 LOT, YARD, AND HOME MAINTENANCE. All property owners, including builders, shall keep all grounds and yards mowed, trimmed and clean, and all houses painted or stained. All lawnmowers, trash containers, ladders, children's toys, bicycles, exercise equipment, and similar items must be stored where they are not visible from the street, such as behind a wood privacy fence or inside a garage.

B-22 COMMENCEMENT OF CONSTRUCTION. A property owner must start construction of an approved dwelling within a period of one (1) year from the date of purchase, defined as the closing date. The owners reserve the option to repurchase any lot for the amount of original purchase price if construction is not commenced within such period of time. This option shall be exercised in writing within a period of 30 days after the one-year period.

B-23 COMPLETION OF CONSTRUCTION. Any dwelling must be completed in its entirety within a period of one (1) year from date such construction is commenced.

B-24 CURB CUTS. Curb cuts should not be necessary due to the rolled curb. Any curb cuts must be approved in writing by Time Square Properties, Inc. Violation will result in removal and replacement at the cost to the property owner. No material may be placed in the rain gutter in front of the curb.

B-25 MOTOR VEHICLE PARKING. Abandoned or unused motor vehicles shall not be parked or permitted to remain on any lot or within the dedicated street. No cars may be parked in front yards. All vehicles must have a current registration and license. Work trucks shall be parked inside garages and shall not be parked in driveways on a regular basis. Boats, recreational vehicles, tractors, commercial vehicles, and trailers cannot be parked at the front or side of any dwelling or in the dedicated street, and must be parked in back of the dwelling and/or behind such privacy fence as defined in B-2 above. In any case, none of the above shall be allowed unless the privacy fence mentioned in B-2 above is installed. Owners or permanent residents are prohibited from parking in the street.

B-26 MINIMUM FLOOR LEVEL ELEVATION. The Architectural Control Committee reserves the right to proscribe a minimum floor elevation for any lot they deem such a minimum should be required.

B-27 MAILBOXES. Mailboxes shall be of the design and construction described by the Architectural Control Committee.

B-28 EXTERIOR LIGHTING. No night watcher lights shall be permitted. All exterior lighting other than normal landscape lighting must be approved by the Architectural Control Committee.

B-29 PROPERTY OWNERS ASSOCIATION. At such time as a valid Property Owners Association is established in Cypress Valley Subdivision, the developer/owner shall deed to and otherwise turn over to and relinquish control of all "common areas" including "fence and sign easements" within said subdivision plat and/or any subsequent phases which may be developed. Until such time occurs, the developer/owner shall retain control of and maintenance of such areas

B-30 SIDEWALKS. The owner of a lot is responsible for installation of a four foot side sidewalk in front of his lot four feet from back of curb. The sidewalk shall run from property line to property line extended, parallel to the street and may be interrupted by the driveway. The sidewalk is to be constructed of 3000 psi normal weight concrete with tooled or sawed control joints, four feet on center and ¾ inch expansion joint at each neighboring sidewalk connection. The sidewalk is to be normal concrete color and shall receive a broom finish.

PART C. ARCHITECTURAL CONTROL COMMITTEE

The owners will cause to be formed an Architectural Control Committee of 2 to 7 persons for the purpose of reviewing all construction plans to assure aesthetic harmony and beauty within the subdivision of Cypress Valley Subdivision. In this regard, no building, fence, wall, or other structure shall be commenced, erected, or maintained upon any lot, nor shall any exterior addition to, or change or alteration therein be made, nor shall any landscaping of any lot be undertaken, until the plans and specifications showing the nature, kind, shape, height, materials, and location of the same shall have been submitted to and approved in writing by the Architectural Control Committee as to the harmony of external design and location in relation to surrounding structures and topography. In the event that any plans and specifications are submitted to the Committee for architectural review as provided herein, and the Committee shall fail either to approve or reject such plans and specifications for a period of 30 days following such submission, such failure shall be deemed to be an approval by the Committee for all purposes. The owners may elect to turn this function entirely over to residents of the subdivision at such time as it sees fit.

In any case, the members of this Committee shall in no event be held personally liable or responsible to any owner in this Addition for their actions, or lack thereof.

PART D. NPDES STORMWATER DISCHARGE PERMIT

D-1 PERMIT. The purchaser of each lot acknowledges that B&C Excavating, Inc., is the developer of the subdivision and therefore, holds a NPDES Stormwater Discharge Permit for the entire development. Purchaser also acknowledges that it must receive an individual permit from the Arkansas Department of Environmental Quality before construction on said lot may begin and also agrees that any violation of seller's existing permit after the date of the sale of the above lot by reason of purchaser's construction shall be the sole responsibility of purchaser. Purchaser further agrees to be responsible for any fines which may be assessed to seller by reason of Purchaser's actions.

12 006937

PART E. GENERAL PROVISIONS

E-1 TERM. These covenants are to run with the land and shall be binding on all parties and all persons claiming under them for a period of 25 years from the date these covenants are recorded, after which time said covenants shall be automatically extended for successive periods of 10 years, subject to the express provision that these covenants may be amended at any time after the date of execution by the owner or owners of the majority of the lots herein platted.

E-2 ENFORCEMENT. Enforcement shall be by proceedings at law in equity against any person or person violating or attempting to violate or attempting to violate any covenant either to restrain violation or to recover damages.

E-3 SEVERABILITY. Invalidation of any one of these covenants by judgments or court order shall in no way affect any of the other provisions which shall remain in full force and effect.

E-4 AMENDMENTS. These restrictions and covenants may be amended at any time by a majority of the lot owner or owners, including the developers. The majority of lots are calculated as being over 50% of the total number of lots.

In compliance with Title 15, SUBDIVISION REGULATIONS, of the City of Bryant, Arkansas, the following is included here under article E-4:

> That any amendment to the Bill of Assurance reducing
> the size of the buildings to be placed on lots must
> be approved by the Bryant Planning Commission.

E-5 CONFLICTS. If there is a conflict within different paragraphs of this document, within a single paragraph, or between this document and the plat, then the more restrictive language or interpretation will apply.

WITNESS our hands on this 26th day of January, 2012.

B&C EXCAVATING, INC.

By: [signature]
Thomas J. Cunningham, Jr.

By: [signature]
Travis Paul Bull, Vice President/Secretary

12 006938

STATE OF ARKANSAS)
)
COUNTY OF SALINE)

BE IT REMEMBERED, that on this day came before me, the undersigned, a Notary Public within and for the County aforesaid, duly commissioned and acting Thomas J. Cunningham, Jr., President, and Travis Paul Bull, Vice President/Secretary, of B&C Excavating, Inc., to me well known as the grantors in the foregoing document, and stated that they had executed the same for the consideration and purposes therein mentioned and set forth.

WITNESS my hand and seal as Notary Public on this 26th day of January, 2012.

Constance M. Bull

My Commission Expires:

7-21-18

(SEAL) NOTARY PUBLIC STATE OF ARKANSAS
CONSTANCE M. BULL
MY COMMISSION # 12366926
EXPIRES: July 21, 2018
Saline County

12 006939

EXHIBIT "A"

PART OF THE SW1/4 SW1/4 OF SECTION 10, TOWNSHIP 1 SOUTH, RANGE 14 WEST, IN SALINE COUNTY, ARKANSAS, MORE PARTICULARLY DESCRIBED AS FOLLOWS: COMMENCING AT THE NORTHEAST CORNER OF THE SOUTHEAST QUARTER OF THE SOUTHWEST QUARTER (SE1/4 SW1/4) OF THE SAID SECTION 10, A FOUND ¼" REBAR; THENCE NORTH 88° 21' 12" WEST 1541.88 FEET; THENCE NORTH 88° 16' 00" WEST 27.36 FEET TO THE POINT OF BEGINNING, A FOUND 5/8" REBAR; THENCE SOUTH 02° 02' 17" WEST 146.17 FEET TO A SET #4 REBAR; THENCE SOUTH 01° 57' 13" WEST 50.00 FEET TO A SET #4 REBAR; THENCE SOUTH 02° 04' 09" WEST 270.00 FEET TO A SET #4 REBAR; THENCE SOUTH 01° 52' 16" WEST 50.00 FEET TO A SET #4 REBAR; THENCE SOUTH 02° 04' 09" WEST 270.00 FEET TO A SET #4 REBAR; THENCE SOUTH 01° 57' 11" WEST 50.00 FEET TO A SET #4 REBAR; THENCE SOUTH 02° 02' 17" WEST 135.20 FEET TO A FOUND #5 REBAR; THENCE SOUTH 02° 02' 17" WEST 315.36 FEET TO A FOUND 5/8" REBAR WITH CAP #128 ON THE NORTH RIGHT-OF-WAY OF HILLTOP ROAD; THENCE NORTH 88° 18' 19" WEST, ALONG SAID RIGHT-OF-WAY, 403.59 FEET TO A FOUND 5/8" REBAR WITH CAP #128; THENCE NORTH 02° 02' 33" EAST, DEPARTING FROM SAID RIGHT-OF-WAY, 1286.20 FEET to A FOUND 5/8" REBAR WITH CAP; THENCE SOUTH 87° 00' 06" EAST 111.53 FEET TO A FOUND #5 REBAR; THENCE NORTH 88° 08' 26" EAST 50.33 FEET TO A FOUND #5 REBAR; THENCE SOUTH 88° 14' 50" EAST 119.44 FEET; THENCE SOUTH 88° 16' 00" EAST 122.25 FEET TO THE POINT OF BEGINNING. CONTAINING AN AREA OF 12.03 ACRES

FILED FOR RECORD
In DOC Book 2012 Page 6931
JAN 31 2012
at 10:11 o'clock A M
DENNIS MILLIGAN, CIRCUIT CLERK
BY Jenny Jo DC

SEAL OF CIRCUIT COURT
SALINE COUNTY, AR

HOPE
CONSULTING
ENGINEERS - SURVEYORS

January 25, 2023

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

RE: Cypress Valley Phase 2 Final Plat

Dear Truett:

On behalf of the property owner, Hope Consulting is requesting the review of the Final Plat and As-Builts of Cypress Valley Phase 2.

The developer of this project is Gary Kennedy of Kennedy Development, LLC.

Gary Kennedy braggconstruction@yahoo.com 501-626-6202

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
ENGINEERS - SURVEYORS
129 N Main Street Benton, AR 72015 * 501-315-2626 * Fax 501-315-0024

Stormwater Infrastructure Maintenance Plan Agreement

Gary Kennedy
Kennedy Development, LLC
braggconstruction@yahoo.com
501-626-6202

Cypress Valley Phase 2

All maintenance basin maintenance plans shall contain or uphold, without limitation, the following provisions:

(1) A description of the property on which the stormwater management facility is located and all easements from the site to the facility;

(2) Size and configuration of the facility;

(3) A statement that properties which will be served by the facility are granted rights to construct, use, reconstruct, repair and maintain access to the facility;

(4) A statement that each lot served by the facility is responsible for repairs and maintenance of the facility and any unpaid ad valorem taxes, public assessments for improvements, and unsafe building and public nuisance abatement liens charged against the facility, including all interest charges together with attorney fees, costs, and expenses of collection. If an association is delegated these responsibilities, then membership into the association shall be mandatory for each parcel served by the facility and any successive buyer. The association shall have the power to levy assessments for these obligations, and all that unpaid assessments levied by the association shall become a lien on the individual parcel;

(5) All stormwater facilities must be designed to minimize the need for maintenance, to provide easy vehicle and personal access for maintenance purpose, and be structurally sound. It shall be the responsibility of the applicant to obtain any necessary easements or other property interested to allow access to the facilities for inspection or maintenance;

(6) Detention/retention areas, earthen berms, intake structures, piping, discharge structures, trickle channels, spillways, pipe flares, weirs and fencing shall be regularly inspected, maintained and repaired to ensure their proper operation and to prevent the creation of any hazards or nuisances;

(7) Major deposits of sediment shall be removed from the detention/retention area on an annual basis or after any extreme storm event. Excavated materials shall be properly disposed of off-site. Every five years the detention area(s) shall be

surveyed to confirm that the original as-constructed contours have been maintained;

(8) Every three months piping and outlet structures shall be inspected and cleared of any accumulated debris;

(9) Erosion in detention/retention areas shall be promptly repaired and stabilized with appropriate Best Management Practices (BMP's);

(10) Detention/retention area shall be mowed during the growing season May through September to maintain the turf height of 6-inches or less. Any brush or trees that may grow within the detention areas bottom, slopes or banks shall be removed;

(11) Litter and foreign materials shall be removed from the detention area(s) weekly. Large or noxious pieces of litter shall be removed immediately. The area(s) shall be inspected visually after rainfall events in excess of 1" in 24 hours;

(12) Inspections of overall detention/retention area(s) and detention/retention components shall occur monthly with their conditions noted on an inspection form. If any remedial action is required, it should be noted and corrected;

(13) All inspection forms must be retained on-site, including the "As-Built" drawings and photographs of the improvements in their original condition;

(14) Items 1-13 shall be listed on the Stormwater Infrastructure Maintenance Plan Agreement.

(15) Inspection forms for Stormwater Infrastructure components are required. (An example of inspection forms are attached.)

______________________________ ______________________________

Gary Kennedy signature

____

date

City of Bryant Stormwater Department

1019 SW 2nd St.
Bryant, Arkansas 72022
Office (501) 943-0453; Fax (501) 943-0851

WARRANTY BOND PROCEDURES

For Stormwater Infrastructure Public & Private

These procedures are applicable to Stormwater Infrastructure that is to be dedicated to the public and maintained by the City of Bryant and for Private Stormwater Infrastructure that will be connected to overall City of Bryant Stormwater Infrastructure.

In accordance with Ordinance No. 2019-32 Article V., The City of Bryant Stormwater Department will require a Maintenance Warranty Bond as part of the process for approving Stormwater Infrastructure. The purpose of the bond is to cover the cost of correcting deficiencies not addressed by the developer during the warranty period and to insure no adverse effects will occur to the overall function of the City of Bryant Stormwater Infrastructure.

ORDINANCE 2019-32 ARTICLE V. STORMWATER INFRASTRUCTURE WARRANTY BOND.

1. **Stormwater Infrastructure Warranty Bond.** A one year maintenance bond against defects in workmanship shall be required by the Administrative Authority for any portion of the stormwater management facilities privately owned or stormwater management improvements dedicated to the city, said maintenance bond is to be provide by cashier's check, irrevocable letter of credit or acceptable surety authorized to do business in the State of Arkansas. All forms of maintenance bonds shall be subject to approval by the Administrative Authority. The value of the bond shall be an amount equal to 100% of the value of the privately owned stormwater management facilities or stormwater system improvements being privately owned or dedicated to the city. A cost list must be provide to prove and verify the amount of the maintenance bond. The cost list shall include cost of stormwater infrastructure construction and components (piping, weirs, spillway structures, junction boxes, trickle channels, inlets, grates, riprap and site stabilization).

2. **Procedurals.** These procedures are applicable to Stormwater Infrastructure that is to be dedicated to the public and maintained by the City of Bryant and for Private Stormwater Infrastructure that will be connected to overall City of Bryant Stormwater Infrastructure.

   In accordance with Ordinance No. 2019-32 Article V., City of Bryant Stormwater Department will require a Maintenance Warranty Bond as part of the process for approving Stormwater Infrastructure. The bond will be equal to 100% of the cost of construction of the Stormwater Infrastructure System at the time of completion of the Stormwater Infrastructure System. The purpose of the bond is to cover the cost of correcting deficiencies not addressed by the developer during the warranty period and to insure no adverse effects will occur to the overall function of the City of Bryant Stormwater Infrastructure.

3. **Determining the Maintenance Warranty Bond Amount.** During the final inspection process, the City of Bryant Stormwater Department will verify and approve the Warranty Bond estimate for all Stormwater Infrastructure within the proposed unit using:

(a) The Warranty Bond cost list estimate shall be presented to the City of Bryant Stormwater Department by formal letter. The formal letter shall include project name, developer contact information and "Cost List for Construction of Stormwater Infrastructure Components" including but not limited to piping, weirs, spillway structures, junction boxes, trickle channels, riprap, inlets, grates, weirs and site stabilization;

(b) The Bond amount will need to be re-evaluated if more than 18 months have passed from the time of the estimate review to the time of providing the bond to the City of Bryant Stormwater Department;

4. **Submitting the bond to the city.** After requesting a final inspection of the Stormwater Infrastructure and approval of completion by the City of Bryant Stormwater Department, the developer must provide the City of Bryant Stormwater Department with a bond equal to amount determined in Article V. Section 3. of this document. The Bond must be for a period of 12 months and be a financial guarantee in the form of a bond, letter of credit, or trust agreement executed by a surety company authorized to do business in the State of Arkansas. The Bond must be payable to the City of Bryant Public Works Department, conditioned that the developer will maintain the Stormwater Infrastructure in accordance with the Stormwater Management Manual Ordinance No. 2019-31 and the Stormwater Management Ordinance No. 2019-32.

5. **Warranty period.** After the Stormwater Infrastructure construction passes the final inspection and the one year warranty bond is received, the one year maintenance warranty period will begin. The one-year warranty period will start on the date the Maintenance Warranty Bond is received and accepted. There shall be no separate warranty period start dates for Stormwater Infrastructure within a single unit.

6. **Follow-up inspection.** The City of Bryant Stormwater Department will conduct a follow-up inspection within the tenth month of the warranty period but in no event any later than two months prior to the bond expiring. The City of Bryant Stormwater Department will issue a punch list of deficiencies that will be sent to the developer or contractor for the unit. If no deficiencies are found and camera video passes inspection, release of the bond will proceed as set out and as listed in Article V. Section 10 of this document.

7. **Correcting Deficiencies and Camera Video.** The developer must contact the City of Bryant Stormwater Department at least 24 hours before correcting any decencies or performing camera video. The developer shall also camera all stormwater infrastructure to ensure that there is no sediment laden infrastructure. Upon notification by the developer that all deficiencies have been corrected and camera video has been completed, the City of Bryant Stormwater Department will re-inspect to verify compliance with correction of deficiencies and reviewing the camera video to assure the stormwater infrastructure is not sediment laden or defective.

8. **Calling in the bond.** If the developer does not contact the City of Bryant Stormwater Department, deficiencies have not been corrected and the stormwater infrastructures has not been camera videoed by the end of the 11th month or one (1) month prior to the expiration of the Bond, the City of Bryant Stormwater Department will prepare an estimate and list of work to be done to bring the stormwater infrastructure into compliance. The City of Bryant Stormwater Department will contact the bonding agency to submit the cost estimates for correcting the deficiencies.

9. **Requesting Acceptance.** Once all deficiencies have been corrected, the City of Bryant Stormwater Department will prepare the paperwork for the Stormwater Infrastructure within the unit accepted for maintenance by the City of Bryant 'if dedicated', or paperwork will be prepared to release the bond if infrastructure is a private unit.

10. **Bond Release.** The Bond will be released once the City of Bryant has accepted the Stormwater Infrastructure for maintenance 'if dedicated', and an acceptance letter has been written by the City of Bryant Public Works. If all compliance has been met with a private Stormwater Infrastructure Unit(s) then the City of Bryant Stormwater Department shall contact the developer by formal letter and release the bond. No partial release of the Bond will be allowed at any time.

ATTENTION: DO NOT FILL OUT INFORMATION BELOW UNTIL YOU ARE PRESENT WITH A NOTARY PUBLIC. (THIS DOCUMENT MUST BE NOTARIZED)

By filling out the information below, signing and dating, you are hereby acknowledging that you have read, understand and agree to adhere to the Stormwater Infrastructure Warranty Bond Procedures and Processes listed in this document. You the applicant are hereby responsible for upholding, without limitation, the Stormwater Infrastructure Warranty Bond Procedures.

CYPRESS VALLEY PHASE 2
____
Name of Project Site/Addition

GARY KENNEDY
____
Applicant Name
(Print)

____
Applicant Name
(Signature)

KENNEDY DEVELOPMENT, LLC
____
Applicant Business Name

1229 HOT SPRINGS HWY BENTON ,AR
____
Applicant Mailing Address

Notarization

State of ______________________

County of ______________________

Subscribed and sworn before me, a Notary Public, on this _____ day of ______________, __________.

____
Signature of Notary

____
My commission expires:

Notary Seal Stamp Here:

Comment Responses for Midland Road Estates Subdivision

Public Works

Comment no.1- Site will require ADEQ Large Scale Development permit.

Response- ACEQ Large Scale Development permit has been provided with the submission.

Comment no.2- Site will require a Stormwater Detention Maintenance Plan.

Response- Storm Detention Maintenance Plan it has been provided.

Comment no.3- Developer will be required to submit signed and notarized Stormwater Infrastructure Warranty Bond SOP per Ordinance 2019-32.

Response- Stormwater Infrastructure Warranty Bond SOP has been submitted.

Comment no.4- Discuss placement of spillway' on detention/retention ponds.

Response- Spillway locations have been provided. See (C-6.16).

Comment no.5- Ensure that the pond to the eastside of the south detention pond is not a federally protected wetland.

Response- The comment has been addressed.

Comment no.6- Geotech report from Midland Rd. per Street Specs.

Response- Geotech report from Midland Rd. Street Specifications have been provided.

Comment no.7- Lot counts

Response- Lot counts have been corrected.

Comment no.8- Provide design drawing Corp creek crossing road

Response- Design drawing for Corp Creek has been provided. See (C-6.17).

Comment no.9- Describe management of water from site to the North (pond)

Response- The comment has been addressed.

Comment no.10- Is lot 8 in Corp creek

Response- Lot 8 has resized to keep distance from the Corp creek. See (C-1.0)

Comment no.11- Discuss access to lot 193 and road maintenance.

Response- The comment has been addressed.

Comment no.12- Provide entire Corp creek that crosses development

Response- Entire Corp creek crossing the development site has been provided.

Comment no.13- Discuss encasement Corp creek crossing Road D.

Response- Encasement for Corp creek on Road (D) has been provided. See (C-6.17)

Comment no.14- Discuss drainage easements

Response- The comment has been addressed.

Comment no.15- Will sites require multiple variances for lots?

Response- We do not expect multiple variances.

Comment no.16- Discuss improvement district

Response- The subdivision will be an improvement district.

Comment no.17- Discuss drainage at rear of lots

Response- Drainage plan for rear lots has been provided.

Engineering

Comment no.1- Provide Utility plans, drainage plans and drainage calculations. Provided

Comment no.2- Discuss Sanitary Sewer Impact of Subdivision on Trunk line to Lift Station 25. Not provided

Response- Sanitary sewer impact of Subdivision on Trunk line to Lift Station 25 has been provided.

Comment no.3- Discuss Sanitary Sewer routing through adjacent neighborhoods (Wildwood Terrace and Centark Ranchette).

Response- Sanitary sewer routing has been provided.

Comment no.4- Discuss access management to existing street (Willow). Provided

Comment no.5- Show 30' dedicated gravity sewer easement between lots 13 and 14 and entire length line per section 1200-7-1.08.

Response- Dedicated gravity sewer has been provided.

Comment no.6- Proposed 2" Force Main and 11 grinder pumps to remain private.

Response- 2" Main and 22 grinder pumps have been provided to remain private. See (C-3.7)

Planning

Comment no.1- Annexation Procedures

Response- We will follow standard procedures.

Comment no.2- Discuss Master Transportation Plan Road – Collector

Response- Master Transportation Plan Road has been considered.

Comment no.3- Is lot 119 6,000 SF? Lots 33-35, 47-49, 185, Are under 6,000SF

Response- Lots 119, 33-35, and 47-49 are over 6000 SF.

Comment no.4- Lot 193 and Rear entrance are located within an existing subdivision, Wildwood Terrace.

Response- Lot 193 has been reviewed and discussed with title company.

Comment no.5- Street Cross Section is incorrect - 5ft sidewalk, 7 ft greenspace is typical local street.

Response- Comment has been addressed.

Comment no.6- Sheet C-5.0 shows sidewalk width “4ft or 5ft” in width. City specs are 5ft.

Response- Sheet C-5.0 has been corrected.

Comment no.7- No updated plat has been provided.

Response- Plats have been updated.

Fire

Comment no.1- Need fire hydrant locations listed on plans.

Response- Fire hydrants have been listed on utilities plans.

Stormwater Pollution Prevention Plan (SWPPP) for Construction Activity
for Large Construction Sites

National Pollutant Discharge Elimination System (NPDES)
General Permit # ARR150000

Prepared for:

HAVEN'S DEVELOPMENT, LLC

MIDLAND ROAD

Proposed Subdivision

MIDLAND ROAD Subdivison
Saline County

Date:
19 April 2023
Prepared by:

HOPE
CONSULTING
ENGINEERS - SURVEYORS

Revised date: 10/20/2016

Project Name and Location: **Midland Road Subdivision, NW across from the intersection of Midland Rd. and Creekside Dr., Bryant, Saline County**

Property Parcel Number (*Optional*): **001-03734-000 and 001-03744-000**

Owner: Todd Haven - **Haven's Development 501- 891-2289;**
2909 N. University Ave., Little Rock, AR 72207 todd@havensdev.com
Developer/Contractor/Operator: **Todd Haven – Haven's Development - 501-891-2289,**
2909 N. University Ave., Little Rock, AR 72207
grahamsmithcompanies.com

A. Site Description
   a. Project description, intended use after NOI is filed: **165 Lot subdivision**
   b. Sequence of major activities which disturb soils: **Construction entrance, ROW clearing, silt fence, drainage channels, trenching for utilities, rock ckeck dams, grading, road construction, lot clearing, home construction. Detention will be temp sediment pond, (see erosion control plan).**
   c. Total Area[1]: **49.09 Ac±** Disturbed Area[2]: **43.76 Ac±**
   d. Soils Information:
      i. Runoff Coefficient Pre-Construction (See Appendix A) : **0.47**_________
      ii. Runoff Coefficient Post-Construction (See Appendix A) : **0.65**________
      iii. Describe the soil or the quality of any discharge from the site: **OK**

B. Responsible Parties
   Be sure to assign all SWPPP related activities to an individual or position; even if the specific individual is not yet known (i.e. contractor has not been chosen).

Individual/Company	Phone Number	Service Provided for SWPPP (i.e., Inspector, SWPPP revisions, Stabilization Activities, BMP Maintenance, etc.)
Hope Consulting	501-315-2626	SWPPP Revisions
Todd Haven – Haven's Development LLC- Operator	501-891-2289	Inspection, Stabilization Activities, BMP Maintenance

C. Receiving Waters
   a. The following waterbody (or waterbodies) receives stormwater from this construction site: **unnamed Tributary, thence Owen Creek, thence Foueche Creek, thence Arkansas River**
   b. Is the project located within the jurisdiction of an MS4? ☒Yes ☐No
      i. If yes, Name of MS4: **Bryant**
   c. Ultimate Receiving Water:
      ☐Red River ☒Arkansas River
      ☐Ouachita River ☐White River

☐St. Francis River ☐Mississippi River

[1]Increases in total acreage require an additional acreage request, an updated SWPPP and a $200 modification fee to be submitted to ADEQ.
[2]Increases in only disturbed acreage require an additional acreage request and an updated SWPPP to be submitted to ADEQ.

D. Documentation of Permit Eligibility Related to the 303(d) list and Total Maximum Daily Loads (TMDL) (https://www.adeq.state.ar.us/water/planning/)
   a. Does the stormwater enter a waterbody on the 303(d) list or with an approved TMDL? ☐Yes ☒No
   b. If yes:
      i. Waterbody identified on 303(d) list:_
      ii. Pollutant addressed on 303(d) list or TMDL: ____________
      iii. This specific project ,or generally construction activity i.e. surface erosion, is identified on 303(d) list or associated assumptions and allocations identified in the TMDL for the discharge: ☒Yes ☐No
      iv. Additional controls implemented: _.

E. Attainment of Water Quality Standards After Authorization
   a. The permittee must select, install, implement, and maintain BMPs at the construction site that minimize pollutants in the discharge as necessary to meet applicable water quality standards. In general, except in situations explained below, the SWPPP developed, implemented, and updated to be considered as stringent as necessary to ensure that the discharges do not cause or contribute to an excursion above any applicable water quality standard.
   b. At any time after authorization, the Department may determine that the stormwater discharges may cause, have reasonable potential to cause, or contribute to an excursion above any applicable water quality standard. If such a determination is made, the Department will require the permittee to:
      i. Develop a supplemental BMP action plan describing SWPPP modifications to address adequately the identified water quality concerns and submit valid and verifiable data and information that are representative of ambient conditions and indicate that the receiving water is attaining water quality standards; or
      ii. Cease discharges of pollutants from construction activity and submit an individual permit application.

I understand and agree to follow the above text regarding the attainment of water quality standards after authorization. ☒Yes ☐No

F. Site Map Requirements (Attach Site Map):
  a. Pre-construction topographic view;
  b. Direction of stormwater flow (i.e., use arrows to show which direction stormwater will flow) and approximate slopes anticipated after grading activities;
  c. Delineate on the site map areas of soil disturbance and areas that will not be disturbed under the coverage of this permit;
  d. Location of major structural and nonstructural controls identified in the plan;
  e. Location of main construction entrance and exit;
  f. Location where stabilization practices are expected to occur;
  g. Locations of off-site materials, waste, borrow area, or equipment storage area;
  h. Location of areas used for concrete wash-out;
  i. Location of all surface water bodies (including wetlands) with associated natural buffer boundary lines. Identify floodplain and floodway boundaries, if available;
  j. Locations where stormwater is discharged to a surface water and/or municipal separate storm sewer system if applicable,
  k. Locations where stormwater is discharged off-site (should be continuously updated);
  l. Areas where final stabilization has been accomplished and no further construction phase permit requirements apply;
  m. A legend that identifies any erosion and sediment control measure symbols/labels used in the site map and/or detail sheet; and
  n. Locations of any storm drain inlets on the site and in the immediate vicinity of the site.

G. Stormwater Controls
  a. Initial Site Stabilization, Erosion and Sediment Controls, and Best Management Practices:
    i. Initial Site Stabilization: **existing vegetation, silt fencing on toe of slopes and along major drainage pathways. All silt fencing may not be necessary initially, but rather as construction progresses.**
    ii. Erosion and Sediment Controls: **Rip rap check dams, additional silt fencing (as needed),**
    iii. If periodic inspections or other information indicates a control has been used inappropriately or incorrectly, the operator will replace or modify the control for site situations: ☒Yes ☐No
      If No, explain: ____
      ____

iv. Off-site accumulations of sediment will be removed at a frequency sufficient to minimize off-site impacts: ☒Yes ☐No
If No, explain: ____
____

v. Sediment will be removed from sediment traps or sedimentation ponds when design capacity has been reduced by 50%: ☒Yes ☐No
If No, explain: ____
____

vi. Litter, construction debris, and construction chemicals exposed to stormwater shall be prevented from becoming a pollutant source for stormwater discharges: ☒Yes ☐No
If No, explain: ____
____

vii. Off-site material storage areas used solely by the permitted project are being covered by this SWPPP: ☐Yes ☒No
If Yes, explain additional BMPs implemented at off-site material storage area: ____
____

b. Stabilization Practices

i. Description and Schedule: **Final stabilization will be concrete, stone, sod, landscape. Permit will be closed when all exposed areas are 100% covered with 80% density.**

ii. Are buffer areas required? ☐Yes ☒No
If Yes, are buffer areas being used? ☒Yes ☒No

If Yes, describe natural buffer areas: Natural buffer area will be undisturbed along unnamed tributary.

If No, explain why not:________________________________
____

iii. A record of the dates when grading activities occur, when construction activities temporarily or permanently cease on a portion of the site, and when stabilization measures are initiated shall be included with the plan.

iv. Deadlines for stabilization: Stabilization procedures will be initiated 14 days after construction activity temporarily ceases on a portion of the site.
☒Yes ☐No
If No, explain: ____
____

v. Deadlines for stabilization:
   1. Stabilization procedures will be initiated immediately after construction activity temporarily ceases on a portion of the site.
   2. Stabilization procedures will be initiated immediately in portions of the site where construction activities have permanently ceased.

c. Structural Practices
   i. Describe any structural practices to divert flows from exposed soils, store flows, or otherwise limit runoff and the discharge of pollutants from exposed areas of the site: **silt fencing, check dams**
   ii. Describe Velocity Dissipation Devices: **rip rap check dams as needed**

   ____

   iii. Sediment Basins:

   Are 10 or more acres draining to a common point? ☒Yes ☐No

   Is a sediment basin included in the project? ☐Yes ☒No

   If Yes, what is the designed capacity for the storage?

   ☐3600 cubic feet per acre = : _

   or

   ☒10 year, 24 hour storm =

   : 62335

   ☐ Other criteria were used to design basin:

   If No, explain why no sedimentation basin was included and describe required natural buffer areas and other controls implemented instead: **Each lot will have plenty of buffer space around the perimeter**

H. Other Controls

a. Solid materials, including building materials, shall be prevented from being discharged to Waters of the State: ☒Yes ☐No

b. Off-site vehicle tracking of sediments and the generation of dust shall be minimized through the use of:

   ☒A stabilized construction entrance and exit

   ☐Vehicle tire washing

   ☐Other controls, describe: **Street needs to be swept if needed.**

   ____

c. Temporary Sanitary Facilities: **Contractor to provide and maintain facitilities.**

d. Concrete Waste Area Provided:

☒Yes

☐No. Concrete is used on the site, but no concrete washout is provided.
Explain why: ____
____

☐N/A, no concrete will be used with this project

e. Fuel Storage Areas, Hazardous Waste Storage, and Truck Wash Areas: **No hazardous waste will be produced as a result of this project. Fuel storage areas will not be used and truck wash areas will not be needed.**

I. Non-Stormwater Discharges

a. The following allowable non-stormwater discharges comingled with stormwater are present or anticipated at the site:

☐Fire-fighting activities;
☒Fire hydrant flushings;
☐Water used to wash vehicles (where detergents or other chemicals are not used) or control dust in accordance with Part II.A.4.H.2;
☒Potable water sources including uncontaminated waterline flushings;
☐Landscape Irrigation;
☐Routine external building wash down which does not use detergents or other chemicals;
☐Pavement wash waters where spills or leaks of toxic or hazardous materials have not occurred (unless all spilled materials have been removed) and where detergents or other chemicals are not used;
☐Uncontaminated air conditioning, compressor condensate (See Part I.B.13.C of the permit);
☐Uncontaminated springs, excavation dewatering and groundwater (See Part I.B.13.C of the permit);
☐Foundation or footing drains where flows are not contaminated with process materials such as solvents (See Part I.B.13.C of the permit);

b. Describe any controls associated with non-stormwater discharges present at the site: **There are no non storm water discharges that warrant extra controls. The activities which will be non storm water discharges will be not be regularly occuring and will be monitored.**

J. Permanent Controls for Post-Construction Stormwater Management:

Describe measures installed during the construction process to control pollutants in stormwater discharges that will occur after construction operations have been completed: **Project area will be stabilized before SWPPP is terminated. Yards will be sodded/seeded and/or landscaped.**
Permit won't be closed until obtain 100% coverage and 80% density

K. Applicable State or Local Programs: The SWPPP will be updated as necessary to reflect any revisions to applicable federal, state, or local requirements that affect the stormwater controls implemented at the site. ☒Yes ☐No

L. Inspections
   a. Inspection frequency:
      ☒**Every 7 calendar days and within 24 hours of the end of a storm event 0.5 inches or greater (a rain gauge must be maintained on-site)**
   b. Inspections:
      Completed inspection forms will be kept with the SWPPP.
      ☒ADEQ's inspection form will be used (See Appendix B)
      or
      ☐A form other than ADEQ's inspection form will be used and is attached (See inspection form requirements Part II.A.4.L.2)
   c. Inspection records will be retained as part of the SWPPP for at least 3 years from the date of termination.
   d. It is understood that the following sections describe waivers of site inspection requirements. All applicable documentation requirements will be followed in accordance with the referenced sections.
      i. Winter Conditions (Part II.A.4.L.4)
      ii. Adverse Weather Conditions (Part II.A.4.L.5)

M. Maintenance:
   The following procedures to maintain vegetation, erosion and sediment control measures and other protective measures in good, effective operating condition will be followed: **As homes are completed, lots will be sodded, seeded, and/or landscaped, contractors will be responsible for keeping individual lots during home construction.**
   Any necessary repairs will be completed, when practicable, before the next storm event, but not to exceed a period of 3 business days of discovery, or as otherwise directed by state or local officials.

N. Employee Training:
   The following is a description of the training plan for personnel (including contractors and subcontractors) on this project: **The operator is well trained and familiar with erosion control practices. Workers who are under the operator will be briefed and trained on erosion control practices and the SWPPP contents.**
   **Note, Formal training classes given by Universities or other third-party organizations are not required, but recommended for qualified trainers; the permittee is responsible for the content of the training being adequate for personnel to implement the requirements of the permit.

Certification

"I certify under penalty of law that this document and all attachments such as Inspection Form were prepared under my direction or supervision in accordance with a system designed to ensure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

Signature of Responsible or Cognizant Official: Kazi Bhuiyan

Title: P.E.

Date: 04-17-2023

Computation Sheet for Determining Runoff Coefficients

Total Site Area = ____________ Acres [A]

Existing Site Conditions

Impervious Site Area [1] = ____________ Acres [B]

Impervious Site Area Runoff Coefficient [2, 4] = ____________ [C]

Pervious Site Area [3] = ____________ Acres [D]

Pervious Site Area Runoff Coefficient [4] = ____________ [E]

Pre-Construction Runoff Coefficient

$$\frac{[B \times C] + [D \times E]}{[A]}$$ = This is your pre-construction runoff coefficient.

Proposed Site Conditions (after construction)

Impervious Site Area [1] = ____________ Acres [F]

Impervious Site Area Runoff Coefficient [2, 4] = ____________ [G]

Pervious Site Area [3] = ____________ Acres [H]

Pervious Site Area Runoff Coefficient [4] = ____________ [I]

Post-Construction Runoff Coefficient

$$\frac{[F \times G] + [H \times I]}{[A]}$$ = This is your post-construction runoff coefficient.

1. Includes paved areas, areas covered by buildings, and other impervious surfaces.
2. Use 0.95 unless lower or higher runoff coefficient can be verified.
3. Includes areas of vegetation, most unpaved or uncovered soil surfaces, and other pervious areas.
4. Refer to local Hydrology Manual for typical C values.

Note: The impervious and pervious surfaces should equal the total area.

ARR150000 Inspection Form

Appendix B

Inspector Name: ______________________________ Date of Inspection: ______________
Inspector Title: ______________________________

Date of Rainfall: ______________________________ Duration of Rainfall: ______________________________
Days Since Last Rain Event: ______________ days Rainfall Since Last Rain Event: ________ inches

Description of any Discharges During Inspection: ______________________________
Location of Discharges of Sediment/Other Pollutant (specify pollutant & location): ______________________________
____

Locations in Need of Additional BMPs: ______________________________

Information on Location of Construction Activities

Location	Activity Begin Date	Activity Occuring Now (y/n)?	Activity Ceased Date	Stabilization Initiated Date	Stabilization Complete Date

Information on BMPs in Need of Maintenance

Location	In Working Order?	Maintenance Scheduled Date	Maintenance Completed Date	Maintenance to be Performed By

Changes required to the SWPPP: ______________ Reasons for changes: ______________
______________________________ ______________________________
______________________________ ______________________________

SWPPP changes completed (date): ______________

"I certify under penalty of law that this document and all attachments such as Inspection Form were prepared under my direction or supervision in accordance with a system designed to ensure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

Signature of Responsible or Cognizant Official: ______________________________ Date: ______________

Title: ______________________________

BMP Consideration Checklist

The BMPs listed here should be considered for every project. Those BMPs that are not included in the SWPPP should be checked as "Not Used" with a brief statement describing why it is not being used.

Note: Appendix C and D do not have to be submitted with the SWPPP. These attachments are for use during the development of the SWPPP.

EROSION CONTROL BMPs				
BMP	**BMP Considered for project**	**BMP Used**	**BMP Not Used**	**If not used, state reason**
EC-1 Scheduling	☐	☒	☐	
EC-2 Preservation of Existing Vegetation	☐	☒	☐	
EC-3 Hydraulic Mulch	☐	☐	☐	
EC-4 Hydroseeding	☐	☒	☐	
EC-5 Soil Binders	☐	☐	☐	
EC-6 Straw Mulch	☐	☐	☐	
EC-7 Geotextiles & Mats	☐	☐	☐	
EC-8 Wood Mulching	☐	☐	☐	
EC-9 Earth Dikes & Drainage Swales	☐	☒	☐	
EC-10 Velocity Dissipation Devices	☐	☐	☐	
EC-11 Slope Drains	☐	☐	☐	
EC-12 Stream bank Stabilization	☐	☒	☐	

SEDIMENT CONTROL BMPs				
BMP	**BMP Considered for project**	**BMP Used**	**BMP Not Used**	**If not used, state reason**
SE-1 Silt Fence	☐	☒	☐	
SE-2 Sediment Basin	☐	☒	☐	
SE-3 Sediment Trap	☐	☒	☐	
SE-4 Check Dam	☐	☒	☐	
SE-5 Fiber Rolls	☐	☐	☐	
SE-6 Gravel Bag Berm	☐	☐	☐	
SE-7 Street Sweeping and Vacuuming	☐	☐	☐	
SE-8 Sand Bag Barrier	☐	☐	☐	
SE-9 Straw Bale Barrier	☐	☐	☐	
SE-10 Storm Drain Inlet Protection	☐	☐	☐	
SE-11 Chemical Treatment	☐	☐	☐	

WIND EROSION CONTROL BMPs				
BMP	**BMP Considered for project**	**BMP Used**	**BMP Not Used**	**If not used, state reason**
WE-1 Wind Erosion Control	☐	☐	☐	

BMP Consideration Checklist Appendix C

TRACKING CONTROL BMPs				
BMP	**BMP Considered for project**	**BMP Used**	**BMP Not Used**	**If not used, state reason**
TR-1 Stabilized Construction Entrance/Exit	☐	☒	☐	BMPs not used are
TR-2 Stabilized Construction Roadway	☐	☐	☐	needed
TR-3 Entrance/Outlet Tire Wash	☐	☐	☐	
NON-STORM WATER MANAGEMENT BMPs				
BMP	**BMP Considered for project**	**BMP Used**	**BMP Not Used**	**If not used, state reason**
NS-1 Water Conservation Practices	☐	☐	☐	BMPs not used are
NS-2 Dewatering Operations	☐	☐	☐	needed
NS-3 Paving and Grinding Operations	☐	☐	☐	
NS-4 Temporary Stream Crossing	☐	☐	☐	
NS-5 Clear Water Diversion	☐	☐	☐	
NS-6 Illicit Connection/ Discharge	☐	☐	☐	
NS-7 Potable Water/Irrigation	☐	☒	☐	
NS-8 Vehicle and Equipment Cleaning	☐	☐	☐	
NS-9 Vehicle and Equipment Fueling	☐	☐	☐	
NS-10 Vehicle and Equipment Maintenance	☐	☐	☐	
NS-11 Pile Driving Operations	☐	☐	☐	
NS-12 Concrete Curing	☐	☐	☐	
NS-13 Concrete Finishing	☐	☐	☐	
NS-14 Material and Equipment Use Over Water	☐	☐	☐	
NS-15 Demolition Adjacent to Water	☐	☐	☐	
NS-16 Temporary Batch Plants	☐	☐	☐	
WASTE MANAGEMENT AND MATERIALS POLLUTION CONTROL BMPs				
BMP	**BMP Considered for project**	**BMP Used**	**BMP Not Used**	**If not used, state reason**
WM-1 Material Delivery and Storage	☐	☐	☐	BMPs not used are
WM-2 Material Use	☐	☐	☐	needed
WM-3 Stockpile Management	☐	☐	☐	
WM-4 Spill Prevention and Control	☐	☐	☐	
WM-5 Solid Waste Management	☐	☐	☐	
WM-6 Hazardous Waste Management	☐	☐	☐	
WM-7 Contaminated Soil Management	☐	☐	☐	
WM-8 Concrete Waste Management	☐	☒	☐	
WM-9 Sanitary/Septic Waste Management	☐	☐	☐	
WM-10 Liquid Waste Management	☐	☐	☐	

SWPPP Completion Checklist

Yes = Complete
No = Incomplete/Deficient
N/A = Not applicable to project

Yes	No	N/A	Item	Permit Section Citation
			A. A site description, including:	
			1. Project description, intended use after NOT	Part II.A.4.A.1
			2. Sequence of major activities	Part II.A.4.A.2
			3. Total & disturbed acreage	Part II.A.4.A.3
			4. Pre- and post-construction runoff coefficient OR soil/discharge data	Part II.A.4.A.4
			B. Responsible Parties: All parties dealing with the SWPPP and the areas they are responsible for on-site.	Part II.A.4.B
			C. Receiving Water.	Part II.A.4.C
			-MS4 Name	Part II.A.4.C
			-Ultimate Receiving Water	Part II.A.4.C
			D. Documentation of permit eligibility related to Impaired Water Bodies and Total Maximum Daily Loads (TMDL	
			1. Identify pollutant on 303(d) list or TMDL	Part II.A.4.D.1
			2. Is construction activity or the specific site listed as cause?	Part II.A.4.D.2
			3. Measures taken to reduce pollutants from the site.	Part II.A.4.D.3
			E. Attainment of Water Quality Standards After Authorization.	Part II.A.4.E
			F. Site Map --- See End of Evaluation Form	Part II.A.4.F
			G. Description of Controls:	
			1. Erosion and sediment controls, including:	
			a. Initial site stabilization	Part II.A.4.G.1.a
			b. Erosion and sediment controls	Part II.A.4.G.1.b
			c. Replacement of inadequate controls	Part II.A.4.G.1.c
			d. Removal of off-site accumulations	Part II.A.4.G.1.d
			e. Maintenance of sediment traps/basins @ 50% capacity	Part II.A.4.G.1.e
			f. Litter, construction debris and chemicals properly handled	Part II.A.4.G.1.f
			g. Off-site storage areas and controls	Part II.A.4.G.1.g
			2. Stabilization practices:	
			a. Description and schedule for stabilization	Part II.A.4.G.2.a
			b. Description of buffer areas	Part II.A.4.G.2.b
			c. Records of stabilization	Part II.A.4.G.2.c
			d. Deadlines for stabilization	Part II.A.4.G.2.d
			3. Structural Practices:	
			-Describe structural practices to divert flows, store flows, or otherwise limit runoff	Part II.A.4.G.3
			a. Sediment basins	Part II.A.4.G.3.a.1
			-Are more than 10 acres draining to a common point? If so, are sediment basins included?	Part II.A.4.G.3.a.1
			-Sediment basin dimensions and capacity description and calculations	Part II.A.4.G.3.a.1
			-If a basin wasn't practicable, are other controls sufficient?	Part II.A.4.G.3.a.1
			b. Velocity dissipation devices concentrated flow from 2 or more acres	Part II.A.4.G.3.b
			H. Other controls including:	
			1. Solid waste control measures	Part II.A.4.H.1
			2. Vehicle off-site tracking controls	Part II.A.4.H.2
			3. Compliance with sanitary waste disposal	Part II.A.4.H.4
			4. Does the site have a concrete washout area controls?	Part II.A.4.H.5
			5. Does the site have fuel storage areas, hazardous waste storage and/or truck wash areas controls?	Part II.A.4.H.6

SWPPP Completion Checklist

Appendix D

Yes	No	N/A		Permit Section Citation
			I. Identification of allowable non-storm water discharges	Part II.A.4.I
			-Appropriate controls for dewatering, if present	Part I.B.12.C
			J. Post construction stormwater management.	Part II.A.4.J
			K. State or local requirements incorporated into the plan.	Part II.A.4.K
			L. Inspections	
			1. Inspection frequency listed?	Part II.A.4.L.1
			2. Inspection form	Part II.A.4.L.2
			Ours.	
			If not ours, does it contain the following items:	
			a. Inspector name and title	Part II.A.4.L.2.a
			b. Date of inspection.	Part II.A.4.L.2.b
			c. Amount of rainfall and days since last rain event (14 day only)	Part II.A.4.L.2.c
			d. Approx beginning and duration of storm event	Part II.A.4.L.2.d
			e. Description of any discharges during inspection	Part II.A.4.L.2.e
			f. Locations of discharges of sediment/other pollutants	Part II.A.4.L.2.f
			g. BMPs in need of maintenance	Part II.A.4.L.2.g
			h. BMPs in working order, if maintenance needed (scheduled and completed)	Part II.A.4.L.2.h
			i. Locations that are in need of additional controls	Part II.A.4.L.2.i
			j. Location and dates when major construction activities begin, occur or cease	Part II.A.4.L.2.j
			k. Signature of responsible/cognizant official	Part II.A.4.L.2.k
			3. Inspection Records	Part II.A.4.L.3
			4. Winter Conditions	Part II.A.4.L.4
			5. Adverse Weather Conditions	Part II.A.4.L.5
			M. Maintenance Procedures	Part II.A.4.M
			N. Employee Training	Part II.A.4.N
			Signed Plan Certification	Part II.A.5. and Part II.B.10
			F. Site Map showing:	
			1. Pre-construction topographic view	Part II.A.4.F.1
			2. Drainage flow	Part II.A.4.F.2
			3. Approximate slopes after grading activities	Part II.A.4.F.2
			4. Areas of soil disturbance and areas not disturbed	Part II.A.4.F.3
			5. Location of major structural and non-structural controls.	Part II.A.4.F.4
			6. Location of main construction entrance and exit.	Part II.A.4.F.5
			7. Areas where stabilization practices are expected to occur.	Part II.A.4.F.6
			8. Locations of off-site materials, waste, borrow area or storage area.	Part II.A.4.F.7
			9. Locations of areas used for concrete wash-out.	Part II.A.4.F.8
			10. Locations of surface waters on site.	Part II.A.4.F.9
			11. Locations where water is discharged to a surface water or MS4.	Part II.A.4.F.10
			12. Storm water discharge locations.	Part II.A.4.F.11
			13. Areas where final stabilization has been accomplished.	Part II.A.4.F.12
			14. Legend for symbols/labels used	Part II.A.4.F.13
			15. Location of storm drain inlets on site or in immediate vicinity	Part II.A.4.F.14

MIDLAND ROAD SUBDIVISION

BRYANT, AR

DRAINAGE REPORT

FOR
City of Bryant, Saline County, AR

April 2023

Owner & Developer: HAVEN'S DEVELOPMENT, LLC
Address: 2615 N. Prickett Road, Suite 5, Bryant AR 72022

By:

HOPE CONSULTING
ENGINEERS - SURVEYORS

TABLE OF CONTENTS

ITEM DESCRIPTION

Narrative & Summary

PROJECT TITLE

Midland Road Subdivision

PROJECT PROPERTY OWNER

Havens Development, LLC

Address: 2615 N. Prickett Road, Suite 5, Bryant AR 72022

PROJECT LOCATION

Midland Road, Bryant, AR

PROJECT DESCRIPTION

The proposed sub divisional development is on Midland Road, Bryant, AR 72002. Total development site area is 49.13 acres.

DRAINAGE ANALYSIS

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

North-West Detention Pond

- Pond is situated on the north-west side of the property.
- Pre-development area 23.93 acres.
- Post-development area 29.93 acres.
- Pre-development runoff coefficient Area-1 0.47.
- Post-development runoff coefficient Area- 0.67.
- Pond has a bottom area of 0.24 acres with bottom elevation of 358.00'.
- One 36'' RCP with 0.5% slope is proposed for outflow culverts.

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

	Pre-development	Post-dev. Without detention	Post-dev. With detention
	Peak Flow (cfs)	Peak Flow (cfs)	Peak Flow (cfs)
2-Year	39.37	71.11	28.79
5-Year	43.42	79.06	32.35
10-Year	51.95	91.38	37.12
25-Year	59.77	104.47	41.61
50-Year	68.17	118.84	44.71
100-Year	72.76	126.02	46.70

South-West Detention Pond

- Pond is situated on the north-east side of the property.
- Pre-development area 15.44 acres.
- Post-development area 15.44 acres.
- Pre-development runoff coefficient 0.47.
- Post-development runoff coefficient 0.67.
- Pond has a bottom area of 0.15 acres with bottom elevation of 350.50'.
- One 24'' RCP with 0.5% slope is proposed for outflow culverts.

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

	Pre-development	Post-dev. Without detention	Post-dev. With detention
	Peak Flow (cfs)	Peak Flow (cfs)	Peak Flow (cfs)
2-Year	27.54	51.22	12.42
5-Year	30.41	57.50	13.85
10-Year	36.00	65.13	15.14
25-Year	41.33	74.24	21.08
50-Year	47.13	84.11	29.93
100-Year	50.16	89.52	33.52

South-East Detention Pond

- Pond is situated on the south-east side of the property.
- Pre-development area 23.57 acres.
- Post-development area 23.57 acres.
- Pre-development runoff coefficient 0.47.
- Post-development runoff coefficient 0.53.
- Pond has a bottom area of 0.15 acres with bottom elevation of 346.50'.
- Two 24'' RCP with 0.5% slope is proposed for outflow culverts.

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

	Pre-development	Post-dev. Without detention	Post-dev. With detention
	Peak Flow (cfs)	Peak Flow (cfs)	Peak Flow (cfs)
2-Year	36.03	40.63	31.29
5-Year	39.74	44.82	34.49
10-Year	47.96	54.08	41.03
25-Year	55.30	62.36	46.37
50-Year	63.03	71.07	50.53
100-Year	67.50	76.12	53.00

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

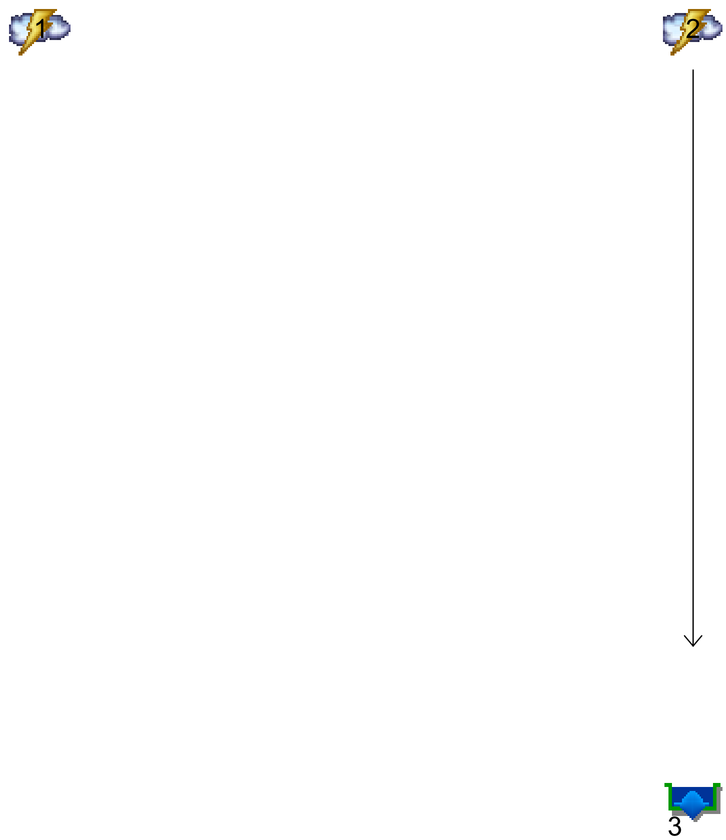
NORTHWEST POND

SOUTHWEST POND

SOUTHEAST POND

SOUTHWEST POND

Watershed Model Schematic



Legend

Hyd.	Origin	Description
1	Rational	Pre. Development
2	Rational	Post Development
3	Reservoir	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	27.54	1	17	28,095	------	------	------	Pre. Development
2	Rational	51.22	1	9	27,659	------	------	------	Post Development
3	Reservoir	12.42	1	16	24,253	2	353.22	21,932	Pond

Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2023 Thursday, 04 / 13 / 2023

Hyd. No. 1

Pre. Development

Hydrograph type	= Rational	Peak discharge	= 27.54 cfs
Storm frequency	= 2 yrs	Time to peak	= 0.28 hrs
Time interval	= 1 min	Hyd. volume	= 28,095 cuft
Drainage area	= 15.440 ac	Runoff coeff.	= 0.47
Intensity	= 3.796 in/hr	Tc by User	= 17.00 min
IDF Curve	= Bryant 50.IDF	Asc/Rec limb fact	= 1/1

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	30.41	1	17	31,020	------	------	------	Pre. Development
2	Rational	57.50	1	9	31,050	------	------	------	Post Development
3	Reservoir	13.85	1	16	27,645	2	353.48	24,474	Pond

Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2023 Thursday, 04 / 13 / 2023

Hyd. No. 1

Pre. Development

Hydrograph type	= Rational	Peak discharge	= 30.41 cfs
Storm frequency	= 5 yrs	Time to peak	= 0.28 hrs
Time interval	= 1 min	Hyd. volume	= 31,020 cuft
Drainage area	= 15.440 ac	Runoff coeff.	= 0.47
Intensity	= 4.191 in/hr	Tc by User	= 17.00 min
IDF Curve	= Bryant 50.IDF	Asc/Rec limb fact	= 1/1

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	36.00	1	17	36,718	------	------	------	Pre. Development
2	Rational	65.13	1	9	35,168	------	------	------	Post Development
3	Reservoir	15.14	1	16	31,762	2	353.79	27,663	Pond

Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2023 Thursday, 04 / 13 / 2023

Hyd. No. 1

Pre. Development

Hydrograph type	= Rational	Peak discharge	= 36.00 cfs
Storm frequency	= 10 yrs	Time to peak	= 0.28 hrs
Time interval	= 1 min	Hyd. volume	= 36,718 cuft
Drainage area	= 15.440 ac	Runoff coeff.	= 0.47
Intensity	= 4.961 in/hr	Tc by User	= 17.00 min
IDF Curve	= Bryant 50.IDF	Asc/Rec limb fact	= 1/1

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	41.33	1	17	42,154	------	------	------	Pre. Development
2	Rational	74.24	1	9	40,091	------	------	------	Post Development
3	Reservoir	21.08	1	15	36,686	2	354.11	31,066	Pond

Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2023 Thursday, 04 / 13 / 2023

Hyd. No. 1

Pre. Development

Hydrograph type	= Rational	Peak discharge	= 41.33 cfs
Storm frequency	= 25 yrs	Time to peak	= 0.28 hrs
Time interval	= 1 min	Hyd. volume	= 42,154 cuft
Drainage area	= 15.440 ac	Runoff coeff.	= 0.47
Intensity	= 5.695 in/hr	Tc by User	= 17.00 min
IDF Curve	= Bryant 50.IDF	Asc/Rec limb fact	= 1/1

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	47.13	1	17	48,074	------	------	------	Pre. Development
2	Rational	84.11	1	9	45,417	------	------	------	Post Development
3	Reservoir	29.93	1	15	42,012	2	354.34	33,670	Pond

Pond # 2.gpw	Return Period: 50 Year	Thursday, 04 / 13 / 2023

Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2023 Thursday, 04 / 13 / 2023

Hyd. No. 1

Pre. Development

Hydrograph type	= Rational	Peak discharge	= 47.13 cfs
Storm frequency	= 50 yrs	Time to peak	= 0.28 hrs
Time interval	= 1 min	Hyd. volume	= 48,074 cuft
Drainage area	= 15.440 ac	Runoff coeff.	= 0.47
Intensity	= 6.495 in/hr	Tc by User	= 17.00 min
IDF Curve	= Bryant 50.IDF	Asc/Rec limb fact	= 1/1

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	50.16	1	17	51,159	------	------	------	Pre. Development
2	Rational	89.15	1	9	48,142	------	------	------	Post Development
3	Reservoir	33.52	1	15	44,737	2	354.46	34,985	Pond

Hydrograph Report

Hyd. No. 1

Pre. Development

Hydrograph type	= Rational	Peak discharge	= 50.16 cfs
Storm frequency	= 100 yrs	Time to peak	= 0.28 hrs
Time interval	= 1 min	Hyd. volume	= 51,159 cuft
Drainage area	= 15.440 ac	Runoff coeff.	= 0.47
Intensity	= 6.912 in/hr	Tc by User	= 17.00 min
IDF Curve	= Bryant 50.IDF	Asc/Rec limb fact	= 1/1

Multi-Hydrograph Plot

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

Hyd. No. 1

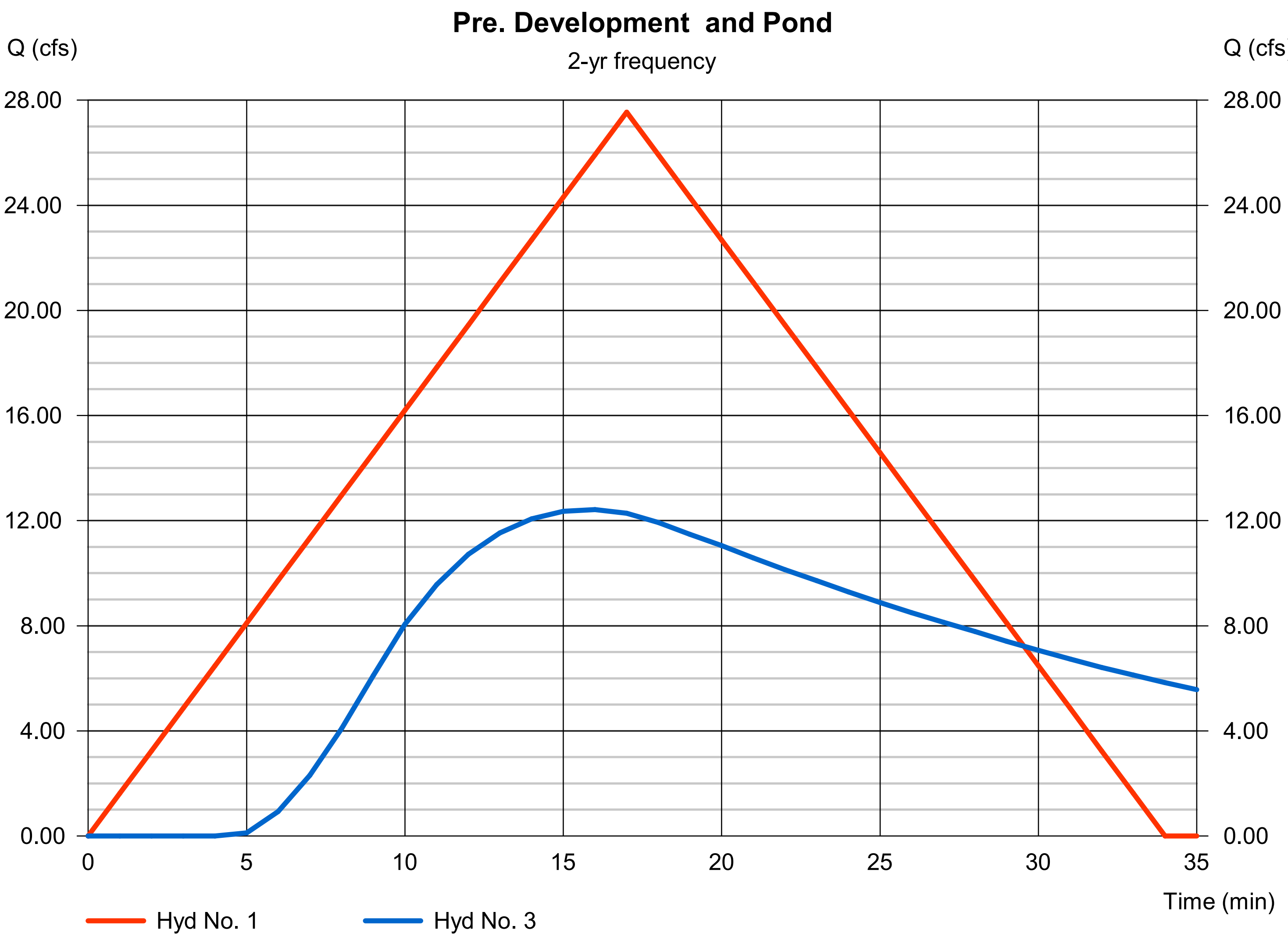
Pre. Development

Hydrograph type	=	Rational
Peak discharge	=	27.54 cfs
Time to peak	=	17 min
Hyd. Volume	=	28,095 cuft

Hyd. No. 3

Pond

Hydrograph type	=	Reservoir
Peak discharge	=	12.42 cfs
Time to peak	=	16 min
Hyd. Volume	=	24,253 cuft



Multi-Hydrograph Plot

Hyd. No. 1

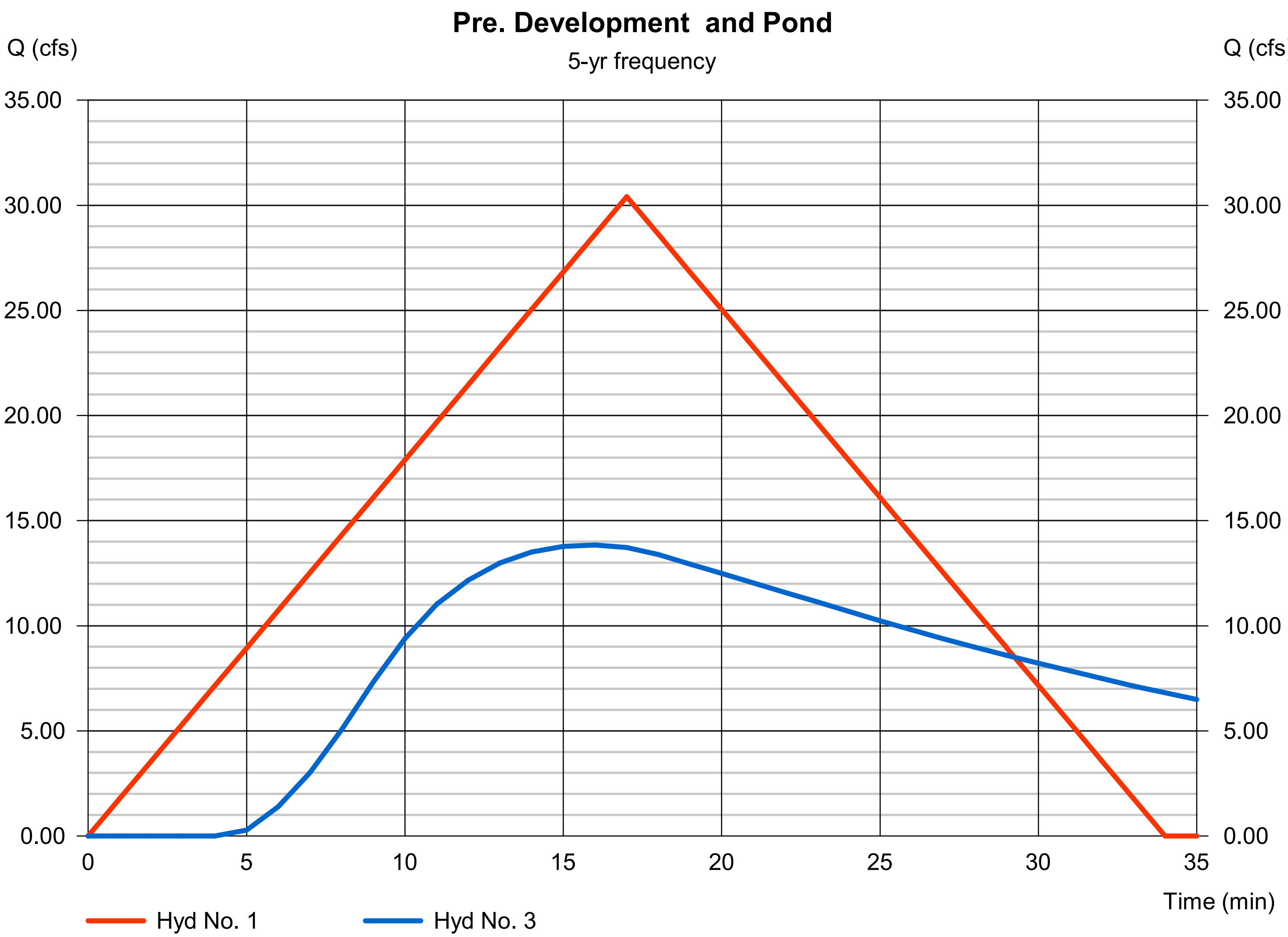
Pre. Development

Hydrograph type	=	Rational
Peak discharge	=	30.41 cfs
Time to peak	=	17 min
Hyd. Volume	=	31,020 cuft

Hyd. No. 3

Pond

Hydrograph type	=	Reservoir
Peak discharge	=	13.85 cfs
Time to peak	=	16 min
Hyd. Volume	=	27,645 cuft



Multi-Hydrograph Plot

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

Hyd. No. 1

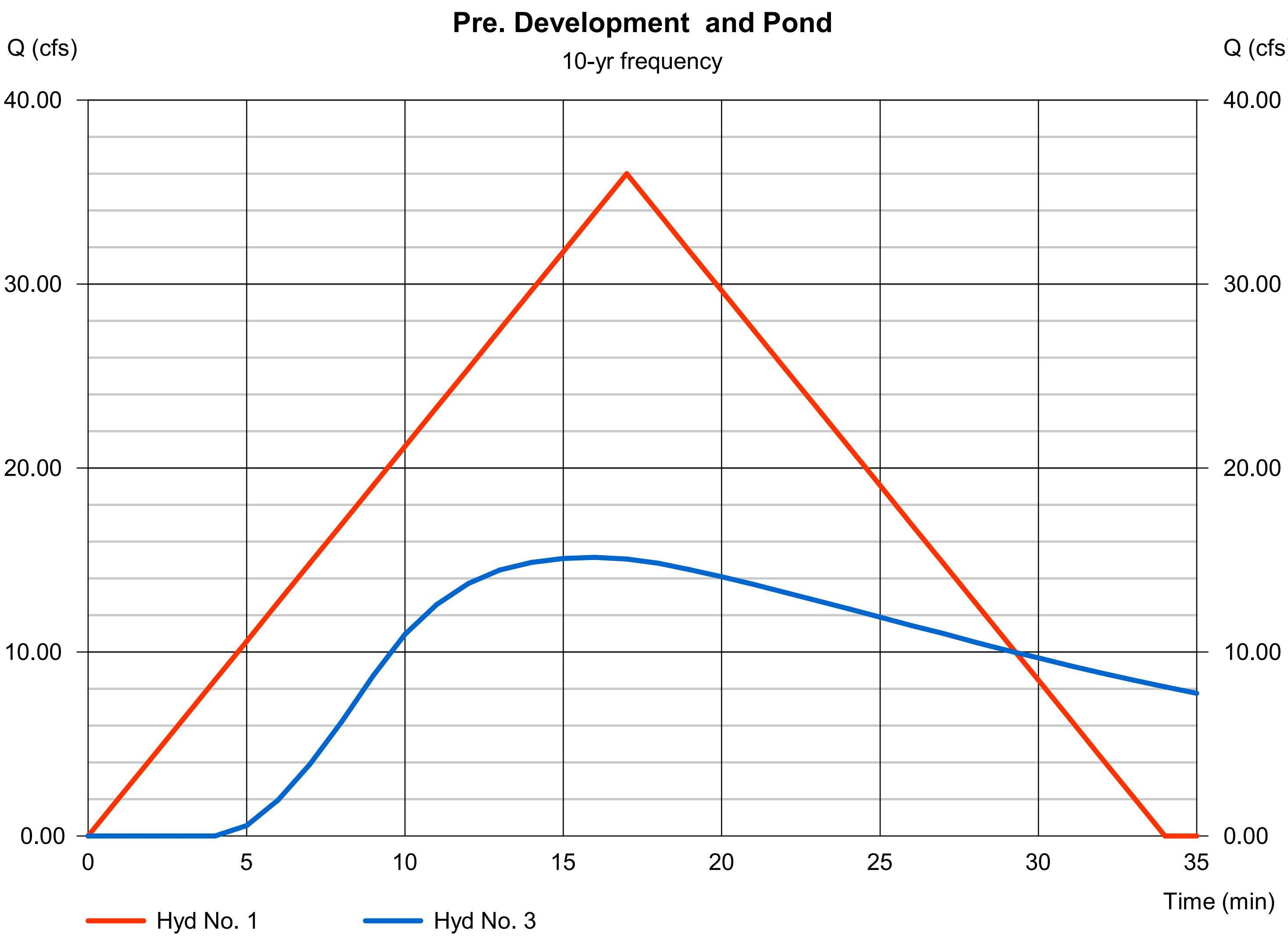
Pre. Development

Hydrograph type	=	Rational
Peak discharge	=	36.00 cfs
Time to peak	=	17 min
Hyd. Volume	=	36,718 cuft

Hyd. No. 3

Pond

Hydrograph type	=	Reservoir
Peak discharge	=	15.14 cfs
Time to peak	=	16 min
Hyd. Volume	=	31,762 cuft



Multi-Hydrograph Plot

Hyd. No. 1

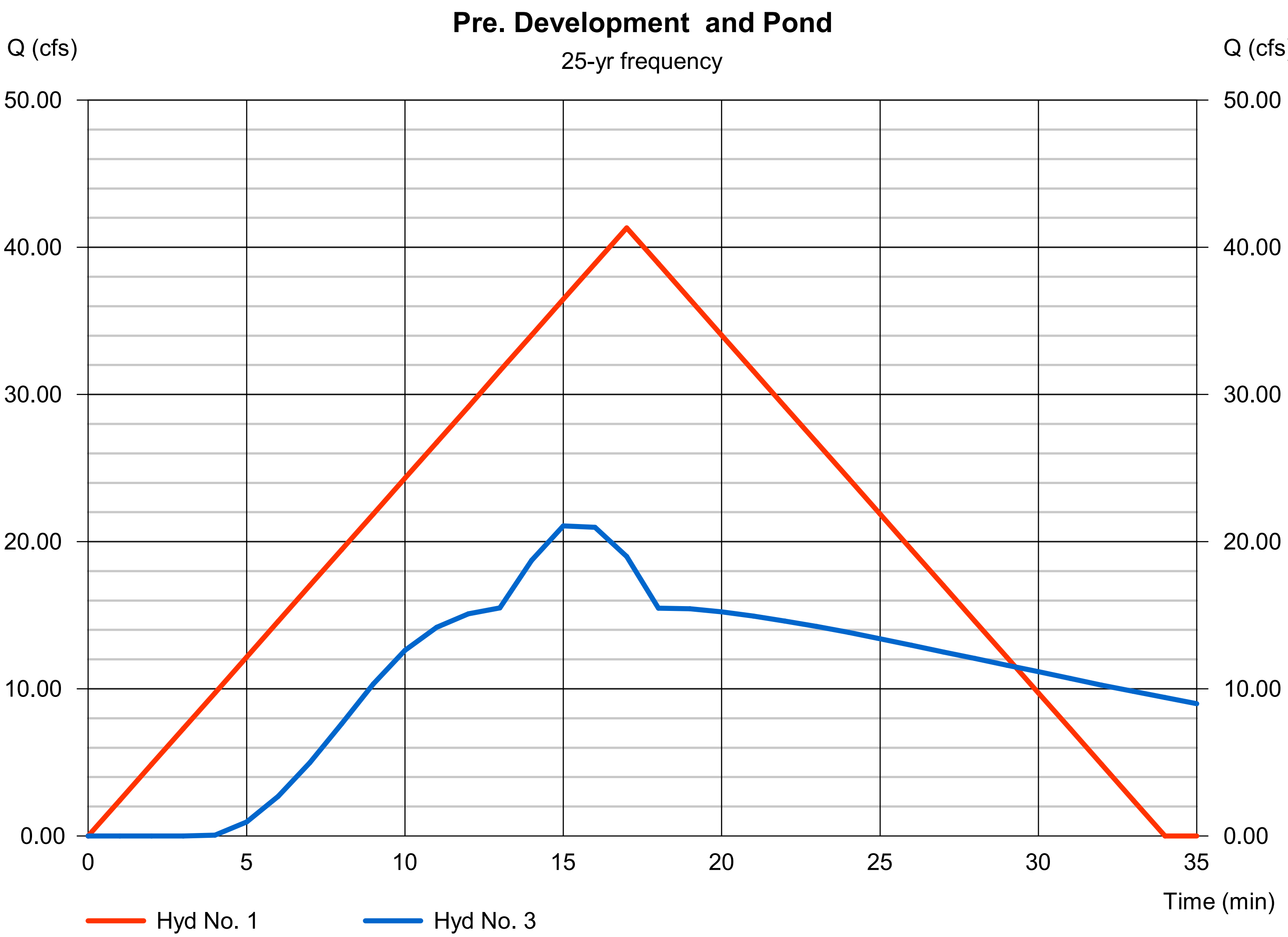
Pre. Development

Hydrograph type	=	Rational
Peak discharge	=	41.33 cfs
Time to peak	=	17 min
Hyd. Volume	=	42,154 cuft

Hyd. No. 3

Pond

Hydrograph type	=	Reservoir
Peak discharge	=	21.08 cfs
Time to peak	=	15 min
Hyd. Volume	=	36,686 cuft



Multi-Hydrograph Plot

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

Hyd. No. 1

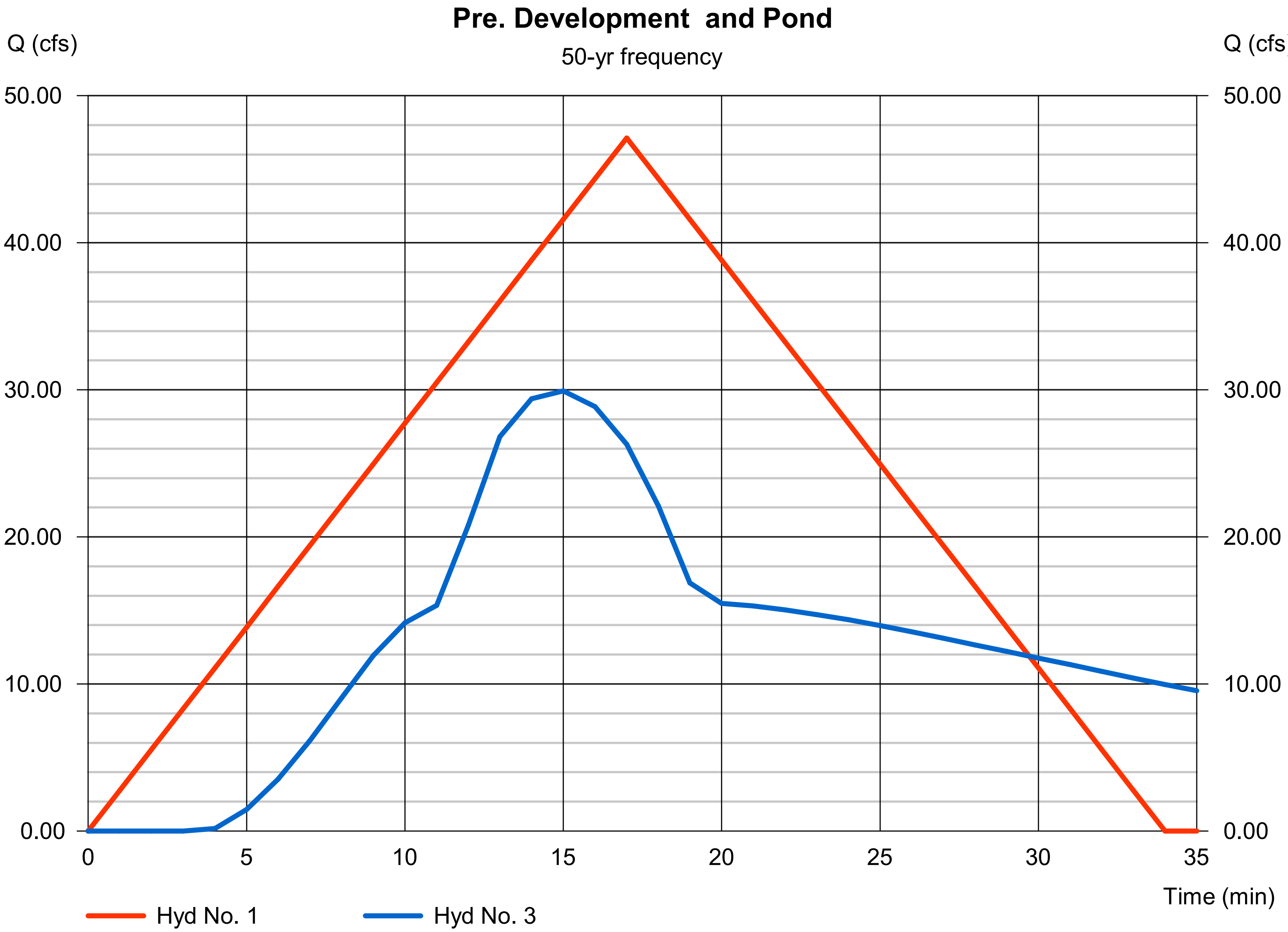
Pre. Development

Hydrograph type	=	Rational
Peak discharge	=	47.13 cfs
Time to peak	=	17 min
Hyd. Volume	=	48,074 cuft

Hyd. No. 3

Pond

Hydrograph type	=	Reservoir
Peak discharge	=	29.93 cfs
Time to peak	=	15 min
Hyd. Volume	=	42,012 cuft



Multi-Hydrograph Plot

Hyd. No. 1

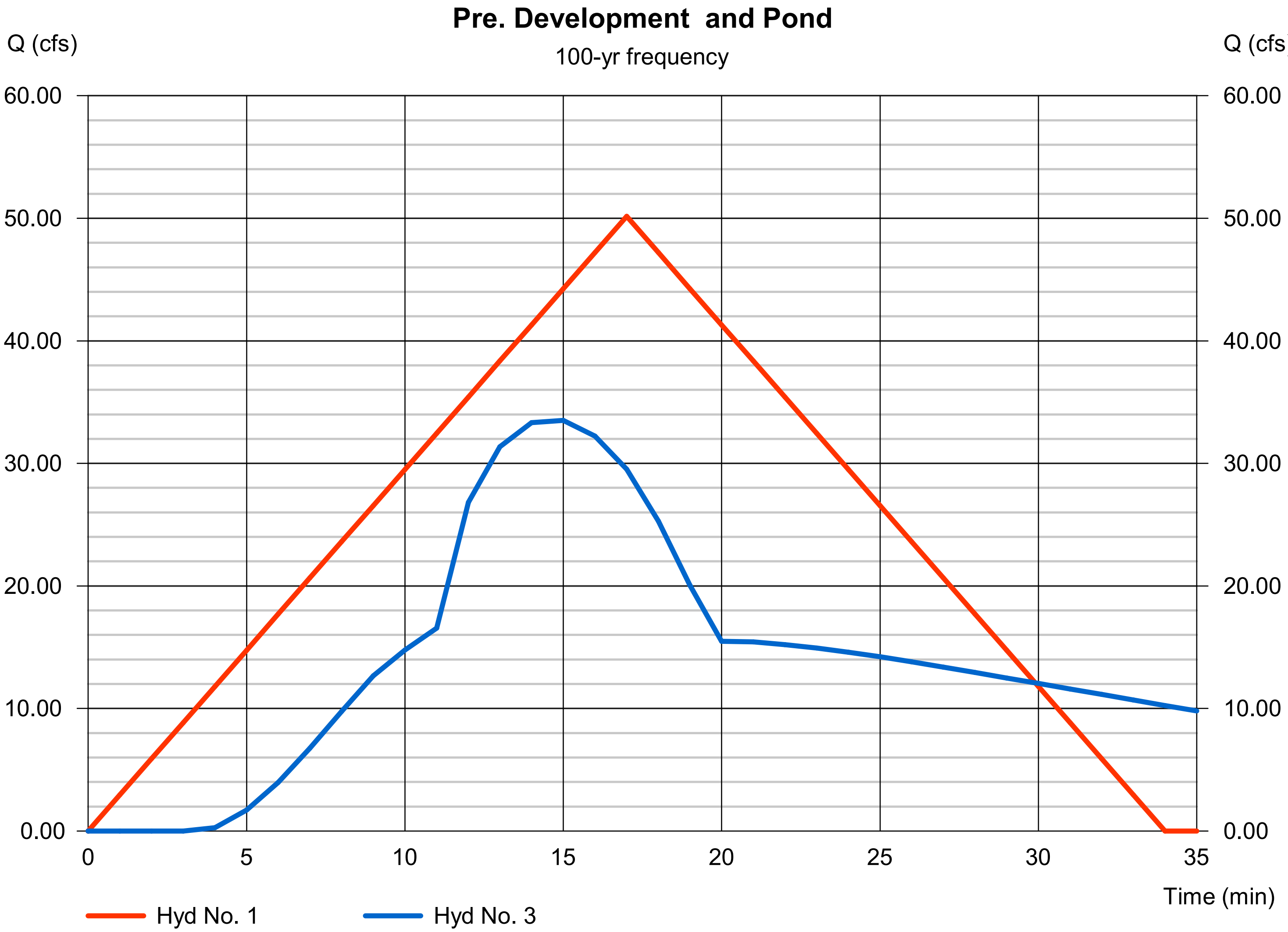
Pre. Development

Hydrograph type	=	Rational
Peak discharge	=	50.16 cfs
Time to peak	=	17 min
Hyd. Volume	=	51,159 cuft

Hyd. No. 3

Pond

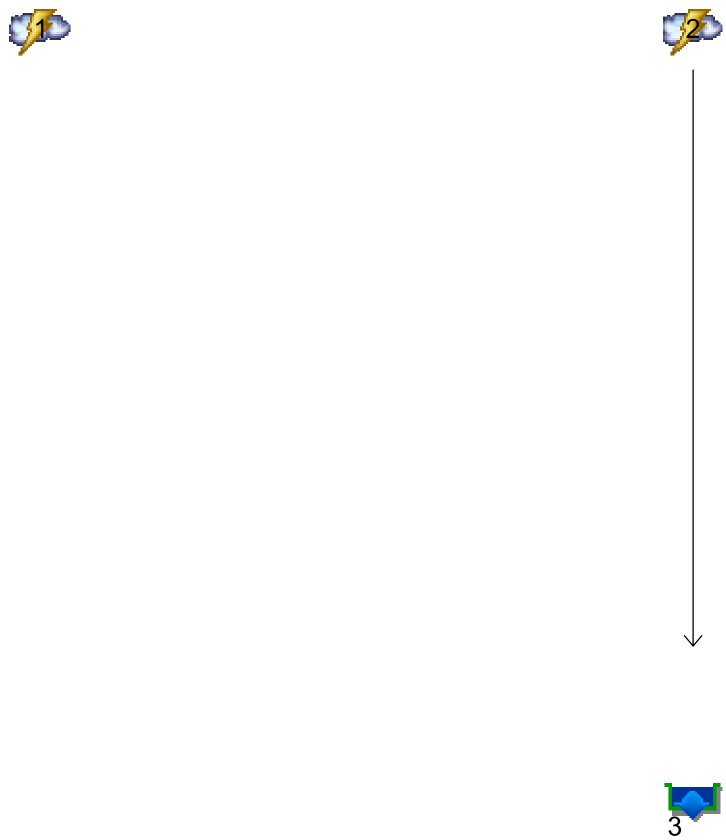
Hydrograph type	=	Reservoir
Peak discharge	=	33.52 cfs
Time to peak	=	15 min
Hyd. Volume	=	44,737 cuft



SOUTHEAST POND

Watershed Model Schematic

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



Legend

Hyd.	Origin	Description
1	Rational	Pre. Deve.
2	Rational	Post Deve.
3	Reservoir	Pond

Project: Pond# 3.gpw

Thursday, 04 / 13 / 2023

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	36.03	1	23	49,717	------	------	------	Pre. Deve.
2	Rational	40.63	1	23	56,064	------	------	------	Post Deve.
3	Reservoir	31.29	1	28	56,053	2	349.07	20,214	Pond

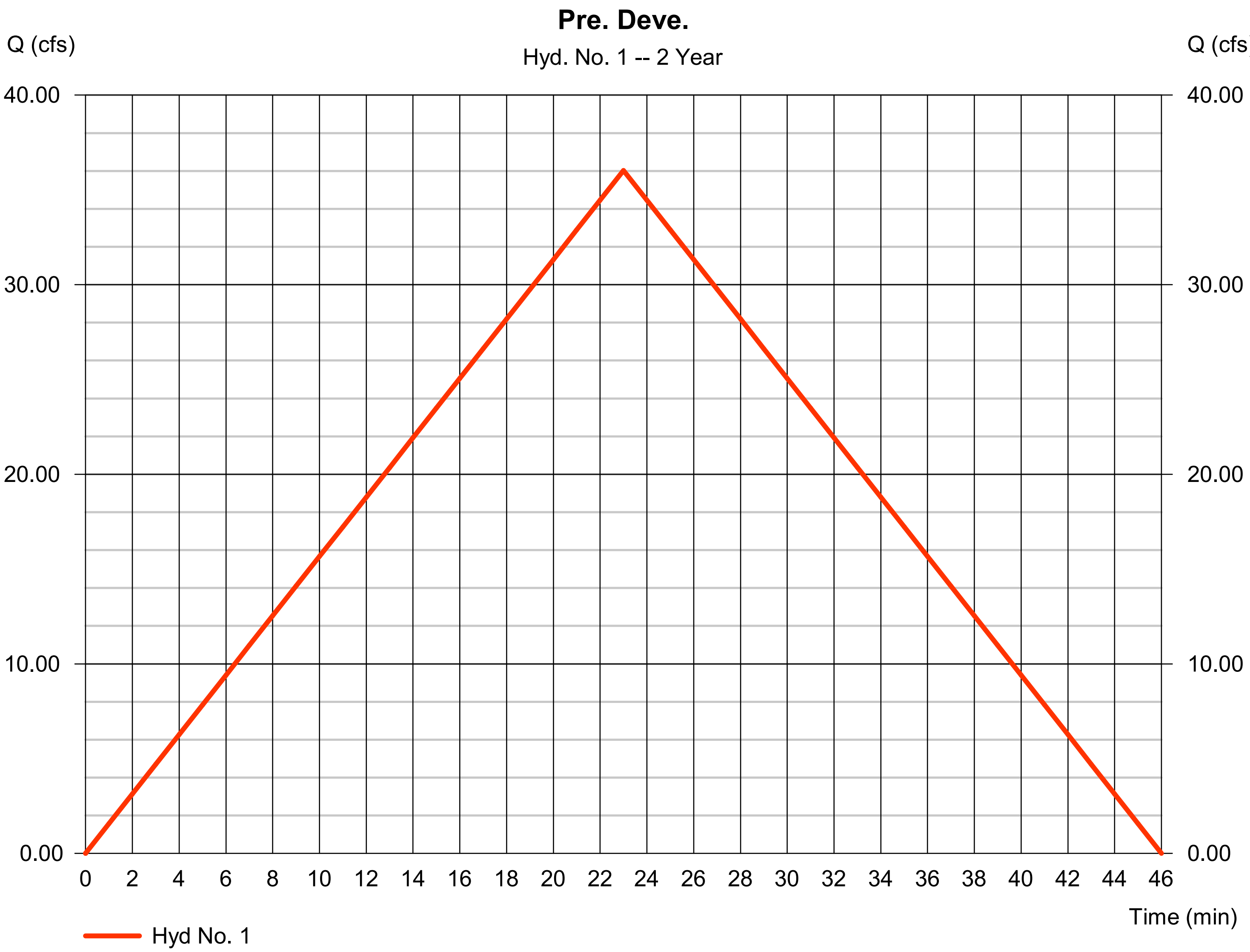
Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2023 Thursday, 04 / 13 / 2023

Hyd. No. 1

Pre. Deve.

Hydrograph type	= Rational	Peak discharge	= 36.03 cfs
Storm frequency	= 2 yrs	Time to peak	= 23 min
Time interval	= 1 min	Hyd. volume	= 49,717 cuft
Drainage area	= 23.570 ac	Runoff coeff.	= 0.47
Intensity	= 3.252 in/hr	Tc by User	= 23.00 min
IDF Curve	= Bryant 50.IDF	Asc/Rec limb fact	= 1/1



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	39.74	1	23	54,845	------	------	------	Pre. Deve.
2	Rational	44.82	1	23	61,846	------	------	------	Post Deve.
3	Reservoir	34.49	1	28	61,836	2	349.22	21,633	Pond

Pond# 3.gpw	Return Period: 5 Year	Thursday, 04 / 13 / 2023

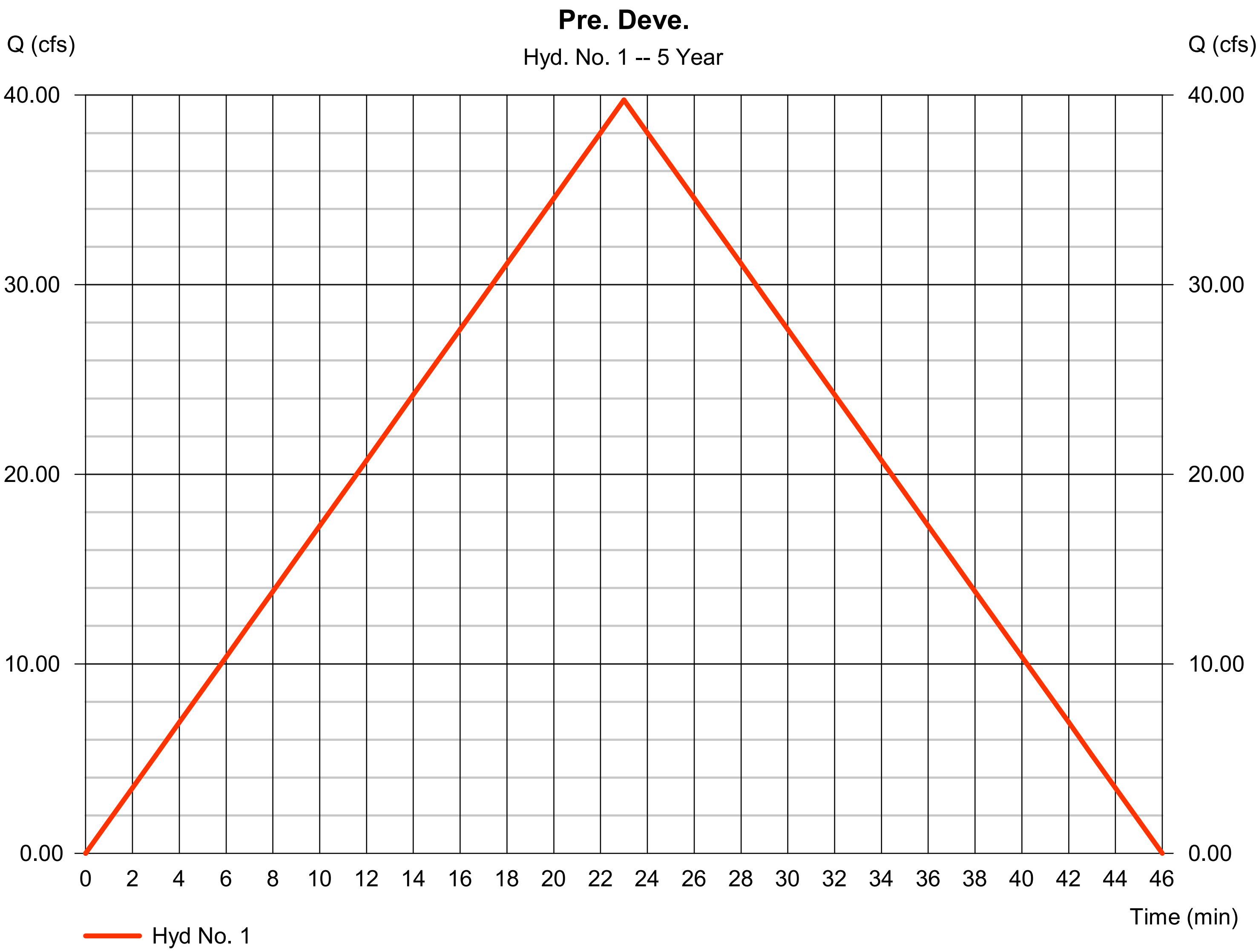
Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2023 Thursday, 04 / 13 / 2023

Hyd. No. 1

Pre. Deve.

Hydrograph type	= Rational	Peak discharge	= 39.74 cfs
Storm frequency	= 5 yrs	Time to peak	= 23 min
Time interval	= 1 min	Hyd. volume	= 54,845 cuft
Drainage area	= 23.570 ac	Runoff coeff.	= 0.47
Intensity	= 3.588 in/hr	Tc by User	= 23.00 min
IDF Curve	= Bryant 50.IDF	Asc/Rec limb fact	= 1/1



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	47.96	1	23	66,187	------	------	------	Pre. Deve.
2	Rational	54.08	1	23	74,637	------	------	------	Post Deve.
3	Reservoir	41.03	1	29	74,626	2	349.57	25,013	Pond

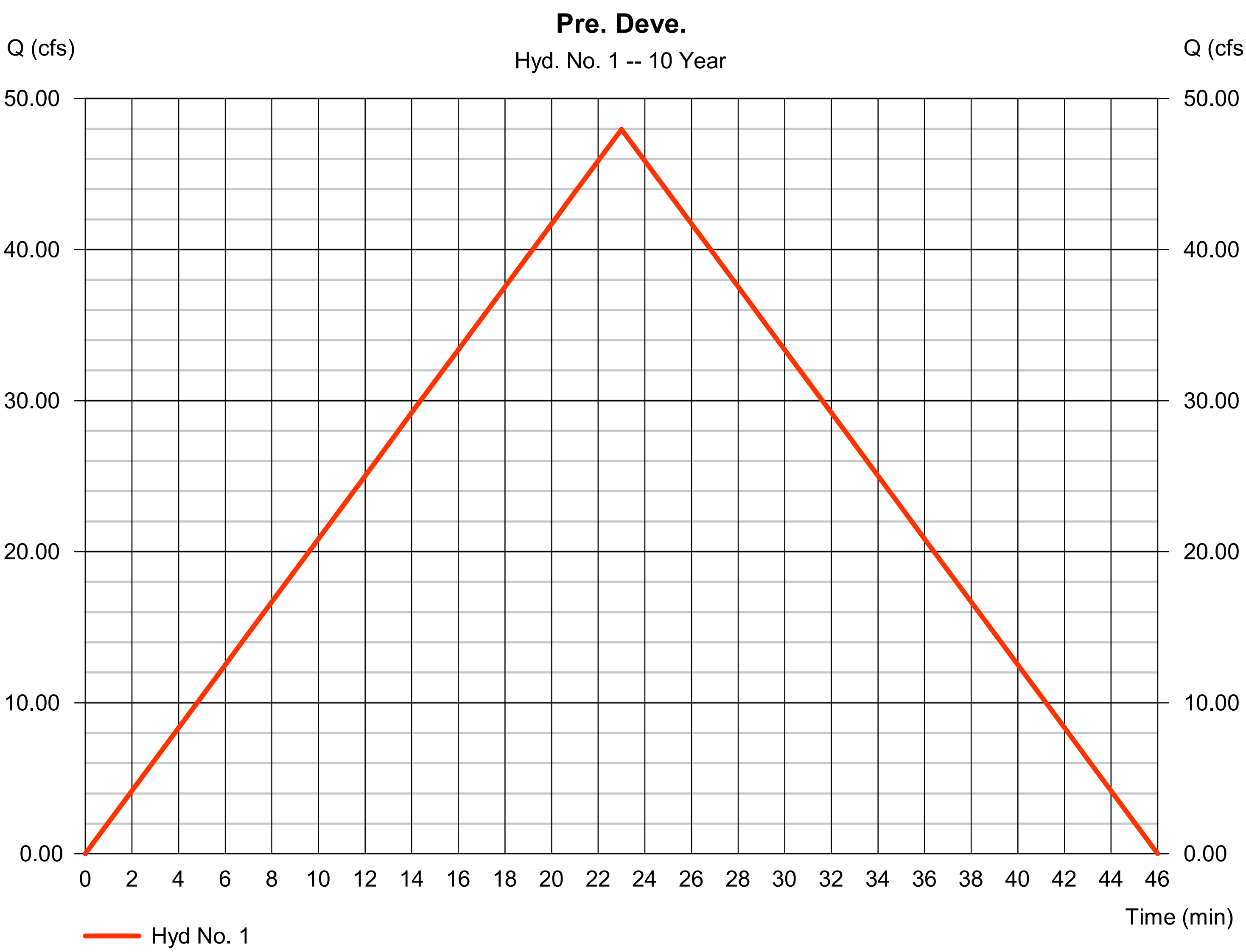
Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2023 Thursday, 04 / 13 / 2023

Hyd. No. 1

Pre. Deve.

Hydrograph type	= Rational	Peak discharge	= 47.96 cfs
Storm frequency	= 10 yrs	Time to peak	= 23 min
Time interval	= 1 min	Hyd. volume	= 66,187 cuft
Drainage area	= 23.570 ac	Runoff coeff.	= 0.47
Intensity	= 4.330 in/hr	Tc by User	= 23.00 min
IDF Curve	= Bryant 50.IDF	Asc/Rec limb fact	= 1/1



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	55.30	1	23	76,312	------	------	------	Pre. Deve.
2	Rational	62.36	1	23	86,054	------	------	------	Post Deve.
3	Reservoir	46.37	1	29	86,043	2	349.90	28,366	Pond

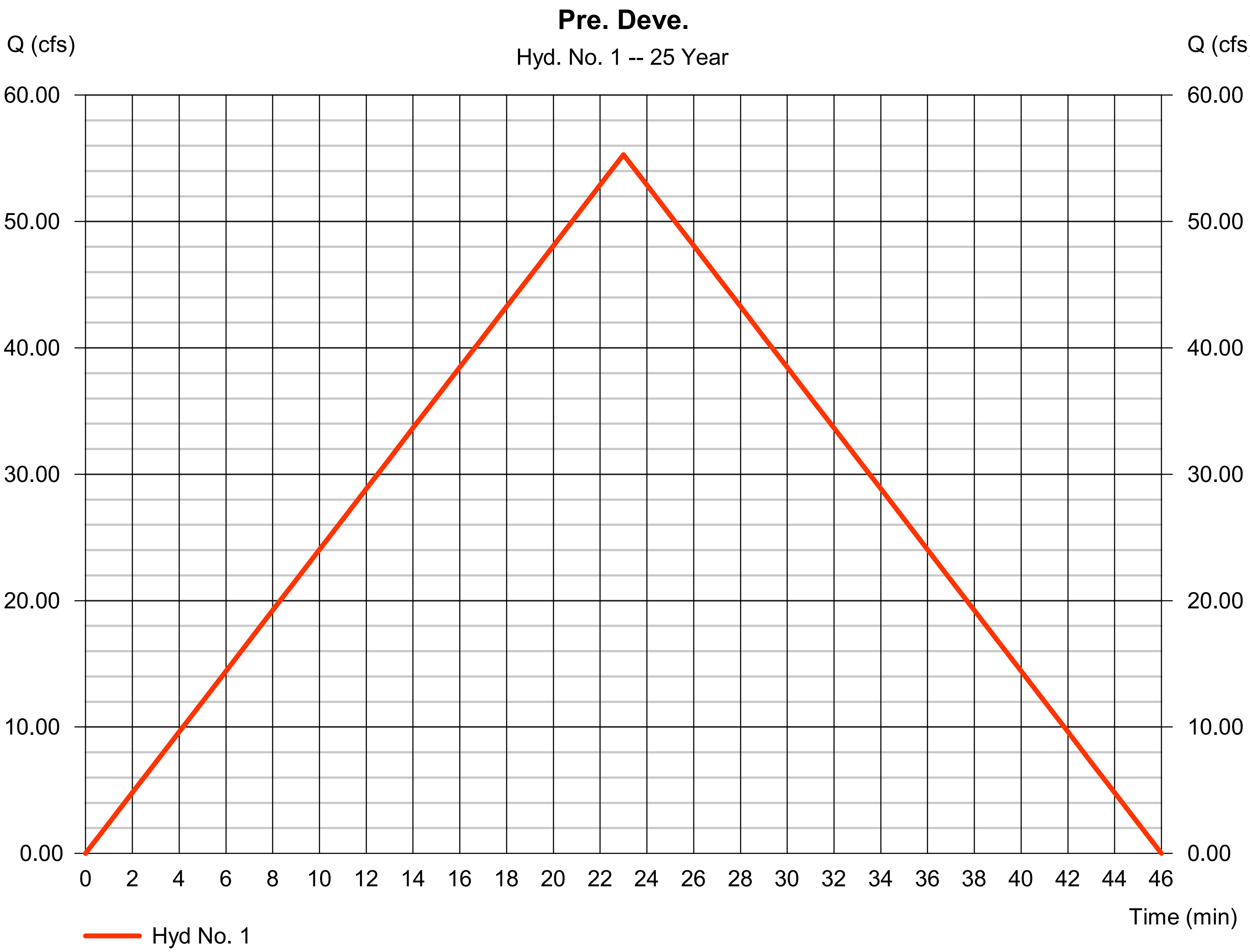
Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2023 Thursday, 04 / 13 / 2023

Hyd. No. 1

Pre. Deve.

Hydrograph type	= Rational	Peak discharge	= 55.30 cfs
Storm frequency	= 25 yrs	Time to peak	= 23 min
Time interval	= 1 min	Hyd. volume	= 76,312 cuft
Drainage area	= 23.570 ac	Runoff coeff.	= 0.47
Intensity	= 4.992 in/hr	Tc by User	= 23.00 min
IDF Curve	= Bryant 50.IDF	Asc/Rec limb fact	= 1/1



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	63.03	1	23	86,979	------	------	------	Pre. Deve.
2	Rational	71.07	1	23	98,082	------	------	------	Post Deve.
3	Reservoir	50.53	1	30	98,072	2	350.29	32,440	Pond

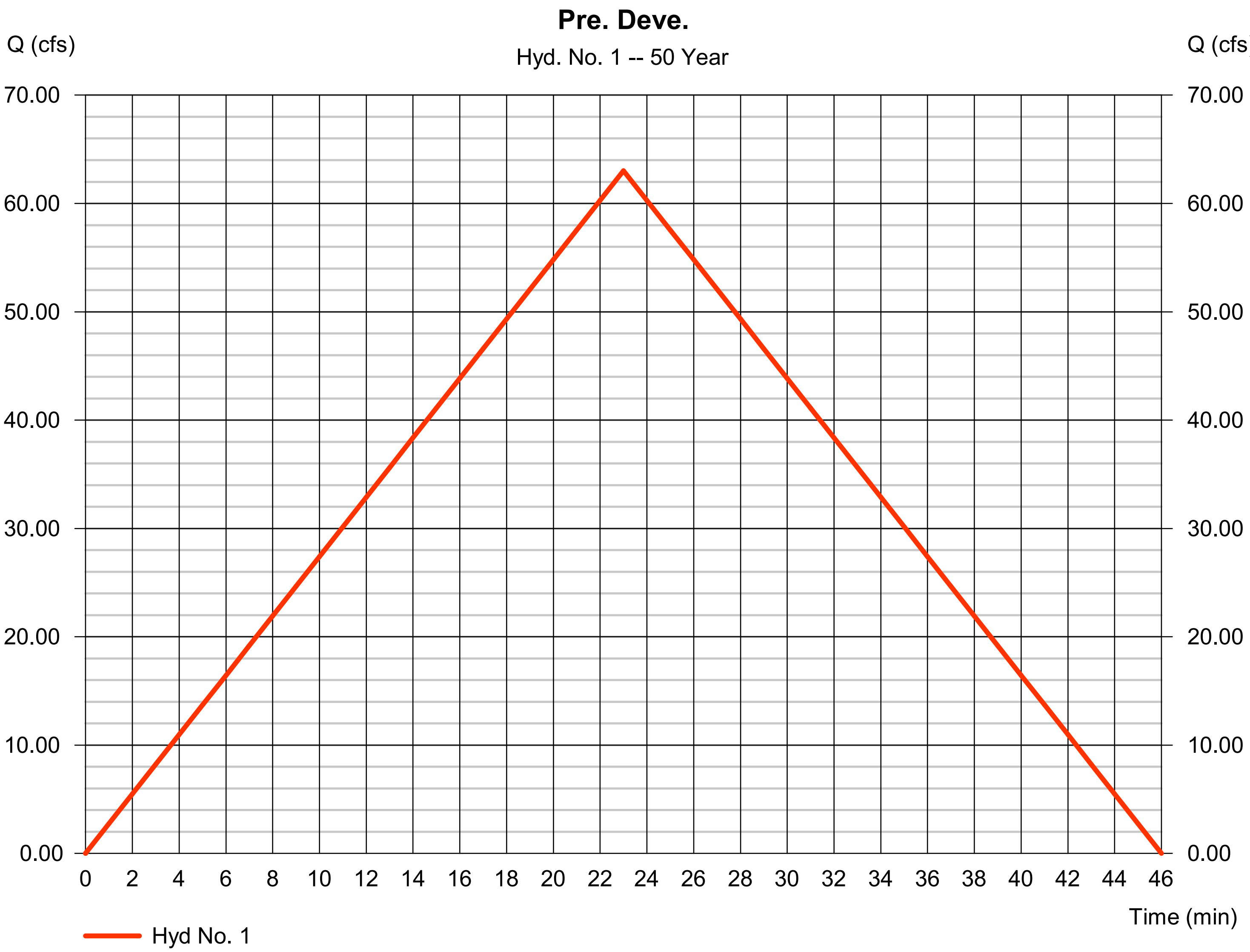
Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2023 Thursday, 04 / 13 / 2023

Hyd. No. 1

Pre. Deve.

Hydrograph type	= Rational	Peak discharge	= 63.03 cfs
Storm frequency	= 50 yrs	Time to peak	= 23 min
Time interval	= 1 min	Hyd. volume	= 86,979 cuft
Drainage area	= 23.570 ac	Runoff coeff.	= 0.47
Intensity	= 5.690 in/hr	Tc by User	= 23.00 min
IDF Curve	= Bryant 50.IDF	Asc/Rec limb fact	= 1/1



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	67.50	1	23	93,152	------	------	------	Pre. Deve.
2	Rational	76.12	1	23	105,043	------	------	------	Post Deve.
3	Reservoir	53.00	1	30	105,033	2	350.54	35,114	Pond

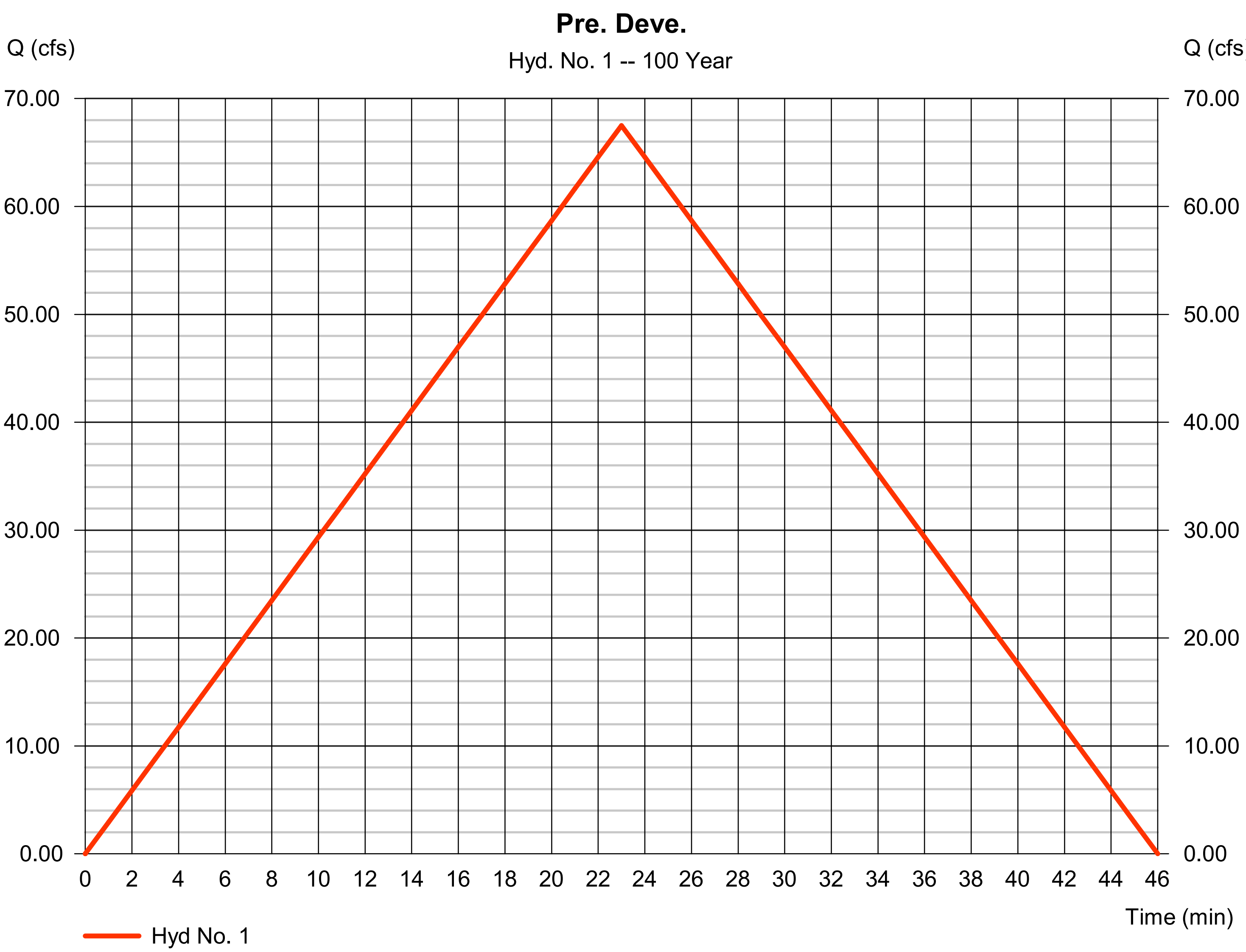
Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2023 Thursday, 04 / 13 / 2023

Hyd. No. 1

Pre. Deve.

Hydrograph type	= Rational	Peak discharge	= 67.50 cfs
Storm frequency	= 100 yrs	Time to peak	= 23 min
Time interval	= 1 min	Hyd. volume	= 93,152 cuft
Drainage area	= 23.570 ac	Runoff coeff.	= 0.47
Intensity	= 6.093 in/hr	Tc by User	= 23.00 min
IDF Curve	= Bryant 50.IDF	Asc/Rec limb fact	= 1/1



Multi-Hydrograph Plot

Hyd. No. 1

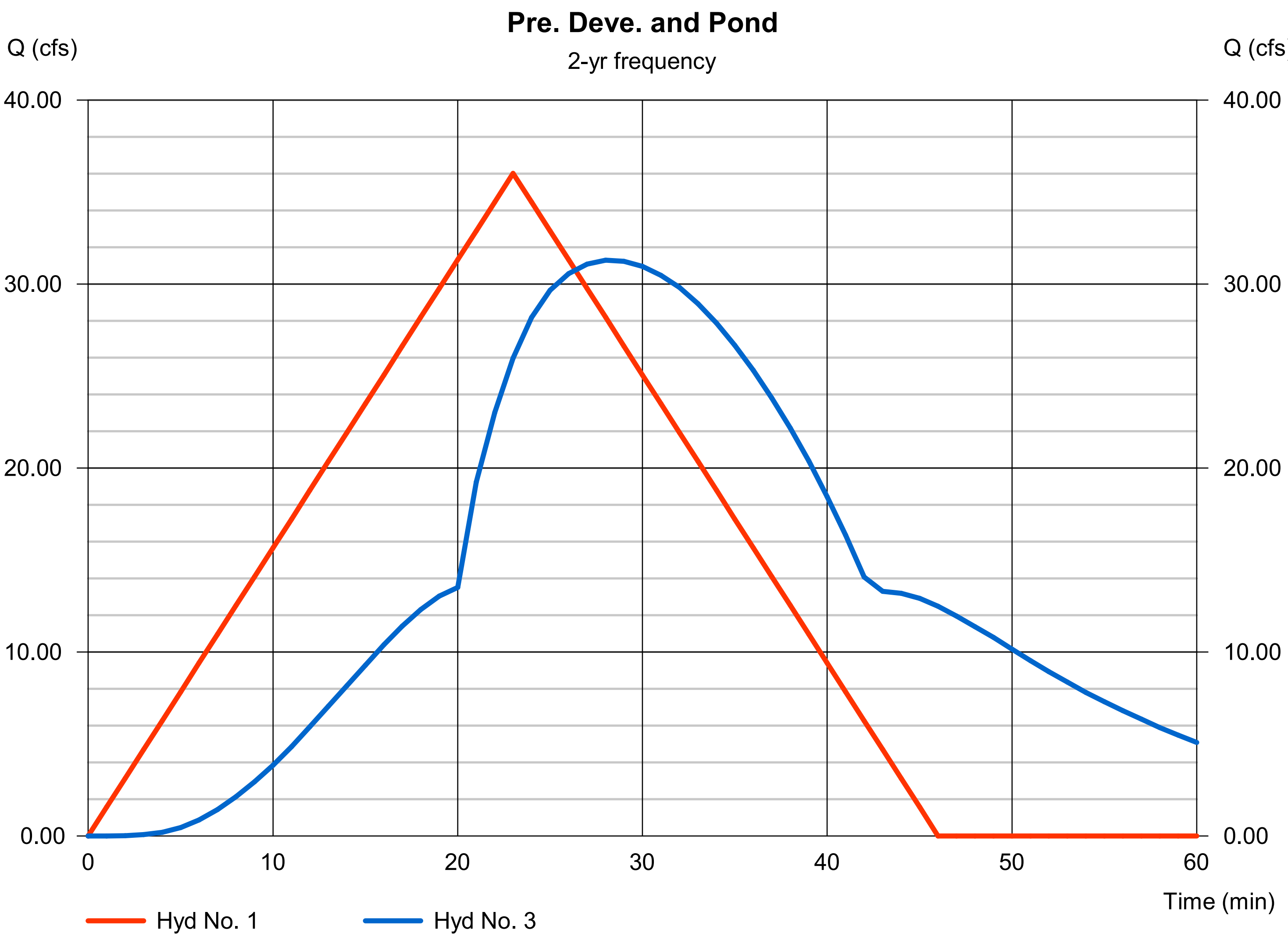
Pre. Deve.

Hydrograph type	=	Rational
Peak discharge	=	36.03 cfs
Time to peak	=	23 min
Hyd. Volume	=	49,717 cuft

Hyd. No. 3

Pond

Hydrograph type	=	Reservoir
Peak discharge	=	31.29 cfs
Time to peak	=	28 min
Hyd. Volume	=	56,053 cuft



Multi-Hydrograph Plot

Hyd. No. 1

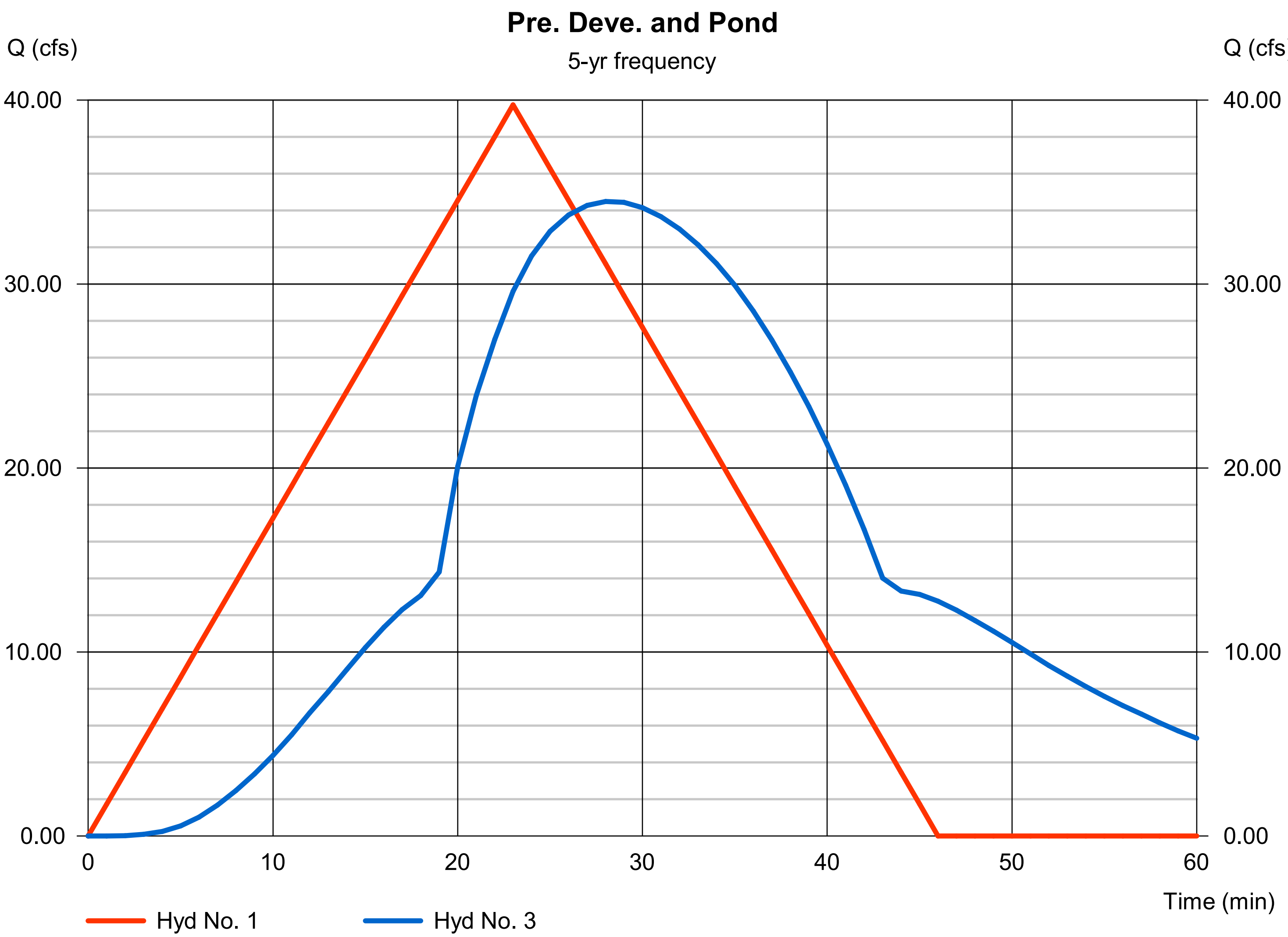
Pre. Deve.

Hydrograph type	=	Rational
Peak discharge	=	39.74 cfs
Time to peak	=	23 min
Hyd. Volume	=	54,845 cuft

Hyd. No. 3

Pond

Hydrograph type	=	Reservoir
Peak discharge	=	34.49 cfs
Time to peak	=	28 min
Hyd. Volume	=	61,836 cuft



Multi-Hydrograph Plot

Hyd. No. 1

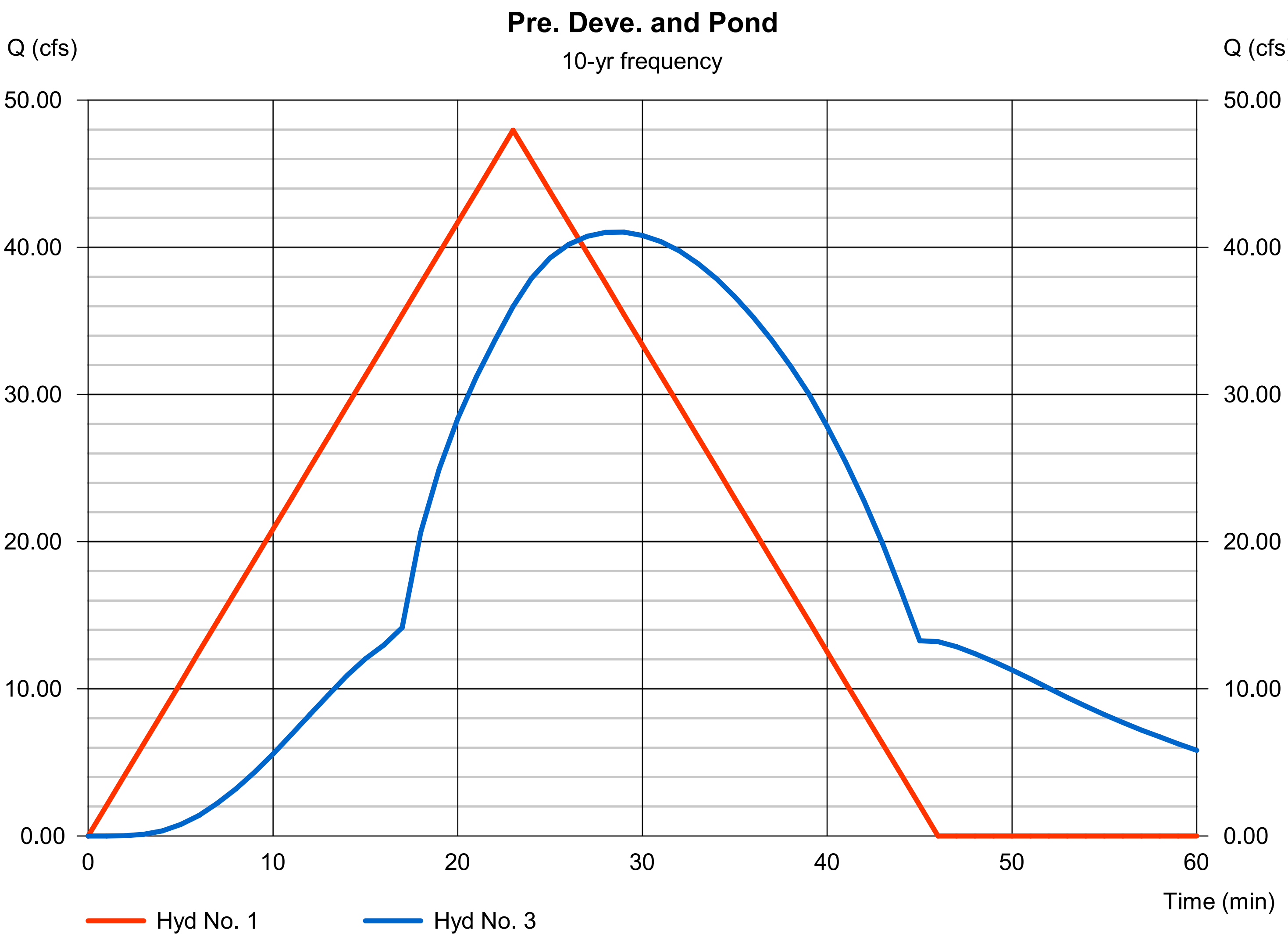
Pre. Deve.

Hydrograph type	=	Rational
Peak discharge	=	47.96 cfs
Time to peak	=	23 min
Hyd. Volume	=	66,187 cuft

Hyd. No. 3

Pond

Hydrograph type	=	Reservoir
Peak discharge	=	41.03 cfs
Time to peak	=	29 min
Hyd. Volume	=	74,626 cuft



Multi-Hydrograph Plot

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

Hyd. No. 1

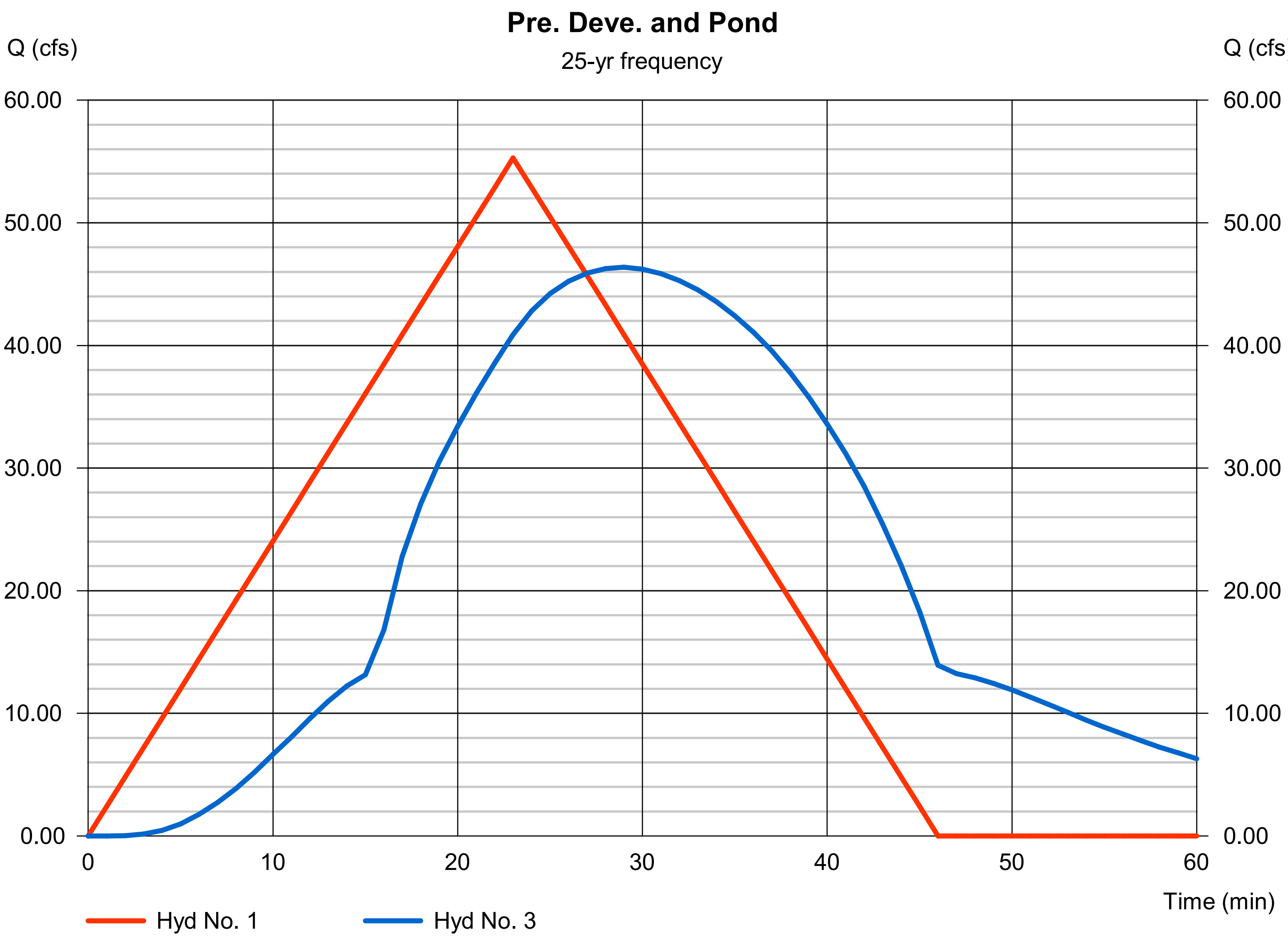
Pre. Deve.

Hydrograph type	=	Rational
Peak discharge	=	55.30 cfs
Time to peak	=	23 min
Hyd. Volume	=	76,312 cuft

Hyd. No. 3

Pond

Hydrograph type	=	Reservoir
Peak discharge	=	46.37 cfs
Time to peak	=	29 min
Hyd. Volume	=	86,043 cuft



Multi-Hydrograph Plot

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

Hyd. No. 1

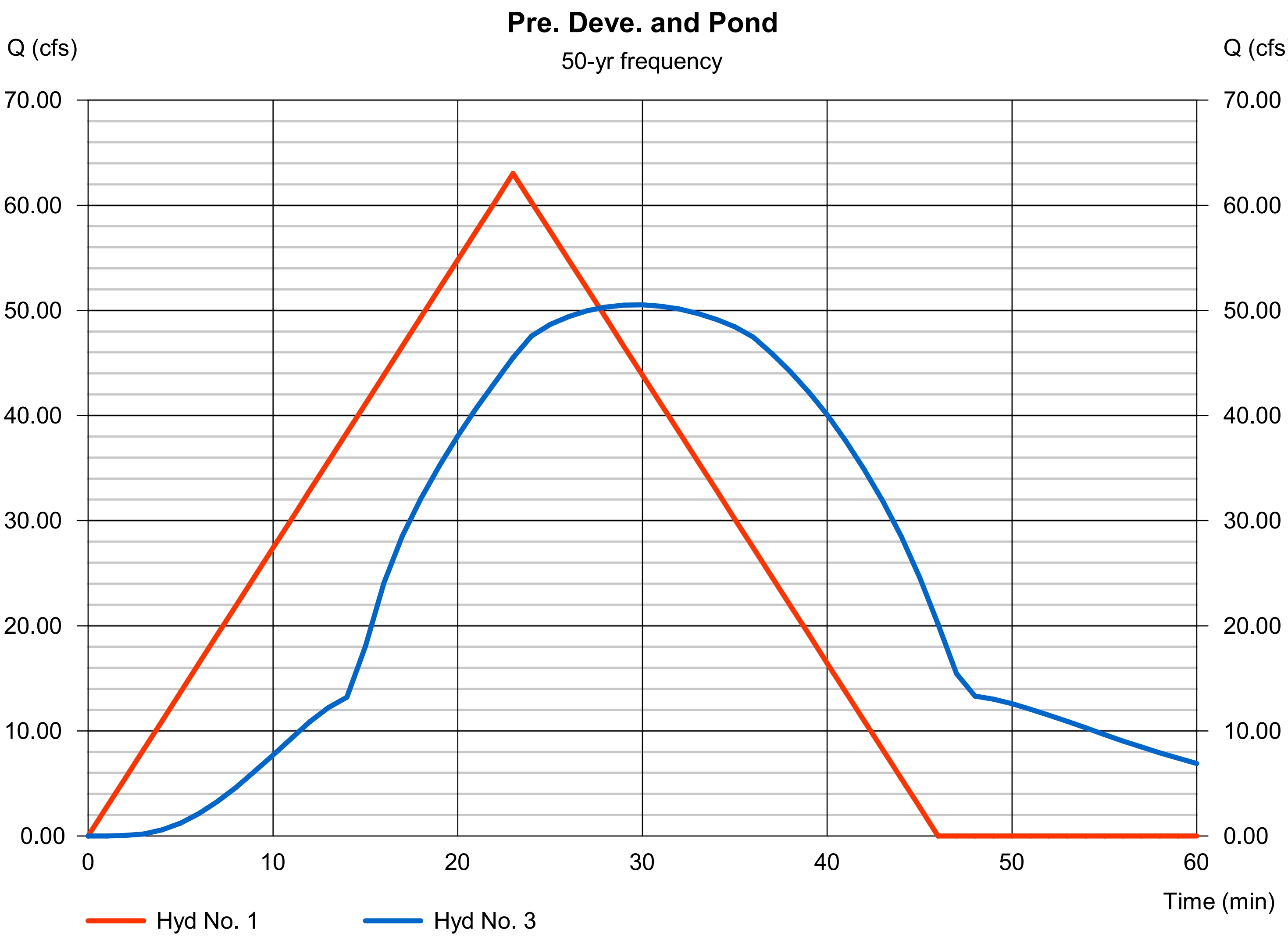
Pre. Deve.

Hydrograph type	=	Rational
Peak discharge	=	63.03 cfs
Time to peak	=	23 min
Hyd. Volume	=	86,979 cuft

Hyd. No. 3

Pond

Hydrograph type	=	Reservoir
Peak discharge	=	50.53 cfs
Time to peak	=	30 min
Hyd. Volume	=	98,072 cuft



Multi-Hydrograph Plot

Hyd. No. 1

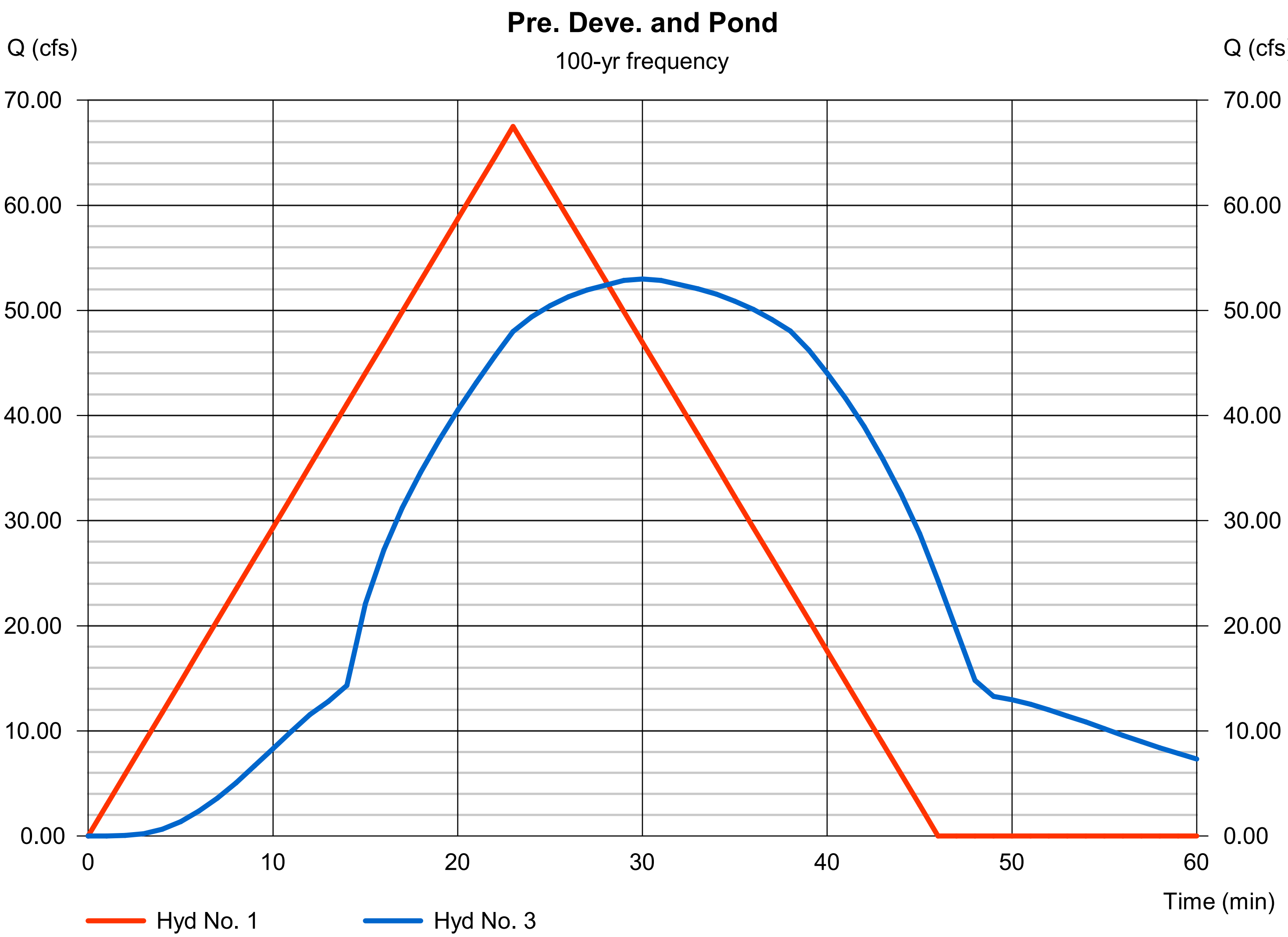
Pre. Deve.

Hydrograph type	=	Rational
Peak discharge	=	67.50 cfs
Time to peak	=	23 min
Hyd. Volume	=	93,152 cuft

Hyd. No. 3

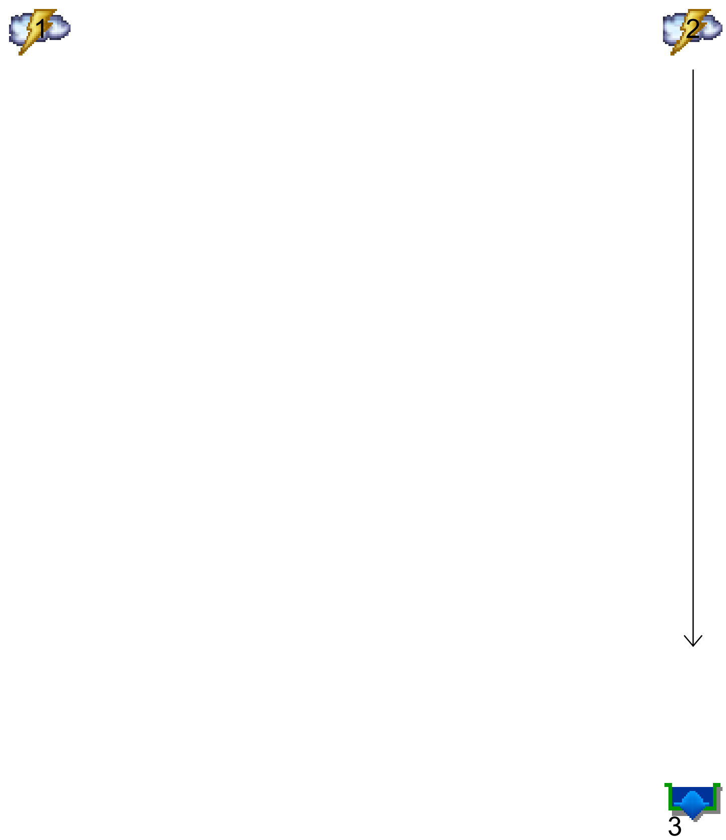
Pond

Hydrograph type	=	Reservoir
Peak discharge	=	53.00 cfs
Time to peak	=	30 min
Hyd. Volume	=	105,033 cuft



Watershed Model Schematic

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



Legend

Hyd.	Origin	Description
1	Rational	Pre. Deve.
2	Rational	Post Deve.
3	Reservoir	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	39.37	1	20	47,246	------	------	------	Pre. Deve.
2	Rational	71.11	1	12	51,201	------	------	------	Post Deve.
3	Reservoir	28.79	1	19	51,181	2	361.30	33,860	Pond

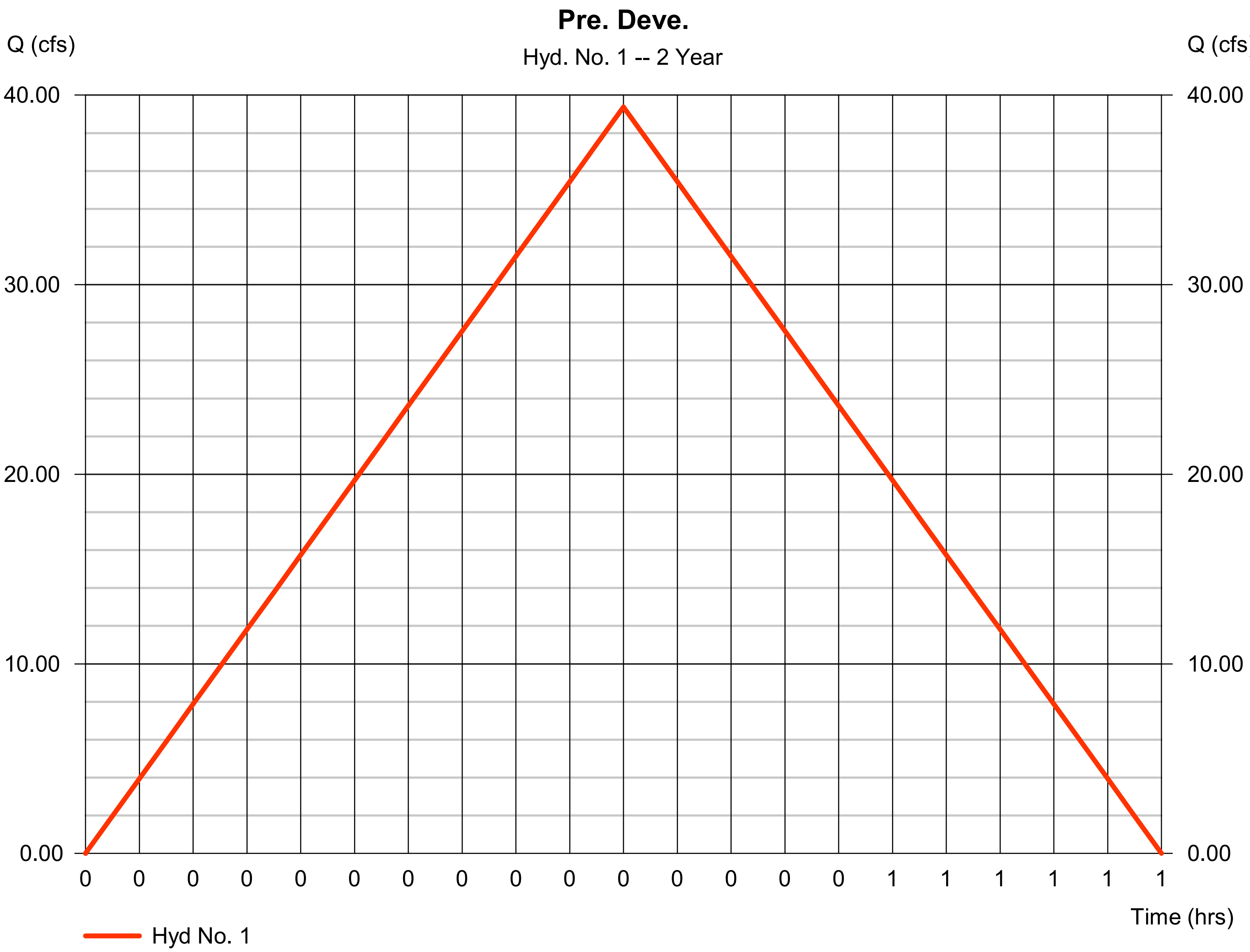
Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2023 Monday, 04 / 17 / 2023

Hyd. No. 1

Pre. Deve.

Hydrograph type	= Rational	Peak discharge	= 39.37 cfs
Storm frequency	= 2 yrs	Time to peak	= 0.33 hrs
Time interval	= 1 min	Hyd. volume	= 47,246 cuft
Drainage area	= 23.930 ac	Runoff coeff.	= 0.47
Intensity	= 3.501 in/hr	Tc by User	= 20.00 min
IDF Curve	= Bryant 50.IDF	Asc/Rec limb fact	= 1/1



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	43.42	1	20	52,106	------	------	------	Pre. Deve.
2	Rational	79.06	1	12	56,926	------	------	------	Post Deve.
3	Reservoir	32.35	1	19	56,907	2	361.55	37,081	Pond

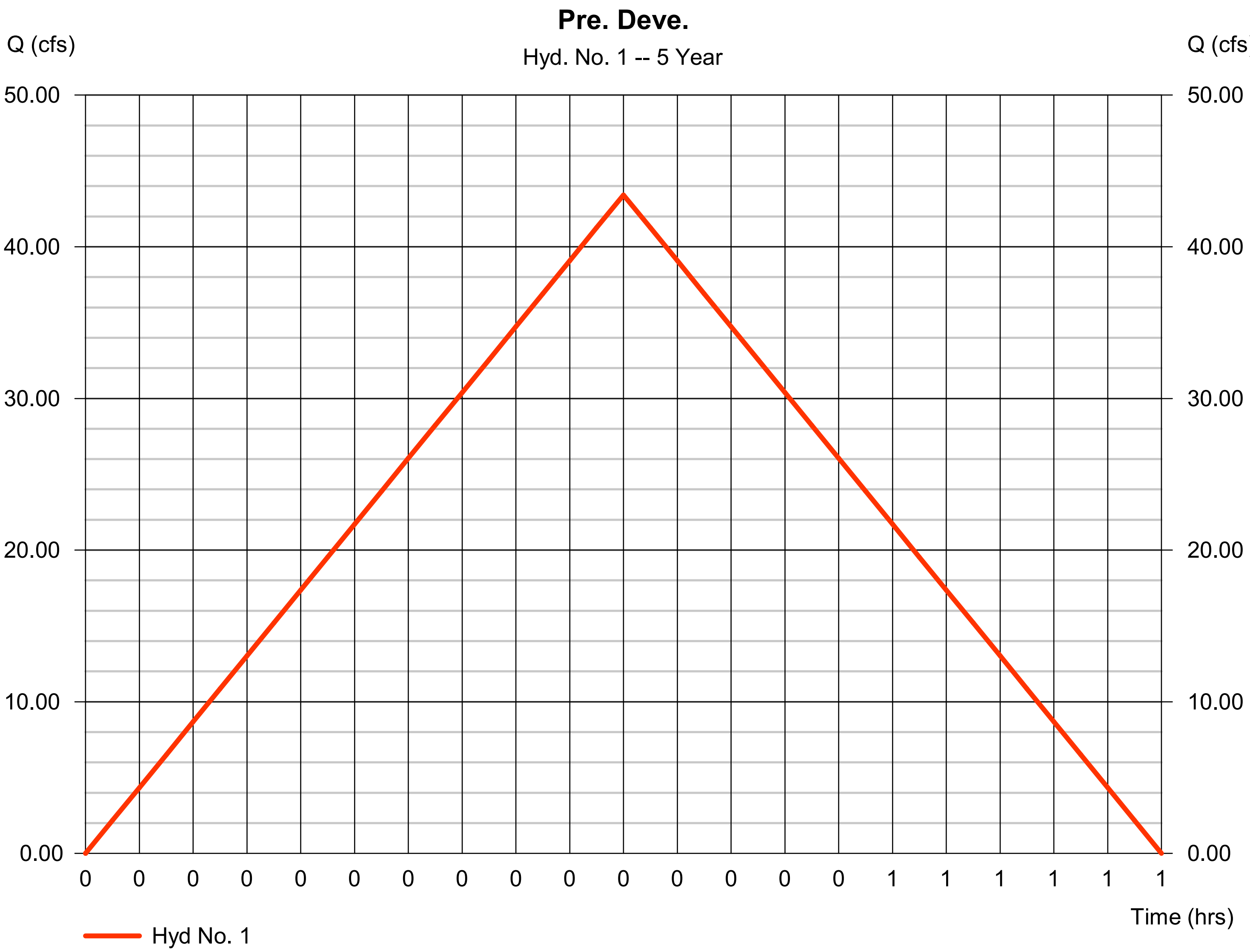
Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2023 Monday, 04 / 17 / 2023

Hyd. No. 1

Pre. Deve.

Hydrograph type	= Rational	Peak discharge	= 43.42 cfs
Storm frequency	= 5 yrs	Time to peak	= 0.33 hrs
Time interval	= 1 min	Hyd. volume	= 52,106 cuft
Drainage area	= 23.930 ac	Runoff coeff.	= 0.47
Intensity	= 3.861 in/hr	Tc by User	= 20.00 min
IDF Curve	= Bryant 50.IDF	Asc/Rec limb fact	= 1/1



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	51.95	1	20	62,335	------	------	------	Pre. Deve.
2	Rational	91.38	1	12	65,796	------	------	------	Post Deve.
3	Reservoir	37.12	1	19	65,777	2	361.95	42,289	Pond

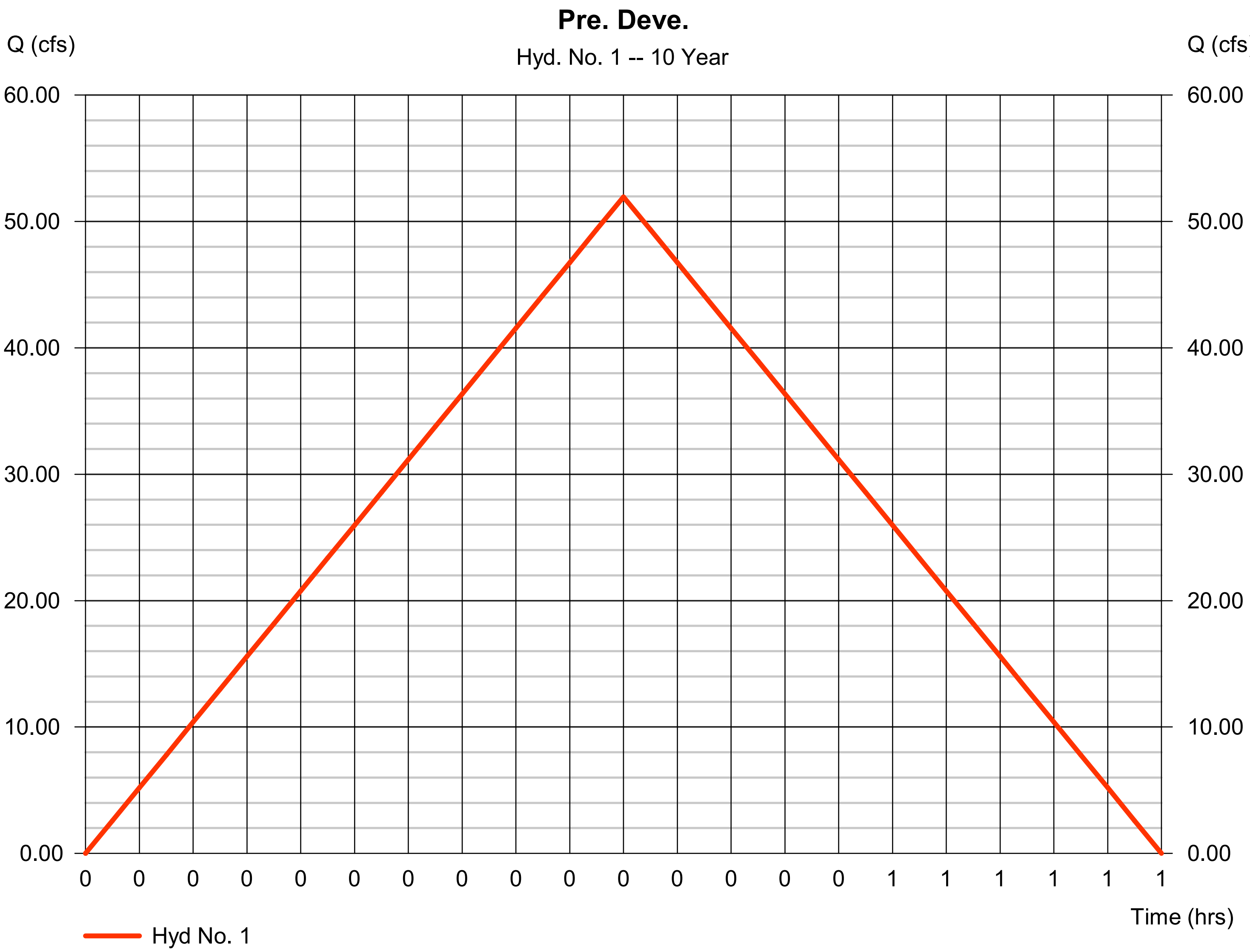
Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2023 Monday, 04 / 17 / 2023

Hyd. No. 1

Pre. Deve.

Hydrograph type	= Rational	Peak discharge	= 51.95 cfs
Storm frequency	= 10 yrs	Time to peak	= 0.33 hrs
Time interval	= 1 min	Hyd. volume	= 62,335 cuft
Drainage area	= 23.930 ac	Runoff coeff.	= 0.47
Intensity	= 4.619 in/hr	Tc by User	= 20.00 min
IDF Curve	= Bryant 50.IDF	Asc/Rec limb fact	= 1/1



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	59.77	1	20	71,722	------	------	------	Pre. Deve.
2	Rational	104.47	1	12	75,221	------	------	------	Post Deve.
3	Reservoir	41.61	1	19	75,202	2	362.36	48,028	Pond

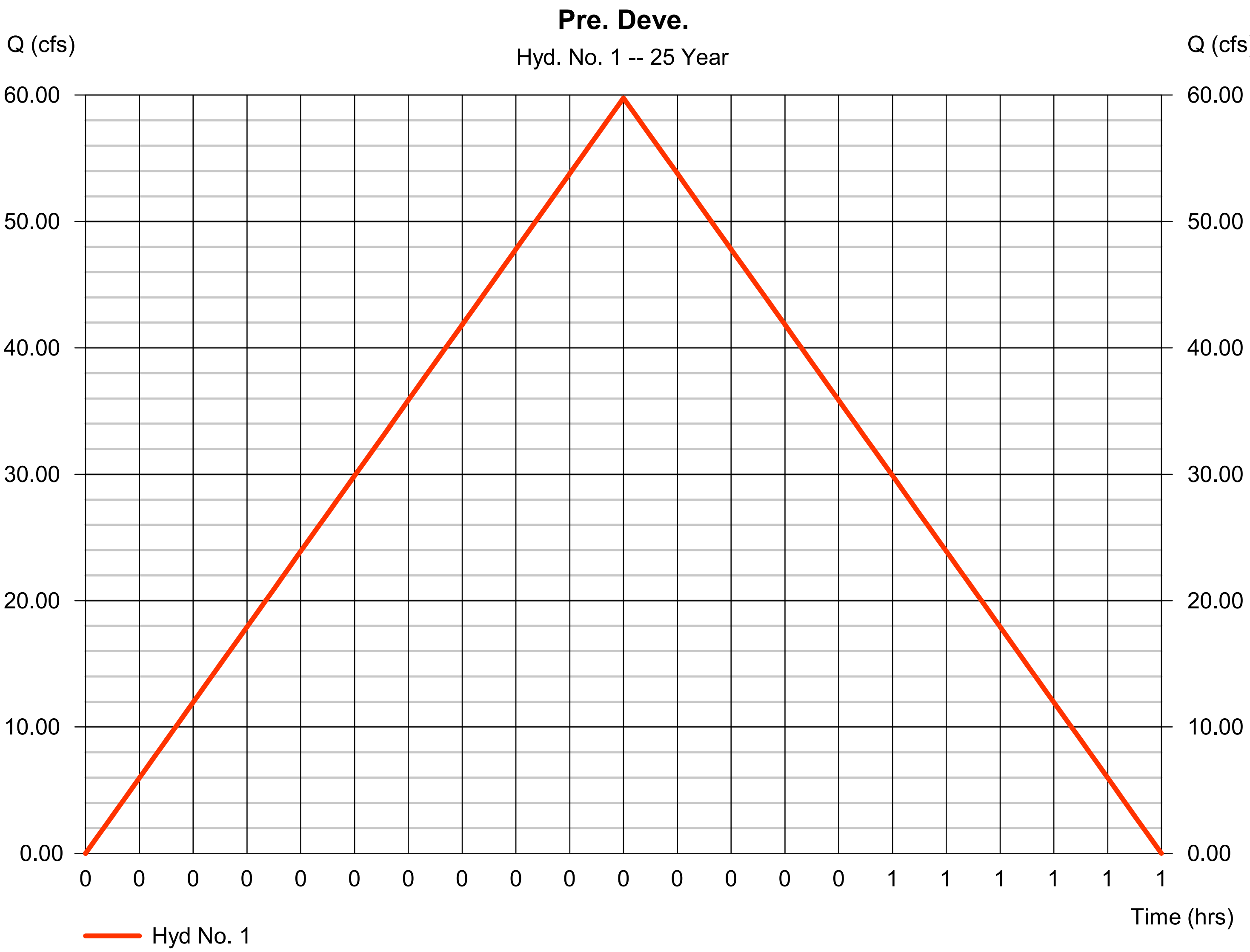
Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2023 | Monday, 04 / 17 / 2023

Hyd. No. 1

Pre. Deve.

Hydrograph type	= Rational	Peak discharge	= 59.77 cfs
Storm frequency	= 25 yrs	Time to peak	= 0.33 hrs
Time interval	= 1 min	Hyd. volume	= 71,722 cuft
Drainage area	= 23.930 ac	Runoff coeff.	= 0.47
Intensity	= 5.314 in/hr	Tc by User	= 20.00 min
IDF Curve	= Bryant 50.IDF	Asc/Rec limb fact	= 1/1



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	68.17	1	20	81,798	------	------	------	Pre. Deve.
2	Rational	118.84	1	12	85,564	------	------	------	Post Deve.
3	Reservoir	44.71	1	19	85,545	2	362.83	54,763	Pond

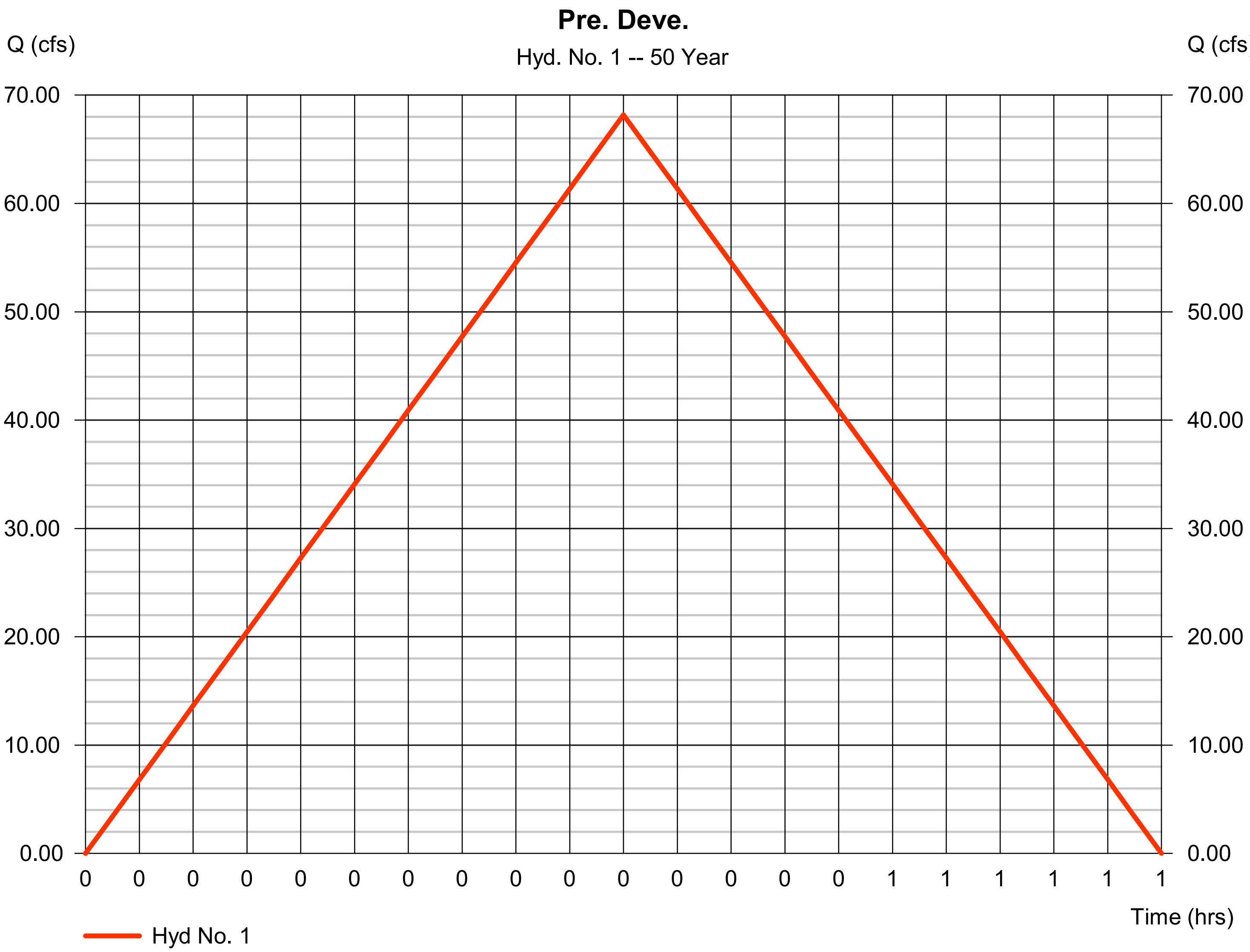
Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2023 | Monday, 04 / 17 / 2023

Hyd. No. 1

Pre. Deve.

Hydrograph type	= Rational	Peak discharge	= 68.17 cfs
Storm frequency	= 50 yrs	Time to peak	= 0.33 hrs
Time interval	= 1 min	Hyd. volume	= 81,798 cuft
Drainage area	= 23.930 ac	Runoff coeff.	= 0.47
Intensity	= 6.061 in/hr	Tc by User	= 20.00 min
IDF Curve	= Bryant 50.IDF	Asc/Rec limb fact	= 1/1



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	72.76	1	20	87,311	------	------	------	Pre. Deve.
2	Rational	126.02	1	12	90,735	------	------	------	Post Deve.
3	Reservoir	46.70	1	20	90,716	2	363.06	58,317	Pond

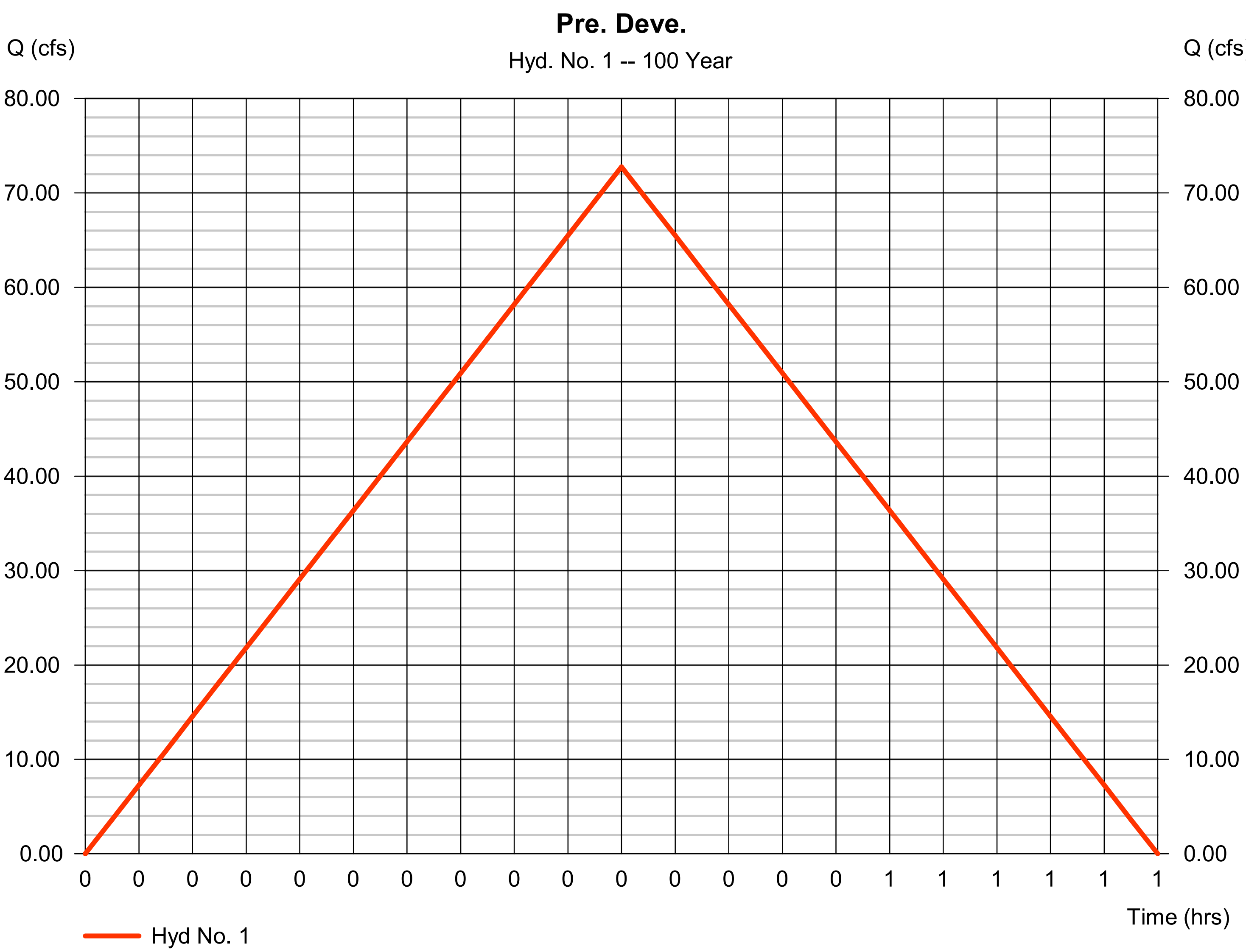
Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2023 Monday, 04 / 17 / 2023

Hyd. No. 1

Pre. Deve.

Hydrograph type	= Rational	Peak discharge	= 72.76 cfs
Storm frequency	= 100 yrs	Time to peak	= 0.33 hrs
Time interval	= 1 min	Hyd. volume	= 87,311 cuft
Drainage area	= 23.930 ac	Runoff coeff.	= 0.47
Intensity	= 6.469 in/hr	Tc by User	= 20.00 min
IDF Curve	= Bryant 50.IDF	Asc/Rec limb fact	= 1/1



Multi-Hydrograph Plot

Hyd. No. 1

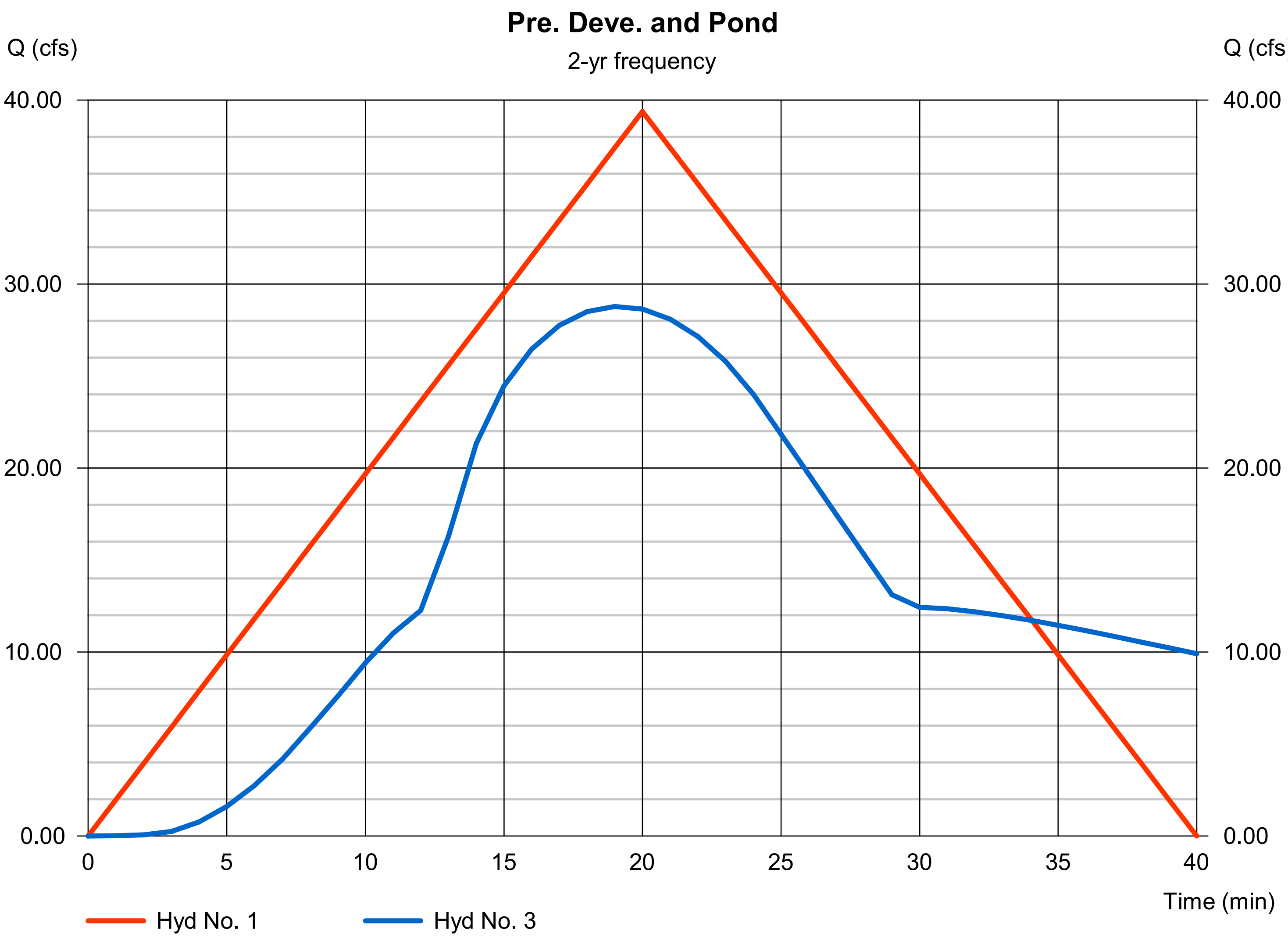
Pre. Deve.

Hydrograph type	=	Rational
Peak discharge	=	39.37 cfs
Time to peak	=	20 min
Hyd. Volume	=	47,246 cuft

Hyd. No. 3

Pond

Hydrograph type	=	Reservoir
Peak discharge	=	28.79 cfs
Time to peak	=	19 min
Hyd. Volume	=	51,181 cuft



Multi-Hydrograph Plot

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

Hyd. No. 1

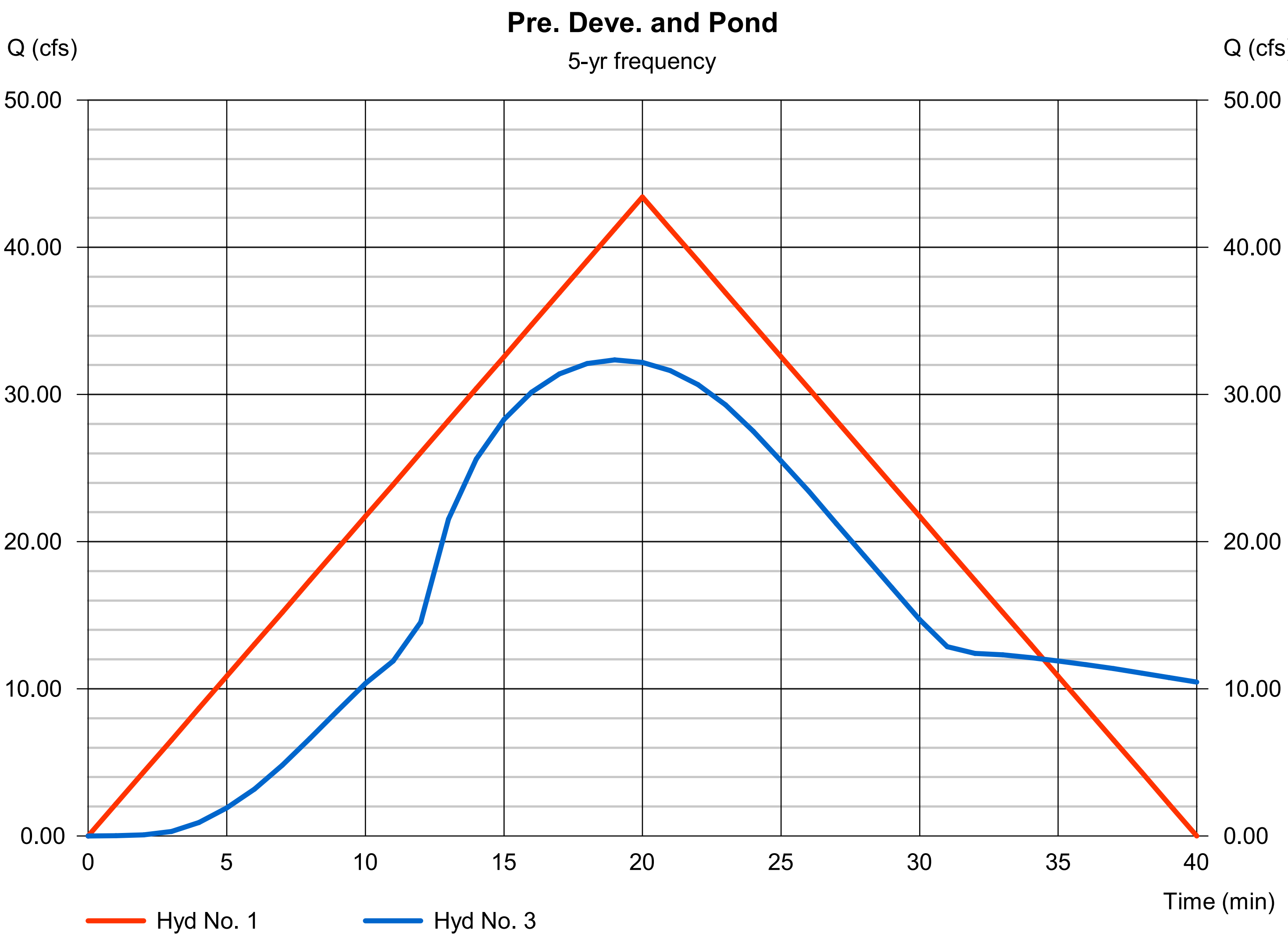
Pre. Deve.

Hydrograph type	=	Rational
Peak discharge	=	43.42 cfs
Time to peak	=	20 min
Hyd. Volume	=	52,106 cuft

Hyd. No. 3

Pond

Hydrograph type	=	Reservoir
Peak discharge	=	32.35 cfs
Time to peak	=	19 min
Hyd. Volume	=	56,907 cuft



Multi-Hydrograph Plot

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

Hyd. No. 1

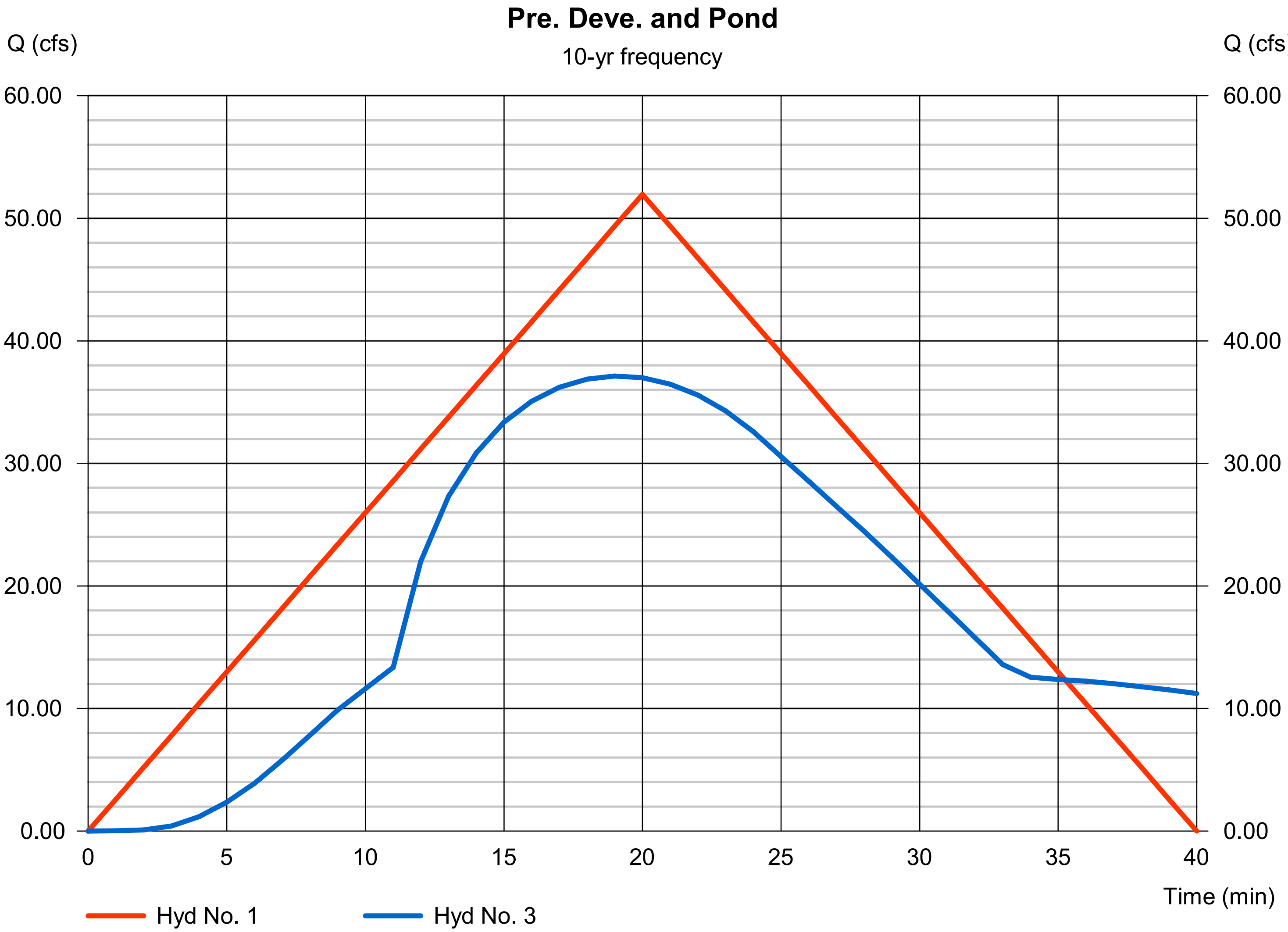
Pre. Deve.

Hydrograph type	=	Rational
Peak discharge	=	51.95 cfs
Time to peak	=	20 min
Hyd. Volume	=	62,335 cuft

Hyd. No. 3

Pond

Hydrograph type	=	Reservoir
Peak discharge	=	37.12 cfs
Time to peak	=	19 min
Hyd. Volume	=	65,777 cuft



Multi-Hydrograph Plot

Hyd. No. 1

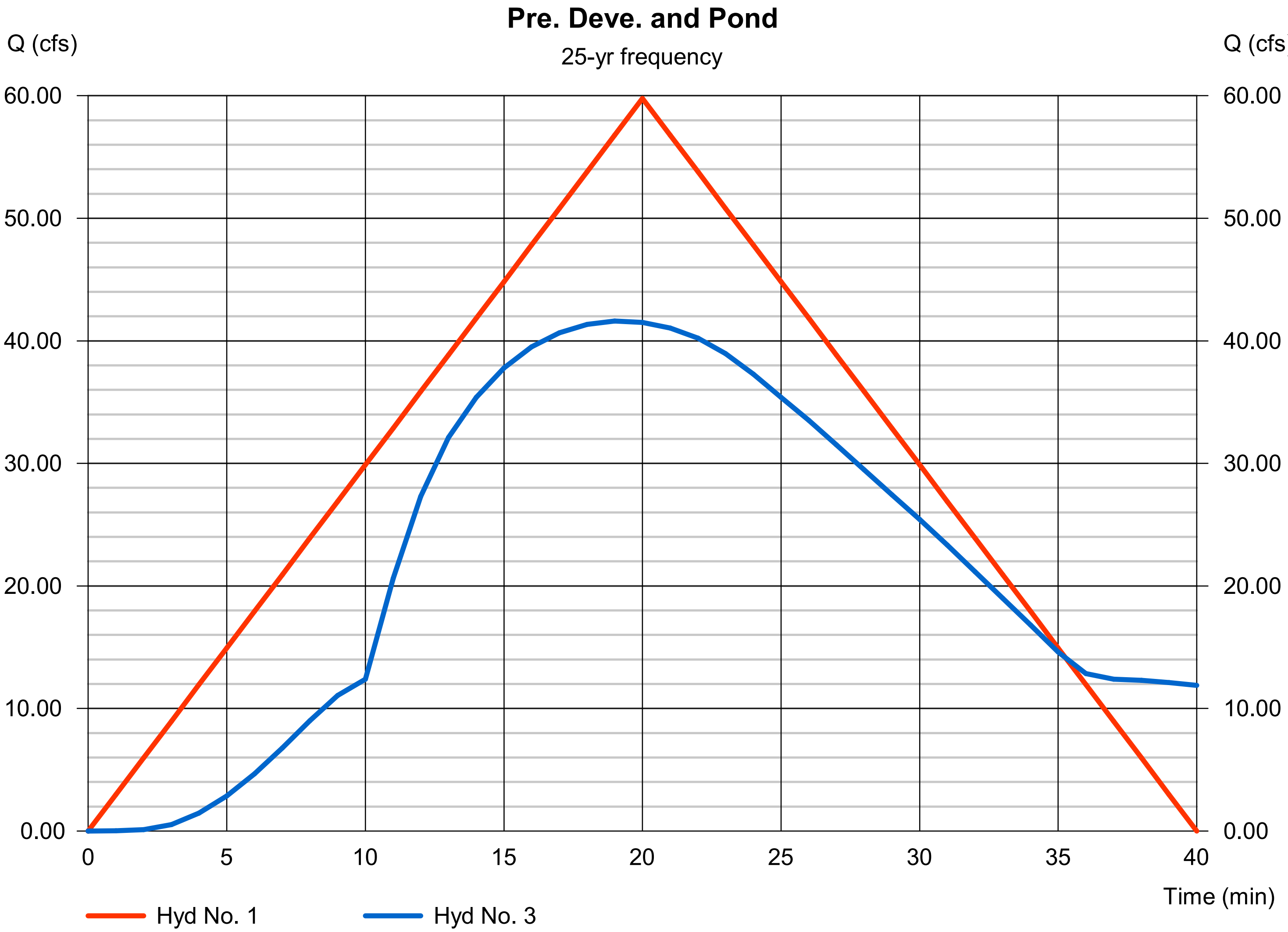
Pre. Deve.

Hydrograph type	=	Rational
Peak discharge	=	59.77 cfs
Time to peak	=	20 min
Hyd. Volume	=	71,722 cuft

Hyd. No. 3

Pond

Hydrograph type	=	Reservoir
Peak discharge	=	41.61 cfs
Time to peak	=	19 min
Hyd. Volume	=	75,202 cuft



Multi-Hydrograph Plot

Hyd. No. 1

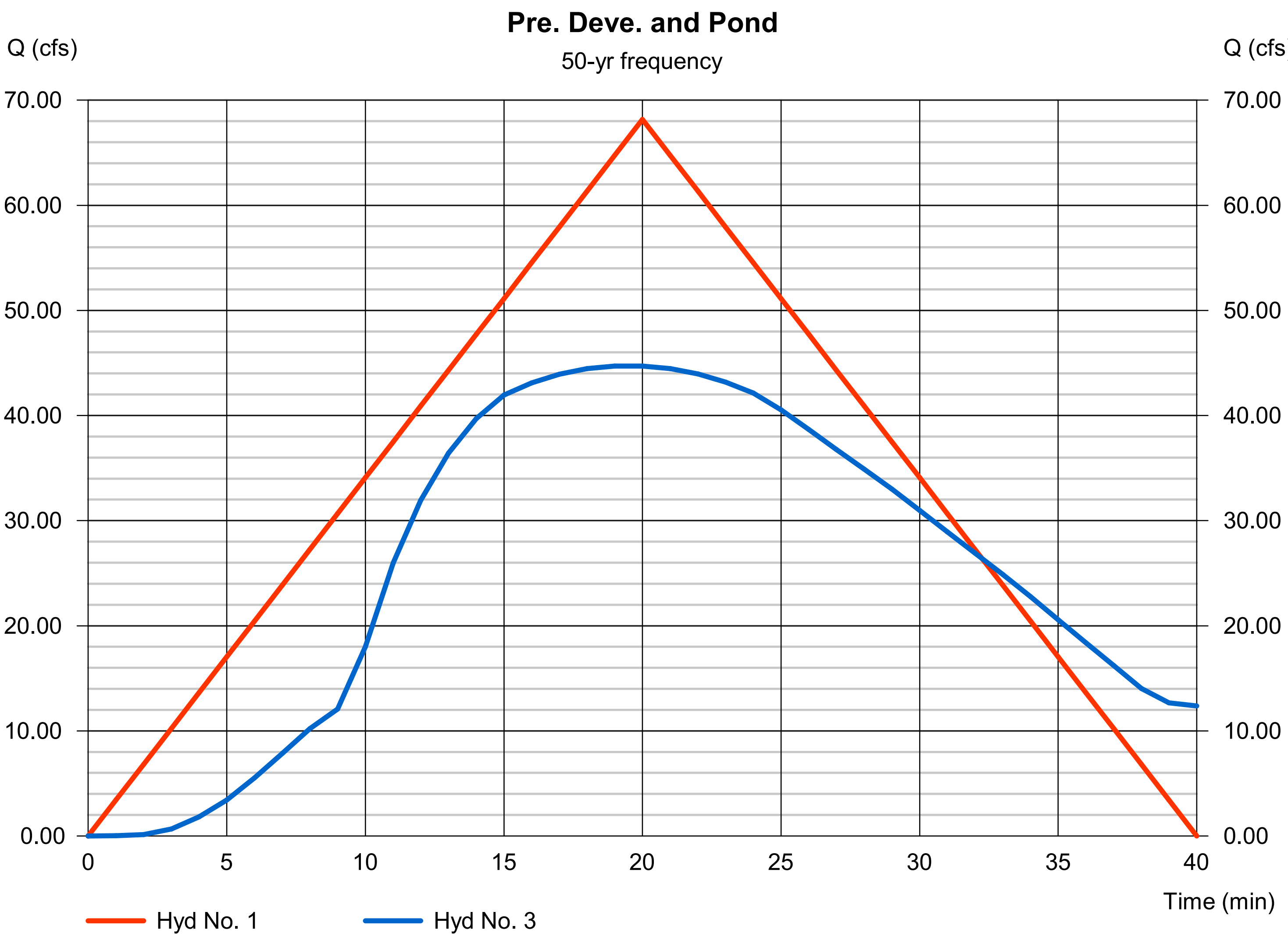
Pre. Deve.

Hydrograph type	=	Rational
Peak discharge	=	68.17 cfs
Time to peak	=	20 min
Hyd. Volume	=	81,798 cuft

Hyd. No. 3

Pond

Hydrograph type	=	Reservoir
Peak discharge	=	44.71 cfs
Time to peak	=	19 min
Hyd. Volume	=	85,545 cuft



Multi-Hydrograph Plot

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

Hyd. No. 1

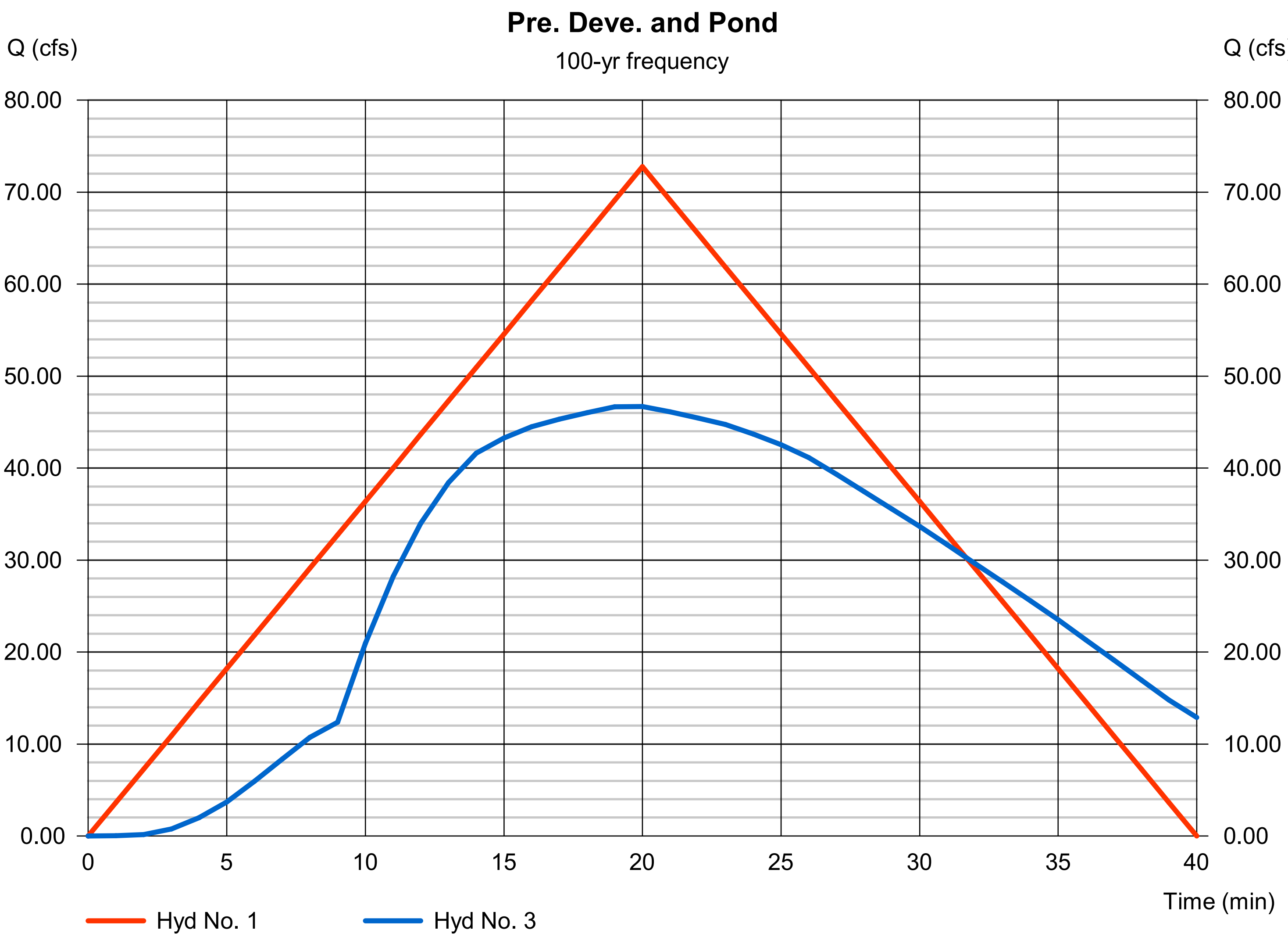
Pre. Deve.

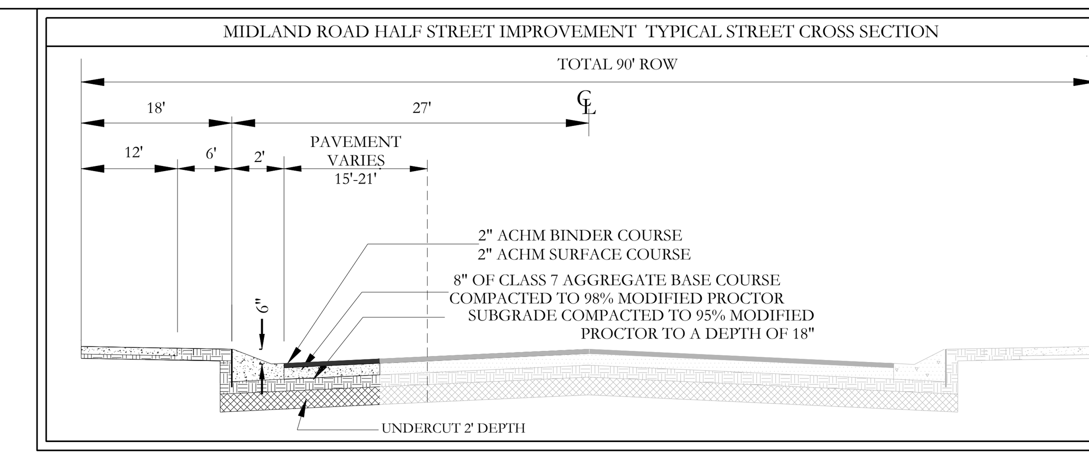
Hydrograph type	=	Rational
Peak discharge	=	72.76 cfs
Time to peak	=	20 min
Hyd. Volume	=	87,311 cuft

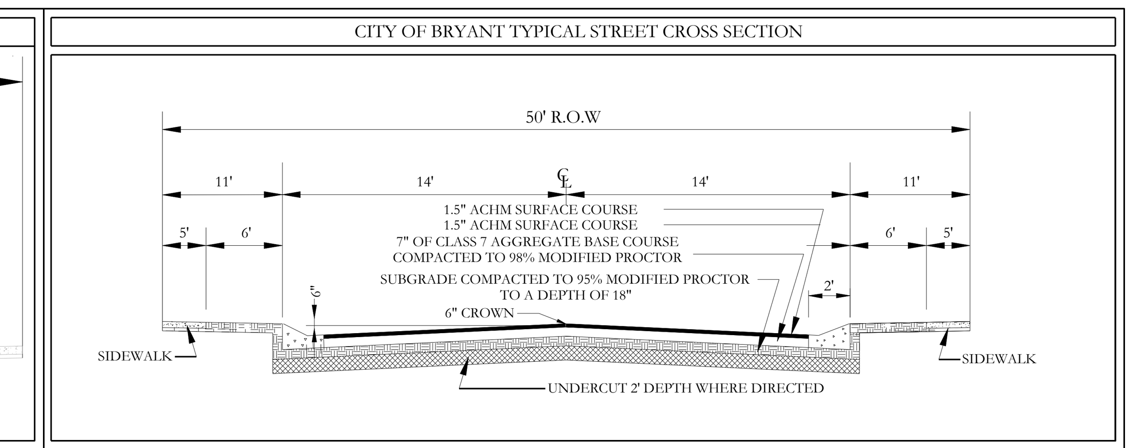
Hyd. No. 3

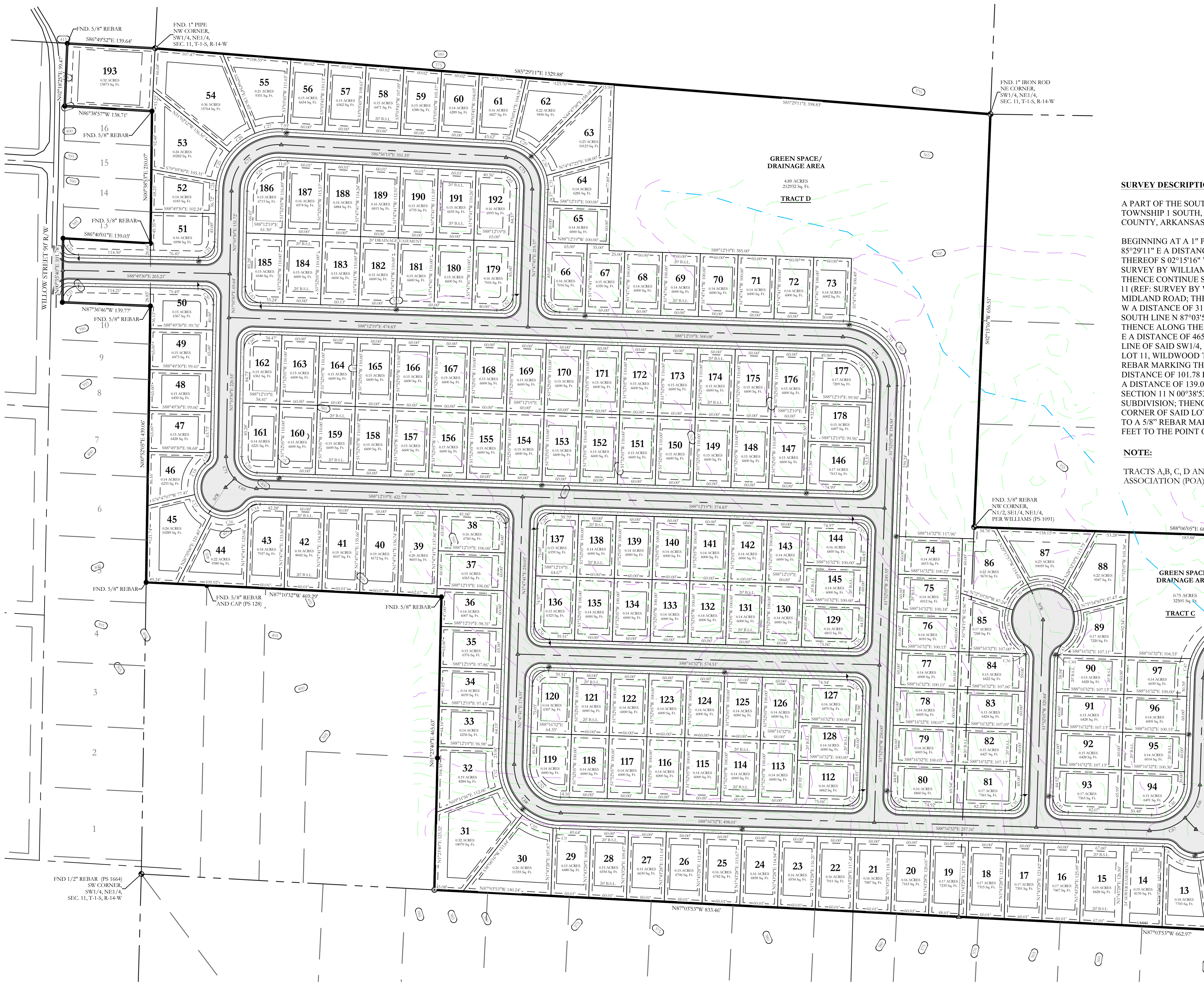
Pond

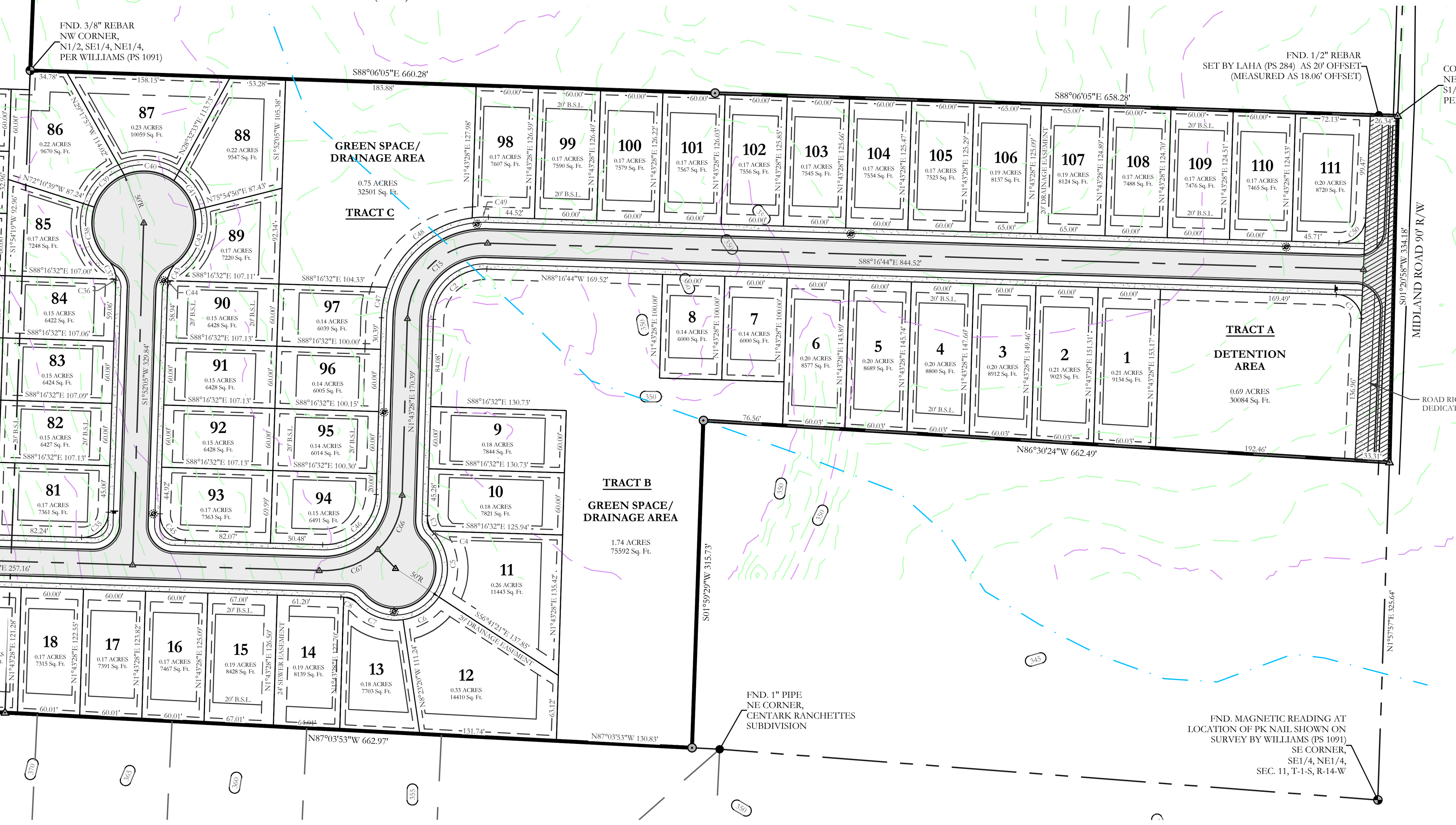
Hydrograph type	=	Reservoir
Peak discharge	=	46.70 cfs
Time to peak	=	20 min
Hyd. Volume	=	90,716 cuft











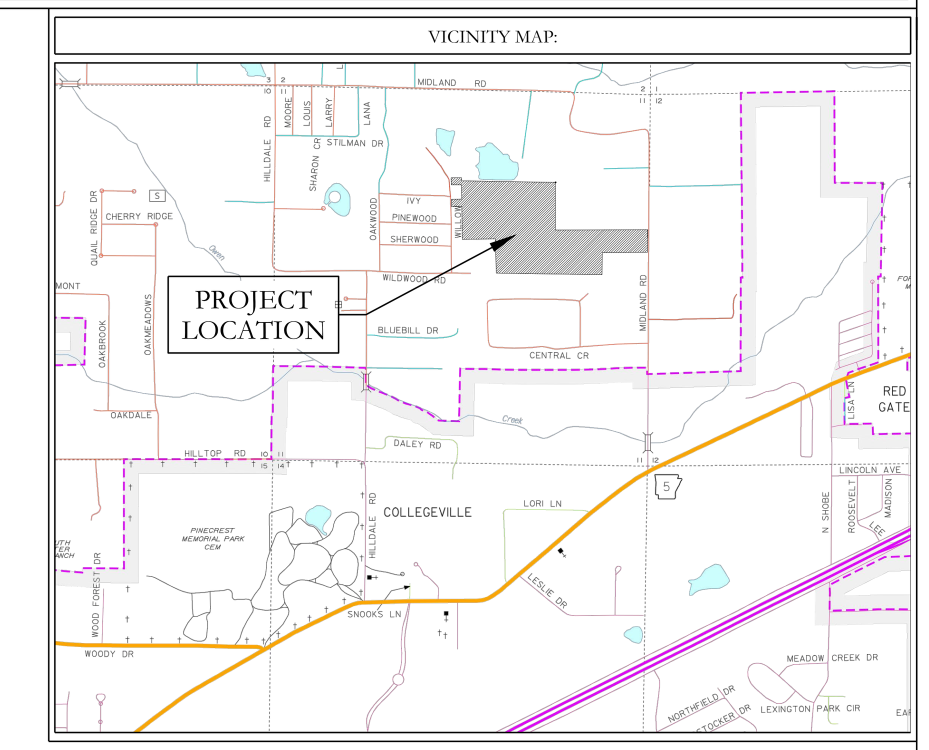
SURVEY DESCRIPTION:

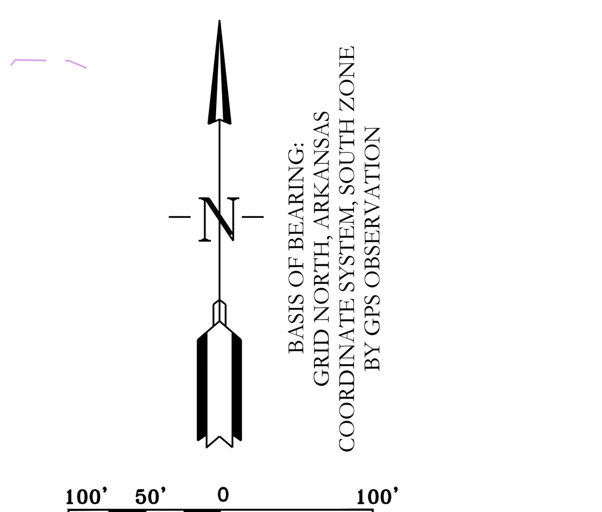
A PART OF THE SOUTHWEST QUARTER OF THE NORTHEAST QUARTER, AND THE SOUTHEAST QUARTER OF THE NORTHEAST QUARTER OF SECTION 11, TOWNSHIP 1 SOUTH, RANGE 14 WEST, SALINE COUNTY, ARKANSAS; AND LOTS 11, 12, 17, AND 18, OF WILDWOOD TERRACE SUBDIVISION TO SALINE COUNTY, ARKANSAS AS SHOWN AND RECOREDED IN SALINE 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.





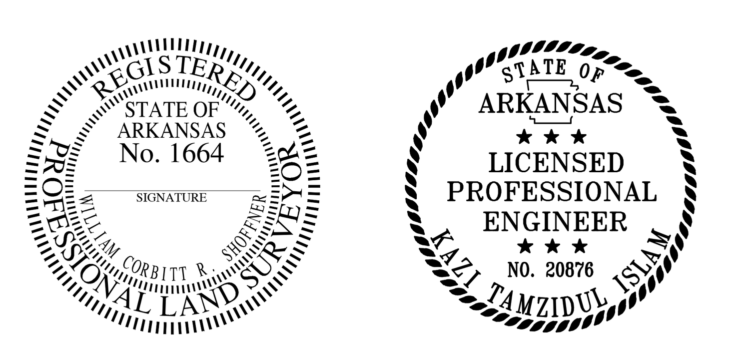
Curve #	Length	Radius	Delta	Chord Direction	Chord Length
C1	36.44	25.00	83.51	N46° 31' 18"W	33.30
C2	78.54	50.00	90.00	S46° 43' 28"W	70.71
C3	15.74	25.00	36.08	S16° 19' 00"E	15.48
C4	3.29	25.00	7.54	S38° 07' 47"E	3.29
C5	65.64	50.00	75.21	S4° 17' 44"E	61.02
C6	42.15	50.00	48.30	S57° 27' 40"W	40.91
C7	46.94	50.00	53.79	N71° 29' 33"W	45.24
C8	16.26	25.00	37.26	N63° 13' 27"W	15.97
C10	53.12	100.00	30.43	N67° 06' 45"W	52.50
C11	54.85	100.00	31.43	N36° 10' 54"W	54.17
C12	38.86	100.00	22.26	N9° 20' 12"W	38.61
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	63.54	50.00	72.81	S80° 10' 34"W	59.35
C17	43.81	50.00	50.20	N38° 18' 56"W	42.42
C18	54.47	50.00	62.42	N17° 59' 35"E	51.81
C19	19.69	25.00	45.12	N26° 38' 19"E	19.18
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 #	Length	Radius	Delta	Chord Direction	Chord Length
C27	43.88	100.00	25.14	N80° 29' 25"E	43.53
C28	13.22	75.00	10.10	S81° 53' 17"E	13.20
C29	41.41	75.00	31.63	S61° 01' 20"E	40.88
C30	39.26	75.00	30.00	S30° 12' 28"E	38.82
C31	22.26	75.00	17.00	S6° 42' 27"E	22.18
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	111.48	100.00	63.87	N50° 53' 08"E	105.80
C49	15.54	100.00	8.90	N87° 16' 23"E	15.52
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 #	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 Wiillaim 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: PROPOSED 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

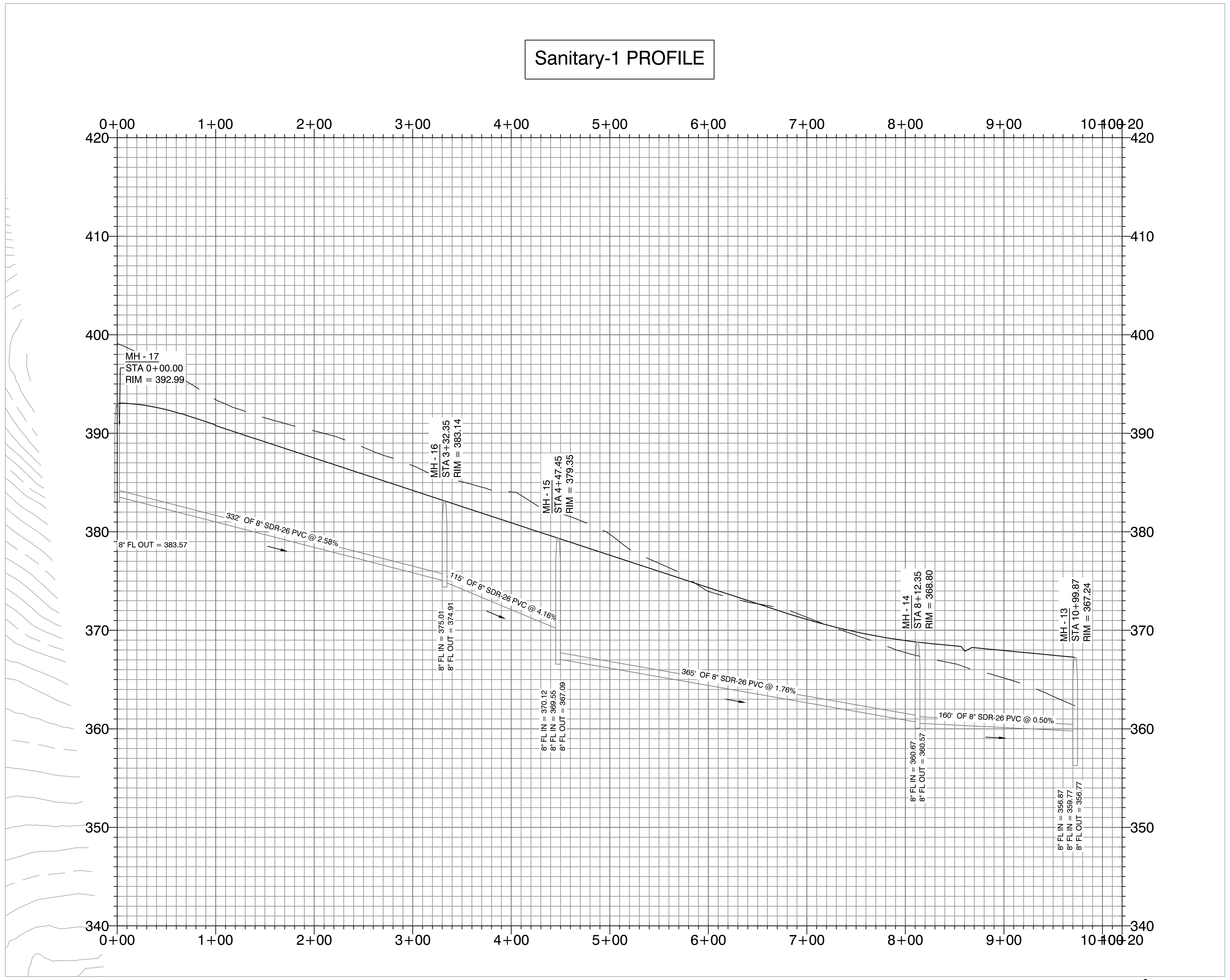
FOR USE AND BENEFIT OF:

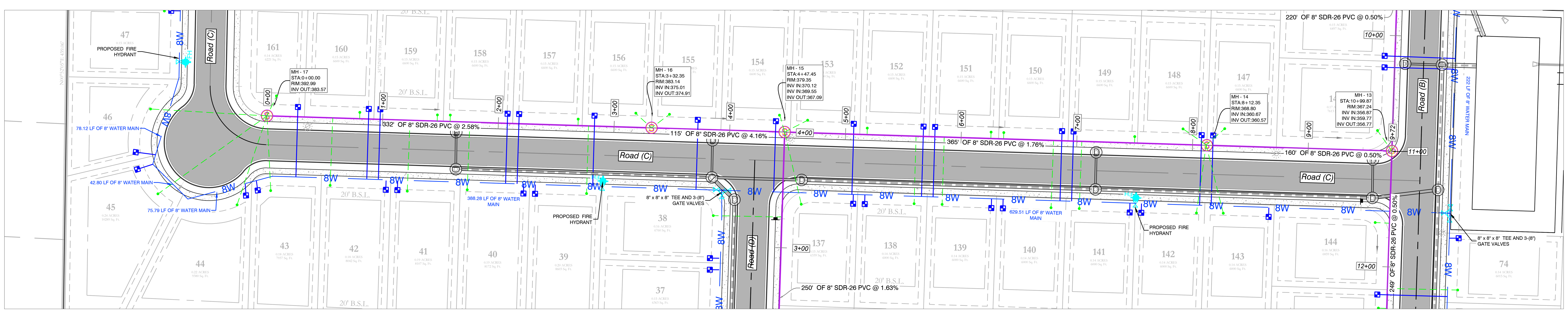
HAVEN'S DEVELOPMENT, LLC

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





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

N

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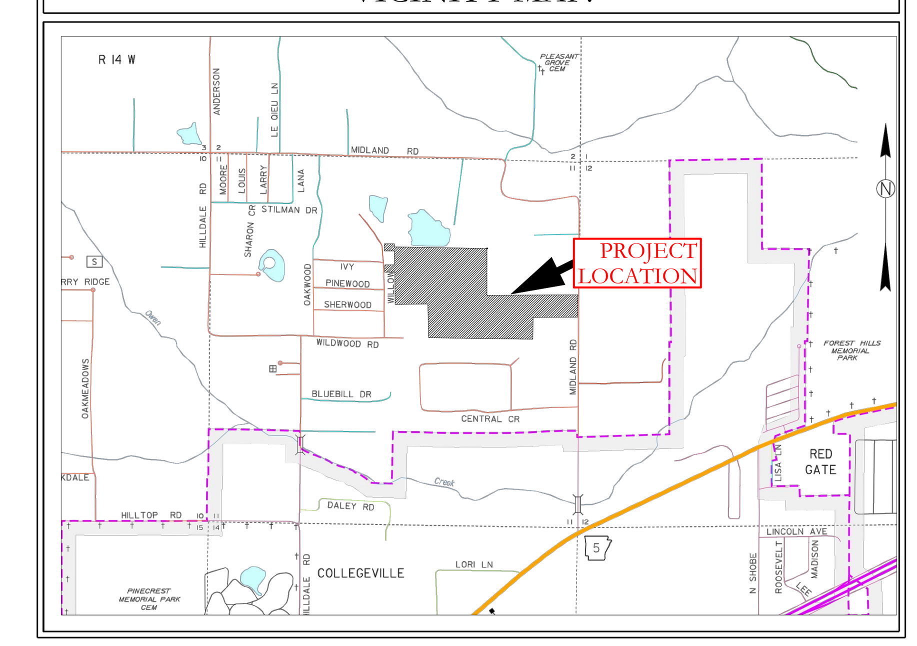
HDPE
RCP

VICINITY MAP:



SEWER LEGEND:

SEWER SERVICE
SEWER MAIN
SEWER MANHOLE

NOTE:
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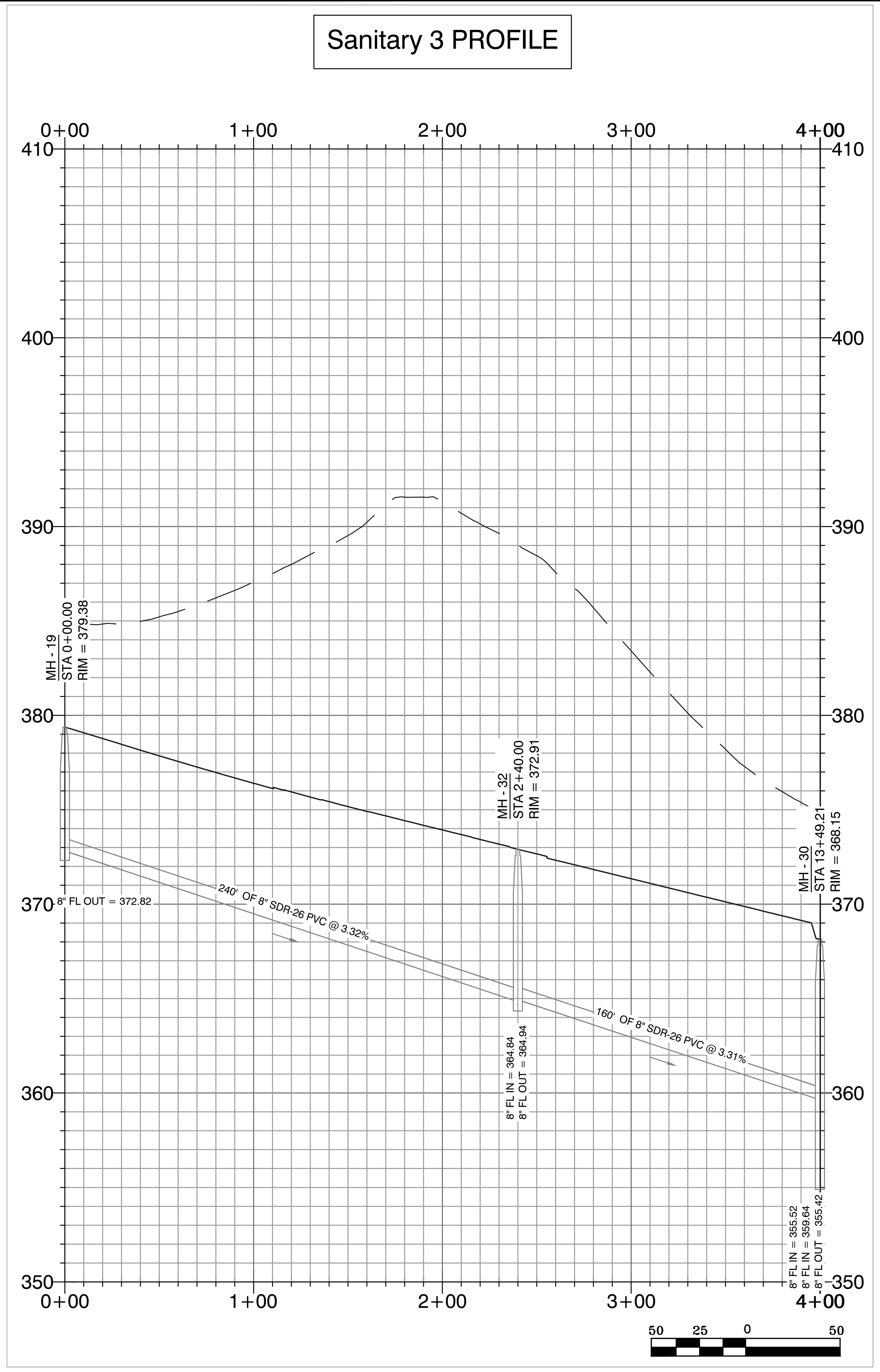
FOR USE AND BENEFIT OF:
HAVEN'S DEVELOPMENT, LLC

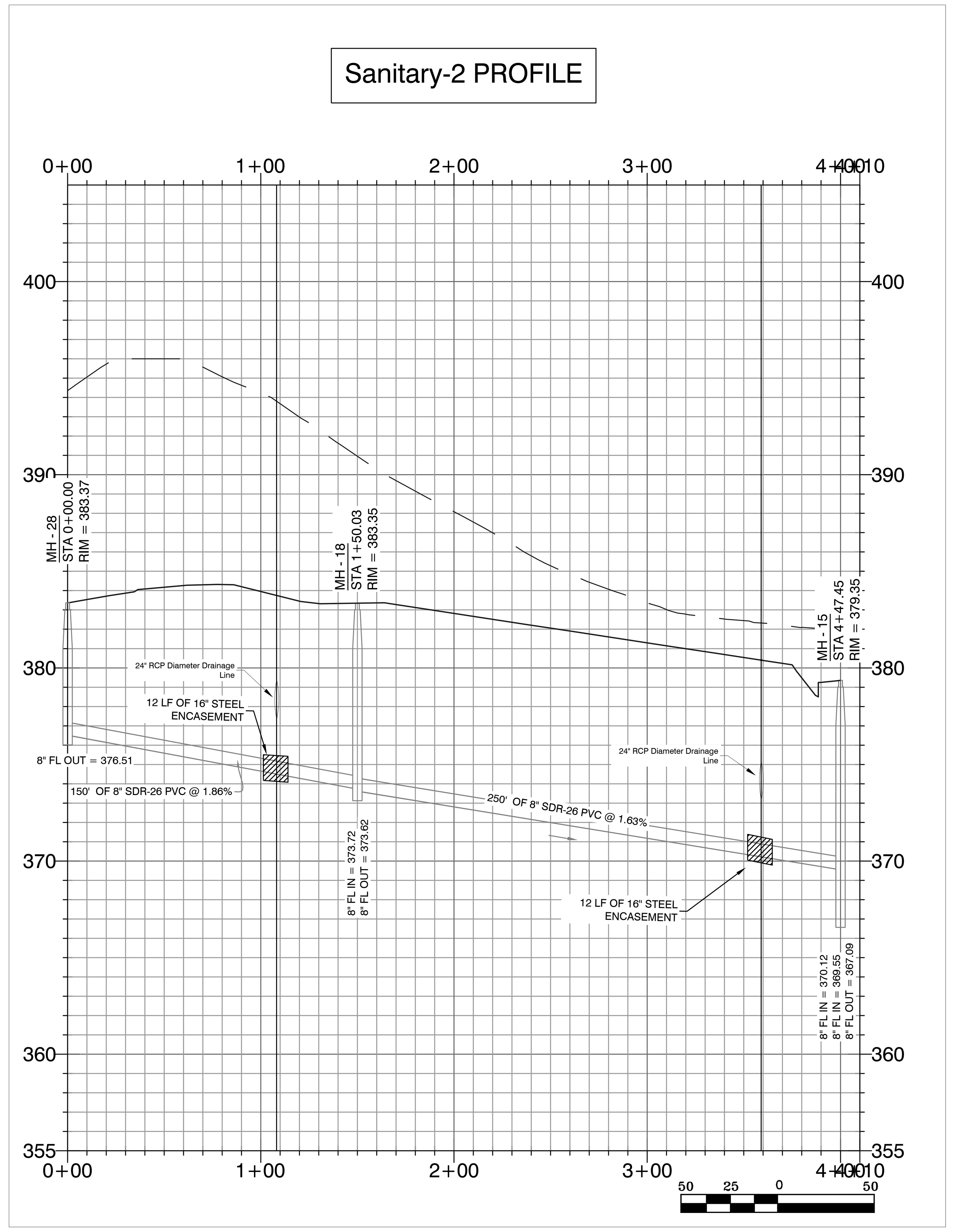
MIDLAND ROAD
SEWER PROFILES
BRYANT, SALINE COUNTY, ARKANSAS

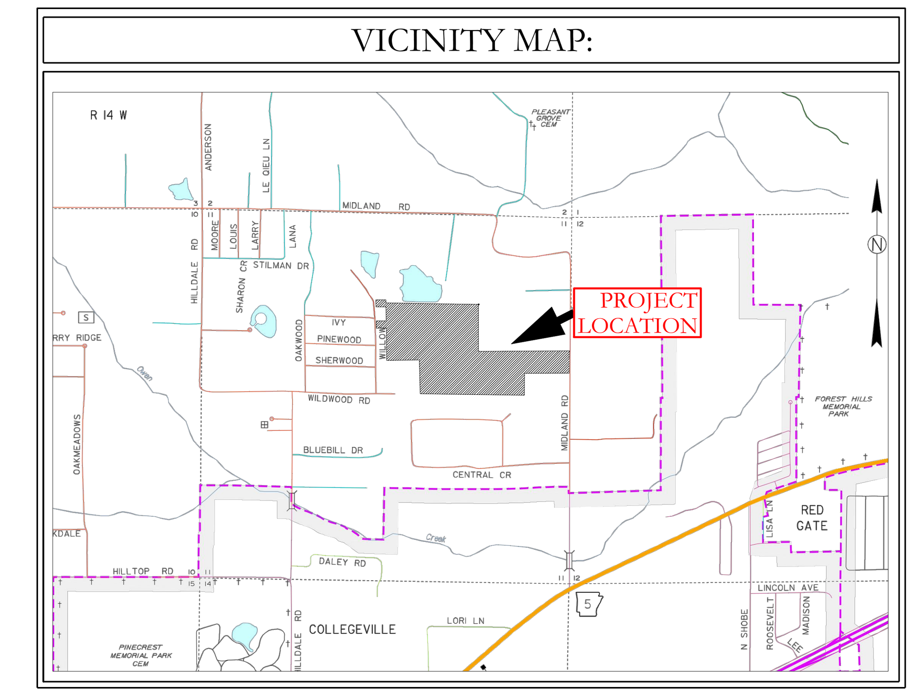
DATE:	4/18/2023	C.A.D. BY:		DRAWING NUMBER:
REVISED:		CHECKED BY:		23-0024
SHEET:	C-3.2	SCALE:		

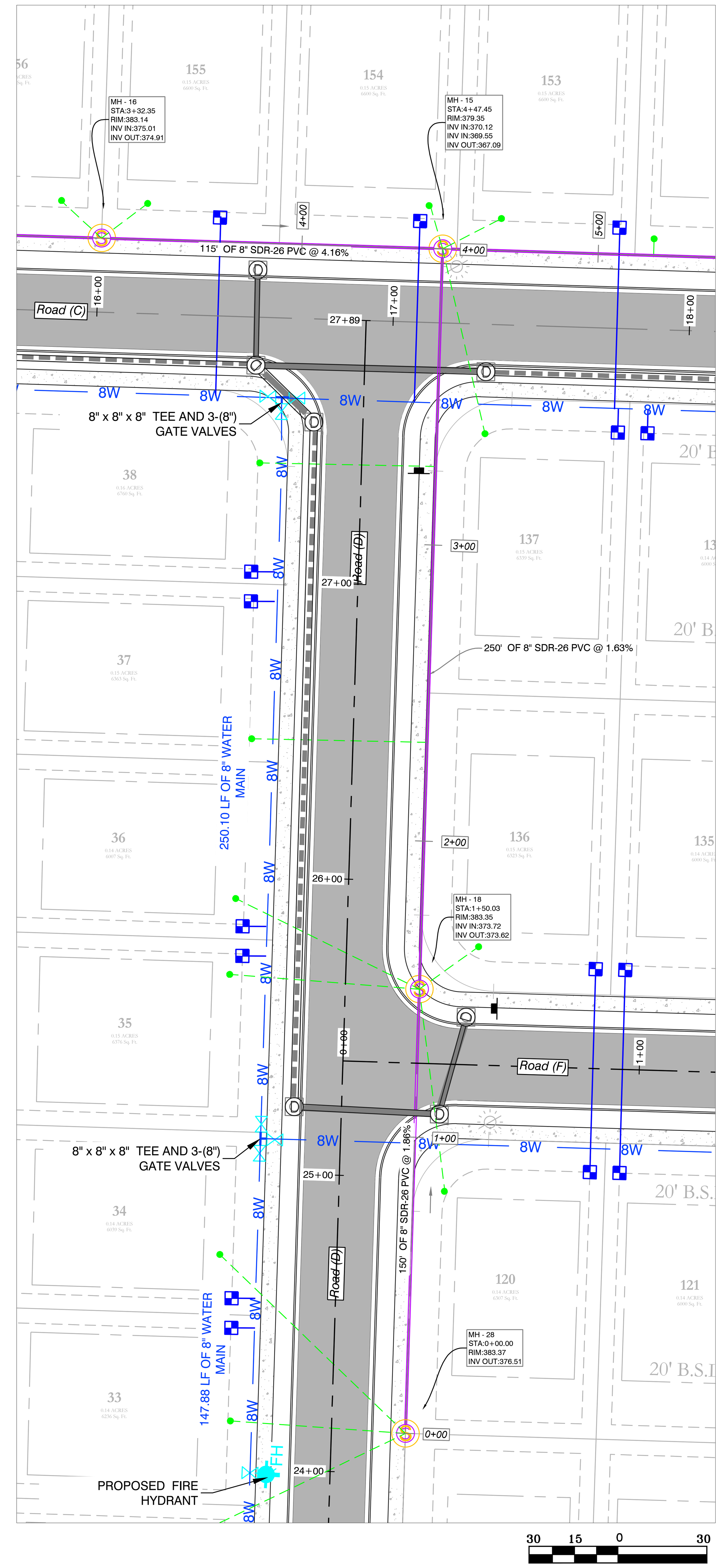
500	1S	15W	0	34	230	62	1807

K:\LAND PROJECTS 2004\SUBDIVISIONS\2023\23-0024 HAVENS MIDLAND ROAD SUBDIVISION S11 T1S R14W\CIVIL\DWG\23-0024 CONSTRUCTION PLAN (FINAL DRAFT)(AFTER COMMENTS)(4-20-2023).DWG









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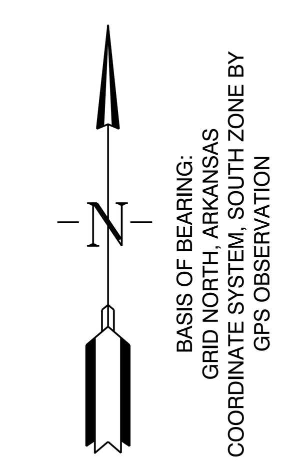
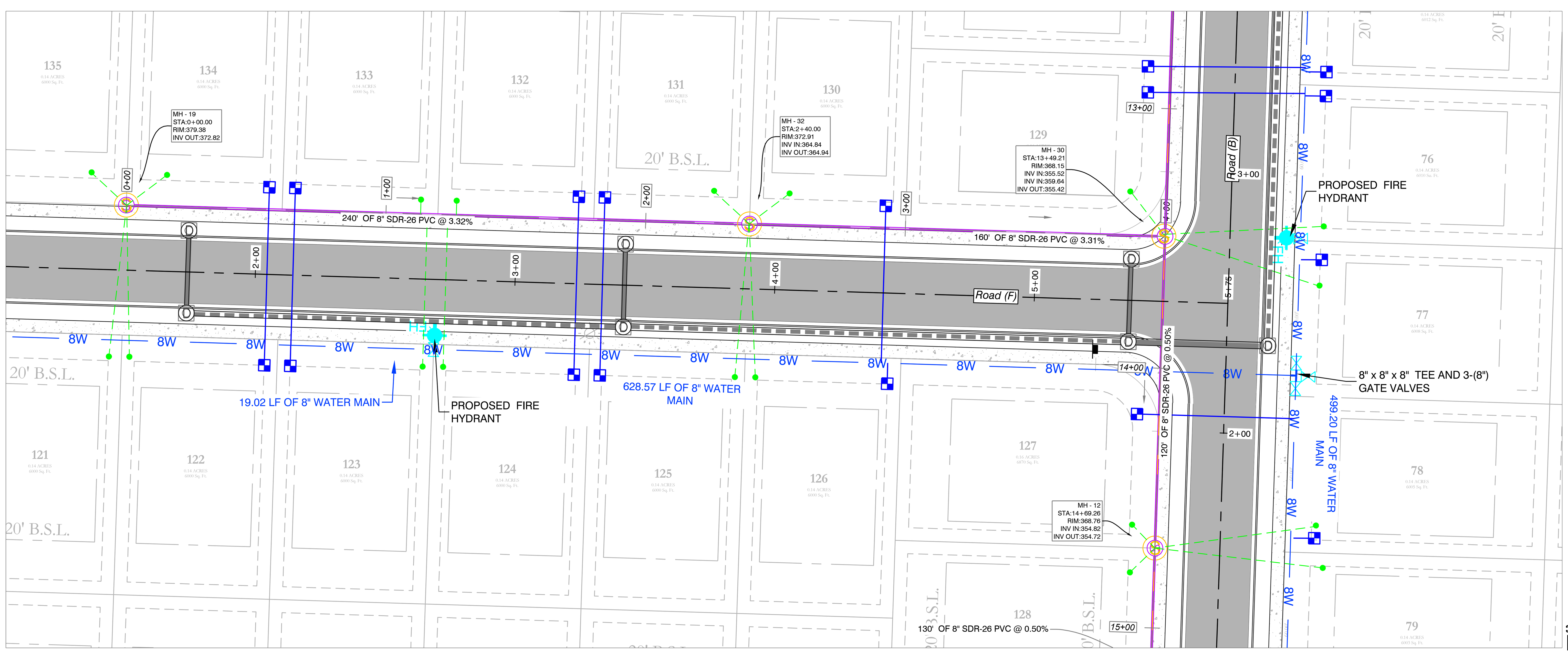
HDPE

RCP





SEWER LEGEND:

SEWER SERVICE

SEWER MAIN

SEWER MANHOLE

NOTE:
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MIDLAND ROAD SUBDIVISION
SEWER PLAN & PROFILES

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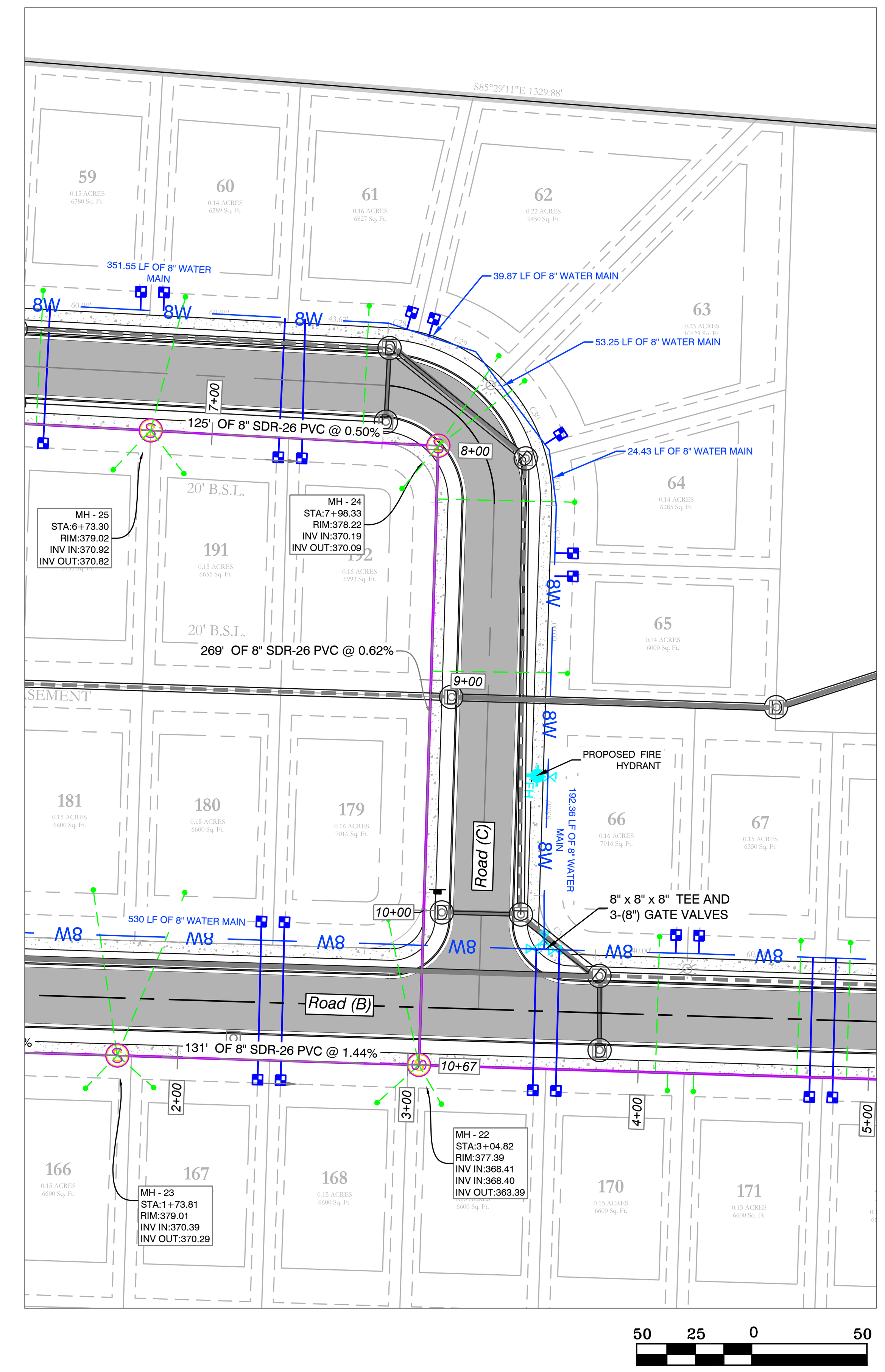
FOR USE AND BENEFIT OF:
HAVEN'S DEVELOPMENT, LLC

MIDLAND ROAD
SEWER PROFILES
BRYANT, SALINE COUNTY, ARKANSAS

DATE:	4/18/2023		C.A.D. BY:			DRAWING NUMBER:	
REVISED:			CHECKED BY:			23-0024	
SHEET:	C-3.3		SCALE:				
500	1S	15W	0	34	230	62	1807

K:\LAND PROJECTS 2004\SUBDIVISIONS\2023\23-0024 HAVENS MIDLAND ROAD SUBDIVISION S11 T1S R14W\CIVIL\DWG\23-0024 CONTRUCTION PLAN (FINAL DRAFT)(AFTER COMMENTS)(4-20-2023).DWG



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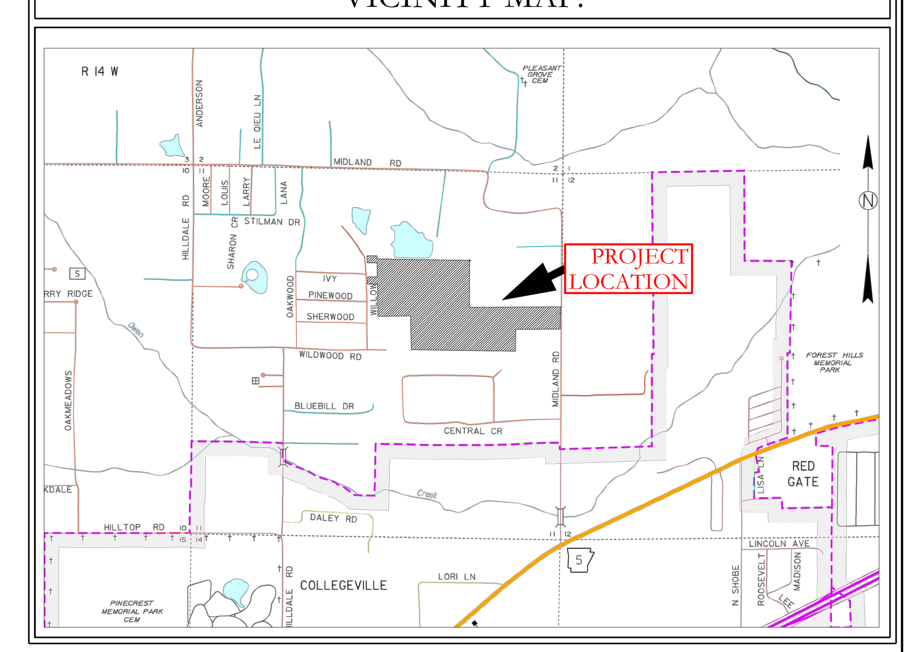
HDPE

RCP

VICINITY MAP:



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N

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

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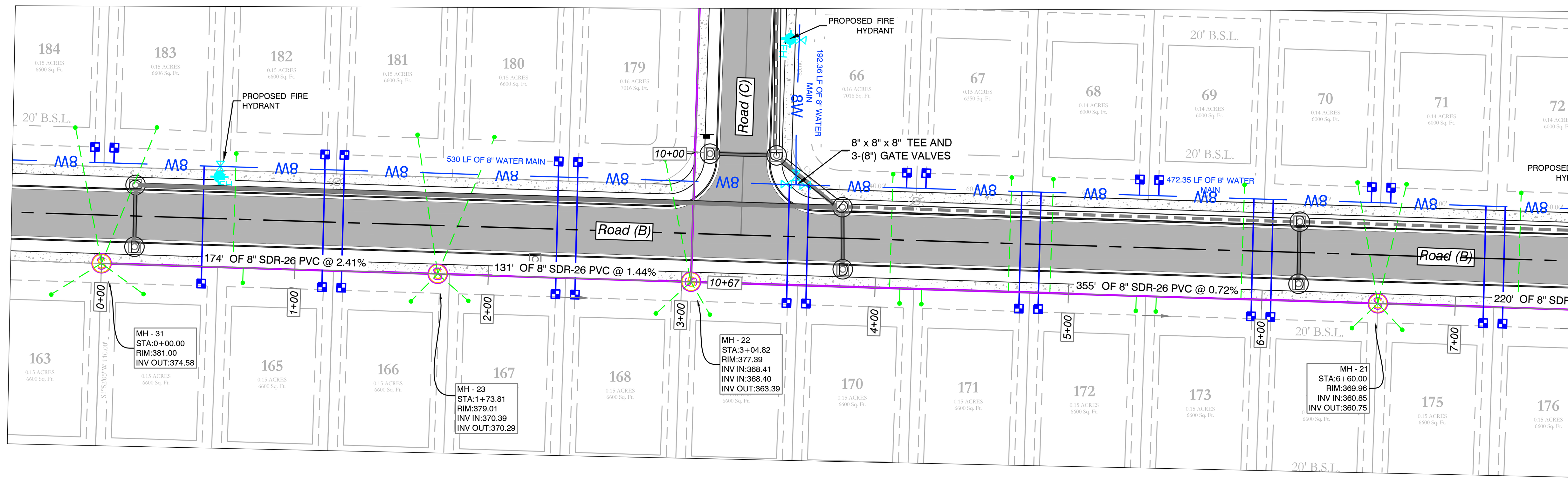
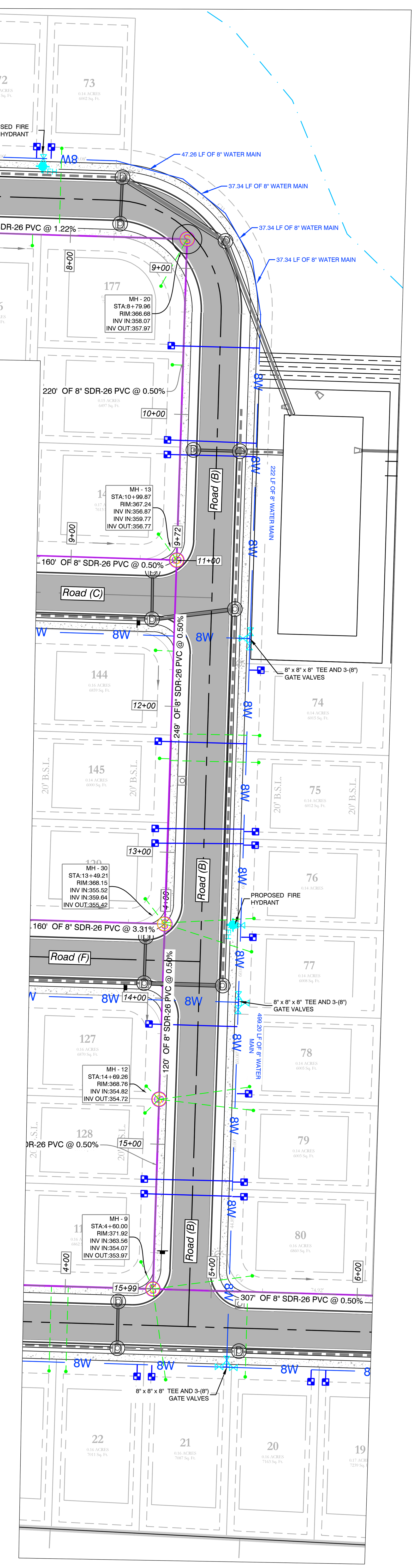
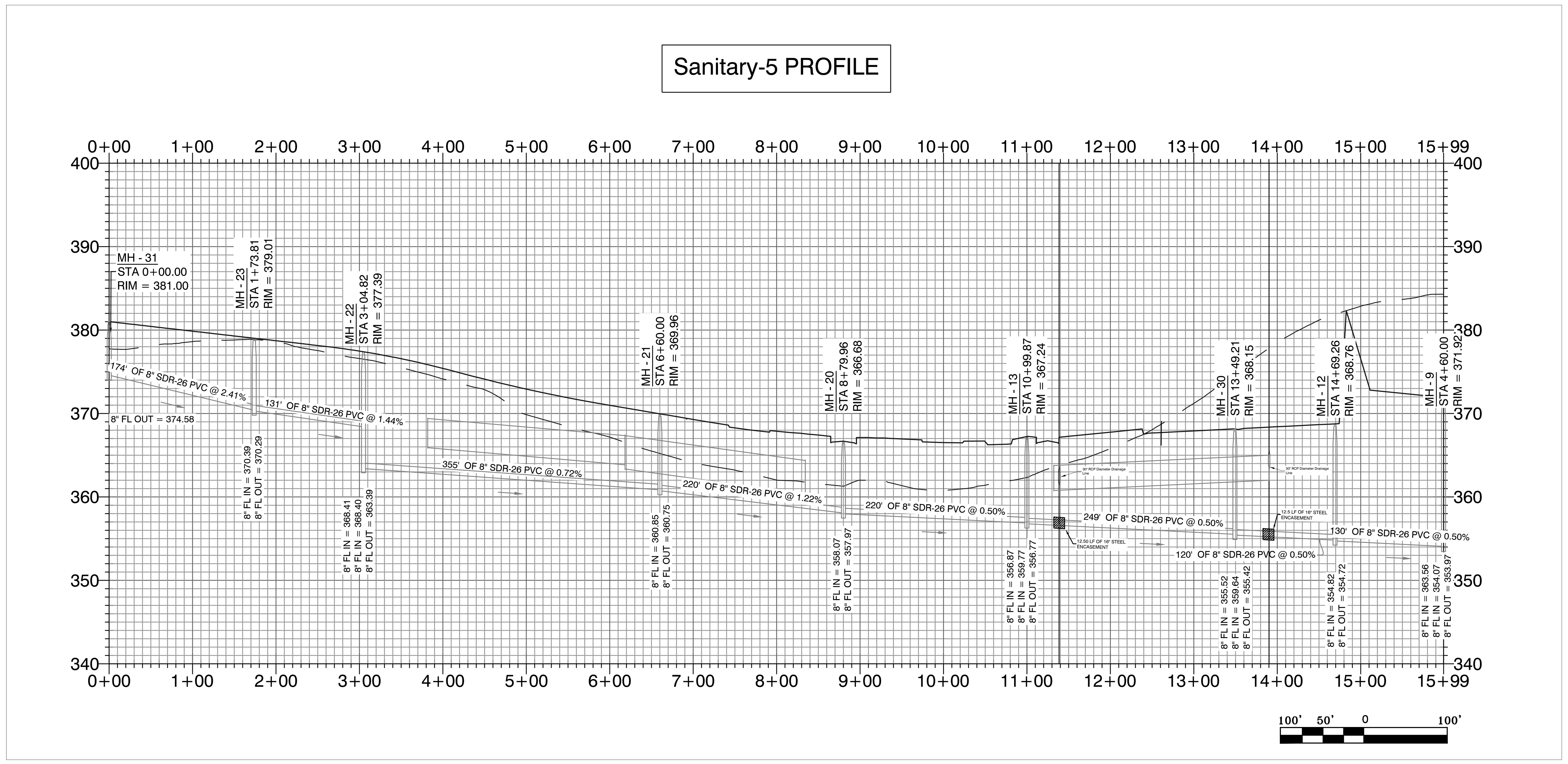
SEWER PROFILES
BRYANT, SALINE COUNTY, ARKANSAS

DATE: 4/18/2023		C.A.D. BY:	DRAWING NUMBER:
REVISED:		CHECKED BY:	23-0024
SHEET:	C-3.4	SCALE:	

500	1S	15W	0	34	230	62	1807

K:\LAND PROJECTS 2004\SUBDIVISIONS\2023\23-0024 HAVENS MIDLAND ROAD SUBDIVISION S11 T1S R14W\CIVIL\DWG\23-0024 CONSTRUCTION PLAN (FINAL DRAFT)(AFTER COMMENTS)(4-20-2023).DWG



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HDPE
RCP

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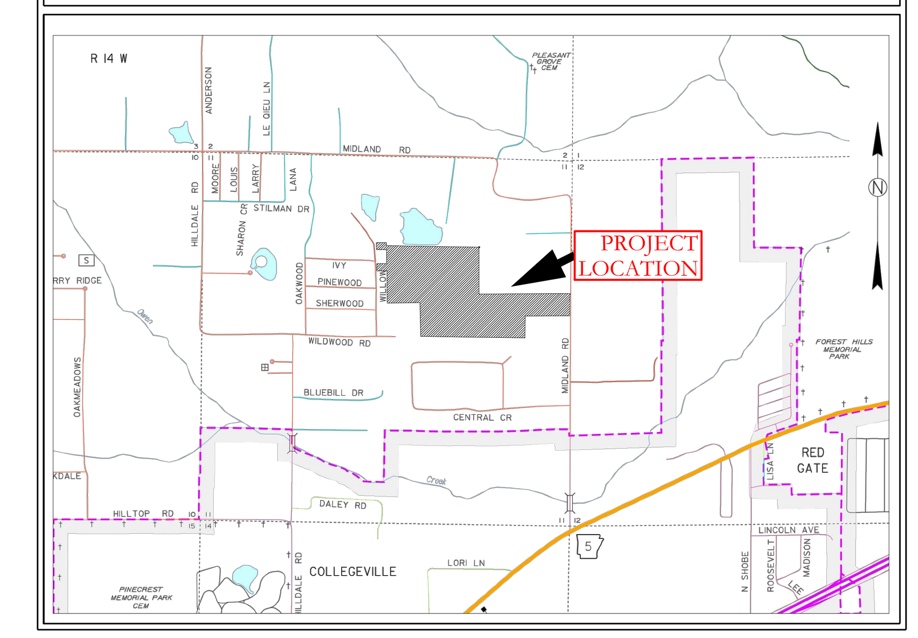
COORDINATE SYSTEM, SOUTH ZONE BY
GPS OBSERVATION

VICINITY MAP:



MIDLAND ROAD SUBDIVISION
SEWER PLAN & PROFILES

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SEWER MAIN
SEWER MANHOLE

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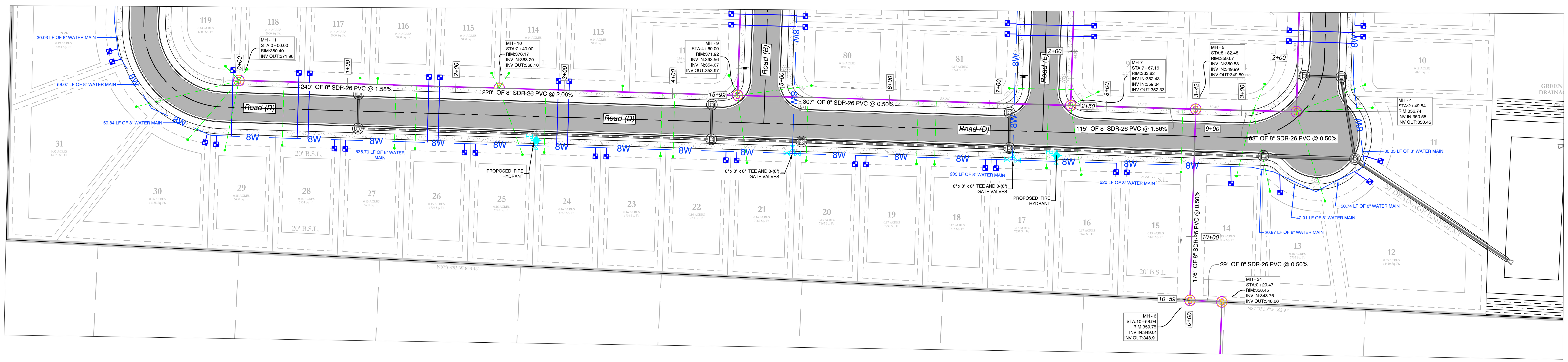
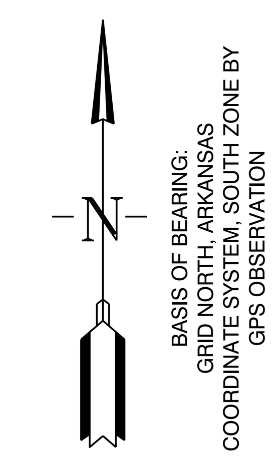
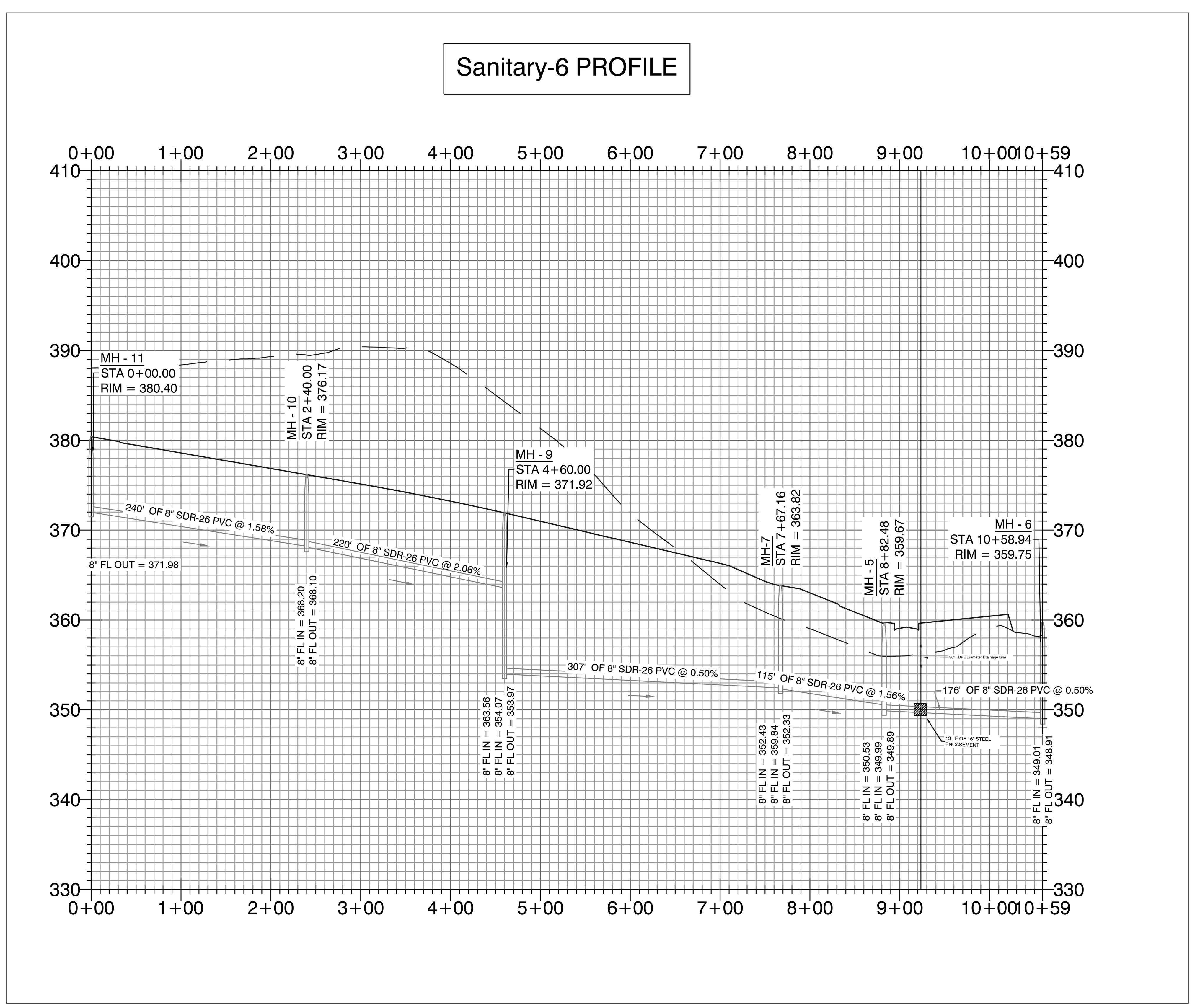
DATE:	4/19/2023	C.A.D. BY:		DRAWING NUMBER:
REVISED:		CHECKED BY:		23-0024
SHEET:	C-3.5	SCALE:		

500	1S	15W	0	34	230	62	1807

K:\LAND PROJECTS 2004\SUBDIVISIONS\2023\23-0024 HAVENS MIDLAND ROAD SUBDIVISION S11 T1S R14W\CIVIL\DWG\23-0024 CONTRUCTION PLAN (FINAL DRAFT)(AFTER COMMENTS)(4-20-2023).DWG







MIDLAND ROAD SUBDIVISION
SEWER PLAN & PROFILES

WATER & SEWER UTILITY NOTES:

1. ALL NEW 8-INCH WATER MAINS TO BE CLASS 900.
2. ALL WATER MAINS LARGER THAN 8" DIAMETER SHALL BE DUCTILE IRON (250 PSI PRESSURE CLASS).
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HDPE

RCP

SEWER LEGEND:

SEWER SERVICE

SEWER MAIN

SEWER MANHOLE

NOTE:
USE SDR-26 PVC SEWER PIPE EXCEPT WHERE DUCTILE IRON PIPE REQUIRED FOR COVER. USE DUCTILE IRON PIPE WHERE 3' MINIMUM COVE CANNOT BE MAINTAINED.

CONTRACTOR IS RESPONSIBLE FOR LOCATING ALL BURIED UTILITIES PRIOR TO CONSTRUCTION.

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- GATE VALVE
- 45º FITTING
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- TEE FITTING
- CROSS FITTING
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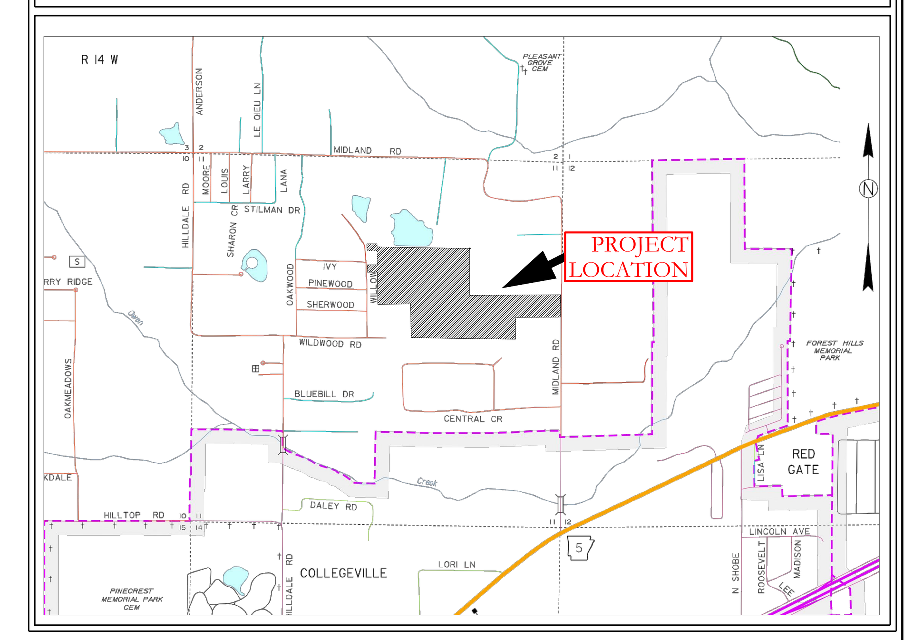
VICINITY MAP:



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BRYANT, SALINE COUNTY, ARKANSAS

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REVISED:		CHECKED BY:			23-0024		
SHEET:	C-3.6	SCALE:					
500	1S	15W	0	34	230	62	1807

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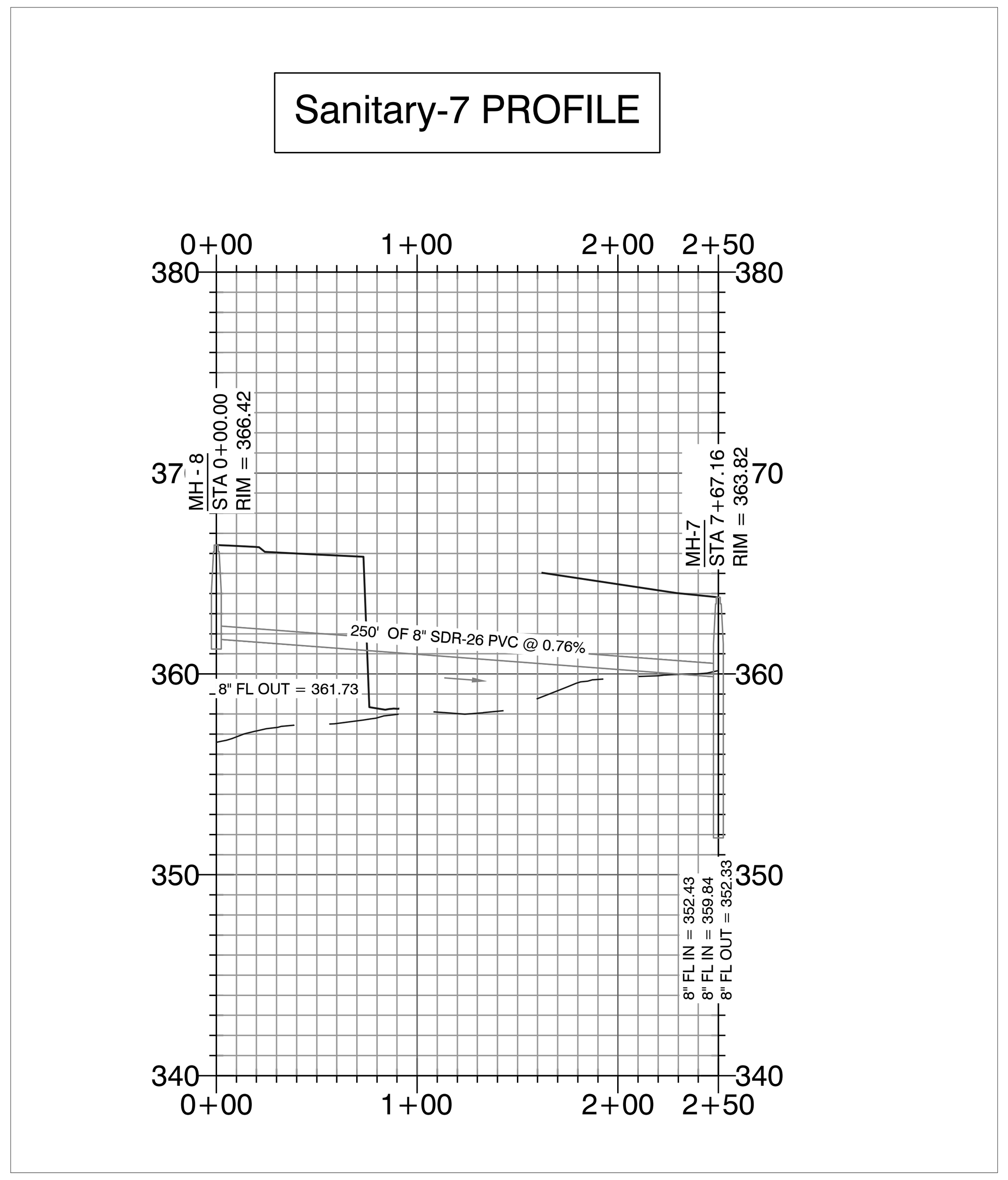

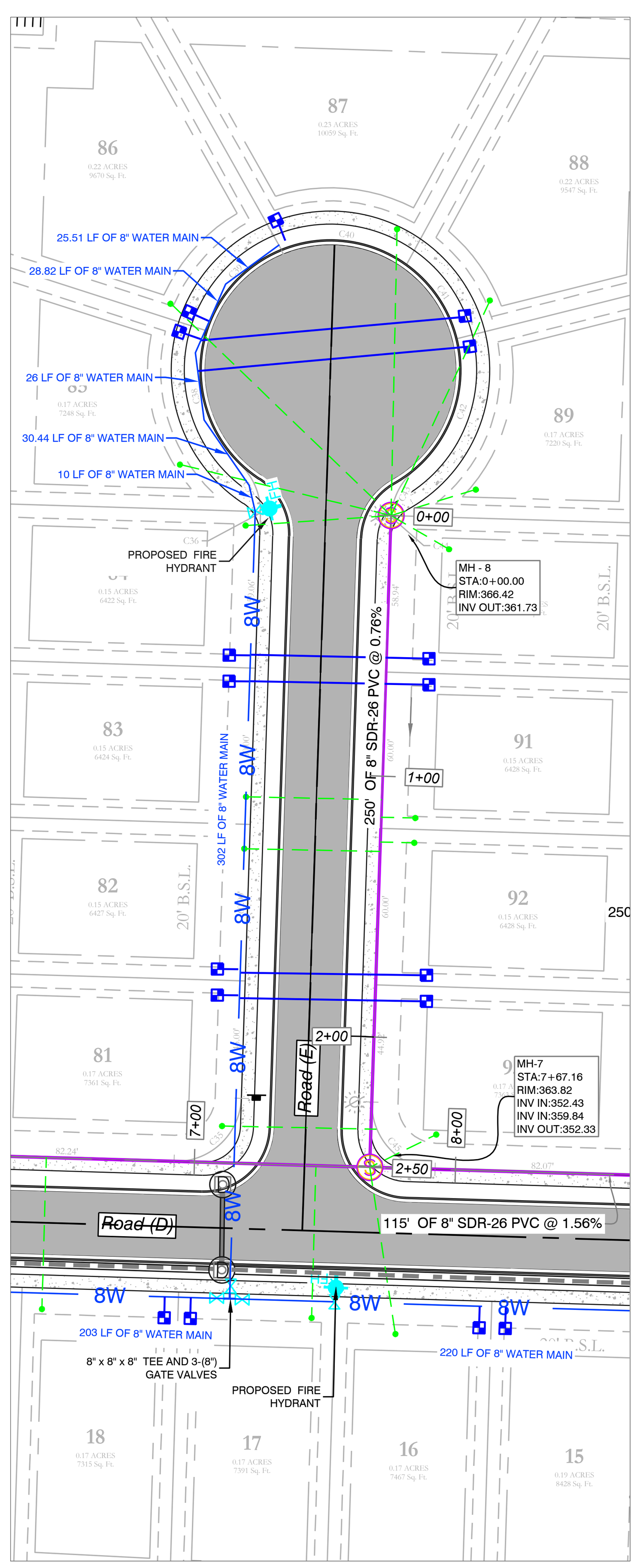

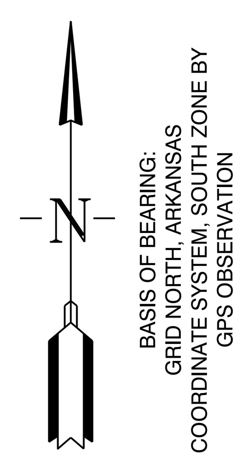

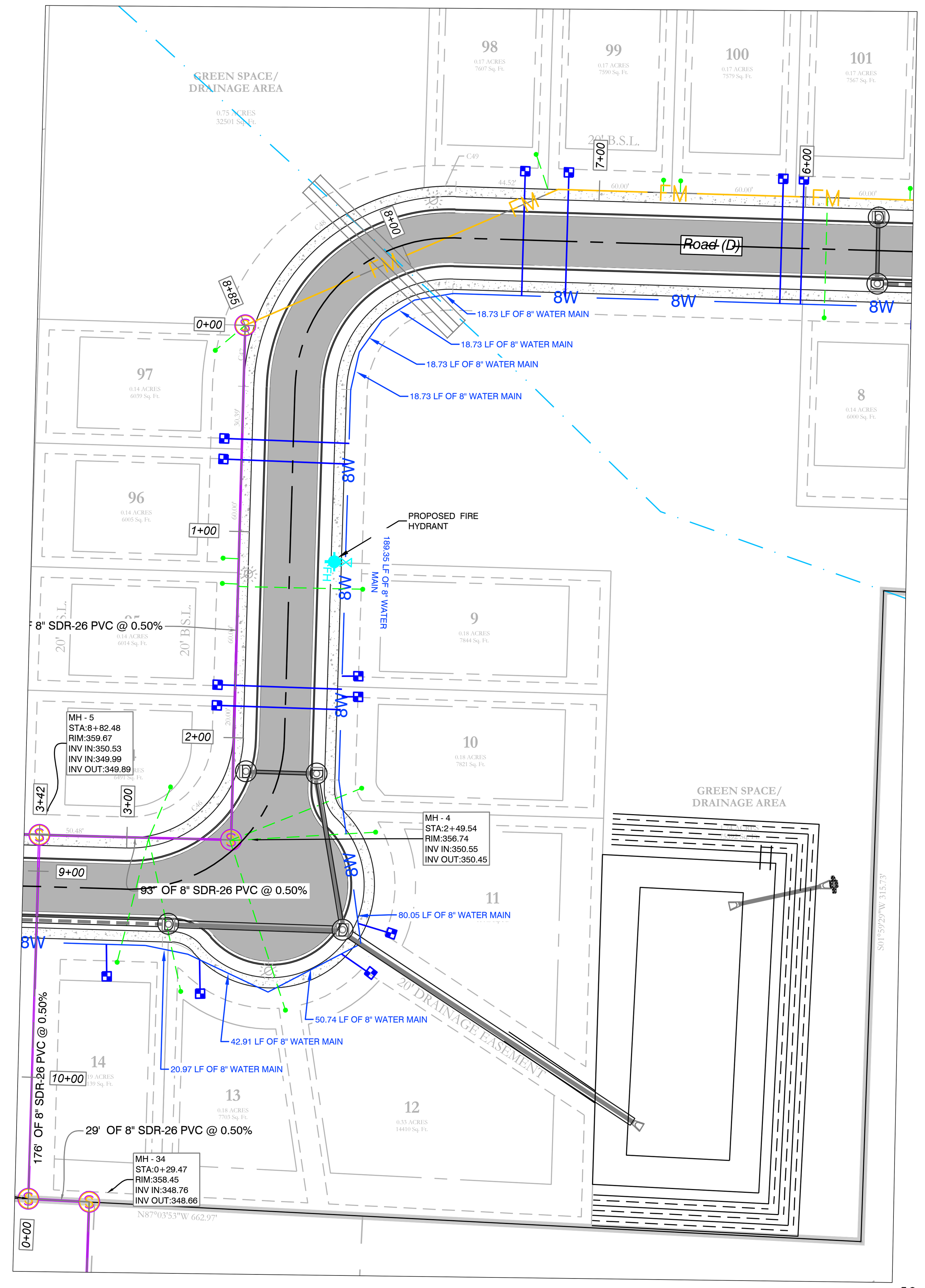

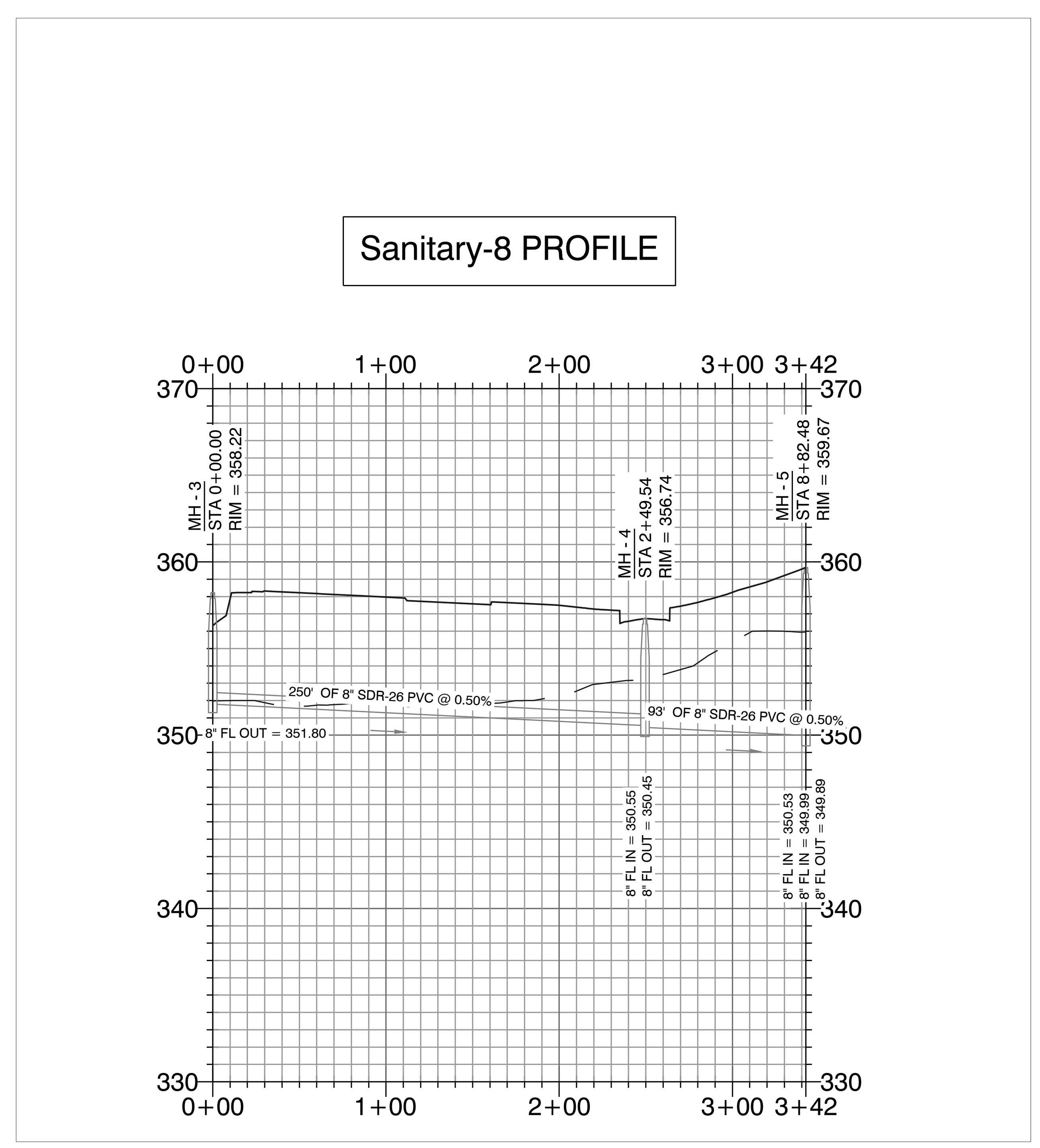

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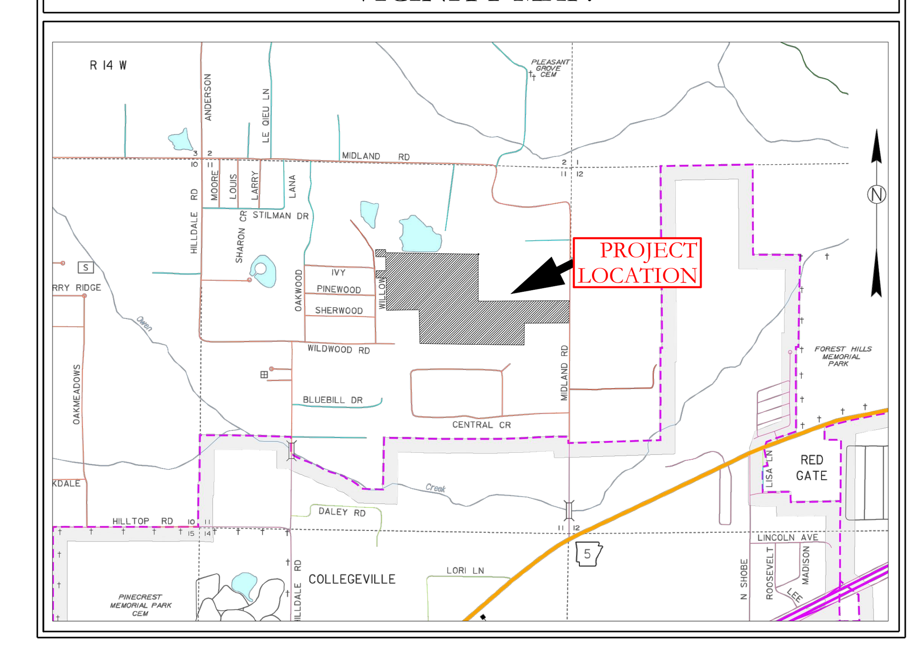

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HDPE

RCP

MIDLAND ROAD SUBDIVISION
SEWER PLAN & PROFILES

SEWER LEGEND:

SEWER SERVICE

SEWER MAIN

SEWER MANHOLE

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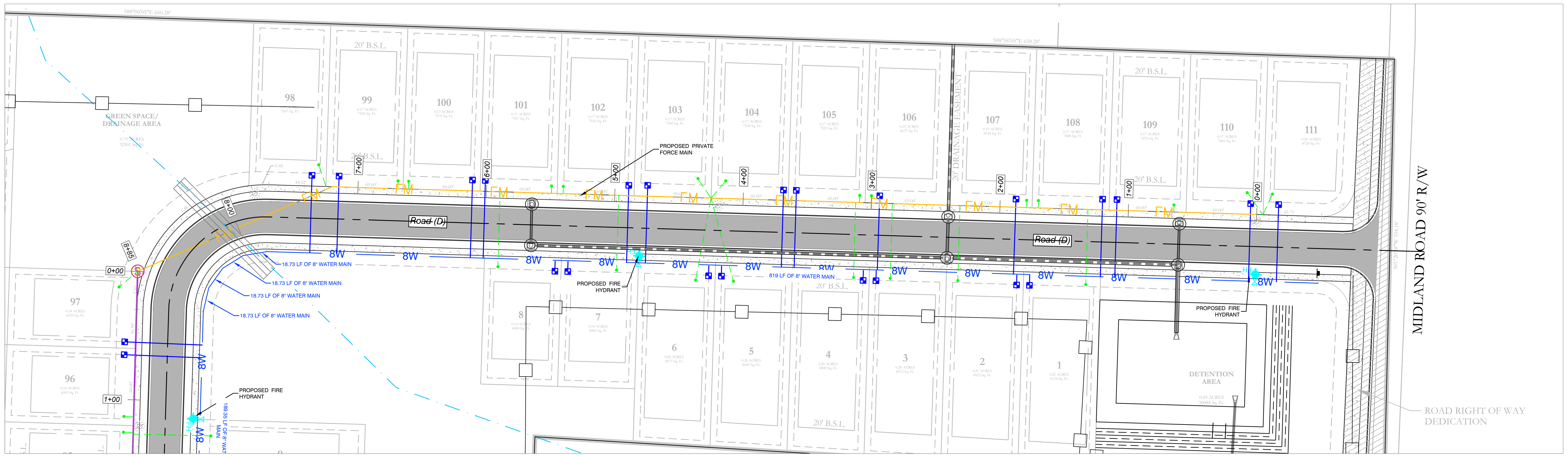
HDPE

RCP



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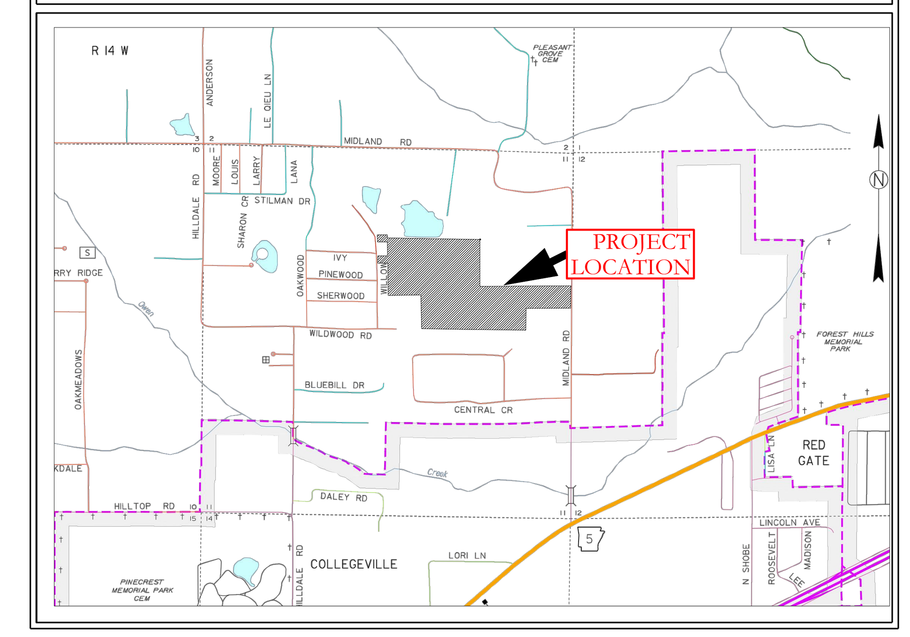
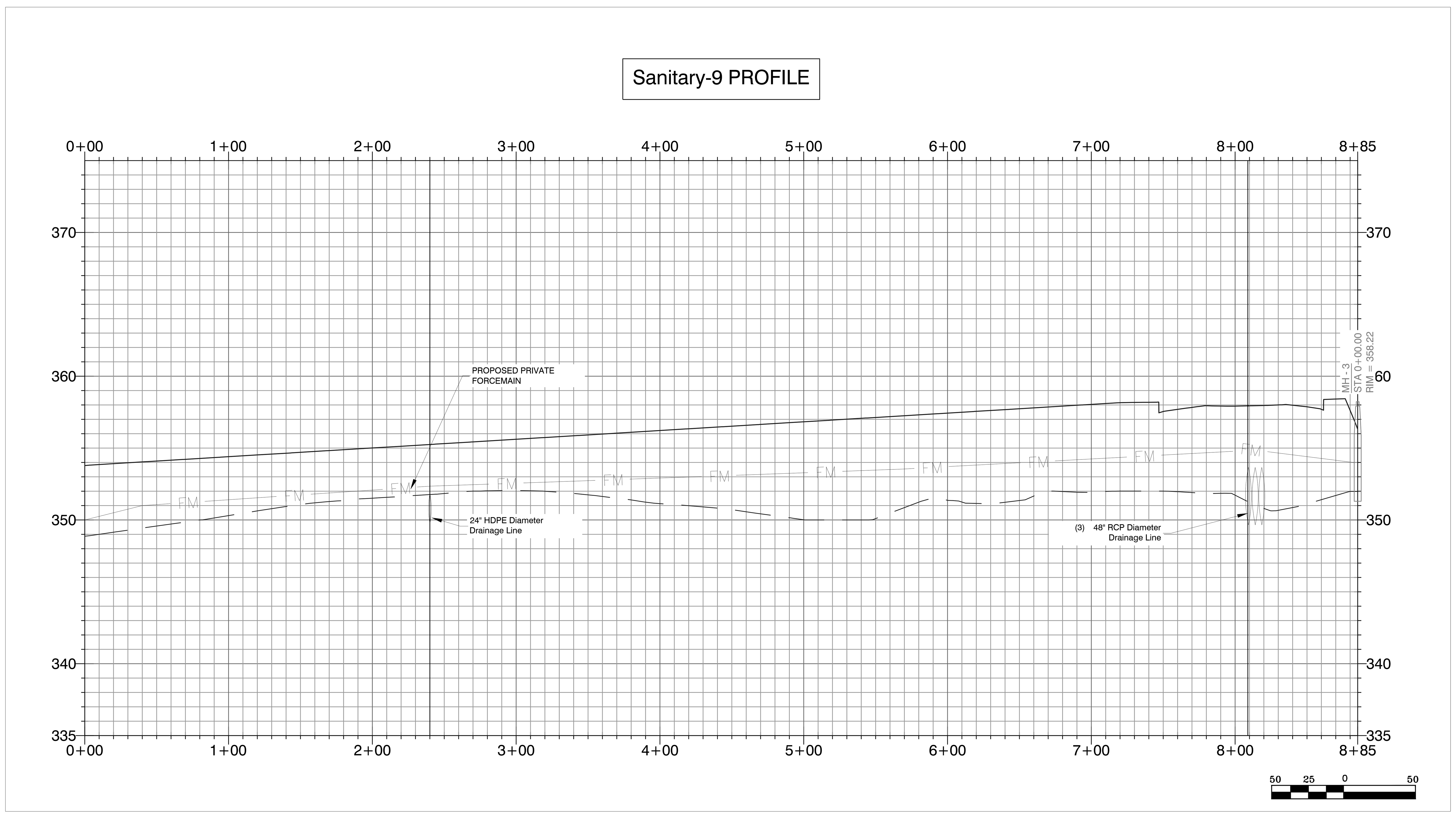
VICINITY MAP:





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N

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

Sanitary-9 Profile Note:

1. Sanitary-9 pipe network is operated by 2" SDR-21pipe force main.

SEWER LEGEND:

SEWER SERVICE

SEWER MAIN — SEWER MANHOLE

NOTE:
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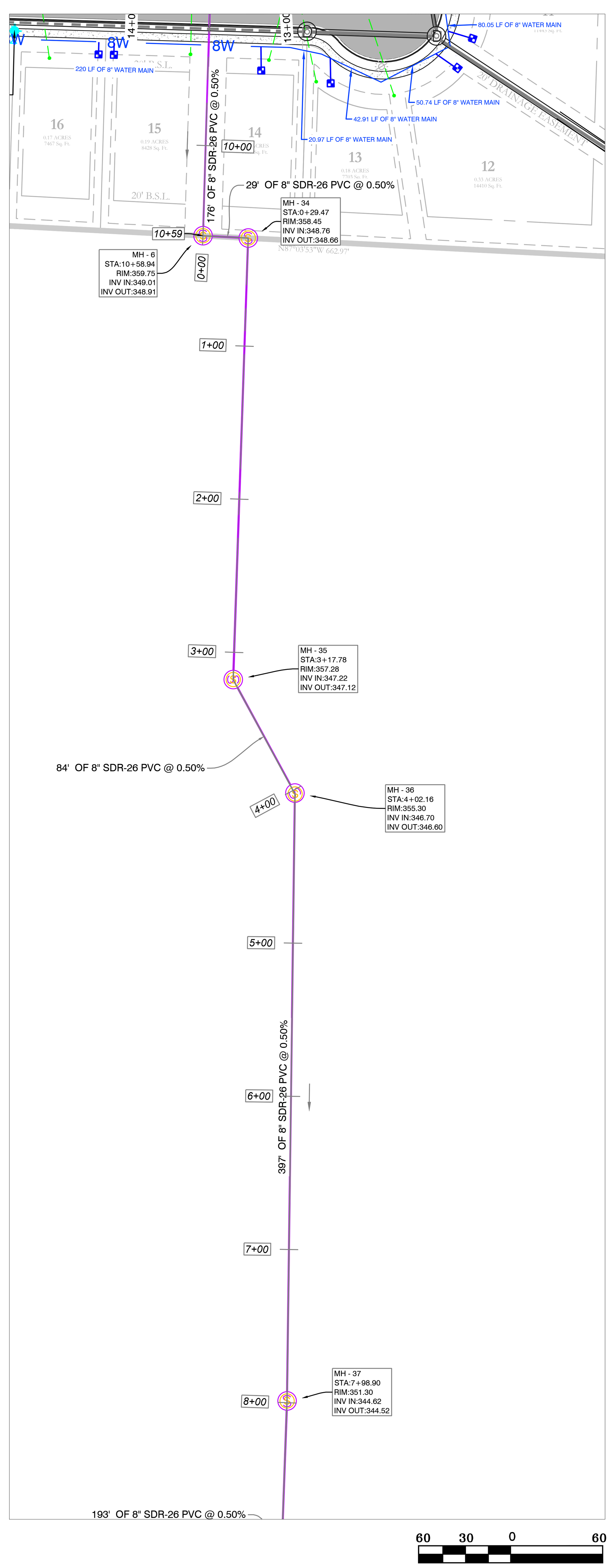

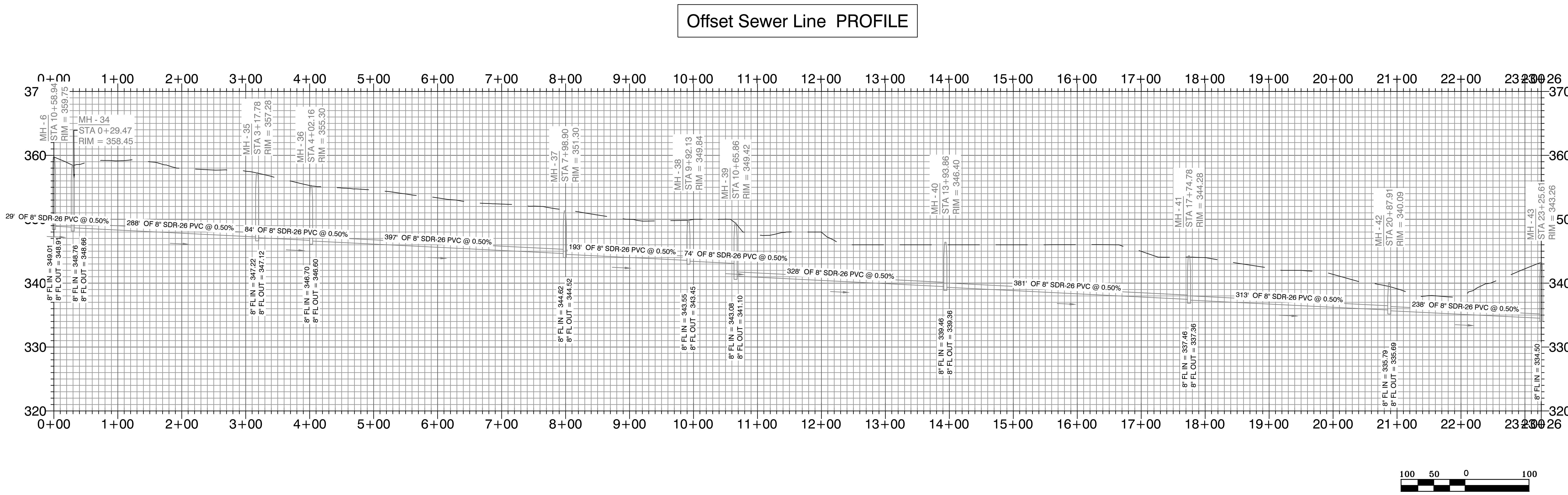

MIDLAND ROAD SUBDIVISION
SEWER PLAN & PROFILES

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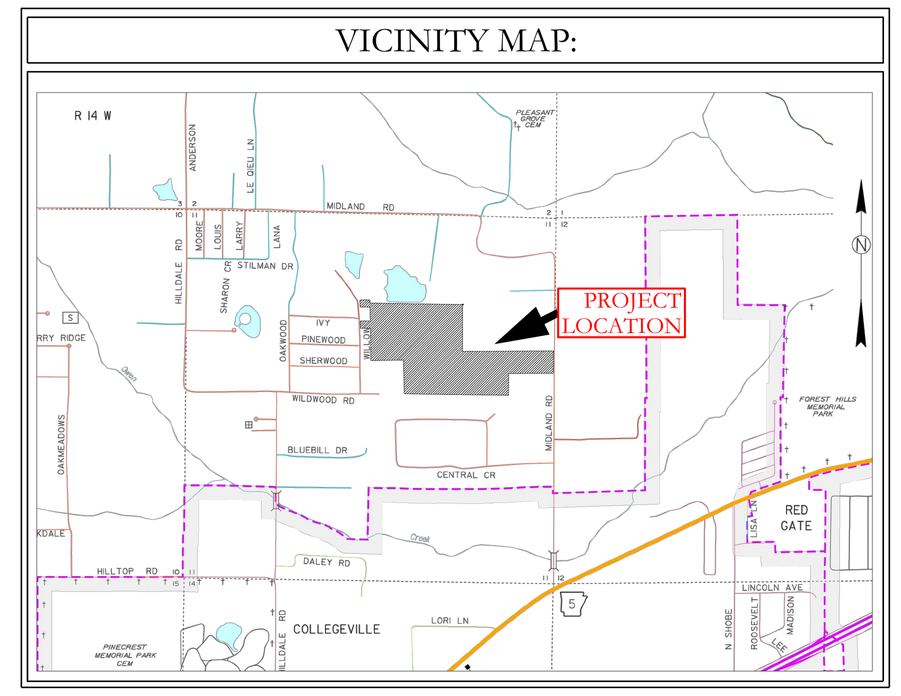
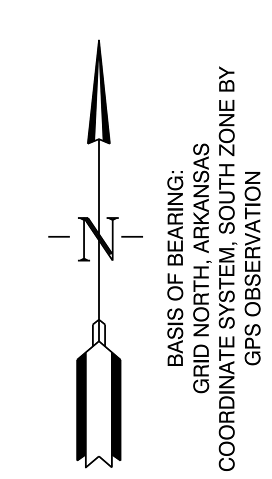
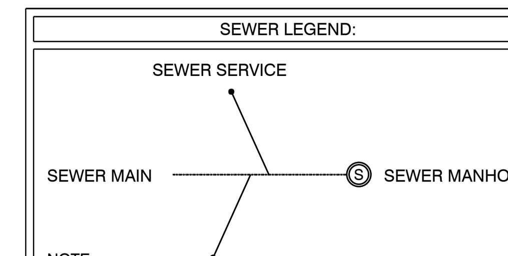




HDPE
RCP

SEWER LEGEND:



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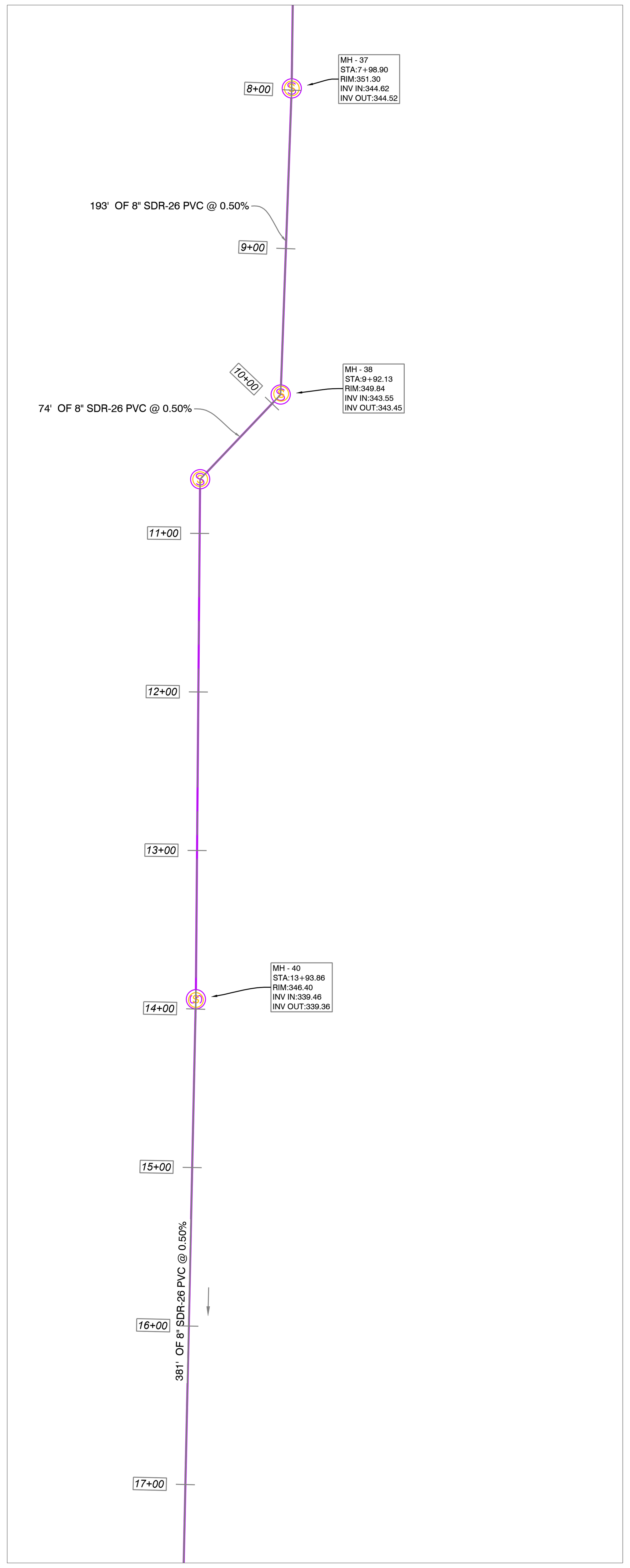

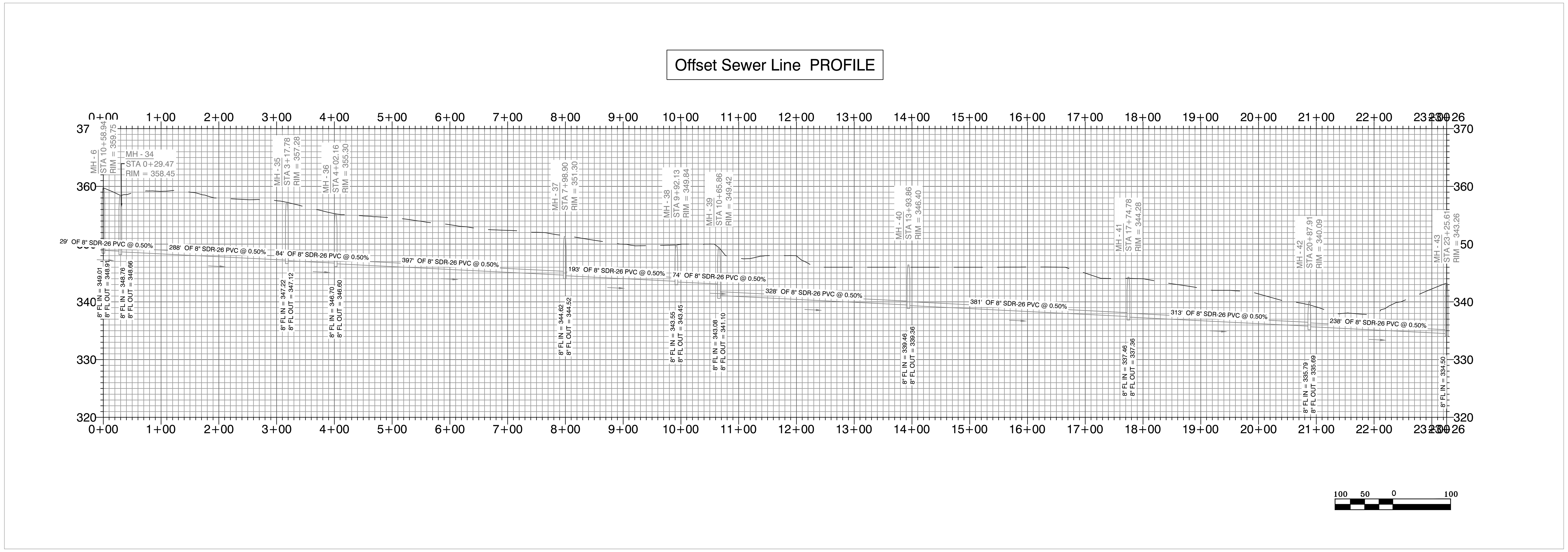

MIDLAND ROAD SUBDIVISION
SEWER PLAN & PROFILES

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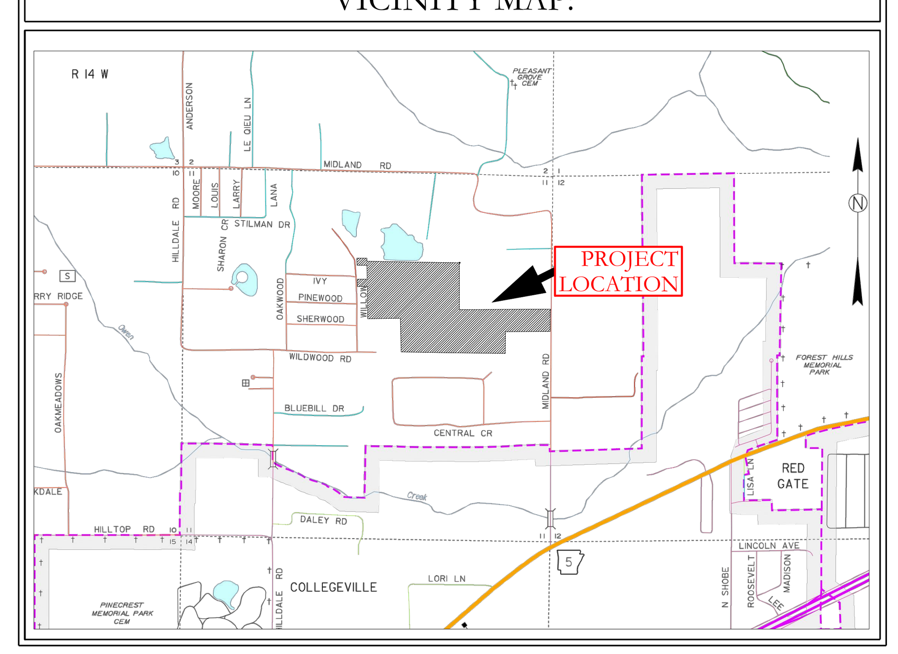

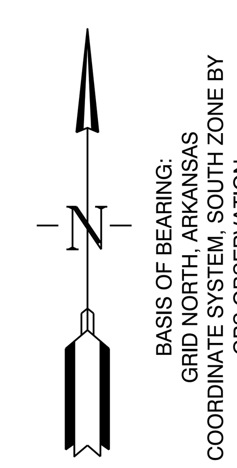

HDPE
RCP

SEWER LEGEND:

SEWER SERVICE
SEWER MAIN
SEWER MANHOLE

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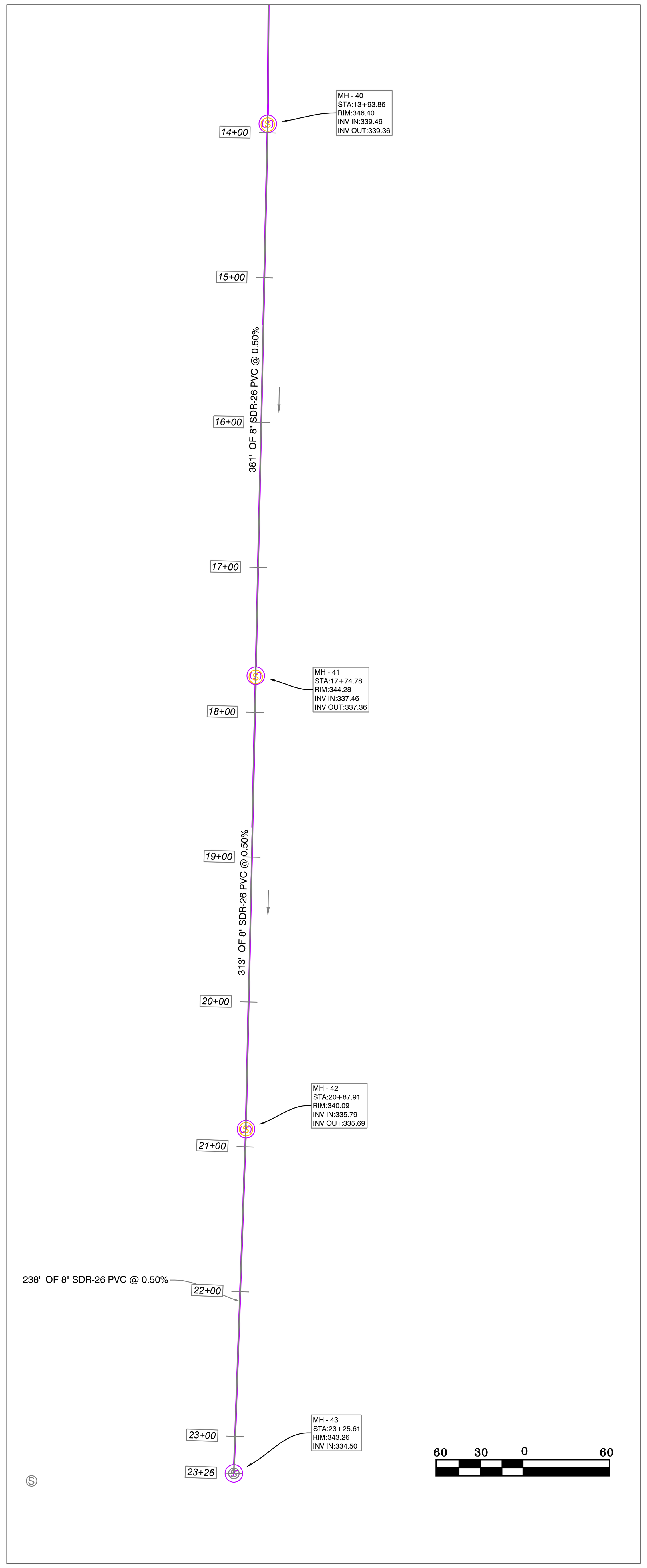

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SEWER CONSTRUCTION NOTES:

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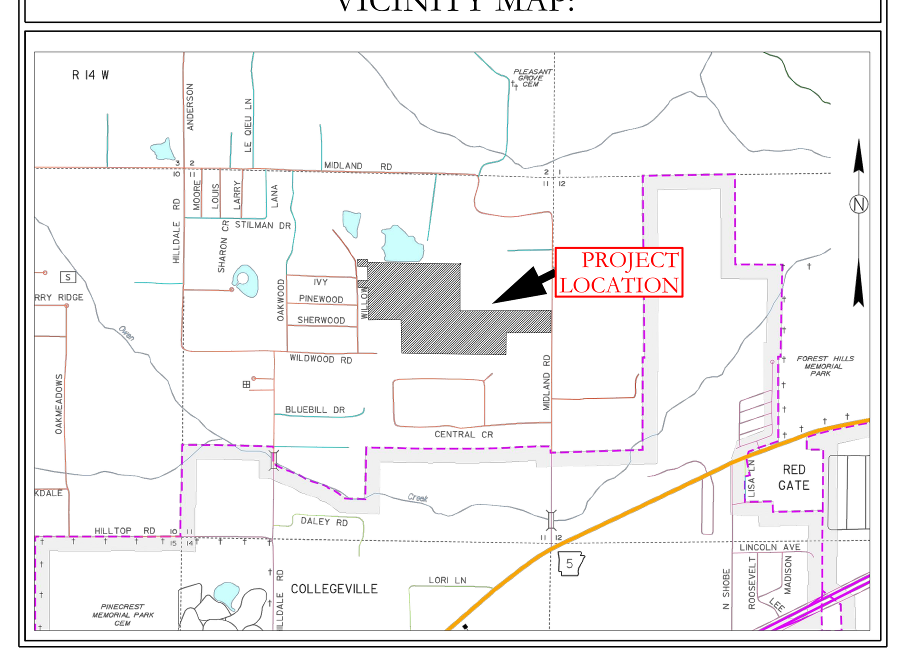
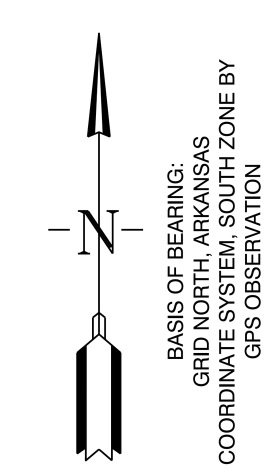
2. ALL SEWER LINES CROSSING UNDER ALL CONCRETE STORM DRAINS OR ANY STORM DRAIN 30-INCH DIAMETER AND LARGER, OR ALL STORM DRAINS WITH MULTIPLE PIPE RUNS, SHALL BE STEEL ENCASED A MINIMUM OF 5 FEET EITHER SIDE OF THE STORM DRAIN.
3. CASING SPACERS: SHALL BE STAINLESS STEEL, CASCADE MODEL CCS AS MANUFACTURED BY CASCADE WATER MFG. CO., OR APPROVED EQUAL.

VICINITY MAP:





HDPE
RCP

SEWER LEGEND:

SEWER SERVICE
SEWER MAIN
SEWER MANHOLE

NOTE:
USE SDR-26 PVC SEWER PIPE EXCEPT WHERE DUCTILE IRON PIPE REQUIRED FOR COVER. USE DUCTILE IRON PIPE WHERE 3' MINIMUM COVE CANNOT BE MAINTAINED.

CONTRACTOR IS RESPONSIBLE FOR LOCATING ALL BURIED UTILITIES PRIOR TO CONSTRUCTION.

WATER LEGEND:

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

HOPE CONSULTING
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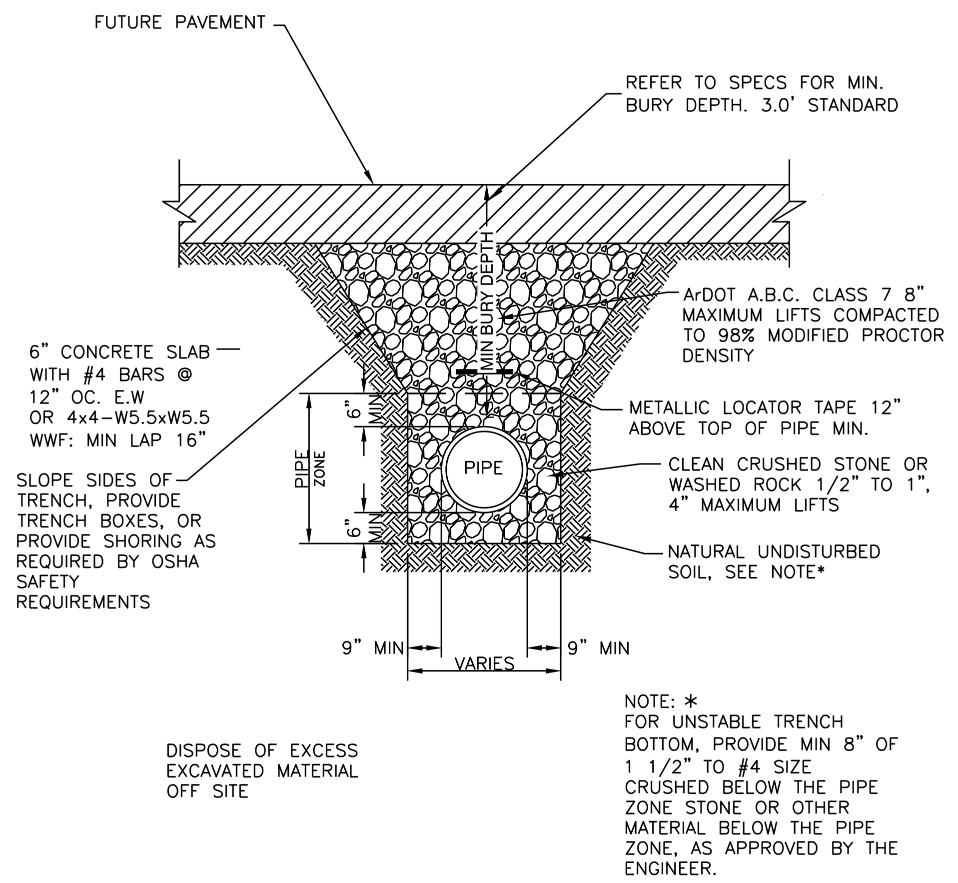
FOR USE AND BENEFIT OF:
HAVEN'S DEVELOPMENT, LLC

MIDLAND ROAD
SEWER PROFILES
BRYANT, SALINE COUNTY, ARKANSAS

DATE:	4/19/2023	C.A.D. BY:		DRAWING NUMBER:
REVISED:		CHECKED BY:		23-0024
SHEET:	C-3.11	SCALE:		

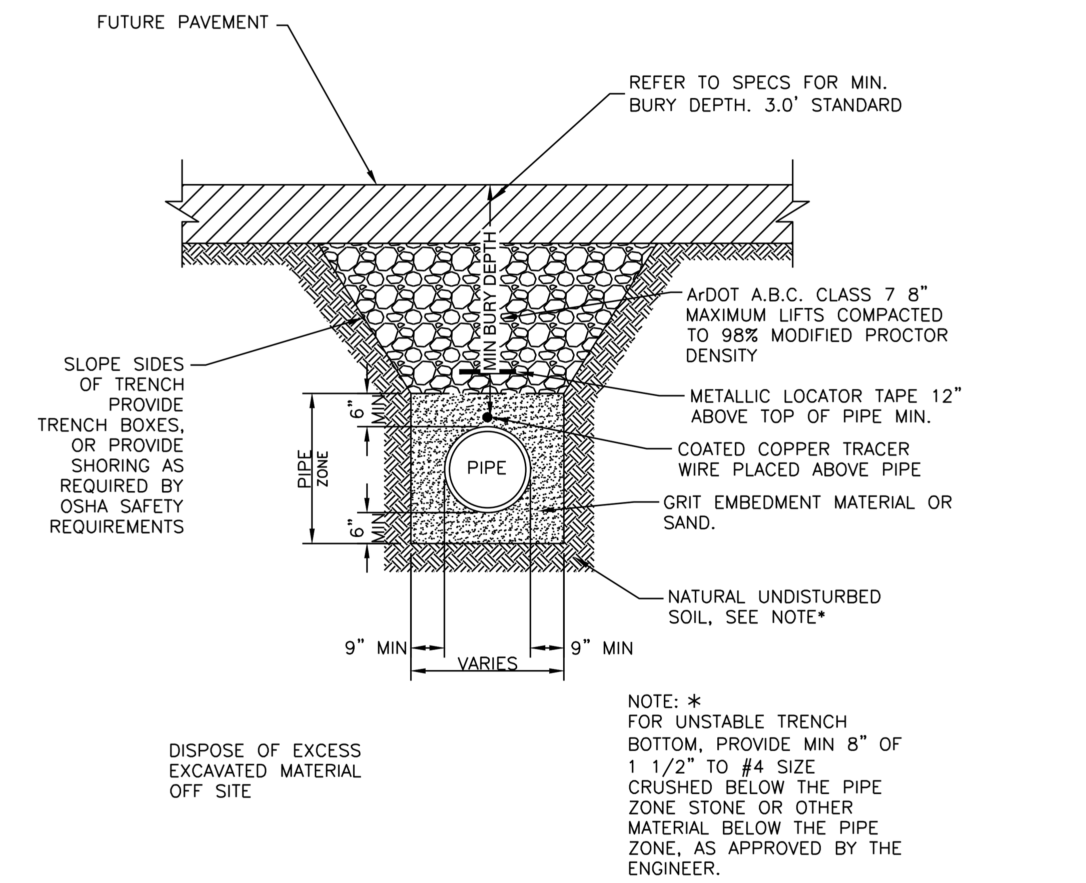
500	1S	15W	0	34	230	62	1807

K:\LAND PROJECTS 2004\SUBDIVISIONS\2023\23-0024 HAVENS MIDLAND ROAD SUBDIVISION S11 T1S R14W\CIVIL\DWG\23-0024 CONTRUCTION PLAN (FINAL DRAFT)(AFTER COMMENTS)(4-20-2023).DWG



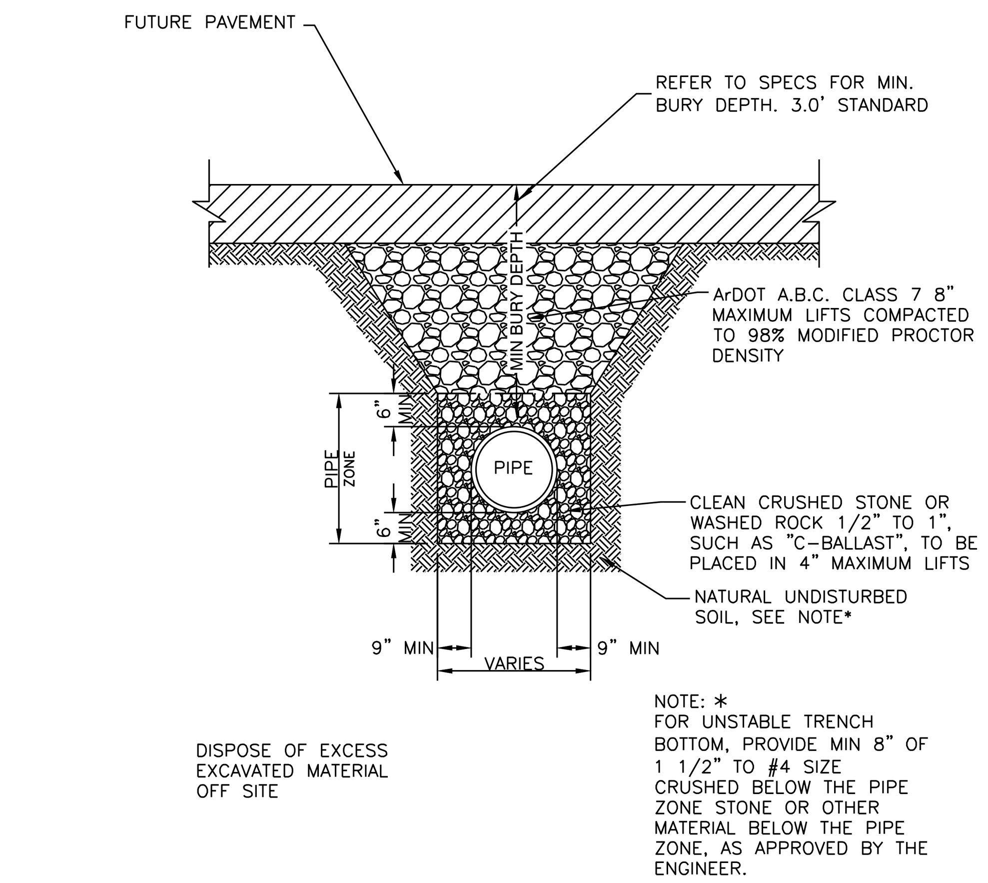
PVC SEWER TRENCH UNDER FUTURE ASPHALT STREET

N.T.S.



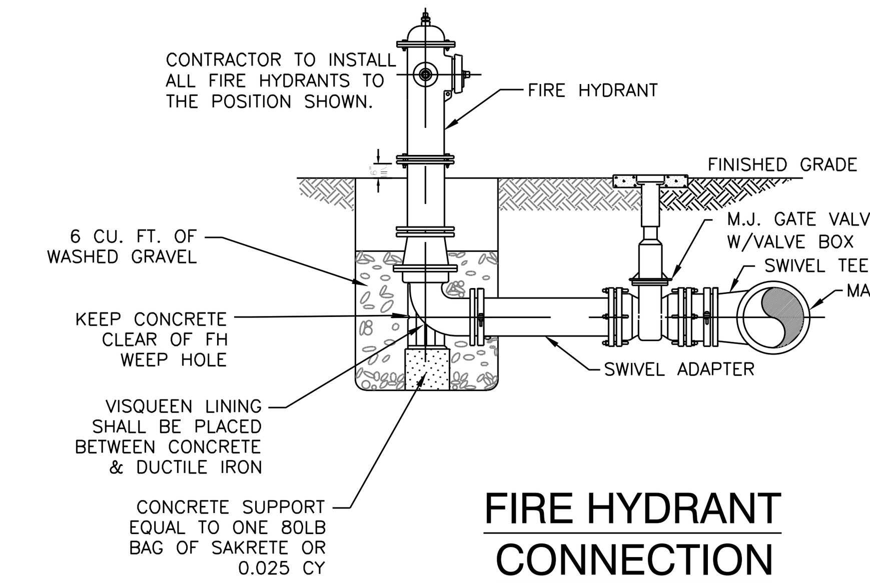
PVC WATER LINE TRENCH UNDER FUTURE ASPHALT STREET

N.T.S.



DRAINAGE PIPE TRENCH UNDER FUTURE ASPHALT STREET

N.T.S.

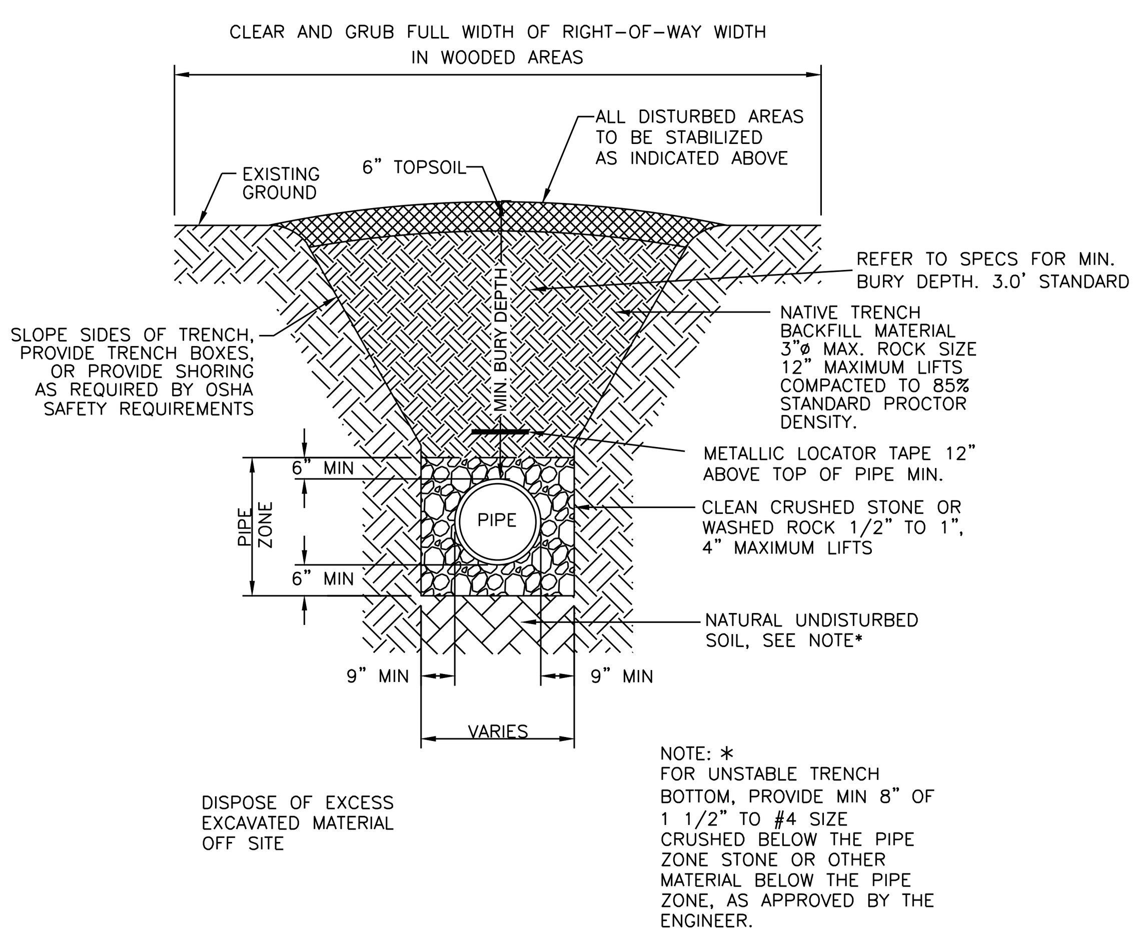


FIRE HYDRANT CONNECTION

NTS

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.

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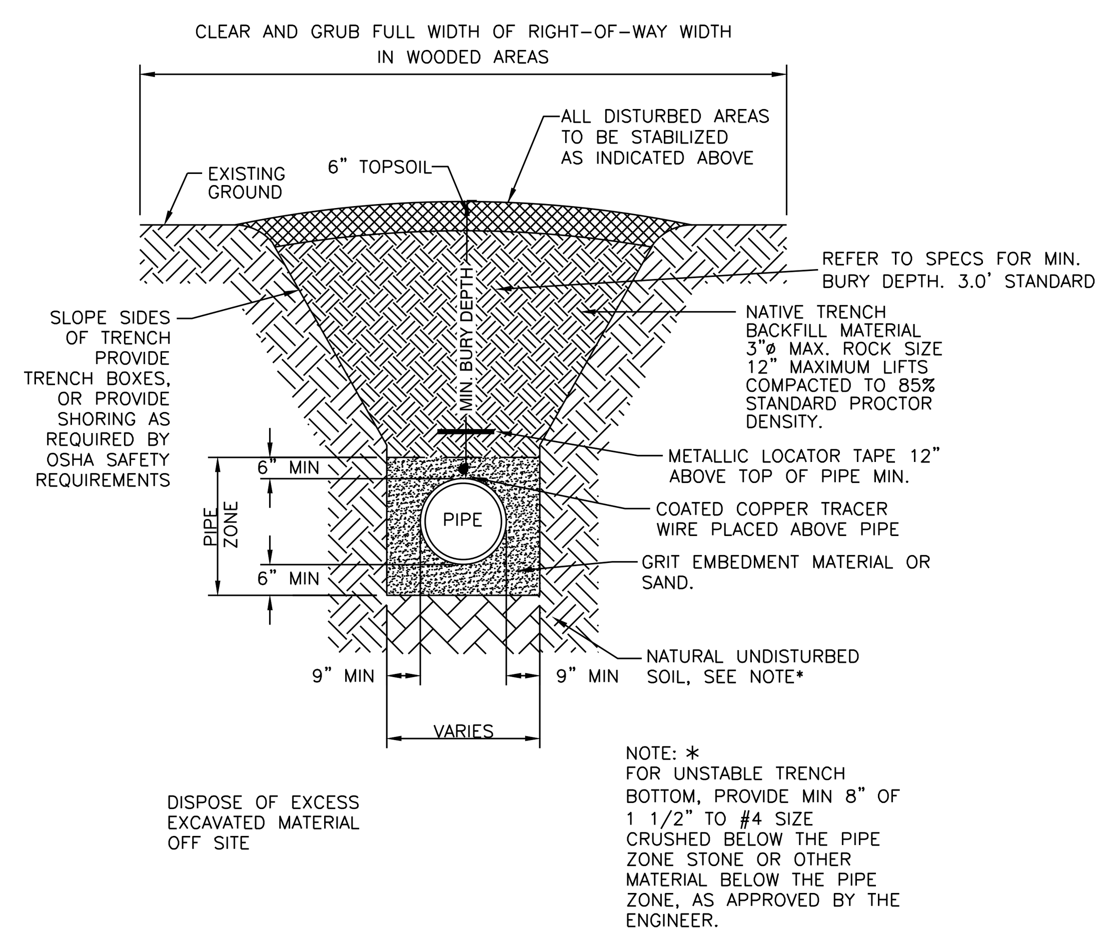

PVC WATER LINE TRENCH IN UNPAVED AREAS

N.T.S.

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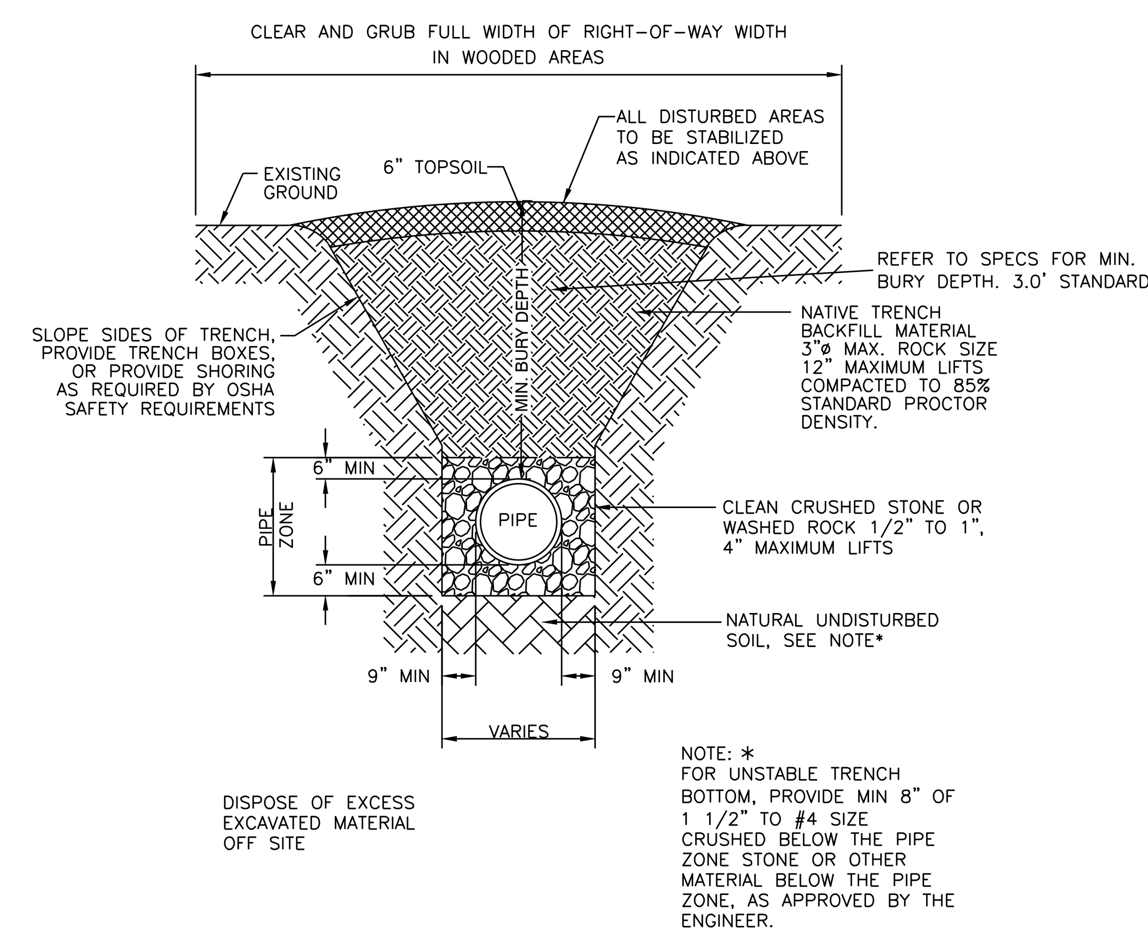
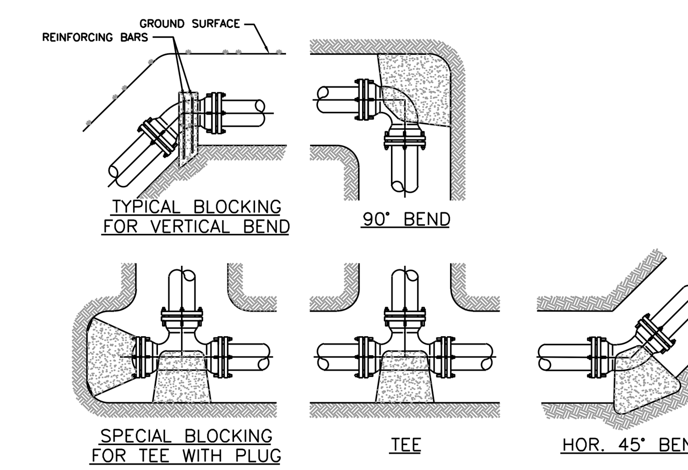


DRAINAGE PIPES IN UNPAVED AREAS

N.T.S.



TYPICAL BLOCKING DETAILS

N.T.S.

VOLUME OF THRUST BLOCK IN CUBIC YARDS (VERTICAL BENDS) FOR 150 P.S.I. TEST PRESSURE			
FITTING SIZE	BEND ANGLE		
	45°	22 1/2°	11 1/4°
4	0.4	0.2	0.1
6	0.8	0.4	0.2
8	1.4	0.7	0.4
10	2.2	1.1	0.6
12	3.2	1.6	0.8
14	4.4	2.2	1.1
16	5.7	2.9	1.5
18	7.2	3.7	1.8
20	8.9	4.5	2.3
24	12.8	6.5	3.3

BEARING AREA OF THRUST BLOCKS IN SQ. FT (HORIZONTAL BENDS) FOR 150 P.S.I. TEST PRESSURE							
FITTING SIZE	TEE, WYE, PLUG,OR CAP	90° BEND, PLUGGED CROSS	TEE PLUGGED ON RUN		BEND ANGLE		
			A_1	A_2	45°	22 1/2°	11 1/4°
4	1.0	1.4	1.0	1.4	1.0	–	–
6	2.1	3.0	2.1	3.0	1.6	1.0	–
8	3.8	5.3	3.8	5.4	2.9	1.5	1.0
10	5.9	8.4	5.9	8.4	4.6	2.4	1.2
12	8.5	12.0	8.5	12.0	6.6	3.4	1.7
14	11.5	16.3	11.5	16.3	8.9	4.6	2.3
16	15.0	21.3	15.0	21.3	11.6	6.0	3.0
18	19.0	27.0	19.0	27.0	14.6	7.6	3.8
20	23.5	33.3	23.5	33.3	18.1	9.4	4.7
24	34.0	48.0	34.0	48.0	26.2	13.6	6.8

VOLUME OF THRUST BLOCK IN CUBIC YARDS (VERTICAL BENDS) FOR 150 P.S.I. TEST PRESSURE			
FITTING SIZE	BEND ANGLE		
	45°	22 1/2°	11 1/4°
4	0.4	0.2	0.1
6	0.8	0.4	0.2
8	1.4	0.7	0.4
10	2.2	1.1	0.6
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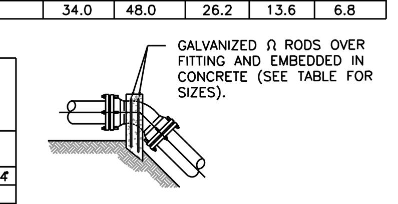


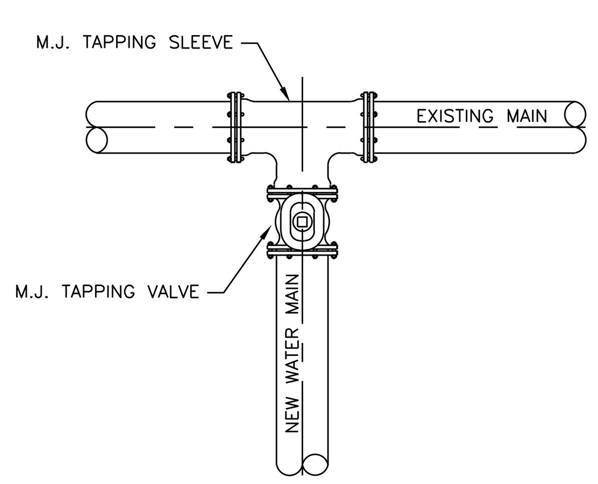
FITTING SIZES	ROD SIZES	EMBEDMENT
12" AND LESS	#6'S	30"
14" – 24"	#8's	36"

THRUST BLOCK NOTES:

1. KEEP CONCRETE CLEAR OF JOINT ACCESSORIES.
2. CONCRETE THRUST BLOCKING SHALL BE POURED AGAINST UNDISTURBED EARTH.
3. REQUIRED VOLUMES OF BEARING AREAS AT FITTINGS SHALL BE AS INDICATED IN THE TABLES PROVIDED AND ADJUSTED, IF NECESSARY, TO CONFORM TO THE TEST PRESSURE(S) STATED IN THE SPECIFICATIONS. AND ALLOWABLE SOIL BEARING STRESS(ES) STATED IN THE SPECIFICATIONS.
4. THRUST BLOCK VOLUMES FOR VERTICAL BENDS HAVING UPWARD RESULTANT THRUSTS ARE BASED ON TEST PRESSURE OF 150 PSIG AND THE WEIGHT OF CONCRETE (4,050 LB/CY). TO COMPUTE VOLUMES FOR DIFFERENT TEST PRESSURES, USE THE FOLLOWING EQUATION: VOLUME = (TEST PRESSURE / 150) X (TABLE VALUE).
5. BEARING AREAS FOR HORIZONTAL BEND THRUST BLOCKS ARE BASED ON TEST PRESSURE OF 150 PSIG AND AN ALLOWABLE SOIL BEARING STRESS OF 2,000 LB/SF TO COMPUTE BEARING STRESSES, USE THE FOLLOWING EQUATION: BEARING AREA – (TEST PRESSURE / 150) X (2,000 / SOIL BEARING STRESS) X (TABLE VALUE).
6. THRUST BLOCKS FOR VERTICAL BENDS HAVING DOWNWARD RESULTANT THRUST SHALL BE THE SAME AS FOR HORIZONTAL BENDS.
7. BEARING AREAS, VOLUMES, AND SPECIAL BLOCKING DETAILS SHOWN ON PLANS TAKE PRECEDENCE OVER THIS STANDARD.
8. BEARING AREA OF THRUST BLOCK SHALL NOT BE LESS THAN 1.0 SF.
9. VERTICAL BENDS THAT REQUIRE A THRUST BLOCK VOLUME EXCEEDING 5 CY REQUIRE SPECIAL BLOCKING DETAILS. SEE PLANS.

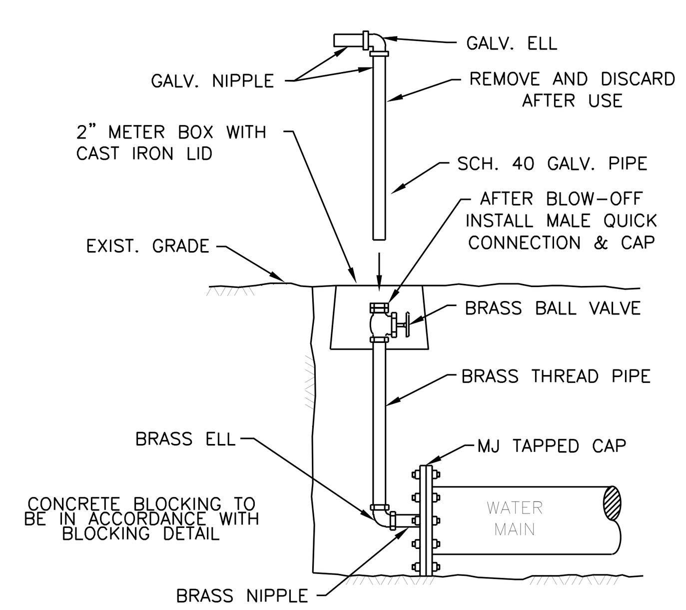
TYPICAL BLOCKING DETAILS

N.T.S.



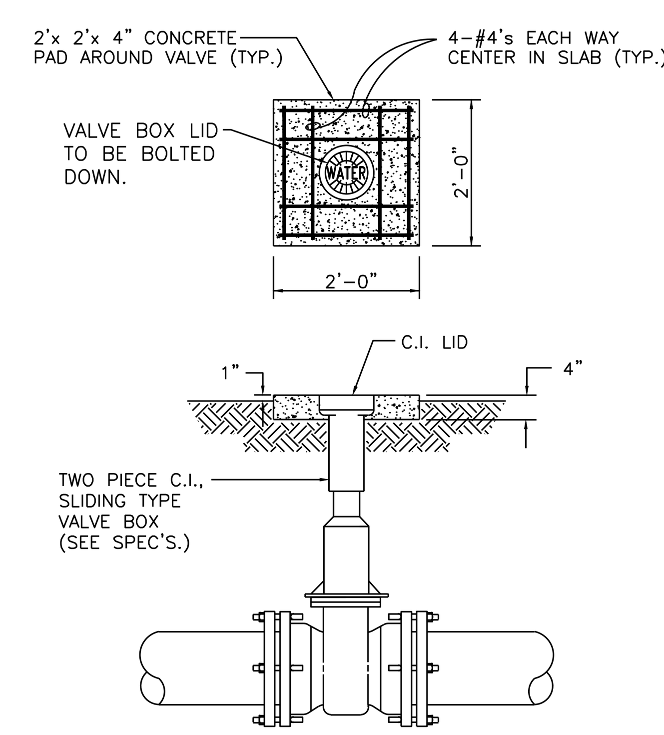
WATER MAIN CONNECTION DETAIL

N.T.S.



2" BLOW-OFF RISER

N.T.S.



DETAIL-VALVE BOX

N.T.S.

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129 North Main Street,
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www.hopeconsulting.com

FOR USE AND BENEFIT OF:
HAVEN'S DEVELOPMENT, LLC

MIDLAND ROAD
TRENCH DETAILS
BRYANT, SALINE COUNTY, ARKANSAS

DATE:	4/19/2023	C.A.D. BY:		DRAWING NUMBER:
REVISED:		CHECKED BY:		23-0024
SHEET:	C-4.0	SCALE:		

500	1S	15W	0	34	230	62	1807

K:\LAND PROJECTS 2004\SUBDIVISIONS\2023\23-0024 HAVENS MIDLAND ROAD SUBDIVISION S11 T1S R14W\CIVIL\DWG\23-0024 CONSTRUCTION PLAN (FINAL DRAFT)(AFTER COMMENTS)(4-20-2023).DWG

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.

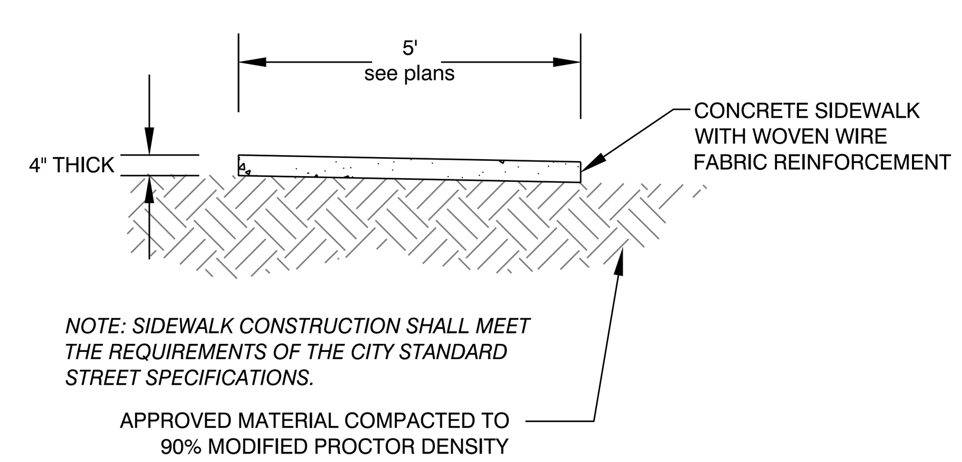
Subgrade

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.

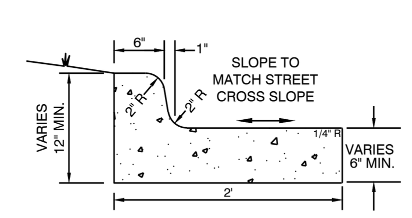
QUALITY CONTROL TESTING AND INSPECTIONS

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:
HAVEN'S DEVELOPMENT, LLC

MIDLAND ROAD
CIVIL SPECS
BRYANT, SALINE COUNTY, ARKANSAS

DATE: 4/19/2023	C.A.D. BY:	DRAWING NUMBER:
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SHEET: C-5.0	SCALE:	

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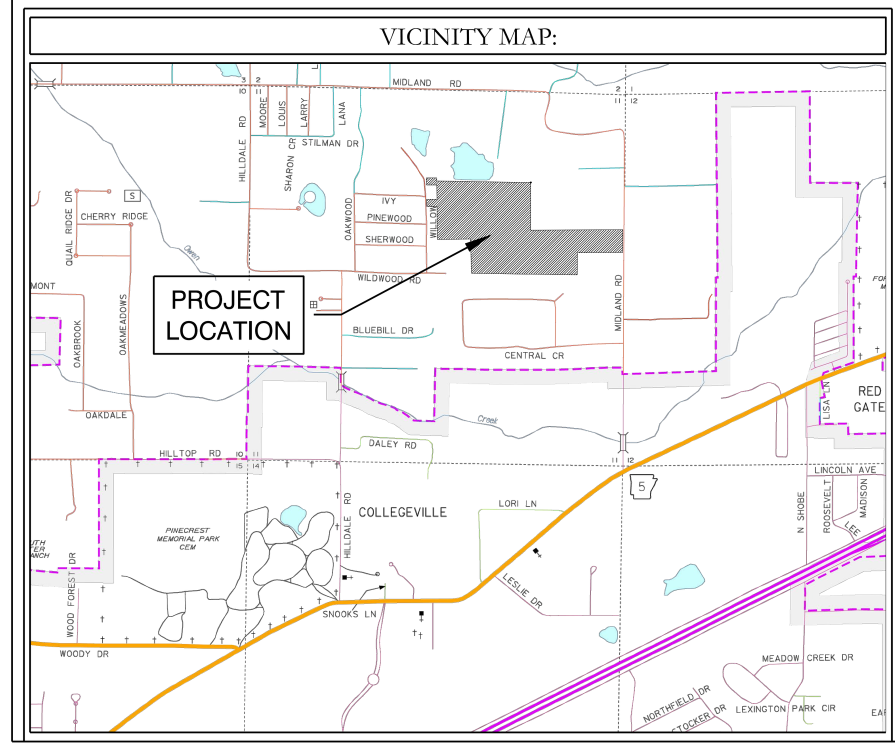
K:\LAND PROJECTS 2004\SUBDIVISIONS\2023\23-0024 HAVENS MIDLAND ROAD SUBDIVISION S11 T1S R14W\CIVIL\DWG\23-0024 CONTRUCTION PLAN (FINAL DRAFT)(AFTER COMMENTS)(4-20-2023).DWG

VICINITY MAP:



DRAINAGE NOTES

No fences, pools or permanent obstructions may be placed in any access or drainage easements.

Dead Storage of pond will be used as a sediment pond at the time of construction later it will remain as a water feature.

Filter fabric shall be placed under all riprap areas.

All drainage ditches and swales that are not concreted will be required to be stabilized with solid sod stabilization per the Stormwater Management Manual.

Any new drainage ditches or swales, new or that have been disturbed during construction are required to have solid sod stabilization per Section 500.7.2 of the Stormwater management Manual. (This is required to be show in detail on the plans).

HDPE

RCP

MIDLAND ROAD SUBDIVISION
DRAINAGE PLAN

N

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

50 25 0 50

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FOR USE AND BENEFIT OF:

HAVEN'S DEVELOPMENT, LLC

MIDLAND ROAD
DRAINAGE PLAN
IN THE CITY OF BRYANT, SALINE COUNTY, ARKANSAS

DATE:	4/19/2023	C.A.D. BY:		DRAWING NUMBER:	
REVISED:		CHECKED BY:		23-0024	
SHEET:	C-6.0	SCALE:	1" = 50'		
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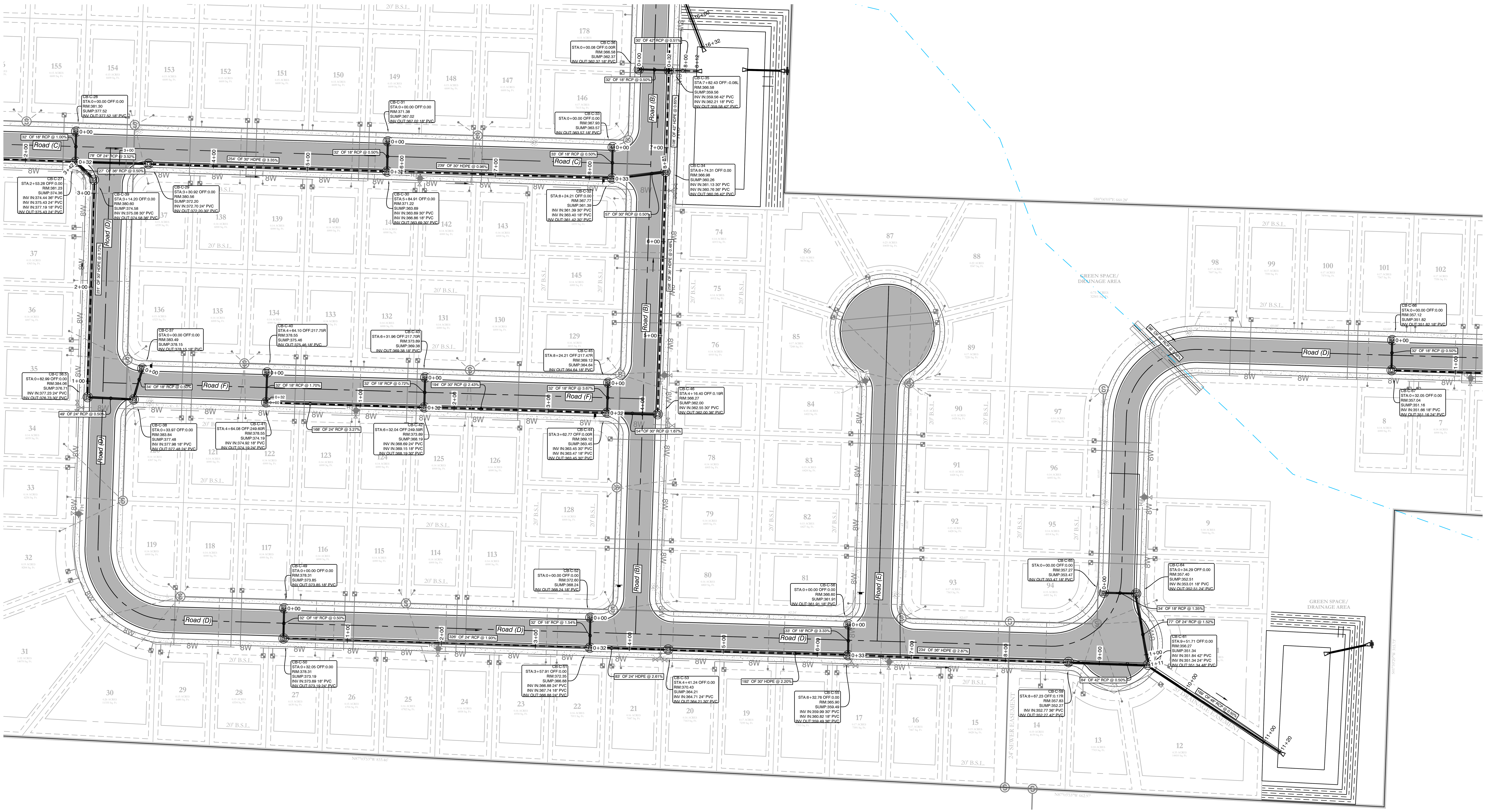

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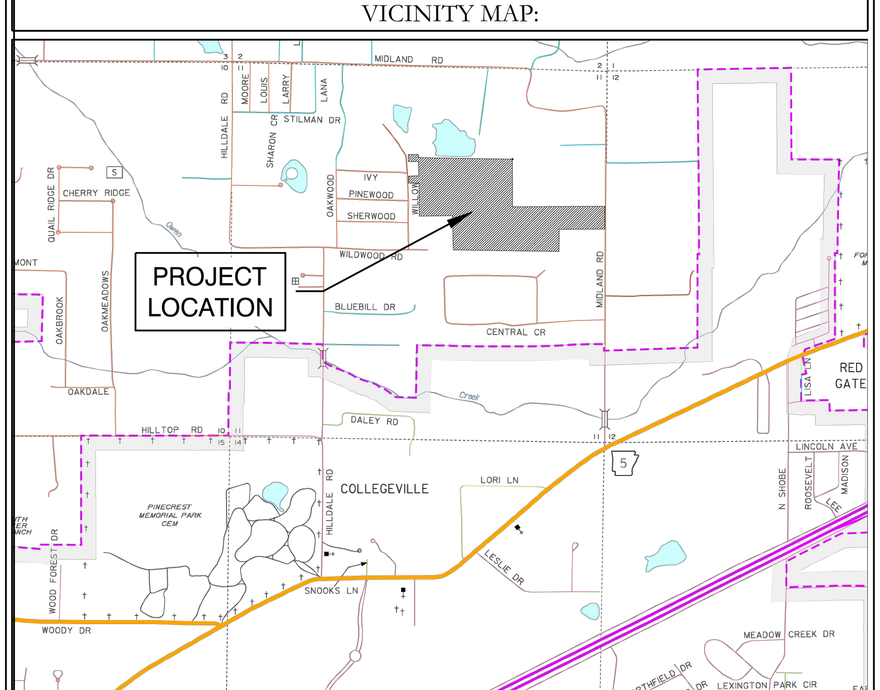

MIDLAND ROAD SUBDIVISION
DRAINAGE PLAN

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

50 25 0 50

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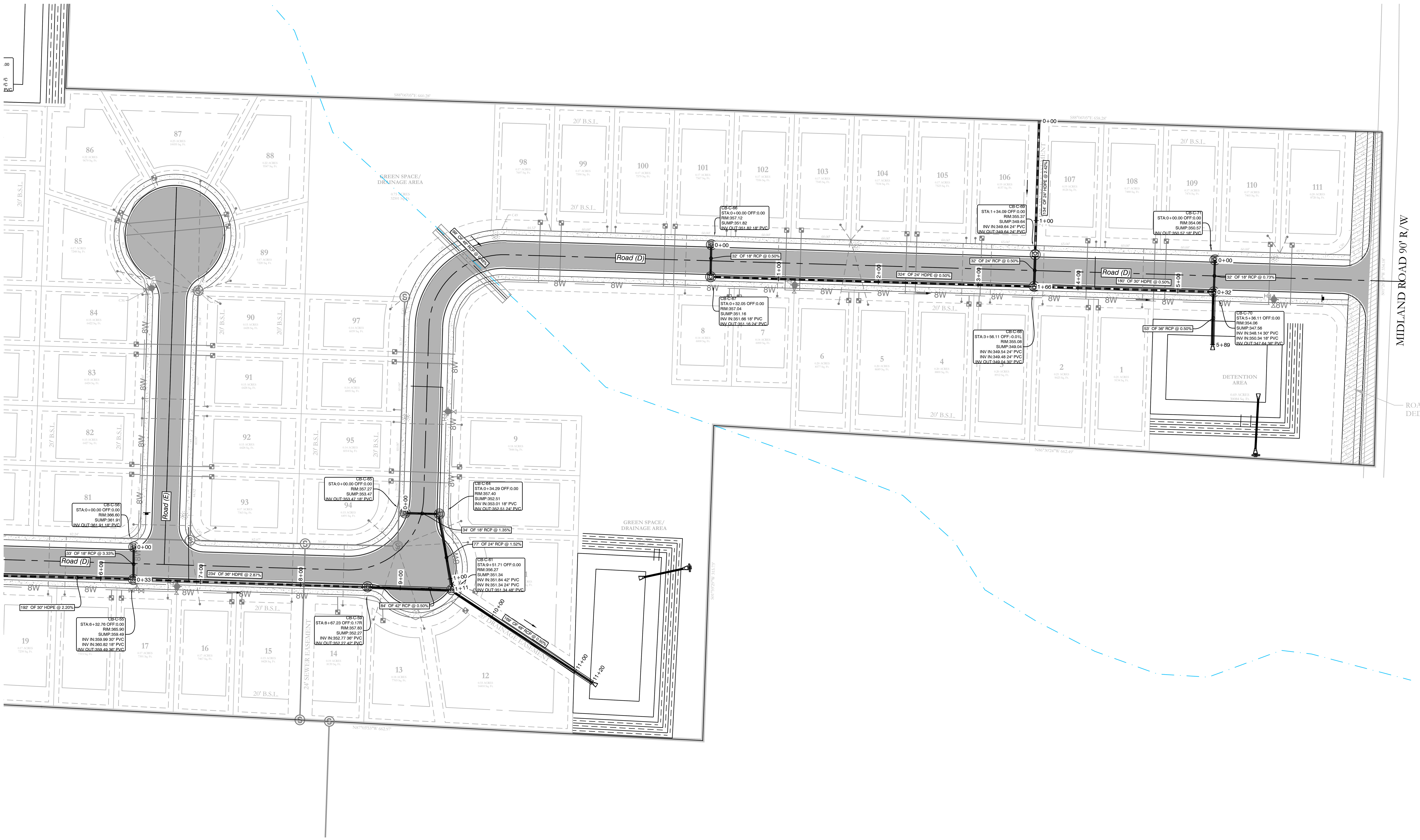
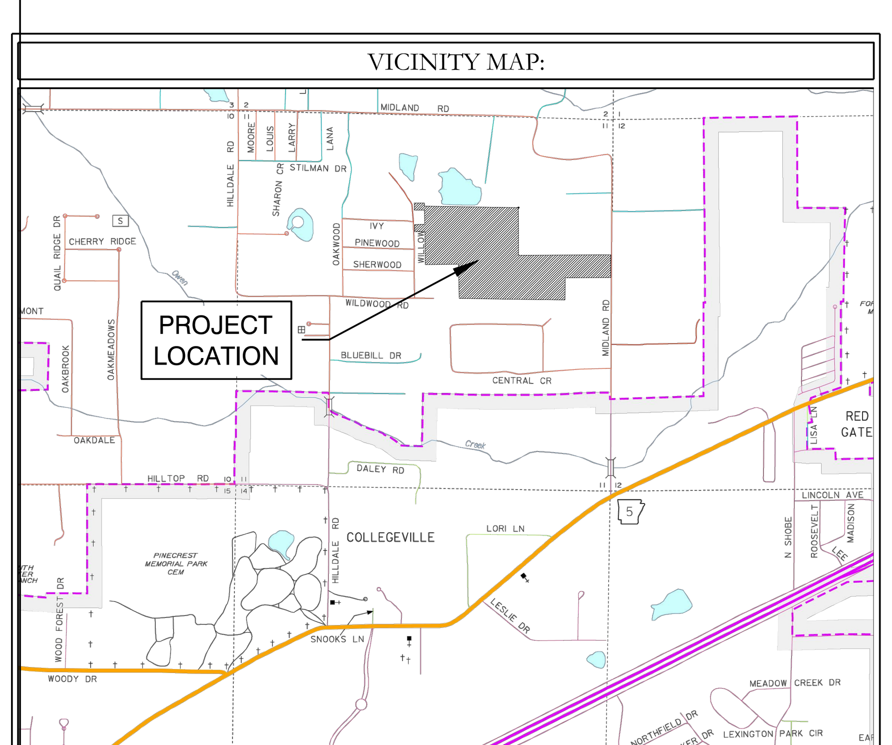
500		0		





DRAINAGE NOTES

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HDPE

RCP

MIDLAND ROAD SUBDIVISION
DRAINAGE PLAN

N

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

50 25 0 50

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FOR USE AND BENEFIT OF:

HAVEN'S DEVELOPMENT, LLC

MIDLAND ROAD
DRAINAGE PLAN
IN THE CITY OF BRYANT, SALINE COUNTY, ARKANSAS

DATE: 4/19/2023	C.A.D. BY:	DRAWING NUMBER:	
REVISED:	CHECKED BY:	23-0024	
SHEET: C-6.2	SCALE: 1" = 50'		
500	0		

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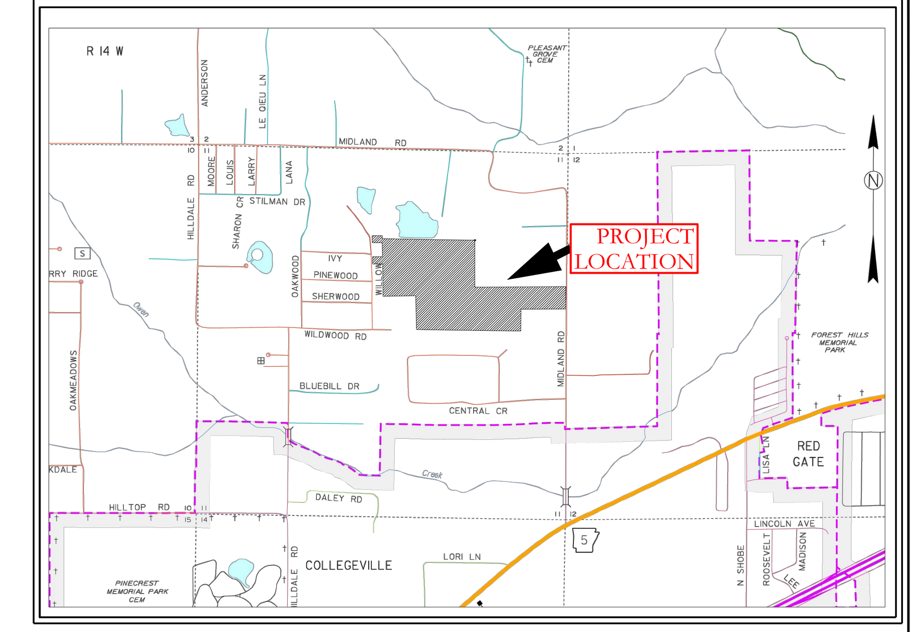
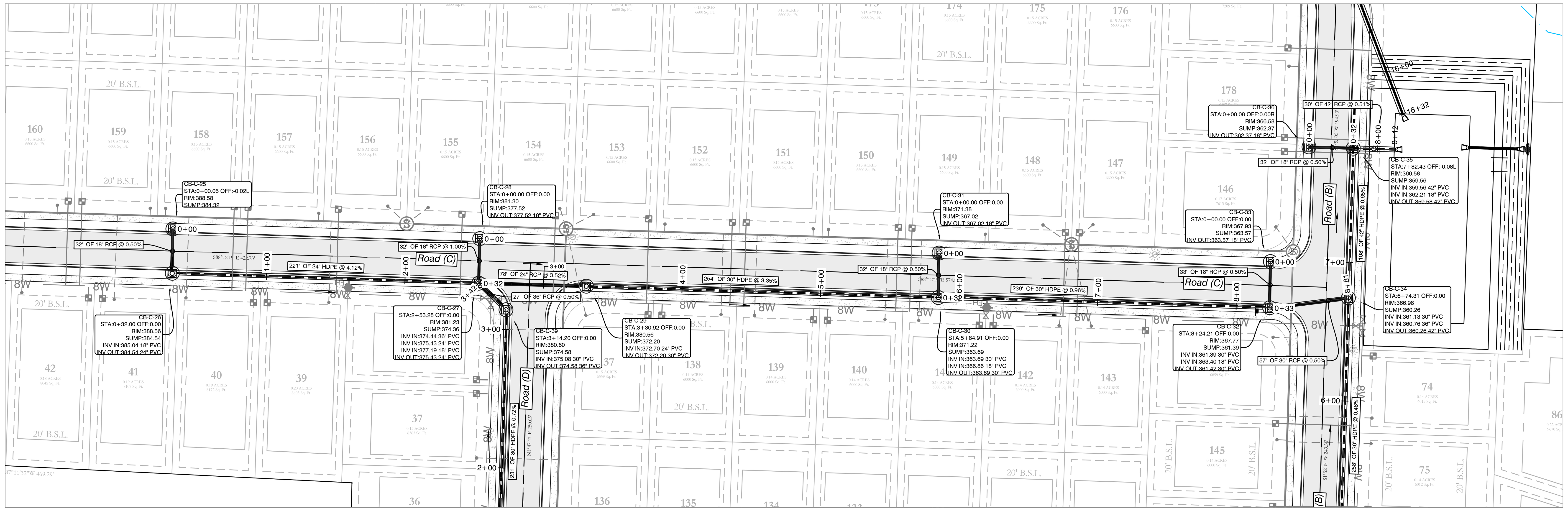
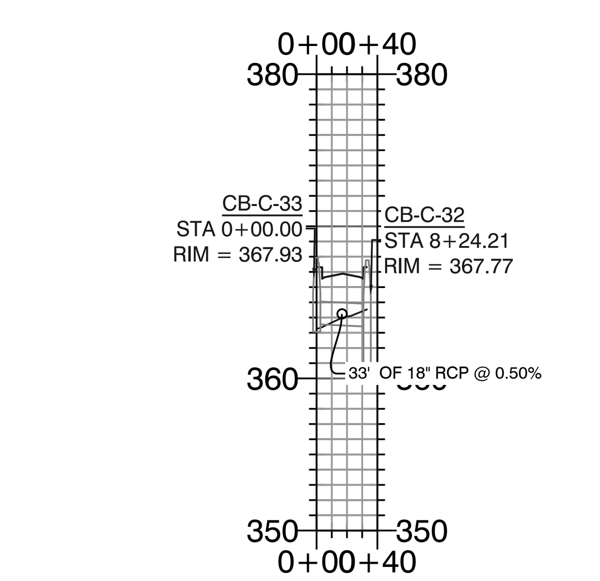




Storm Water Line 4 PROFILE



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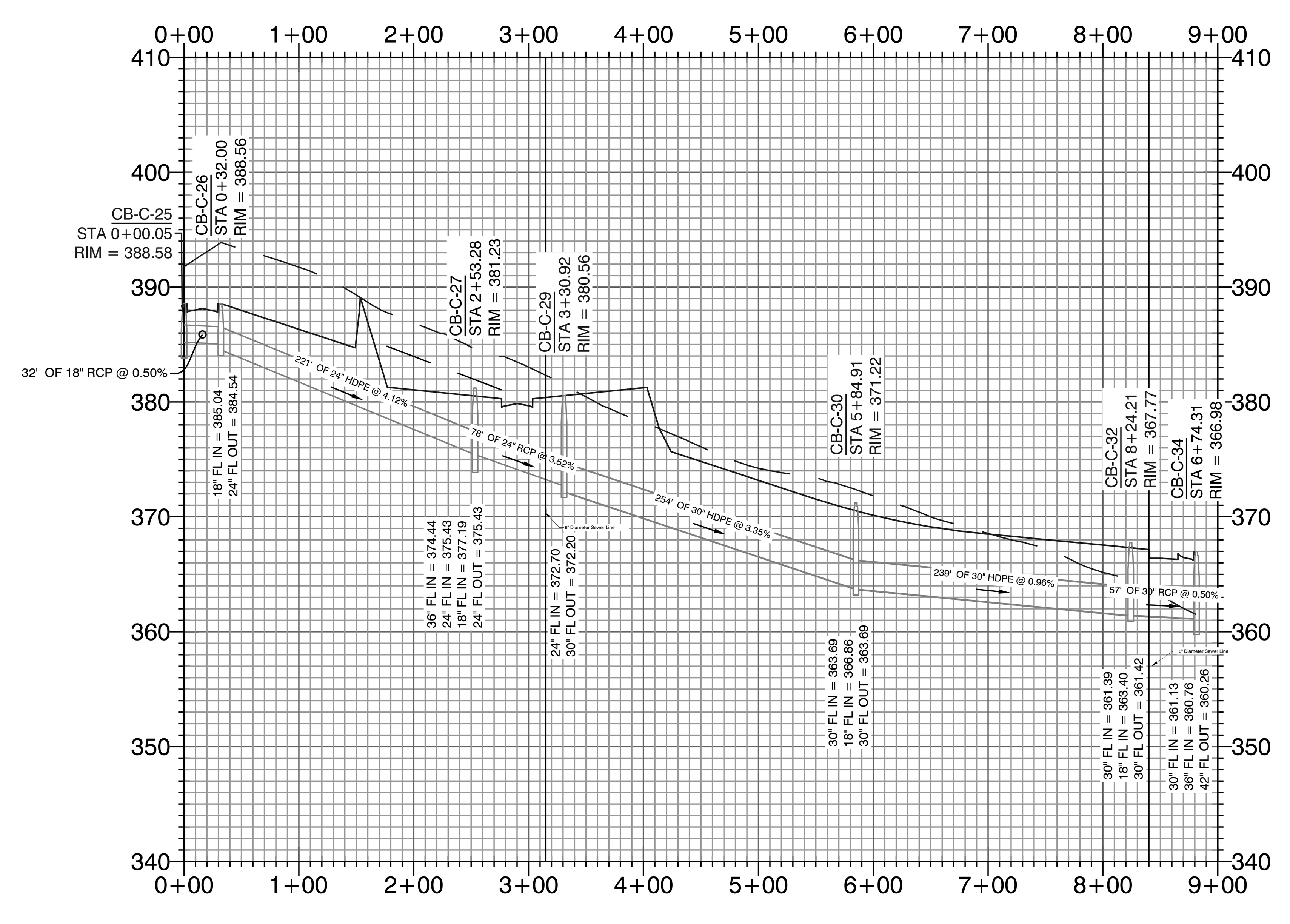

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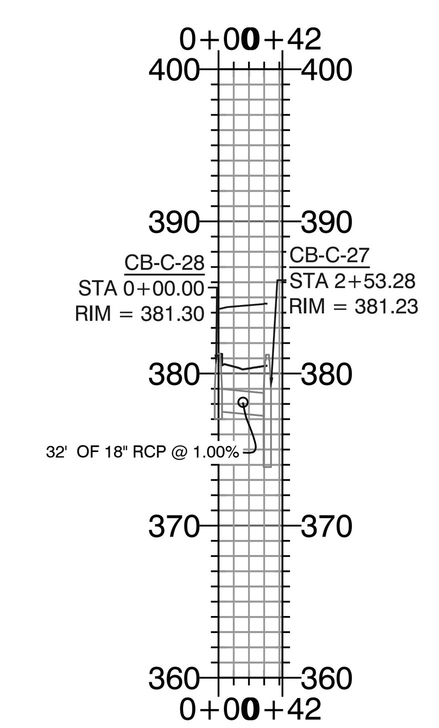
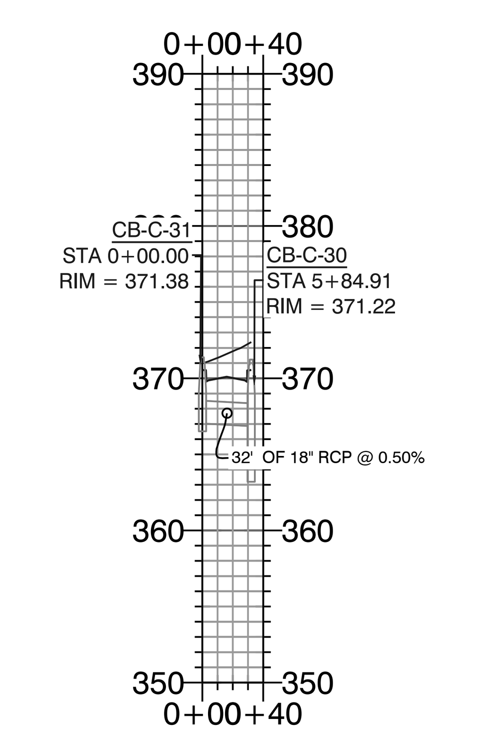


Storm Water Line 3 PROFILE



HDPE
RCP

N

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

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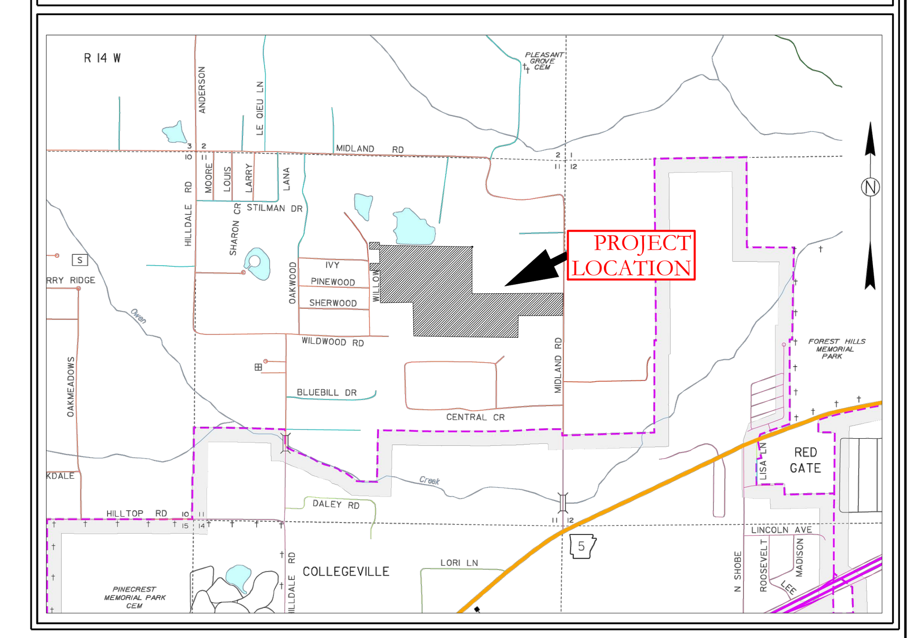
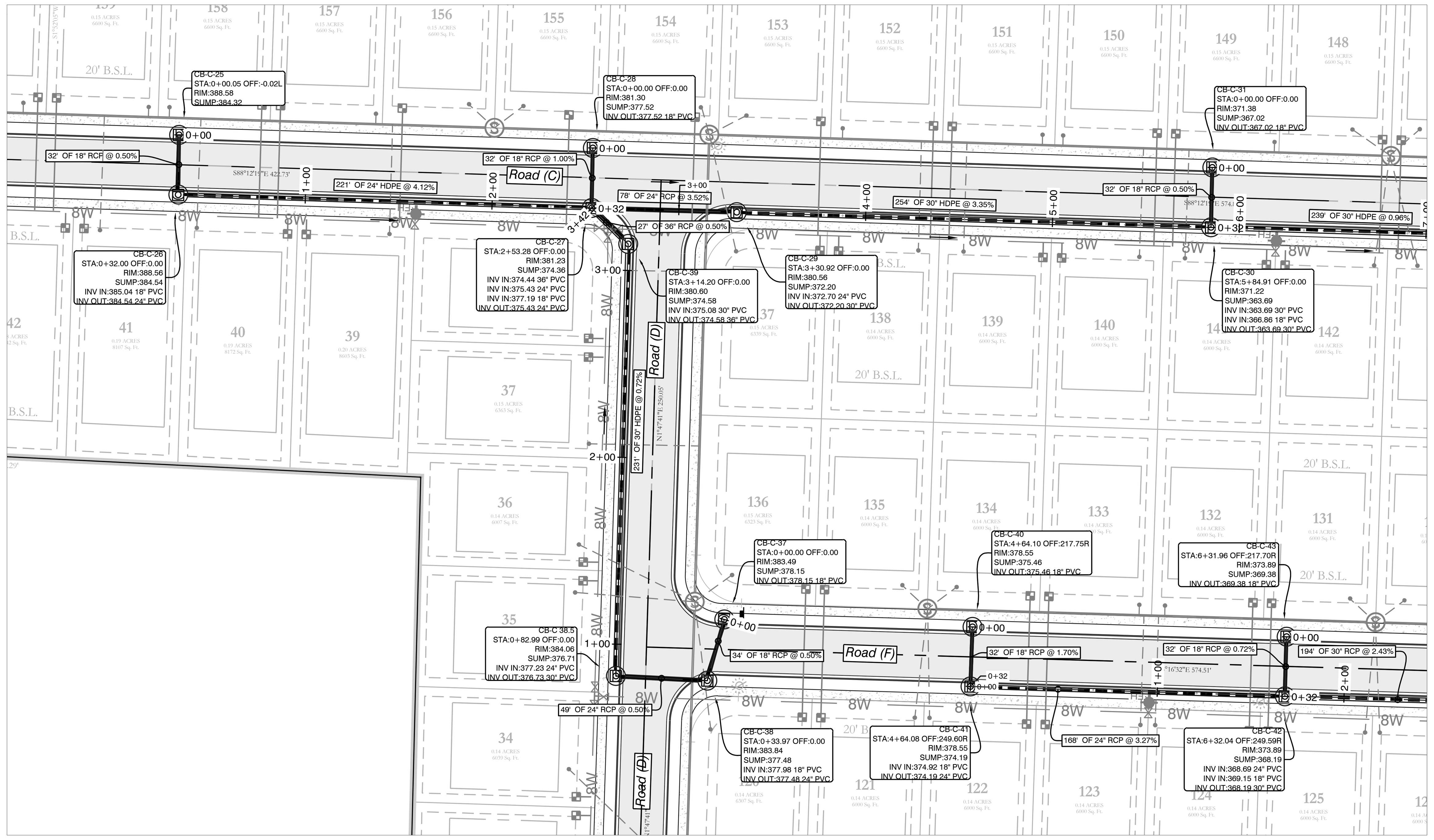
FOR USE AND BENEFIT OF:
HAVEN'S DEVELOPMENT, LLC

DRAINAGE PROFILES
MIDLAND ROAD
BRYANT, SALINE COUNTY, ARKANSAS

DATE: 4/19/2023	C.A.D. BY: xxxx	DRAWING NUMBER:
REVISED:	CHECKED BY:	23-0024
SHEET: C-6.3	SCALE: as shown	

K:\LAND PROJECTS 2004\SUBDIVISIONS\2023\23-0024 HAVENS MIDLAND ROAD SUBDIVISION S11 T5S R14W\CIVIL\DWG\23-0024 CONSTRUCTION PLAN (FINAL DRAFT)(AFTER COMMENTS)(4-20-2023).DWG





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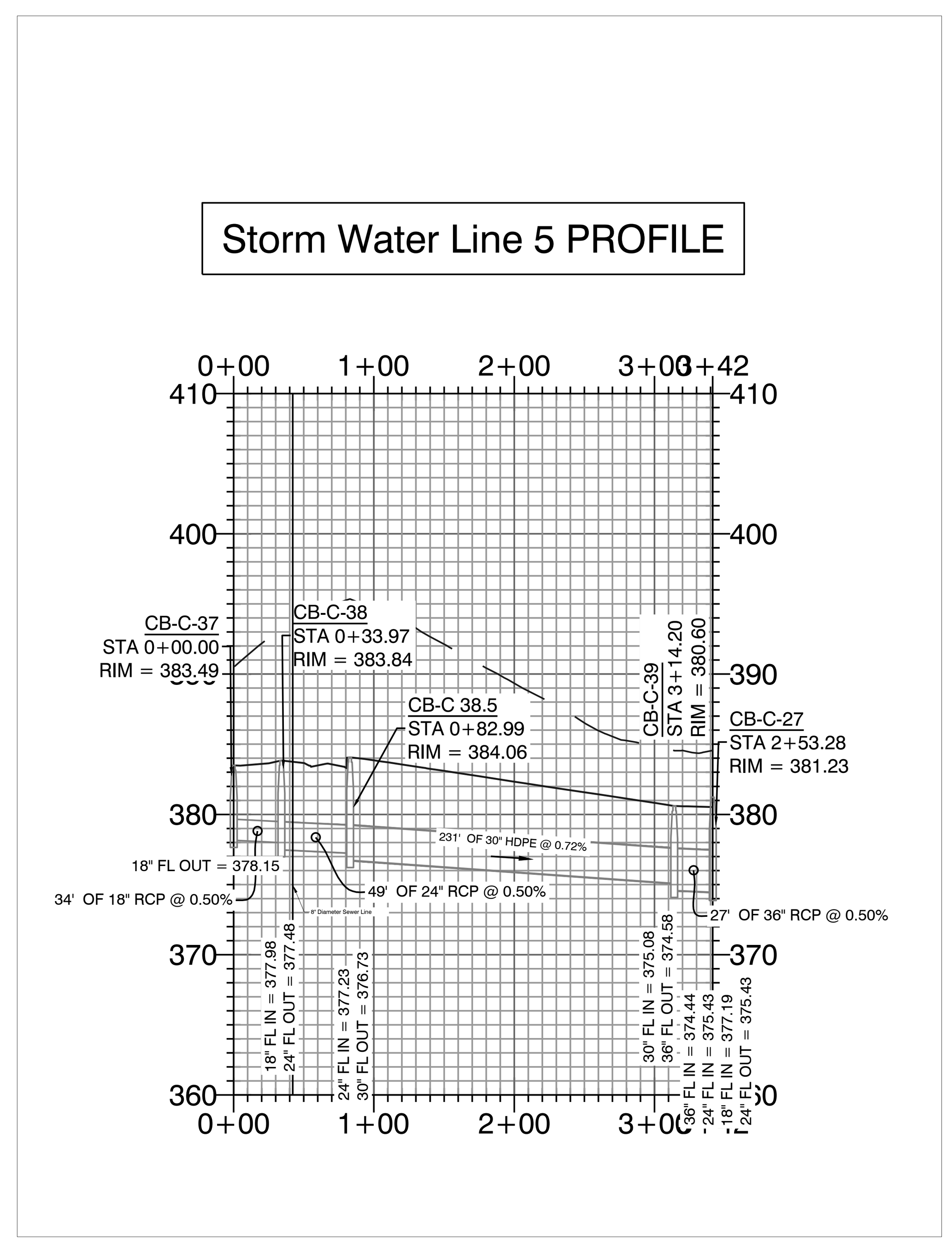

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BASIS OF BEARING:
GRID NORTH, ARKANSAS
COORDINATE SYSTEM, SOUTH ZONE BY
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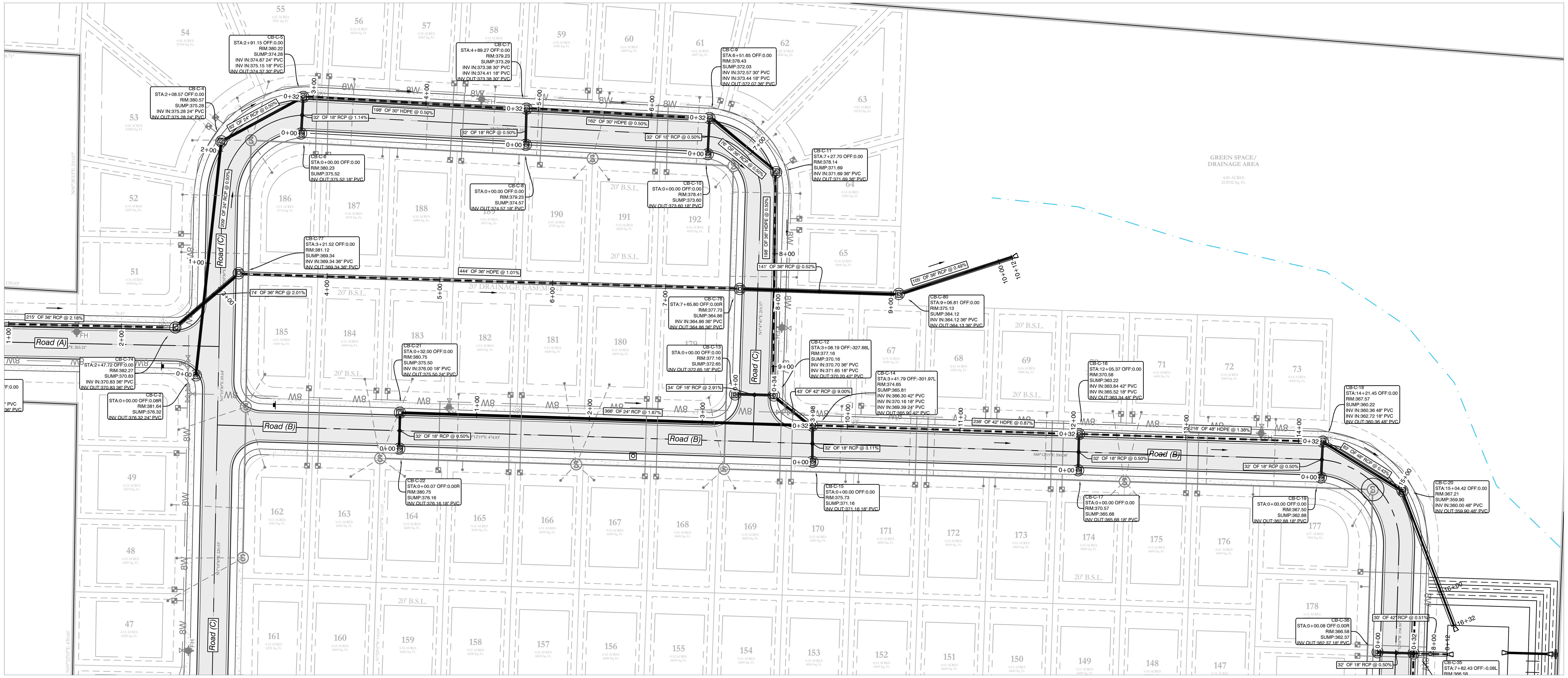
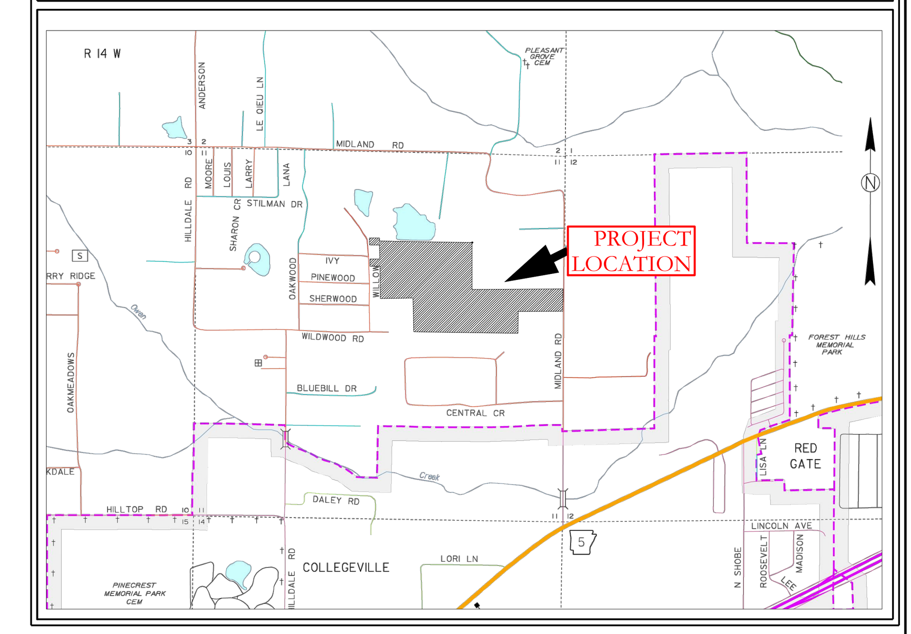
MIDLAND ROAD
BRYANT, SALINE COUNTY, ARKANSAS

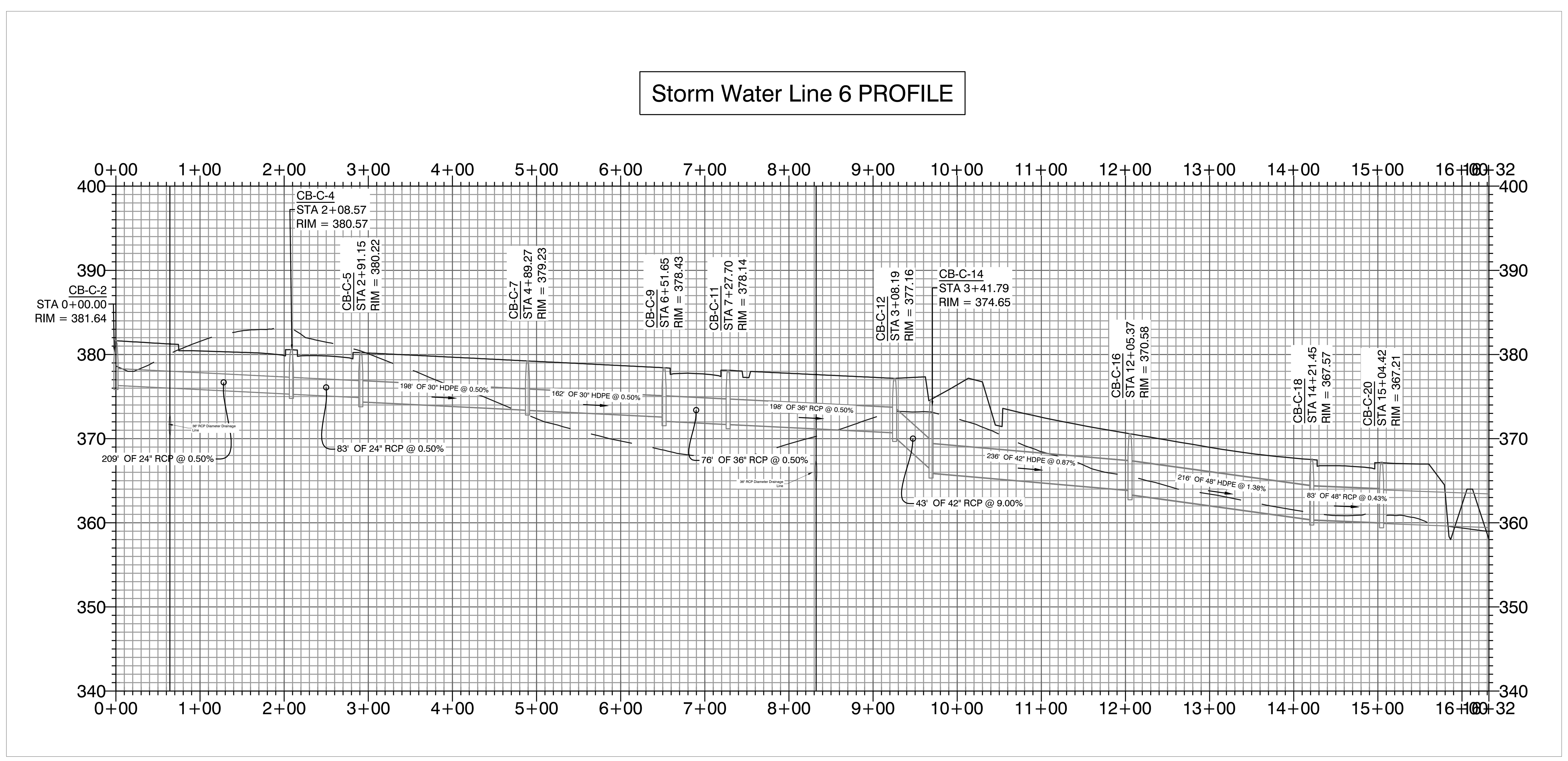
DATE:	4/19/2023	C.A.D. BY:	xxxx	DRAWING NUMBER:
REVISED:		CHECKED BY:		23-0024
SHEET:	C-6.4	SCALE:	as shown	



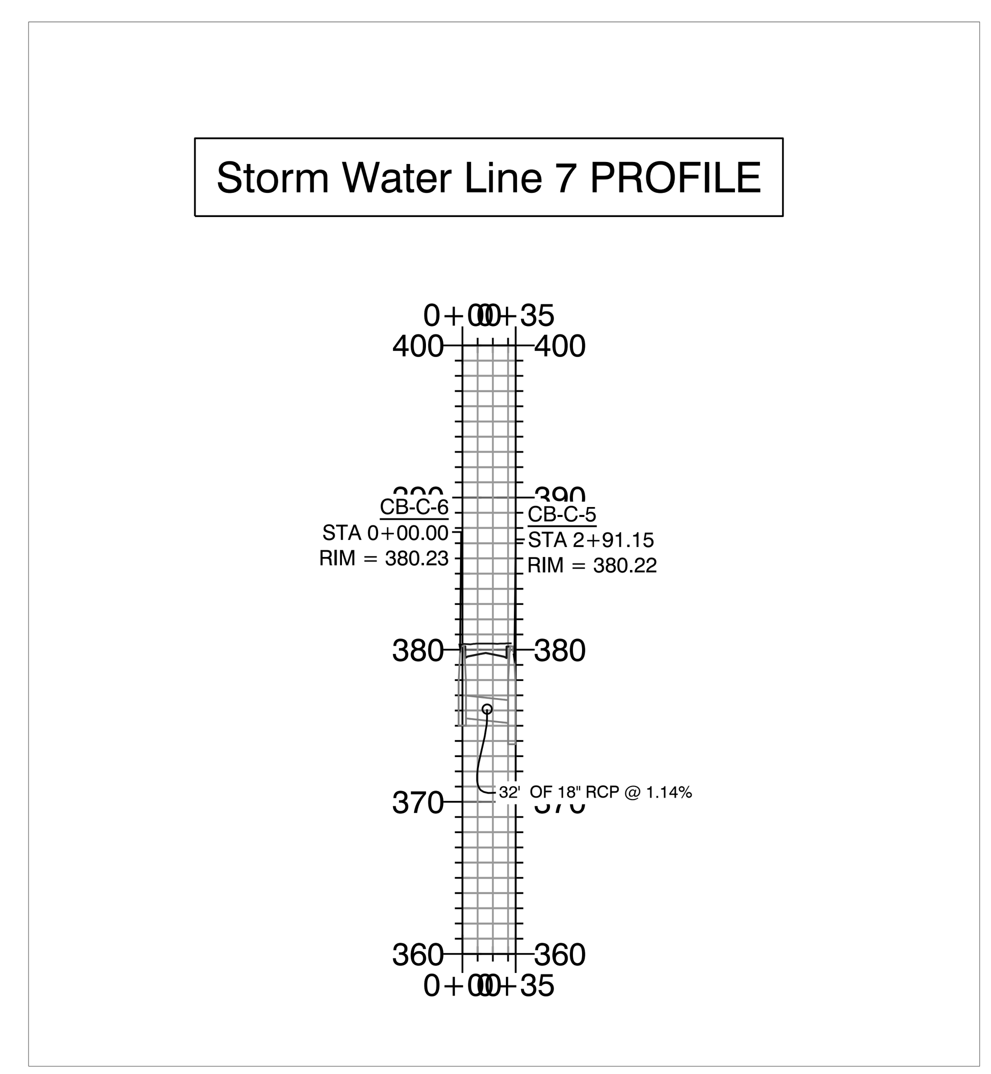
VICINITY MAP:



Storm Water Line 6 PROFILE



Storm Water Line 7 PROFILE



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BASIS OF BEARING:
GRID NORTH, ARKANSAS
COORDINATE SYSTEM, SOUTH ZONE BY
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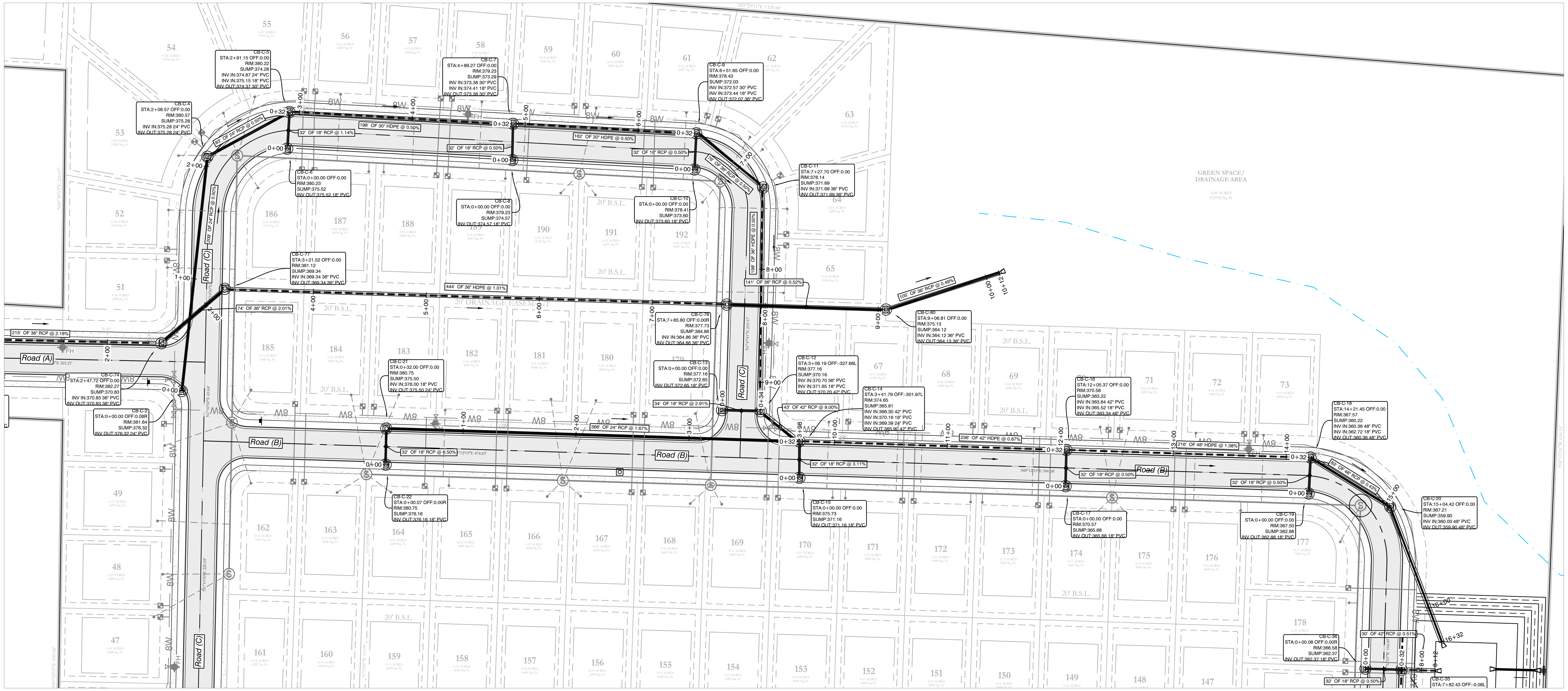
MIDLAND ROAD
BRYANT, SALINE COUNTY, ARKANSAS

DATE:	4/19/2023	C.A.D. BY:	xxxx	DRAWING NUMBER:
REVISED:		CHECKED BY:		23-0024
SHEET:	C-6.5	SCALE:	as shown	



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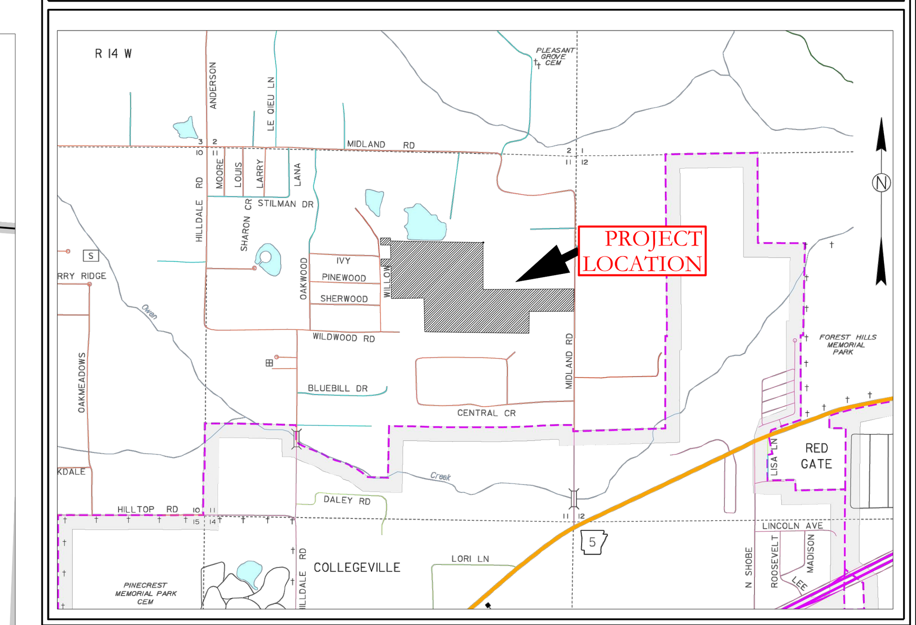
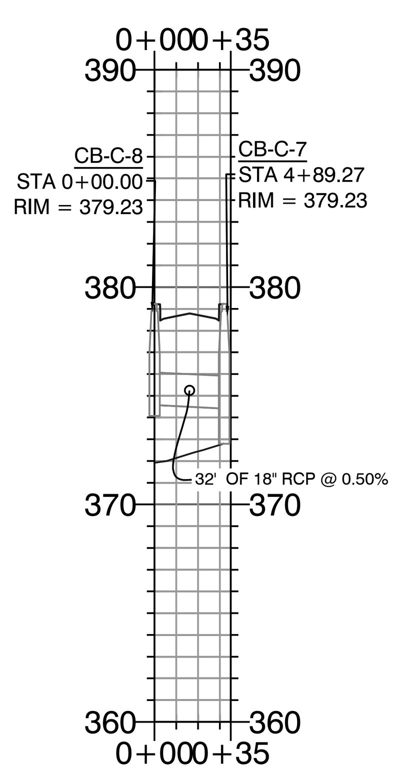


Storm Water Line 8 PROFILE



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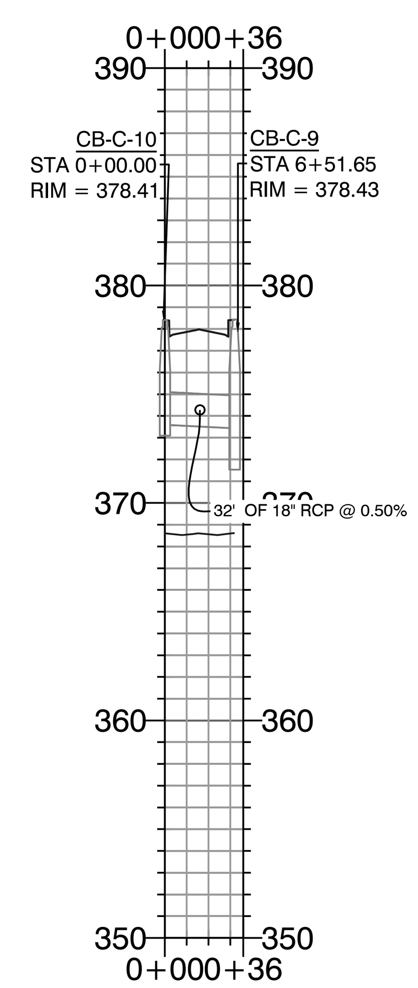
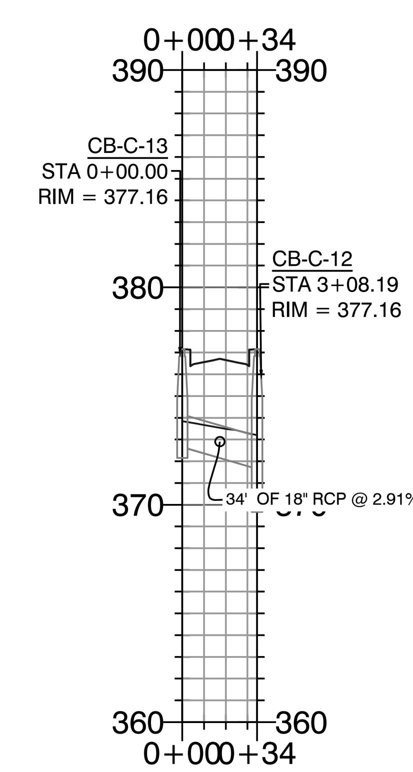
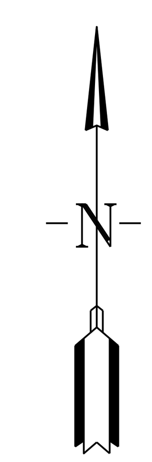


Storm Water Line 10 PROFILE





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

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BRYANT, SALINE COUNTY, ARKANSAS

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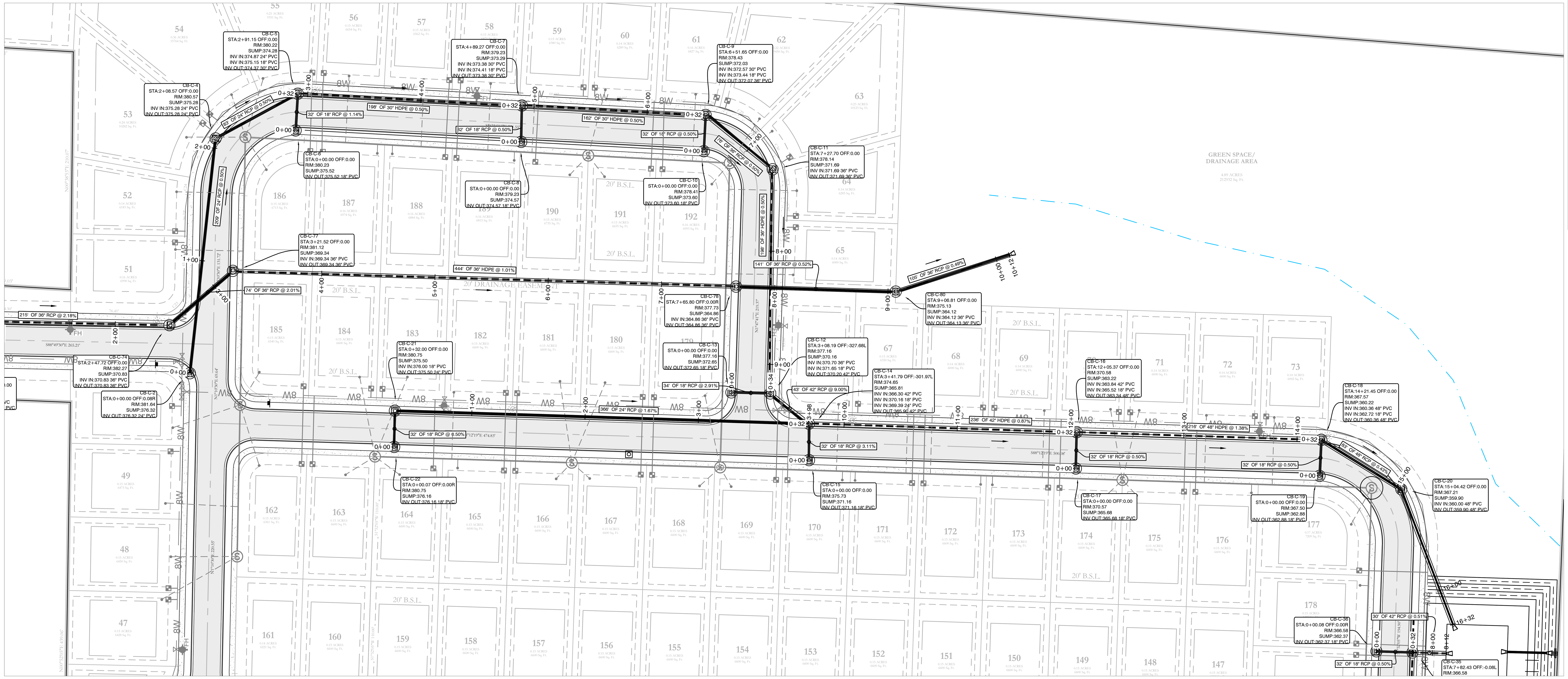
SHEET:	C-6.6	SCALE:	as shown	

K:\LAND PROJECTS 2004\SUBDIVISIONS\2023\23-0024 HAVENS MIDLAND ROAD SUBDIVISION S11 T1S R14W\CIVIL\DWG\23-0024 CONTRUCTION PLAN (FINAL DRAFT)(AFTER COMMENTS)(4-20-2023).DWG



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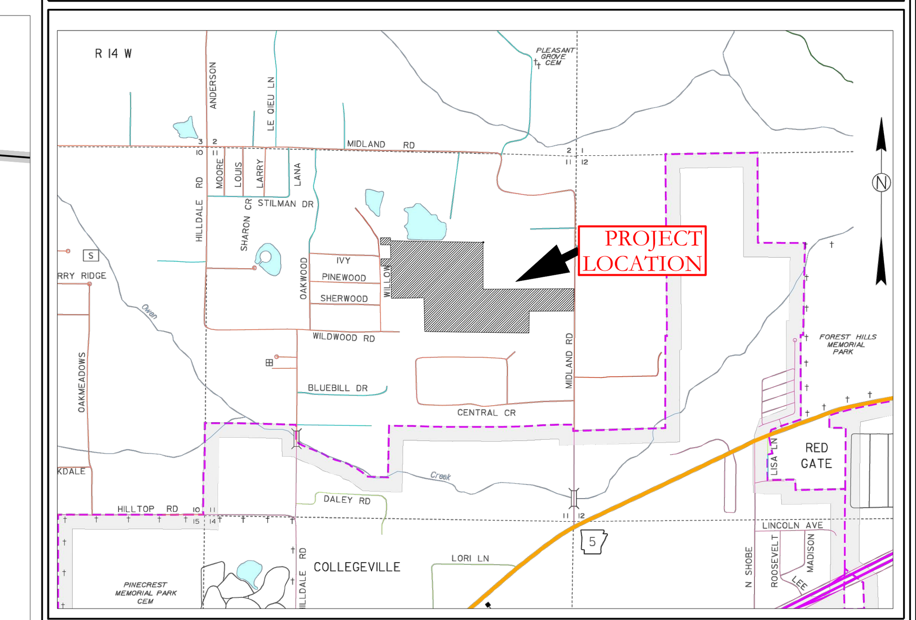

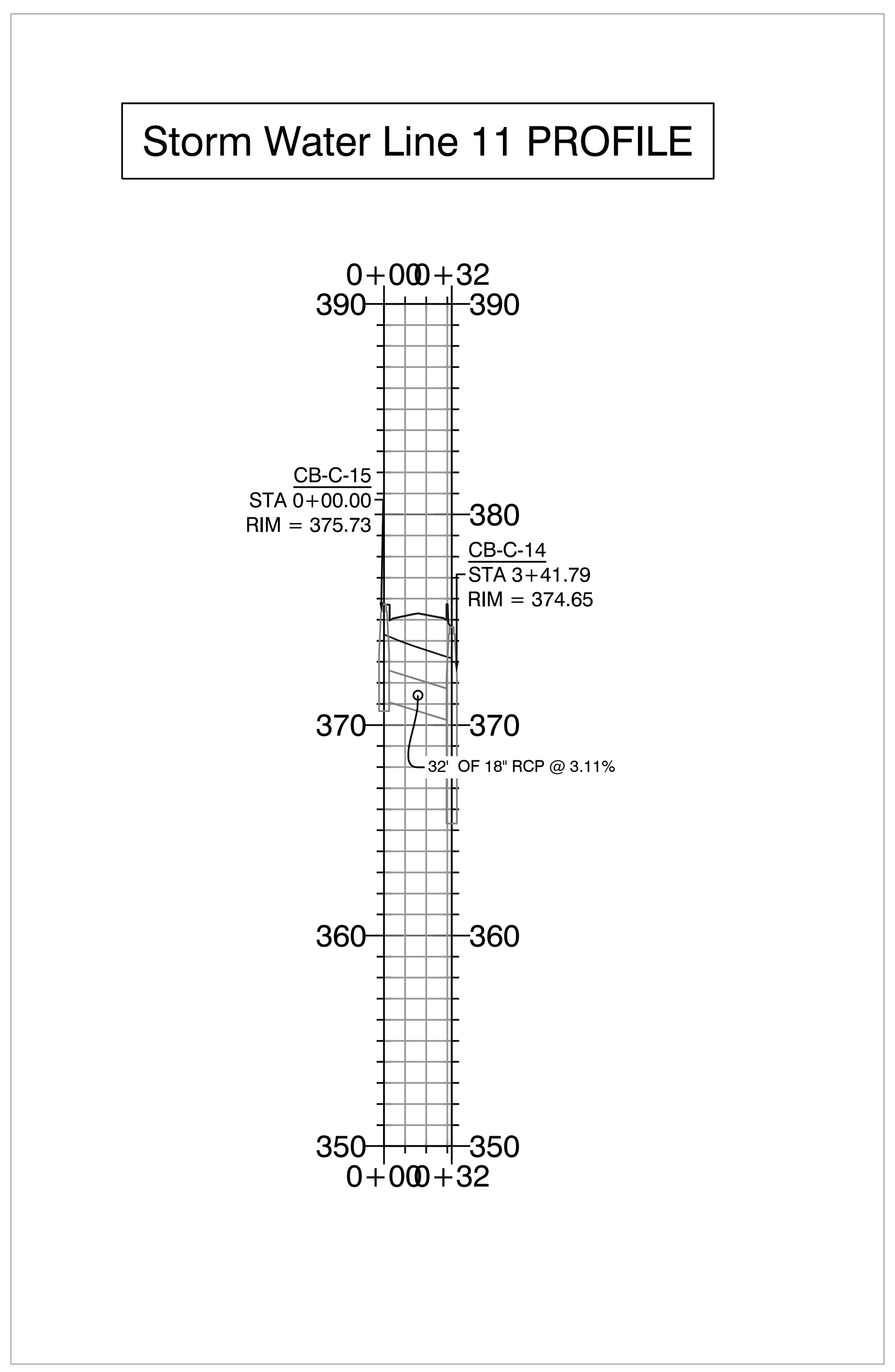

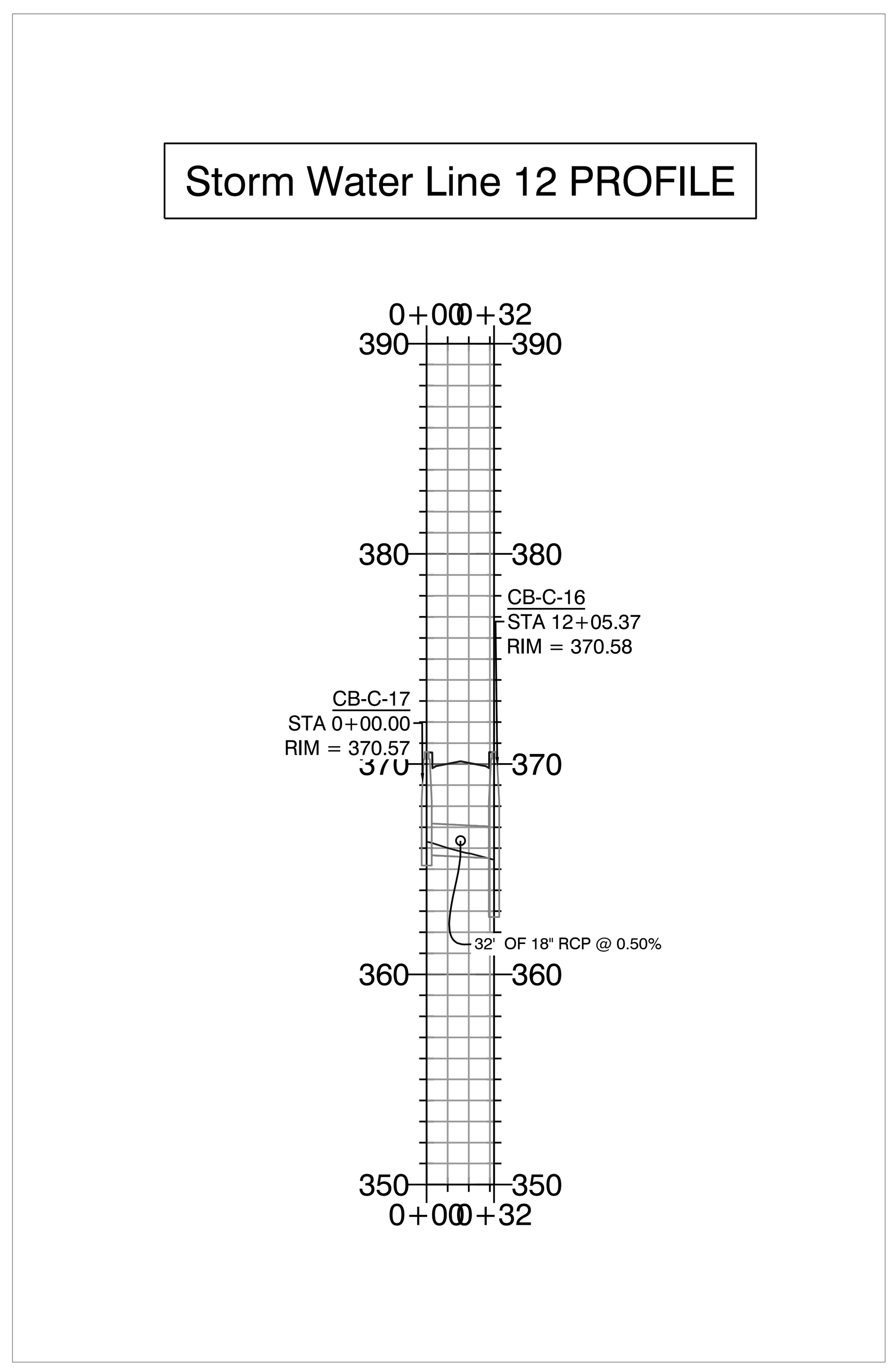

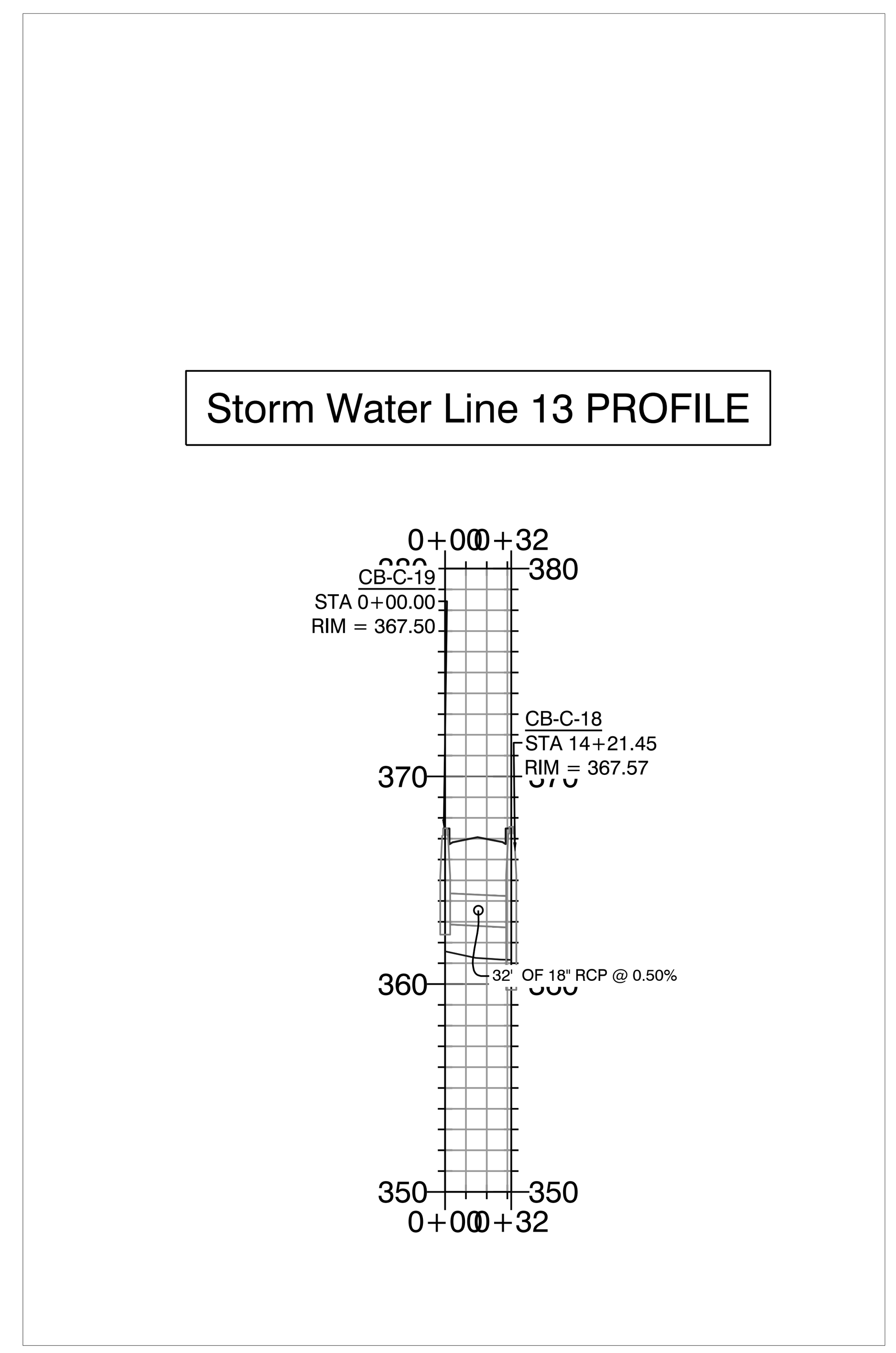

BASIS OF BEARING:
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COORDINATE SYSTEM, SOUTH ZONE BY
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MIDLAND ROAD
BRYANT, SALINE COUNTY, ARKANSAS

DATE: 4/19/2023	C.A.D. BY: xxxx	DRAWING NUMBER:
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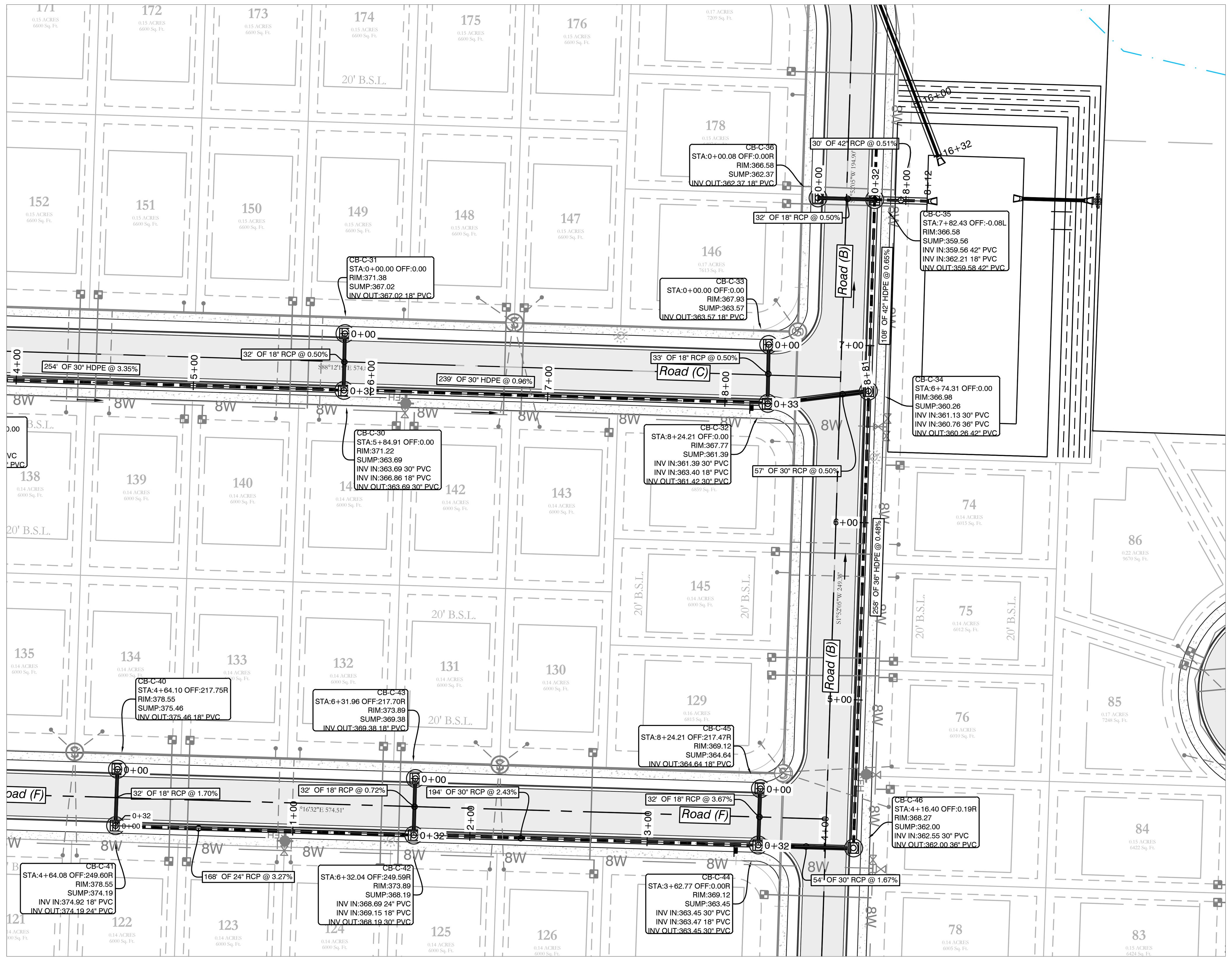
SHEET: C-6.7	SCALE: as shown	

K:\LAND PROJECTS 2004\SUBDIVISIONS\2023\23-0024 HAVENS MIDLAND ROAD SUBDIVISION S11 T1S R14W\CIVIL\DWG\23-0024 CONTRUCTION PLAN (FINAL DRAFT)(AFTER COMMENTS)(4-20-2023).DWG



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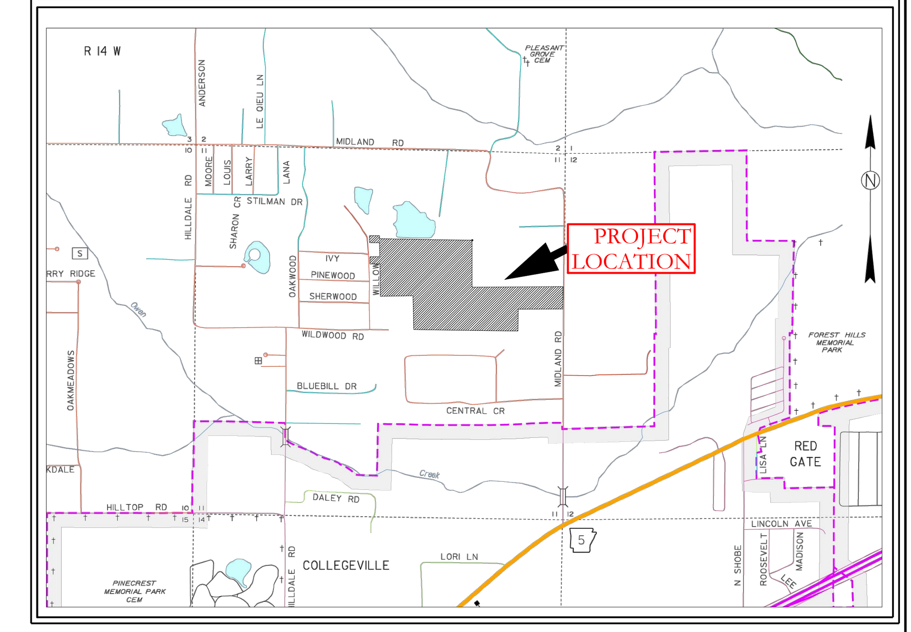
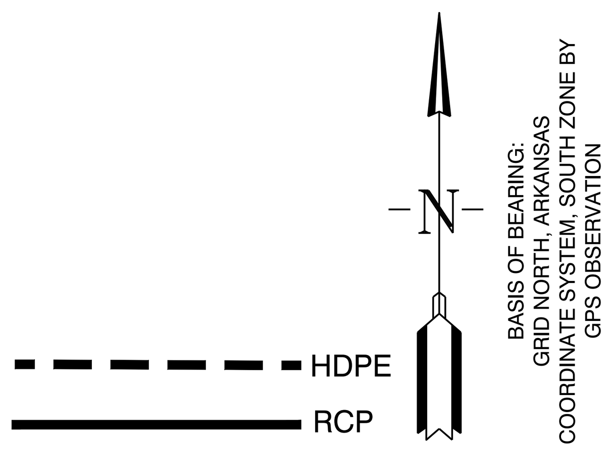
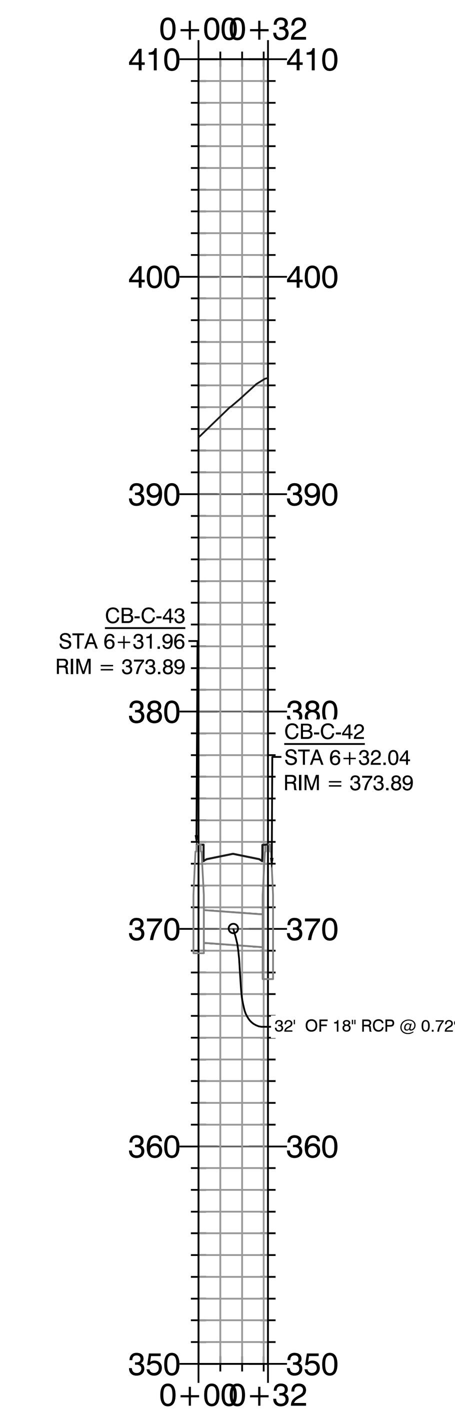
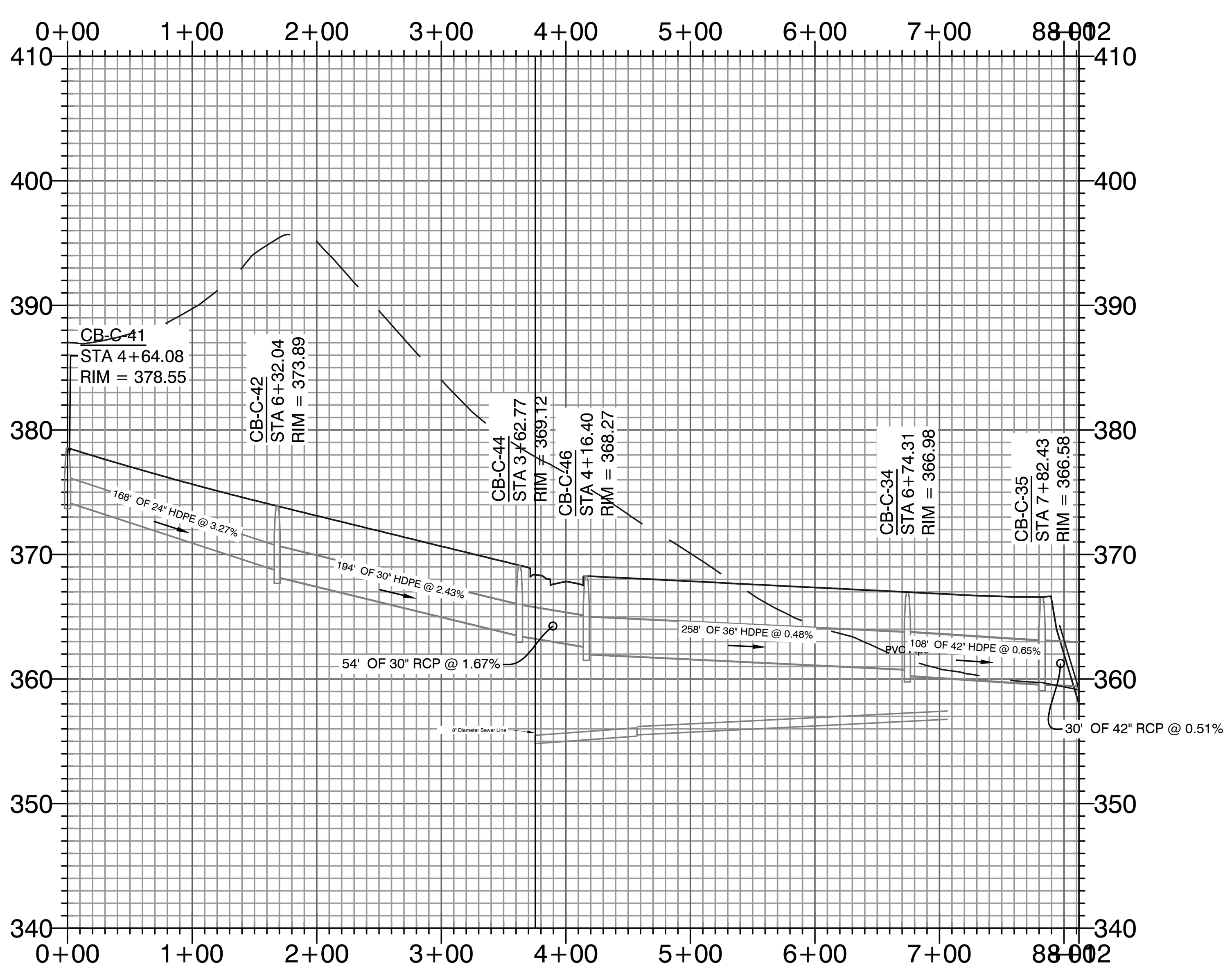




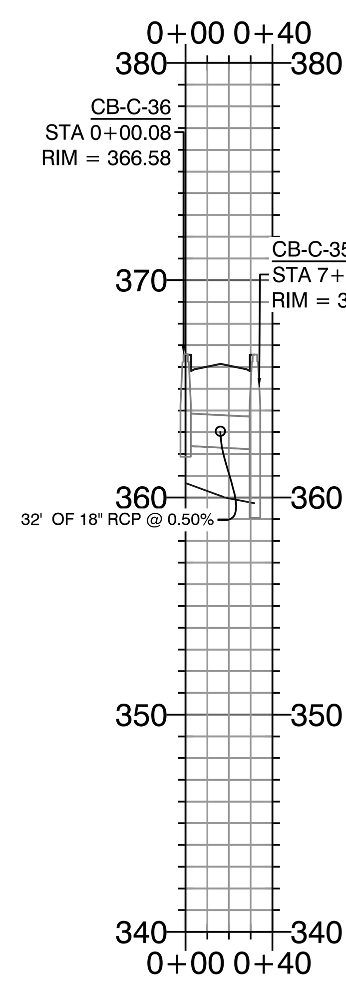
Storm Water Line 28 PROFILE



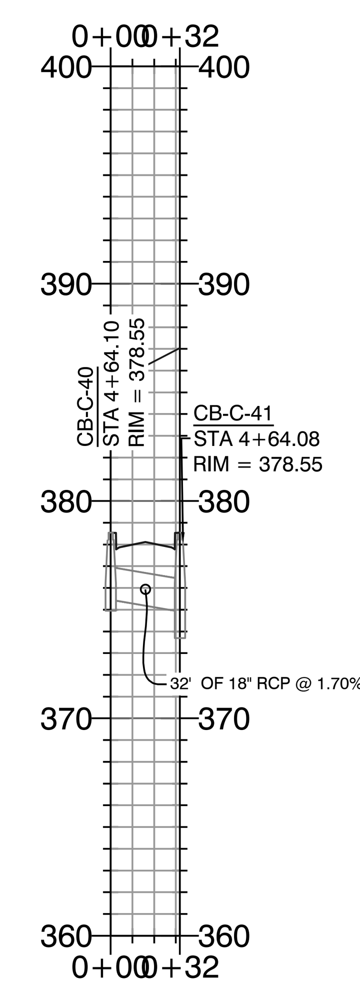
Storm Water Line 14 PROFILE



Storm Water Line 15 PROFILE



Storm Water Line 27 PROFILE



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FOR USE AND BENEFIT OF:
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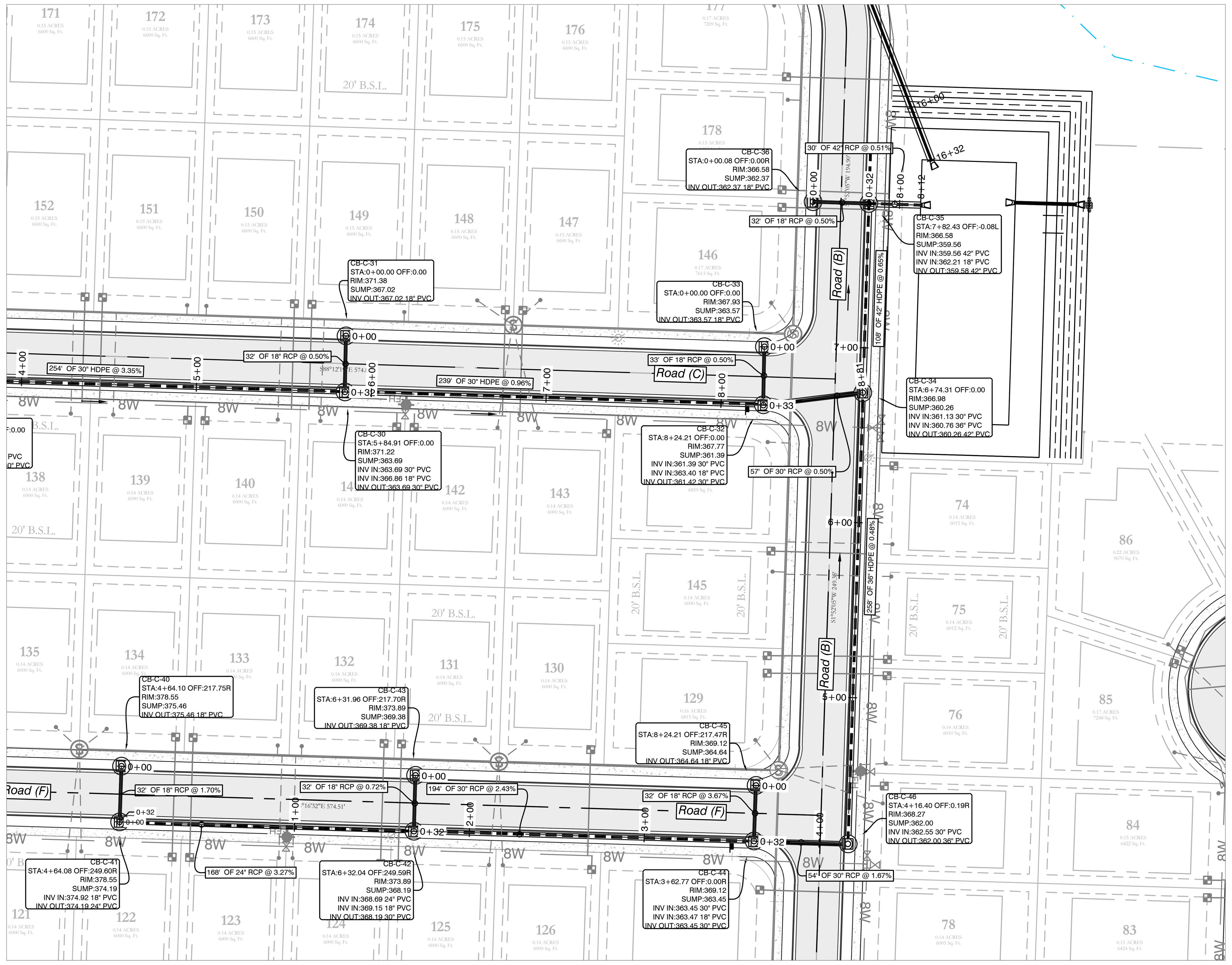
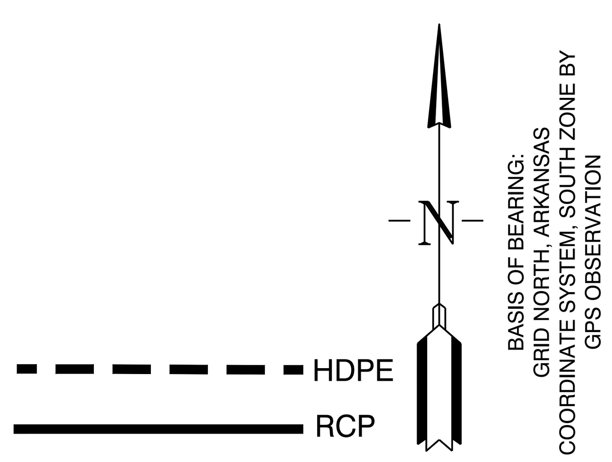
DRAINAGE PROFILES
MIDLAND ROAD
BRYANT, SALINE COUNTY, ARKANSAS

DATE: 4/19/2023	C.A.D. BY: xxxx	DRAWING NUMBER:
REVISED:	CHECKED BY:	23-0024
SHEET: C-6.8	SCALE: as shown	

K:\LAND PROJECTS 2004\SUBDIVISIONS\2023\23-0024 HAVENS MIDLAND ROAD SUBDIVISION S11 T1S R14W\CIVIL\DWG\23-0024 CONTRUCTION PLAN (FINAL DRAFT)(AFTER COMMENTS)(4-20-2023).DWG





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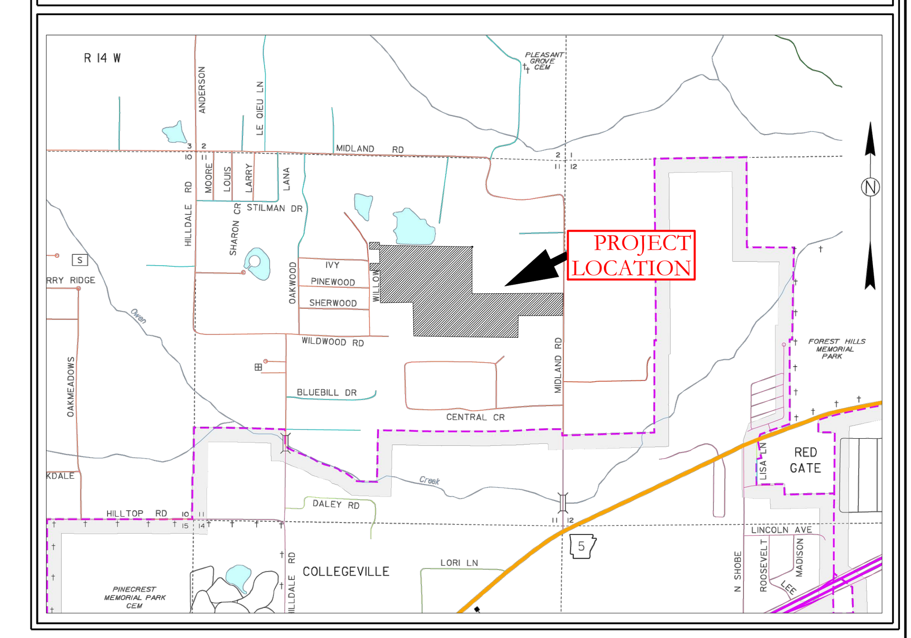
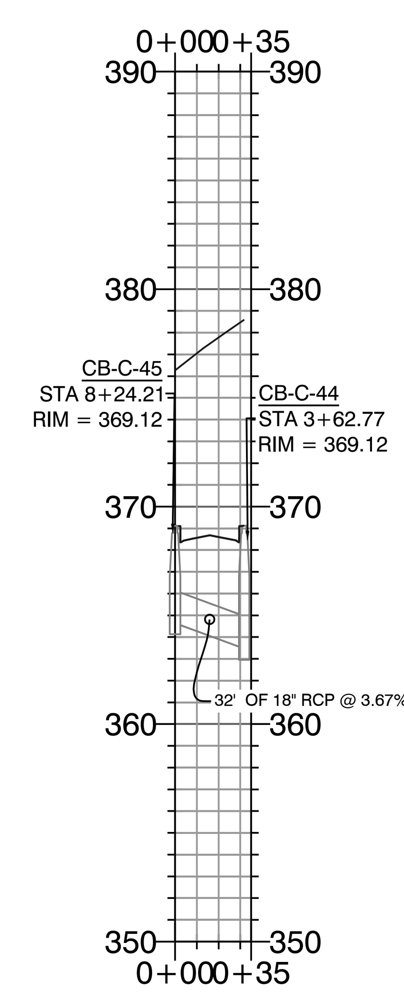


Storm Water Line 29 PROFILE



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DRAINAGE PROFILES
MIDLAND ROAD
BRYANT, SALINE COUNTY, ARKANSAS

DATE:	4/12/2023	C.A.D. BY:	xxxx	DRAWING NUMBER:
REVISED:		CHECKED BY:		23-0024
SHEET:	C-6.9	SCALE:	as shown	

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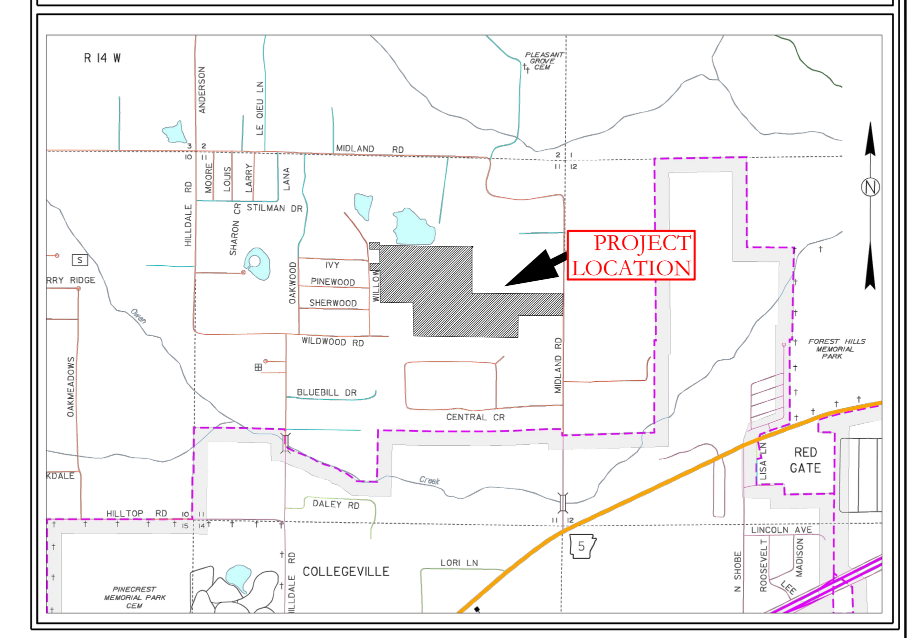
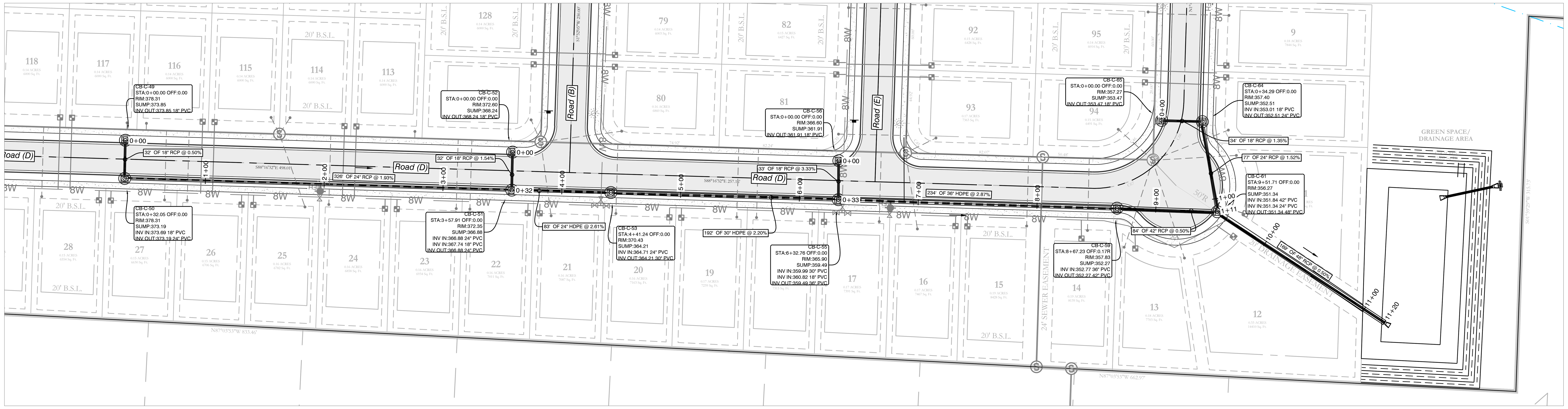
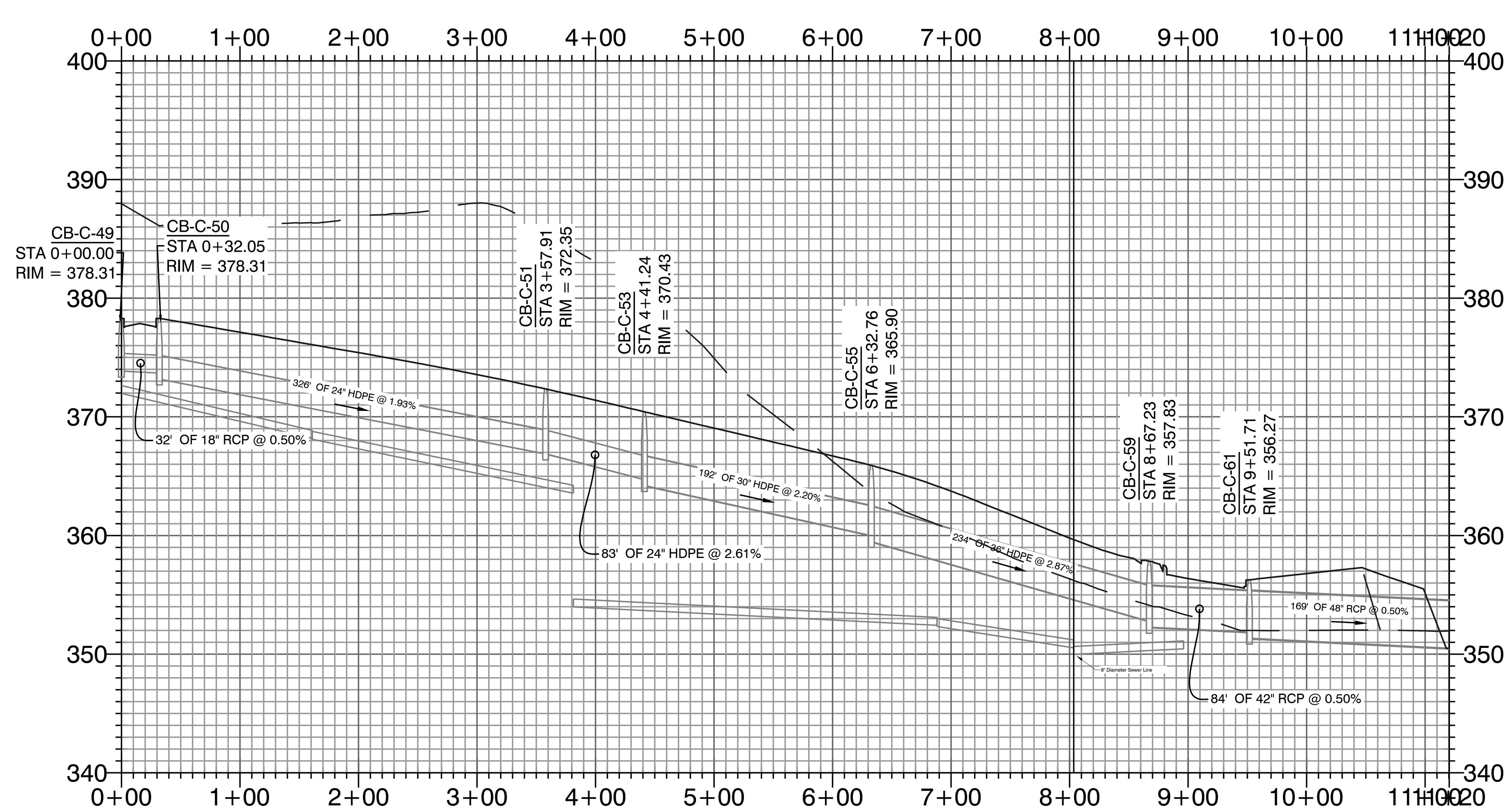
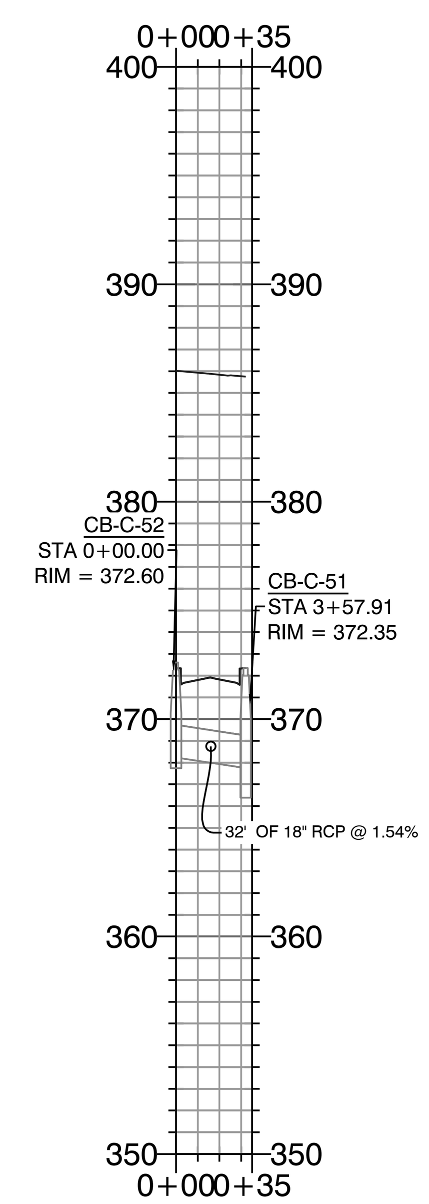




Storm Water Line 16 PROFILE



Storm Water Line 17 PROFILE



HDPE

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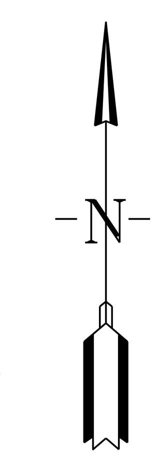

BASIS OF BEARING:
GRID NORTH, ARKANSAS
COORDINATE SYSTEM, SOUTH ZONE BY
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MIDLAND ROAD
BRYANT, SALINE COUNTY, ARKANSAS

DATE:	4/19/2023	C.A.D. BY:	xxxx	DRAWING NUMBER:
REVISED:		CHECKED BY:		23-0024
SHEET:	C-6.10	SCALE:	as shown	

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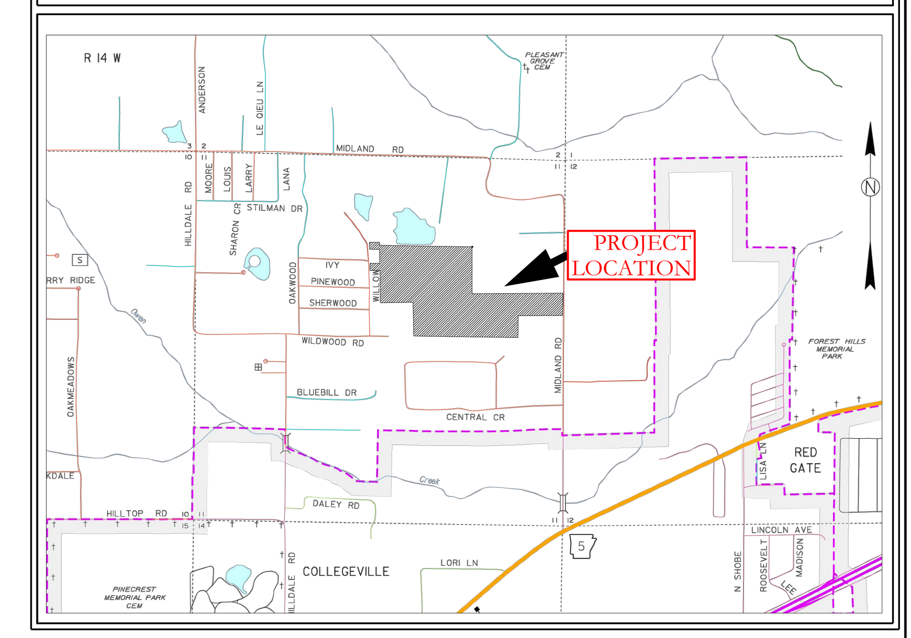
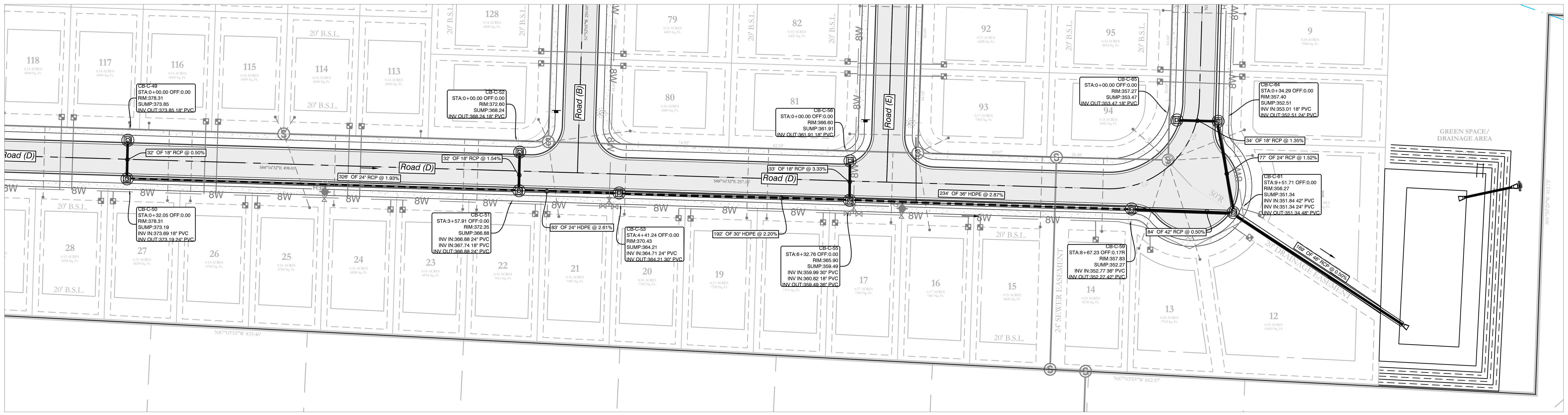
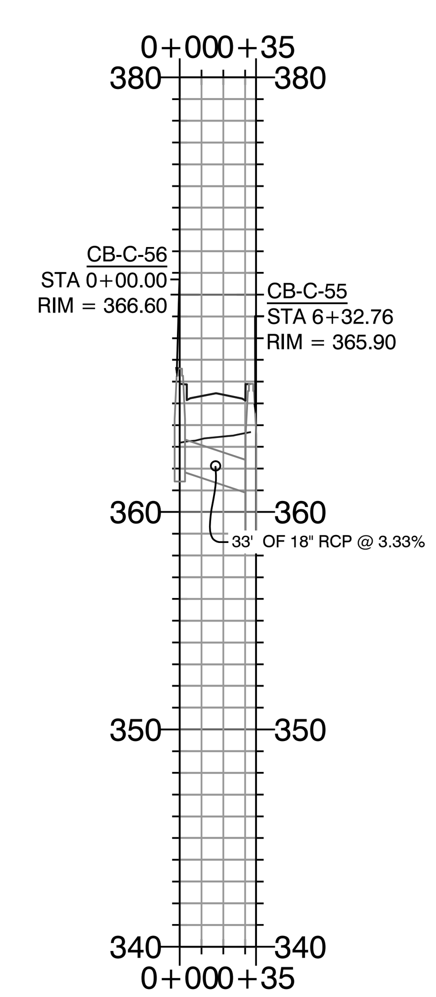
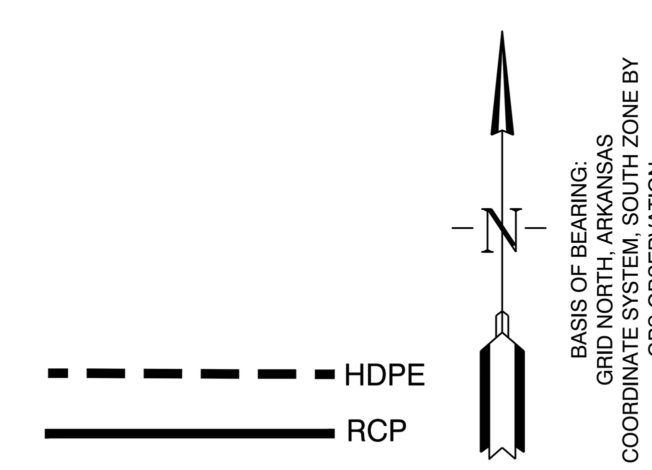
VICINITY MAP:





Storm Water Line 19 PROFILE





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BRYANT, SALINE COUNTY, ARKANSAS

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REVISED:		CHECKED BY:		23-0024
SHEET:	C-6.11	SCALE:	as shown	

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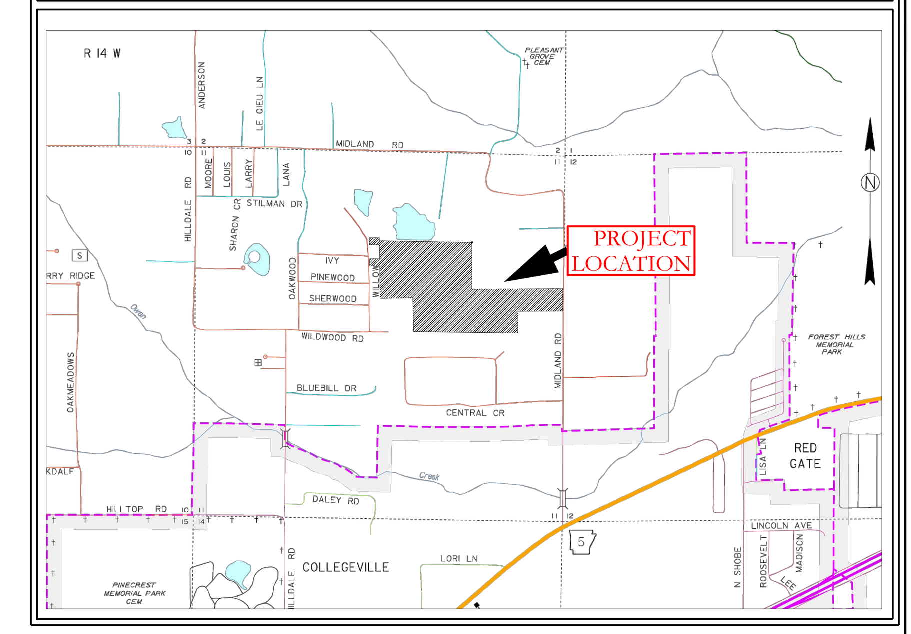
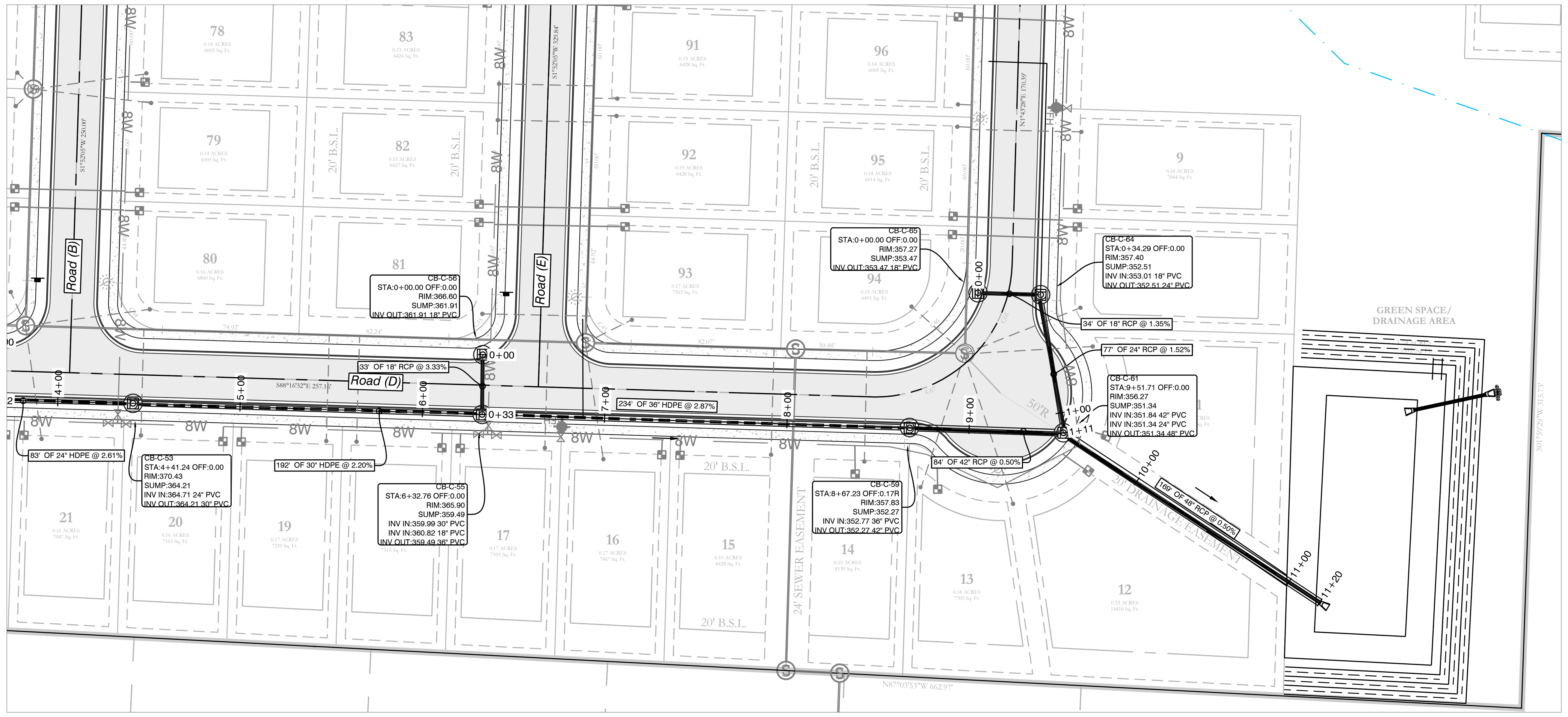
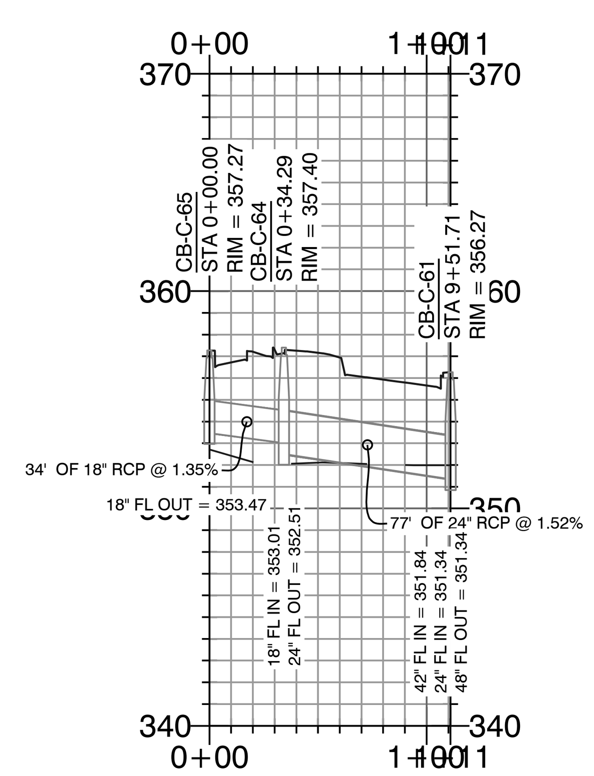
VICINITY MAP:





Storm Water Line 22 PROFILE



HDPE

RCP

N

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

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HAVEN'S DEVELOPMENT, LLC

DRAINAGE PROFILES
MIDLAND ROAD
BRYANT, SALINE COUNTY, ARKANSAS

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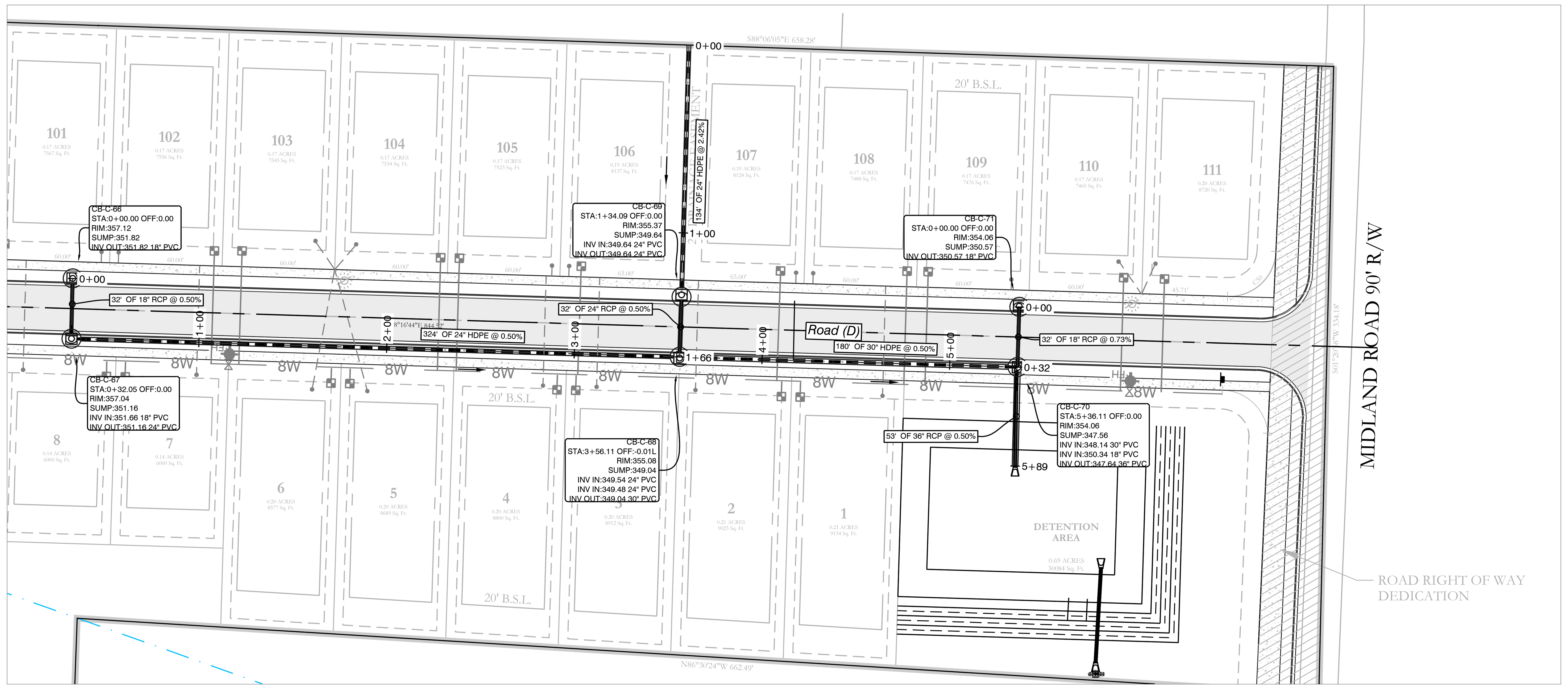
K:\LAND PROJECTS 2004\SUBDIVISIONS\2023\23-0024 HAVENS MIDLAND ROAD SUBDIVISION S11 T1S R14W\CIVIL\DWG\23-0024 CONTRUCTION PLAN (FINAL DRAFT)(AFTER COMMENTS)(4-20-2023).DWG



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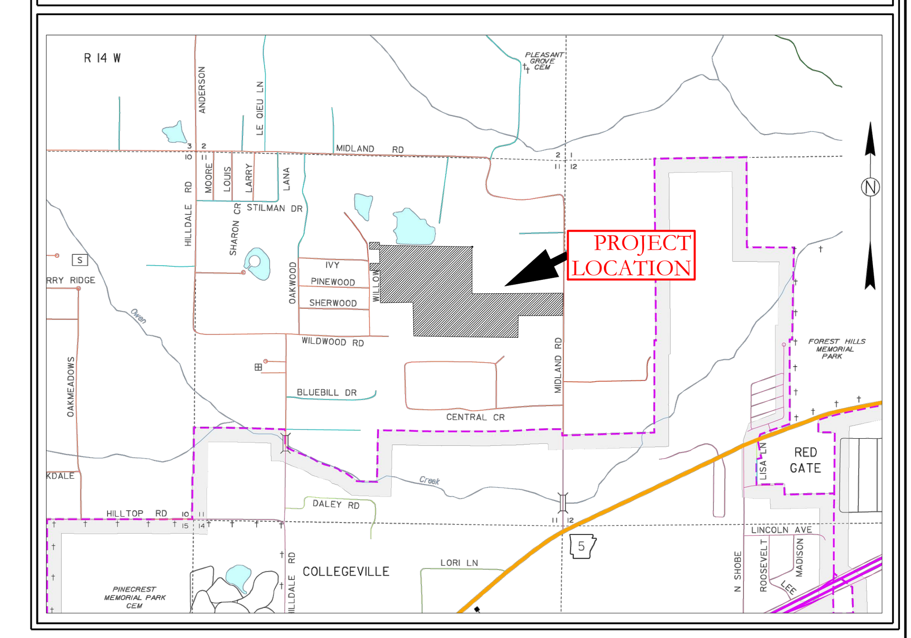

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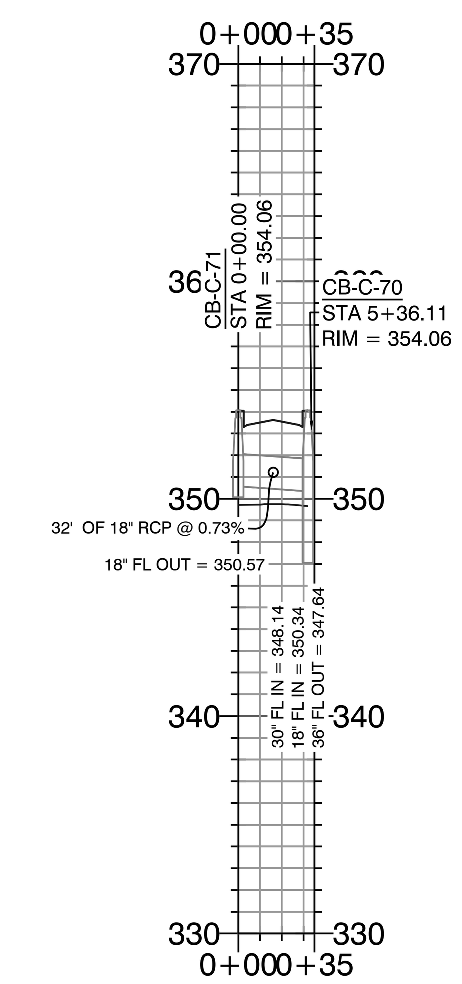

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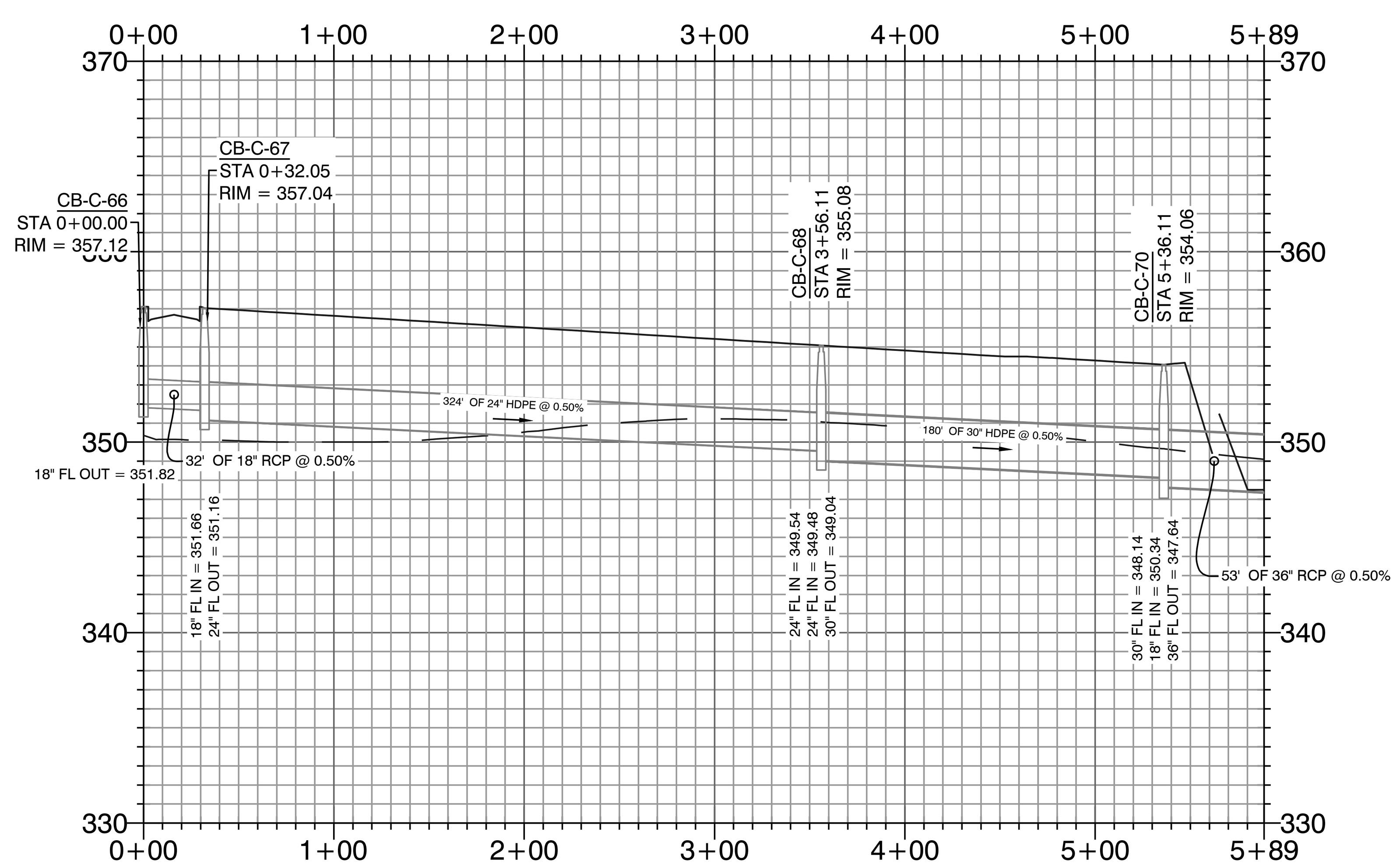
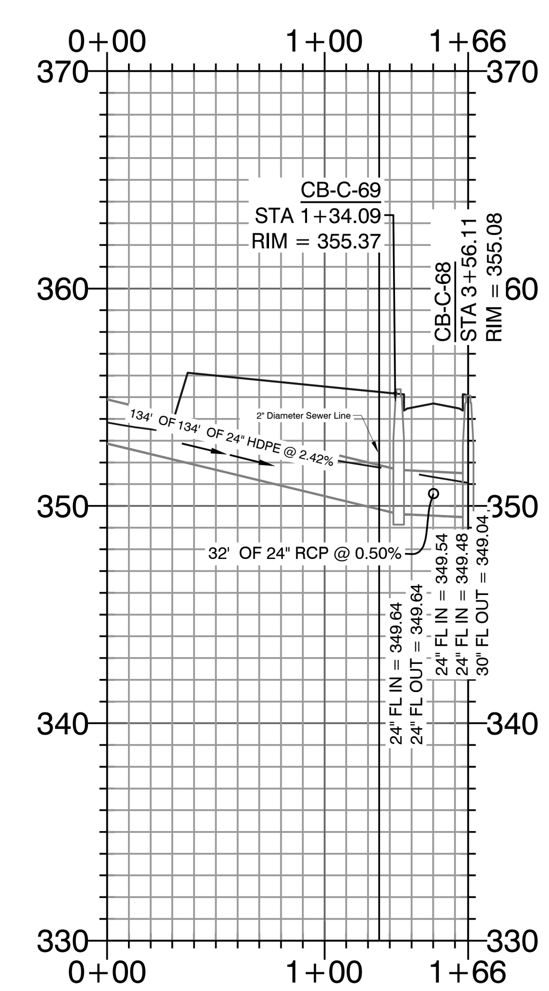


Storm Water Line 25 PROFILE



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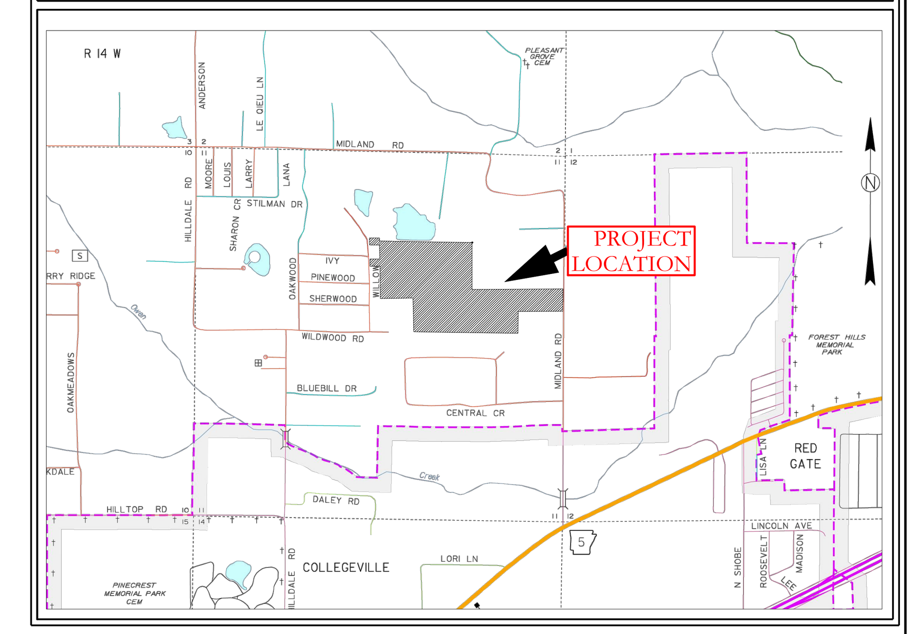

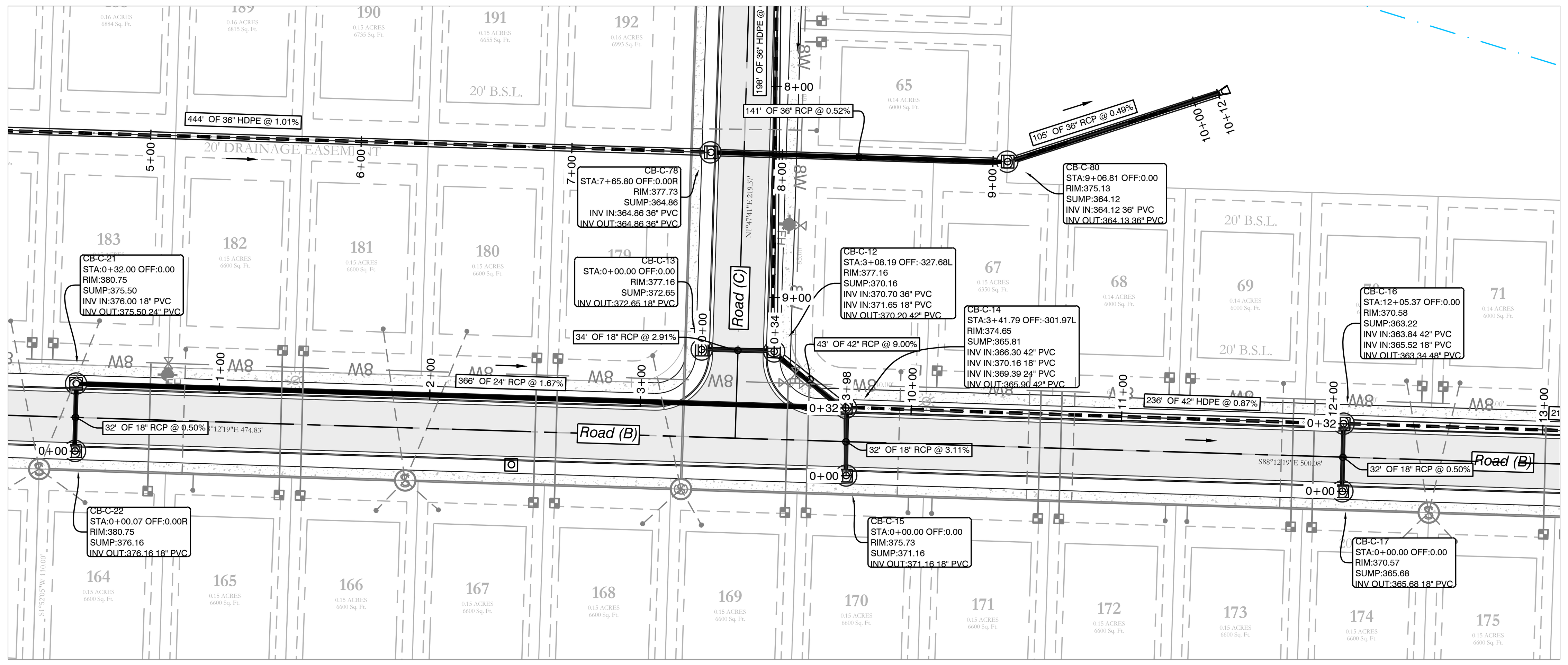

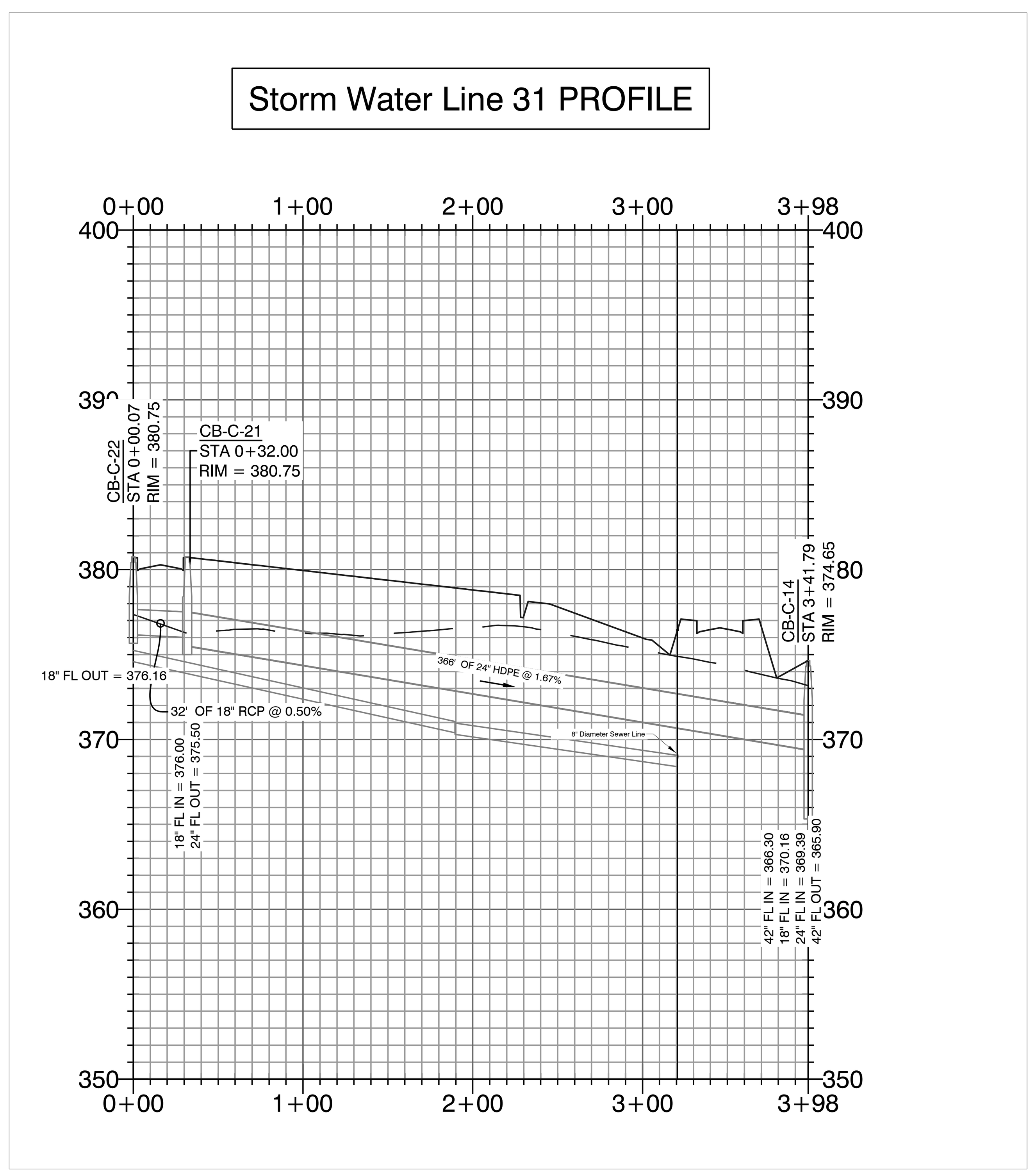

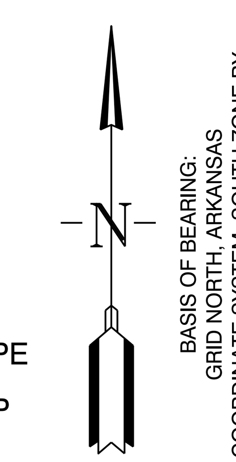

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BRYANT, SALINE COUNTY, ARKANSAS

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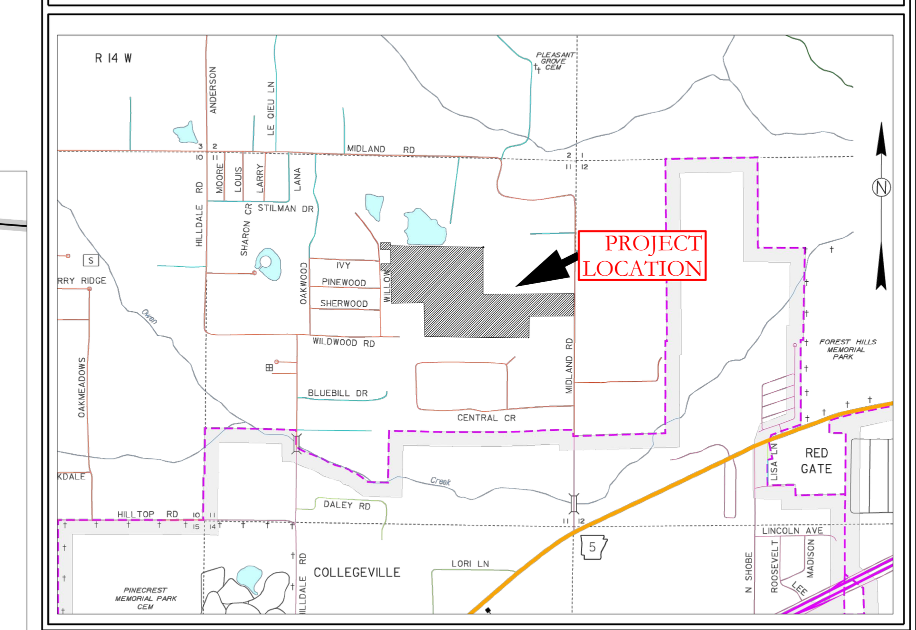
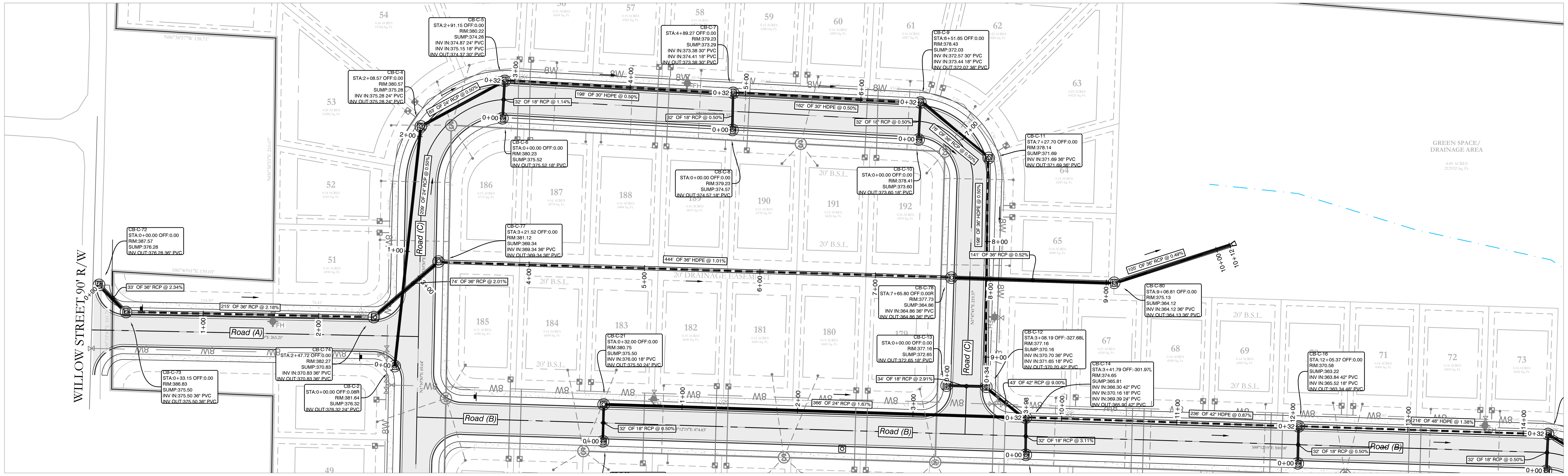
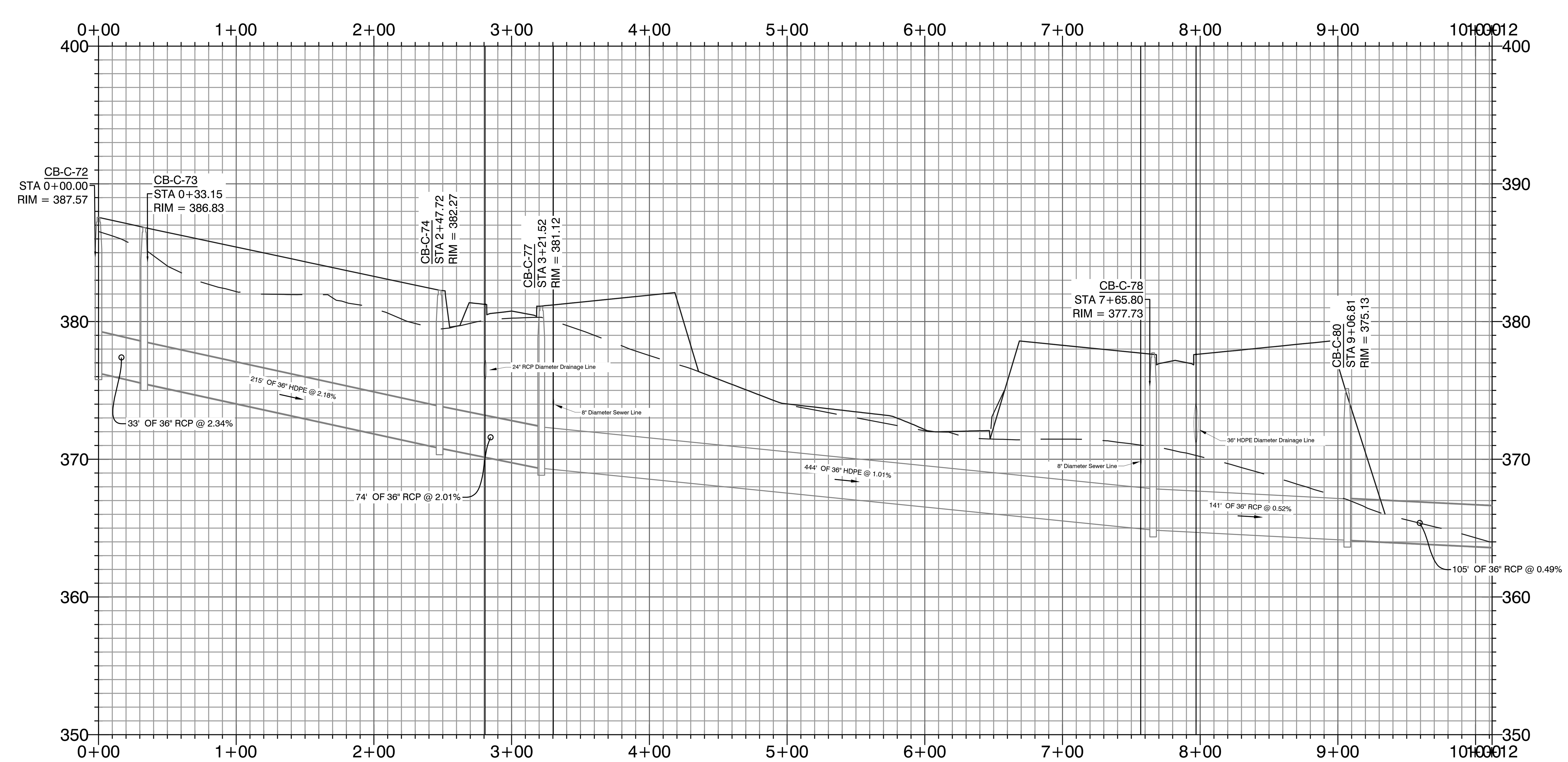




External Discharge (Storm Water) PROFILE



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BASIS OF BEARING:
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COORDINATE SYSTEM, SOUTH ZONE BY
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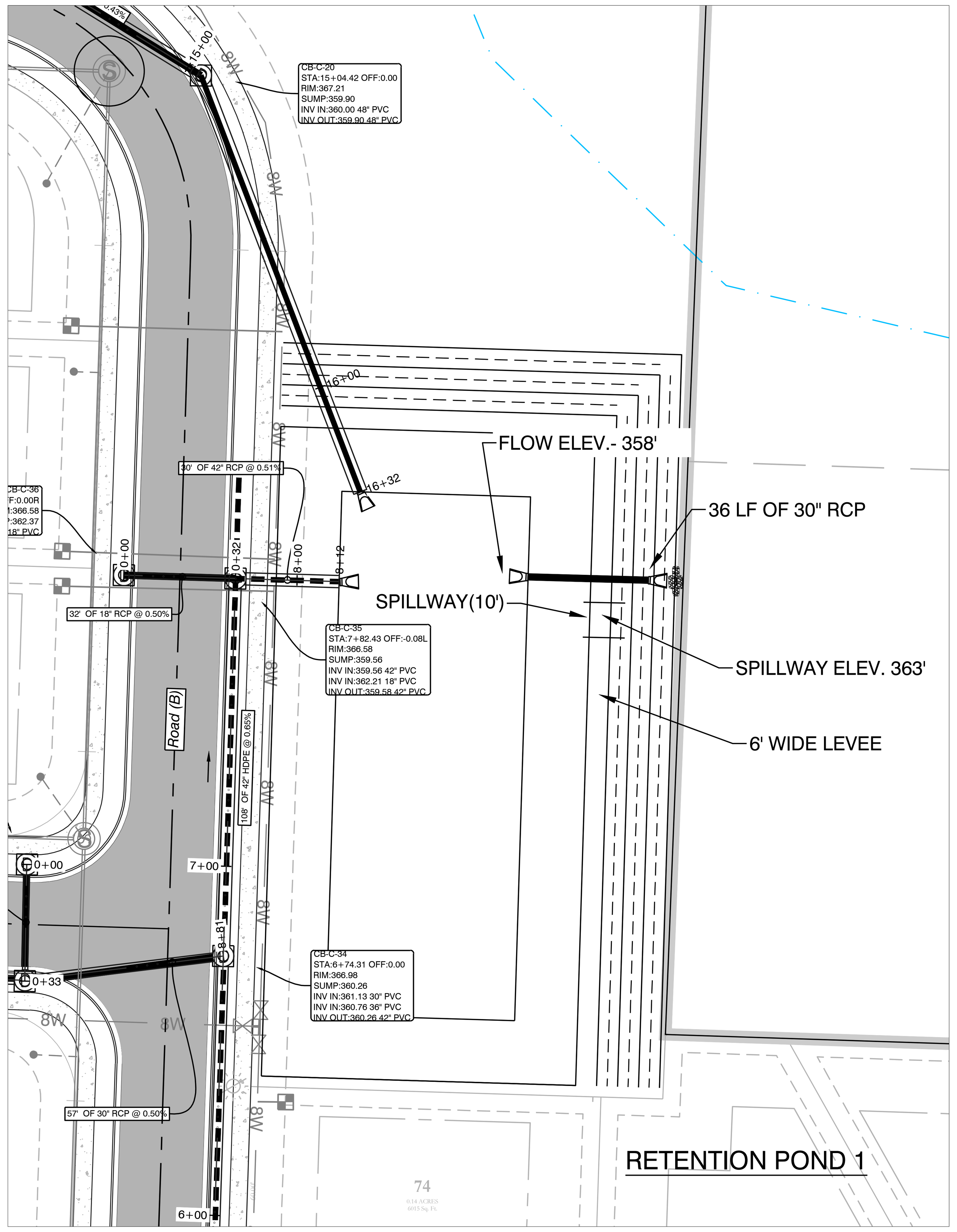
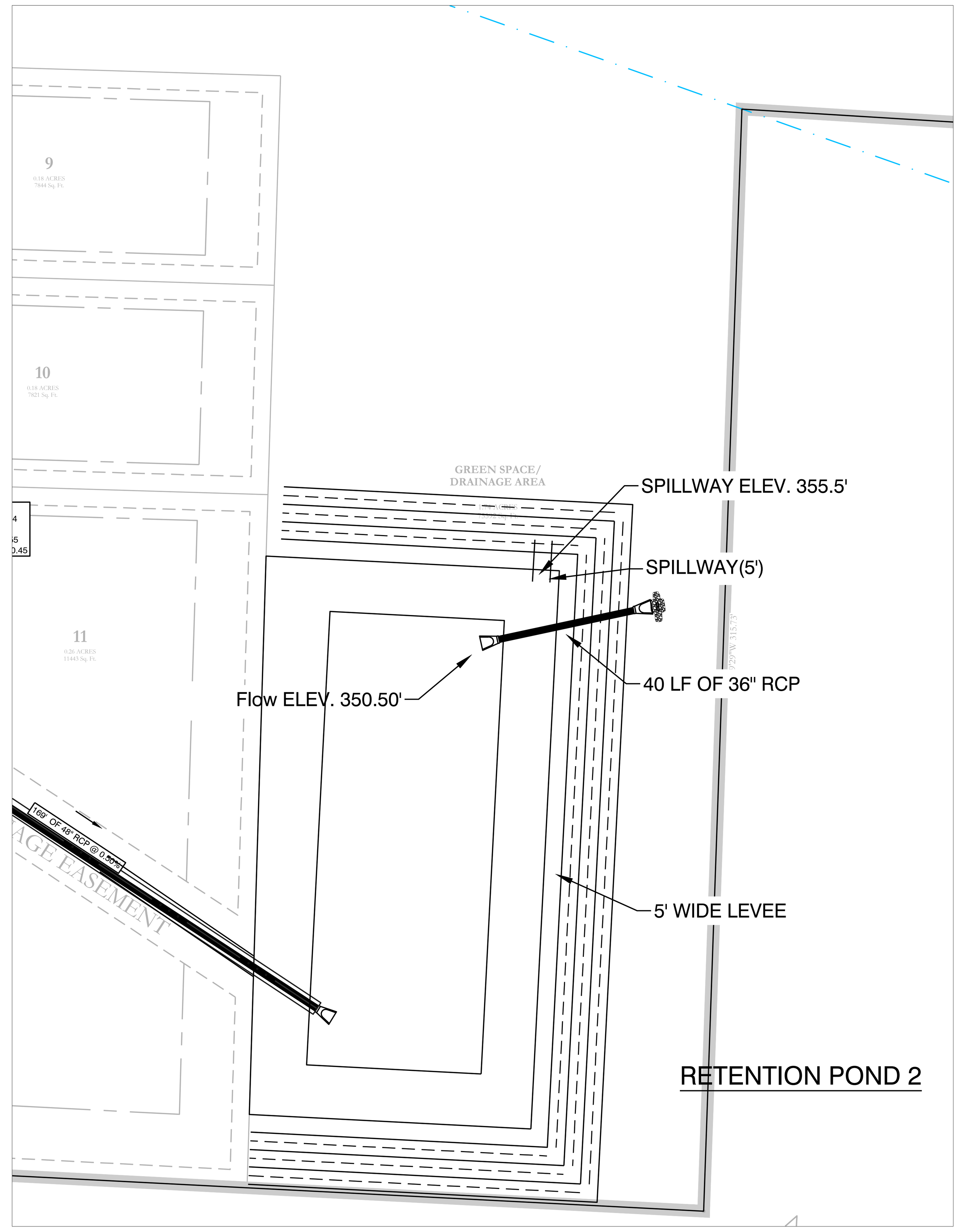
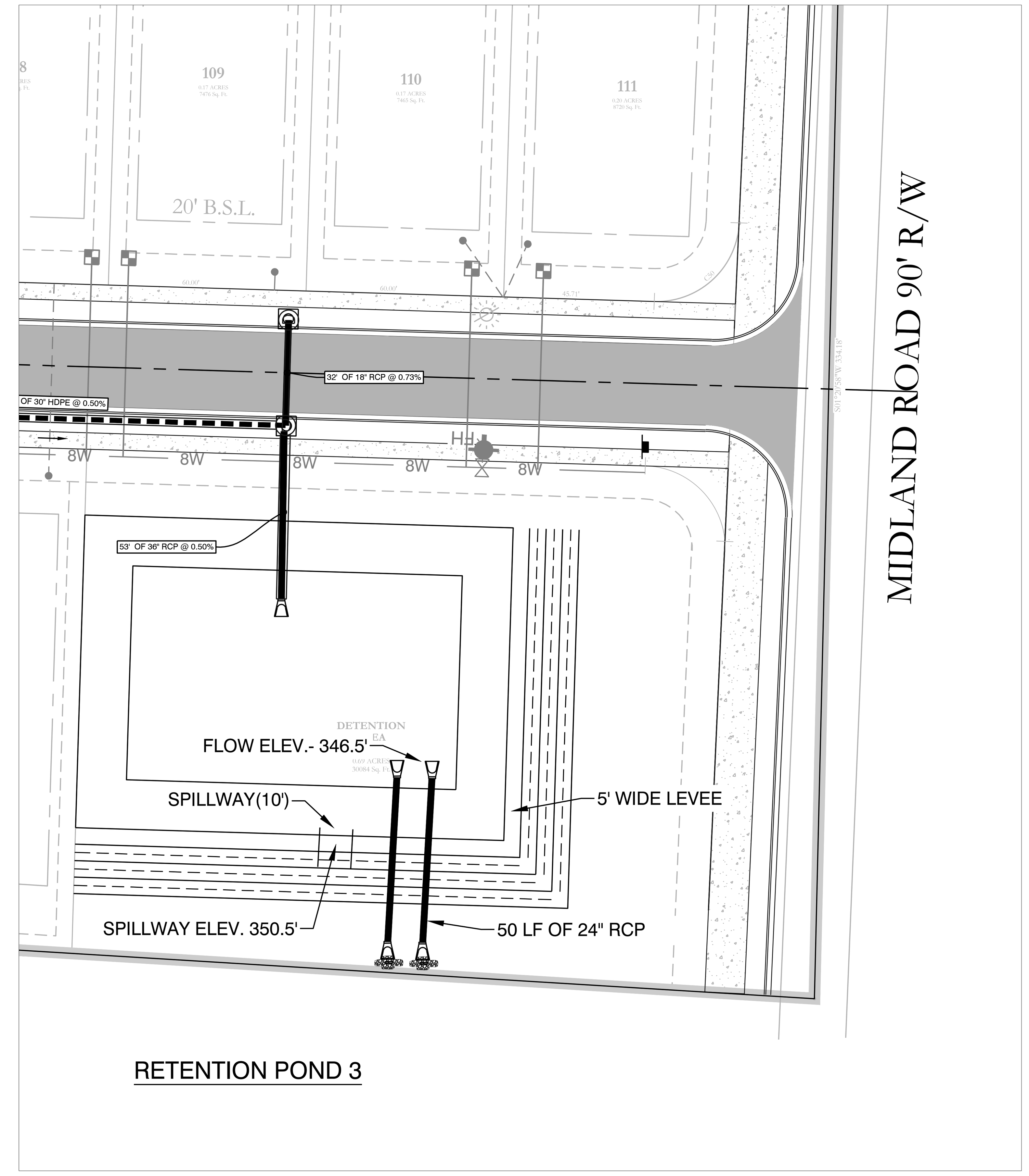
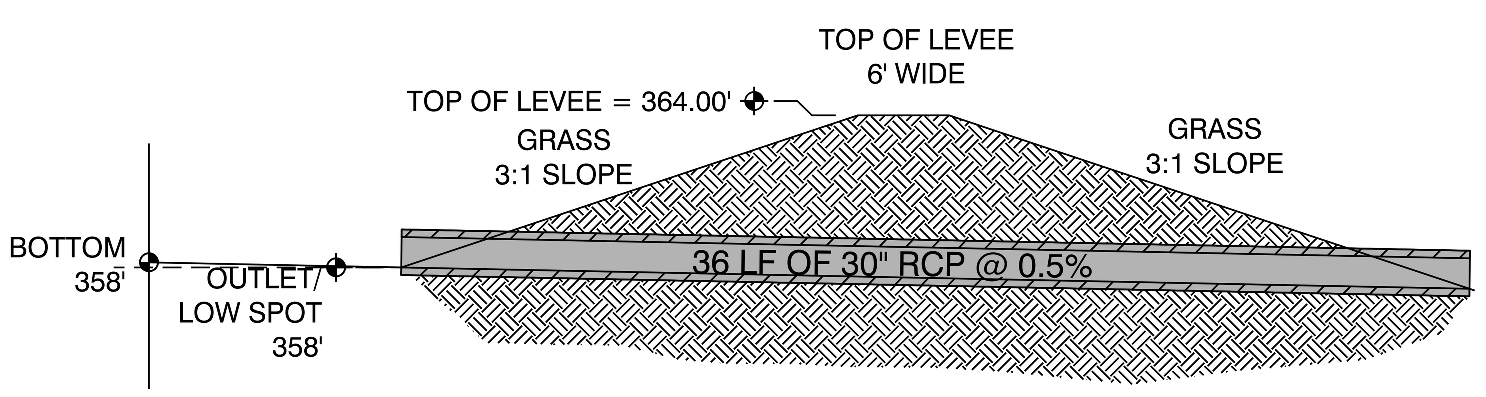
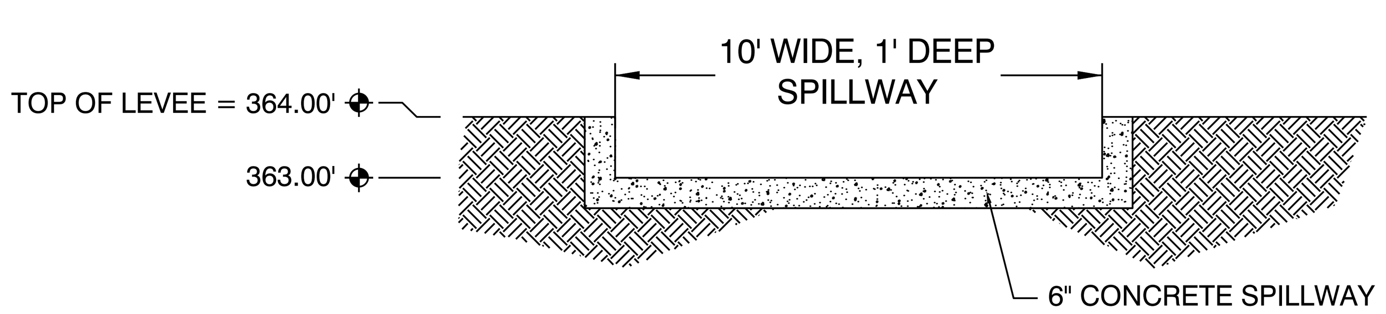




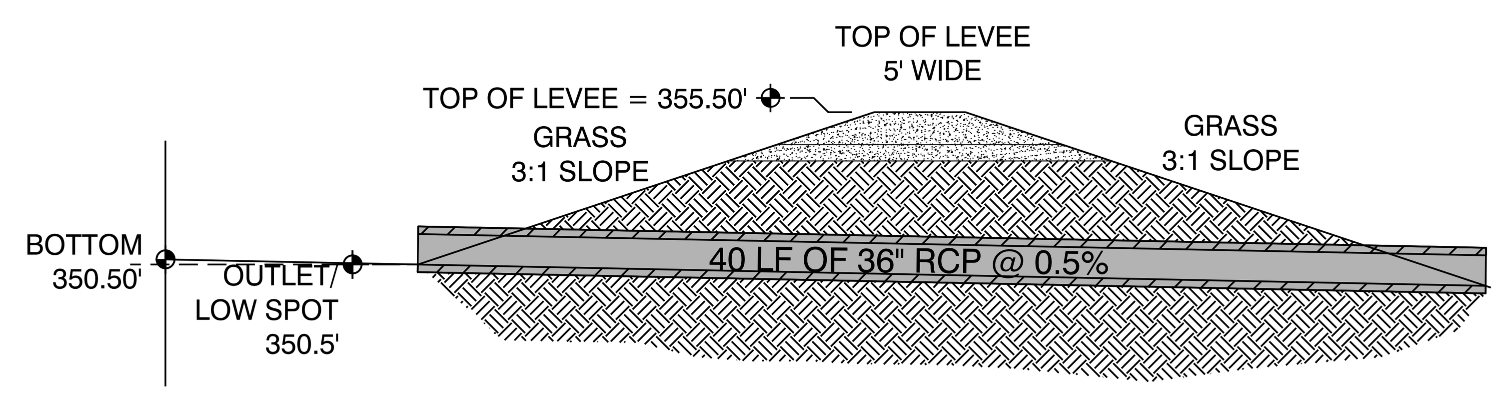




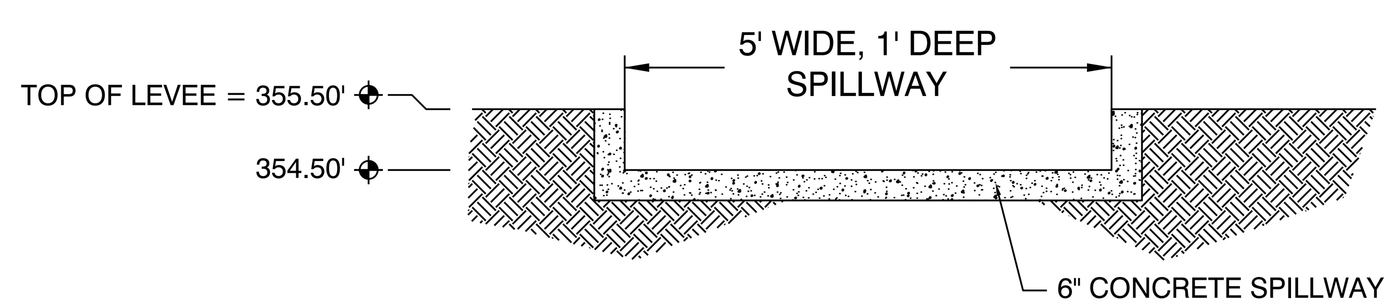
OUTLET PROFILE
NTS



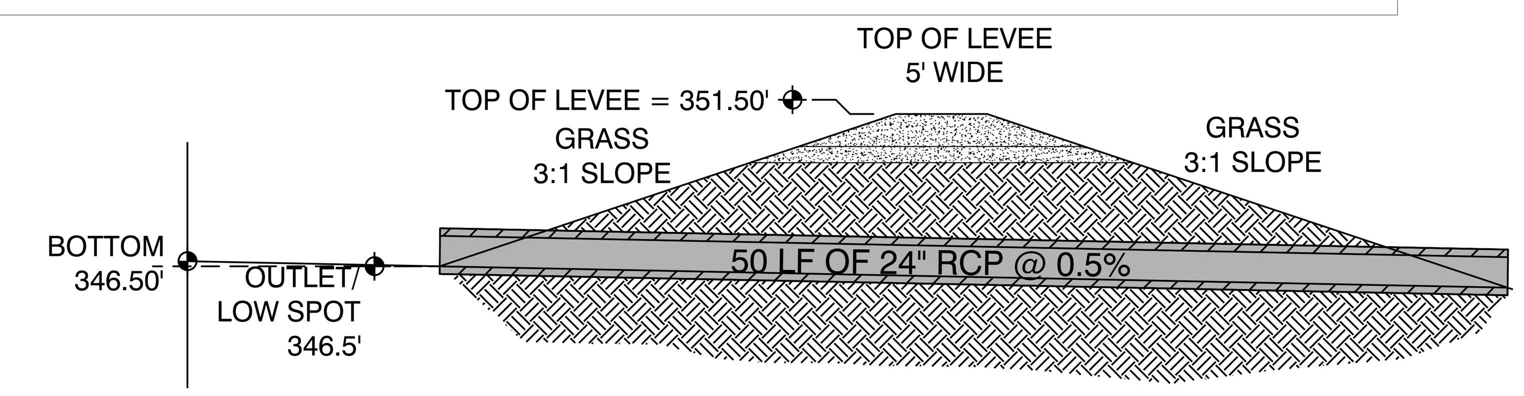
SPILLWAY END VIEW
NTS



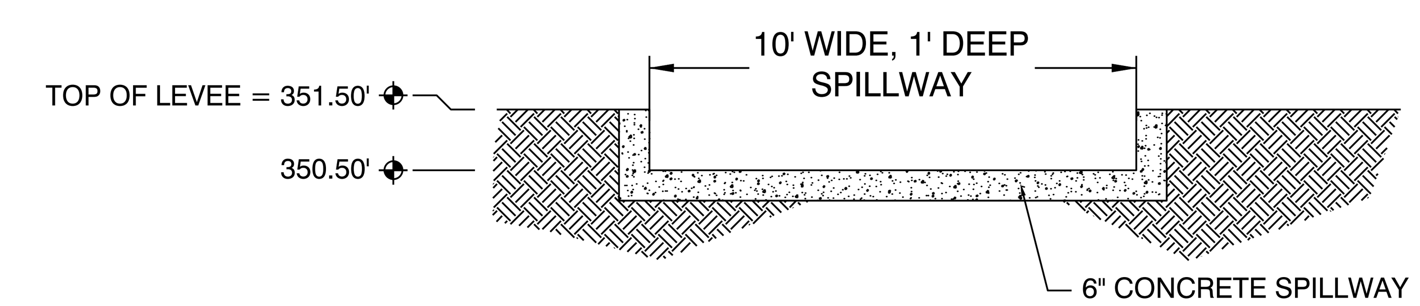
OUTLET SECTION
NTS



SPILLWAY END VIEW
NTS



OUTLET SECTION
NTS



SPILLWAY END VIEW
NTS

DETENTION POND MAINTENANCE PLAN

Background
There will be three retention ponds in this project.The retention ponds are located at the NW Corner, SW Corner, and SE Corner of the subject property. It is 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. 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 pond area and discharge pipe 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.

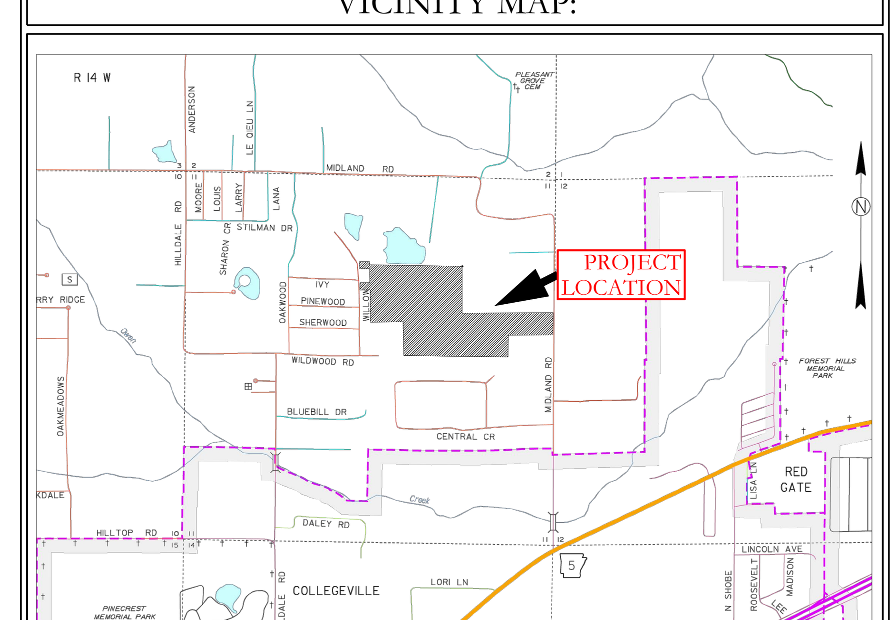
-Stabilization or re-grading of side slopes may be required periodically or after excessive rain events. Any disturbance of slopes should be reseeded or may require installation of erosion control materials until seeding can reestablish adequate grasses to prevent future erosion.

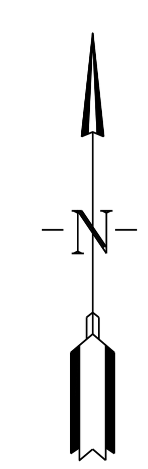
-Any other maintenance or repairs which would minimize other maintenance to the pond or outfall structures.

For questions or concerns about Tract "A", contact at 501-.

HDPE
RCP

VICINITY MAP:





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

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MIDLAND ROAD
RETENTION PLAN
BRYANT, SALINE COUNTY, ARKANSAS

DATE:	4/19/2023	C.A.D. BY:		DRAWING NUMBER:
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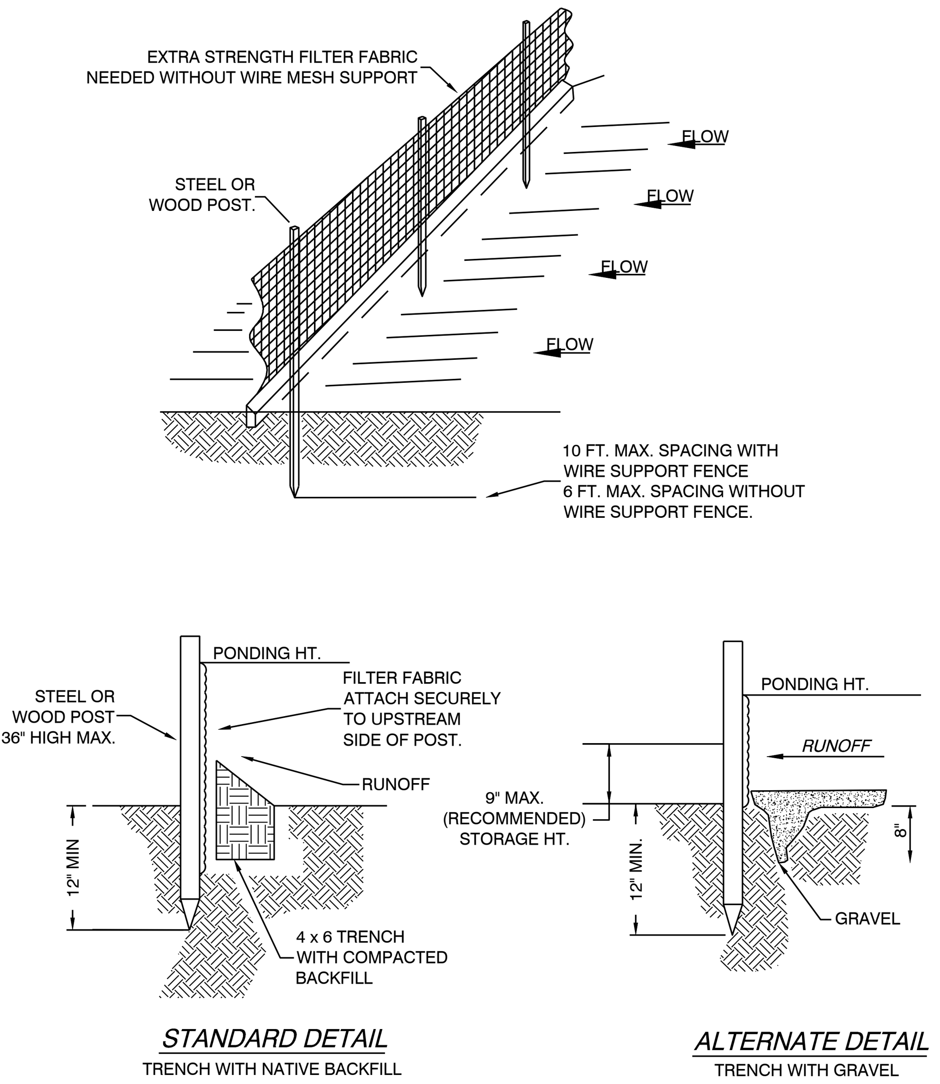
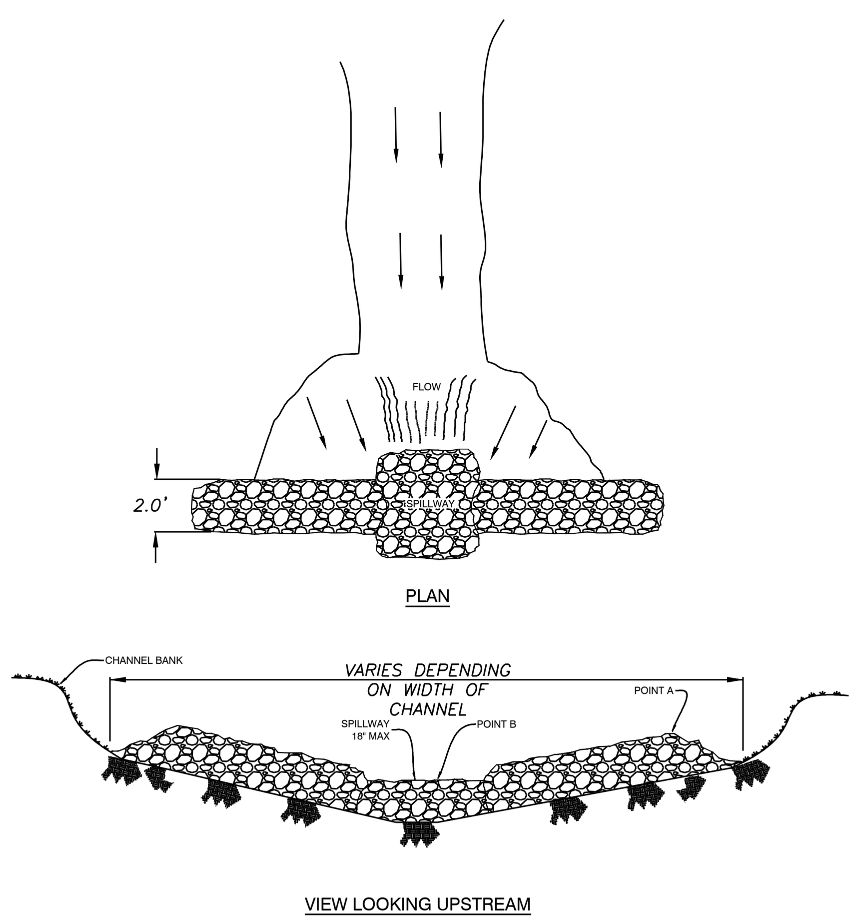


NOTE:
1.) INSPECT AND REPAIR FENCE AFTER EACH STORM EVENT AND REMOVE SEDIMENT WHEN NECESSARY.

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.

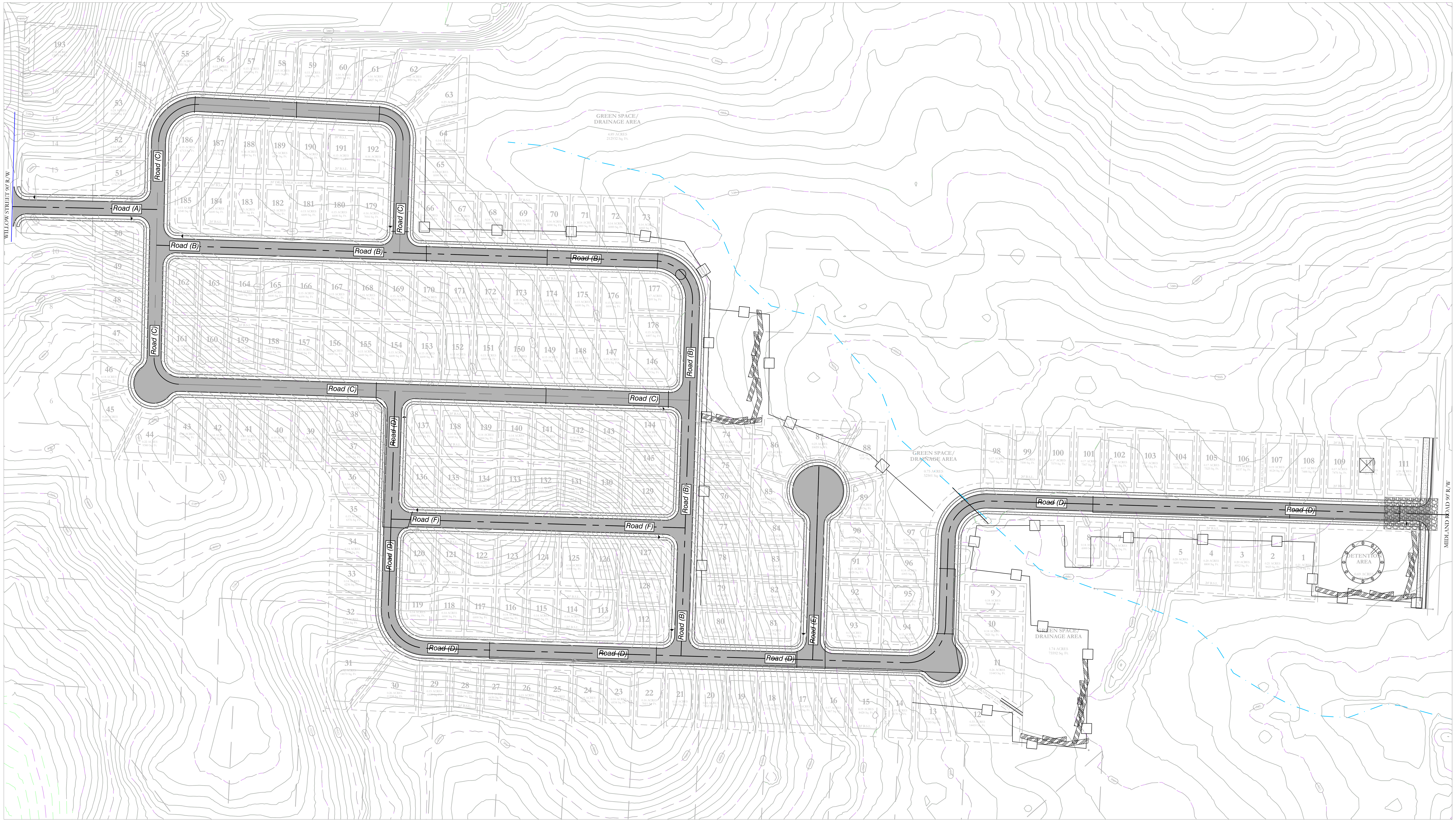
SILT FENCE



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



ERC LEGEND

SITE POSTING

DISTURBED AREA

CONC. WASHOUT DETENTION AREA

SILT FENCE

RIP RAP CHECK DAM

CONSTRUCTION ENTRANCE

EROSION CONTROL NOTES

SOD OR SEED DETENTION AREA POST–CONSTRUCTION (IF APPLICABLE)

MAXIMUM SLOPE OF 3H:1V ON DETENTION POND LEVEES

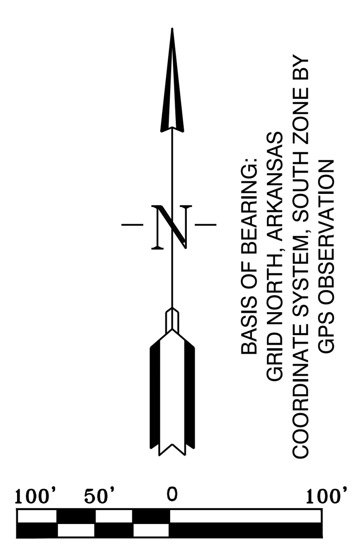
CONTRACTOR MUST HAVE INLET PROTECTION MEASURES INSTALLED IMMEDIATELY AFTER CONSTRUCTION OF DRAINAGE INLETS/STRUCTURES IS COMPLETE. SEDIMENT BARRIERS SHALL BE MAINTAINED THROUGHOUT AND INSPECTED THROUGHOUT CONSTRUCTION PROCESS UNTIL PROJECT IS COMPLETE

RIP RAP SEDIMENT BARRIERS SHALL BE USED AT ALL STORMWATER DISCHARGE POINTS SHOWN ON PLANS ASAP

CONTRACTOR SHOULD WORK WITH ENGINEER TO ESTABLISH EFFECTIVE AND EFFICIENT PLAN TO PREVENT SEDIMENT RUNOFF BY DETERMINING WHERE SILT FENCING OR OTHER TYPES OF CONTROLS ARE NECESSARY

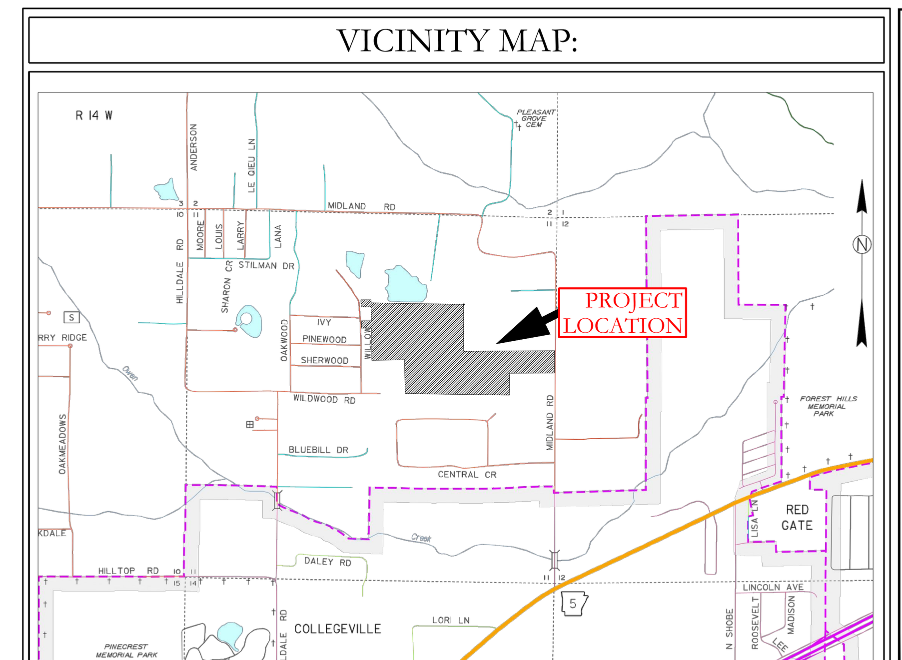
SOME EROSION CONTROL MEASURES, SILT FENCING, OR CHECK DAMS MAY NOT BE NECESSARY DURING INITIAL ROW CLEARING BUT MAY BE NEEDED ONCE LOT CLEARING AND HOME BUILDING BEGINS

EXISTING VEGETATION WILL ONLY BE REMOVED INSIDE ROW AND WITHIN HOUSE FOOTPRINTS AS THEY ARE CONSTRUCTED. ADDITIONAL SILT FENCING WILL BE ADDED TO INDIVIDUAL LOTS AS HOME CONSTRUCTION TAKES PLACE.



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

VICINITY MAP:



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MIDLAND ROAD
EROSION CONTROL PLAN
BRYANT, SALINE COUNTY, ARKANSAS

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500	1S	15W	0	34	230	62	1807

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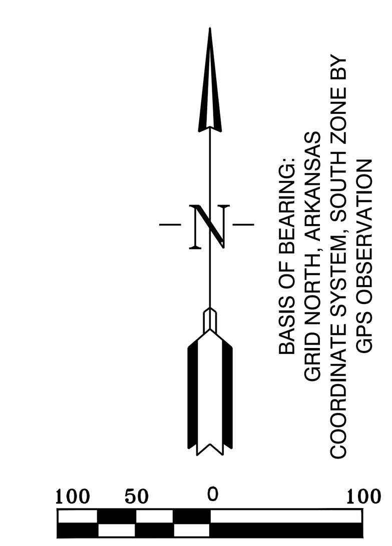

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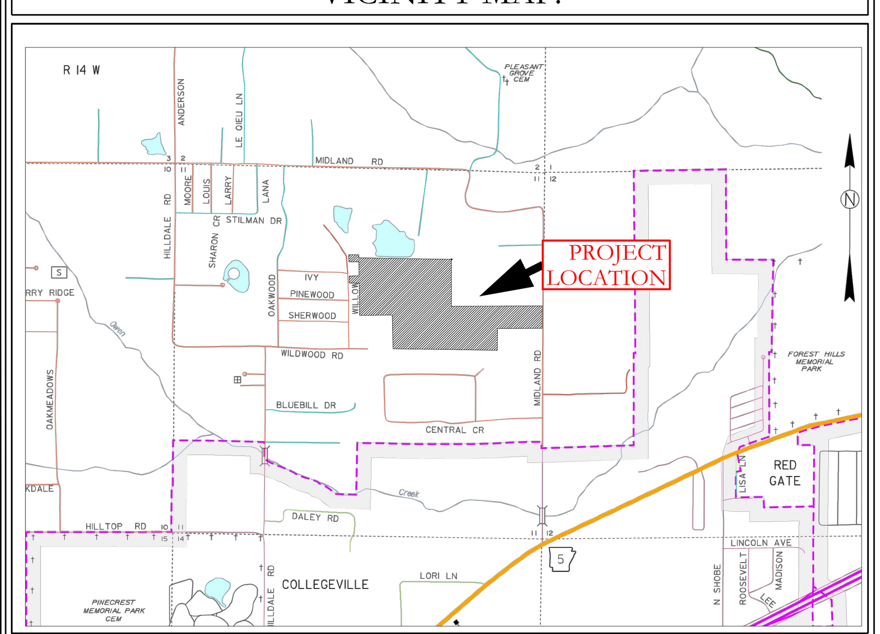
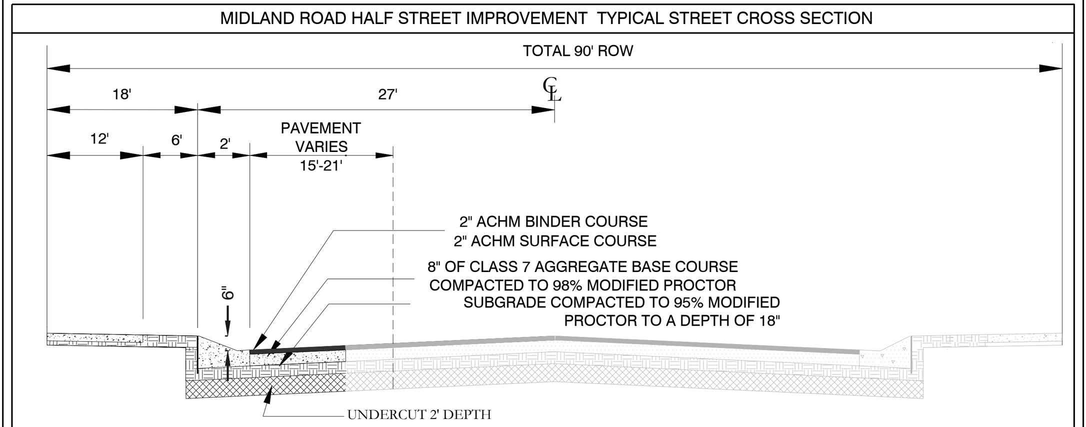
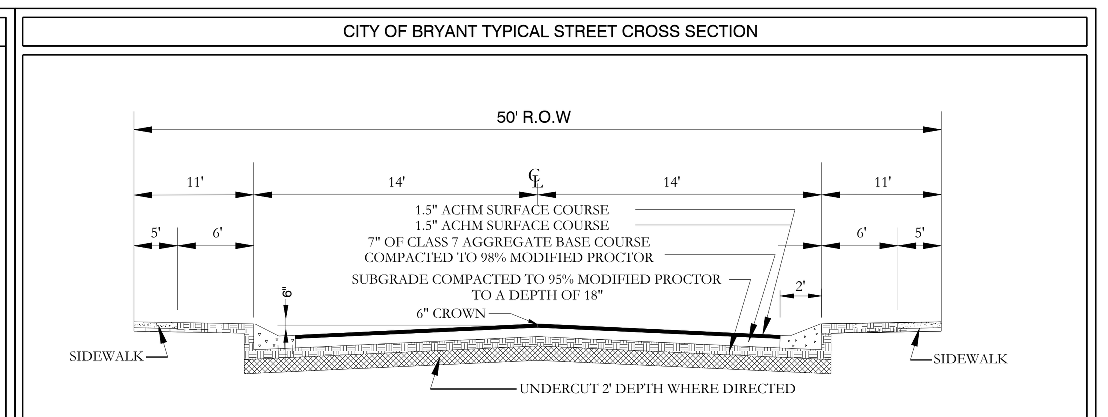


MIDLAND ROAD SUBDIVISION
STREET PLAN

MIDLAND ROAD HALF STREET IMPROVEMENT TYPICAL STREET CROSS SECTION



CITY OF BRYANT TYPICAL STREET CROSS SECTION



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MIDLAND ROAD
STREET LAYOUT
BRYANT, SALINE COUNTY, ARKANSAS

DATE:	4/18/2023	C.A.D. BY:	DRAWING NUMBER:
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SHEET:	C-1.0	SCALE:	

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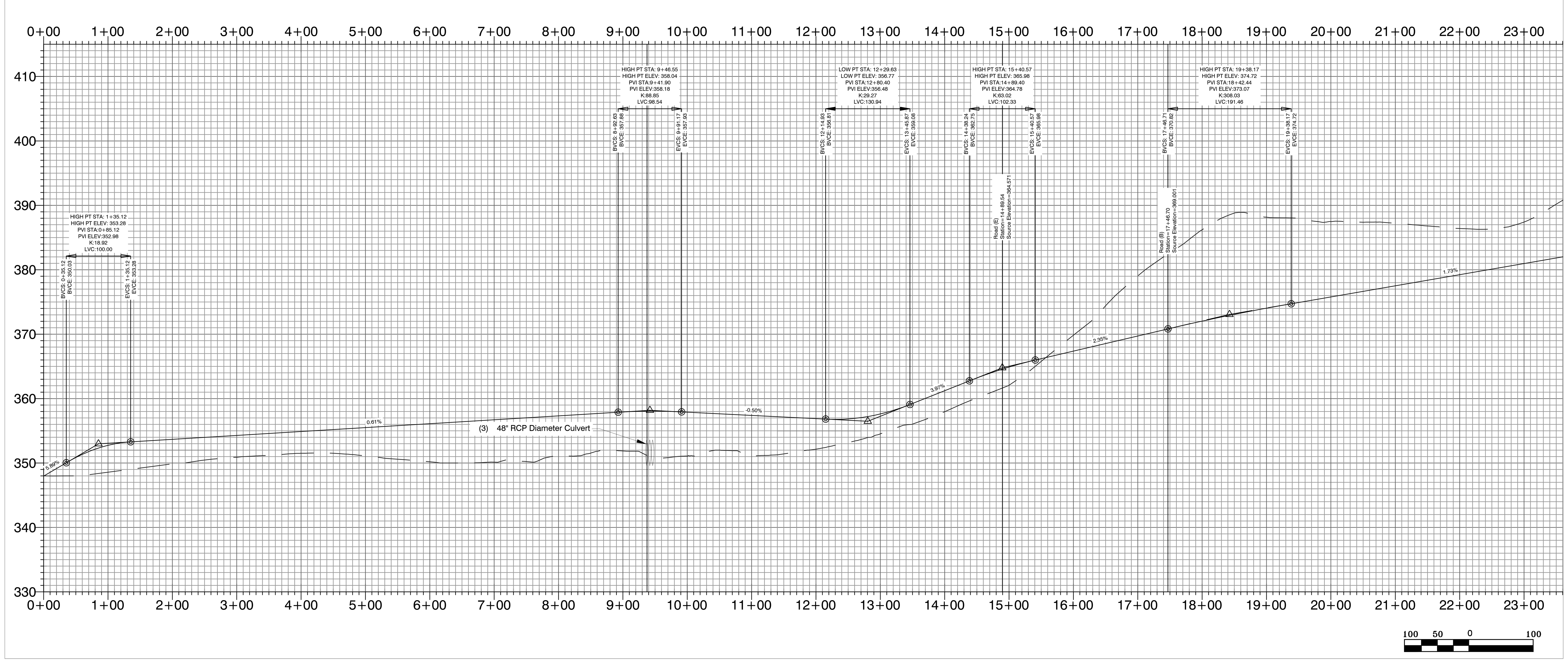
Road (D) PROFILE



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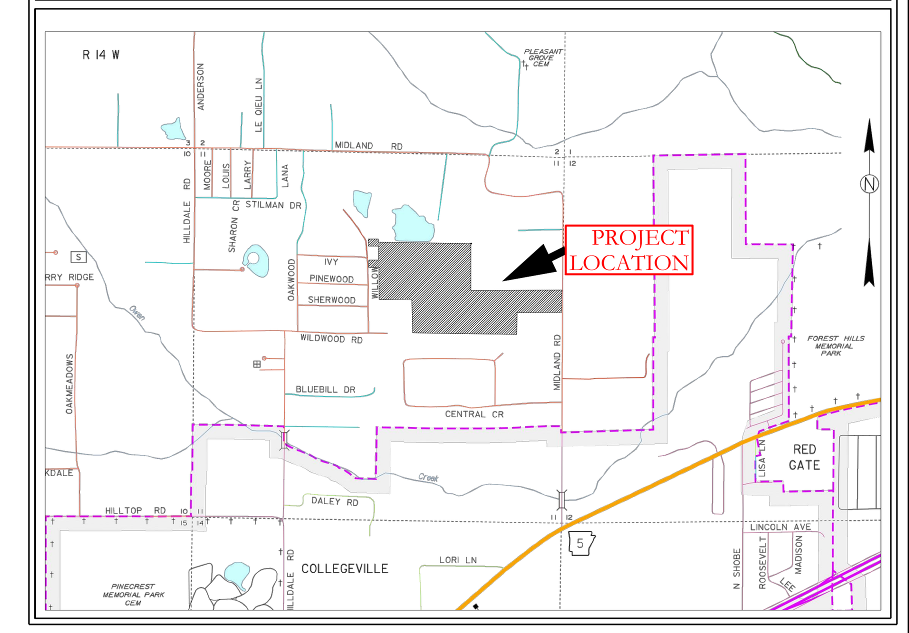

MIDLAND ROAD SUBDIVISION
STREET PLAN & PROFILES

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

50 25 0 50

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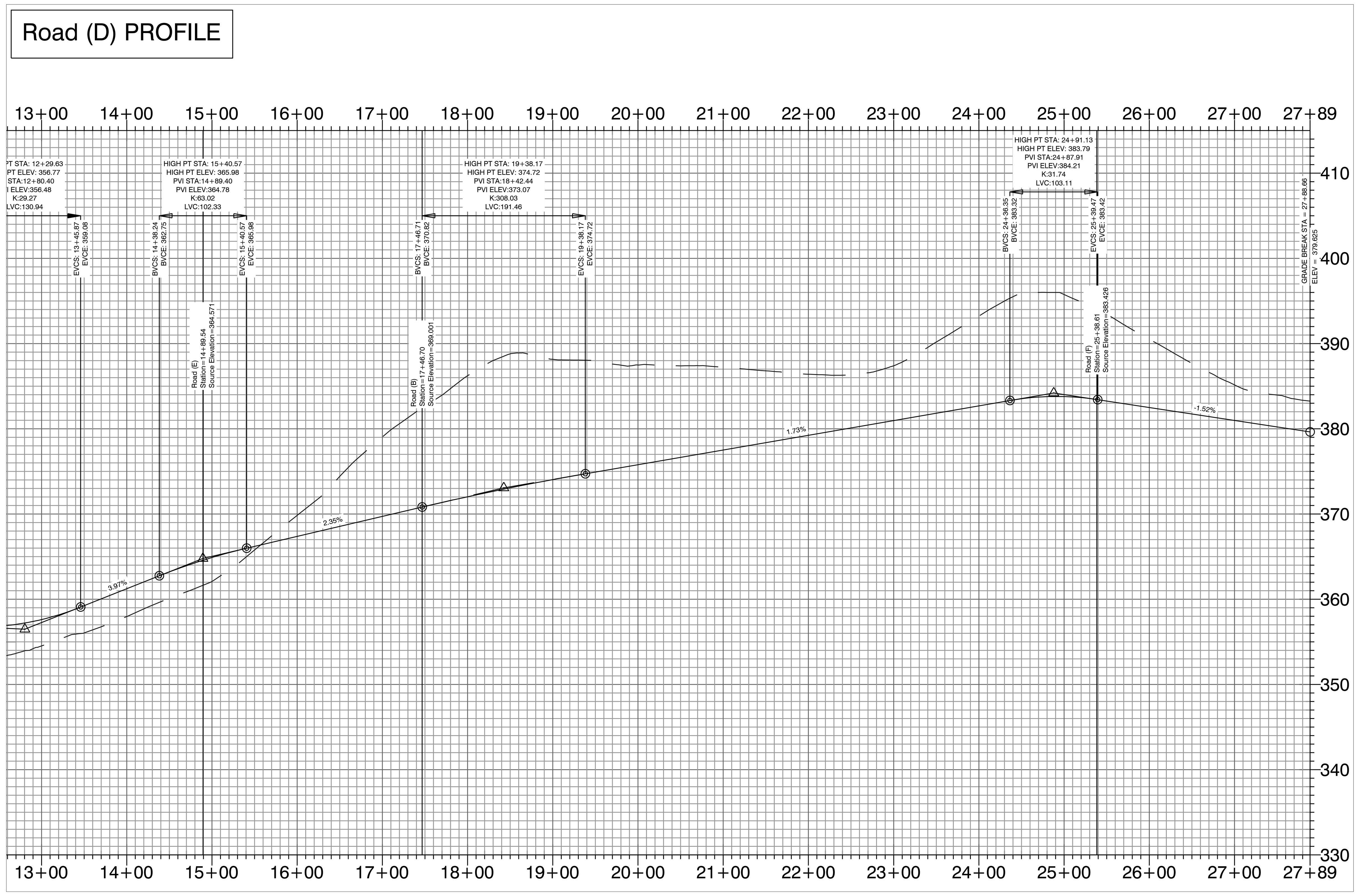

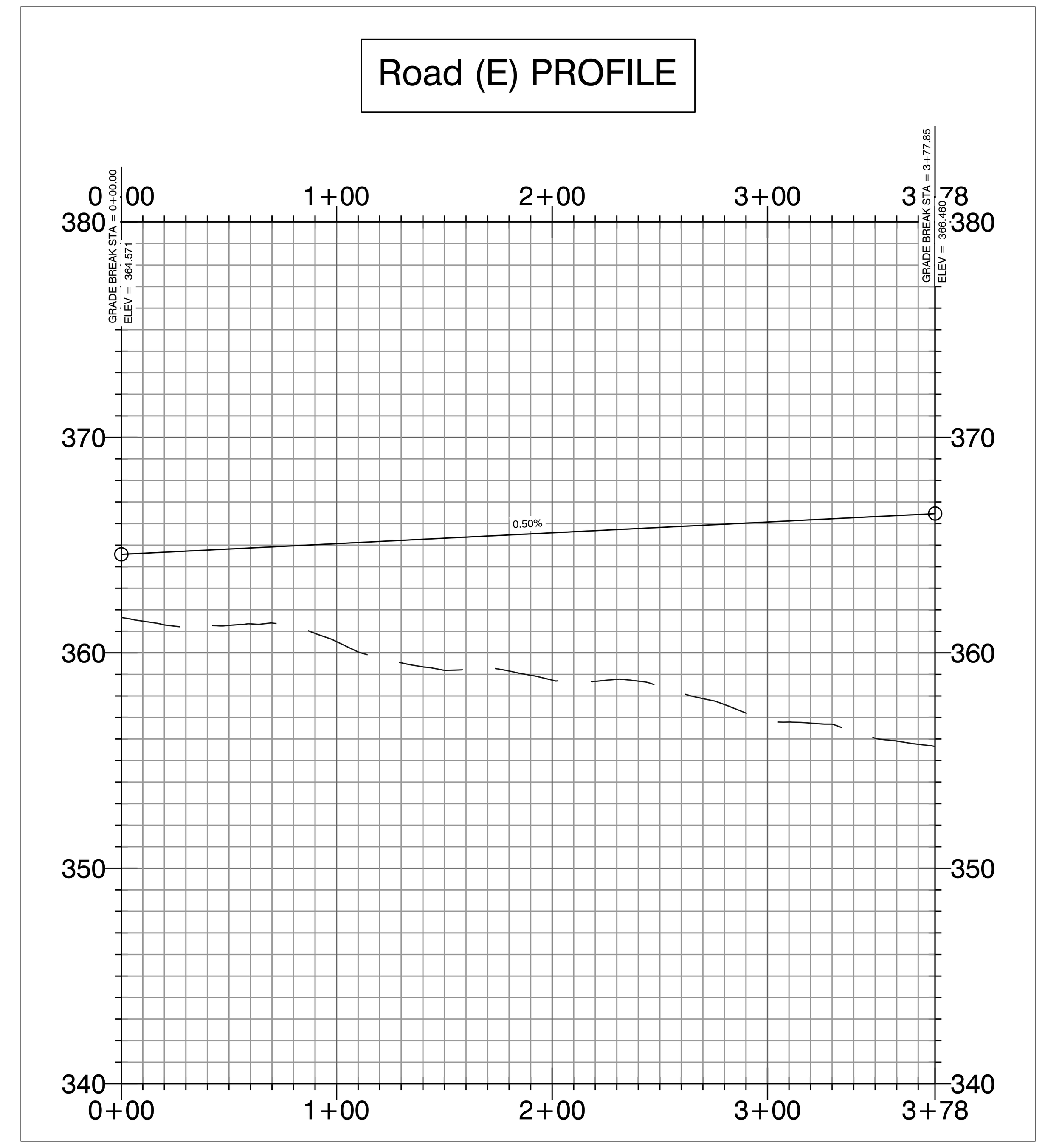

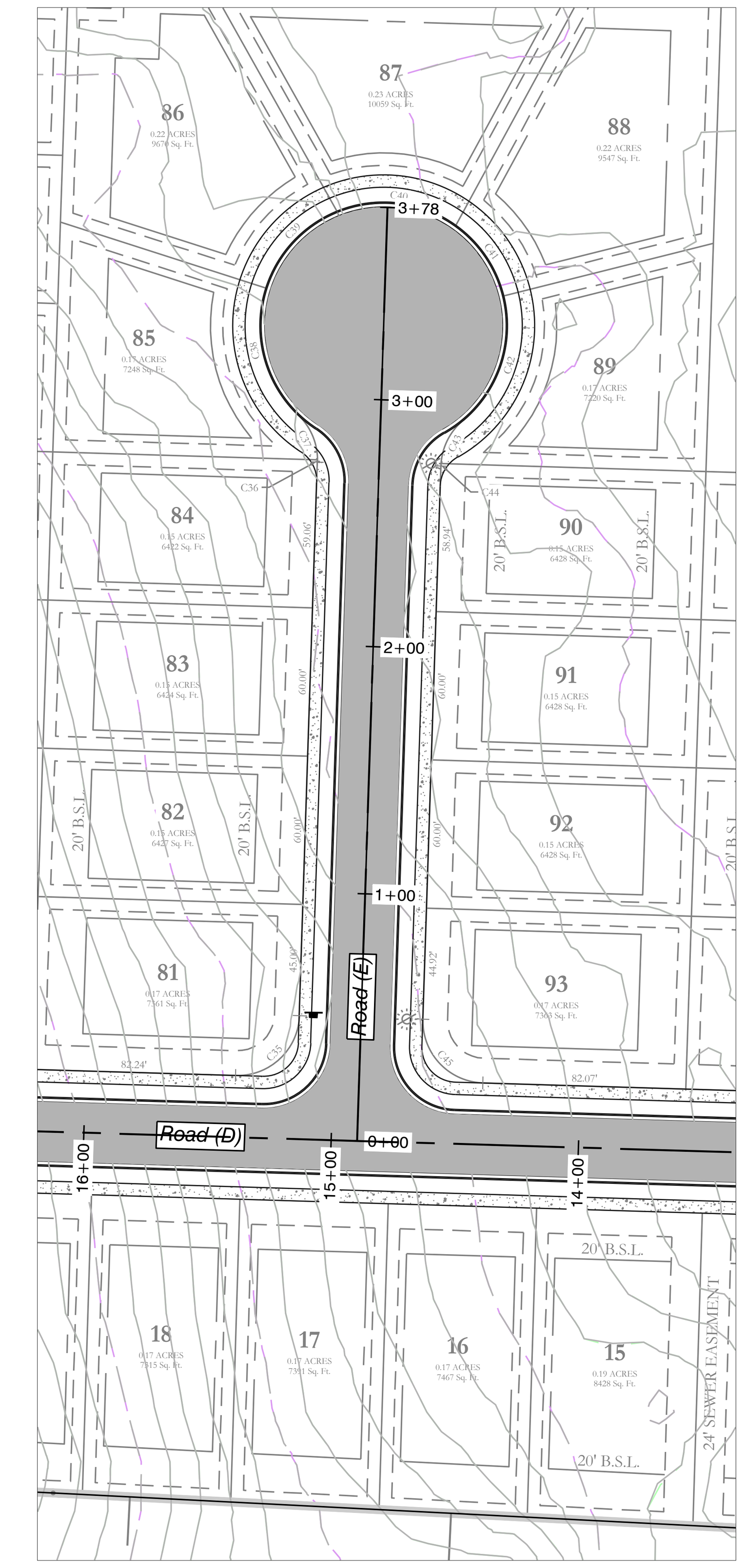

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STREET PLAN AND PROFILES
BRYANT, SALINE COUNTY, ARKANSAS

DATE:	4/18/2023	C.A.D. BY:		DRAWING NUMBER:
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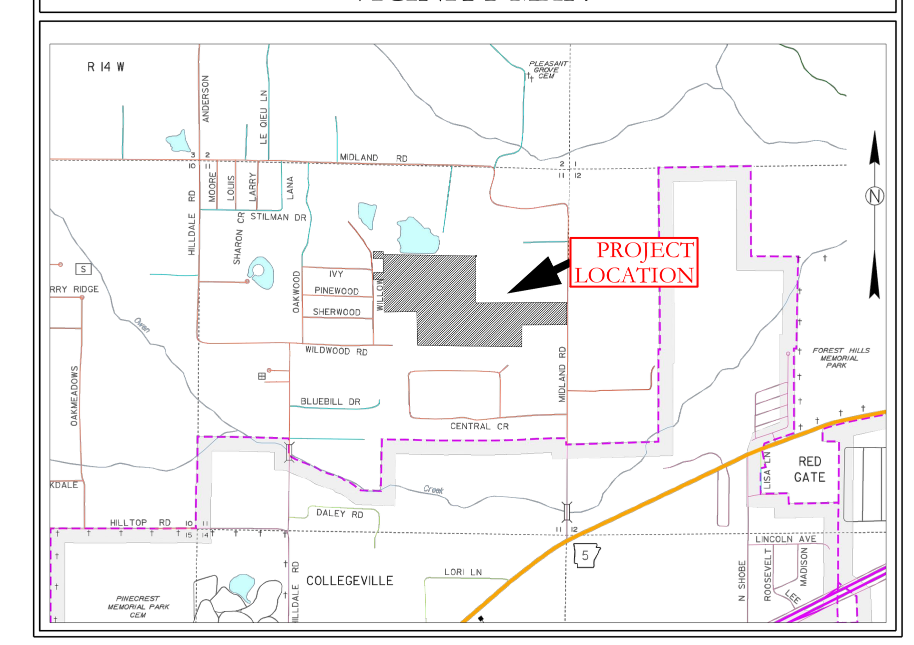

BASIS OF BEARING:
GRID NORTH, ARKANSAS
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MIDLAND ROAD SUBDIVISION
STREET PLAN & PROFILES

HOPE CONSULTING
ENGINEERS - SURVEYORS
129 North Main Street,
Benton, Arkansas 72015
PH. (501)315-2626
FAX (501) 315-0024
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FOR USE AND BENEFIT OF:
HAVEN'S DEVELOPMENT, LLC

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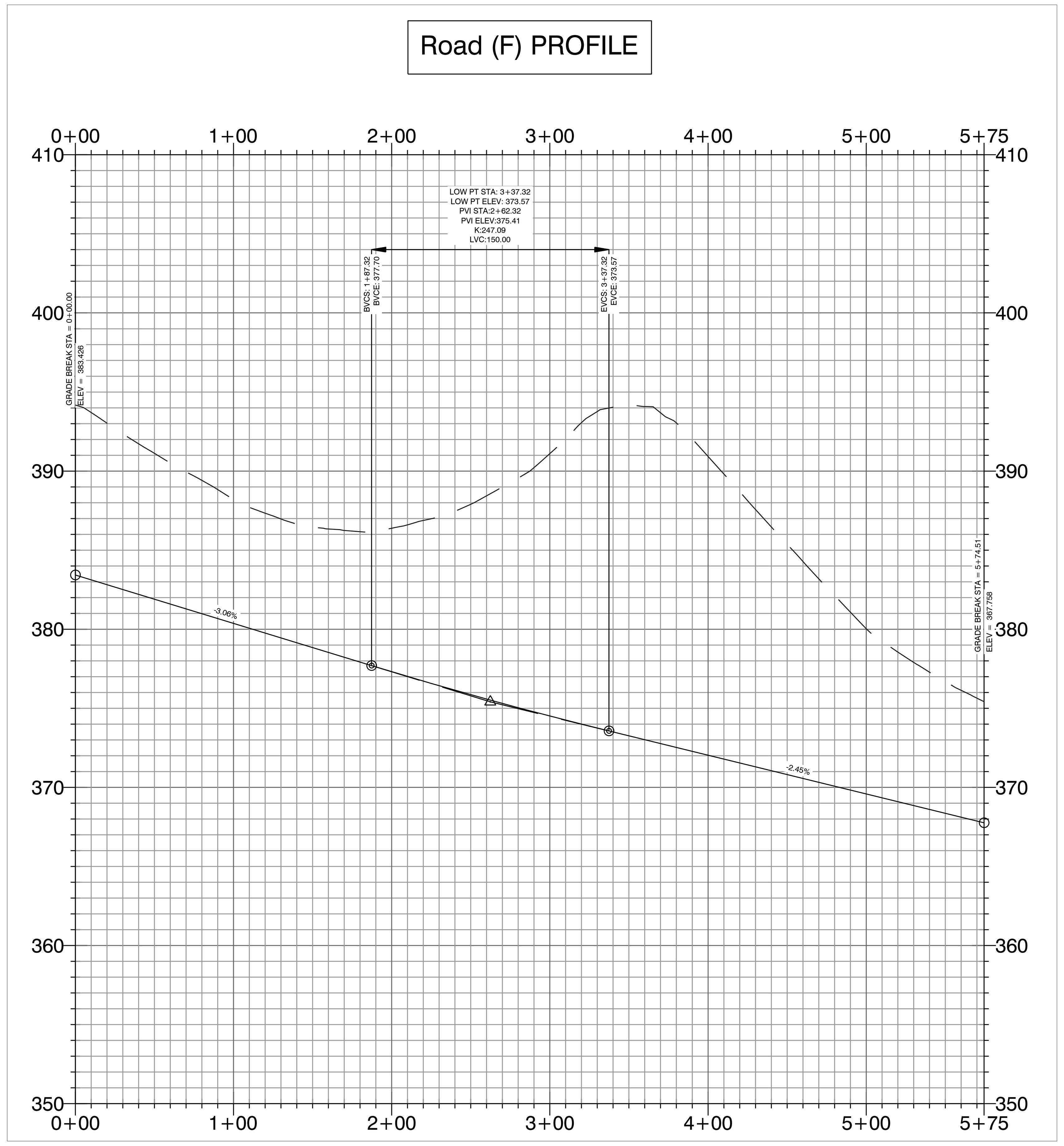
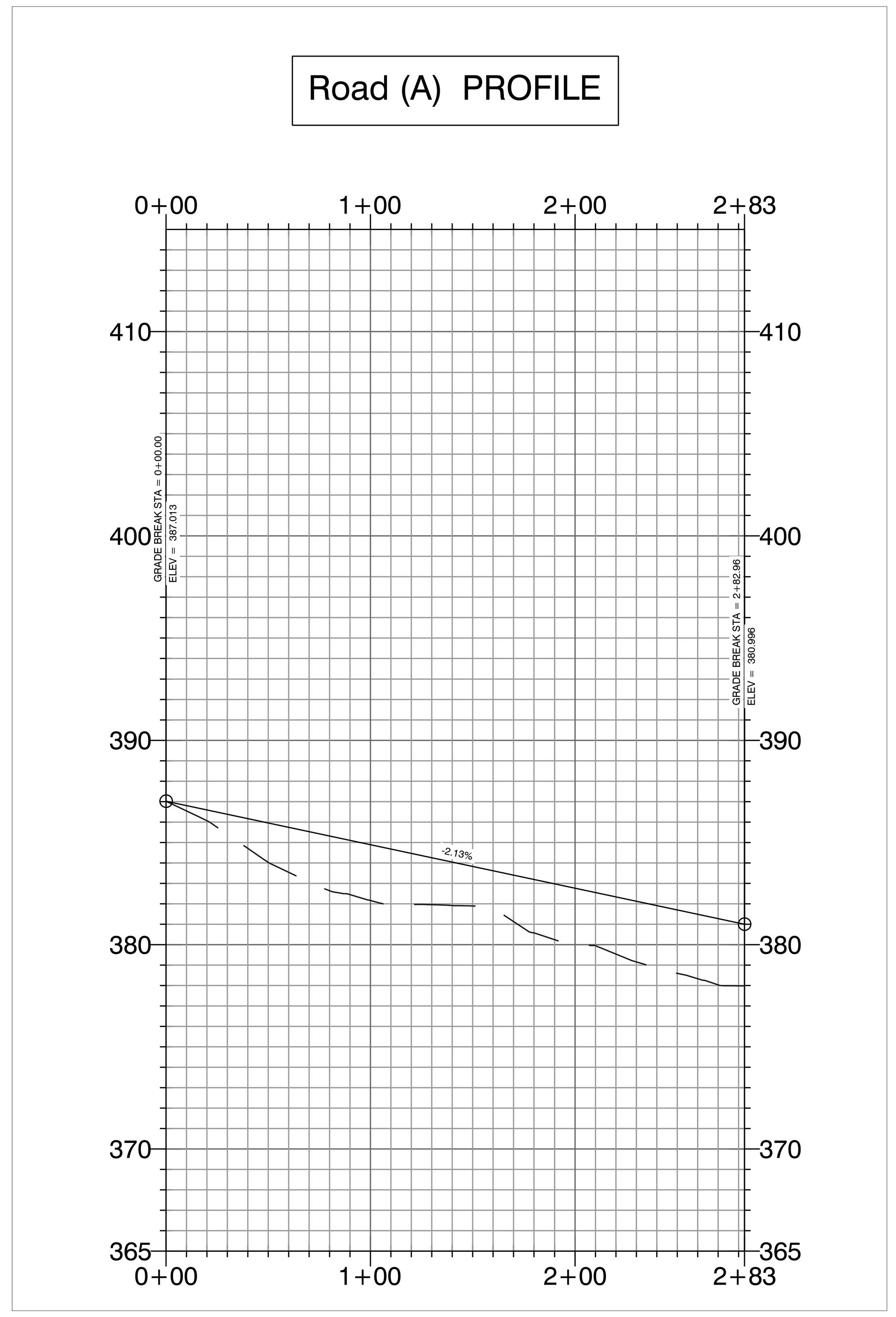
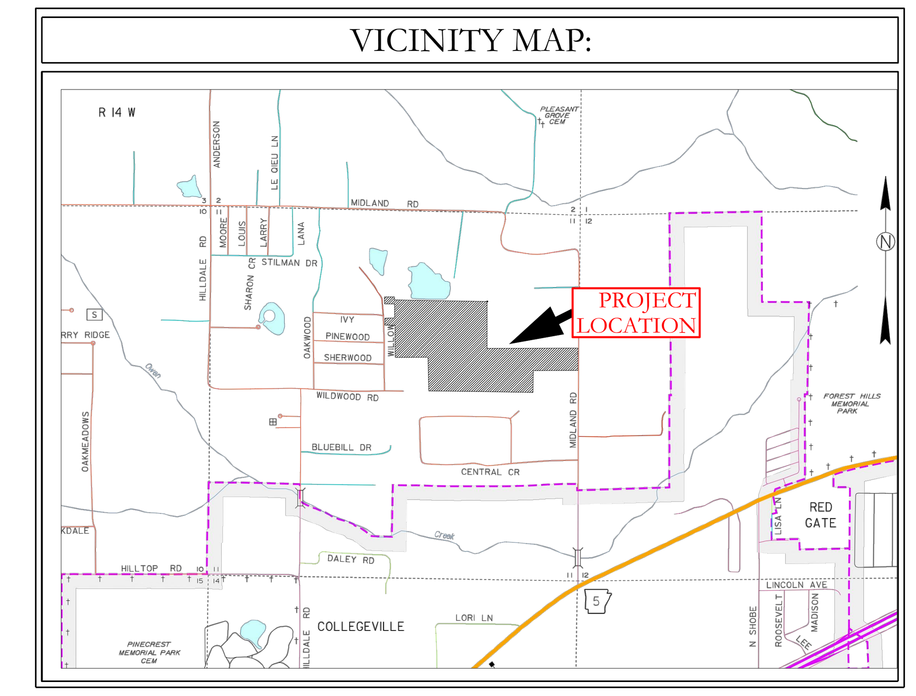
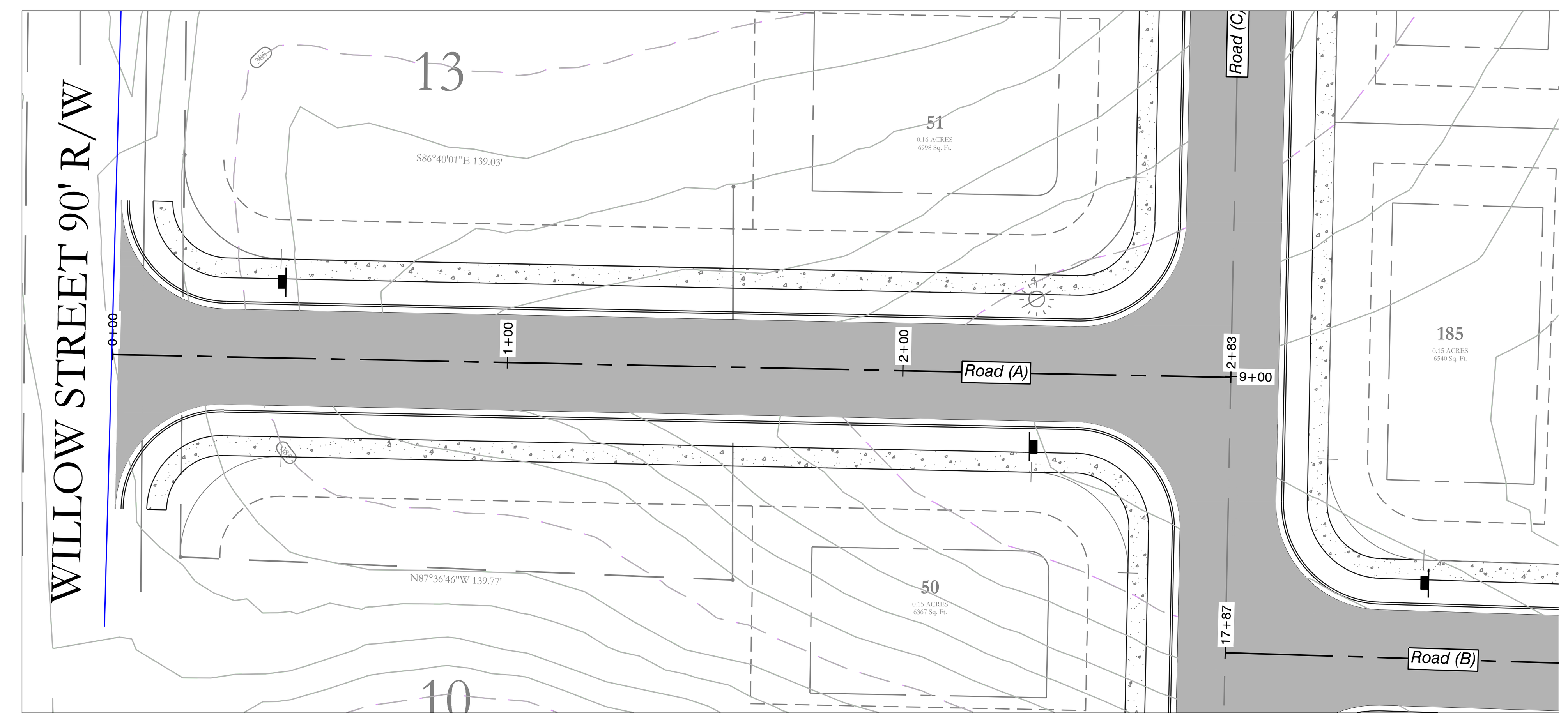
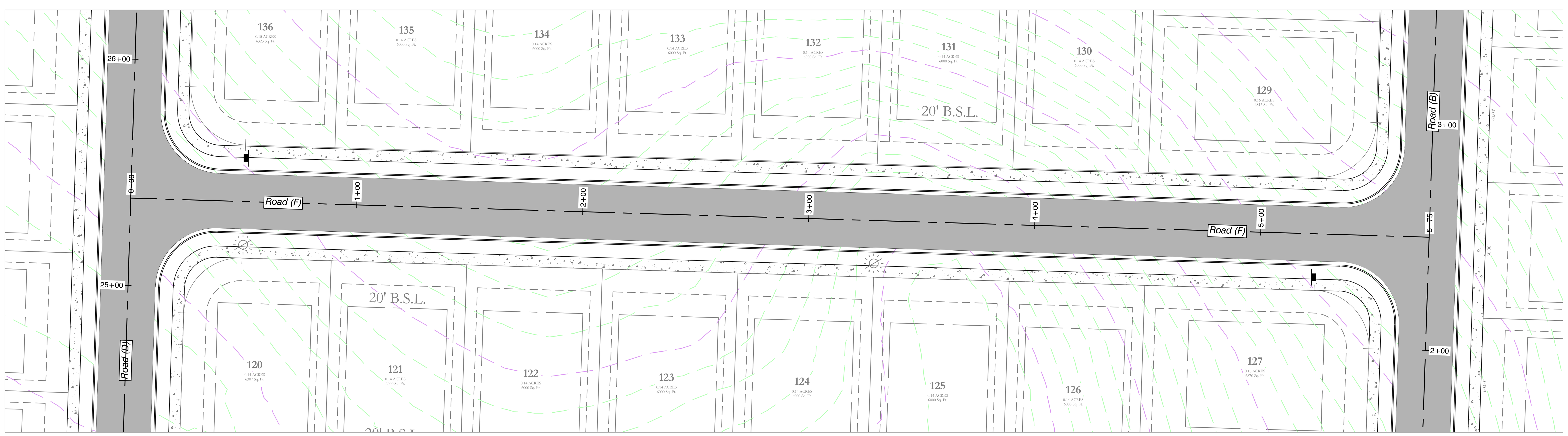
MIDLAND ROAD SUBDIVISION
STREET PLAN & PROFILES











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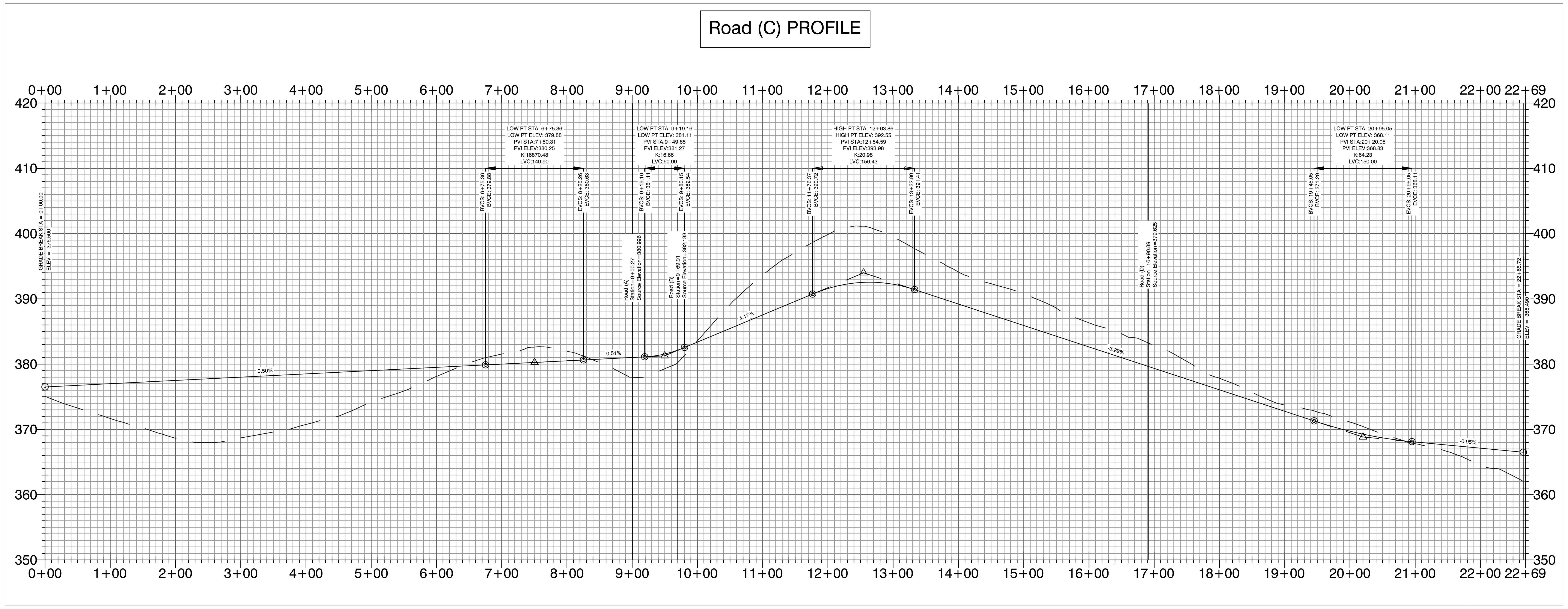

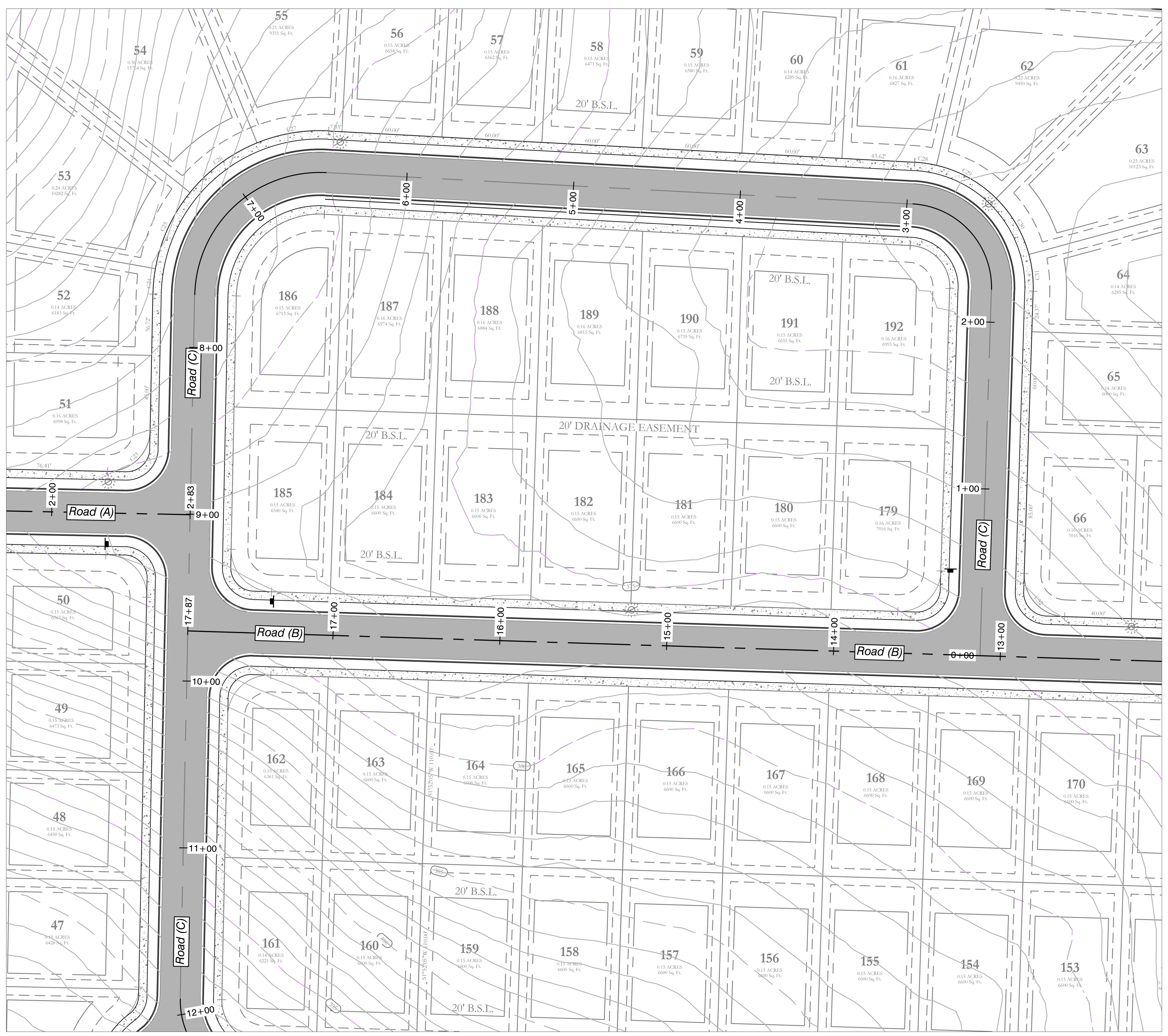

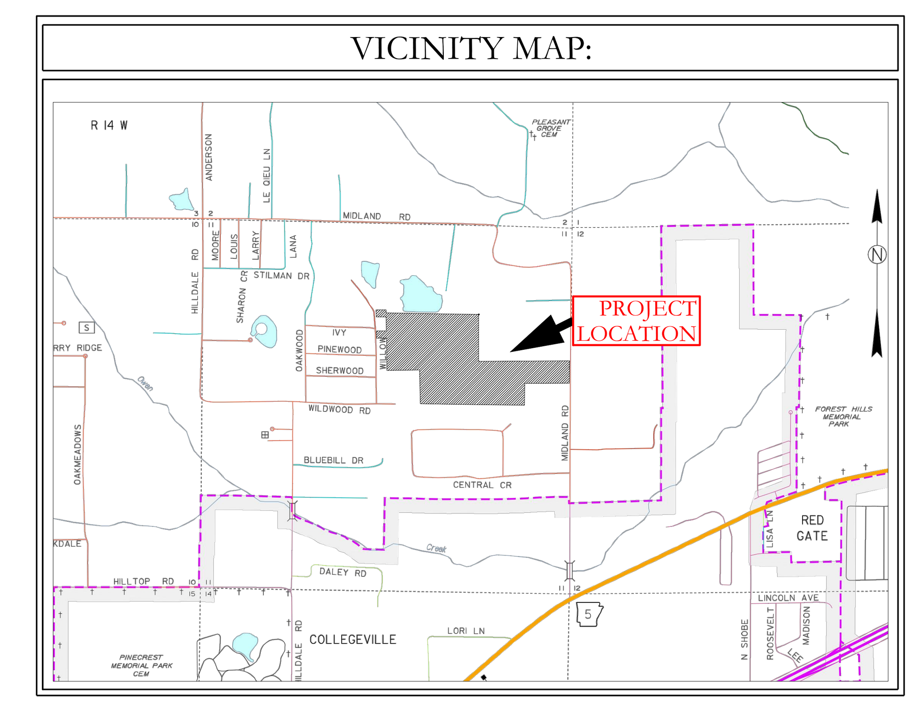

MIDLAND ROAD SUBDIVISION
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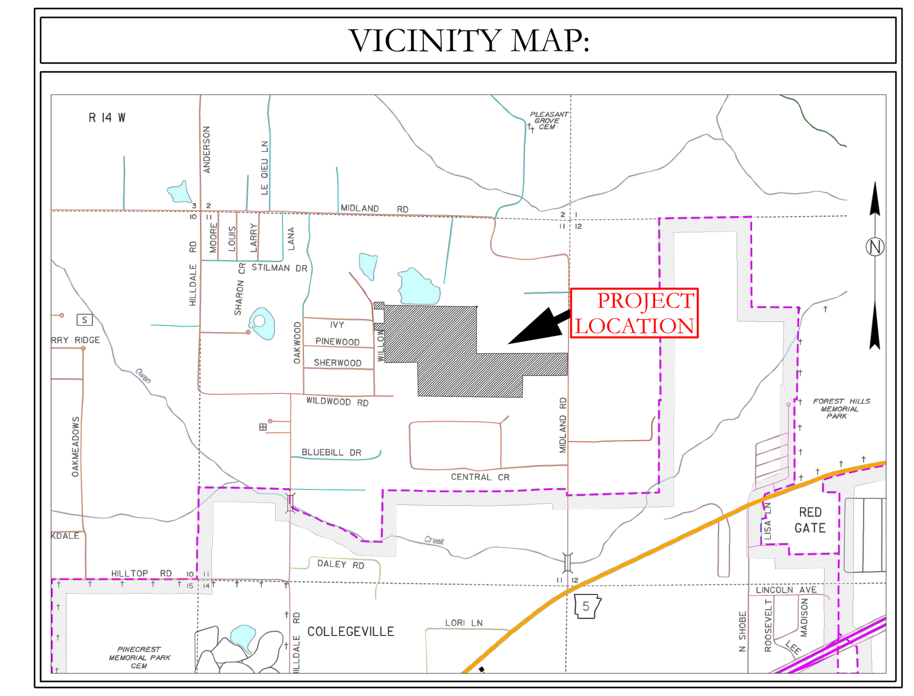

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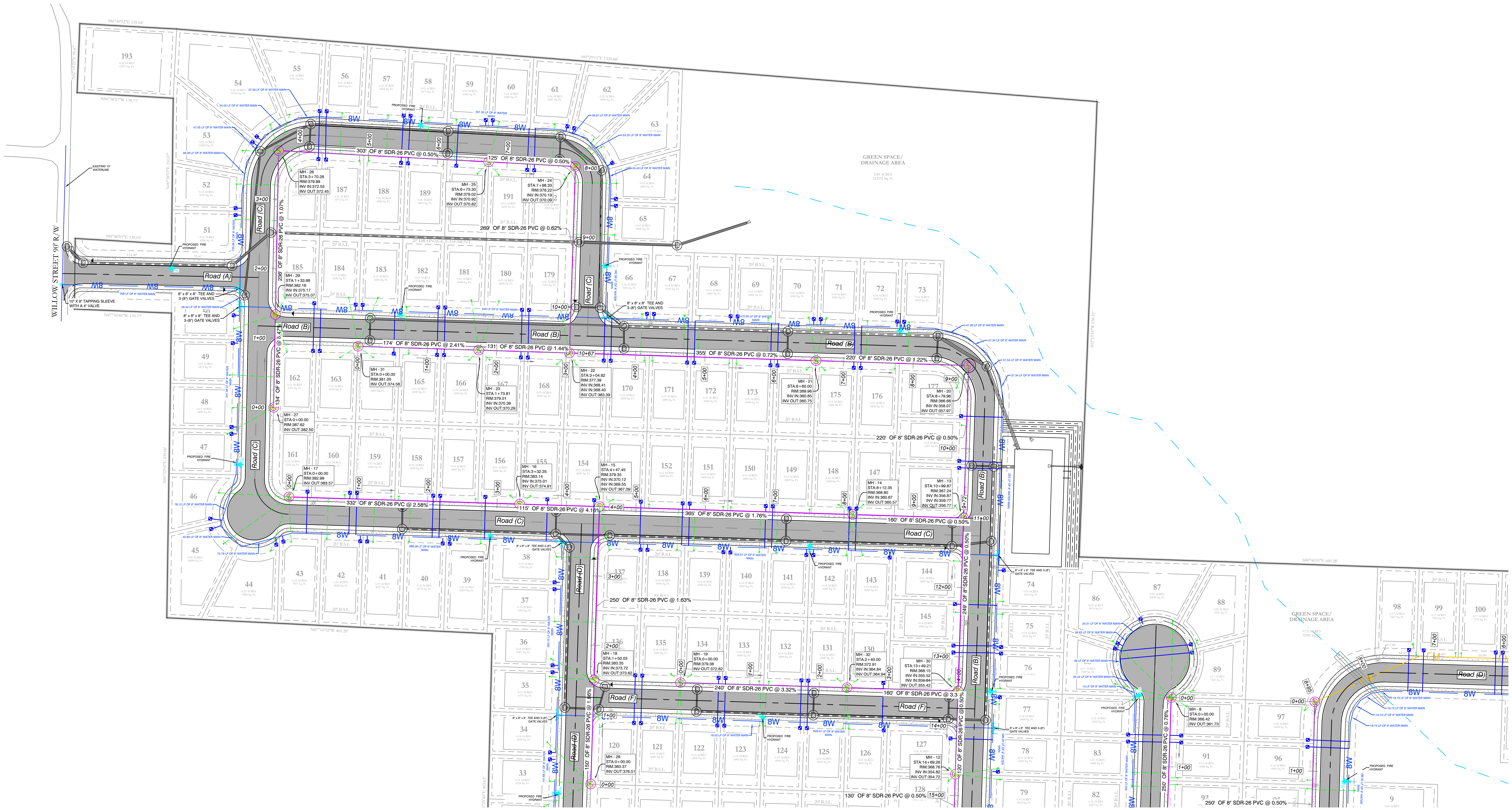

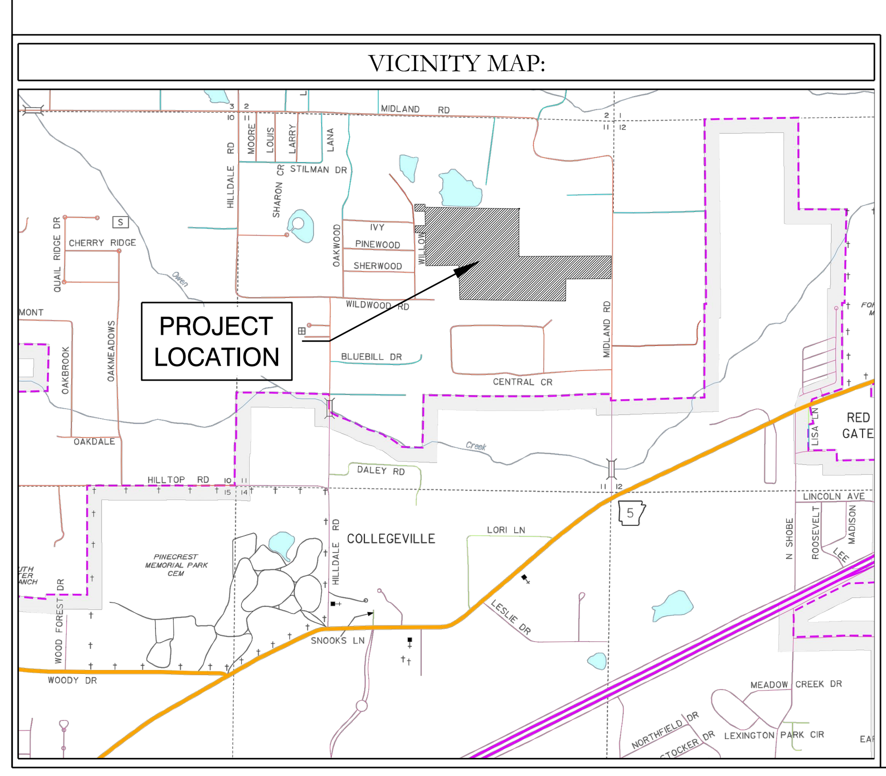

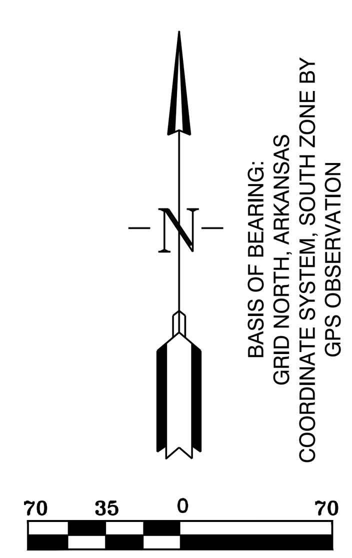

WATER & SEWER UTILITY NOTES:

1. ALL NEW 8-INCH WATER MAINS TO BE CLASS 900.
2. ALL WATER MAINS LARGER THAN 8" DIAMETER SHALL BE DUCTILE IRON (250 PSI PRESSURE CLASS).
3. ALL WATER AND SEWER INSTALLATION TO BE IN ACCORDANCE WITH THE CITY OF BRYANT "STANDARD SPECIFICATIONS FOR DESIGN AND CONSTRUCTION OF WATER LINES AND SEWER LINES, 2015 EDITION.
4. WATER LINES UNDER CULVERTS, CREEKS, CONCRETE CHANNELS, RETAINING WALLS, OR OTHER DIFFICULT AND /OR DANGEROUS TO MAINTAIN AREAS SHALL BE ENCASED IN A SMOOTH STEEL ENCASEMENT PIPE. THE STEEL ENCASEMENT SHALL EXTEND FIVE FEET EITHER SIDE OF THE AREA.
5. EACH WATER SERVICE METER MUST HAVE ITS OWN SERVICE LINE CONNECTION TO THE MAIN (INCLUDES DOUBLE METERS DISPLAYED AS ONE SERVICE LINE ON THE PLAT.
6. CASING SPACERS: SHALL BE STAINLESS STEEL, CASCADE MODEL CCS AS MANUFACTURED BY CASCADE WATER MFG. CO., OR APPROVED EQUAL.

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HDPE

RCP

SEWER LEGEND:

SEWER SERVICE

SEWER MAIN

SEWER MANHOLE

NOTE:
USE SDR-26 PVC SEWER PIPE EXCEPT WHERE DUCTILE IRON PIPE REQUIRED FOR COVER. USE DUCTILE IRON PIPE WHERE 3' MINIMUM COVE CANNOT BE MAINTAINED.

CONTRACTOR IS RESPONSIBLE FOR LOCATING ALL BURIED UTILITIES PRIOR TO CONSTRUCTION.

WATER LEGEND:

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

MIDLAND ROAD SUBDIVISION
UTILITY PLAN

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ENGINEERS - SURVEYORS

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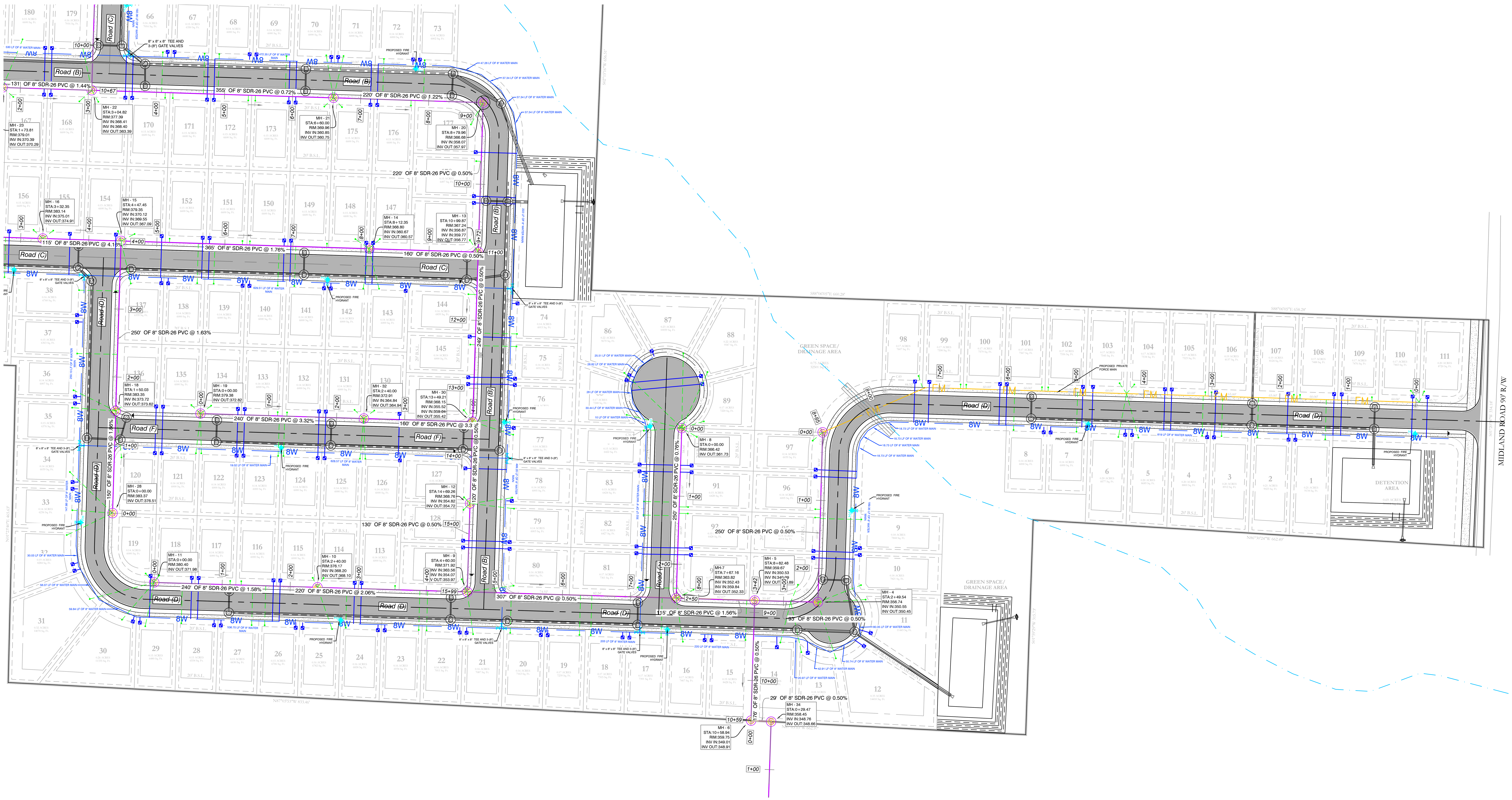

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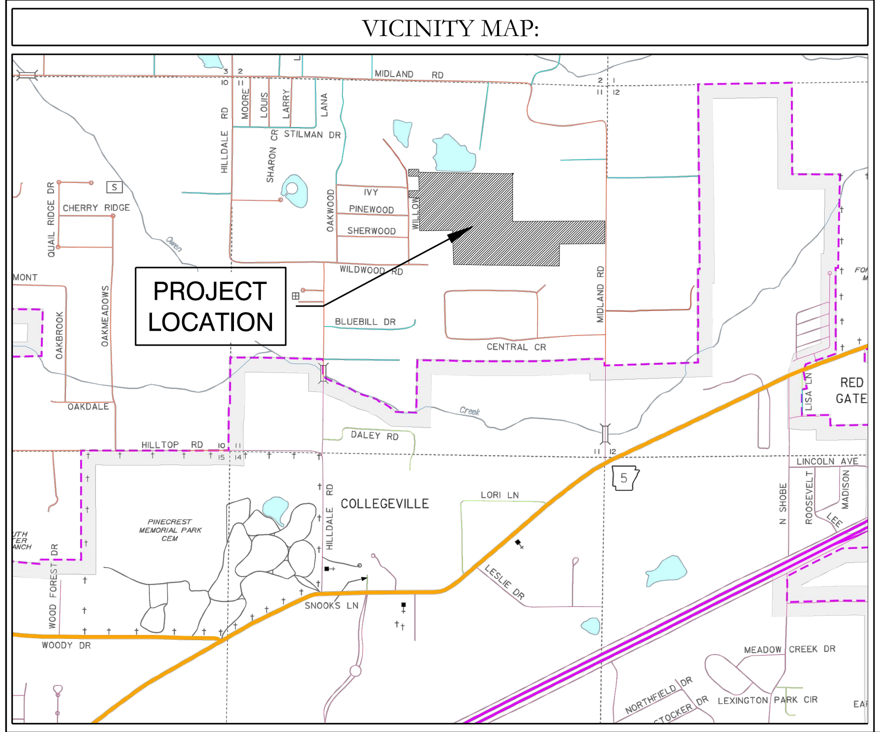

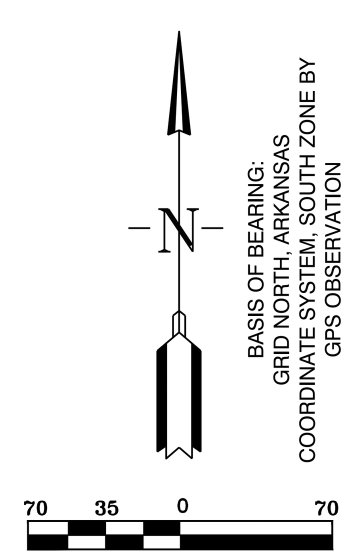

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MTA ENGINEERS

• Geotechnical Engineering
• Materials Testing • Special Inspections
• Design

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GEOTECHNICAL ENGINEERING EXPLORATION

Proposed Midland Road Subdivision
Bryant, Arkansas

PREPARED FOR:

Jonathan Hope
Hope Consulting
117 South Market Street
Benton, AR 72015

PREPARED BY:

MTA ENGINEERS
8001 National Drive
Little Rock, AR 72209

March 10th, 2022

MTA ENGINEERS

Jonathan Hope
Hope Consulting
117 South Market Street
Benton, AR 72015

March 10th, 2022

Subject: Report of Geotechnical Engineering Exploration
Proposed Duplexes at Midland Road
Bryant, Arkansas

Mr. Hope:

MTA Engineers has completed the authorized Geotechnical Engineering Exploration for the above referred project. This work was conducted in accordance with the agreement between MTA Engineers and Hope Consulting, detailed in MTA Engineers Proposal dated February 2nd, 2023.

The purpose of our work was to review general surface and subsurface conditions within the project site area, and to gather and present data relative to the design and construction of the proposed Midland Road Subdivision located in Bryant, Arkansas. This report outlines the exploration procedures used, exhibits the data obtained, and presents our recommendations.

MTA Engineers appreciates this opportunity to provide these services and looks forward to working with you on future projects. Please contact us if you have any questions or require additional information.

Sincerely,

MTA ENGINEERS

Kelton Price, P.E.
Project Engineer
Office +1 501-753-2526
keltonp@mtaengineers.com

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 10650
KELTON W. PRICE

TABLE OF CONTENTS

SECTION

APPENDICES

TABLES

EXECUTIVE SUMMARY

The geotechnical exploration was conducted near Midland Road located in Bryant, Arkansas. The general topography of the site was varying elevations. At the time of our visit, the site was heavily wooded.

In general, the soils will consist of stiff lean clay / silty sand, dense clayey sand with gravel and medium hard to hard shale. Subsurface conditions were consistent throughout the entirety of the proposed development. The potential to find buried stumps or other organic material is low. Major soil types encountered at each boring may be summarized as follow:

Table 1. Soil Types Encountered

SOIL TYPE	DESCRIPTION
CL	Lean Clay / Sandy Clay
ML / CL-ML	Sandy Silt / Sandy Silty Clay
SC / SM	Silty / Clayey Sand
CH	Expansive clay
Shale	Weathered Shale

See Table 2 General Strata Classification of Soil Logs or the individual soil logs found in Appendix B for a more detailed overview of the soils encountered on site.

Based on the nature of the existing strata encountered at the time of exploration, it is assumed that the proposed improvements will be above existing grades. The surface soils contain organics in all borings. In grass covered areas, the soils of Stratum I are stiff and will contain 6-in of topsoils. Stability of these soils will depend on soil moisture conditions at the time of construction, area of improvements may require over-excavation of 2-ft to remove silty isolated surface soils (deeper during wetter seasons). Additional over-excavation may be required in the footing trenches, depending upon weather conditions. A random presence a of CH clay was noted during exploration. Care should be taken to monitor CH when excavation and ensure no CH clay presence within 2-ft of pavement.

Based on the anticipated bearing load, it is recommended that any structure be supported on traditional shallow footings founded a minimum of 24-in below final grade, within Structural fill. Footings founded as recommended may be designed using a net allowable bearing capacity of 2,000-psf for continuous and individual spread footings.

The net allowable end bearing pressure is based on a factor of safety in excess of 3.0 with respect to the anticipated shear strength of the bearing stratum. Total and differential settlement is anticipated to be less than ½-in.

SUMMARY

- **Rock/Hard Dig:**
  - Excavation may be performed using medium to heavy duty equipment.
  - Weathered Shale was encountered in all borings.

- **Soils:**
  - Soils generally consist of stiff lean clay, silty sand, dense clayey sand, expansive clay and shale.
  - Structural fill should be placed according to the "Structural Fill" section of this report.
  - Stripping in the order of 6-in to remove organics.

- **Foundations/Slabs:**
  - Shallow footings founded a minimum of 24-in beneath final grade may be sized using a bearing pressure of 2,000-psf for continuous and individual spread footings.

- **Un-compacted Fill:**
  - No un-compacted fill was encountered on the property during the exploration.

- **Stump/Organic Findings:**
  - The potential to find stumps or other organic material beneath the surface is low.

- **Pavement:**
  - Recommended pavement sections are presented within this report.
  - Pavement must meet the requirement of City of Bryant

- **Miscellaneous:**
  - Groundwater was encountered near TP-10 & 11.

INTRODUCTION

This exploration was requested in order to evaluate existing subsurface conditions and provide geotechnical design recommendations. The results of this exploration and the geotechnical design recommendations for site construction are presented in this report.

Exploration was accomplished by:

1. Excavating 14 locations up to 10-ft or refusal, to explore subsurface soil, and groundwater conditions.

2. Obtaining samples from each stratum, within the accessible areas, using standard geotechnical sampling technique or standard penetration test.

3. Performing laboratory tests on various samples to determine pertinent engineering properties of the subsurface strata.

4. Analyzing field and laboratory test data to develop design recommendations.

The scope of this geotechnical exploration did not include an environmental assessment to determine the presence of wetlands and/ or hazardous or toxic materials in the soil or groundwater on or near this site. If there is concern of wetlands or a hazardous/ toxic material presence, a qualified environmental assessment consultant should be contacted to perform a site investigation before construction begins.

FIELD EXPLORATION

Subsurface conditions at the site were explored by using test pits to a depth of 10-ft at 14 test pit location. The approximate excavation locations are shown on the Excavation Location Plan (see Appendix A). Test Pit logs presenting descriptions of the soil strata encountered are included in Appendix B. Laboratory testing summary of the different soil types are located in Appendix D.

Samples were obtained throughout the entirety of most locations using bulk grab methods. The recorded penetrometer reading (tons/ft^2) are indicated on the Test Pit Logs in the Unconfined Compression Strength column. All soil samples encountered were removed from the field in moisture tight containers and transported to our laboratory for further examination. At the lab, a visual classification was performed for each sample.

All various soil types were then analyzed for specific engineering properties.

GENERAL SITE AND SUBSURFACE CONDITIONS

The exploration for the proposed Subdivision located along Midland Road in Bryant, Arkansas. It is anticipated that proposed roads will be constructed near the existing grade. Soil as explored consisted of silty sands, lean sandy clays, and clayey sands with gravel above weathered shale. The stratigraphy encountered in the excavation locations is summarized in Table 2. Test Pit were advanced to a depth of 10-ft or refusal within the building and pavement areas using mini excavation procedures.

For a more detailed description of soils encountered while testing see the boring log sheets found in attached preliminary report.

Table2. General Strata Classification of Boring Logs

STRATA	DEPTH (ft)	SOIL CLASSIFICATION	SOIL DESCRIPTION	SIGNIFICANT PROPERTIES
STRATUM I (a)	0 – 2 to 4	SM & SC *TP-1, 2 & 4*	Silty Sand & Clayey Sand Surface Organics	Medium Dense Low Shrink Swell Potential Moderate bearing capacity
STRATUM I (b)	0 – 2 to 4	CL *Except in TP-1, 2, 3 and 8*	Lean Clay / Sandy Clay w/ surface Organics	Stiff to Very Stiff Moderate Bearing Low shrink swell potential
STRATUM I (c)	1 – 2 to 5	ML/ CL-ML *(Except TP-4 & TP-5)*	Sandy silt/ Sandy Silty Clayey	Stiff Moderate to High Bearing Capacity Moisture Sensitive
STRATUM II (a)	2 – 4	CH *(Only in TP-12)*	Expansive Clay	Very Stiff Moisture sensitive
STRATUM II (b)	2 to refusal	Shale *In all test pits*	Weathered Shale	Medium Hard to Hard Moderate Bearing Capacity

The significant properties and characteristics of the subsurface strata pertinent to design and constructions are as follows:

A. The topography of the site and planned building location.
B. The anticipated bearing loads.
C. Dense Sand-Clay-Gravel encountered in the several Test Pits.
D. Shale was encountered in all test pit excavations.
E. The anticipated pavement loading.

LABORATORY TESTING

Description of the soils encountered in the excavation was prepared in general accordance with applicable ASTM standards. The soil stratification shown on the test pit logs represents soil conditions at the specific excavation locations. There may be some variations that occur between or beyond the excavation locations.

The stratification lines on the test pit logs represent the approximate boundaries between soil types, but the actual transitions between soil layers in the subsurface of the proposed site may be gradual. Laboratory testing was performed to verify/evaluate classification, volumetric stability, and to determine water content. The results of all testing performed are represented in Appendix D Laboratory Test Summary.

ANALYSIS AND RECOMMENDATIONS

SITE PREPARATION

Based on the requirement of the city of Bryant, the existing soils are not suitable to be within the upper 2-ft of the subgrade; therefore, 2-ft of approved fill will be required in the areas of public streets. This can be achieved through over-excavation and backfill, raising the proposed grades, or a combination of both. Prior to the addition of any fill or the construction of any improvements, areas of proposed building and parking should be stripped to remove organics and stiff isolated silty sand. Areas of vegetation and trees within the building or paved areas should be grubbed to a depth of 6-in. The roadway areas should be proof-rolled using 62,000-lbs loaded dump truck (or equivalent load) to determine area of instability. Proof-roll should be performed in the presence of MTA Engineers. Any areas of instability should be further investigated. Isolated areas of over-excavation should be anticipated. MTA recommends that all excavation be performed during dry periods and that positive drainage is maintained during construction. Water ponding will affect soil stability. Areas of instability will require over-excavation. Depths of over-excavation will vary, but could extend to 3-ft. Structural fill, where needed, should be placed as recommended in the "Structural Fill" section of the report. Positive drainage should be maintained throughout this process. The addition of excessive moisture could cause a significant loss of soil stability.

Consideration should be given to backfilling storm drains with clean gravel to allow for the removal of potential ground water that may accumulate above the shale strata. Frequent French drains may be required as well. If soft soils are encountered in the area of proposed roadways, a filter may be used to maintain separation of the soft soils from the approved fill.

The building pads should be constructed above the existing grade to provide positive drainage. Some over-excavation of footings could be required depending on the soil moisture condition at the time of excavation. Soil bearing information given in the building foundations section of this report will be based on these site preparation conditions.

STRUCTURAL FILL

Structural Fill within roadways must conform to City of Bryant requirements. Fill should consist of approved materials, which are free of organic matter and debris. For approval, samples of the proposed fill material should be submitted to MTA Engineers for classification testing. Select fill consisting of low plasticity soil such as lean clay or clayey gravel classifying as SC, CL, or GC according to the Unified Soils Classification System are generally considered suitable. High plasticity clay soils (soils with a Liquid Limit above 50) should not be used as fill.

Placement of approved fill should be achieved in multiple thin lifts. Each lift should not exceed 8-in in loose thickness. Compaction of these lifts should be performed with suitable equipment to achieve the compaction requirements noted in Table 3. Care should be taken that all compaction recommendations are performed.

If cohesive soils are to be used, compaction should be performed using a kneading-type vibratory compactor, such as a vibratory sheepsfoot. The material should be broken down sufficiently to provide a dense matrix of particles.

Table 3: Compaction Requirements

Material Type and Location	Minimum Compaction (percent of ASTM D1557)	Allowable variance in moisture from optimum
Structural Fill Beneath Pavement Sections	95%	Optimum to +3 (Clay Shale) -3 to +3 (Other Approved Select Fill)
Structural Fill Beneath Buildings	95%	Optimum to +3 (Clay Shale) -3 to +3 (Other Approved Select Fill)
Utility Backfill in Building Area and Pavement	95%	-3 to +3
Miscellaneous and Green Areas	90%	-3 to +3
Aggregate Base Course	95%	-3 to +3 at time of compaction

BUILDING FOUNDATIONS

All foundations must satisfy two basic and independent design criteria. First, foundations must have acceptable factor of safety against bearing failure under maximum design loads. Secondly, movement of the foundation due to consolidation, shrinkage, and/or swelling of the supporting strata should not exceed tolerable limits for the structure.

Construction factors such as installation of foundations units, excavation procedures, and surface and groundwater conditions should also be considered. These factors and the aforementioned subsurface conditions were influential in development of the following statement.

In view of the anticipated foundation loading and subsurface conditions encountered, it is suggested that the proposed structures be supported on a foundation system designed in accordance with the following recommendations.

FOUNDATIONS/ SLABS

Shallow Foundations

Based on the nature of existing soils encountered at the time of exploration and the anticipated loading, it is recommended that all structures be supported on traditional shallow footings founded a minimum of 24-in beneath final exterior grade, within Structural fill. In addition, to minimize the potential for localized shear failure within the soils, a minimum footing width of 24-in is recommended.

Shallow foundations founded as accounted may be designed using a net allowable bearing pressure of 2,000-psf for continuous and individual spread footings. The net allowable end bearing pressures will be based on a factor or safety in excess of 3.0. Total and differential settlement is anticipated to be less than ½-in.

Slab-on-grade type construction is considered appropriate for the floor slab. We recommend that the slab be supported on 4-in of clean crushed stone or gravel (ASTM C-33 #57 or equivalent) on prepared subgrade. A Class A impervious moisture barrier with a minimum thickness of 10-mils, specified according to ASTM E-1745, should be provided between slab and the granular fill due to the potential for perched water to develop during the wetter seasons.

PAVEMENT DESIGN

Paved parking and drives will be constructed as part of the project. Design traffic volumes and loadings have not been determined. However, we anticipate that the drives will be subject to light vehicles and weekly service trucks. We anticipate that the drives will be placed at/or above the existing elevation. The following design criteria were used to develop the recommended pavement sections in conjunction with the AASHTO Design Guide 1996:

Table 3. Pavement Design Assumption Values

PAVEMENT DESIGN ASSUMPTION VALUES	
CBR	5
R-VALUE	15
SOIL SUPPORT VALUE (S)	5

Based on information obtained during this study, subgrade soils in the paved areas should generally consist of proof-rolled properly compacted Structural fill. Due to the random presence of Ch clay, care should be taken to avoid it within 2-ft of the pavement. Structural fill should be placed as recommended in the Structural fill section of the report. It is recommended that positive site drainage should be provided during construction and be incorporated during the final design.

All pavement sections must comply with the City of Bryant minimum requirements. It should be recognized that some periodic maintenance of pavement will be required. As a minimum, this should include periodic sealing of all joints and cracks to prevent surface water infiltration.

UN-COMPACTED FILL

No uncompacted fill was encountered on the property during our exploration. The cleared area near Midland Road contains unsuitable fill that should be removed prior to construction.

STUMP/ ORGANIC FINDINGS

The proposed improvement area is covered with light grassy vegetation and trees. The potential to find stumps or other organic material below the surface is low.

SEISMIC CONSIDERATION

Based on IBC-2015, a site soil **Class B** may be used for design purposes. Liquefaction potential of the soils in Stratum I(a, b & c), II(a & b) is negligible. Additional design information on Seismic Consideration is attached as Appendix E.

CONSTRUCTION PROCEDURES

The potential exists for increased perched water to develop during wetter seasons. Therefore, foundation excavation and any other site grading should be performed during drier periods to reduce the possibility of changes in conditions.

Subsurface conditions significantly at variance with those encountered within the borings should be brought to the attention of the engineer, and work delayed pending evaluation and/or preparation of additional recommendations, if warranted.

♦ ♦ ♦ ♦

The following illustrations are attached and complete this report:

Appendix A: Excavation Location Plan
Appendix B: Test Pit Logs
Appendix C: Key to terms and Symbols
Appendix D: Laboratory Test Summary
Appendix E: Seismic Design Criteria

♦ ♦ ♦ ♦

Appendix A : Excavation Location Plan

B-1
B-2
B-3
B-4
B-5
B-6
B-7
B-8
B-9
B-10
B-11
B-12
B-13
B-14
GREEN SPACE/
DRAINAGE AREA
GREEN SPACE/
DRAINAGE AREA
DETENTION
AREA
Ivy St
Willow St
Sherwood Rd
Wildwood Rd
Centark Circle
Old Mae Wood Rd

Appendix B:
Test Pit Logs

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Excavation Log Report

TEST PIT NO. TP-1
PAGE 1 OF 1

JOB NO. GEO23-023
JOB NAME: MIDLAND ROAD SUBDIVISION
COORDINATES: NORTH: EAST:
STATION:
LOCATION: BRYANT, AR

DATE: 3/1/2023
TYPE OF DRILLING: EXCAVATION
EQUIPMENT: KUBOTA U35
LOGGED BY: CHRIS
DRILLED BY: STEWARD

DEPTH FT.	SYMBOL	SAMPLES	DESCRIPTION OF MATERIAL SURFACE ELEVATION: EXISTING GRADE	SOIL GROUP	PLASTIC LIMIT	% MOIST.	LIQUID LIMIT	PLASTICITY INDEX	PERCENT PASSING #200	NO. OF BLOWS	PER 6-IN.	UNCONFINED COMPRESSION
			MEDIUM DENSE, BROWN SILTY SAND W/ GRAVEL AND ORGANICS	SM	NP	14.5	NV		44.7			2.0 2.5
			BROWN-GREY, SANDY SILTY CLAY	CL-ML	17	16.3	24	7	53.7			2.5
5			MEDIUM HARD TO HARD, GREY-TAN, WEATHERED SHALE REFUSAL AT 6-FT ON SHALE	SHALE								4.5
			Boring Terminated									
10												
15												
20												
25												
30												

COMPLETION DEPTH: 6 WATER DEPTH> INITIAL: AFTER 24 HOURS:

REMARKS:

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Excavation Log Report TEST

PIT NO. TP-2

PAGE 1 OF 1

JOB NO. GEO23-023
JOB NAME: MIDLAND ROAD SUBDIVISION
COORDINATES: NORTH: EAST:
STATION:
LOCATION: BRYANT, AR

DATE: 3/1/2023
TYPE OF DRILLING: EXCAVATION
EQUIPMENT: KUBOTA U35
LOGGED BY: CHRIS
DRILLED BY: STEWARD

DEPTH FT.	SYMBOL	SAMPLES	DESCRIPTION OF MATERIAL SURFACE ELEVATION: EXISTING GRADE	SOIL GROUP	PLASTIC LIMIT	% MOIST.	LIQUID LIMIT	PLASTICITY INDEX	PERCENT PASSING #200	NO. OF BLOWS PER 6-IN.	UNCONFINED COMPRESSION
			MEDIUM DENSE, RED-TAN, SILTY SAND W/ ORGANICS	SM							2.0 2.5
			MEDIUM DENSE, BROWN, CLAYEY SAND	SC							2.5
5			MEDIUM HARD TO HARD, GREY-RED, WEATHERED SHALE REFUSAL AT 6-FT ON SHALE	SHALE							4.5
			Boring Terminated								
10											
15											
20											
25											
30											

COMPLETION DEPTH: 6 WATER DEPTH> INITIAL: AFTER 24 HOURS:

REMARKS:

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Excavation Log Report TEST

PIT NO. TP-3
PAGE 1 OF 1

JOB NO. GEO23-023
JOB NAME: MIDLAND ROAD SUBDIVISION
COORDINATES: NORTH: EAST:
STATION:
LOCATION: BRYANT, AR

DATE: 3/1/2023
TYPE OF DRILLING: EXCAVATION
EQUIPMENT: KUBOTA U35
LOGGED BY: CHRIS
DRILLED BY: STEWARD

DEPTH FT.	SYMBOL	SAMPLES	DESCRIPTION OF MATERIAL SURFACE ELEVATION: EXISTING GRADE	SOIL GROUP	PLASTIC LIMIT	% MOIST.	LIQUID LIMIT	PLASTICITY INDEX	PERCENT PASSING #200	NO. OF BLOWS PER 6-IN.	UNCONFINED COMPRESSION
			BROWN-TAN, SANDY SILT W/ GRAVEL	ML	NP	26.0	NV		54.9		2.0
			MEDIUM HARD TO HARD, GREY-RED, WEATHERED SHALE REFUSAL AT 4-FT ON SHALE	SHALE							2.5 4.0
5			Boring Terminated								
10											
15											
20											
25											
30											

COMPLETION DEPTH: 4 WATER DEPTH> INITIAL: AFTER 24 HOURS:

REMARKS:

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Excavation Log Report

TEST PIT NO. TP-4
PAGE 1 OF 1

JOB NO. GEO23-023
JOB NAME: MIDLAND ROAD SUBDIVISION
COORDINATES: NORTH: EAST:
STATION:
LOCATION: BRYANT, AR

DATE: 3/1/2023
TYPE OF DRILLING: EXCAVATION
EQUIPMENT: KUBOTA U35
LOGGED BY: CHRIS
DRILLED BY: STEWARD

DEPTH FT.	SYMBOL	SAMPLES	DESCRIPTION OF MATERIAL SURFACE ELEVATION: EXISTING GRADE	SOIL GROUP	PLASTIC LIMIT	% MOIST.	LIQUID LIMIT	PLASTICITY INDEX	PERCENT PASSING #200	NO. OF BLOWS PER 6-IN.	UNCONFINED COMPRESSION
			STIFF, RED-TAN, LEAN CLAY W/ ORGANICS	CL	14	27.1	36	22	79.7		2.5 2.5
			MEDIUM DENSE, BROWN, CLAYEY SAND	SC							3.0
5			MEDIUM HARD TO HARD, GREY-RED, WEATHERED SHALE REFUSAL AT 6-FT ON SHALE	SHALE							4.5

Boring Terminated

10

15

20

25

30

COMPLETION DEPTH: 6 WATER DEPTH> INITIAL: AFTER 24 HOURS:

REMARKS:

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Excavation Log Report

TEST PIT NO. TP-5
PAGE 1 OF 1

JOB NO. GEO23-023
JOB NAME: MIDLAND ROAD SUBDIVISION
COORDINATES: NORTH: EAST:
STATION:
LOCATION: BRYANT, AR

DATE: 3/1/2023
TYPE OF DRILLING: EXCAVATION
EQUIPMENT: KUBOTA U35
LOGGED BY: CHRIS
DRILLED BY: STEWARD

DEPTH FT.	SYMBOL	SAMPLES	DESCRIPTION OF MATERIAL / SURFACE ELEVATION: EXISTING GRADE	SOIL GROUP	PLASTIC LIMIT	% MOIST.	LIQUID LIMIT	PLASTICITY INDEX	PERCENT PASSING #200	NO. OF BLOWS PER 6-IN.	UNCONFINED COMPRESSION
			STIFF, BROWN-TAN,SILTY CLAY W/ ORGANICS	CL							2.0
			MEDIUM HARD TO HARD, GREY-RED, WEATHERED SHALE	SHALE							2.5
											4.0
			REFUSAL AT 4-FT ON SHALE								
5			Boring Terminated								
10											
15											
20											
25											
30											

COMPLETION DEPTH: 4 WATER DEPTH> INITIAL: AFTER 24 HOURS:
REMARKS:

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Excavation Log Report

TEST PIT NO. TP-7

PAGE 1 OF 1

JOB NO.	GEO23-023	DATE:	3/1/2023
JOB NAME:	MIDLAND ROAD SUBDIVISION	TYPE OF DRILLING:	EXCAVATION
COORDINATES: NORTH:	EAST:	EQUIPMENT:	KUBOTA U35
STATION:		LOGGED BY:	CHRIS
LOCATION:	BRYANT, AR	DRILLED BY:	STEWARD

DEPTH FT.	SYMBOL	SAMPLES	DESCRIPTION OF MATERIAL SURFACE ELEVATION: EXISTING GRADE	SOIL GROUP	PLASTIC LIMIT	% MOIST.	LIQUID LIMIT	PLASTICITY INDEX	PERCENT PASSING #200	NO. OF BLOWS PER 6-IN.	UNCONFINED COMPRESSION
			STIFF, BROWN, SILTY CLAY W/ ORGANICS	CL							2.5
			VERY STIFF, BROWN SILT W/ SAND	ML	NP	27.4	NV		74.4		3.0
											3.0
5			MEDIUM HARD TO HARD, GREY-TAN, WEATHERED SHALE REFUSAL AT 6-FT ON SHALE	SHALE							4.5
			Boring Terminated								
10											
15											
20											
25											
30											

COMPLETION DEPTH: 6 WATER DEPTH> INITIAL: AFTER 24 HOURS:

REMARKS:

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Excavation Log Report

TEST PIT NO. TP-8
PAGE 1 OF 1

JOB NO. GEO23-023
JOB NAME: MIDLAND ROAD SUBDIVISION
COORDINATES: NORTH: EAST:
STATION:
LOCATION: BRYANT, AR

DATE: 3/1/2023
TYPE OF DRILLING: EXCAVATION
EQUIPMENT: KUBOTA U35
LOGGED BY: CHRIS
DRILLED BY: STEWARD

DEPTH FT.	SYMBOL	SAMPLES	DESCRIPTION OF MATERIAL SURFACE ELEVATION: EXISTING GRADE	SOIL GROUP	PLASTIC LIMIT	% MOIST.	LIQUID LIMIT	PLASTICITY INDEX	PERCENT PASSING #200	NO. OF BLOWS PER 6-IN.	UNCONFINED COMPRESSION
			STIFF, BROWN,SANDY CLAY W/ ORGANICS	CL							2.0
			MEDIUM HARD TO HARD, GREY-RED, WEATHERED SHALE REFUSAL AT 4-FT ON SHALE	SHALE							2.5 4.0
5			Boring Terminated								
10											
15											
20											
25											
30											

COMPLETION DEPTH: 4 WATER DEPTH> INITIAL: AFTER 24 HOURS:
REMARKS:

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Excavation Log Report

TEST PIT NO. TP-9
PAGE 1 OF 1

JOB NO. GEO23-023
JOB NAME: MIDLAND ROAD SUBDIVISION
COORDINATES: NORTH: EAST:
STATION:
LOCATION: BRYANT, AR

DATE: 3/1/2023
TYPE OF DRILLING: EXCAVATION
EQUIPMENT: KUBOTA U35
LOGGED BY: CHRIS
DRILLED BY: STEWARD

DEPTH FT.	SYMBOL	SAMPLES	DESCRIPTION OF MATERIAL SURFACE ELEVATION: EXISTING GRADE	SOIL GROUP	PLASTIC LIMIT	% MOIST.	LIQUID LIMIT	PLASTICITY INDEX	PERCENT PASSING #200	NO. OF BLOWS PER 6-IN.	UNCONFINED COMPRESSION
			STIFF, BROWN-GREY, SANDY SILT W/ ORGANICS	ML	NP	25.6	NV		64.6		2.5 3.0
5			MEDIUM HARD TO HARD, GREY-TAN, WEATHERED SHALE REFUSAL AT 6-FT ON SHALE	SHALE							3.5 4.5
10			Boring Terminated								
15											
20											
25											
30											

COMPLETION DEPTH: 6 WATER DEPTH> INITIAL: AFTER 24 HOURS:

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Excavation Log Report

TEST PIT NO. TP-10
PAGE 1 OF 1

JOB NO. GEO23-023
JOB NAME: MIDLAND ROAD SUBDIVISION
COORDINATES: NORTH: EAST:
STATION:
LOCATION: BRYANT, AR

DATE: 02/28/2023
TYPE OF DRILLING: EXCAVATION
EQUIPMENT: KUBOTA U35
LOGGED BY: CHRIS
DRILLED BY: STEWARD

DEPTH FT.	SYMBOL	SAMPLES	DESCRIPTION OF MATERIAL SURFACE ELEVATION: EXISTING GRADE	SOIL GROUP	PLASTIC LIMIT	% MOIST.	LIQUID LIMIT	PLASTICITY INDEX	PERCENT PASSING #200	NO. OF BLOWS PER 6-IN.	UNCONFINED COMPRESSION
			STIFF, BROWN-GREY,SILTY CLAY W/ ORGANICS	CL							1.5 4.5
5			MEDIUM HARD TO HARD, GREY-TAN, WEATHERED SHALE REFUSAL AT 6-FT ON SHALE	SHALE	21	21.7	26	5	52.5		4.0 4.5
10 15 20 25 30			Boring Terminated								

COMPLETION DEPTH: 6 WATER DEPTH> INITIAL: 2 AFTER 24 HOURS:

REMARKS:

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Excavation Log Report

TEST PIT NO. TP-11
PAGE 1 OF 1

JOB NO. GEO23-023
JOB NAME: MIDLAND ROAD SUBDIVISION
COORDINATES: NORTH: EAST:
STATION:
LOCATION: BRYANT, AR

DATE: 02/28/2023
TYPE OF DRILLING: EXCAVATION
EQUIPMENT: KUBOTA U35
LOGGED BY: CHRIS
DRILLED BY: STEWARD

DEPTH FT.	SYMBOL	SAMPLES	DESCRIPTION OF MATERIAL — SURFACE ELEVATION: EXISTING GRADE	SOIL GROUP	PLASTIC LIMIT	% MOIST.	LIQUID LIMIT	PLASTICITY INDEX	PERCENT PASSING #200	NO. OF BLOWS PER 6-IN.	UNCONFINED COMPRESSION
			STIFF, BROWN-GREY,SILTY CLAY W/ ORGANICS	CL							1.5 2.5
			MEDIUM HARD TO HARD, GREY-TAN, WEATHERED SHALE	SHALE							2.5
5			BROWN-GREY LEAN CLAY W/ SAND REFUSAL AT 6-FT ON SHALE	CL	23	29.6	46	23	77.6		4.5
10			Boring Terminated								
15											
20											
25											
30											

COMPLETION DEPTH: 6 WATER DEPTH> INITIAL: 2 AFTER 24 HOURS:

REMARKS:

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Excavation Log Report

TEST PIT NO. TP-12

JOB NO.	GEO23-023
JOB NAME:	MIDLAND ROAD SUBDIVISION
COORDINATES: NORTH:	EAST:
STATION:	
LOCATION:	BRYANT, AR
DATE:	3/1/2023
TYPE OF DRILLING:	EXCAVATION
EQUIPMENT:	KUBOTA U35
LOGGED BY:	CHRIS
DRILLED BY:	STEWARD

DEPTH FT.	SYMBOL	SAMPLES	DESCRIPTION OF MATERIAL SURFACE ELEVATION: EXISTING GRADE	SOIL GROUP	PLASTIC LIMIT	% MOIST.	LIQUID LIMIT	PLASTICITY INDEX	PERCENT PASSING #200	NO. OF BLOWS PER 6-IN.	UNCONFINED COMPRESSION
			STIFF TO VERY STIFF, BROWN,SILTY CLAY W/ ORGANICS	CL							2.5 3.0
			VERY STIFF, RED EXPANSIVE CLAY W/ GRAVEL	CH	24	27.2	51	27	73.2		3.5
5			MEDIUM HARD TO HARD, RED, WEATHERED SHALE REFUSAL AT 6-FT ON SHALE	SHALE							4.5
			Boring Terminated								
10											
15											
20											
25											
30											

COMPLETION DEPTH: 6 WATER DEPTH> INITIAL: AFTER 24 HOURS:

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505 Sanders Ave. • Springdale, AR 72764 Ph. 479.756.0061 • Fax 479.756.9254
101 S. Church St. • Jonesboro, AR 72401 Ph. 870.530.8380 • Fax 870.972.0237

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Excavation Log Report

TEST PIT NO. TP-13
PAGE 1 OF 1

JOB NO. GEO23-023
JOB NAME: MIDLAND ROAD SUBDIVISION
COORDINATES: NORTH: EAST:
STATION:
LOCATION: BRYANT, AR

DATE: 3/1/2023
TYPE OF DRILLING: EXCAVATION
EQUIPMENT: KUBOTA U35
LOGGED BY: CHRIS
DRILLED BY: STEWARD

DEPTH FT.	SYMBOL	SAMPLES	DESCRIPTION OF MATERIAL SURFACE ELEVATION: EXISTING GRADE	SOIL GROUP	PLASTIC LIMIT	% MOIST.	LIQUID LIMIT	PLASTICITY INDEX	PERCENT PASSING #200	NO. OF BLOWS PER 6-IN.	UNCONFINED COMPRESSION
			STIFF, BROWN-RED, SANDY CLAY W/ ORGANICS	CL							2.0
			MEDIUM HARD TO HARD, BROWN-TAN, WEATHERED SHALE	SHALE							2.5
											4.0
			REFUSAL AT 4-FT ON SHALE								
5			Boring Terminated								
10											
15											
20											
25											
30											

COMPLETION DEPTH: 4 WATER DEPTH> INITIAL: AFTER 24 HOURS:

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Excavation Log Report

TEST PIT NO. TP-14

PAGE 1 OF 1

JOB NO.	GEO23-023	DATE:	3/1/2023
JOB NAME:	MIDLAND ROAD SUBDIVISION	TYPE OF DRILLING:	EXCAVATION
COORDINATES: NORTH:	EAST:	EQUIPMENT:	KUBOTA U35
STATION:		LOGGED BY:	CHRIS
LOCATION:	BRYANT, AR	DRILLED BY:	STEWARD

DEPTH FT.	SYMBOL	SAMPLES	DESCRIPTION OF MATERIAL SURFACE ELEVATION: EXISTING GRADE	SOIL GROUP	PLASTIC LIMIT	% MOIST.	LIQUID LIMIT	PLASTICITY INDEX	PERCENT PASSING #200	NO. OF BLOWS PER 6-IN.	UNCONFINED COMPRESSION
			STIFF TO VERY STIFF, BROWN-TAN,SILTY CLAY W/ ORGANICS	CL							2.5 3.0
5			MEDIUM HARD TO HARD, TAN-GREY, WEATHERED SHALE REFUSAL AT 6-FT ON SHALE	SHALE							3.5 4.5
			Boring Terminated								
10											
15											
20											
25											
30											

COMPLETION DEPTH: 6 WATER DEPTH> INITIAL: AFTER 24 HOURS:

REMARKS:

Appendix C:
Key to Terms

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P.O. Box 688 • Springdale, AR 72765 Ph. 479.756.0061
101 S. Church Street, Box 4 • Jonesboro, AR 72401 Ph. 870.530.8380

TERMS AND SYMBOLS USED ON BORING LOGS

SOIL TYPES

- CLAY (CH)
- SILTY CLAY (CL)
- CLAY (CL)
- SANDY CLAY (CL)
- WELL-GRADED SAND (SW)
- POORLY-GRADED SAND (SP)
- SILTY SAND (SM)
- CLAYEY SAND (SC)
- WELL-GRADED GRAVEL (GW)
- POORLY-GRADED GRAVEL (GP)
- SILTY GRAVEL (GM)
- SANDY SILT (ML)
- CLAYEY GRAVEL (GC)
- SILT (ML)
- SILT (MH)
- FILL MATERIAL

ROCK TYPES

- LIMESTONE
- SHALE
- SANDSTONE
- WEATHERED LIMESTONE
- WEATHERED SHALE
- WEATHERED SANDSTONE

SAMPLER TYPE

- SHELBY TUBE SAMPLE
- SPLIT SPOON SAMPLE
- AUGER SAMPLE
- NO RECOVERY

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P.O. Box 688 • Springdale, AR 72765 Ph. 479.756.0061
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SOIL GRAIN SIZE

U.S. STANDARD SIEVE

12" | 3" | 3/4" | 4 | 10 | 40 | 200

BOULDERS	COBBLES	GRAVEL		SAND			SILT	CLAY
		COARSE	FINE	COARSE	MEDIUM	FINE		

304 | 76.2 | 19.1 | 4.75 | 2 | 0.42 | 0.074 | 0.002

SOIL GRAIN SIZE IN MILIMETERS

TERMS DESCRIBING CONSISTENCY OR CONDITION

COARSE GRAINED SOILS (major portion retained on No 200 sieve): Includes (1) clean gravels and sand~~s, and~~ (2) silty clayey gravels and sands condition is rated according to relative density, as determined by laboratory tests.

DESCRIPTIVE TERMS	N VALUE	RELATIVE DENSITY
VERY LOOSE	0-4	0 – 15 %
LOOSE	4-10	15 – 35 %
MEDIUM DENSE	10-30	35 – 65 %
DENSE	30-50	65 – 85 %
VERY DENSE	50 and above	85 – 100 %

FINE GRAINED SOILS (major portion passing No 200 sieve): include (1) inorganic and organic silt and clays, (2) gravelly, sandy, or silty clays, and (3) clayey silts. Consistency is rated according to shearing strength, as indicated by penetrometer reading or by unconfined compression tests.

DESCRIPTIVE TERMS	N VALUE	UNCONFINED COMPRESSIVE STRENGTH TON / SQ. FT.
VERY SOFT	0-3	less than 0.25
SOFT	3-6	0.25 - 0.50
FIRM	6-12	0.50 - 1.00
STIFF	13-20	1.00 - 2.00
VERY STIFF	20-50	2.00- 4.00
HARD	50 and above	4.00 and higher

NOTE: Slickensided and fissured clays may have lower unconfined compressive strengths than shown above because of planes of weakness or cracks in the soil. The consistency rating of such soils are based on penetrometer readings

TERMS CHARACTERIZING MOISTURE CONTENT

DRY: No water evident in sample; fines less than plastic limit.
MOIST: Sample feels damp; fines near the plastic limit.
VERY MOIST: Water visible on sample; fines greater than plastic limit and less than liquid limit.
WET: Sample bears free water; fines greater than liquid limit.

TERMS CHARACTERIZING SOIL STRUCTURE

SLICKENSIDED: Having inclined planes of weakness that are slick and glassy in appearance.
FISSURED: Containing shrinkage cracks, frequently filled with fine sand or silt; usually more or less vertical.
LAMINATED: Composed of thin layer of varying color and texture.
INTERBEDDED: Composed of alternate layers of different soil types
CALCAREOUS: Containing appreciable quantities of calcium carbonate.
WELL GRADED: Having wide range in grain sizes and substantial amounts of all intermediate particle size.
POORLY GRADED: Predominantly of one grain size, or having a range of sizes with some intermediate size missing

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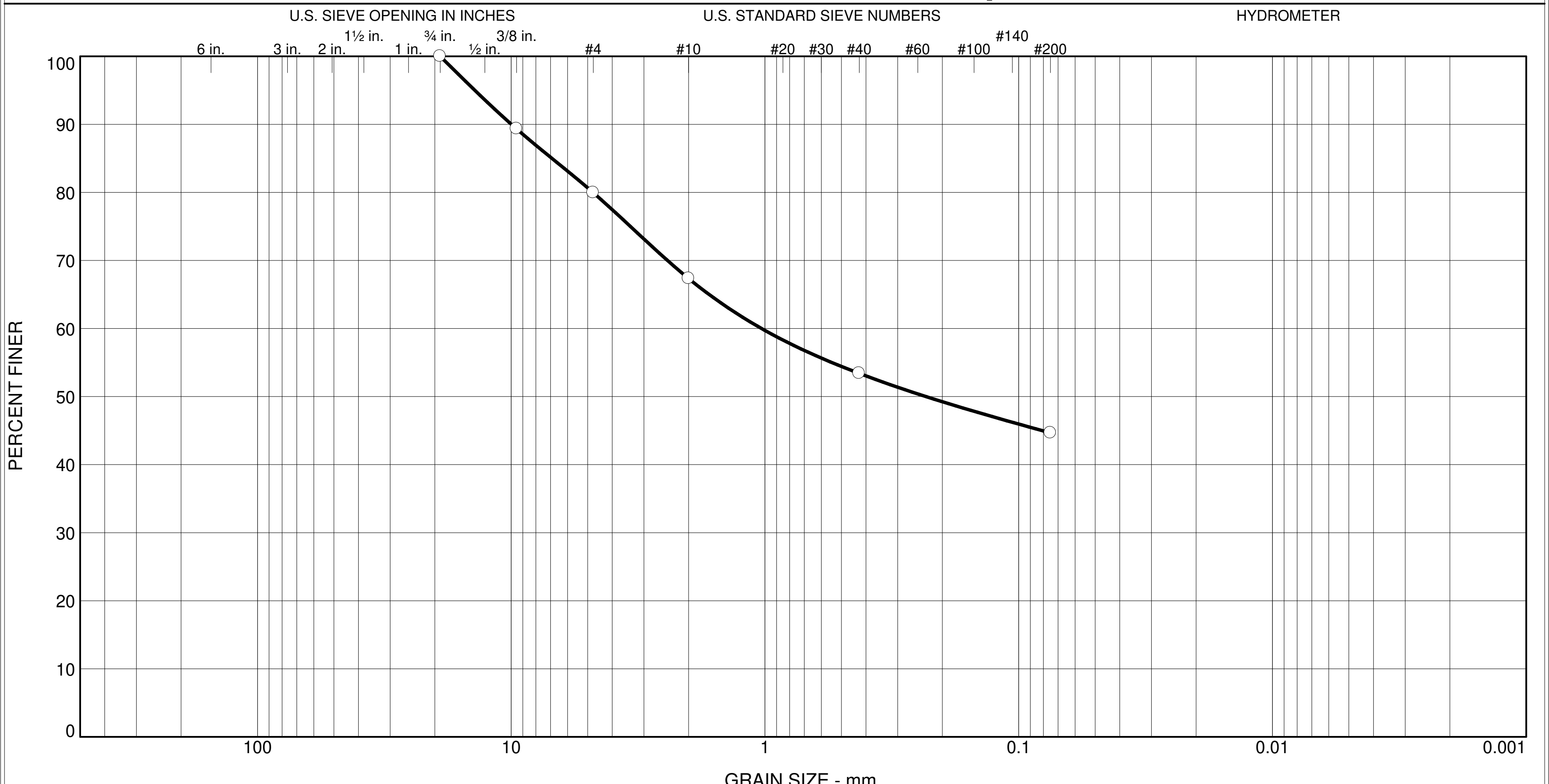
Terms used in this report for describing soils according to their texture or grain size distribution are in accordance with UNIFIED SOIL CLASSIFICATION SYSTEM as described in technical Memorandum No 3-357, Waterways Experiment Station, March 1953

Appendix D: Laboratory Test Summary

Particle Size Distribution Report



% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
0.0	0.0	20.0	12.6	14.0	8.7	44.7	

Identification	Date Sampled	Date Received	Date Tested
Source of Sample: TP-1 Depth: 1 Sample Number: S-2			3-3-2023

Client HOPE CONSULTING

Project MIDLAND ROAD SUBDIVISION

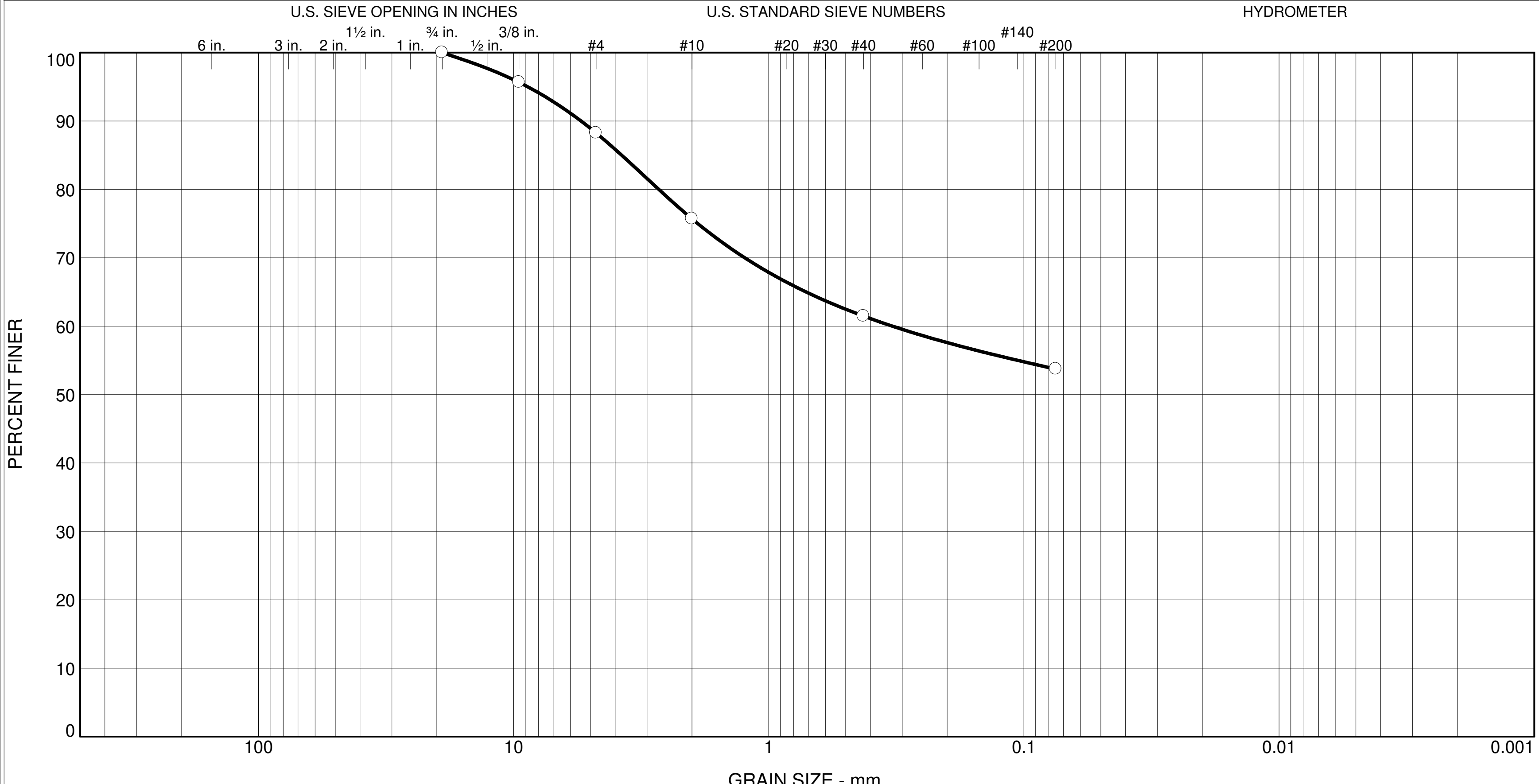
Project No. GEO23-023 Figure

Materials Testing of Arkansas

Little Rock, AR

Tested By: S. PENNINGTON **Checked By:** F. MONDUN

Particle Size Distribution Report



% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
0.0	0.0	11.8	12.5	14.2	7.8	53.7	

Identification	Date Sampled	Date Received	Date Tested
Source of Sample: TP-1 Depth: 2 Sample Number: S-3			3-3-2023

Client HOPE CONSULTING

Project MIDLAND ROAD SUBDIVISION

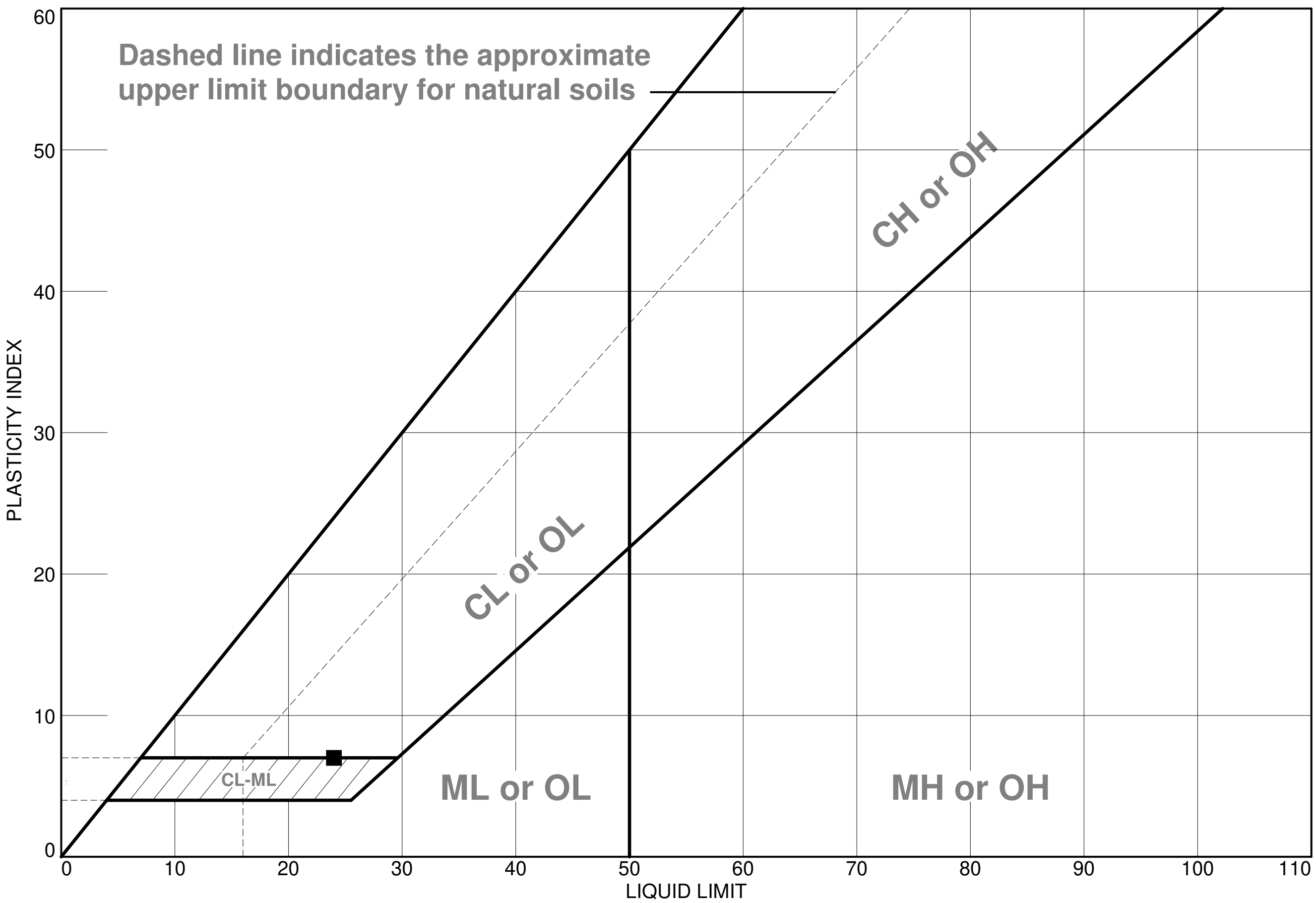
Project No. GEO23-023 Figure

Materials Testing of Arkansas

Little Rock, AR

Tested By: S. PENNINGTON **Checked By:** F. MONDUN

LIQUID AND PLASTIC LIMITS TEST REPORT



	MATERIAL DESCRIPTION	LL	PL	PI	%<#40	%<#200	USCS
●	BROWN SILTY SAND W/ GRAVEL	NV	NP	NP	53.4	44.7	SM
■	BROWN-GREY, SANDY SILTY CLAY	24	17	7	61.5	53.7	CL-ML

Project No. GEO23-023 **Client:** HOPE CONSULTING

Project: MIDLAND ROAD SUBDIVISION

●**Source of Sample:** TP-1 **Depth:** 1 **Sample Number:** S-2

■**Source of Sample:** TP-1 **Depth:** 2 **Sample Number:** S-3

Remarks:

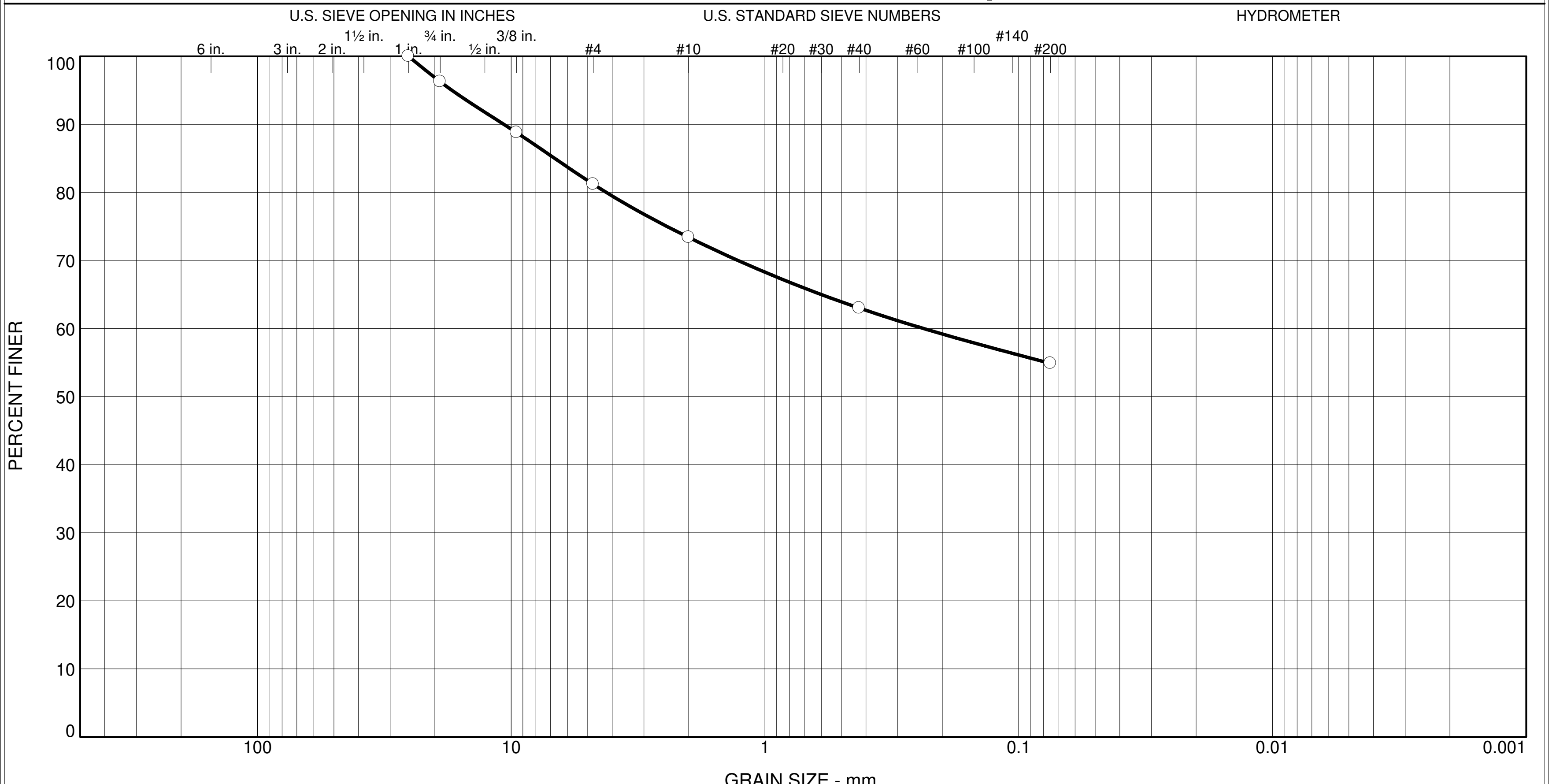
Materials Testing of Arkansas

Little Rock, AR

Figure

Tested By: C. SHEARER **Checked By:** F. MONDUN

Particle Size Distribution Report



% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
0.0	3.7	15.1	7.8	10.4	8.1	54.9	

Identification	Date Sampled	Date Received	Date Tested
Source of Sample: TP-3 Depth: 0 Sample Number: S-1			3-3-2023

Client HOPE CONSULTING
Project MIDLAND ROAD SUBDIVISION

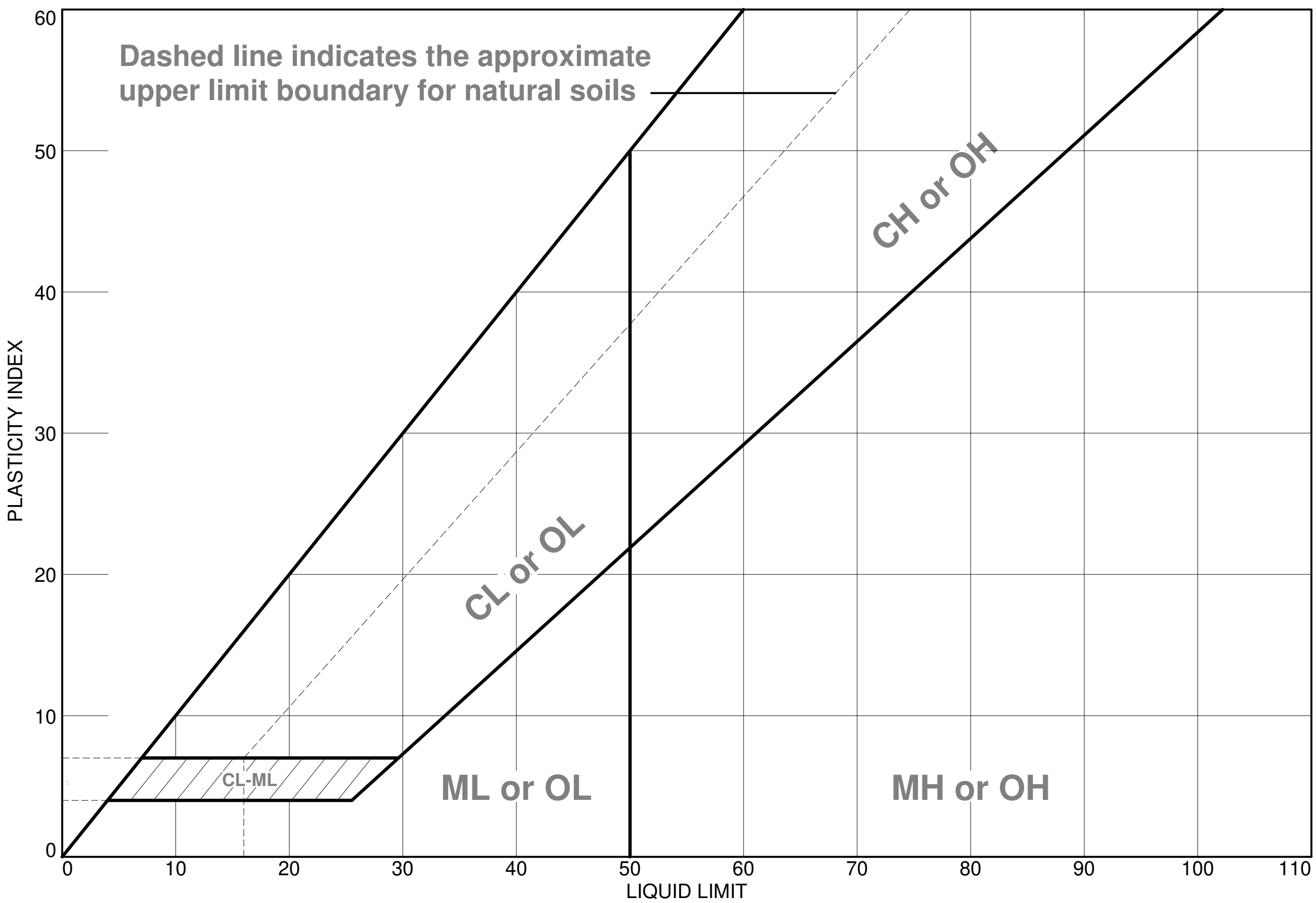
Project No. GEO23-023 Figure

Materials Testing of Arkansas

Little Rock, AR

Tested By: S. PENNINGTON **Checked By:** F. MONDUN

LIQUID AND PLASTIC LIMITS TEST REPORT



	MATERIAL DESCRIPTION	LL	PL	PI	%<#40	%<#200	USCS
●	BROWN-TAN, SANDY SILT W/ GRAVEL	NV	NP	NP	63.0	54.9	ML

Project No. GEO23-023 **Client:** HOPE CONSULTING

Project: MIDLAND ROAD SUBDIVISION

● **Source of Sample:** TP-3 **Depth:** 0 **Sample Number:** S-1

Remarks:

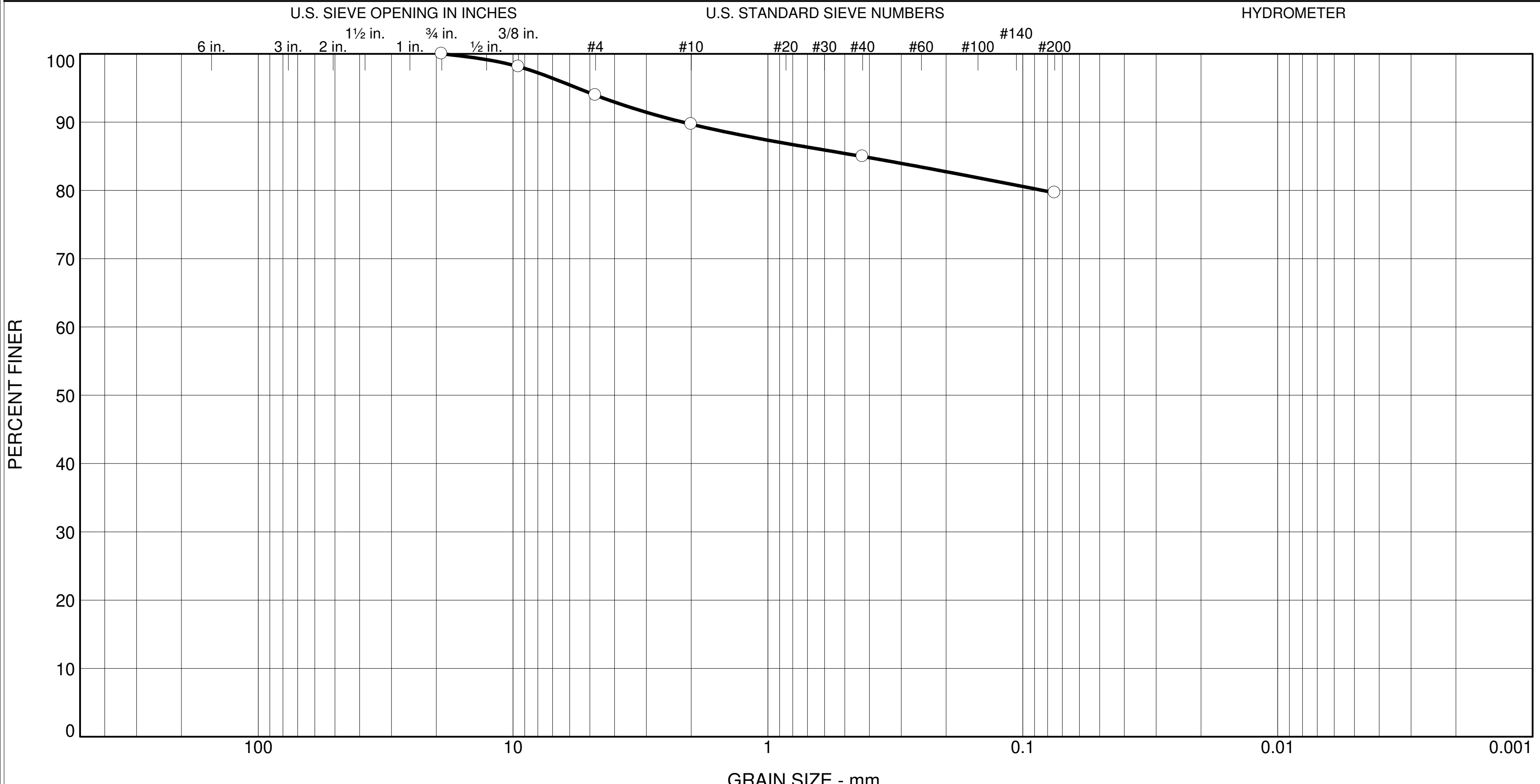
Materials Testing of Arkansas

Little Rock, AR

Figure

Tested By: C. SHEARER **Checked By:** F. MONDUN

Particle Size Distribution Report



% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
0.0	0.0	6.1	4.2	4.7	5.3	79.7	

Identification	Date Sampled	Date Received	Date Tested
Source of Sample: TP-4 Depth: 1 Sample Number: S-2			3-3-2023

Client HOPE CONSULTING

Project MIDLAND ROAD SUBDIVISION

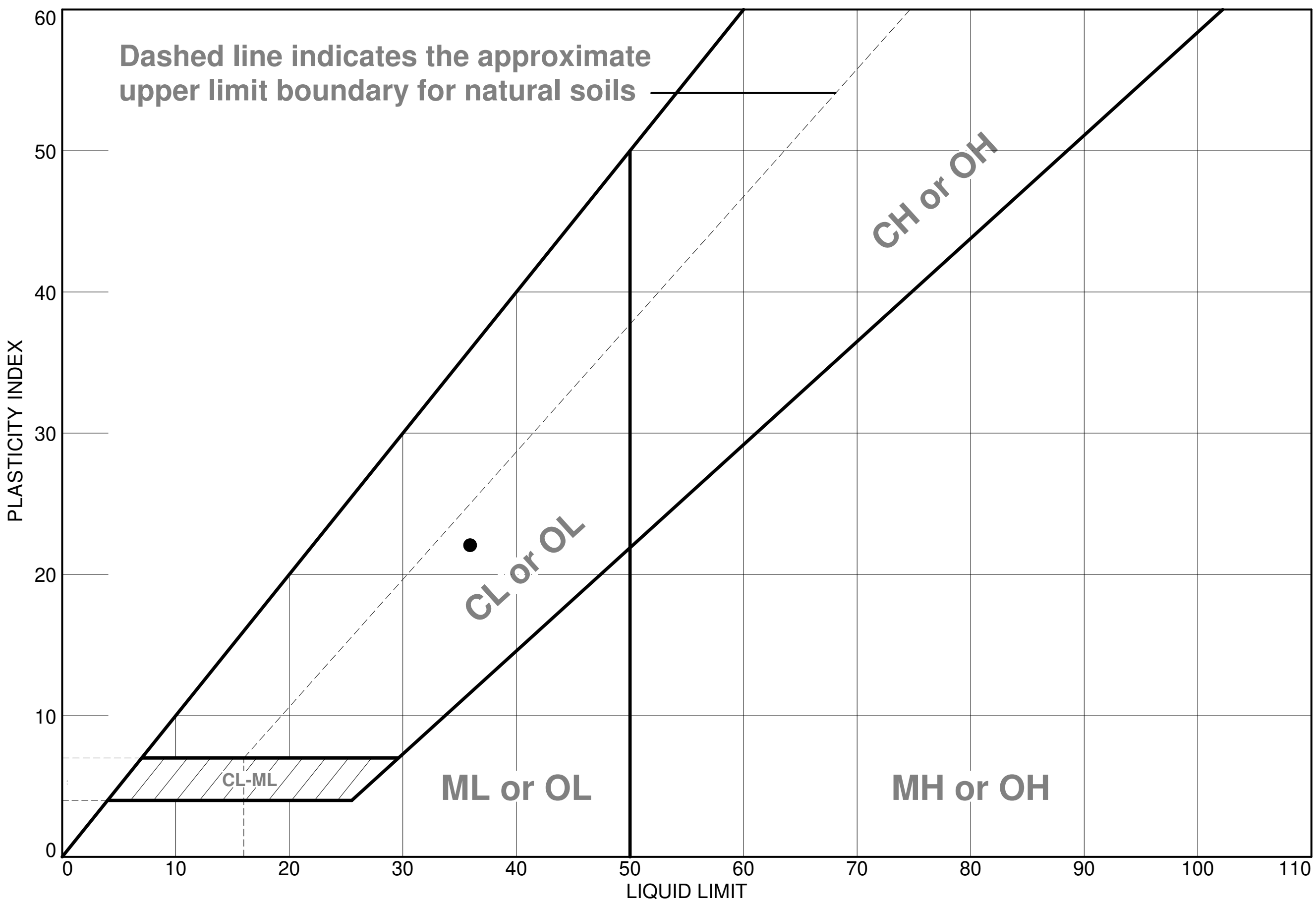
Project No. GEO23-023 Figure

Materials Testing of Arkansas

Little Rock, AR

Tested By: S. PENNINGTON **Checked By:** F. MONDUN

LIQUID AND PLASTIC LIMITS TEST REPORT



	MATERIAL DESCRIPTION	LL	PL	PI	%<#40	%<#200	USCS
●	RED LEAN CLAY W/ SAND	36	14	22	85.0	79.7	CL

Project No. GEO23-023 **Client:** HOPE CONSULTING

Project: MIDLAND ROAD SUBDIVISION

● **Source of Sample:** TP-4 **Depth:** 1 **Sample Number:** S-2

Remarks:

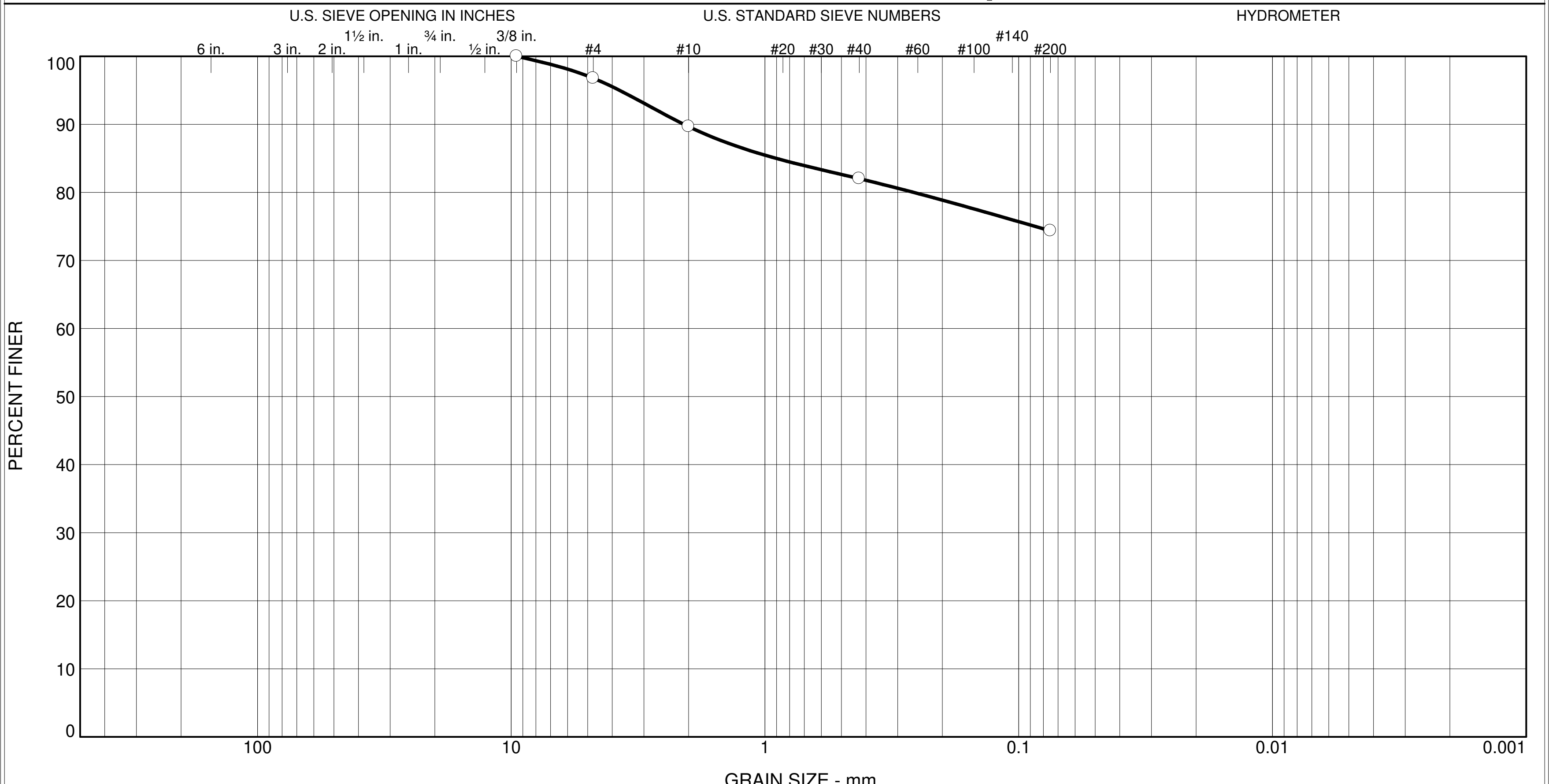
Materials Testing of Arkansas

Little Rock, AR

Figure

Tested By: C. SHEARER **Checked By:** F. MONDUN

Particle Size Distribution Report



% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
0.0	0.0	3.2	7.1	7.7	7.6	74.4	

Identification	Date Sampled	Date Received	Date Tested
Source of Sample: TP-7 Depth: 1 Sample Number: S-2			3-3-2023

Client HOPE CONSULTING

Project MIDLAND ROAD SUBDIVISION

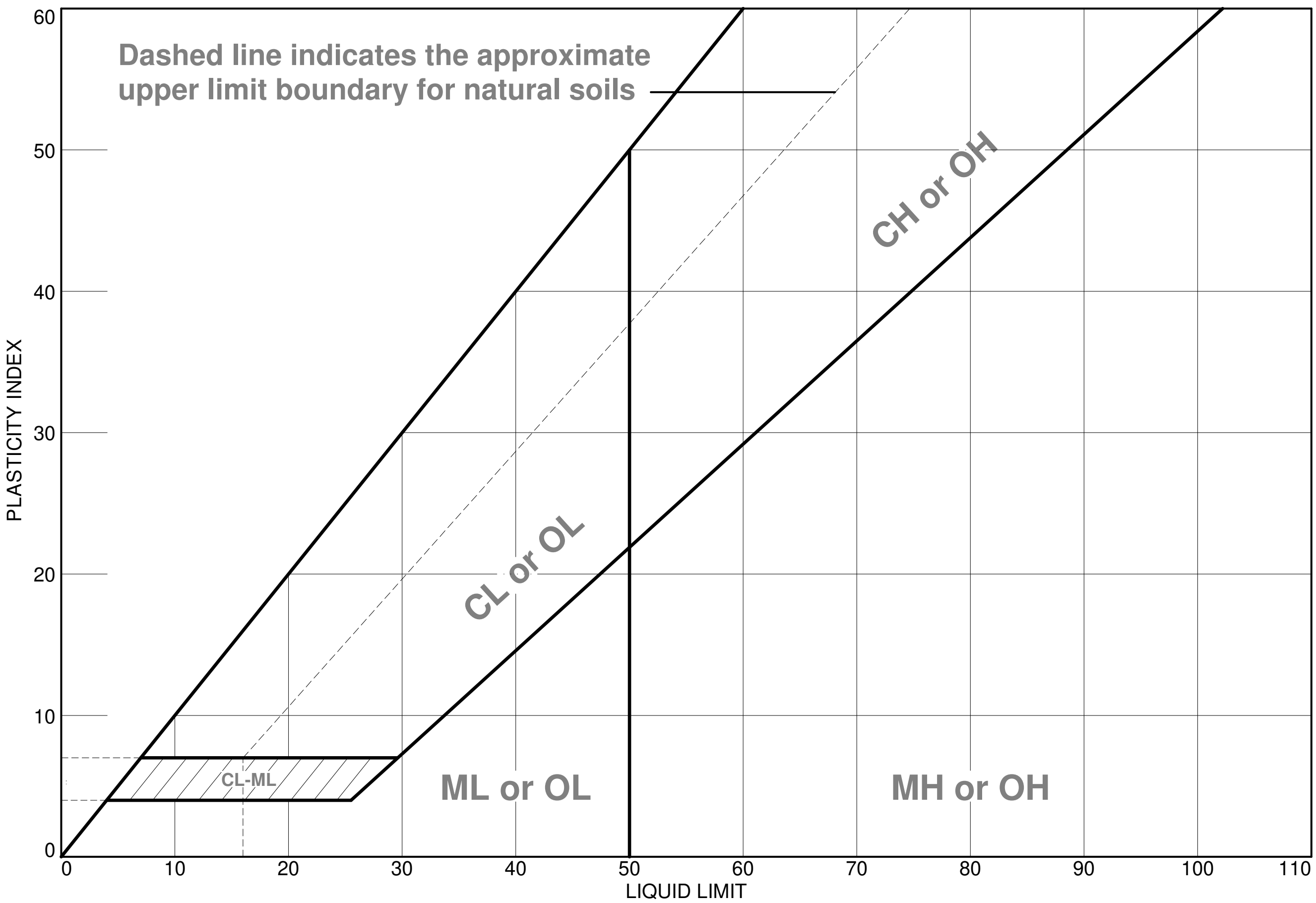
Project No. GEO23-023 Figure

Materials Testing of Arkansas

Little Rock, AR

Tested By: S. PENNINGTON **Checked By:** F. MONDUN

LIQUID AND PLASTIC LIMITS TEST REPORT



	MATERIAL DESCRIPTION	LL	PL	PI	%<#40	%<#200	USCS
●	BROWN SILT W/ SAND	NV	NP	NP	82.0	74.4	ML

Project No. GEO23-023 **Client:** HOPE CONSULTING

Project: MIDLAND ROAD SUBDIVISION

●**Source of Sample:** TP-7 **Depth:** 1 **Sample Number:** S-2

Remarks:

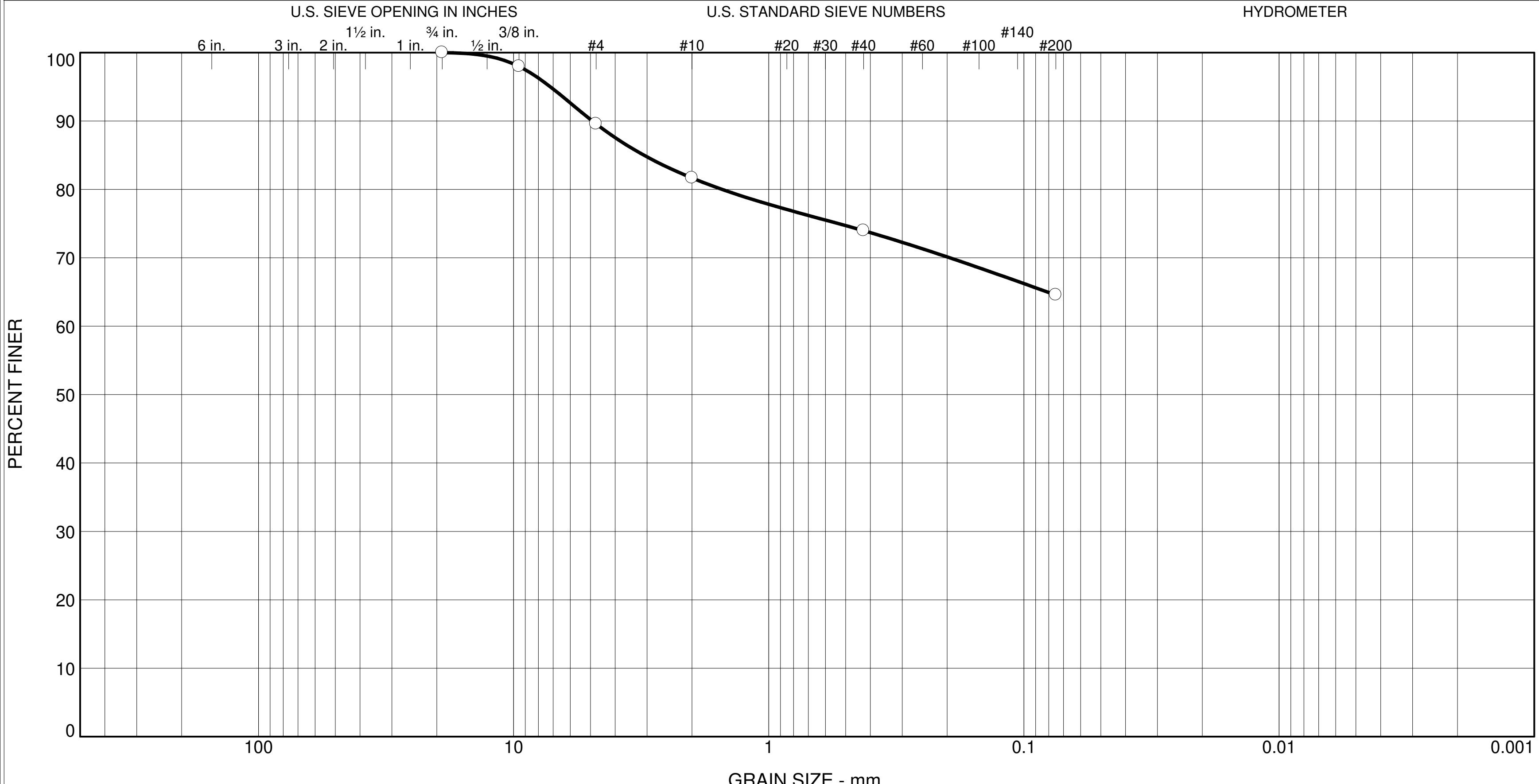
Materials Testing of Arkansas

Little Rock, AR

Figure

Tested By: C. SHEARER **Checked By:** F. MONDUN

Particle Size Distribution Report



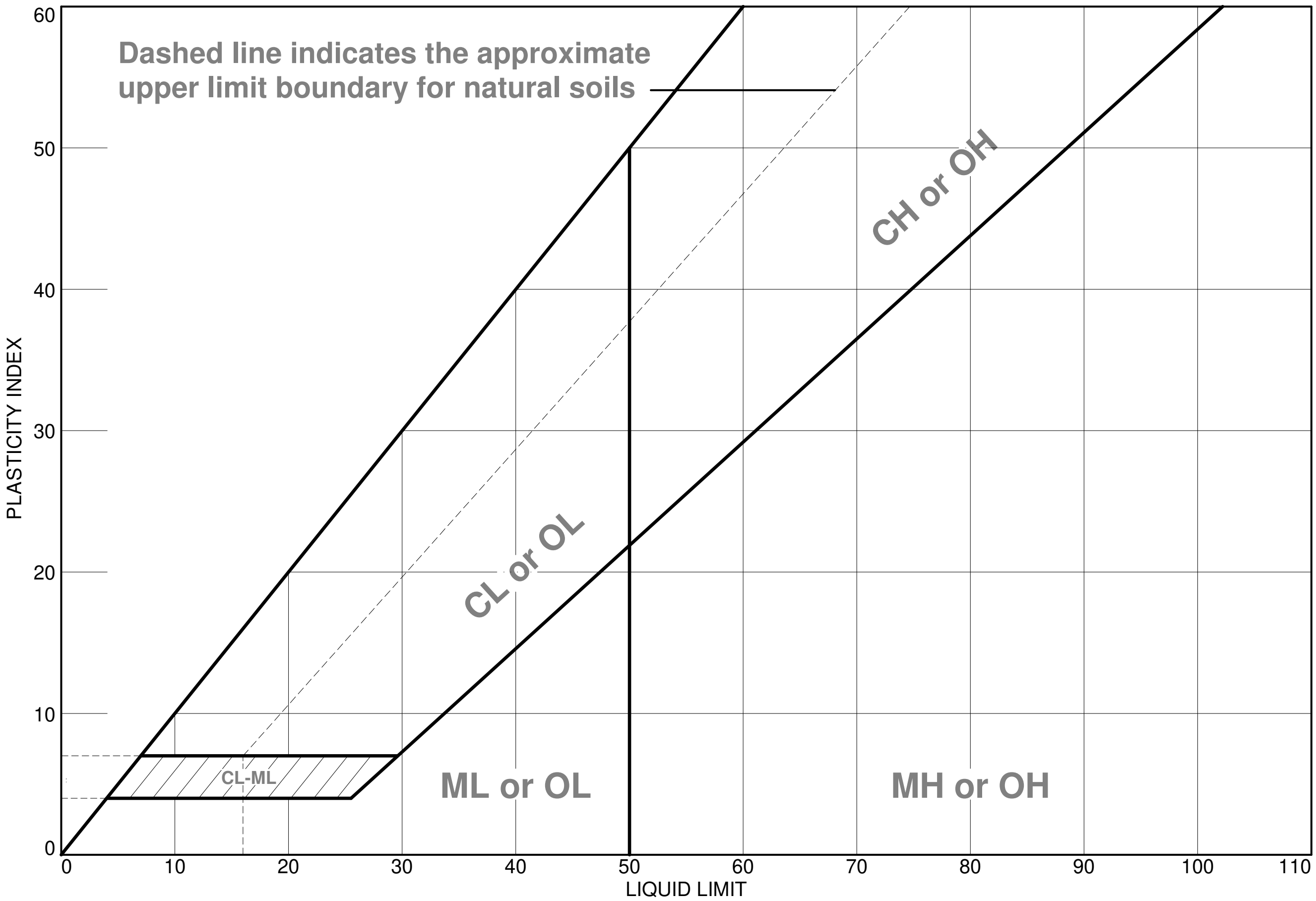
% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
0.0	0.0	10.4	7.9	7.7	9.4	64.6	

Identification	Date Sampled	Date Received	Date Tested
Source of Sample: TP-9 Depth: 0 Sample Number: S-1			3-3-2023

Client HOPE CONSULTING	**Materials Testing of Arkansas**
Project MIDLAND ROAD SUBDIVISION	
Project No. GEO23-023 Figure	**Little Rock, AR**

Tested By: S. PENNINGTON **Checked By:** F. MONDUN

LIQUID AND PLASTIC LIMITS TEST REPORT



	MATERIAL DESCRIPTION	LL	PL	PI	%<#40	%<#200	USCS
●	BROWN-GREY, SANDY SILT W/ ORGANICS	NV	NP	NP	74.0	64.6	ML

Project No. GEO23-023 **Client:** HOPE CONSULTING

Project: MIDLAND ROAD SUBDIVISION

●**Source of Sample:** TP-9 **Depth:** 0 **Sample Number:** S-1

Remarks:

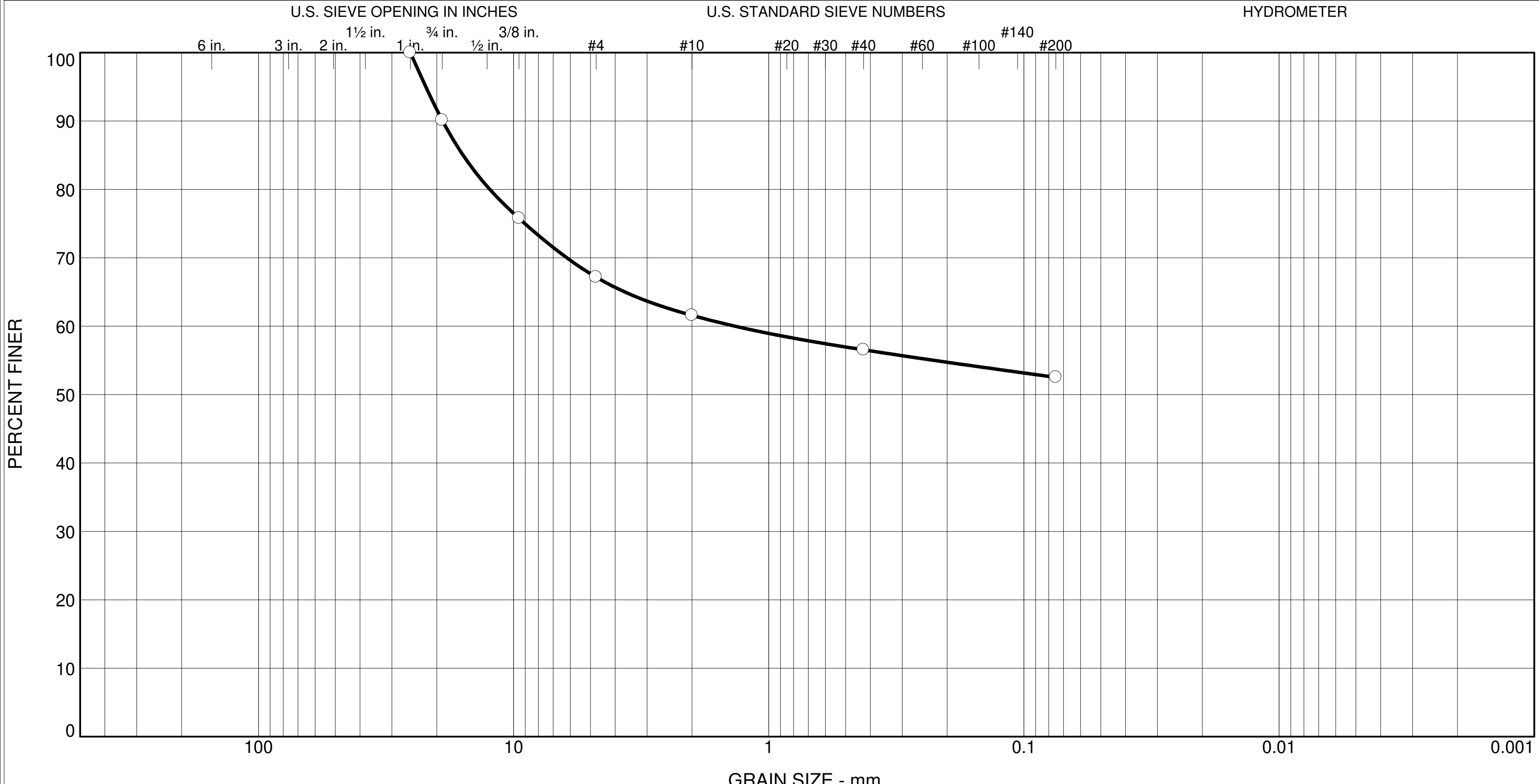
Materials Testing of Arkansas

Little Rock, AR

Figure

Tested By: C. SHEARER **Checked By:** F. MONDUN

Particle Size Distribution Report



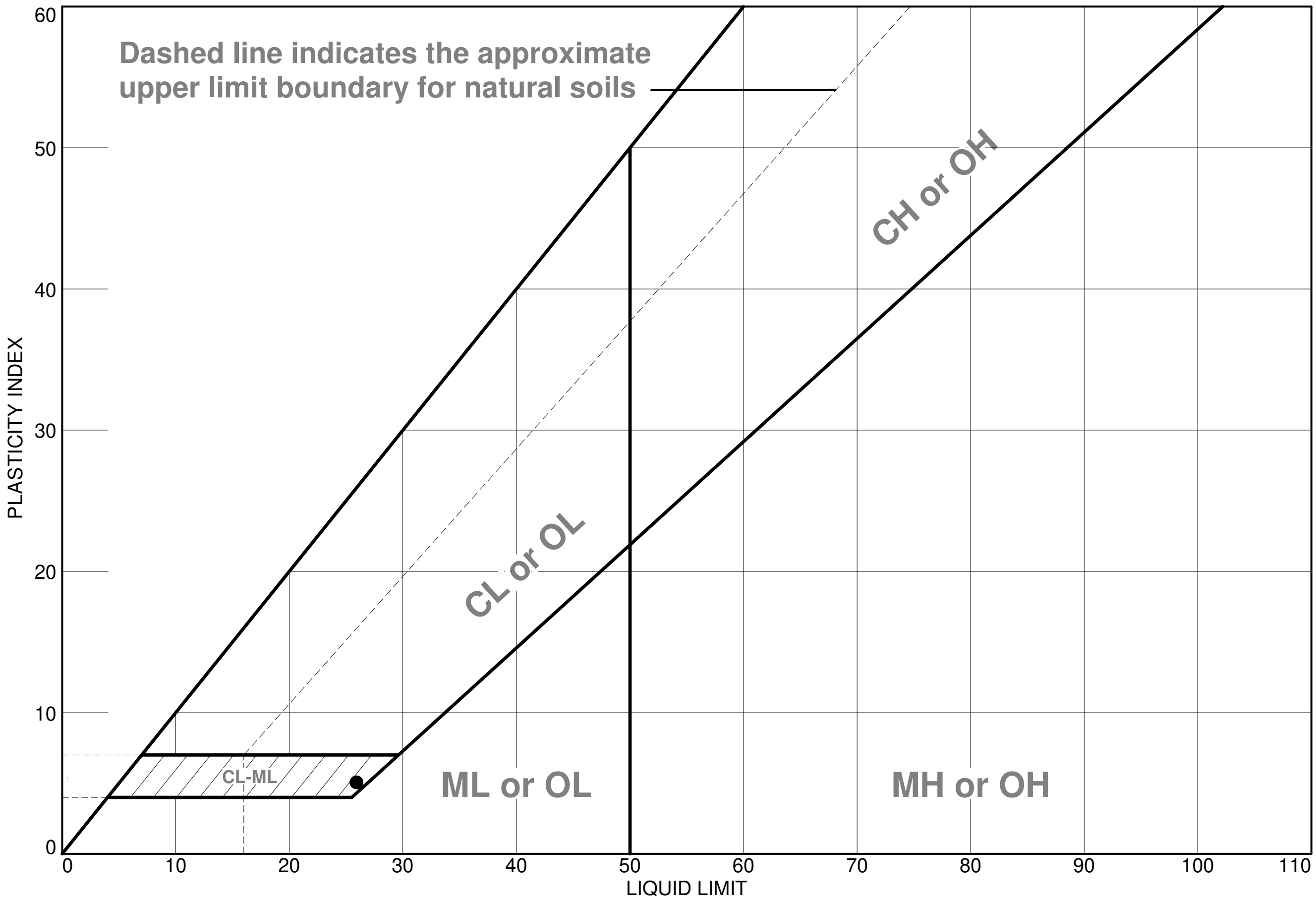
% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
0.0	9.9	22.9	5.6	5.1	4.0	52.5	

Identification	Date Sampled	Date Received	Date Tested
Source of Sample: TP-10 Depth: 4 Sample Number: S-4			3-3-2023

Client HOPE CONSULTING	**Materials Testing of Arkansas**
Project MIDLAND ROAD SUBDIVISION	
Project No. GEO23-023 Figure	**Little Rock, AR**

Tested By: S. PENNINGTON **Checked By:** F. MONDUN

LIQUID AND PLASTIC LIMITS TEST REPORT



	MATERIAL DESCRIPTION	LL	PL	PI	%<#40	%<#200	USCS
●	BROWN, GRAVELLY SILTY CLAY	26	21	5	56.5	52.5	CL-ML

Project No. GEO23-023 **Client:** HOPE CONSULTING

Project: MIDLAND ROAD SUBDIVISION

● **Source of Sample:** TP-10 **Depth:** 4 **Sample Number:** S-4

Remarks:

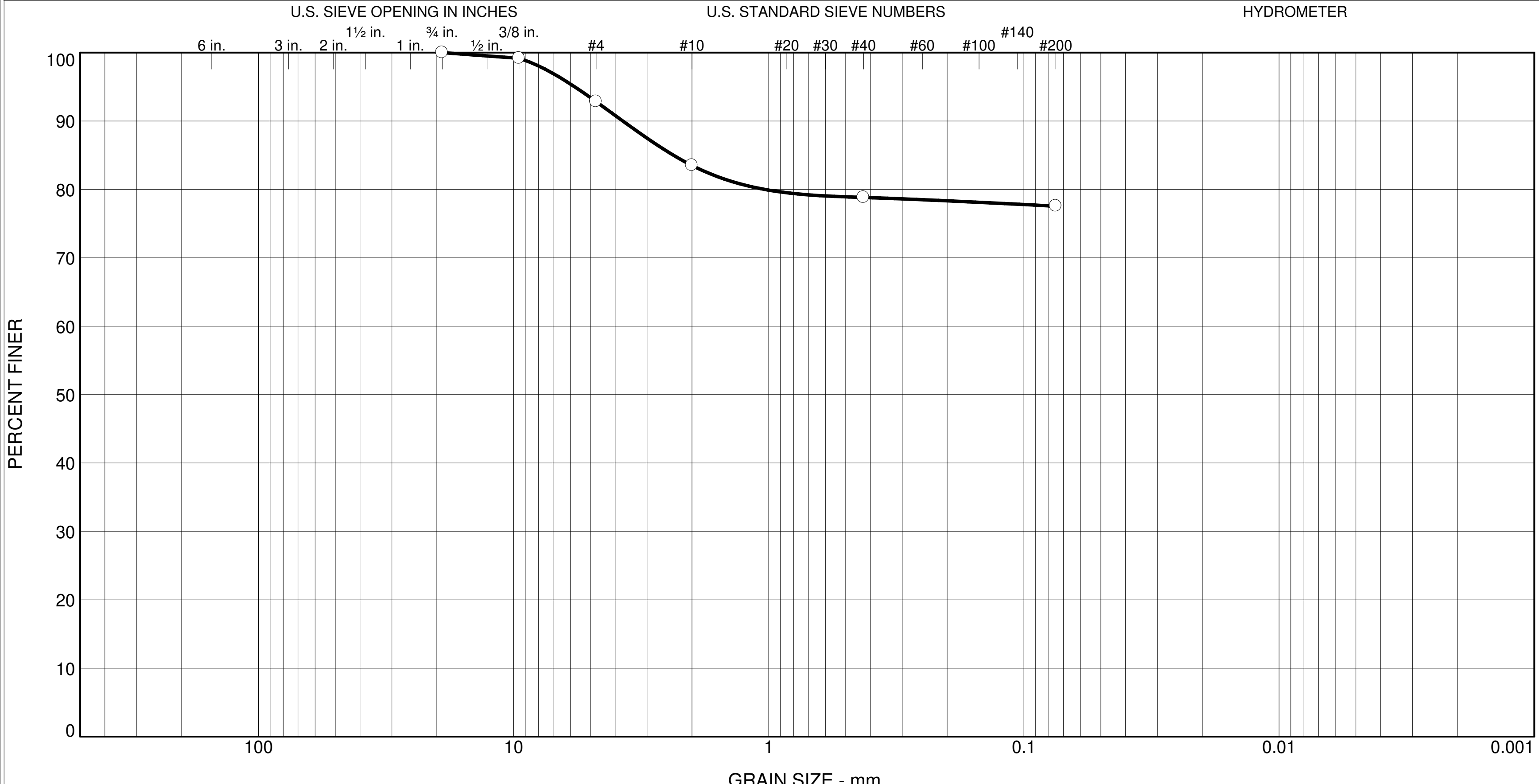
Materials Testing of Arkansas

Little Rock, AR

Figure

Tested By: C. SHEARER **Checked By:** F. MONDUN

Particle Size Distribution Report



% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
0.0	0.0	7.2	9.3	4.7	1.2	77.6	

Identification	Date Sampled	Date Received	Date Tested
Source of Sample: TP-11 Depth: 4 Sample Number: S-4			3-3-2023

Client HOPE CONSULTING

Project MIDLAND ROAD SUBDIVISION

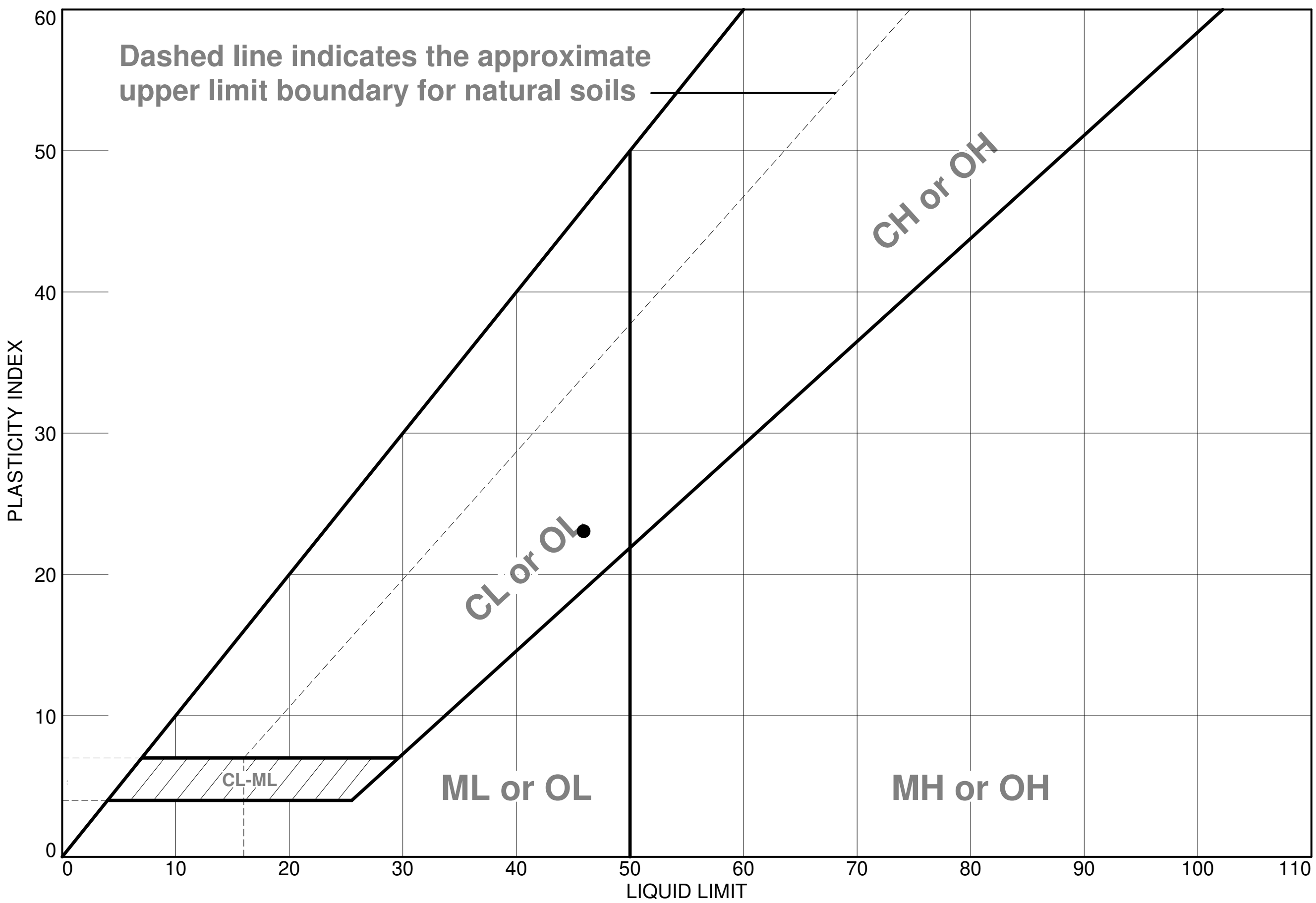
Project No. GEO23-023 Figure

Materials Testing of Arkansas

Little Rock, AR

Tested By: S. PENNINGTON **Checked By:** F. MONDUN

LIQUID AND PLASTIC LIMITS TEST REPORT



	MATERIAL DESCRIPTION	LL	PL	PI	%<#40	%<#200	USCS
●	BROWN-GREY LEAN CLAY W/ SAND	46	23	23	78.8	77.6	CL

Project No. GEO23-023 **Client:** HOPE CONSULTING

Project: MIDLAND ROAD SUBDIVISION

●**Source of Sample:** TP-11 **Depth:** 4 **Sample Number:** S-4

Remarks:

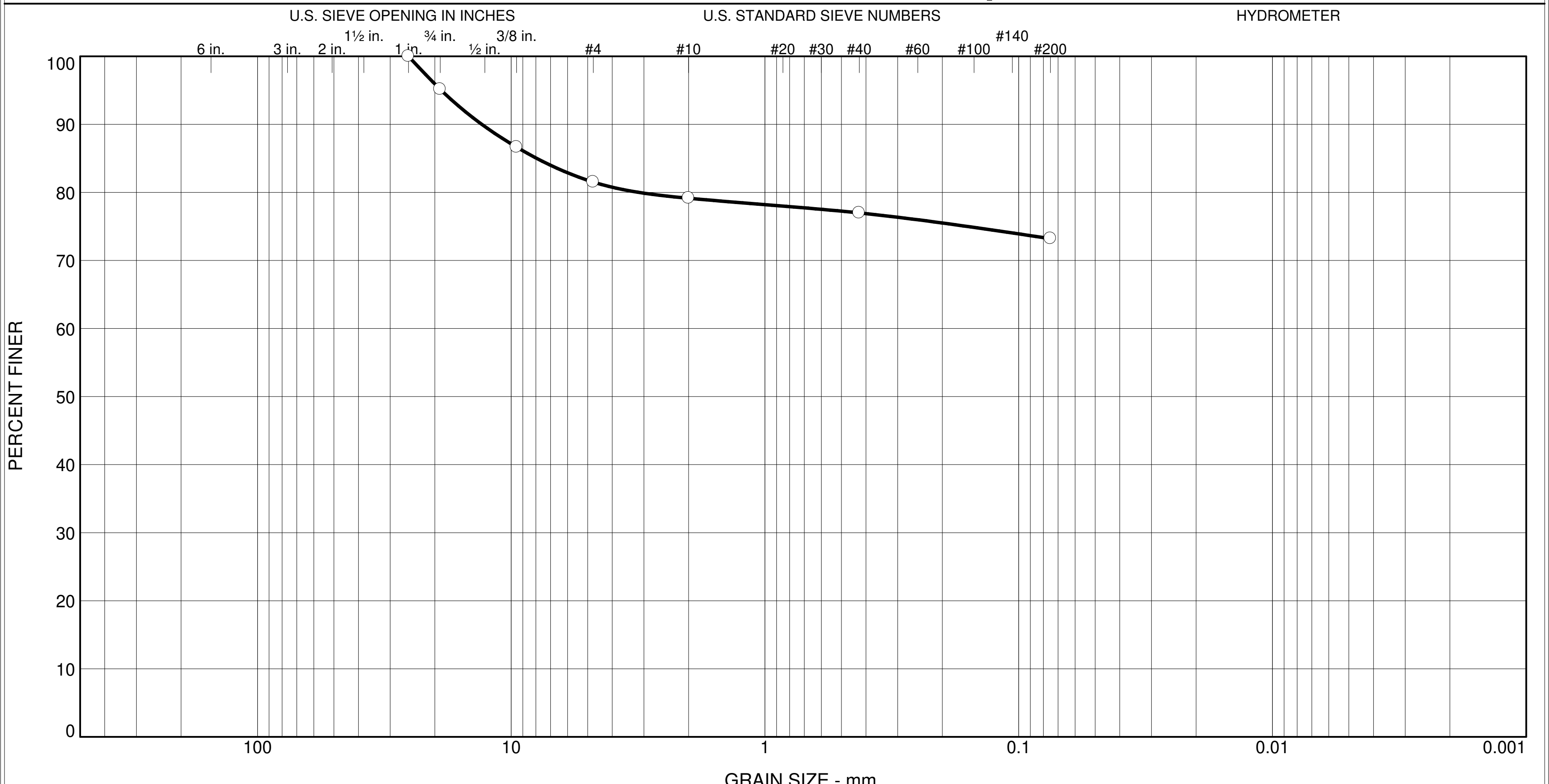
Materials Testing of Arkansas

Little Rock, AR

Figure

Tested By: C. SHEARER **Checked By:** F. MONDUN

Particle Size Distribution Report



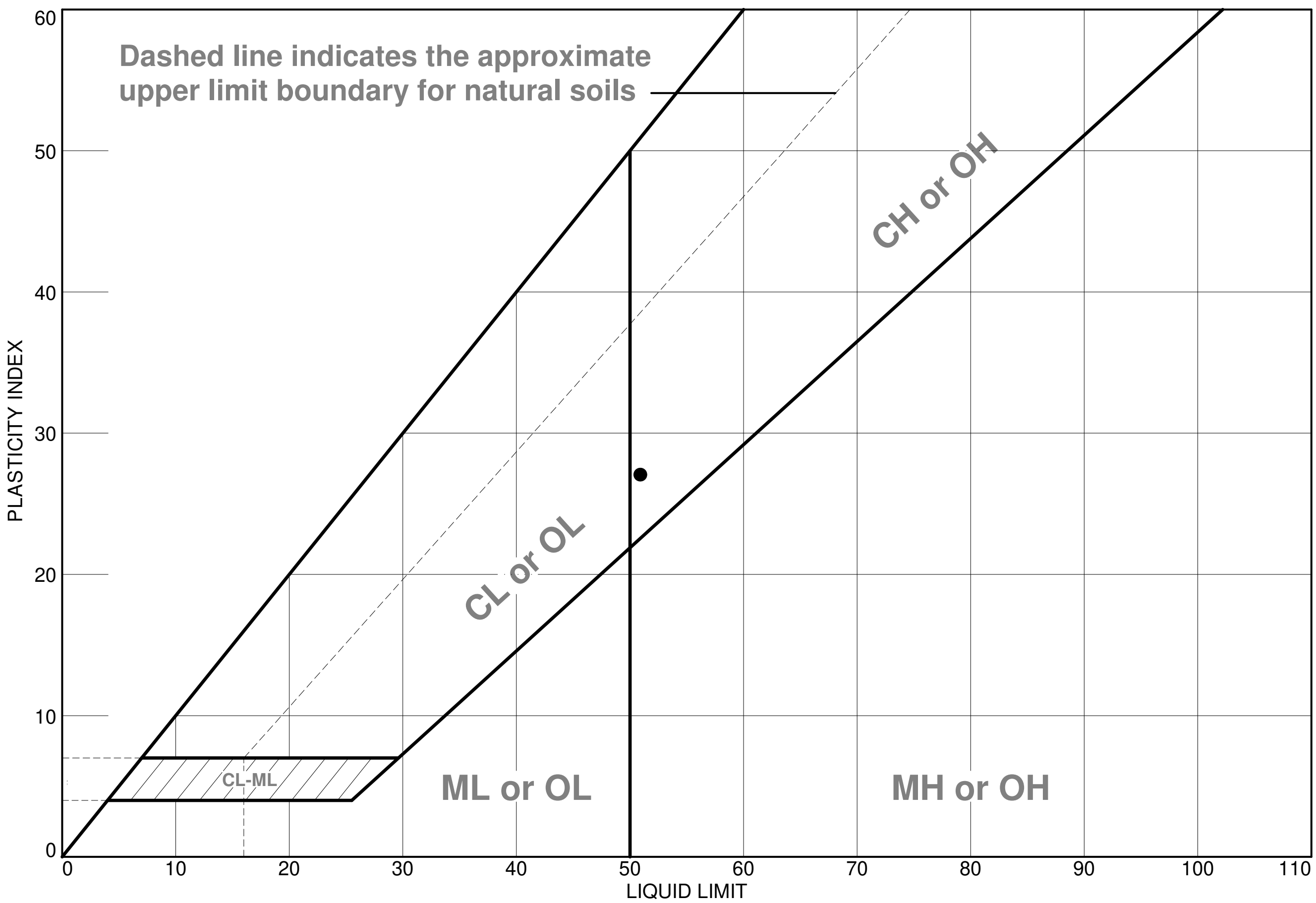
% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
0.0	4.8	13.7	2.4	2.1	3.8	73.2	

Identification	Date Sampled	Date Received	Date Tested
Source of Sample: TP-12 Depth: 2 Sample Number: S-3			3-3-2023

Client HOPE CONSULTING	**Materials Testing of Arkansas**
Project MIDLAND ROAD SUBDIVISION	
Project No. GEO23-023 Figure	**Little Rock, AR**

Tested By: S. PENNINGTON **Checked By:** F. MONDUN

LIQUID AND PLASTIC LIMITS TEST REPORT



	MATERIAL DESCRIPTION	LL	PL	PI	%<#40	%<#200	USCS
●	RED EXPANSIVE CLAY W/ GRAVEL	51	24	27	77.0	73.2	CH

Project No. GEO23-023 **Client:** HOPE CONSULTING

Project: MIDLAND ROAD SUBDIVISION

●**Source of Sample:** TP-12 **Depth:** 2 **Sample Number:** S-3

Remarks:

Materials Testing of Arkansas

Little Rock, AR

Figure

Tested By: C. SHEARER **Checked By:** F. MONDUN

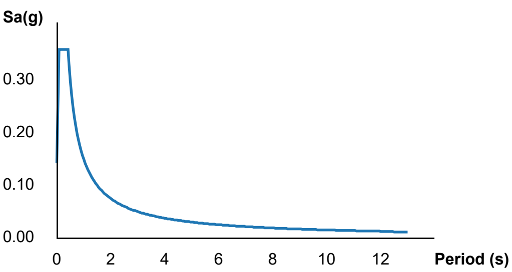
Appendix E:
Seismic Design Criteria

ATC Hazards by Location

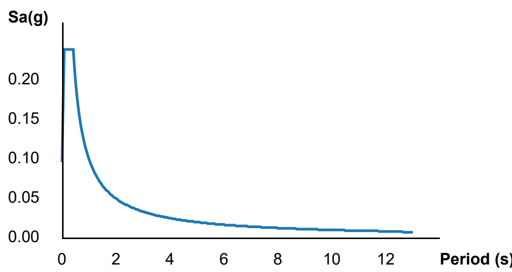
Search Information

Coordinates:	34.65036519728192, -92.46651549255981
Elevation:	360 ft
Timestamp:	2023-03-10T23:13:28.070Z
Hazard Type:	Seismic
Reference Document:	IBC-2015
Risk Category:	II
Site Class:	B

MCER Horizontal Response Spectrum



Design Horizontal Response Spectrum



Basic Parameters

Name	Value	Description
S_S	0.359	MCE_R ground motion (period=0.2s)
S_1	0.15	MCE_R ground motion (period=1.0s)
S_{MS}	0.359	Site-modified spectral acceleration value
S_{M1}	0.15	Site-modified spectral acceleration value
S_{DS}	0.239	Numeric seismic design value at 0.2s SA
S_{D1}	0.1	Numeric seismic design value at 1.0s SA

Additional Information

Name	Value	Description
SDC	B	Seismic design category
F_a	1	Site amplification factor at 0.2s
F_v	1	Site amplification factor at 1.0s
CR_S	0.837	Coefficient of risk (0.2s)
CR_1	0.813	Coefficient of risk (1.0s)
PGA	0.184	MCE_G peak ground acceleration
F_{PGA}	1	Site amplification factor at PGA
PGA_M	0.184	Site modified peak ground acceleration
T_L	12	Long-period transition period (s)
SsRT	0.359	Probabilistic risk-targeted ground motion (0.2s)
SsUH	0.429	Factored uniform-hazard spectral acceleration (2% probability of exceedance in 50 years)
SsD	1.5	Factored deterministic acceleration value (0.2s)
S1RT	0.15	Probabilistic risk-targeted ground motion (1.0s)
S1UH	0.184	Factored uniform-hazard spectral acceleration (2% probability of exceedance in 50 years)
S1D	0.6	Factored deterministic acceleration value (1.0s)

PGAd	0.6	Factored deterministic acceleration value (PGA)

The results indicated here DO NOT reflect any state or local amendments to the values or any delineation lines made during the building code adoption process. Users should confirm any output obtained from this tool with the local Authority Having Jurisdiction before proceeding with design.

Please note that the ATC Hazards by Location website will not be updated to support ASCE 7-22. Find out why.

Disclaimer

Hazard loads are provided by the U.S. Geological Survey Seismic Design Web Services.

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City of Bryant Stormwater Department

1019 SW 2nd St.
Bryant, Arkansas 72022
Office (501) 943-0453; Fax (501) 943-0851

WARRANTY BOND PROCEDURES

For Stormwater Infrastructure Public & Private

These procedures are applicable to Stormwater Infrastructure that is to be dedicated to the public and maintained by the City of Bryant and for Private Stormwater Infrastructure that will be connected to overall City of Bryant Stormwater Infrastructure.

In accordance with Ordinance No. 2019-32 Article V., The City of Bryant Stormwater Department will require a Maintenance Warranty Bond as part of the process for approving Stormwater Infrastructure. The purpose of the bond is to cover the cost of correcting deficiencies not addressed by the developer during the warranty period and to insure no adverse effects will occur to the overall function of the City of Bryant Stormwater Infrastructure.

ORDINANCE 2019-32 ARTICLE V. STORMWATER INFRASTRUCTURE WARRANTY BOND.

1. **Stormwater Infrastructure Warranty Bond.** A one year maintenance bond against defects in workmanship shall be required by the Administrative Authority for any portion of the stormwater management facilities privately owned or stormwater management improvements dedicated to the city, said maintenance bond is to be provide by cashier's check, irrevocable letter of credit or acceptable surety authorized to do business in the State of Arkansas. All forms of maintenance bonds shall be subject to approval by the Administrative Authority. The value of the bond shall be an amount equal to 100% of the value of the privately owned stormwater management facilities or stormwater system improvements being privately owned or dedicated to the city. A cost list must be provide to prove and verify the amount of the maintenance bond. The cost list shall include cost of stormwater infrastructure construction and components (piping, weirs, spillway structures, junction boxes, trickle channels, inlets, grates, riprap and site stabilization).

2. **Procedurals.** These procedures are applicable to Stormwater Infrastructure that is to be dedicated to the public and maintained by the City of Bryant and for Private Stormwater Infrastructure that will be connected to overall City of Bryant Stormwater Infrastructure.

   In accordance with Ordinance No. 2019-32 Article V., City of Bryant Stormwater Department will require a Maintenance Warranty Bond as part of the process for approving Stormwater Infrastructure. The bond will be equal to 100% of the cost of construction of the Stormwater Infrastructure System at the time of completion of the Stormwater Infrastructure System. The purpose of the bond is to cover the cost of correcting deficiencies not addressed by the developer during the warranty period and to insure no adverse effects will occur to the overall function of the City of Bryant Stormwater Infrastructure.

3. **Determining the Maintenance Warranty Bond Amount.** During the final inspection process, the City of Bryant Stormwater Department will verify and approve the Warranty Bond estimate for all Stormwater Infrastructure within the proposed unit using:

(a) The Warranty Bond cost list estimate shall be presented to the City of Bryant Stormwater Department by formal letter. The formal letter shall include project name, developer contact information and "Cost List for Construction of Stormwater Infrastructure Components" including but not limited to piping, weirs, spillway structures, junction boxes, trickle channels, riprap, inlets, grates, weirs and site stabilization;

(b) The Bond amount will need to be re-evaluated if more than 18 months have passed from the time of the estimate review to the time of providing the bond to the City of Bryant Stormwater Department;

4. **Submitting the bond to the city.** After requesting a final inspection of the Stormwater Infrastructure and approval of completion by the City of Bryant Stormwater Department, the developer must provide the City of Bryant Stormwater Department with a bond equal to amount determined in Article V. Section 3. of this document. The Bond must be for a period of 12 months and be a financial guarantee in the form of a bond, letter of credit, or trust agreement executed by a surety company authorized to do business in the State of Arkansas. The Bond must be payable to the City of Bryant Public Works Department, conditioned that the developer will maintain the Stormwater Infrastructure in accordance with the Stormwater Management Manual Ordinance No. 2019-31 and the Stormwater Management Ordinance No. 2019-32.

5. **Warranty period.** After the Stormwater Infrastructure construction passes the final inspection and the one year warranty bond is received, the one year maintenance warranty period will begin. The one-year warranty period will start on the date the Maintenance Warranty Bond is received and accepted. There shall be no separate warranty period start dates for Stormwater Infrastructure within a single unit.

6. **Follow-up inspection.** The City of Bryant Stormwater Department will conduct a follow-up inspection within the tenth month of the warranty period but in no event any later than two months prior to the bond expiring. The City of Bryant Stormwater Department will issue a punch list of deficiencies that will be sent to the developer or contractor for the unit. If no deficiencies are found and camera video passes inspection, release of the bond will proceed as set out and as listed in Article V. Section 10 of this document.

7. **Correcting Deficiencies and Camera Video.** The developer must contact the City of Bryant Stormwater Department at least 24 hours before correcting any decencies or performing camera video. The developer shall also camera all stormwater infrastructure to ensure that there is no sediment laden infrastructure. Upon notification by the developer that all deficiencies have been corrected and camera video has been completed, the City of Bryant Stormwater Department will re-inspect to verify compliance with correction of deficiencies and reviewing the camera video to assure the stormwater infrastructure is not sediment laden or defective.

8. **Calling in the bond.** If the developer does not contact the City of Bryant Stormwater Department, deficiencies have not been corrected and the stormwater infrastructures has not been camera videoed by the end of the 11th month or one (1) month prior to the expiration of the Bond, the City of Bryant Stormwater Department will prepare an estimate and list of work to be done to bring the stormwater infrastructure into compliance. The City of Bryant Stormwater Department will contact the bonding agency to submit the cost estimates for correcting the deficiencies.

9. **Requesting Acceptance.** Once all deficiencies have been corrected, the City of Bryant Stormwater Department will prepare the paperwork for the Stormwater Infrastructure within the unit accepted for maintenance by the City of Bryant 'if dedicated', or paperwork will be prepared to release the bond if infrastructure is a private unit.

10. **Bond Release.** The Bond will be released once the City of Bryant has accepted the Stormwater Infrastructure for maintenance 'if dedicated', and an acceptance letter has been written by the City of Bryant Public Works. If all compliance has been met with a private Stormwater Infrastructure Unit(s) then the City of Bryant Stormwater Department shall contact the developer by formal letter and release the bond. No partial release of the Bond will be allowed at any time.

ATTENTION: DO NOT FILL OUT INFORMATION BELOW UNTIL YOU ARE PRESENT WITH A NOTARY PUBLIC. (THIS DOCUMENT MUST BE NOTARIZED)

By filling out the information below, signing and dating, you are hereby acknowledging that you have read, understand and agree to adhere to the Stormwater Infrastructure Warranty Bond Procedures and Processes listed in this document. You the applicant are hereby responsible for upholding, without limitation, the Stormwater Infrastructure Warranty Bond Procedures.

Hilltop Landing
Name of Project Site/Addition

Scott M. Hurley
Applicant Name
(Print)

Applicant Name
(Signature)

Nxt Gen Homes, LLC
Applicant Business Name

PO Box 242146 Little Rock AR 72223
~~19218 Summershade Dr., Bryant, AR 72022~~
Applicant Mailing Address

Notarization

State of Arkansas

County of Pulaski

Subscribed and sworn before me, a Notary Public, on this 20th **day of** April, 2023.

Signature of Notary

10-10-29
My commission expires:

Notary Seal Stamp Here:

CARLA K KOEN
NOTARY PUBLIC
#12373843
EXPIRES 10/10/29
PULASKI COUNTY, ARKANSAS

HOPE CONSULTING
ENGINEERS - SURVEYORS
117 S. Market St. Benton, AR 72015 * 501-315-2626 * Fax 501-315-0024

Stormwater Infrastructure Maintenance Plan Agreement

Scott m. Hurley
AR Land & Realty
501.240.0049 Mobile
scott@arlr.net

Hilltop Landing Subdivision - Hilltop Road and Miller Road

All maintenance basin maintenance plans shall contain or uphold, without limitation, the following provisions:

(1) A description of the property on which the stormwater management facility is located and all easements from the site to the facility;

(2) Size and configuration of the facility;

(3) A statement that properties which will be served by the facility are granted rights to construct, use, reconstruct, repair and maintain access to the facility;

(4) A statement that each lot served by the facility is responsible for repairs and maintenance of the facility and any unpaid ad valorem taxes, public assessments for improvements, and unsafe building and public nuisance abatement liens charged against the facility, including all interest charges together with attorney fees, costs, and expenses of collection. If an association is delegated these responsibilities, then membership into the association shall be mandatory for each parcel served by the facility and any successive buyer. The association shall have the power to levy assessments for these obligations, and all that unpaid assessments levied by the association shall become a lien on the individual parcel;

(5) All stormwater facilities must be designed to minimize the need for maintenance, to provide easy vehicle and personal access for maintenance purpose, and be structurally sound. It shall be the responsibility of the applicant to obtain any necessary easements or other property interested to allow access to the facilities for inspection or maintenance;

(6) Detention/retention areas, earthen berms, intake structures, piping, discharge structures, trickle channels, spillways, pipe flares, weirs and fencing shall be regularly inspected, maintained and repaired to ensure their proper operation and to prevent the creation of any hazards or nuisances;

(7) Major deposits of sediment shall be removed from the detention/retention area on an annual basis or after any extreme storm event. Excavated materials shall be properly disposed of off-site. Every five years the detention area(s) shall be

surveyed to confirm that the original as-constructed contours have been maintained;

(8) Every three months piping and outlet structures shall be inspected and cleared of any accumulated debris;

(9) Erosion in detention/retention areas shall be promptly repaired and stabilized with appropriate Best Management Practices (BMP's);

(10) Detention/retention area shall be mowed during the growing season May through September to maintain the turf height of 6-inches or less. Any brush or trees that may grow within the detention areas bottom, slopes or banks shall be removed;

(11) Litter and foreign materials shall be removed from the detention area(s) weekly. Large or noxious pieces of litter shall be removed immediately. The area(s) shall be inspected visually after rainfall events in excess of 1" in 24 hours;

(12) Inspections of overall detention/retention area(s) and detention/retention components shall occur monthly with their conditions noted on an inspection form. If any remedial action is required, it should be noted and corrected;

(13) All inspection forms must be retained on-site, including the "As-Built" drawings and photographs of the improvements in their original condition;

(14) Items 1-13 shall be listed on the Stormwater Infrastructure Maintenance Plan Agreement.

(15) Inspection forms for Stormwater Infrastructure components are required. (An example of inspection forms are attached.)

Scott M. Hurley

signature

4-18-2023
date

HILLTOP LANDING SUBDIVISION

HILLTOP ROAD & MILLER ROAD, BRYANT, AR 72022

DRAINAGE REPORT

FOR

City of Bryant, Saline County, AR

April 2023

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 18,760 sft with bottom elevation of 437.50'.
- One 42" HDPE with 1.08% 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	65.96	90.29	32.54
5-Year	72.96	99.87	35.52
10-Year	85.63	117.23	39.88
25-Year	98.15	134.37	45.74
50-Year	111.88	153.15	57.52
100-Year	118.85	162.70	63.55

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 12.74% 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 7,680 sft with bottom elevation of 511.00'.
- One 36'' HDPE with 9.34% 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	18.44
5-Year	34.66	48.39	21.11
10-Year	39.81	55.21	24.59
25-Year	45.47	63.00	28.39
50-Year	51.67	71.49	32.15
100-Year	54.77	75.78	33.77

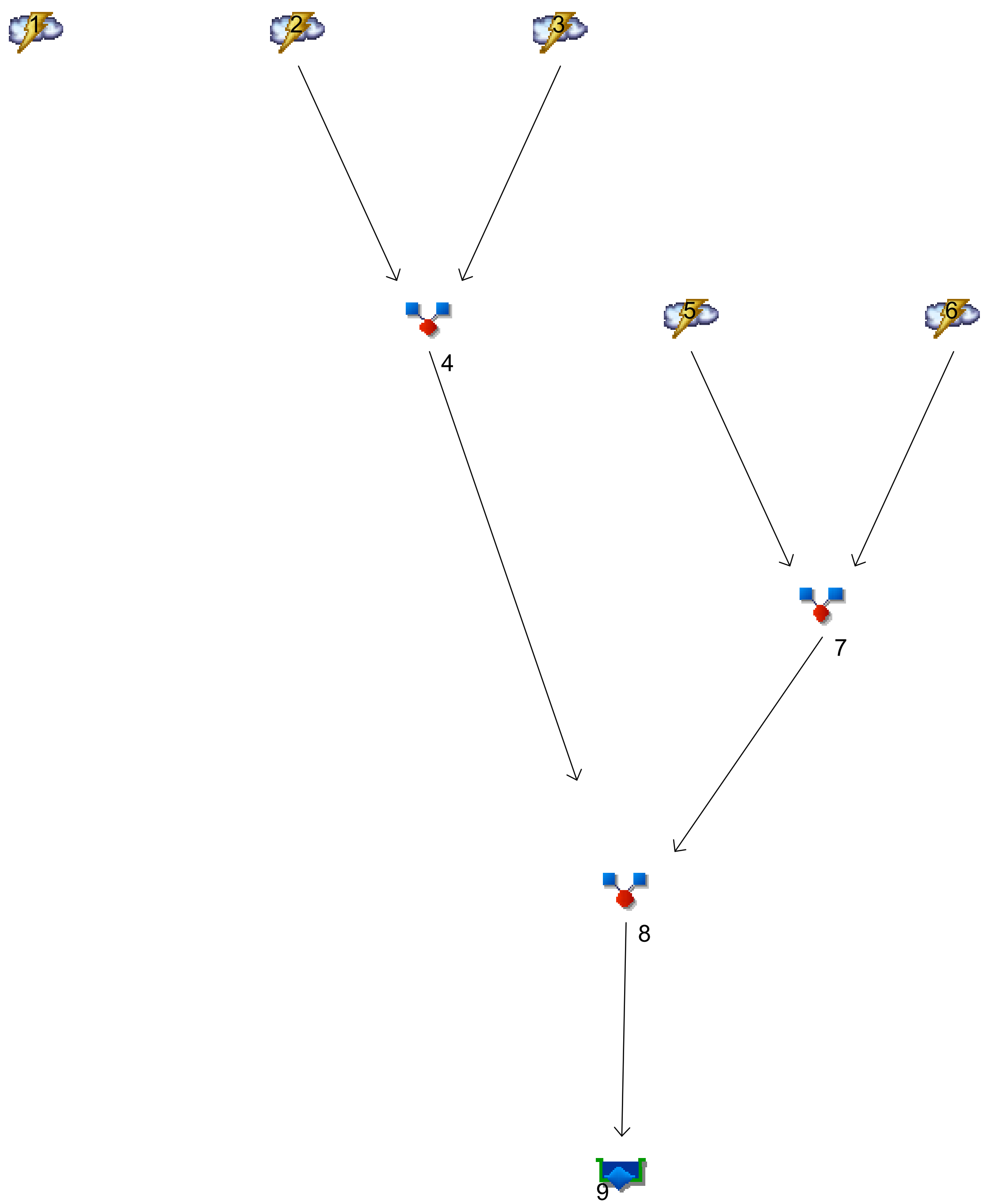
CONCLUSION

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

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



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

Project: drainage one pond_04-18-2023.gpw	Wednesday, 04 / 19 / 2023

Multi-Hydrograph Plot

Hyd. No. 1

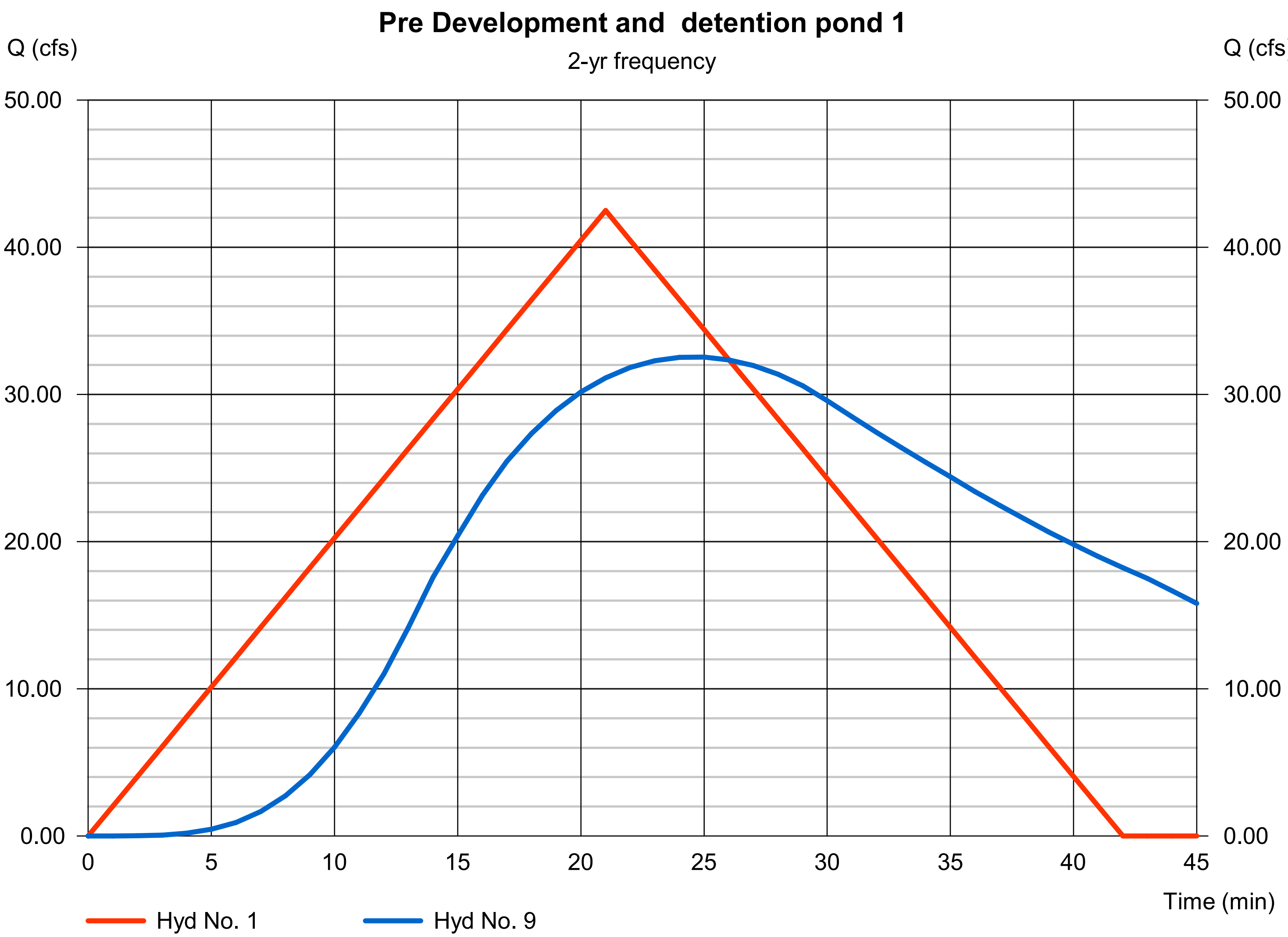
Pre Development

Hydrograph type	=	Rational
Peak discharge	=	42.51 cfs
Time to peak	=	21 min
Hyd. Volume	=	53,568 cuft

Hyd. No. 9

detention pond 1

Hydrograph type	=	Reservoir
Peak discharge	=	32.54 cfs
Time to peak	=	25 min
Hyd. Volume	=	81,205 cuft



Multi-Hydrograph Plot

Hyd. No. 1

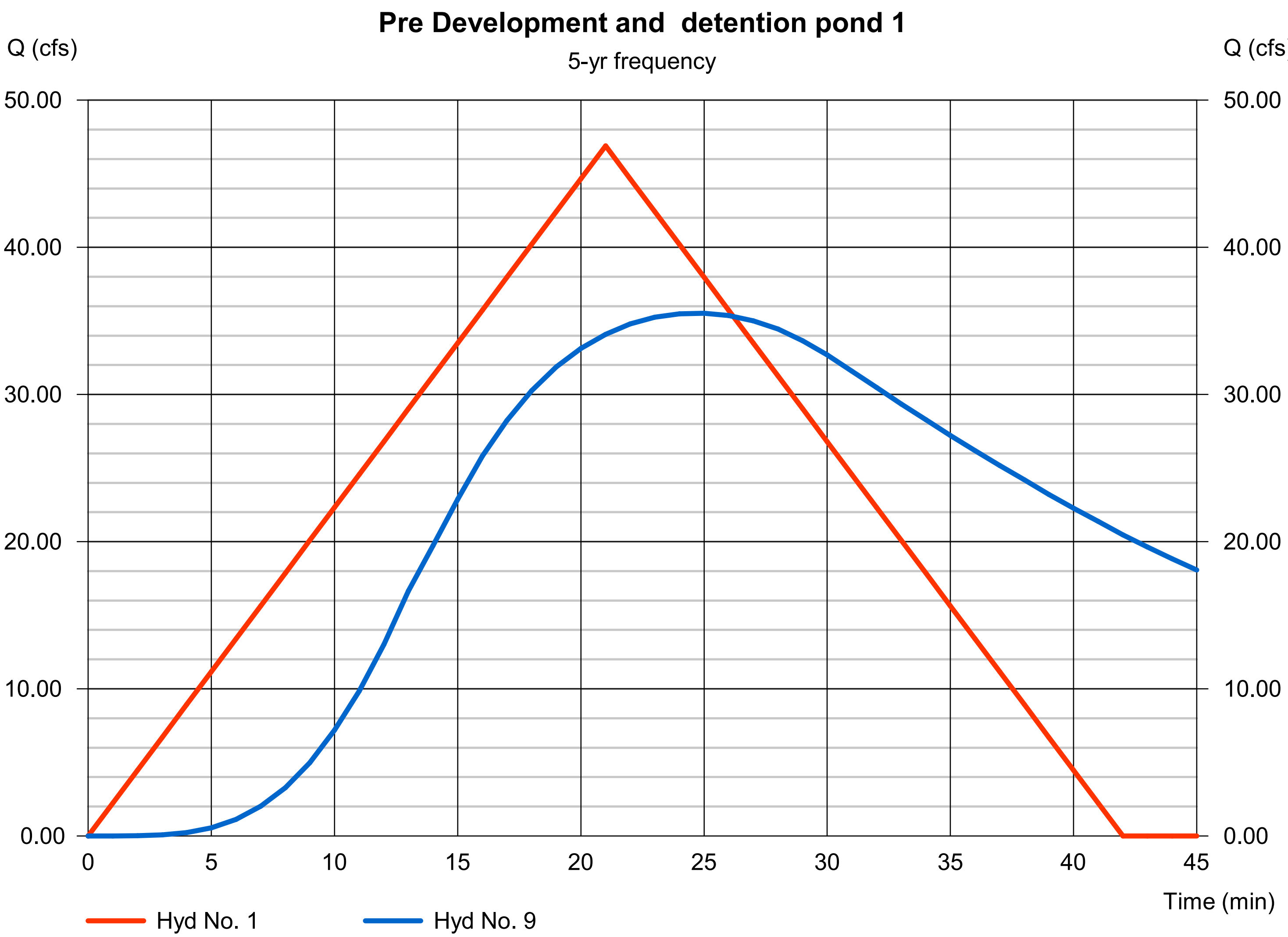
Pre Development

Hydrograph type	=	Rational
Peak discharge	=	46.89 cfs
Time to peak	=	21 min
Hyd. Volume	=	59,077 cuft

Hyd. No. 9

detention pond 1

Hydrograph type	=	Reservoir
Peak discharge	=	35.52 cfs
Time to peak	=	25 min
Hyd. Volume	=	89,828 cuft



Multi-Hydrograph Plot

Hyd. No. 1

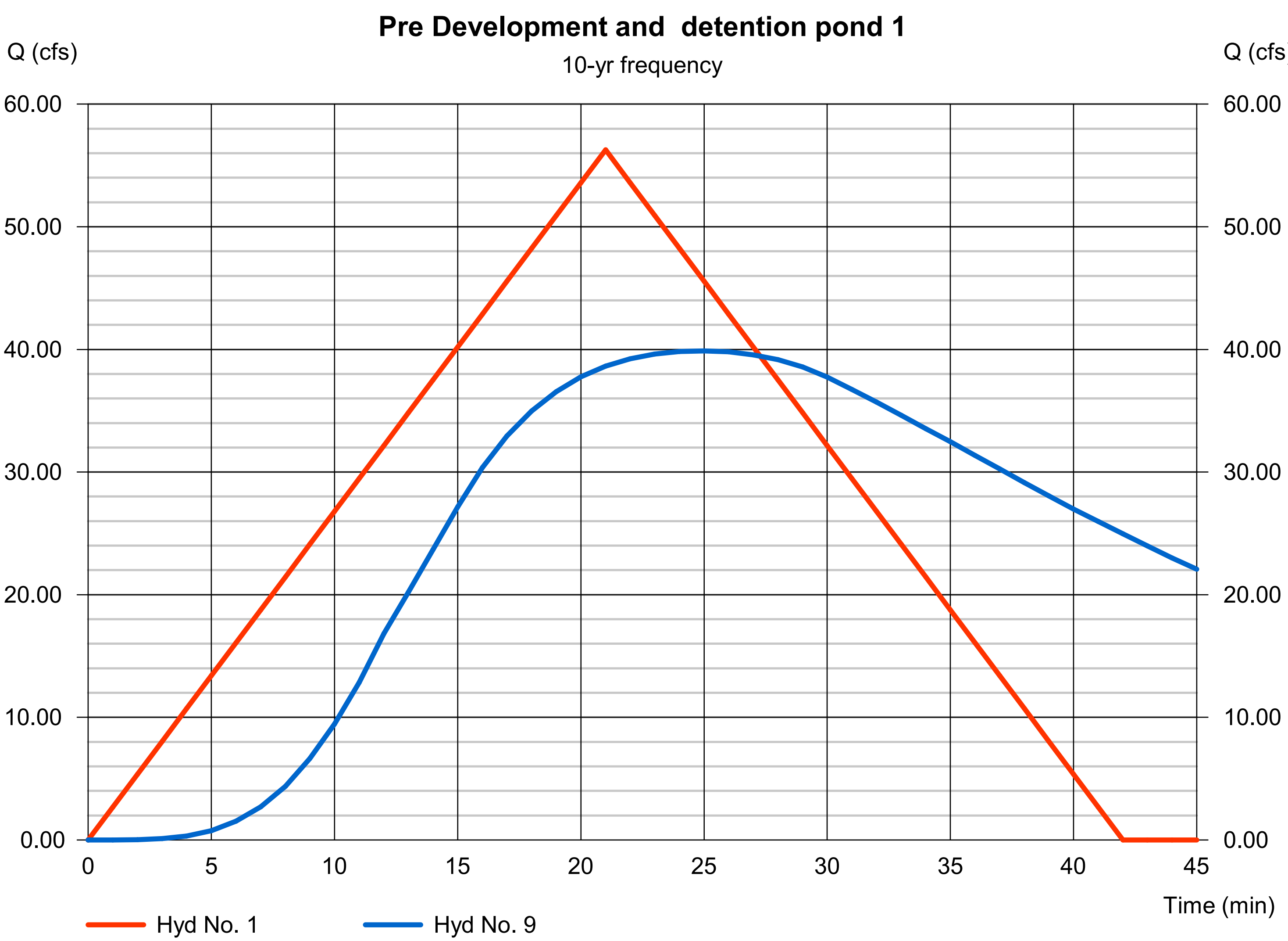
Pre Development

Hydrograph type	=	Rational
Peak discharge	=	56.26 cfs
Time to peak	=	21 min
Hyd. Volume	=	70,892 cuft

Hyd. No. 9

detention pond 1

Hydrograph type	=	Reservoir
Peak discharge	=	39.88 cfs
Time to peak	=	25 min
Hyd. Volume	=	105,448 cuft



Multi-Hydrograph Plot

Hyd. No. 1

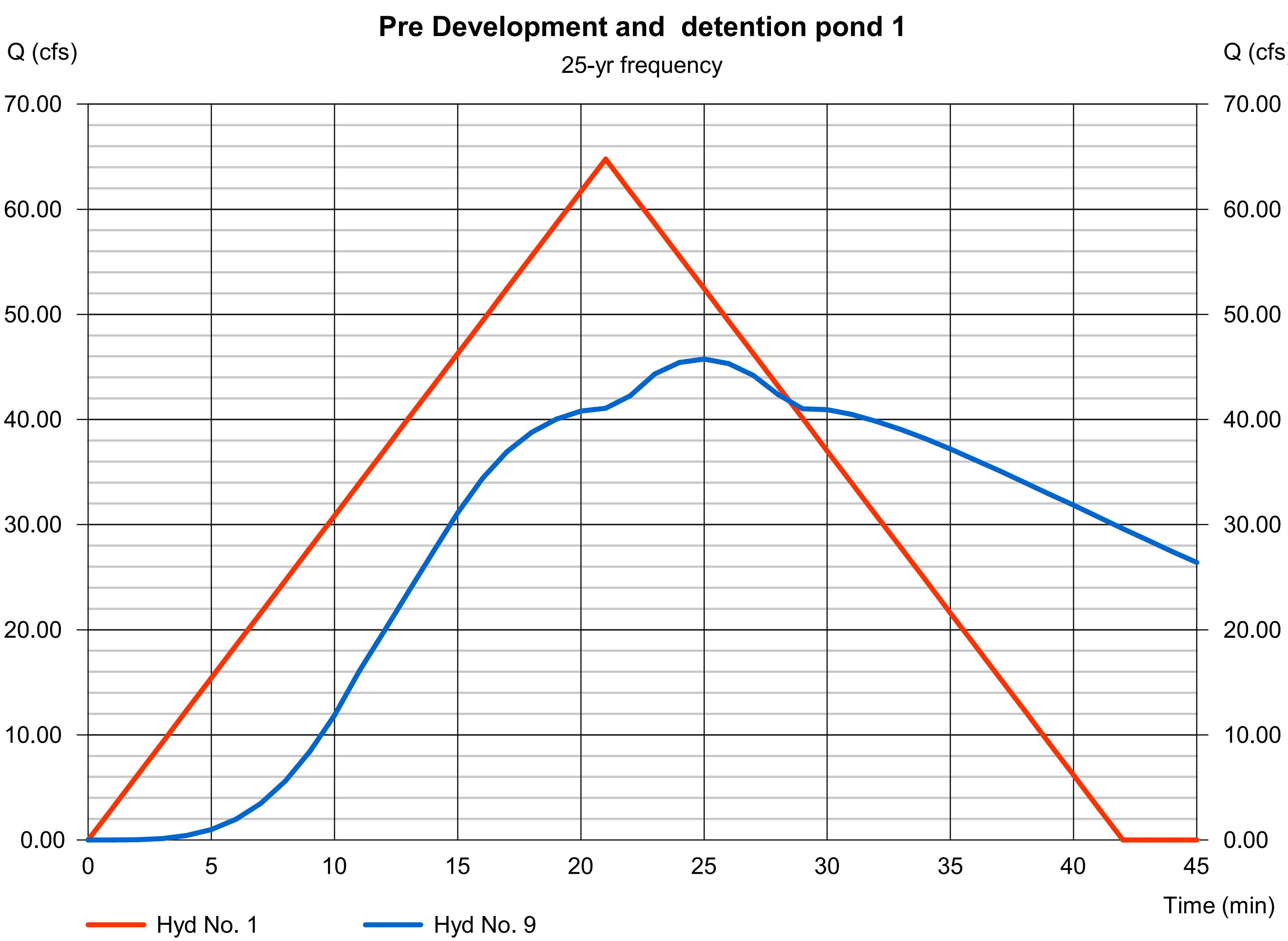
Pre Development

Hydrograph type	=	Rational
Peak discharge	=	64.78 cfs
Time to peak	=	21 min
Hyd. Volume	=	81,626 cuft

Hyd. No. 9

detention pond 1

Hydrograph type	=	Reservoir
Peak discharge	=	45.74 cfs
Time to peak	=	25 min
Hyd. Volume	=	120,872 cuft



Multi-Hydrograph Plot

Hyd. No. 1

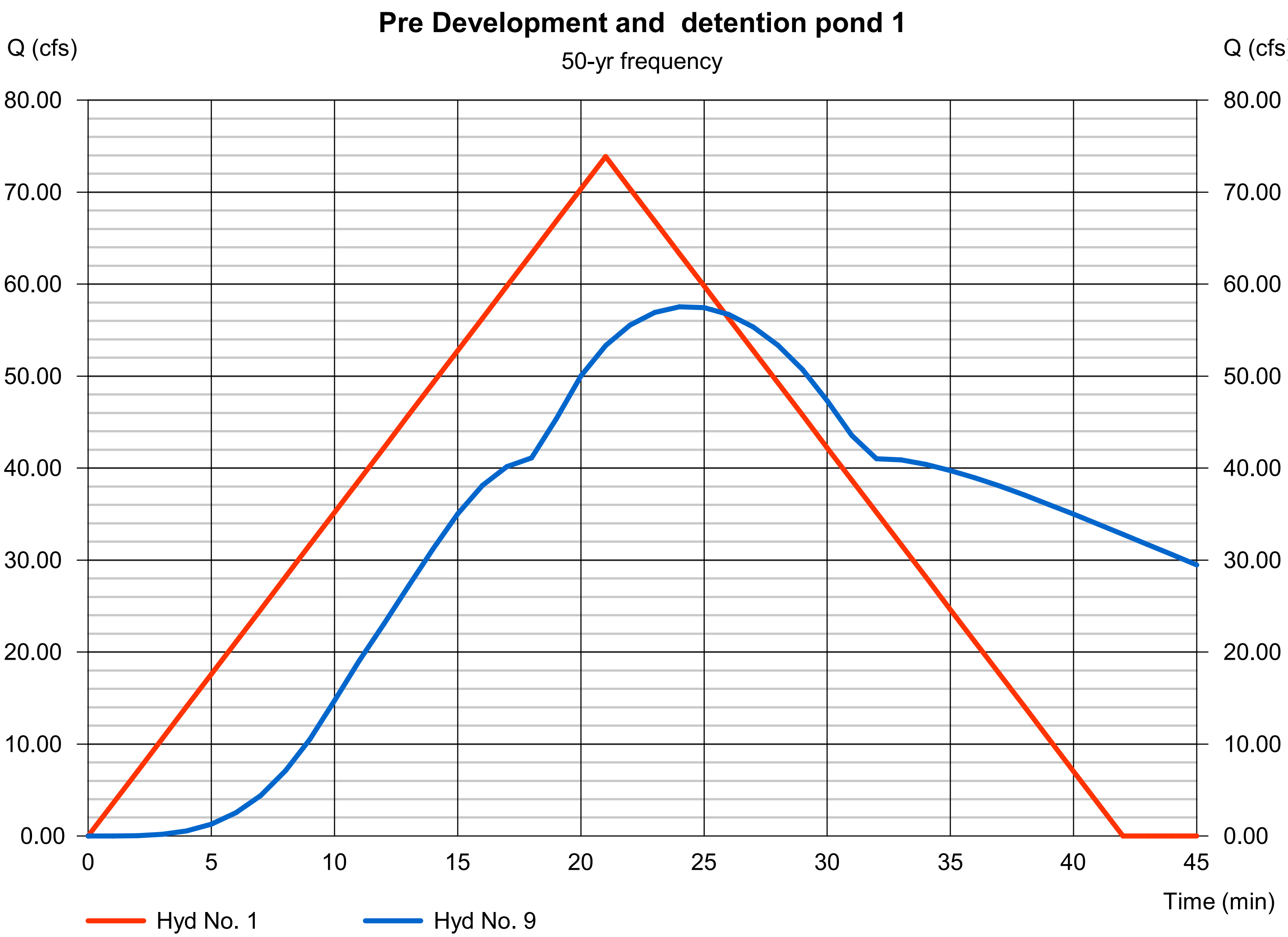
Pre Development

Hydrograph type	=	Rational
Peak discharge	=	73.87 cfs
Time to peak	=	21 min
Hyd. Volume	=	93,080 cuft

Hyd. No. 9

detention pond 1

Hydrograph type	=	Reservoir
Peak discharge	=	57.52 cfs
Time to peak	=	24 min
Hyd. Volume	=	137,777 cuft



Multi-Hydrograph Plot

Hyd. No. 1

Pre Development

Hydrograph type	=	Rational
Peak discharge	=	78.94 cfs
Time to peak	=	21 min
Hyd. Volume	=	99,461 cuft

Hyd. No. 9

detention pond 1

Hydrograph type	=	Reservoir
Peak discharge	=	63.55 cfs
Time to peak	=	24 min
Hyd. Volume	=	146,374 cuft

Pond Report

Pond No. 2 - Detention Pond 1

Pond Data

Trapezoid -Bottom L x W = 268.0 x 70.0 ft, Side slope = 3.00:1, Bottom elev. = 437.50 ft, Depth = 5.00 ft

Stage / Storage Table

Stage (ft)	Elevation (ft)	Contour area (sqft)	Incr. Storage (cuft)	Total storage (cuft)
0.00	437.50	18,760	0	0
0.50	438.00	19,783	9,635	9,635
1.00	438.50	20,824	10,151	19,786
1.50	439.00	21,883	10,676	30,462
2.00	439.50	22,960	11,210	41,672
2.50	440.00	24,055	11,753	53,425
3.00	440.50	25,168	12,305	65,730
3.50	441.00	26,299	12,866	78,596
4.00	441.50	27,448	13,436	92,032
4.50	442.00	28,615	14,015	106,047
5.00	442.50	29,800	14,603	120,650

Culvert / Orifice Structures

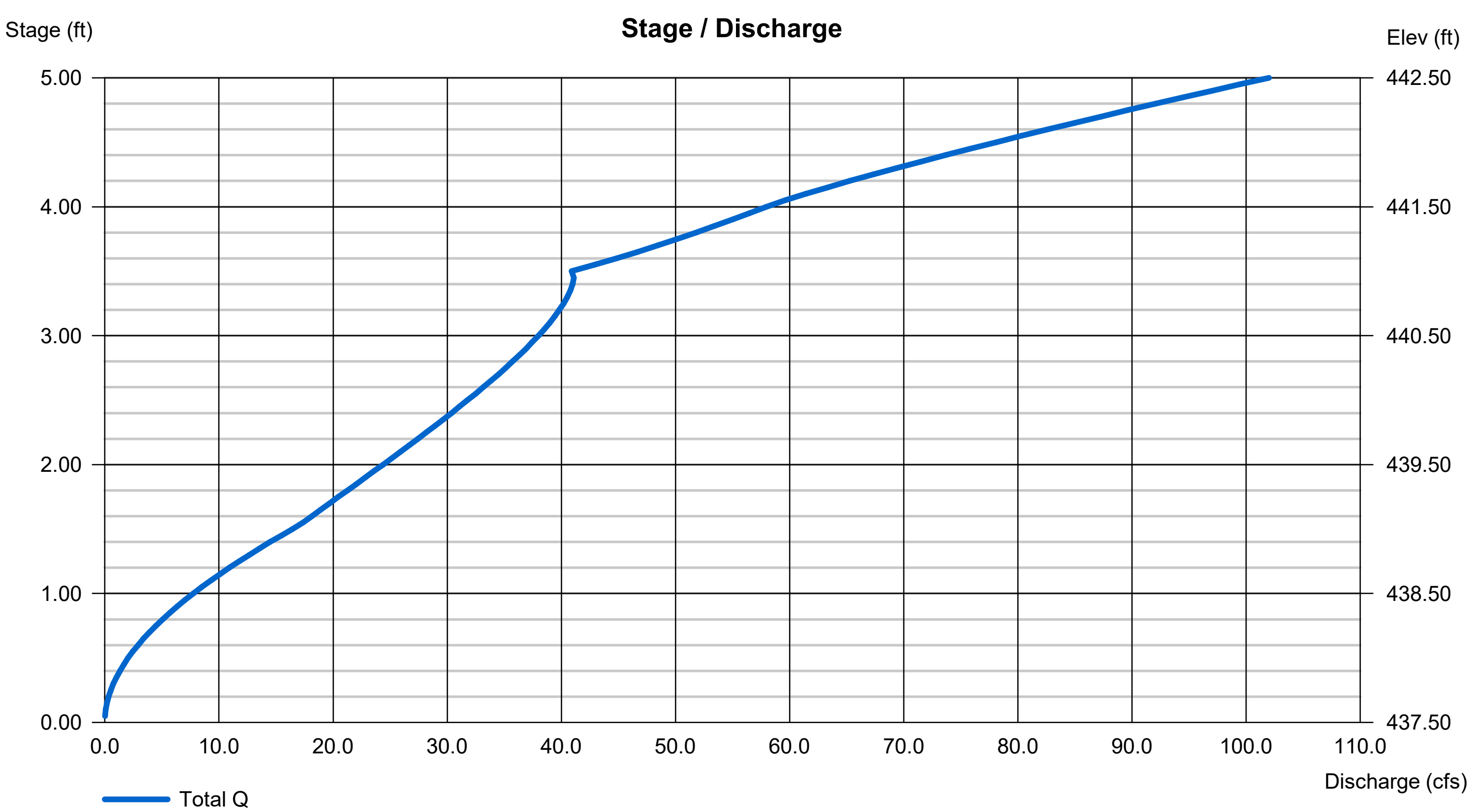
	[A]	[B]	[C]	[PrfRsr]
Rise (in)	= 42.00	Inactive	Inactive	0.00
Span (in)	= 42.00	0.00	0.00	0.00
No. Barrels	= 1	0	0	0
Invert El. (ft)	= 437.50	0.00	0.00	0.00
Length (ft)	= 46.00	0.00	0.00	0.00
Slope (%)	= 1.08	0.00	0.00	n/a
N-Value	= .013	.013	.013	n/a
Orifice Coeff.	= 0.60	0.60	0.60	0.60
Multi-Stage	= n/a	No	No	No

Weir Structures

	[A]	[B]	[C]	[D]
Crest Len (ft)	= 6.00	Inactive	Inactive	0.00
Crest El. (ft)	= 441.50	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	42.51	1	21	53,568	------	------	------	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	32.54	1	25	81,205	8	440.05	54,740	detention pond 1

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	46.89	1	21	59,077	------	------	------	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	35.52	1	25	89,828	8	440.28	60,392	detention pond 1

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	56.26	1	21	70,892	------	------	------	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	39.88	1	25	105,448	8	440.71	71,054	detention pond 1

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	64.78	1	21	81,626	------	------	------	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	45.74	1	25	120,872	8	441.12	81,944	detention pond 1

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	73.87	1	21	93,080	------	------	------	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	57.52	1	24	137,777	8	441.49	91,647	detention pond 1

drainage one pond_04-18-2023.gpw	Return Period: 50 Year	Wednesday, 04 / 19 / 2023

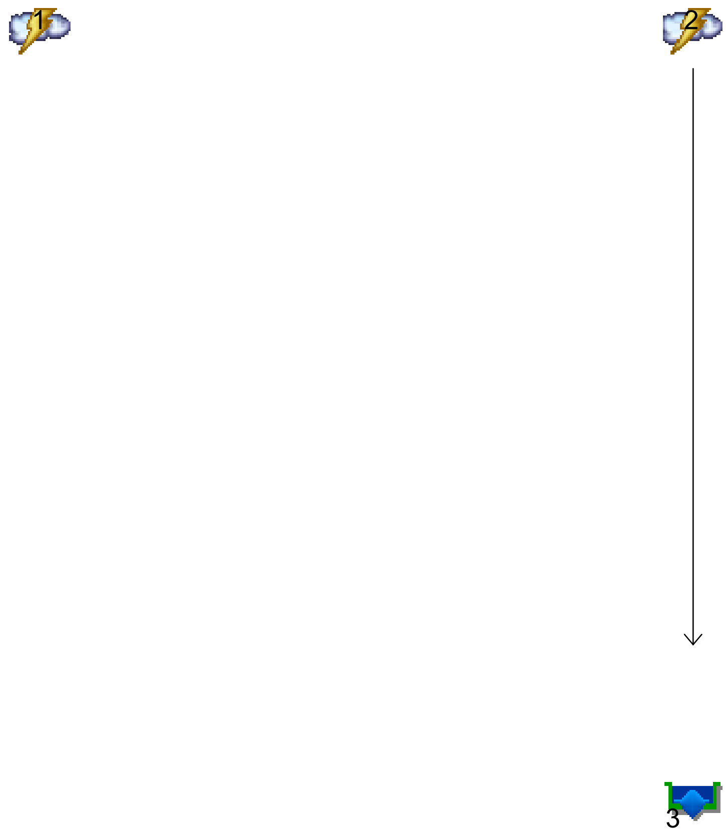
Hydrograph Summary Report

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	78.94	1	21	99,461	------	------	------	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	63.55	1	24	146,374	8	441.66	96,403	detention pond 1

Watershed Model Schematic

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



Legend

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

Project: DETENTION POND 2.gpw

Thursday, 10 / 6 / 2022

Multi-Hydrograph Plot

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

Hyd. No. 1

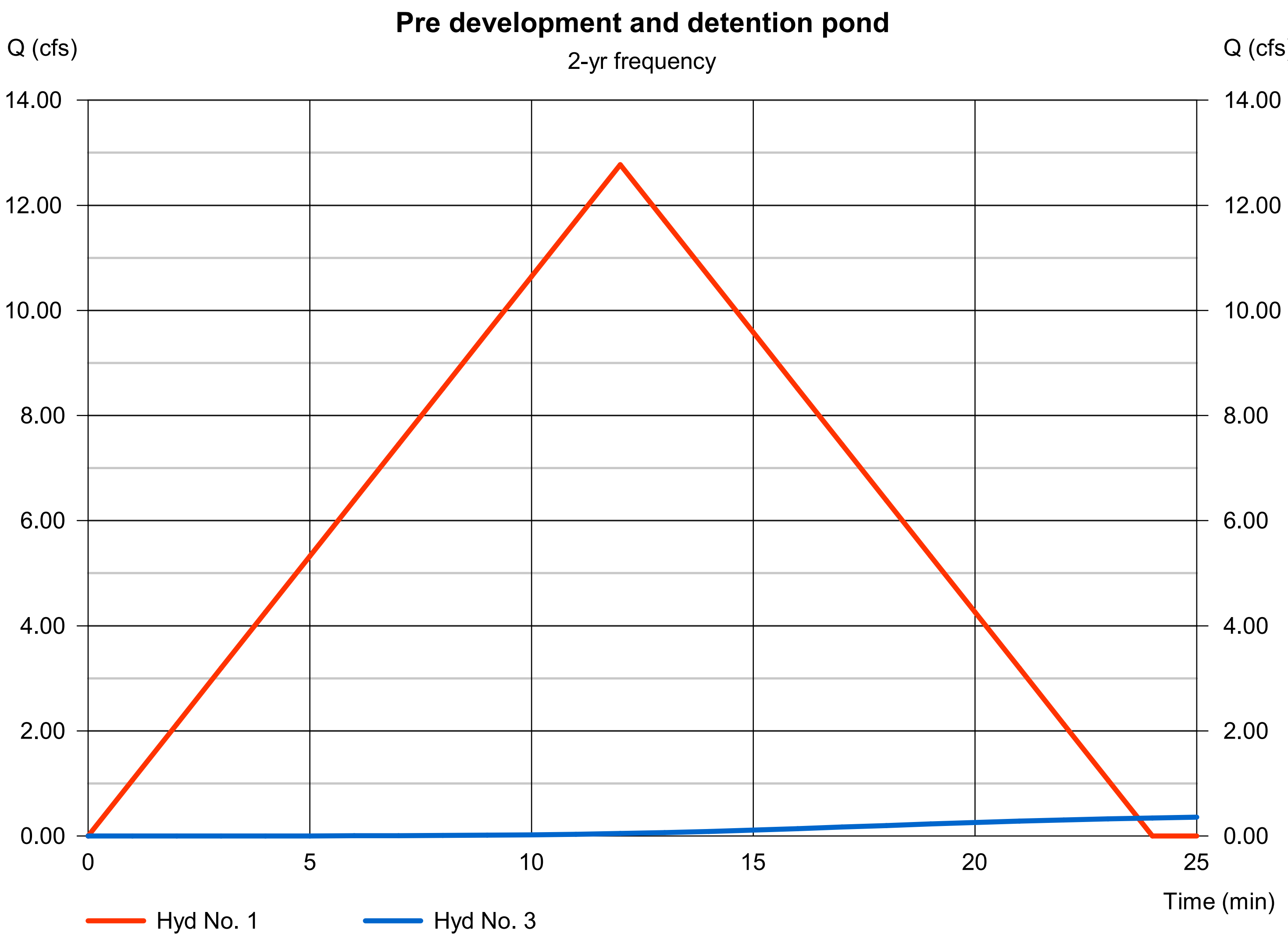
Pre development

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

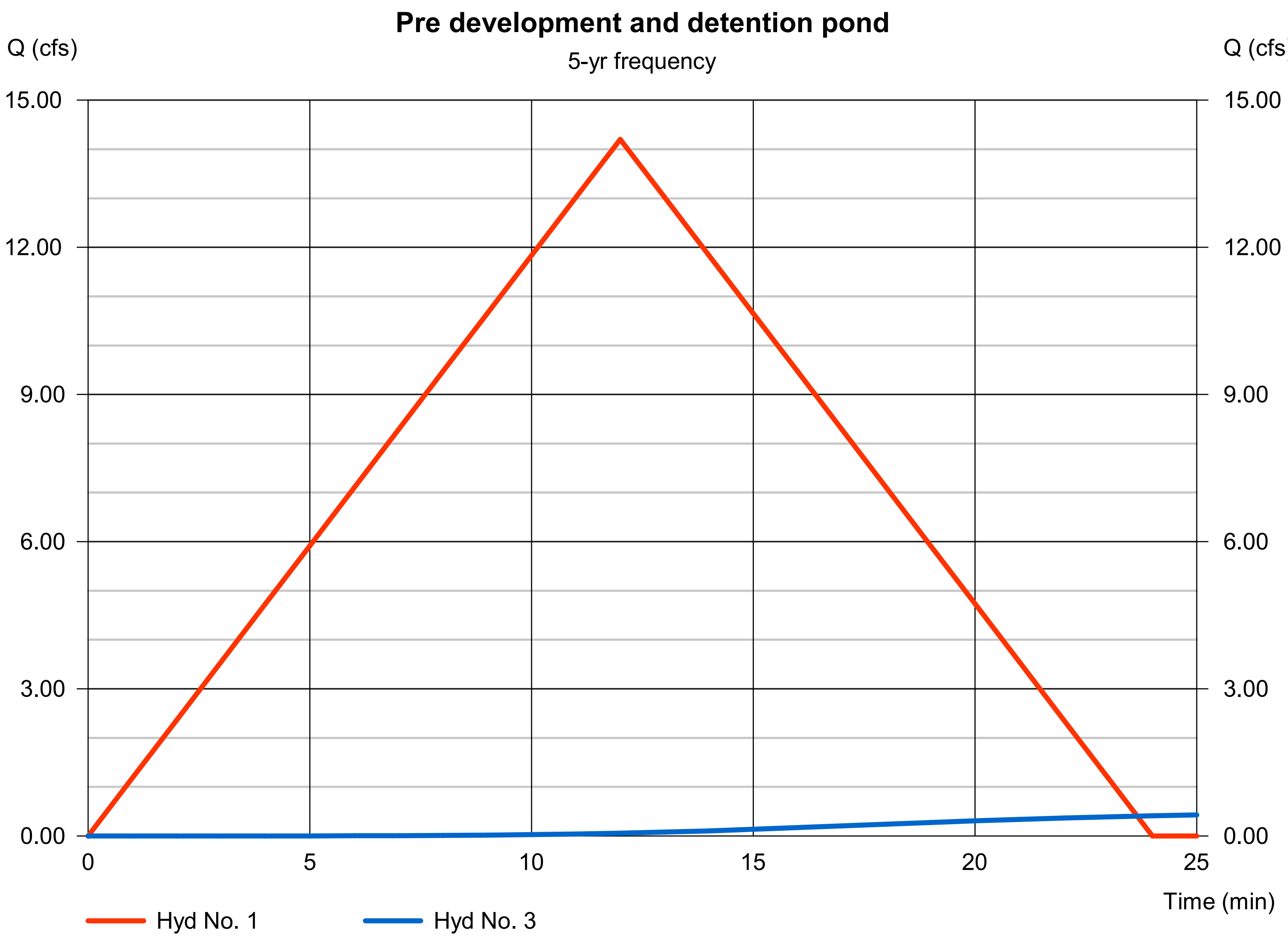
Pre development

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

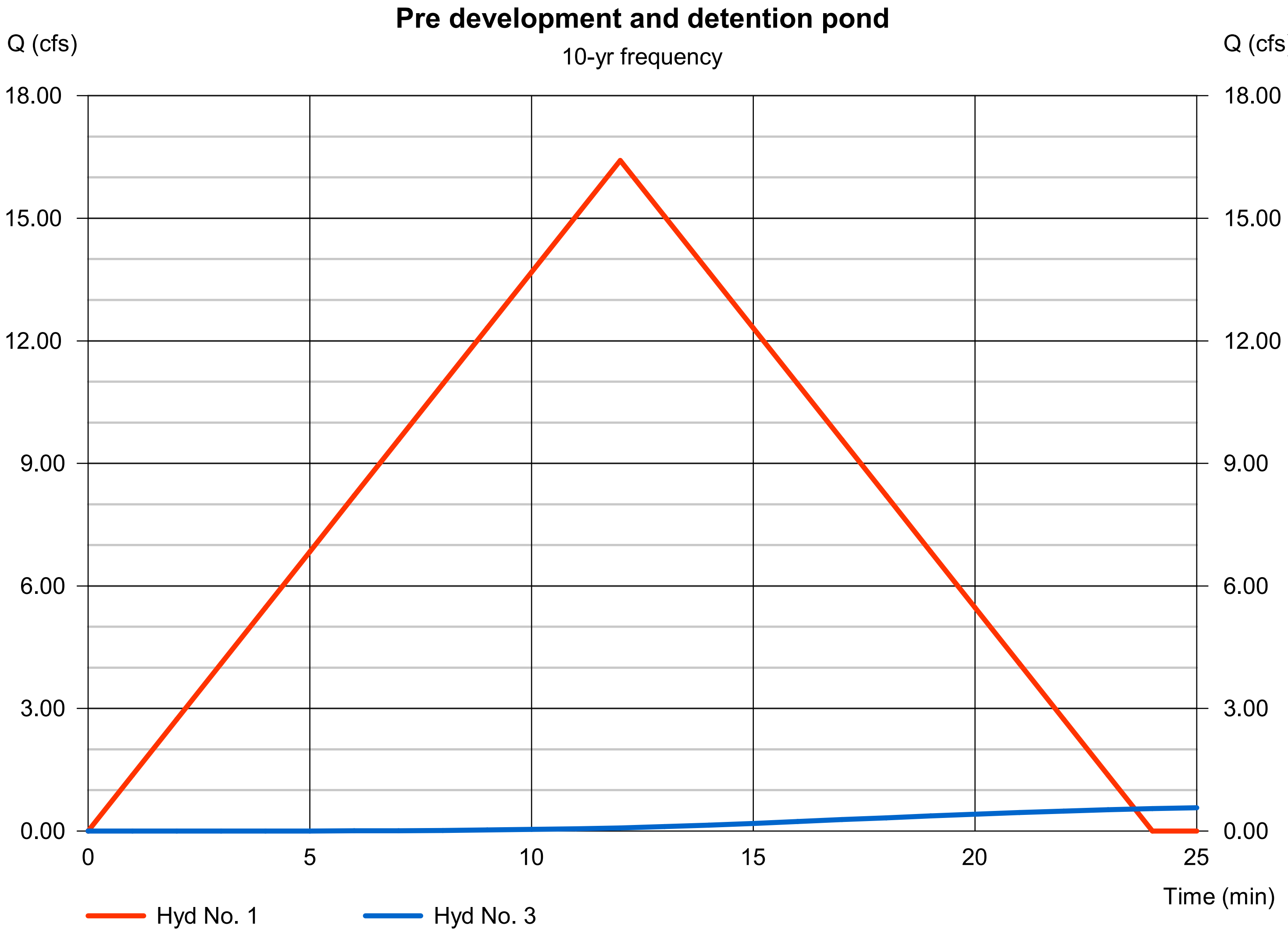
Pre development

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

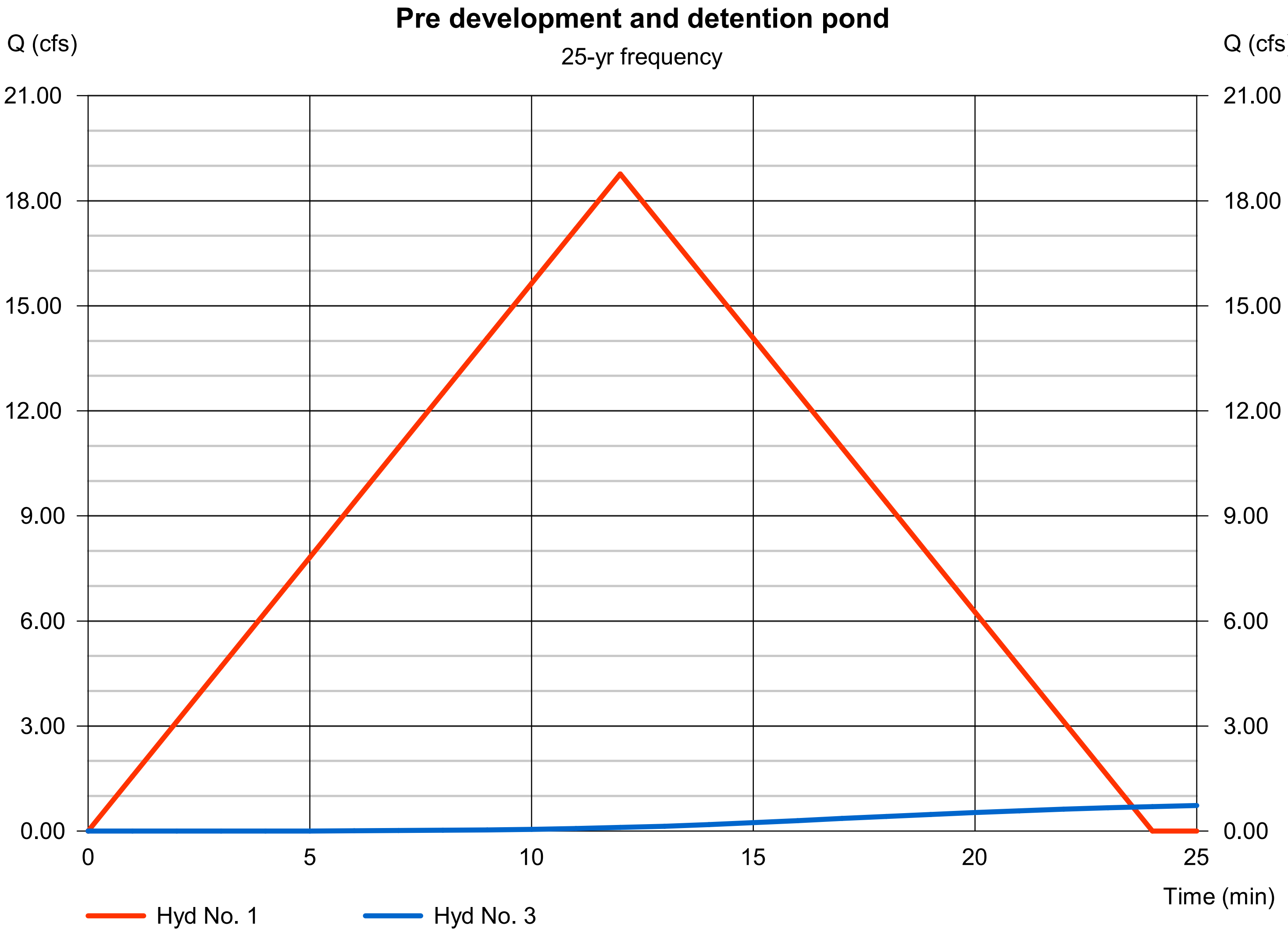
Pre development

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

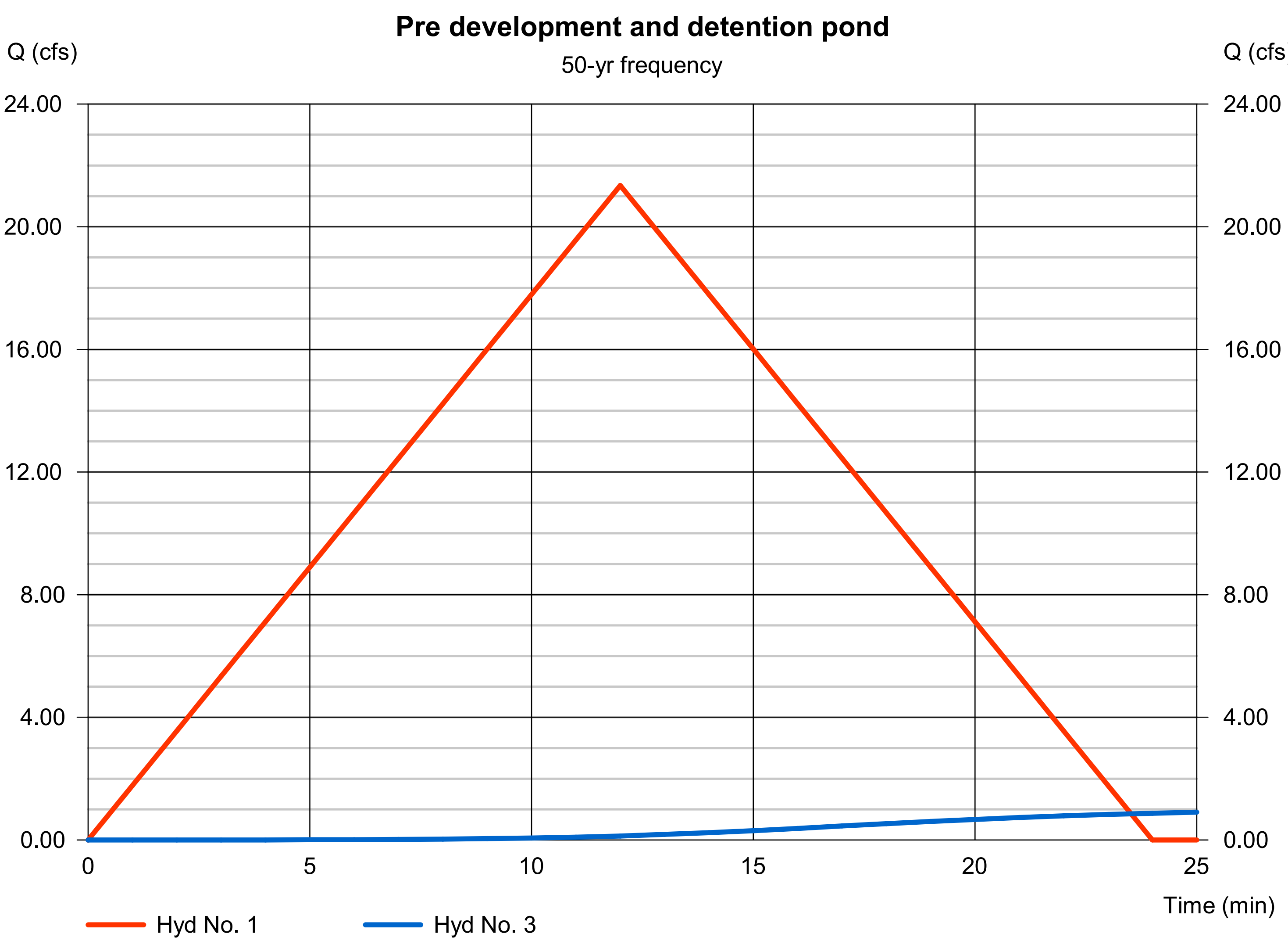
Pre development

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

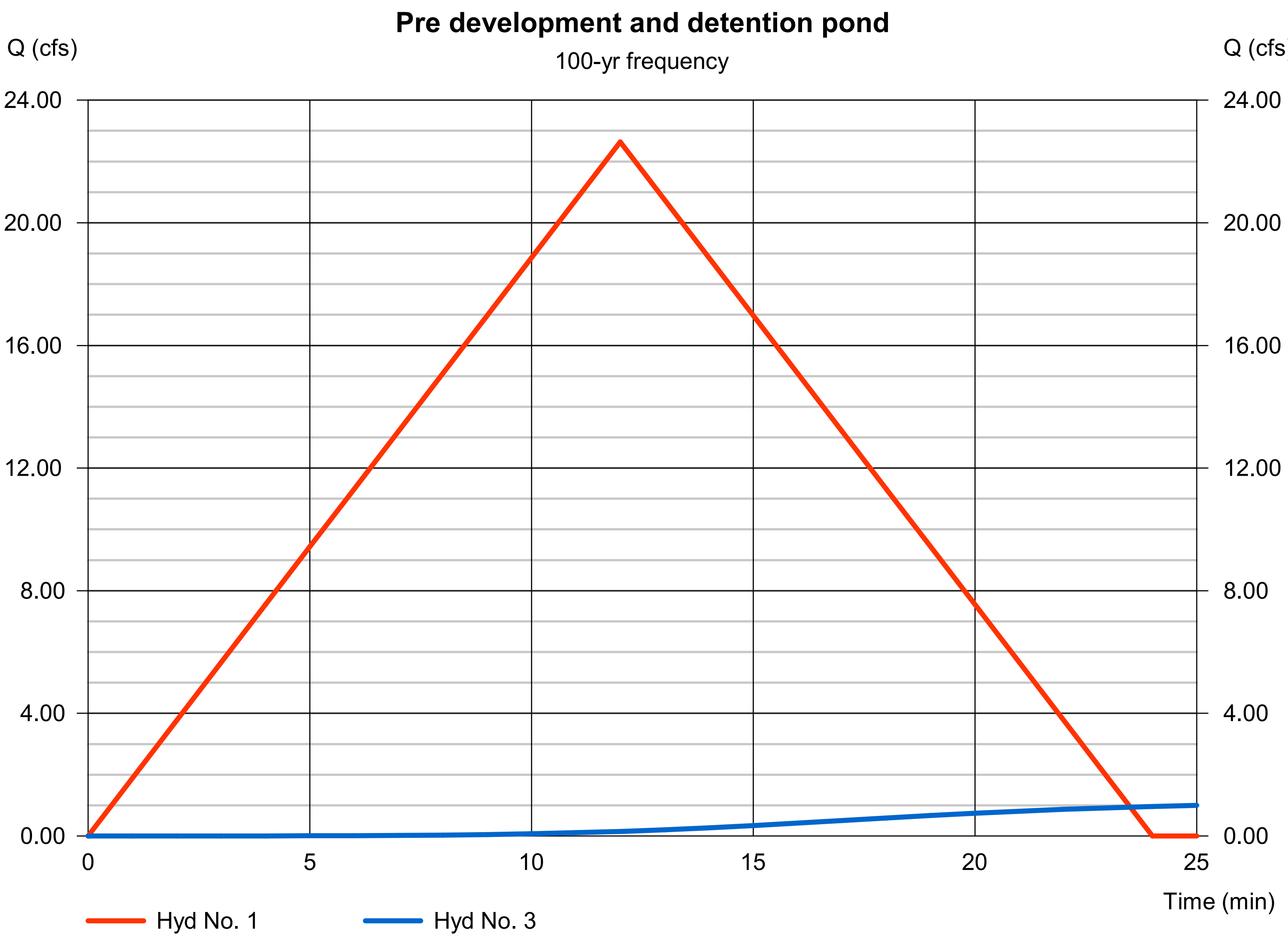
Pre development

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

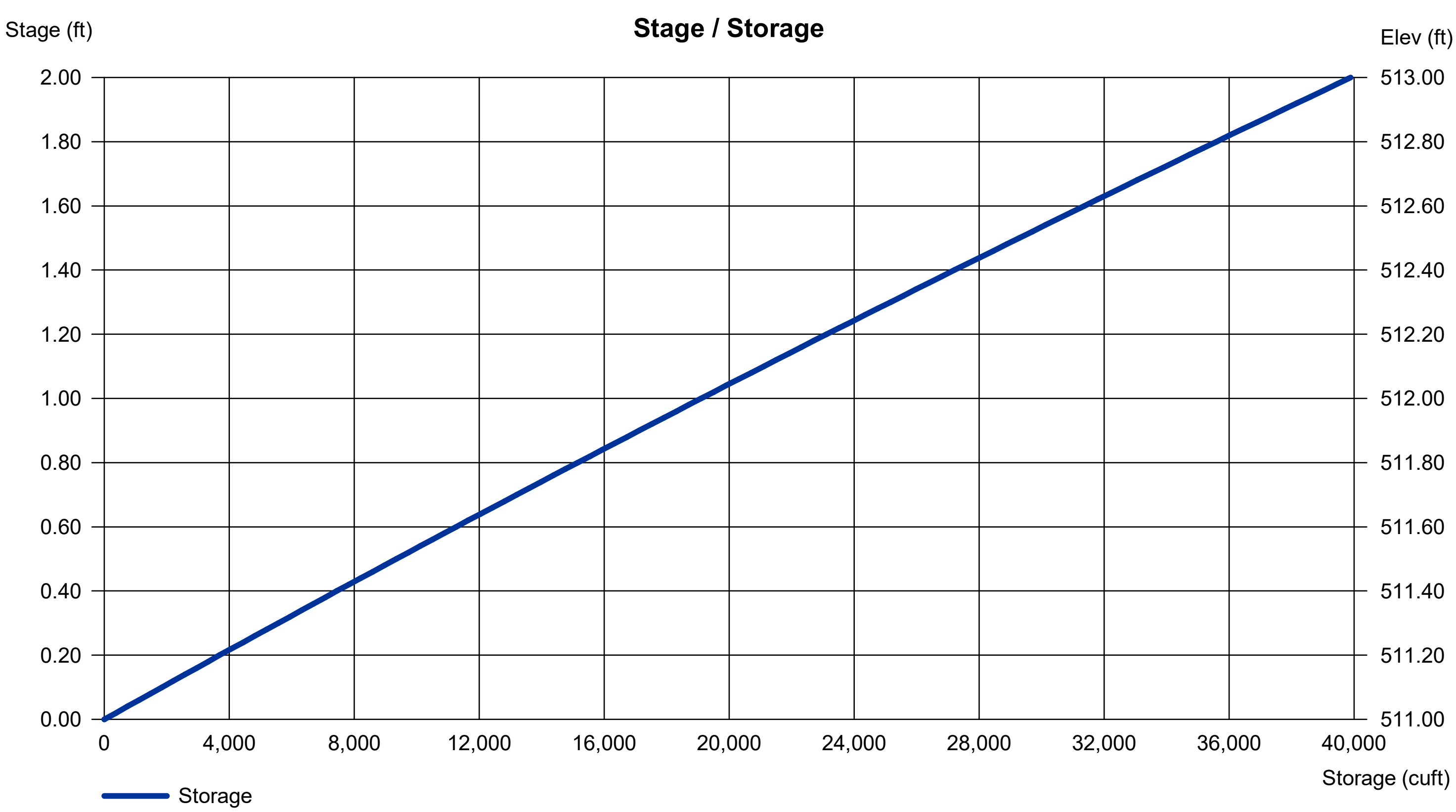
	[A]	[B]	[C]	[PrfRsr]
Rise (in)	= 12.00	Inactive	Inactive	0.00
Span (in)	= 12.00	0.00	0.00	0.00
No. Barrels	= 1	0	0	0
Invert El. (ft)	= 511.00	0.00	0.00	0.00
Length (ft)	= 64.00	0.00	0.00	0.00
Slope (%)	= 9.00	0.00	0.00	n/a
N-Value	= .013	.013	.013	n/a
Orifice Coeff.	= 0.60	0.60	0.60	0.60
Multi-Stage	= 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

DETENTION POND 2.gpw	Return Period: 2 Year	Thursday, 10 / 6 / 2022

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

DETENTION POND 2.gpw	Return Period: 5 Year	Thursday, 10 / 6 / 2022

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

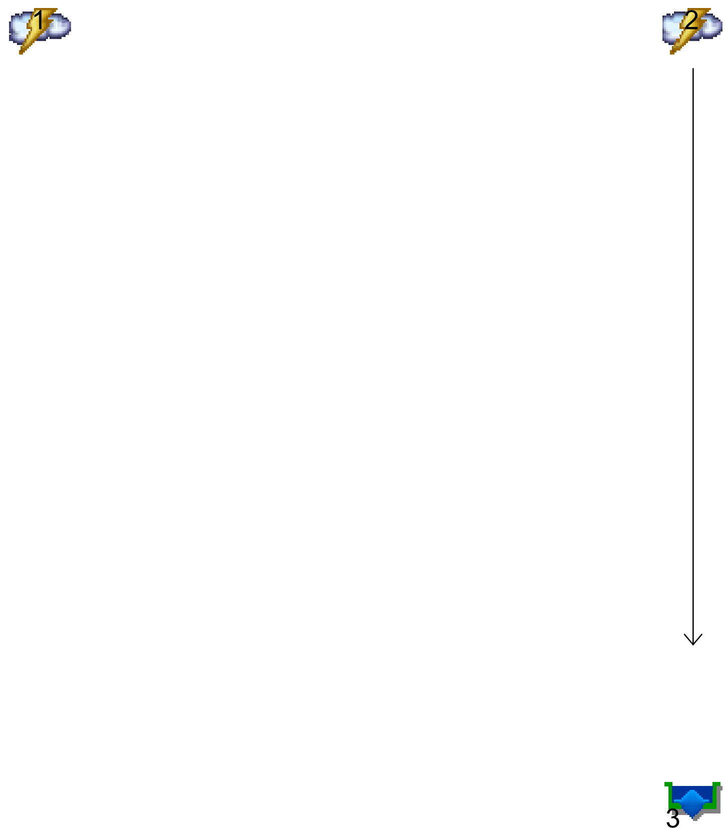
Hyd. No.	Hydrograph type (origin)	Peak flow (cfs)	Time interval (min)	Time to Peak (min)	Hyd. volume (cuft)	Inflow hyd(s)	Maximum elevation (ft)	Total strge used (cuft)	Hydrograph Description
1	Rational	21.35	1	12	15,370	------	------	------	Pre development
2	Rational	11.24	1	15	10,120	------	------	------	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



Project: detention pond 3.gpw	Wednesday, 04 / 19 / 2023

Multi-Hydrograph Plot

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

Hyd. No. 1

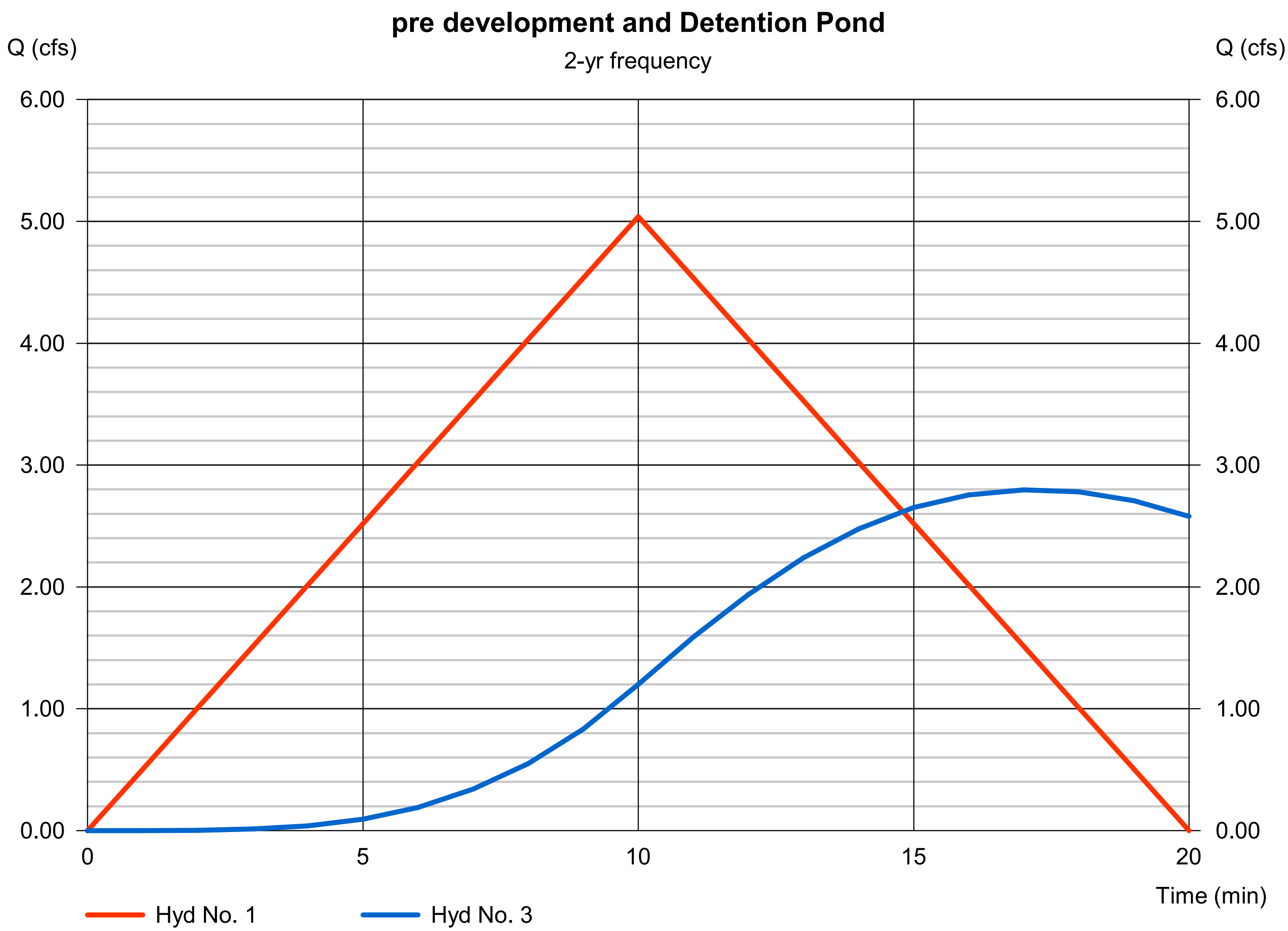
pre development

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

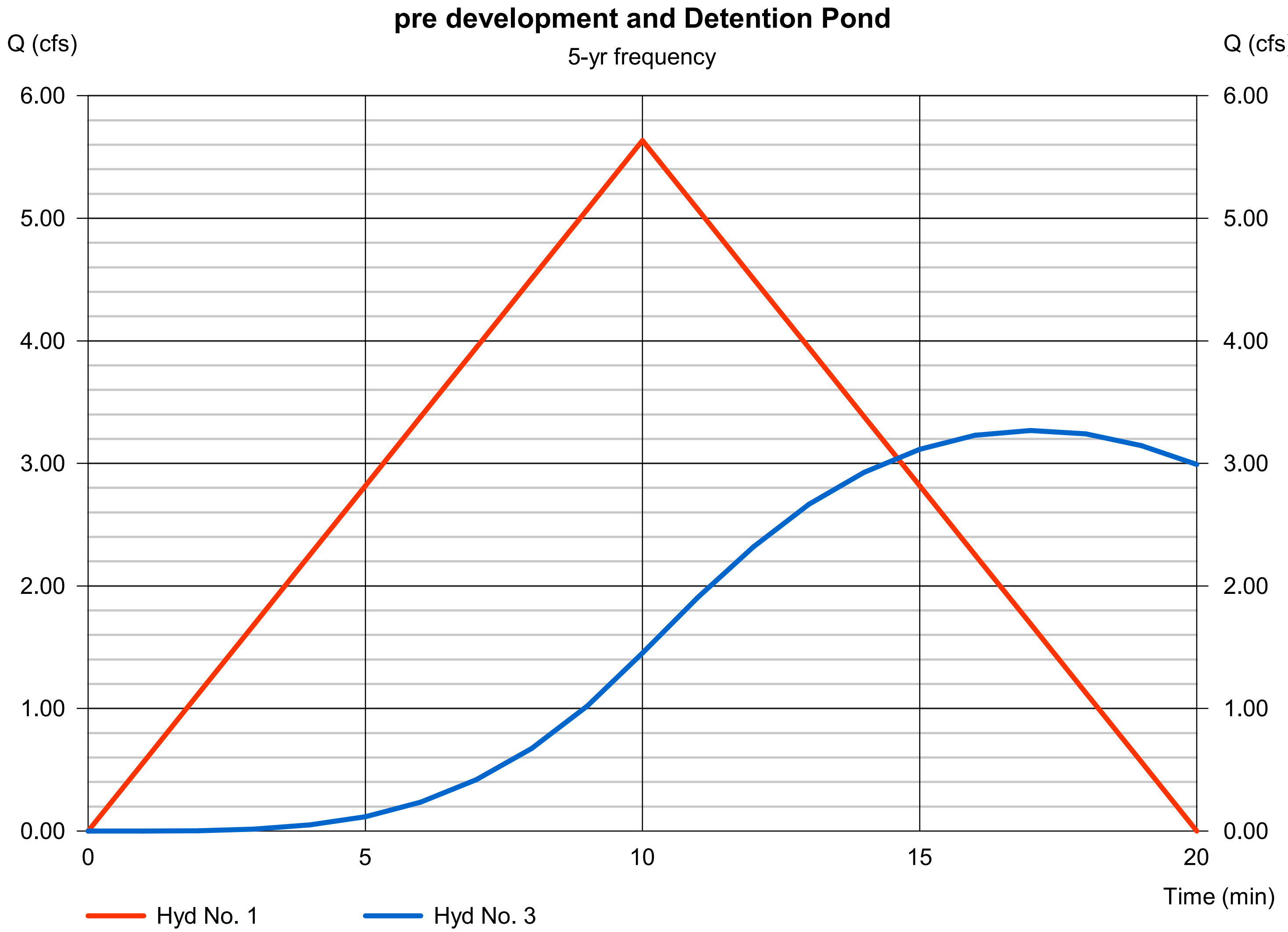
pre development

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

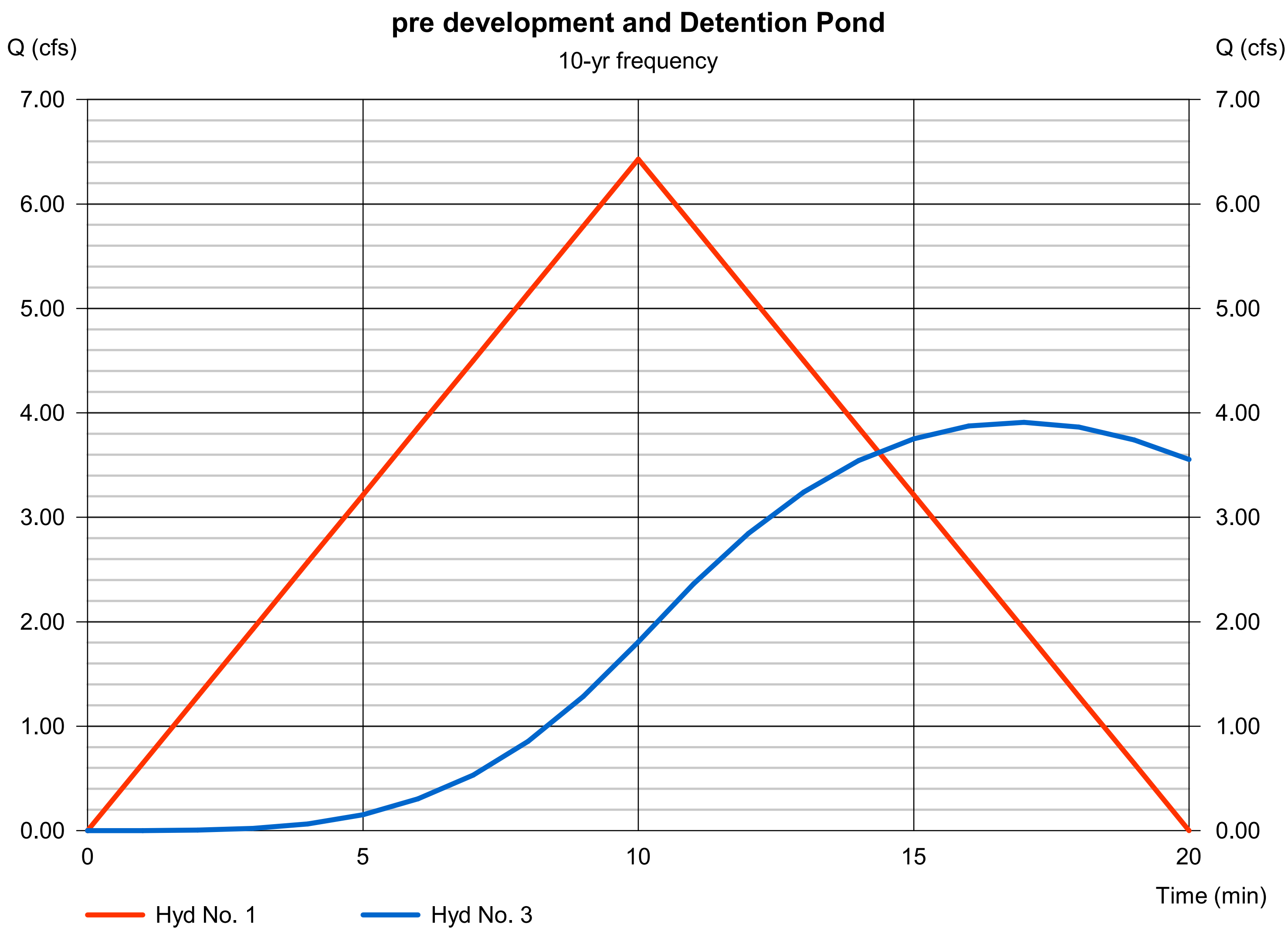
pre development

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

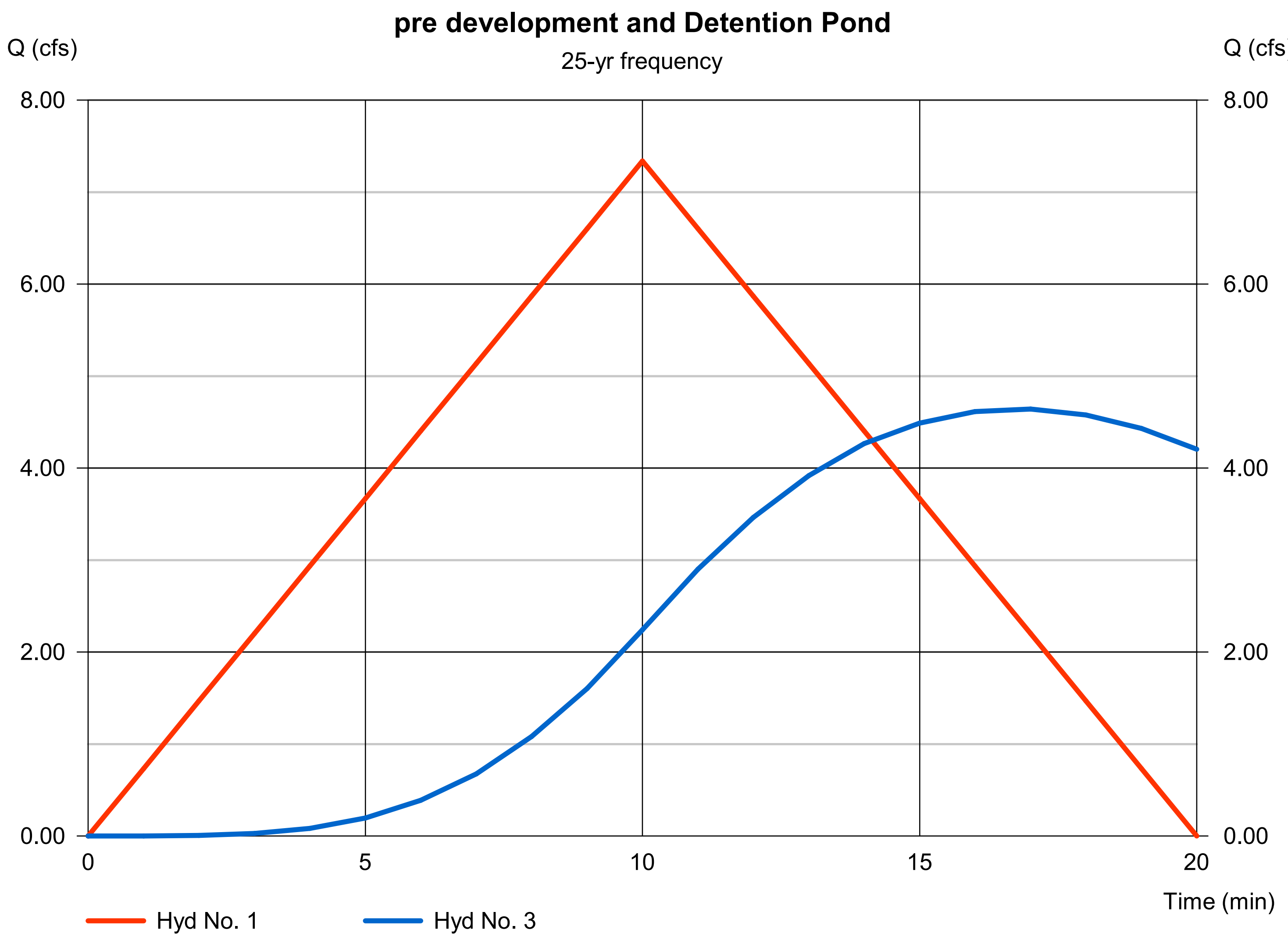
pre development

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

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

Hyd. No. 1

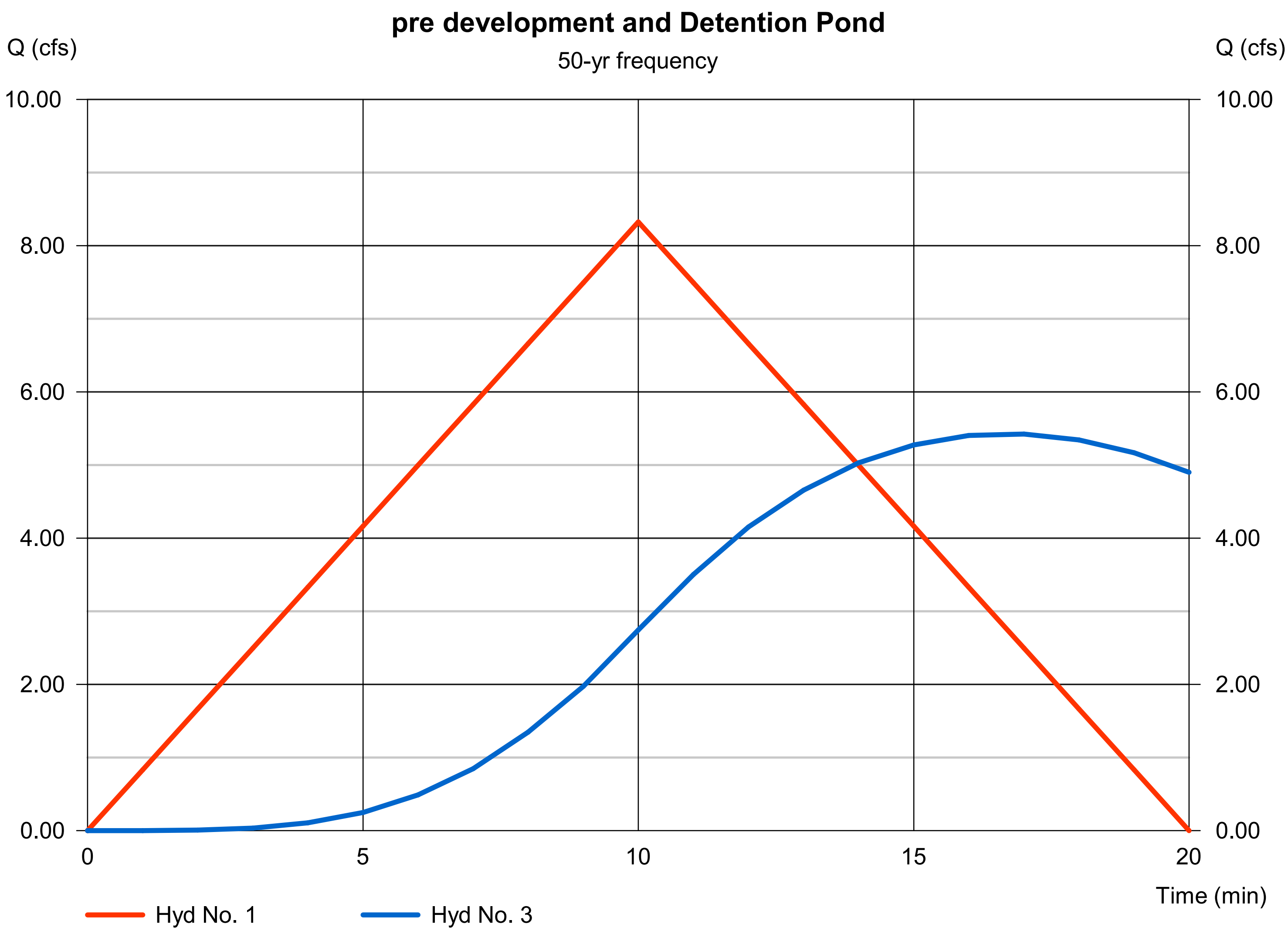
pre development

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

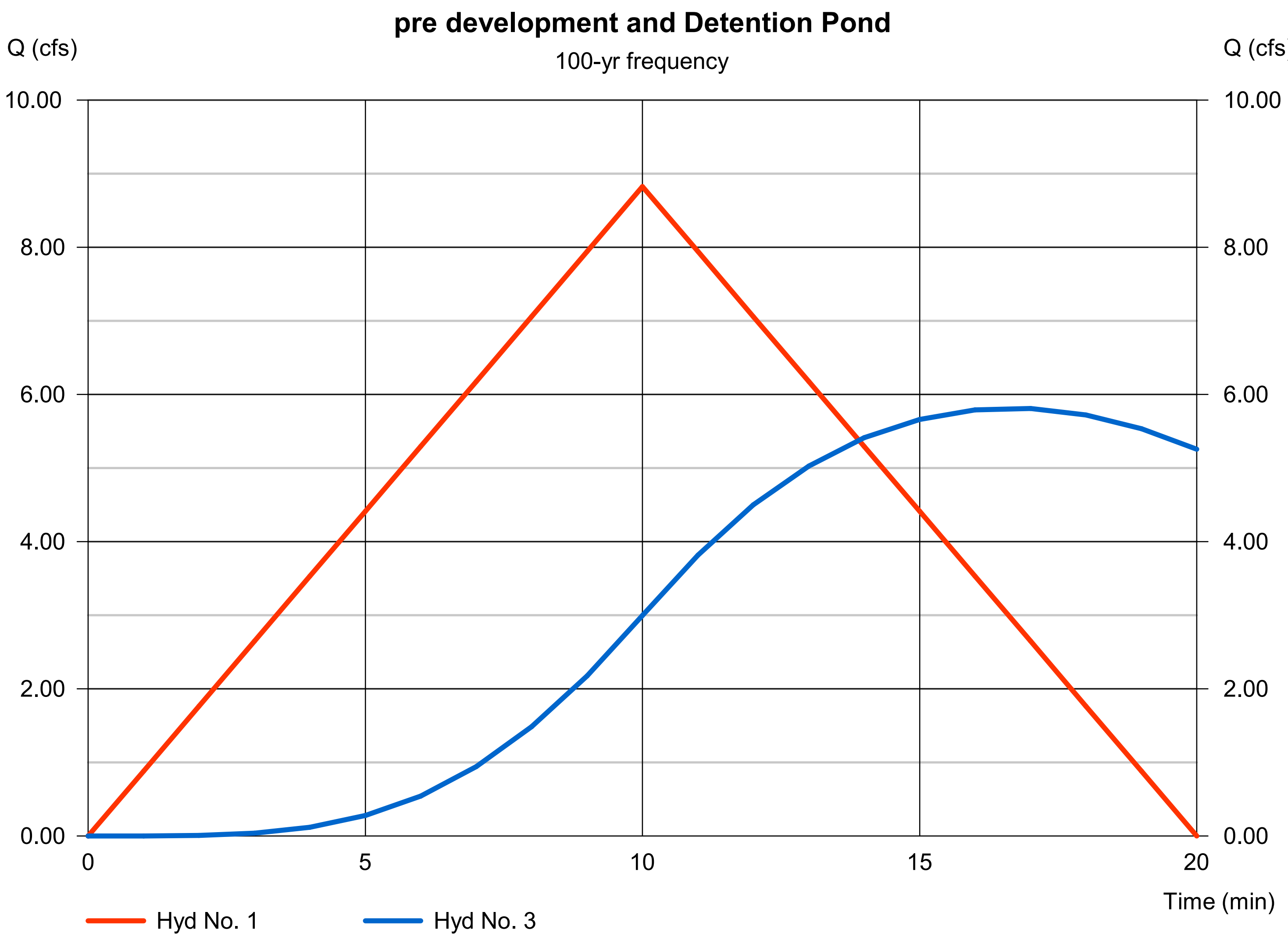
pre development

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 — Wednesday, 04 / 19 / 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

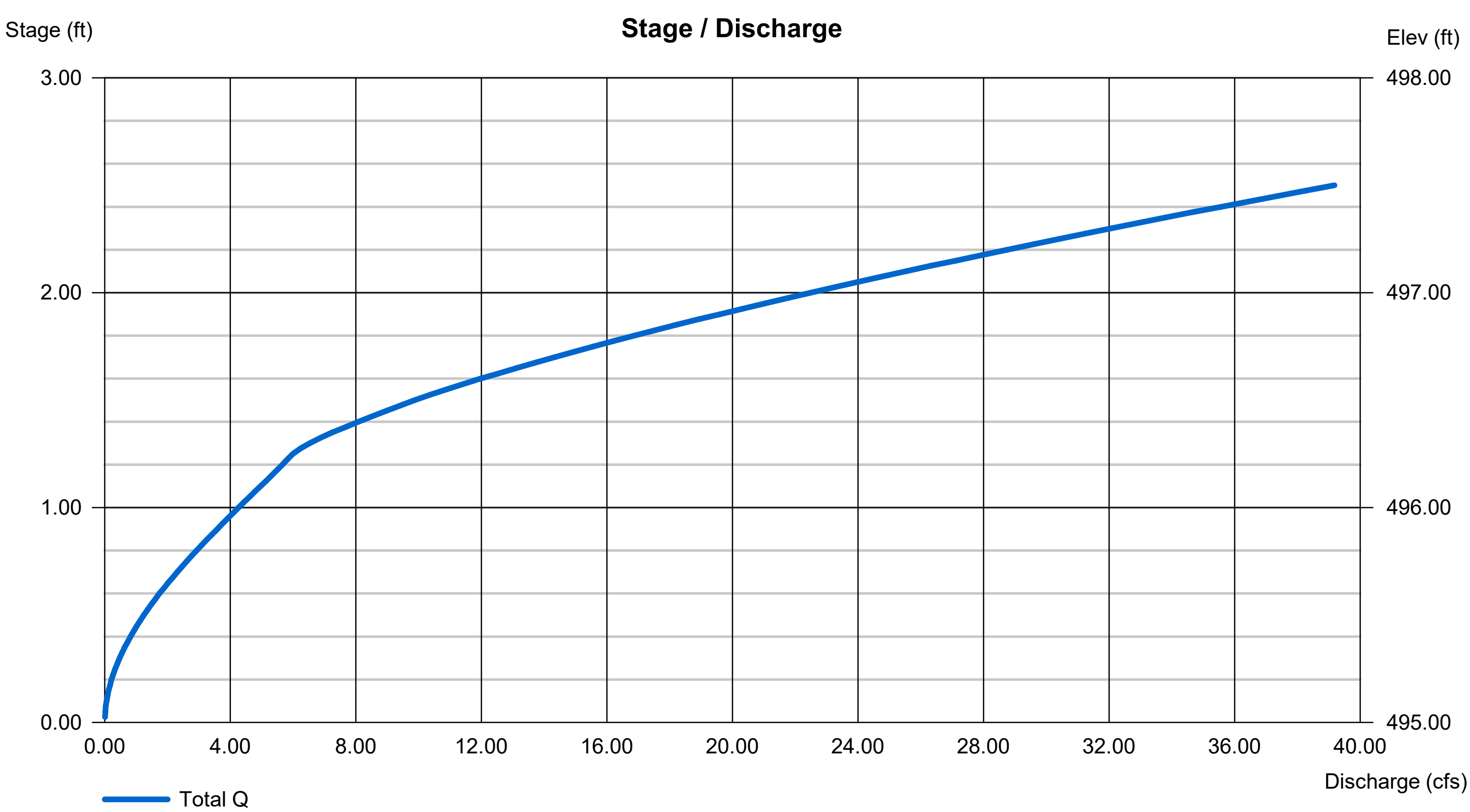
	[A]	[B]	[C]	[PrfRsr]
Rise (in)	= 18.00	0.00	0.00	0.00
Span (in)	= 18.00	0.00	0.00	0.00
No. Barrels	= 1	0	0	0
Invert El. (ft)	= 495.00	0.00	0.00	0.00
Length (ft)	= 29.00	0.00	0.00	0.00
Slope (%)	= 12.74	0.00	0.00	n/a
N-Value	= .013	.013	.013	n/a
Orifice Coeff.	= 0.60	0.60	0.60	0.60
Multi-Stage	= n/a	No	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

detention pond 3.gpw	Return Period: 10 Year	Wednesday, 04 / 19 / 2023

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

detention pond 3.gpw	Return Period: 50 Year	Wednesday, 04 / 19 / 2023

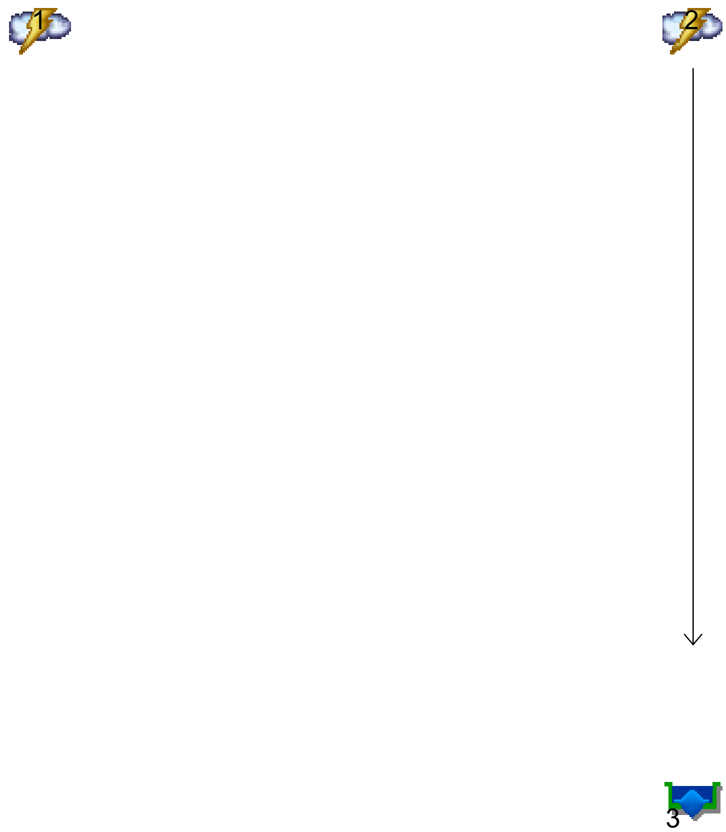
Hydrograph Summary Report

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

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



Project: detention pond 4.gpw	Wednesday, 04 / 19 / 2023

Multi-Hydrograph Plot

Hyd. No. 1

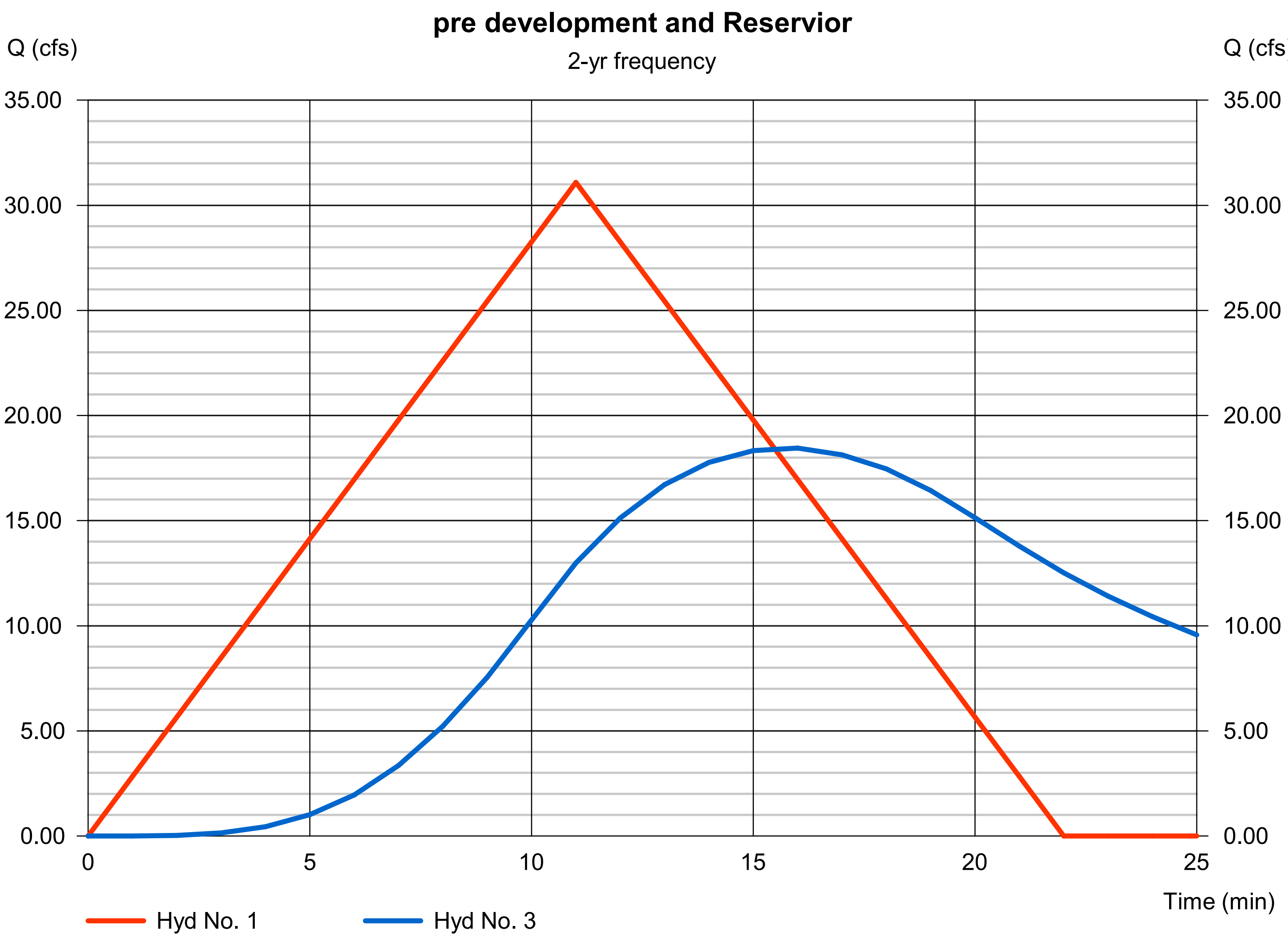
pre development

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	= 18.44 cfs
Time to peak	= 16 min
Hyd. Volume	= 25,931 cuft



Multi-Hydrograph Plot

Hyd. No. 1

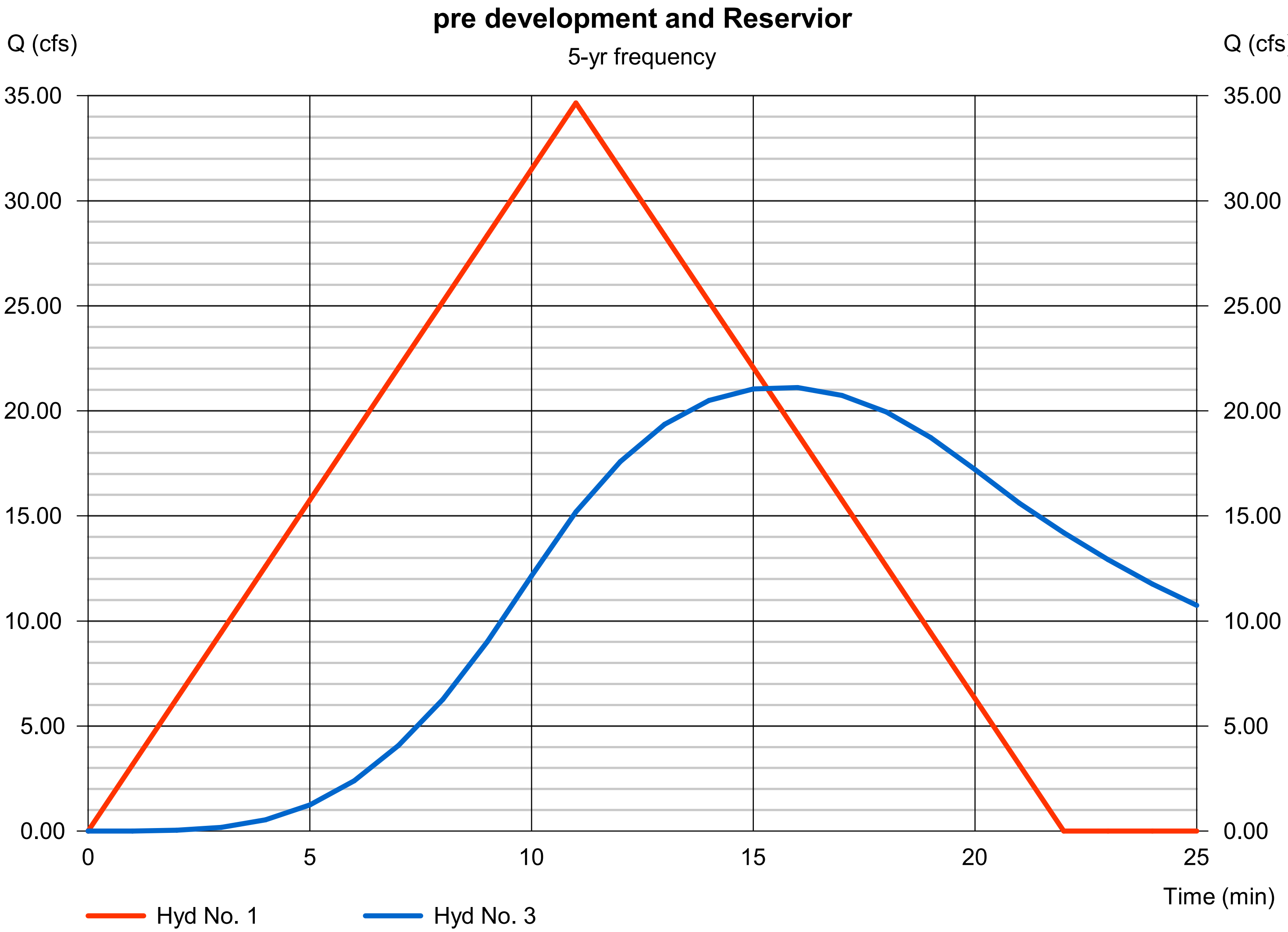
pre development

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	=	21.11 cfs
Time to peak	=	16 min
Hyd. Volume	=	29,001 cuft



Multi-Hydrograph Plot

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

Hyd. No. 1

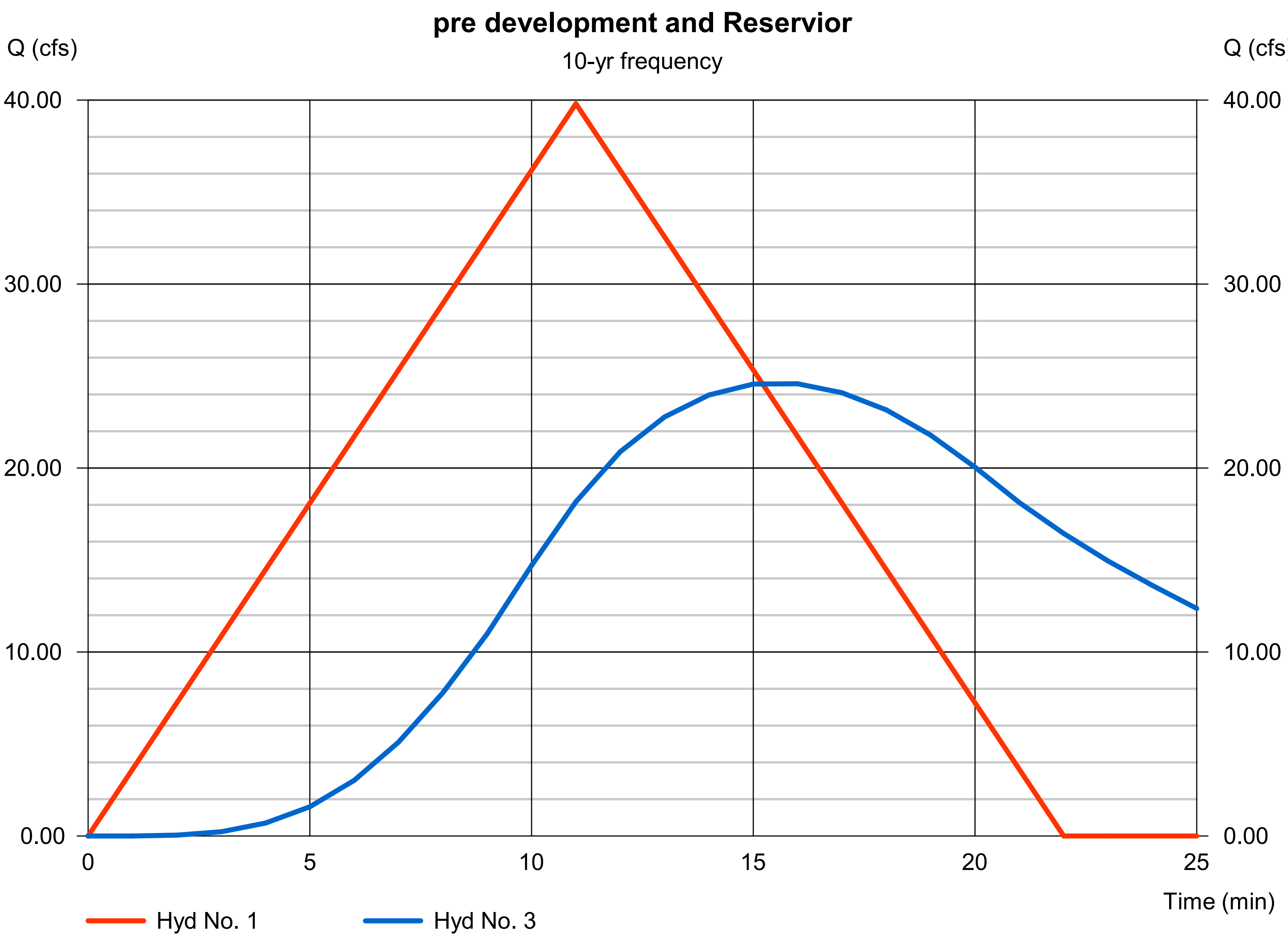
pre development

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

Hyd. No. 3

Reservior

Hydrograph type	=	Reservoir
Peak discharge	=	24.59 cfs
Time to peak	=	16 min
Hyd. Volume	=	33,097 cuft



Multi-Hydrograph Plot

Hyd. No. 1

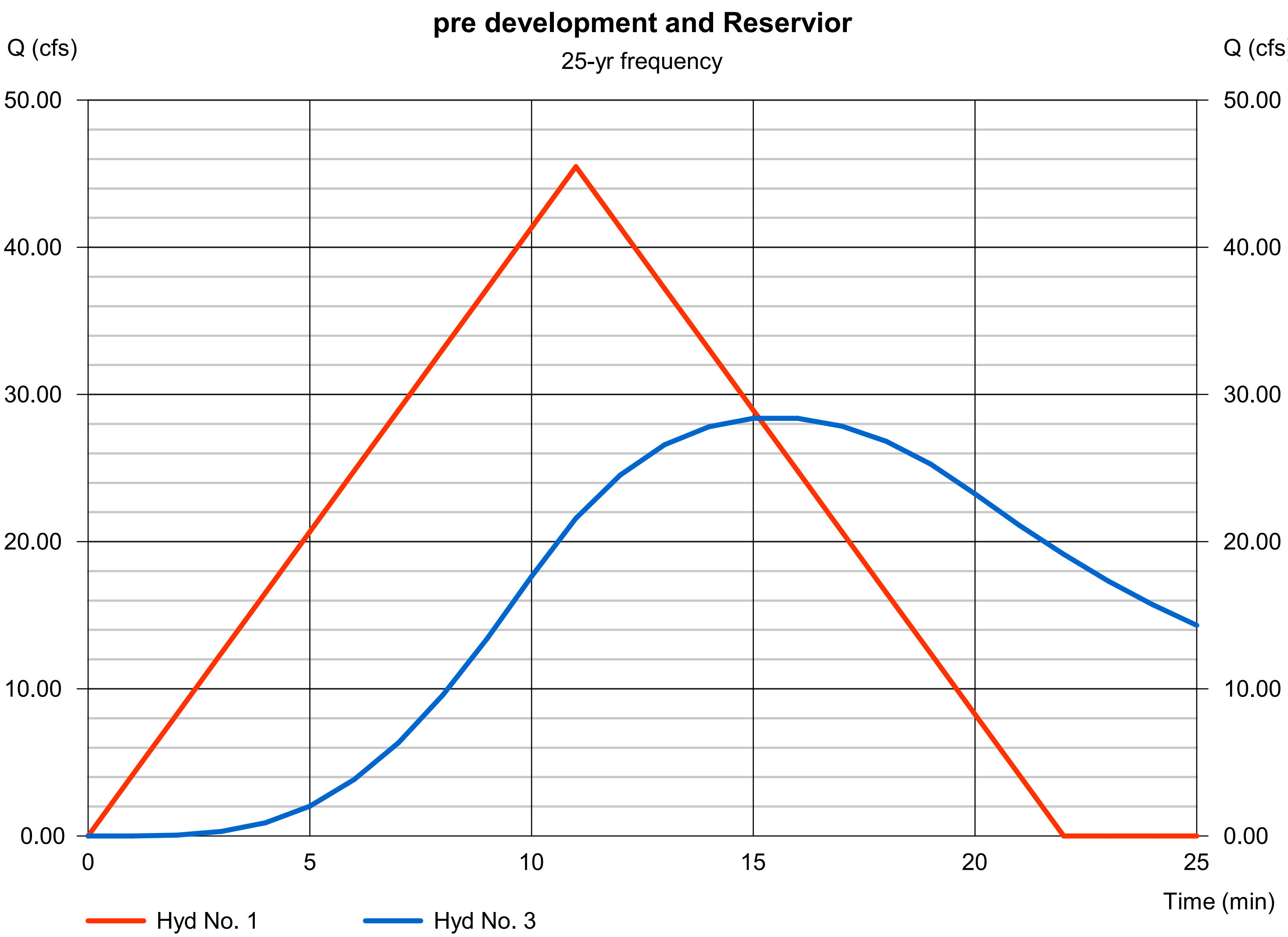
pre development

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	=	28.39 cfs
Time to peak	=	15 min
Hyd. Volume	=	37,772 cuft



Multi-Hydrograph Plot

Hyd. No. 1

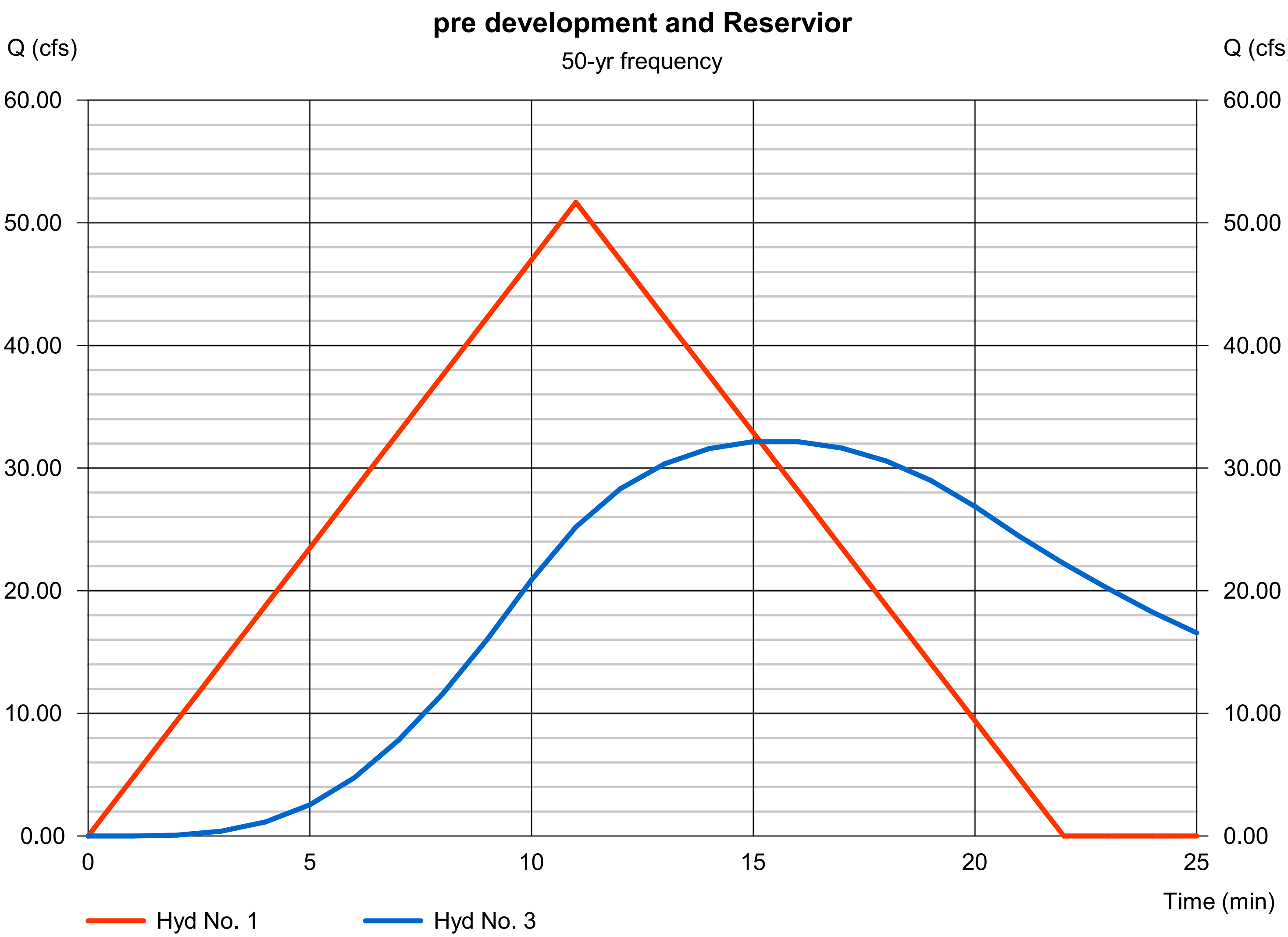
pre development

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	=	32.15 cfs
Time to peak	=	16 min
Hyd. Volume	=	42,865 cuft



Multi-Hydrograph Plot

Hyd. No. 1

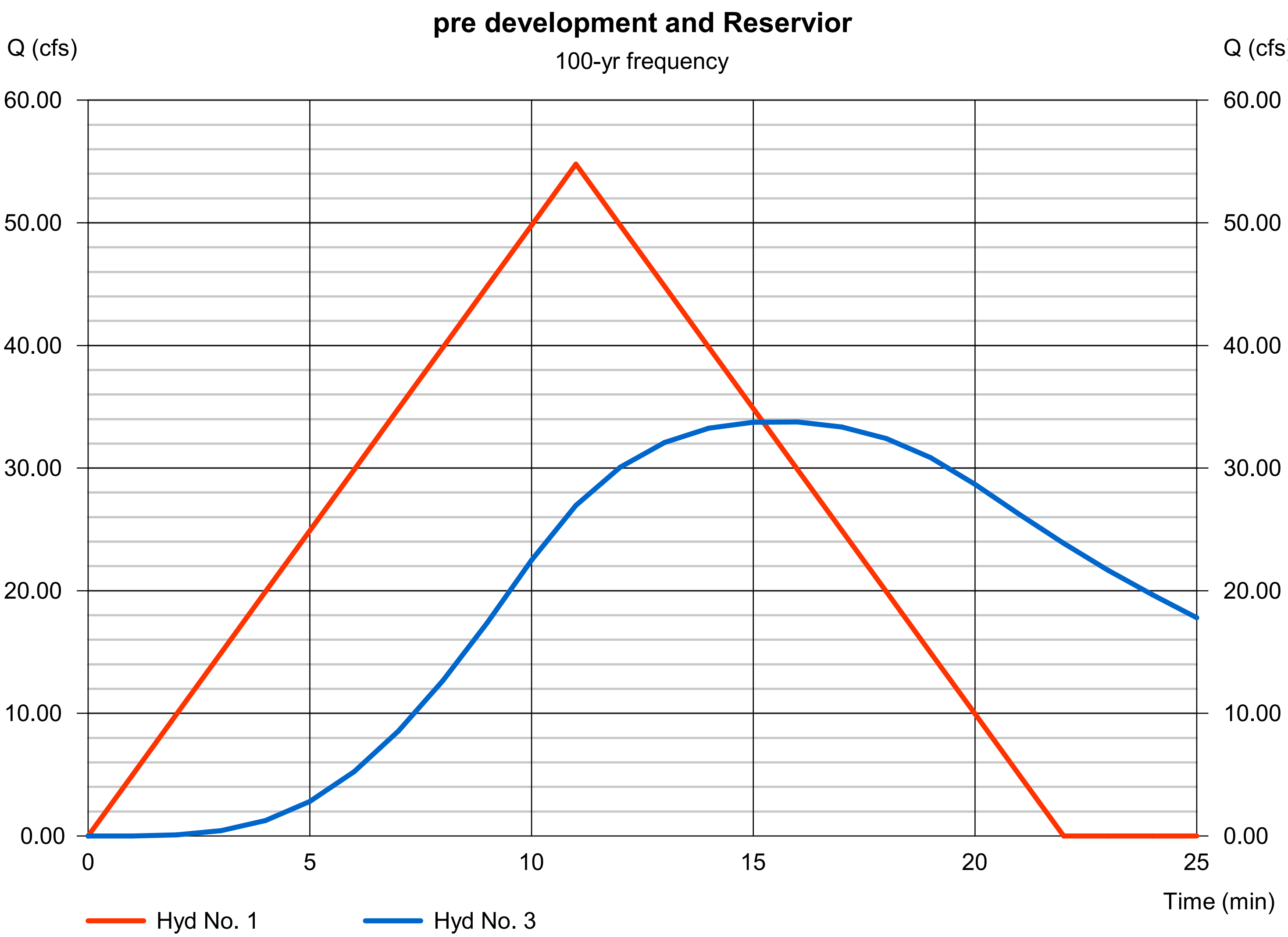
pre development

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	=	33.77 cfs
Time to peak	=	16 min
Hyd. Volume	=	45,435 cuft



Pond Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2023 — Wednesday, 04 / 19 / 2023

Pond No. 1 - Detention Pond -4

Pond Data

Trapezoid -Bottom L x W = 120.0 x 64.0 ft, Side slope = 3.00:1, Bottom elev. = 511.00 ft, Depth = 4.00 ft

Stage / Storage Table

Stage (ft)	Elevation (ft)	Contour area (sqft)	Incr. Storage (cuft)	Total storage (cuft)
0.00	511.00	7,680	0	0
0.40	511.40	8,127	3,161	3,161
0.80	511.80	8,586	3,342	6,503
1.20	512.20	9,057	3,528	10,032
1.60	512.60	9,539	3,719	13,750
2.00	513.00	10,032	3,914	17,664
2.40	513.40	10,537	4,113	21,777
2.80	513.80	11,053	4,318	26,095
3.20	514.20	11,581	4,527	30,622
3.60	514.60	12,121	4,740	35,362
4.00	515.00	12,672	4,958	40,320

Culvert / Orifice Structures

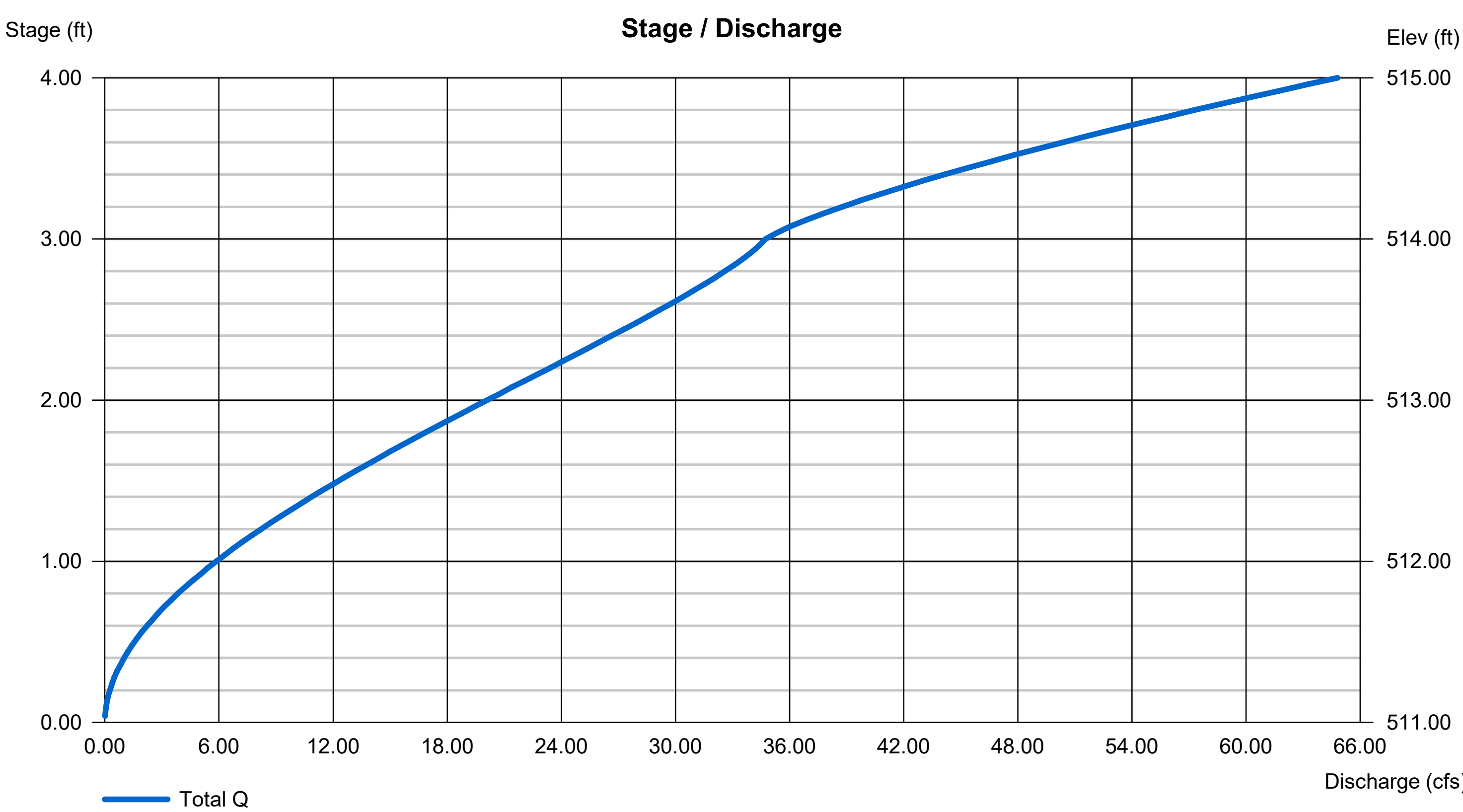
	[A]	[B]	[C]	[PrfRsr]
Rise (in)	= 36.00	Inactive	Inactive	0.00
Span (in)	= 36.00	24.00	24.00	0.00
No. Barrels	= 1	1	1	0
Invert El. (ft)	= 511.00	511.00	513.00	0.00
Length (ft)	= 103.00	0.50	0.00	0.00
Slope (%)	= 9.34	0.01	0.00	n/a
N-Value	= .013	.013	.013	n/a
Orifice Coeff.	= 0.50	0.60	0.60	0.60
Multi-Stage	= n/a	No	No	No

Weir Structures

	[A]	[B]	[C]	[D]
Crest Len (ft)	Inactive	6.00	Inactive	0.00
Crest El. (ft)	= 511.00	514.00	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	18.44	1	16	25,931	2	512.90	16,675	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	21.11	1	16	29,001	2	513.06	18,301	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	24.59	1	16	33,097	2	513.27	20,466	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	28.39	1	15	37,772	2	513.51	22,950	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	32.15	1	16	42,865	2	513.77	25,730	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	33.77	1	16	45,435	2	513.90	27,191	Reservior

Stormwater Pollution Prevention Plan (SWPPP) for Construction Activity
for Large Construction Sites

National Pollutant Discharge Elimination System (NPDES)
General Permit # ARR150000

Prepared for:

NXT GEN HOMES LLC

HILLTOP LANDING

Proposed Subdivision

Hilltop Landing Subdivison
Saline County

Date:
19 April 2023
Prepared by:

HOPE
CONSULTING
ENGINEERS - SURVEYORS

Project Name and Location: **Hilltop Landing Subdivision, NE corner of Miller Rd and Hilltop Rd, Bryant, Saline County**

Property Parcel Number (*Optional*): **840-11625-125**

Owner: **NXT GEN HOMES LLC 501-217-8400;**
19218 Summershade Dr., Bryant, AR 72022 graham@grahamsmithcompanies.com

Developer/Contractor/Operator: **Graham Smith – NXT GEN HOMES LLC- 501-217-8400, 19218 Summershade Dr., Bryant, AR 72022**
grahamsmithcompanies.com

A. Site Description
   a. Project description, intended use after NOI is filed: **165 Lot subdivision**
   b. Sequence of major activities which disturb soils: **Construction entrance, ROW clearing, silt fence, drainage channels, trenching for utilities, rock ckeck dams, grading, road construction, lot clearing, home construction. Detention will be temp sediment pond, (see erosion control plan).**
   c. Total Area[1]: **54 Ac±** Disturbed Area[2]: **54 Ac±**
   d. Soils Information:
      i. Runoff Coefficient Pre-Construction (See Appendix A) : **0.36**________
      ii. Runoff Coefficient Post-Construction (See Appendix A) : **0.65**________
      iii. Describe the soil or the quality of any discharge from the site: **OK**

B. Responsible Parties
Be sure to assign all SWPPP related activities to an individual or position; even if the specific individual is not yet known (i.e. contractor has not been chosen).

Individual/Company	Phone Number	Service Provided for SWPPP (i.e., Inspector, SWPPP revisions, Stabilization Activities, BMP Maintenance, etc.)
Hope Consulting	501-315-2626	SWPPP Revisions
Graham Smith – NXT GEN HOMES LLC- Operator	501-217-8400	Inspection, Stabilization Activities, BMP Maintenance

C. Receiving Waters
   a. The following waterbody (or waterbodies) receives stormwater from this construction site: **unnamed Tributary, thence Owen, thence Fourche Creek, thence Arkansas River**
   b. Is the project located within the jurisdiction of an MS4? ☒ Yes ☐ No
      i. If yes, Name of MS4: **Bryant**
   c. Ultimate Receiving Water:
      ☐ Red River ☐ Ouachita River

☒Arkansas River ☐St. Francis River
☐White River ☐Mississippi River

[1]Increases in total acreage require an additional acreage request, an updated SWPPP and a $200 modification fee to be submitted to ADEQ.
[2]Increases in only disturbed acreage require an additional acreage request and an updated SWPPP to be submitted to ADEQ.

D. Documentation of Permit Eligibility Related to the 303(d) list and Total Maximum Daily Loads (TMDL) (https://www.adeq.state.ar.us/water/planning/)
   a. Does the stormwater enter a waterbody on the 303(d) list or with an approved TMDL? ☐Yes ☒No
   b. If yes:
      i. Waterbody identified on 303(d) list:_
      ii. Pollutant addressed on 303(d) list or TMDL: ____________
      iii. This specific project ,or generally construction activity i.e. surface erosion, is identified on 303(d) list or associated assumptions and allocations identified in the TMDL for the discharge: ☒Yes ☐No
      iv. Additional controls implemented: _.

E. Attainment of Water Quality Standards After Authorization
   a. The permittee must select, install, implement, and maintain BMPs at the construction site that minimize pollutants in the discharge as necessary to meet applicable water quality standards. In general, except in situations explained below, the SWPPP developed, implemented, and updated to be considered as stringent as necessary to ensure that the discharges do not cause or contribute to an excursion above any applicable water quality standard.
   b. At any time after authorization, the Department may determine that the stormwater discharges may cause, have reasonable potential to cause, or contribute to an excursion above any applicable water quality standard. If such a determination is made, the Department will require the permittee to:
      i. Develop a supplemental BMP action plan describing SWPPP modifications to address adequately the identified water quality concerns and submit valid and verifiable data and information that are representative of ambient conditions and indicate that the receiving water is attaining water quality standards; or
      ii. Cease discharges of pollutants from construction activity and submit an individual permit application.

I understand and agree to follow the above text regarding the attainment of water quality standards after authorization. ☒Yes ☐No

F. Site Map Requirements (Attach Site Map):
   a. Pre-construction topographic view;
   b. Direction of stormwater flow (i.e., use arrows to show which direction stormwater will flow) and approximate slopes anticipated after grading activities;
   c. Delineate on the site map areas of soil disturbance and areas that will not be disturbed under the coverage of this permit;
   d. Location of major structural and nonstructural controls identified in the plan;
   e. Location of main construction entrance and exit;
   f. Location where stabilization practices are expected to occur;
   g. Locations of off-site materials, waste, borrow area, or equipment storage area;
   h. Location of areas used for concrete wash-out;
   i. Location of all surface water bodies (including wetlands) with associated natural buffer boundary lines. Identify floodplain and floodway boundaries, if available;
   j. Locations where stormwater is discharged to a surface water and/or municipal separate storm sewer system if applicable,
   k. Locations where stormwater is discharged off-site (should be continuously updated);
   l. Areas where final stabilization has been accomplished and no further construction phase permit requirements apply;
   m. A legend that identifies any erosion and sediment control measure symbols/labels used in the site map and/or detail sheet; and
   n. Locations of any storm drain inlets on the site and in the immediate vicinity of the site.

G. Stormwater Controls
   a. Initial Site Stabilization, Erosion and Sediment Controls, and Best Management Practices:
      i. Initial Site Stabilization: **existing vegetation, silt fencing on toe of slopes and along major drainage pathways. All silt fencing may not be necessary initially, but rather as construction progresses.**
      ii. Erosion and Sediment Controls: **Rip rap check dams, additional silt fencing (as needed),**
      iii. If periodic inspections or other information indicates a control has been used inappropriately or incorrectly, the operator will replace or modify the control for site situations: ☒Yes ☐No

If No, explain: ____

____

iv. Off-site accumulations of sediment will be removed at a frequency sufficient to minimize off-site impacts: ☒Yes ☐No
If No, explain: ____

____

v. Sediment will be removed from sediment traps or sedimentation ponds when design capacity has been reduced by 50%: ☒Yes ☐No
If No, explain: ____

____

vi. Litter, construction debris, and construction chemicals exposed to stormwater shall be prevented from becoming a pollutant source for stormwater discharges: ☒Yes ☐No
If No, explain: ____

____

vii. Off-site material storage areas used solely by the permitted project are being covered by this SWPPP: ☐Yes ☒No
If Yes, explain additional BMPs implemented at off-site material storage area: ____

____

b. Stabilization Practices
i. Description and Schedule: **Final stabilization will be concrete, stone, sod, landscape. Permit will be closed when all exposed areas are 100% covered with 80% density.**
ii. Are buffer areas required? ☐Yes ☒No
If Yes, are buffer areas being used? ☒Yes ☐No

If Yes, describe natural buffer areas:

If No, explain why not:________________________________

____

iii. A record of the dates when grading activities occur, when construction activities temporarily or permanently cease on a portion of the site, and when stabilization measures are initiated shall be included with the plan.
iv. Deadlines for stabilization: Stabilization procedures will be initiated 14 days after construction activity temporarily ceases on a portion of the site.
☒Yes ☐No
If No, explain: ____

____

v. Deadlines for stabilization:
    1. Stabilization procedures will be initiated immediately after construction activity temporarily ceases on a portion of the site.
    2. Stabilization procedures will be initiated immediately in portions of the site where construction activities have permanently ceased.

c. Structural Practices
    i. Describe any structural practices to divert flows from exposed soils, store flows, or otherwise limit runoff and the discharge of pollutants from exposed areas of the site: **silt fencing, check dams**
    ii. Describe Velocity Dissipation Devices: **rip rap check dams as needed**
    iii. Sediment Basins:

Are 10 or more acres draining to a common point? ☒Yes ☐No
Is a sediment basin included in the project? ☒Yes ☐No

If Yes, what is the designed capacity for the storage?
☐3600 cubic feet per acre = :
or
☒10 year, 24 hour storm =
: 70,892
☐ Other criteria were used to design basin:
If No, explain why no sedimentation basin was included and describe required natural buffer areas and other controls implemented instead: **Each lot will have plenty of buffer space around the perimeter**

H. Other Controls
    a. Solid materials, including building materials, shall be prevented from being discharged to Waters of the State: ☒Yes ☐No
    b. Off-site vehicle tracking of sediments and the generation of dust shall be minimized through the use of:
        ☒A stabilized construction entrance and exit
        ☐Vehicle tire washing
        ☐Other controls, describe: **Street needs to be swept if needed.**
    c. Temporary Sanitary Facilities: **Contractor to provide and maintain facitilities.**

d. Concrete Waste Area Provided:

☒ Yes

☐ No. Concrete is used on the site, but no concrete washout is provided.
Explain why: ____
____

☐ N/A, no concrete will be used with this project

e. Fuel Storage Areas, Hazardous Waste Storage, and Truck Wash Areas: **No hazardous waste will be produced as a result of this project. Fuel storage areas will not be used and truck wash areas will not be needed.**

I. Non-Stormwater Discharges

a. The following allowable non-stormwater discharges comingled with stormwater are present or anticipated at the site:

☐ Fire-fighting activities;
☒ Fire hydrant flushings;
☐ Water used to wash vehicles (where detergents or other chemicals are not used) or control dust in accordance with Part II.A.4.H.2;
☒ Potable water sources including uncontaminated waterline flushings;
☐ Landscape Irrigation;
☐ Routine external building wash down which does not use detergents or other chemicals;
☐ Pavement wash waters where spills or leaks of toxic or hazardous materials have not occurred (unless all spilled materials have been removed) and where detergents or other chemicals are not used;
☐ Uncontaminated air conditioning, compressor condensate (See Part I.B.13.C of the permit);
☐ Uncontaminated springs, excavation dewatering and groundwater (See Part I.B.13.C of the permit);
☐ Foundation or footing drains where flows are not contaminated with process materials such as solvents (See Part I.B.13.C of the permit);

b. Describe any controls associated with non-stormwater discharges present at the site: **There are no non storm water discharges that warrant extra controls. The activities which will be non storm water discharges will be not be regularly occuring and will be monitored.**

J. Permanent Controls for Post-Construction Stormwater Management:

Describe measures installed during the construction process to control pollutants in stormwater discharges that will occur after construction operations have been completed: **Project area will be stabilized before SWPPP is terminated. Yards will be sodded/seeded and/or landscaped.**
Permit won't be closed until obtain 100% coverage and 80% density

K. Applicable State or Local Programs: The SWPPP will be updated as necessary to reflect any revisions to applicable federal, state, or local requirements that affect the stormwater controls implemented at the site. ☒Yes ☐No

L. Inspections

a. Inspection frequency:

☒**Every 7 calendar days and within 24 hours of the end of a storm event 0.5 inches or greater (a rain gauge must be maintained on-site)**

b. Inspections:

Completed inspection forms will be kept with the SWPPP.

☒ADEQ's inspection form will be used (See Appendix B)

or

☐A form other than ADEQ's inspection form will be used and is attached (See inspection form requirements Part II.A.4.L.2)

c. Inspection records will be retained as part of the SWPPP for at least 3 years from the date of termination.

d. It is understood that the following sections describe waivers of site inspection requirements. All applicable documentation requirements will be followed in accordance with the referenced sections.

i. Winter Conditions (Part II.A.4.L.4)

ii. Adverse Weather Conditions (Part II.A.4.L.5)

M. Maintenance:

The following procedures to maintain vegetation, erosion and sediment control measures and other protective measures in good, effective operating condition will be followed: **<u>As homes are completed, lots will be sodded, seeded, and/or landscaped, contractors will be responsible for keeping individual lots during home construction.</u>** *Any necessary repairs will be completed, when practicable, before the next storm event, but not to exceed a period of 3 business days of discovery, or as otherwise directed by state or local officials.*

N. Employee Training:

The following is a description of the training plan for personnel (including contractors and subcontractors) on this project: **<u>The operator is well trained and familiar with erosion control practices. Workers who are under the operator will be briefed and trained on erosion control practices and the SWPPP contents.</u>**

**Note, Formal training classes given by Universities or other third-party organizations are not required, but recommended for qualified trainers; the permittee is responsible for the content of the training being adequate for personnel to implement the requirements of the permit.

Certification

"I certify under penalty of law that this document and all attachments such as Inspection Form were prepared under my direction or supervision in accordance with a system designed to ensure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

Signature of Responsible or Cognizant Official: Kazi Blum

Title: P.E.

Date: 04-15-2023

Computation Sheet for Determining Runoff Coefficients

Total Site Area =	______ Acres	[A]
Existing Site Conditions		
Impervious Site Area [1] =	______ Acres	[B]
Impervious Site Area Runoff Coefficient [2, 4] =	______	[C]
Pervious Site Area [3] =	______ Acres	[D]
Pervious Site Area Runoff Coefficient [4] =	______	[E]

Pre-Construction Runoff Coefficient

$$\frac{[B \times C] + [D \times E]}{[A]}$$ = This is your pre-construction runoff coefficient.

Proposed Site Conditions (after construction)		
Impervious Site Area [1] =	______ Acres	[F]
Impervious Site Area Runoff Coefficient [2, 4] =	______	[G]
Pervious Site Area [3] =	______ Acres	[H]
Pervious Site Area Runoff Coefficient [4] =	______	[I]

Post-Construction Runoff Coefficient

$$\frac{[F \times G] + [H \times I]}{[A]}$$ = This is your post-construction runoff coefficient.

1. Includes paved areas, areas covered by buildings, and other impervious surfaces.
2. Use 0.95 unless lower or higher runoff coefficient can be verified.
3. Includes areas of vegetation, most unpaved or uncovered soil surfaces, and other pervious areas.
4. Refer to local Hydrology Manual for typical C values.

Note: The impervious and pervious surfaces should equal the total area.

ARR150000 Inspection Form

Appendix B

Inspector Name: ____ Date of Inspection: _________________

Inspector Title: ____

Date of Rainfall:_________________________________ Duration of Rainfall: ______________________________

Days Since Last Rain Event: _________________ days Rainfall Since Last Rain Event: ________ inches

Description of any Discharges During Inspection: ____

Location of Discharges of Sediment/Other Pollutant (specify pollutant & location): ________________________________

____

Locations in Need of Additional BMPs: ____

Information on Location of Construction Activities

Location	Activity Begin Date	Activity Occuring Now (y/n)?	Activity Ceased Date	Stabilization Initiated Date	Stabilization Complete Date

Information on BMPs in Need of Maintenance

Location	In Working Order?	Maintenance Scheduled Date	Maintenance Completed Date	Maintenance to be Performed By

Changes required to the SWPPP: ___________________ Reasons for changes: ____________________________

____ ____

____ ____

SWPPP changes completed (date): _________________

"I certify under penalty of law that this document and all attachments such as Inspection Form were prepared under my direction or supervision in accordance with a system designed to ensure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

Signature of Responsible or Cognizant Official: ____ Date:______________

Title: ____

BMP Consideration Checklist Appendix C

The BMPs listed here should be considered for every project. Those BMPs that are not included in the SWPPP should be checked as “Not Used” with a brief statement describing why it is not being used.

Note: Appendix C and D do not have to be submitted with the SWPPP. These attachments are for use during the development of the SWPPP.

EROSION CONTROL BMPs

BMP	BMP Considered for project	BMP Used	BMP Not Used	If not used, state reason
EC-1 Scheduling	☐	☒	☐	
EC-2 Preservation of Existing Vegetation	☐	☒	☐	
EC-3 Hydraulic Mulch	☐	☐	☐	
EC-4 Hydroseeding	☐	☒	☐	
EC-5 Soil Binders	☐	☐	☐	
EC-6 Straw Mulch	☐	☐	☐	
EC-7 Geotextiles & Mats	☐	☐	☐	
EC-8 Wood Mulching	☐	☐	☐	
EC-9 Earth Dikes & Drainage Swales	☐	☒	☐	
EC-10 Velocity Dissipation Devices	☐	☐	☐	
EC-11 Slope Drains	☐	☐	☐	
EC-12 Stream bank Stabilization	☐	☒	☐	

SEDIMENT CONTROL BMPs

BMP	BMP Considered for project	BMP Used	BMP Not Used	If not used, state reason
SE-1 Silt Fence	☐	☒	☐	
SE-2 Sediment Basin	☐	☒	☐	
SE-3 Sediment Trap	☐	☒	☐	
SE-4 Check Dam	☐	☒	☐	
SE-5 Fiber Rolls	☐	☐	☐	
SE-6 Gravel Bag Berm	☐	☐	☐	
SE-7 Street Sweeping and Vacuuming	☐	☐	☐	
SE-8 Sand Bag Barrier	☐	☐	☐	
SE-9 Straw Bale Barrier	☐	☐	☐	
SE-10 Storm Drain Inlet Protection	☐	☐	☐	
SE-11 Chemical Treatment	☐	☐	☐	

WIND EROSION CONTROL BMPs

BMP	BMP Considered for project	BMP Used	BMP Not Used	If not used, state reason
WE-1 Wind Erosion Control	☐	☐	☐	

BMP Consideration Checklist

Appendix C

TRACKING CONTROL BMPs				
BMP	BMP Considered for project	BMP Used	BMP Not Used	If not used, state reason
TR-1 Stabilized Construction Entrance/Exit	☐	☒	☐	BMPs not used are
TR-2 Stabilized Construction Roadway	☐	☐	☐	needed
TR-3 Entrance/Outlet Tire Wash	☐	☐	☐	
NON-STORM WATER MANAGEMENT BMPs				
BMP	BMP Considered for project	BMP Used	BMP Not Used	If not used, state reason
NS-1 Water Conservation Practices	☐	☐	☐	BMPs not used are
NS-2 Dewatering Operations	☐	☐	☐	needed
NS-3 Paving and Grinding Operations	☐	☐	☐	
NS-4 Temporary Stream Crossing	☐	☐	☐	
NS-5 Clear Water Diversion	☐	☐	☐	
NS-6 Illicit Connection/ Discharge	☐	☐	☐	
NS-7 Potable Water/Irrigation	☐	☒	☐	
NS-8 Vehicle and Equipment Cleaning	☐	☐	☐	
NS-9 Vehicle and Equipment Fueling	☐	☐	☐	
NS-10 Vehicle and Equipment Maintenance	☐	☐	☐	
NS-11 Pile Driving Operations	☐	☐	☐	
NS-12 Concrete Curing	☐	☐	☐	
NS-13 Concrete Finishing	☐	☐	☐	
NS-14 Material and Equipment Use Over Water	☐	☐	☐	
NS-15 Demolition Adjacent to Water	☐	☐	☐	
NS-16 Temporary Batch Plants	☐	☐	☐	
WASTE MANAGEMENT AND MATERIALS POLLUTION CONTROL BMPs				
BMP	BMP Considered for project	BMP Used	BMP Not Used	If not used, state reason
WM-1 Material Delivery and Storage	☐	☐	☐	BMPs not used are
WM-2 Material Use	☐	☐	☐	needed
WM-3 Stockpile Management	☐	☐	☐	
WM-4 Spill Prevention and Control	☐	☐	☐	
WM-5 Solid Waste Management	☐	☐	☐	
WM-6 Hazardous Waste Management	☐	☐	☐	
WM-7 Contaminated Soil Management	☐	☐	☐	
WM-8 Concrete Waste Management	☐	☒	☐	
WM-9 Sanitary/Septic Waste Management	☐	☐	☐	
WM-10 Liquid Waste Management	☐	☐	☐	

SWPPP Completion Checklist

Appendix D

Yes = Complete
No = Incomplete/Deficient
N/A = Not applicable to project

Yes	No	N/A	A. A site description, including:	Permit Section Citation
			1. Project description, intended use after NOT	Part II.A.4.A.1
			2. Sequence of major activities	Part II.A.4.A.2
			3. Total & disturbed acreage	Part II.A.4.A.3
			4. Pre- and post-construction runoff coefficient OR soil/discharge data	Part II.A.4.A.4
			B. Responsible Parties: All parties dealing with the SWPPP and the areas they are responsible for on-site.	Part II.A.4.B
			C. Receiving Water.	Part II.A.4.C
			-MS4 Name	Part II.A.4.C
			-Ultimate Receiving Water	Part II.A.4.C
			D. Documentation of permit eligibility related to Impaired Water Bodies and Total Maximum Daily Loads (TMDLs	
			1. Identify pollutant on 303(d) list or TMDL	Part II.A.4.D.1
			2. Is construction activity or the specific site listed as cause?	Part II.A.4.D.2
			3. Measures taken to reduce pollutants from the site.	Part II.A.4.D.3
			E. Attainment of Water Quality Standards After Authorization.	Part II.A.4.E
			F. Site Map --- See End of Evaluation Form	Part II.A.4.F
			G. Description of Controls:	
			1. Erosion and sediment controls, including:	
			a. Initial site stabilization	Part II.A.4.G.1.a
			b. Erosion and sediment controls	Part II.A.4.G.1.b
			c. Replacement of inadequate controls	Part II.A.4.G.1.c
			d. Removal of off-site accumulations	Part II.A.4.G.1.d
			e. Maintenance of sediment traps/basins @ 50% capacity	Part II.A.4.G.1.e
			f. Litter, construction debris and chemicals properly handled	Part II.A.4.G.1.f
			g. Off-site storage areas and controls	Part II.A.4.G.1.g
			2. Stabilization practices:	
			a. Description and schedule for stabilization	Part II.A.4.G.2.a
			b. Description of buffer areas	Part II.A.4.G.2.b
			c. Records of stabilization	Part II.A.4.G.2.c
			d. Deadlines for stabilization	Part II.A.4.G.2.d
			3. Structural Practices:	
			-Describe structural practices to divert flows, store flows, or otherwise limit runoff	Part II.A.4.G.3
			a. Sediment basins	Part II.A.4.G.3.a.1
			-Are more than 10 acres draining to a common point? If so, are sediment basins included?	Part II.A.4.G.3.a.1
			-Sediment basin dimensions and capacity description and calculations	Part II.A.4.G.3.a.1
			-If a basin wasn't practicable, are other controls sufficient?	Part II.A.4.G.3.a.1
			b. Velocity dissipation devices concentrated flow from 2 or more acres	Part II.A.4.G.3.b
			H. Other controls including:	
			1. Solid waste control measures	Part II.A.4.H.1
			2. Vehicle off-site tracking controls	Part II.A.4.H.2
			3. Compliance with sanitary waste disposal	Part II.A.4.H.4
			4. Does the site have a concrete washout area controls?	Part II.A.4.H.5
			5. Does the site have fuel storage areas, hazardous waste storage and/or truck wash areas controls?	Part II.A.4.H.6

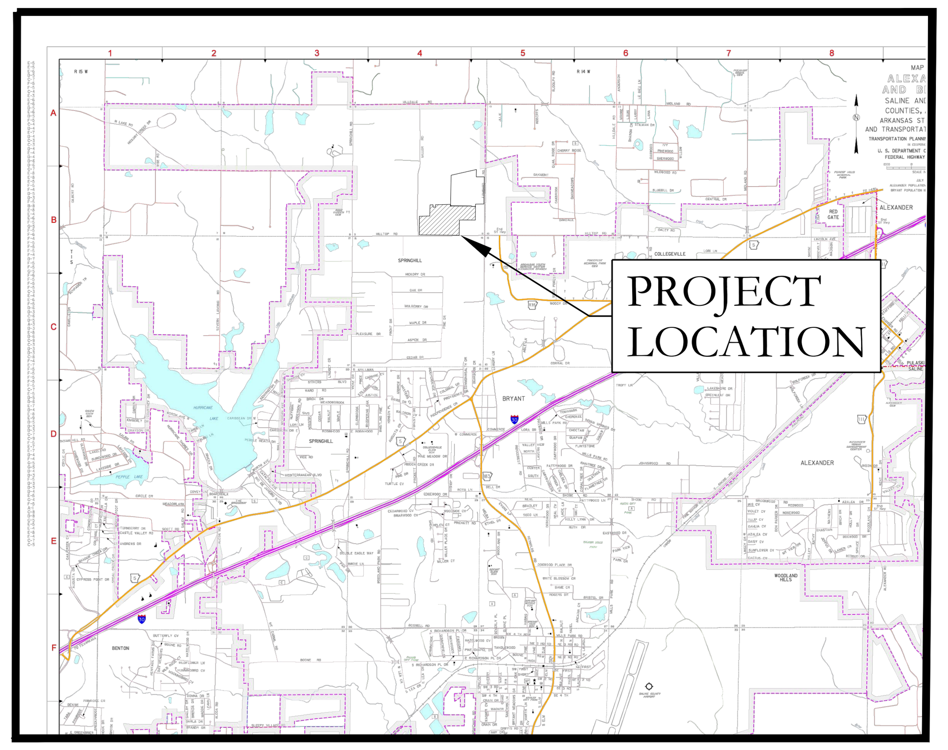
SWPPP Completion Checklist

Appendix D

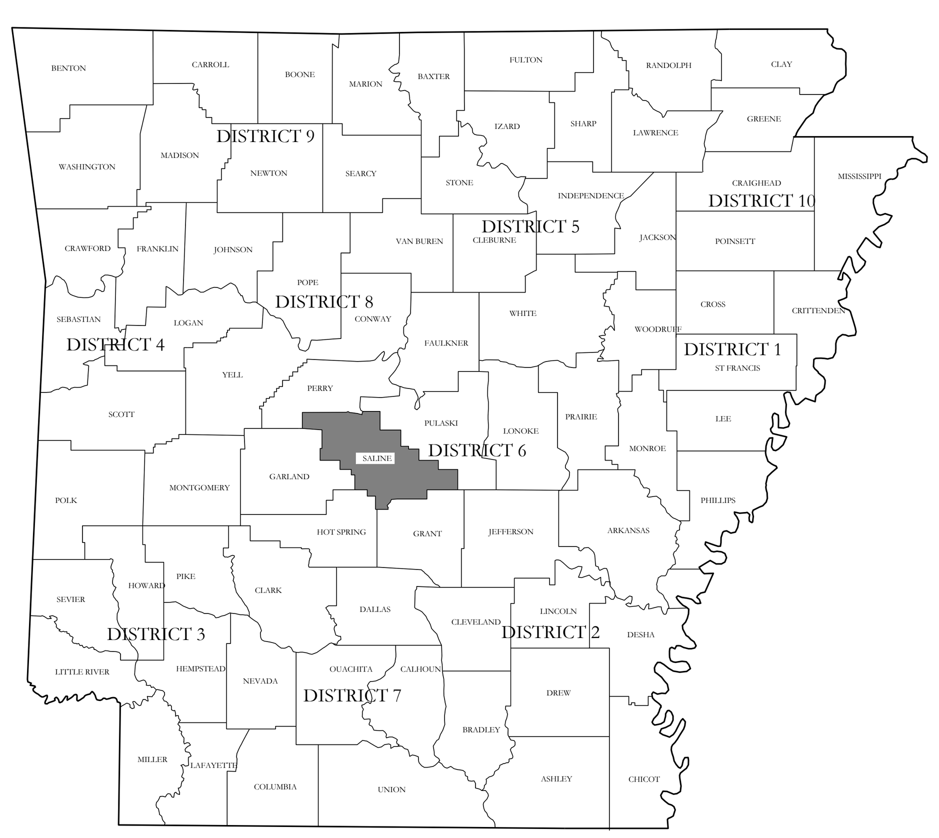
Yes	No	N/A		Permit Section Citation
			I. Identification of allowable non-storm water discharges	Part II.A.4.I
			-Appropriate controls for dewatering, if present	Part I.B.12.C
			J. Post construction stormwater management.	Part II.A.4.J
			K. State or local requirements incorporated into the plan.	Part II.A.4.K
			L. Inspections	
			1. Inspection frequency listed?	Part II.A.4.L.1
			2. Inspection form	Part II.A.4.L.2
			Ours.	
			If not ours, does it contain the following items:	
			a. Inspector name and title	Part II.A.4.L.2.a
			b. Date of inspection.	Part II.A.4.L.2.b
			c. Amount of rainfall and days since last rain event (14 day only)	Part II.A.4.L.2.c
			d. Approx beginning and duration of storm event	Part II.A.4.L.2.d
			e. Description of any discharges during inspection	Part II.A.4.L.2.e
			f. Locations of discharges of sediment/other pollutants	Part II.A.4.L.2.f
			g. BMPs in need of maintenance	Part II.A.4.L.2.g
			h. BMPs in working order, if maintenance needed (scheduled and completed)	Part II.A.4.L.2.h
			i. Locations that are in need of additional controls	Part II.A.4.L.2.i
			j. Location and dates when major construction activities begin, occur or cease	Part II.A.4.L.2.j
			k. Signature of responsible/cognizant official	Part II.A.4.L.2.k
			3. Inspection Records	Part II.A.4.L.3
			4. Winter Conditions	Part II.A.4.L.4
			5. Adverse Weather Conditions	Part II.A.4.L.5
			M. Maintenance Procedures	Part II.A.4.M
			N. Employee Training	Part II.A.4.N
			Signed Plan Certification	Part II.A.5. and Part II.B.10
			F. Site Map showing:	
			1. Pre-construction topographic view	Part II.A.4.F.1
			2. Drainage flow	Part II.A.4.F.2
			3. Approximate slopes after grading activities	Part II.A.4.F.2
			4. Areas of soil disturbance and areas not disturbed	Part II.A.4.F.3
			5. Location of major structural and non-structural controls.	Part II.A.4.F.4
			6. Location of main construction entrance and exit.	Part II.A.4.F.5
			7. Areas where stabilization practices are expected to occur.	Part II.A.4.F.6
			8. Locations of off-site materials, waste, borrow area or storage area.	Part II.A.4.F.7
			9. Locations of areas used for concrete wash-out.	Part II.A.4.F.8
			10. Locations of surface waters on site.	Part II.A.4.F.9
			11. Locations where water is discharged to a surface water or MS4.	Part II.A.4.F.10
			12. Storm water discharge locations.	Part II.A.4.F.11
			13. Areas where final stabilization has been accomplished.	Part II.A.4.F.12
			14. Legend for symbols/labels used	Part II.A.4.F.13
			15. Location of storm drain inlets on site or in immediate vicinity	Part II.A.4.F.14

CONSTRUCTION PLANS
HILLTOP LANDING

HILLTOP ROAD & MILLER ROAD ,BRYANT, AR



VICINITY MAP



PREPARED BY:

HOPE CONSULTING
ENGINEERS - SURVEYORS

129 N. Main Street,
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www.hopeconsulting.com

DRAWING INDEX

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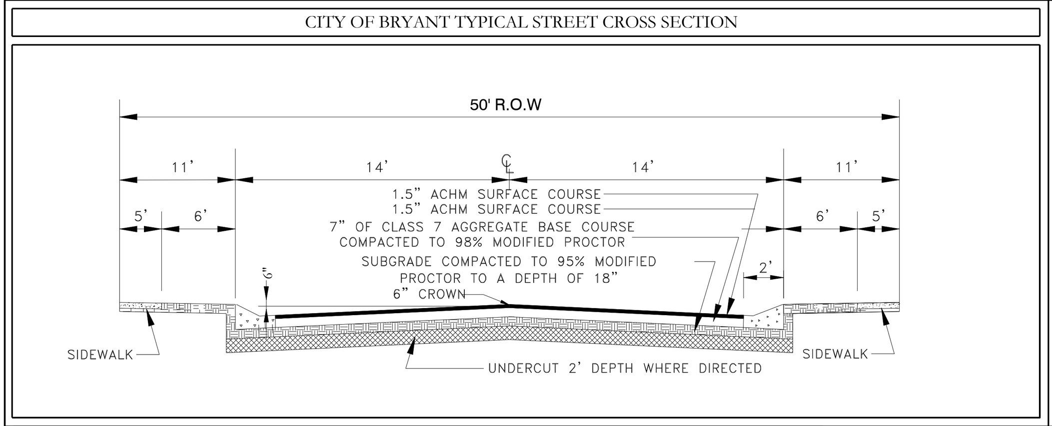
FOR USE AND BENEFIT OF:
NXT GEN HOMES LLC.

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

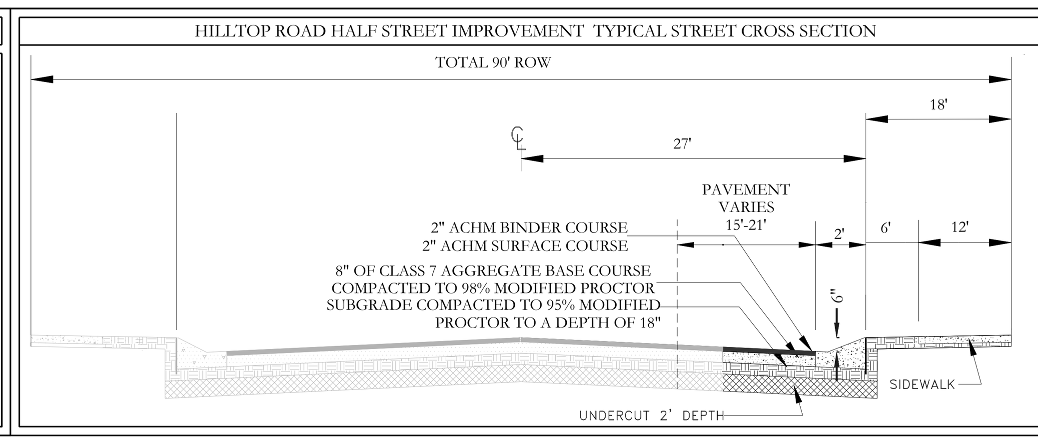
DATE: 02/16/2023	C.A.D. BY:	DRAWING NUMBER:
REVISED: 04-19-2023	CHECKED BY:	20-1341
SHEET:	SCALE:	

500	01S	14W	0	9	200	62	1762

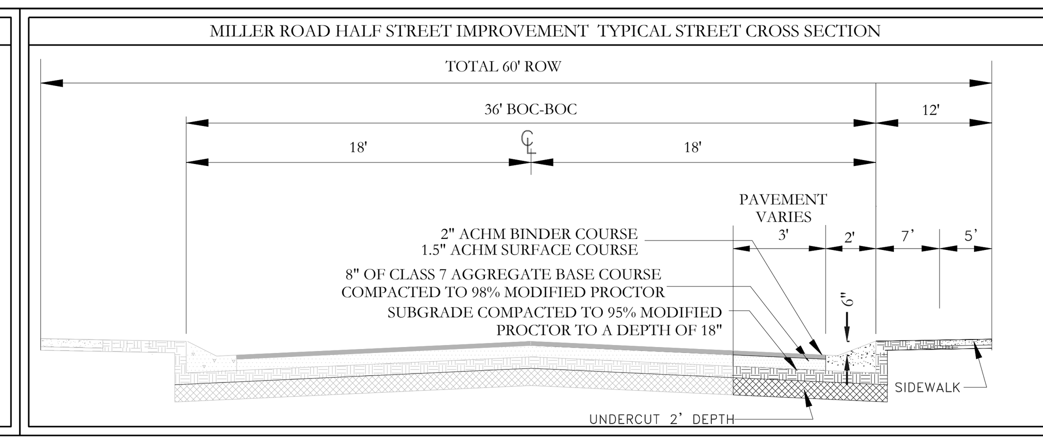
CITY OF BRYANT TYPICAL STREET CROSS SECTION



HILLTOP ROAD HALF STREET IMPROVEMENT TYPICAL STREET CROSS SECTION



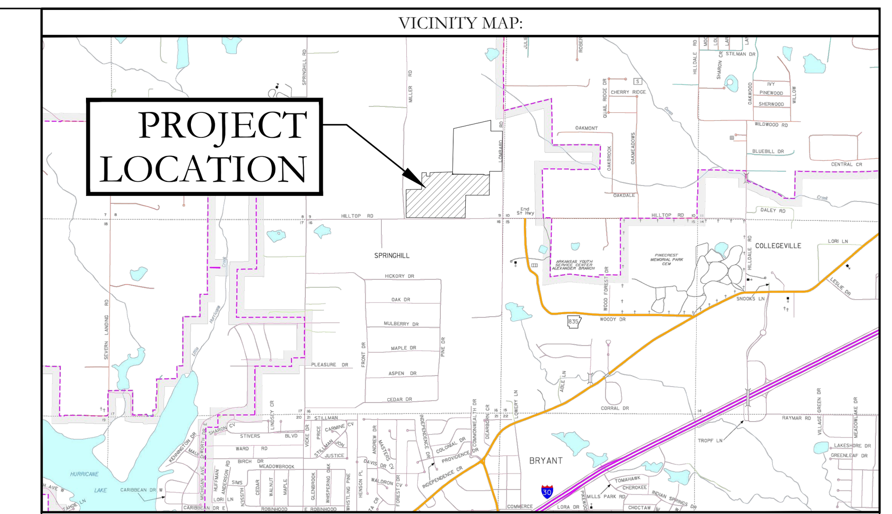
MILLER ROAD HALF STREET IMPROVEMENT TYPICAL STREET CROSS SECTION

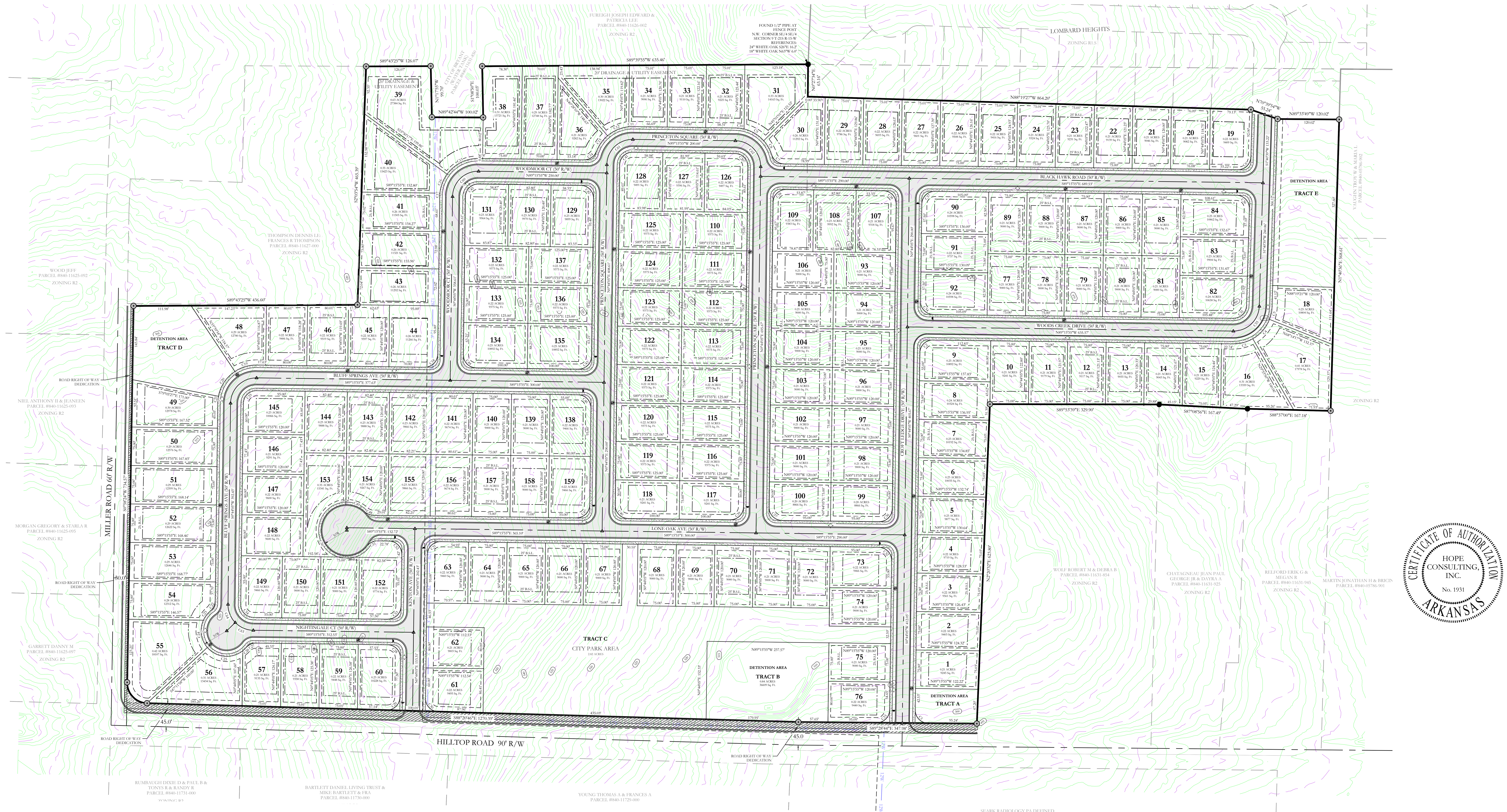


NOTE:

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:





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	90°12'49"	N44°22'19"W 35.42'	39.36'	25.00'
C2	90°00'00"	N45°44'05"E 35.36'	39.27'	25.00'
C3	30°37'55"	N75°25'08"E 39.62'	40.10'	75.00'
C4	38°53'53"	N40°39'14"E 49.95'	50.92'	75.00'
C5	19°31'39"	N11°26'28"E 25.44'	25.56'	75.00'
C6	89°03'26"	N46°12'22"E 35.06'	38.86'	25.00'
C7	71°54'20"	S53°18'45"E 29.36'	31.37'	25.00'
C8	24°25'17"	S29°34'13"E 31.73'	31.97'	75.00'
C9	34°37'45"	S59°05'44"E 44.64'	45.33'	75.00'
C10	12°51'19"	S82°50'16"E 16.79'	16.83'	75.00'
C11	6°21'51"	N87°33'10"E 8.33'	8.33'	75.00'
C12	34°44'46"	N66°59'51"E 44.79'	45.48'	75.00'
C13	29°00'47"	N35°07'05"E 37.57'	37.98'	75.00'
C14	70°07'23"	N55°40'23"E 28.72'	30.60'	25.00'
C15	54°34'22"	N63°26'54"E 68.77'	71.44'	75.00'
C16	30°32'24"	N20°53'31"E 39.51'	39.98'	75.00'
C17	4°53'14"	N3°10'42"E 6.40'	6.40'	75.00'
C18	90°00'00"	N45°44'05"E 35.36'	39.27'	25.00'
C19	34°23'40"	N73°32'15"E 44.35'	45.02'	75.00'
C20	45°25'53"	N33°37'29"E 57.92'	59.47'	75.00'
C21	10°10'28"	N5°49'19"E 13.30'	13.32'	75.00'
C22	49°56'39"	N25°42'25"E 21.11'	21.79'	25.00'
C23	26°13'50"	N37°33'49"E 22.69'	22.89'	50.00'
C24	65°06'18"	N8°06'15"W 53.81'	56.81'	50.00'
C25	88°00'23"	N84°39'36"W 69.47'	76.80'	50.00'
C26	10°32'47"	S46°03'49"W 9.19'	9.20'	50.00'
C27	49°56'39"	S65°45'45"W 21.11'	21.79'	25.00'
C28	90°00'00"	N44°15'55"W 35.36'	39.27'	25.00'
C29	90°55'09"	N46°11'39"E 35.64'	39.67'	25.00'
C30	89°05'30"	S43°48'01"E 35.07'	38.87'	25.00'
C31	89°59'21"	S45°44'24"W 35.35'	39.27'	25.00'
C32	90°00'00"	N44°15'55"W 35.36'	39.27'	25.00'
C33	89°47'11"	N45°37'41"E 35.29'	39.18'	25.00'
C34	90°00'00"	N44°15'55"W 35.36'	39.27'	25.00'
C35	89°03'26"	S46°12'22"W 35.06'	38.86'	25.00'
C36	90°56'34"	S43°47'38"E 35.65'	39.68'	25.00'
C37	90°00'00"	N45°44'05"E 35.36'	39.27'	25.00'
C38	90°00'00"	N44°15'55"W 35.36'	39.27'	25.00'
C39	90°00'00"	N45°44'05"E 35.36'	39.27'	25.00'
C40	90°00'00"	S44°15'55"E 35.36'	39.27'	25.00'
C41	90°00'00"	S45°44'05"W 35.36'	39.27'	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"	N45°44'05"E 35.36'	39.27'	25.00'
C46	90°00'00"	N44°15'55"W 35.36'	39.27'	25.00'
C47	90°00'00"	N45°44'05"E 35.36'	39.27'	25.00'
C48	42°50'00"	S67°50'55"E 18.26'	18.69'	25.00'
C49	45°35'19"	S69°13'34"E 38.74'	39.78'	50.00'
C50	230°22'30"	N27°12'28"W 90.49'	201.04'	50.00'
C51	53°07'48"	S64°10'11"W 22.36'	23.18'	25.00'
C52	90°00'53"	N44°15'28"W 35.36'	39.28'	25.00'
C53	89°59'07"	N45°44'32"E 35.35'	39.26'	25.00'
C54	90°00'00"	S44°15'55"E 35.36'	39.27'	25.00'
C55	89°03'26"	N46°12'22"E 70.13'	77.72'	50.00'
C55	90°00'00"	S45°44'05"W 35.36'	39.27'	25.00'
C56	90°00'00"	N45°44'05"E 35.36'	39.27'	25.00'
C57	90°00'00"	S44°15'55"E 35.36'	39.27'	25.00'
C58	90°00'00"	S45°44'05"W 35.36'	39.27'	25.00'
C60	90°00'00"	S45°44'05"W 70.71'	78.54'	50.00'

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
- Fence

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

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: 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

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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: 04/06/2023	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

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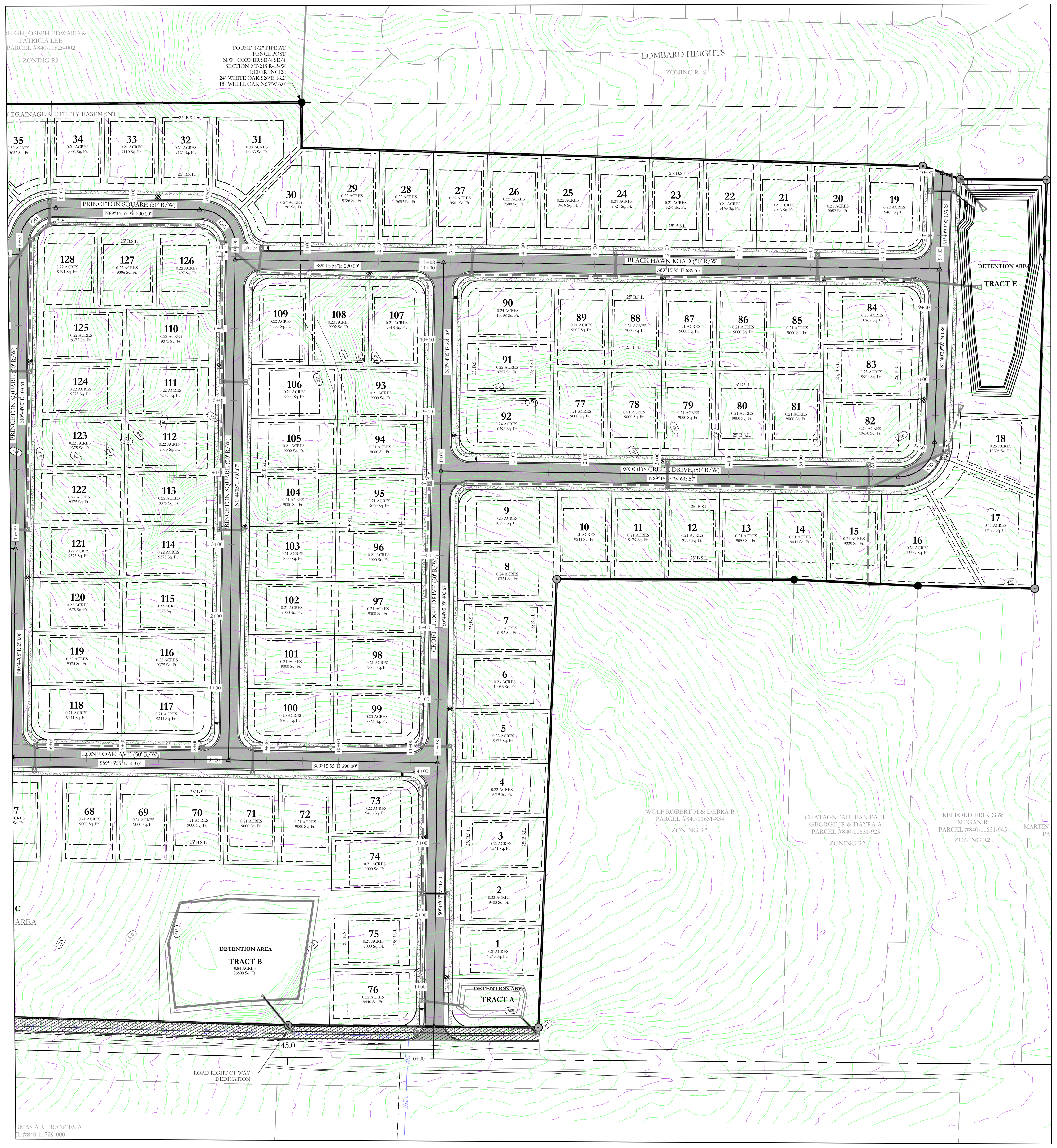
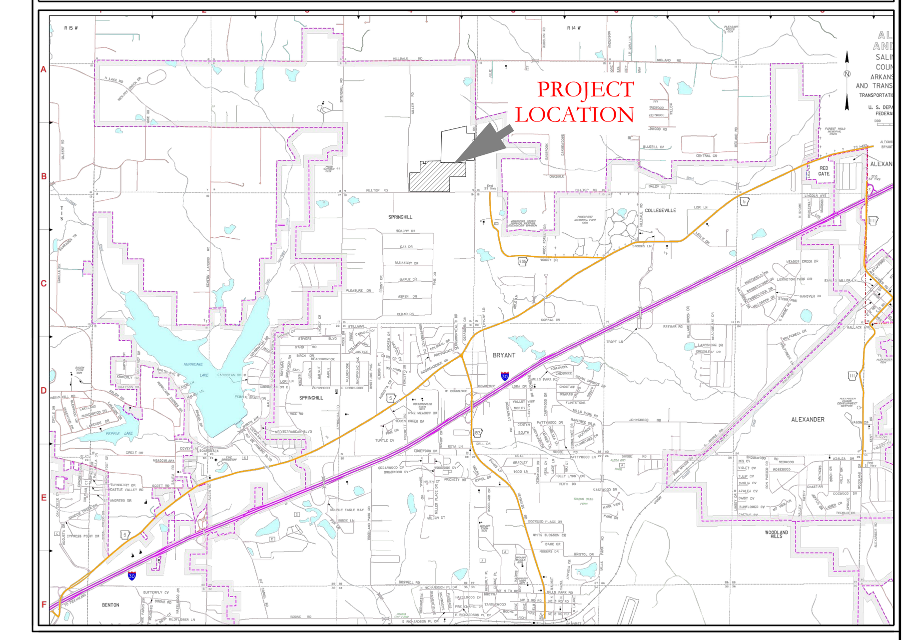
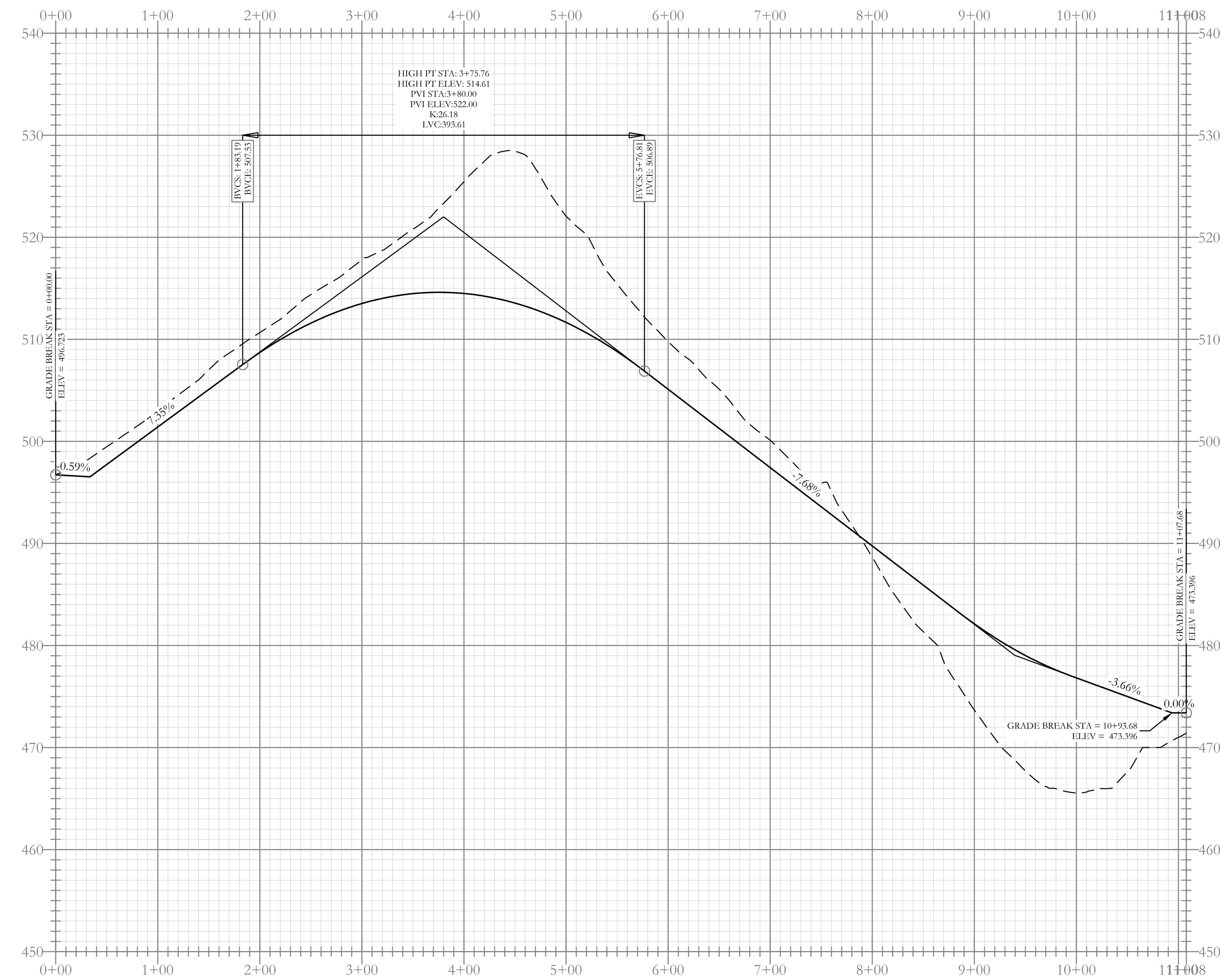
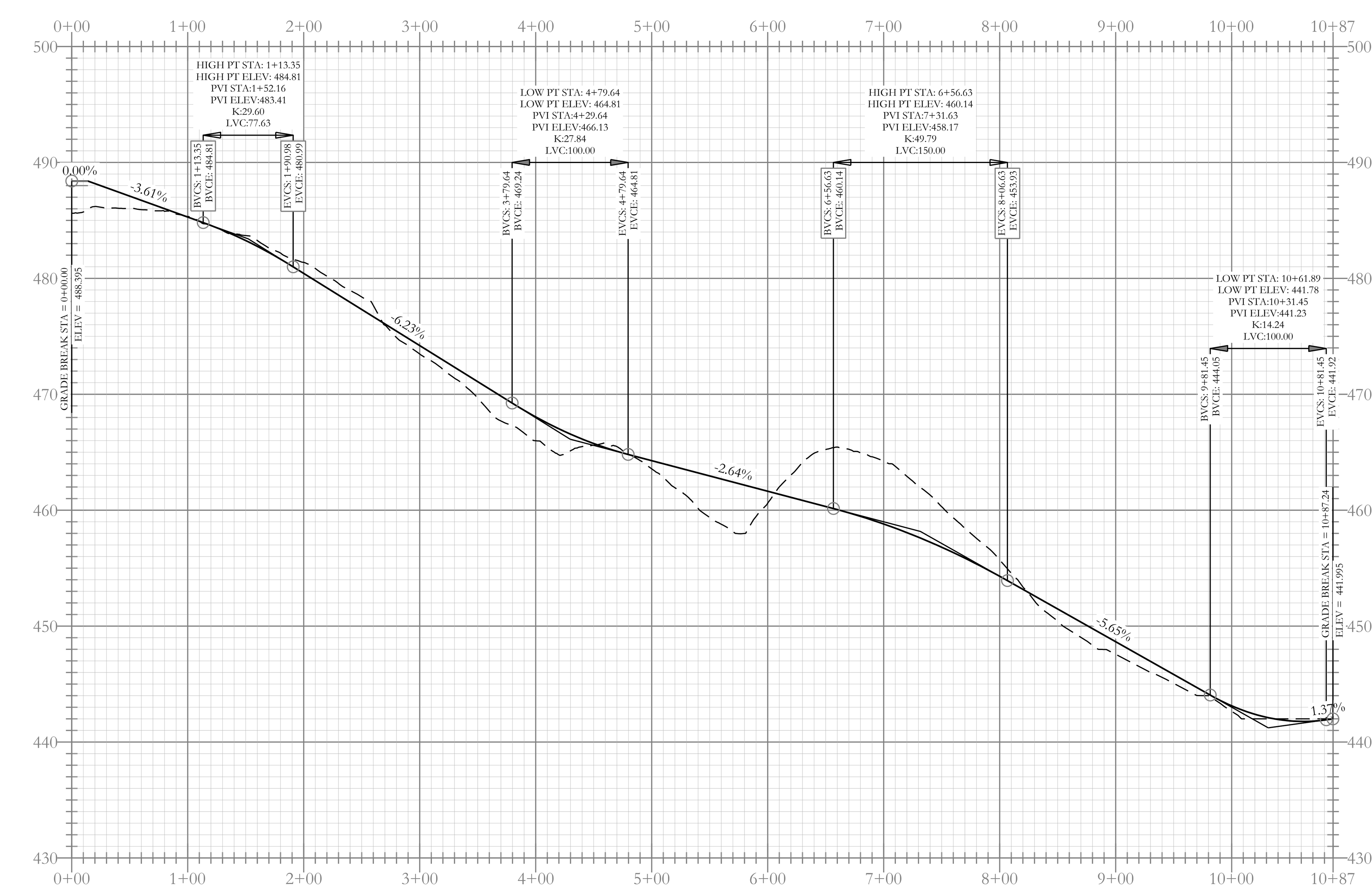




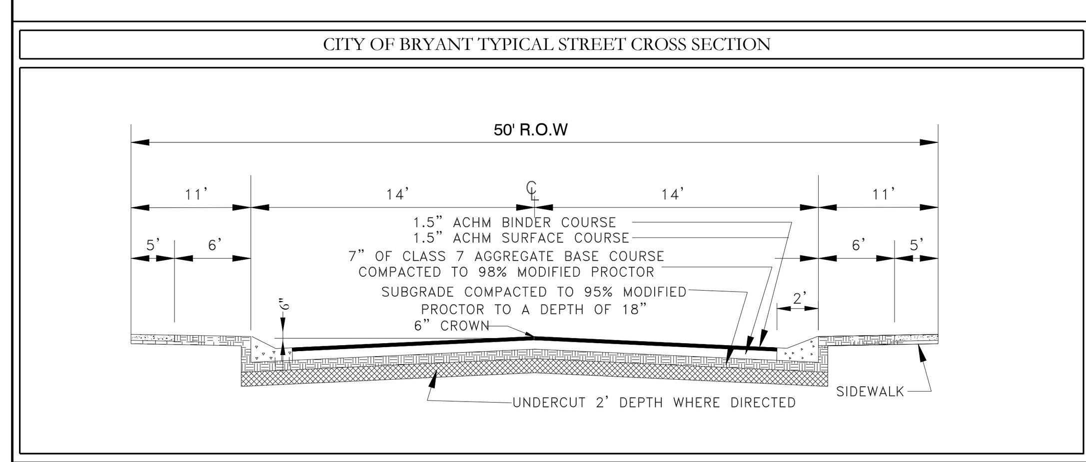


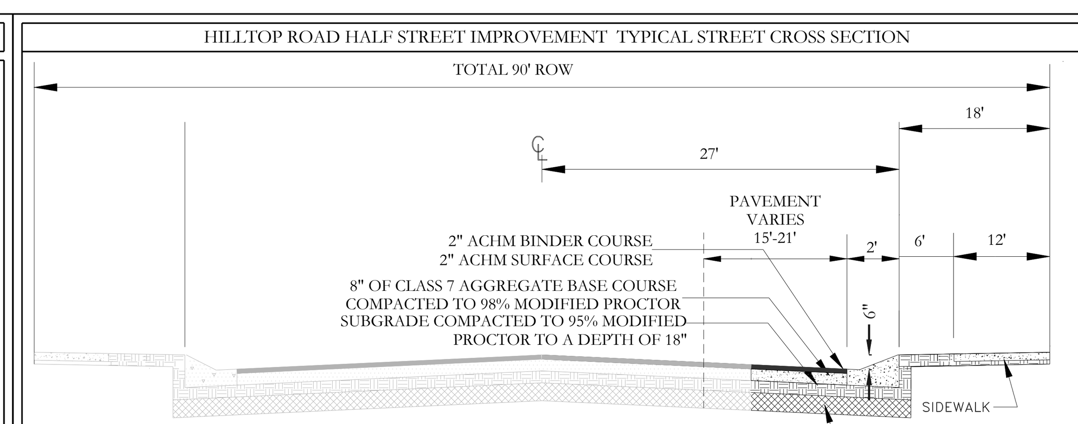
Croft Ledge Drive Profile

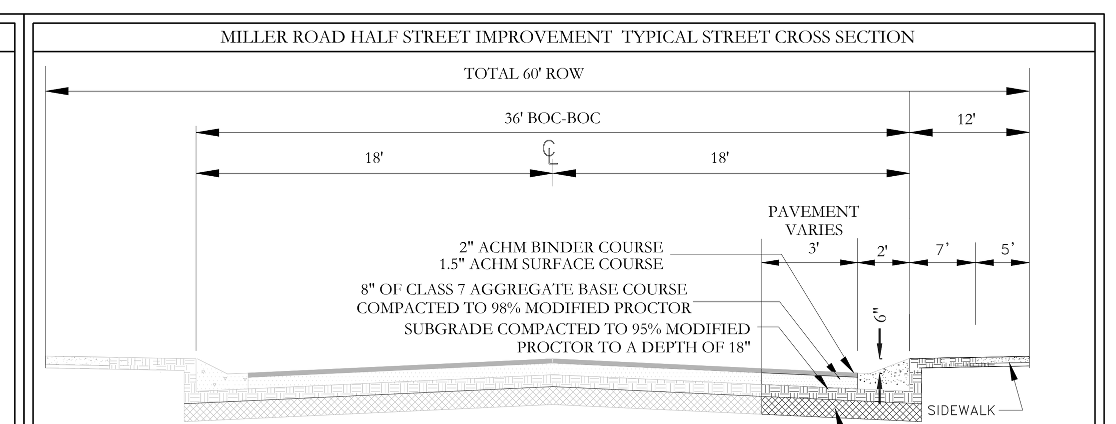


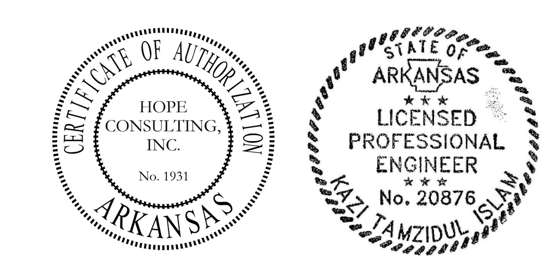
- - - - HDPE
—— RCP

Wood Creek Drive Profile









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

N

100 50 0 100

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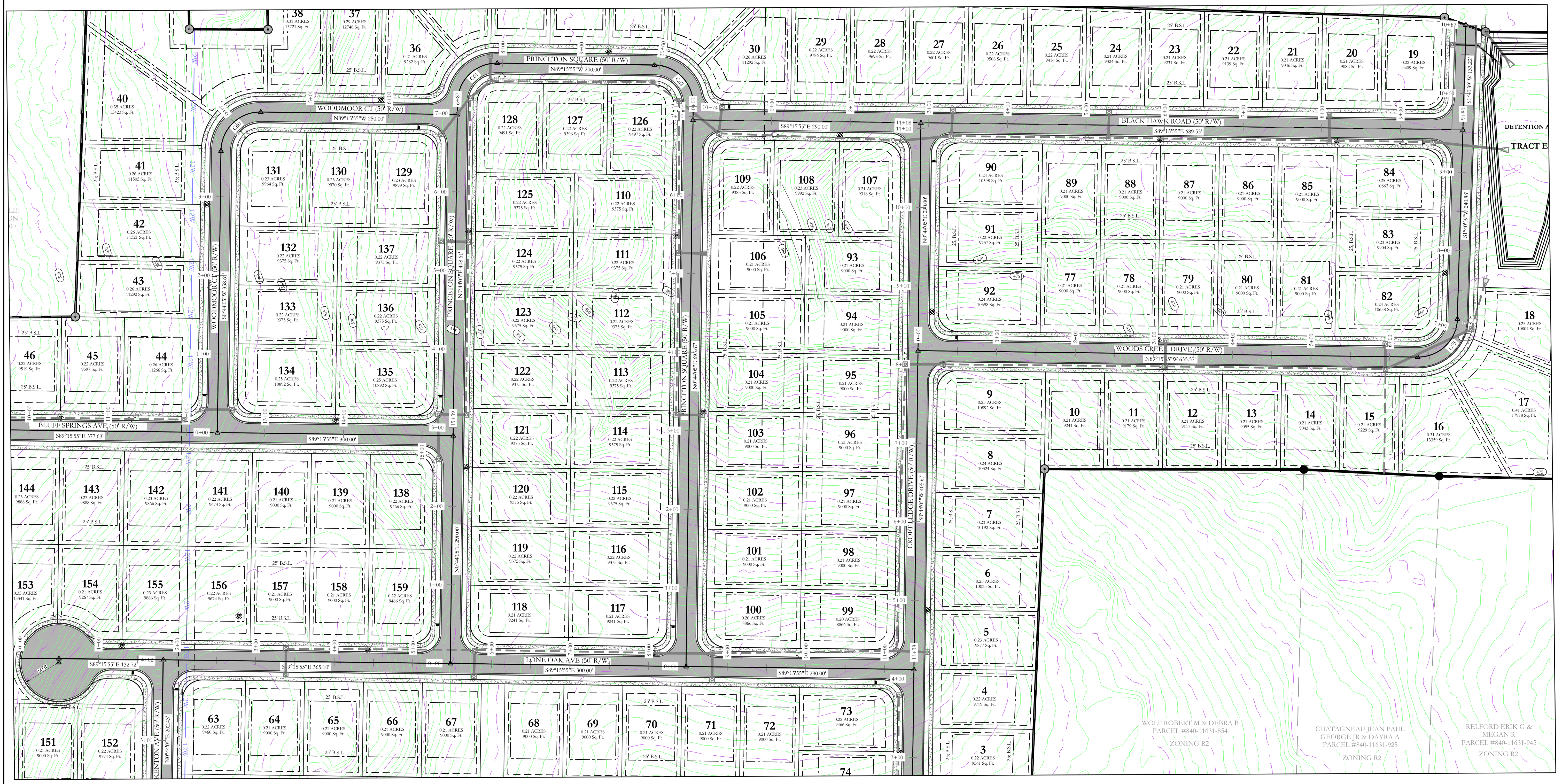
FOR USE AND BENEFIT OF:
NXT GEN HOMES LLC.

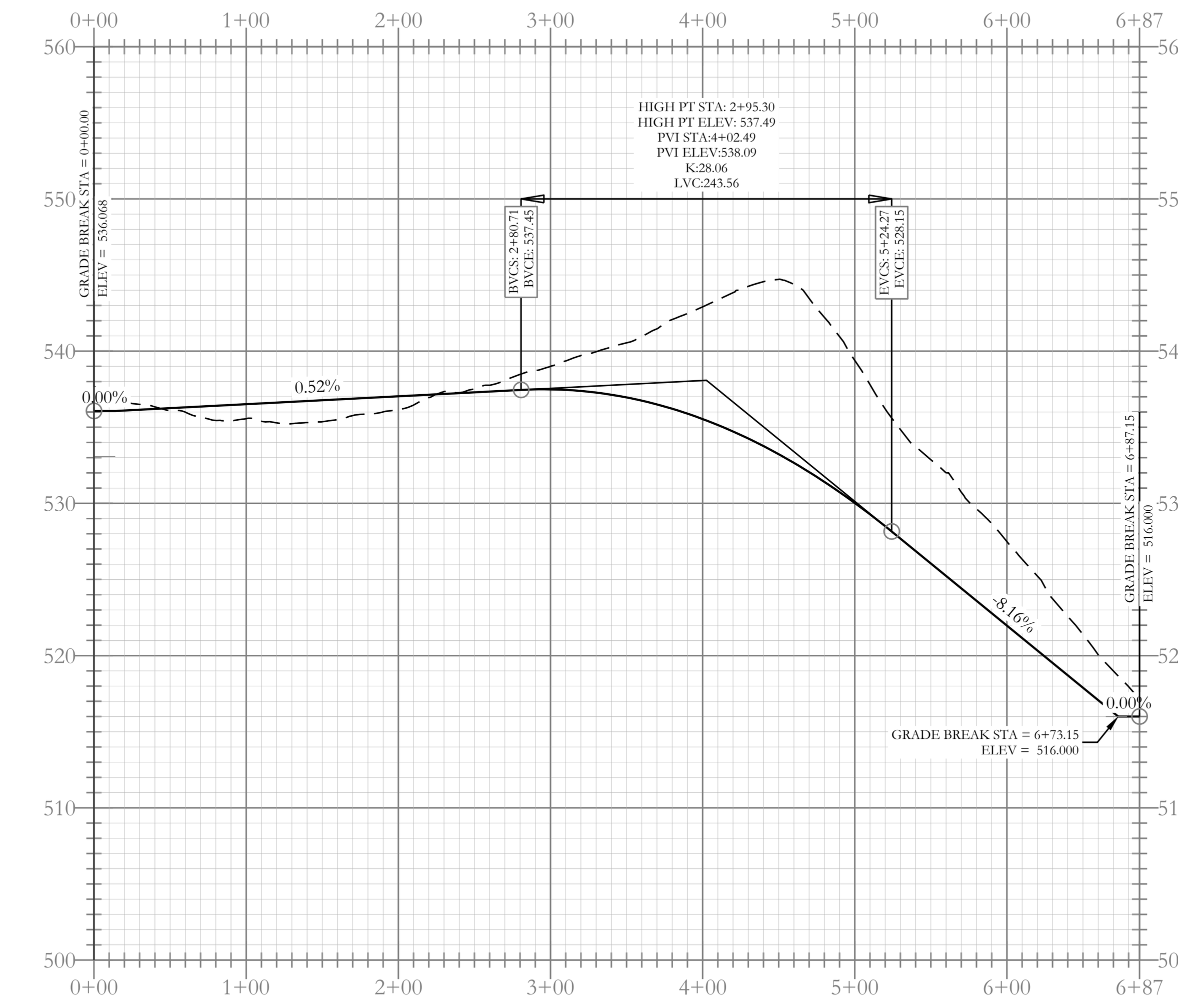
HILLTOP LANDING
STREET PLAN & PROFILE
A SUBDIVISION IN THE CITY OF BRYANT, SALINE COUNTY, ARKANSAS

DATE:	03/08/2023	C.A.D. BY:	DRAWING NUMBER:
REVISED:	04/19/2023	CHECKED BY:	20-1341
SHEET:	C-1.0	SCALE: 1" = 100'	

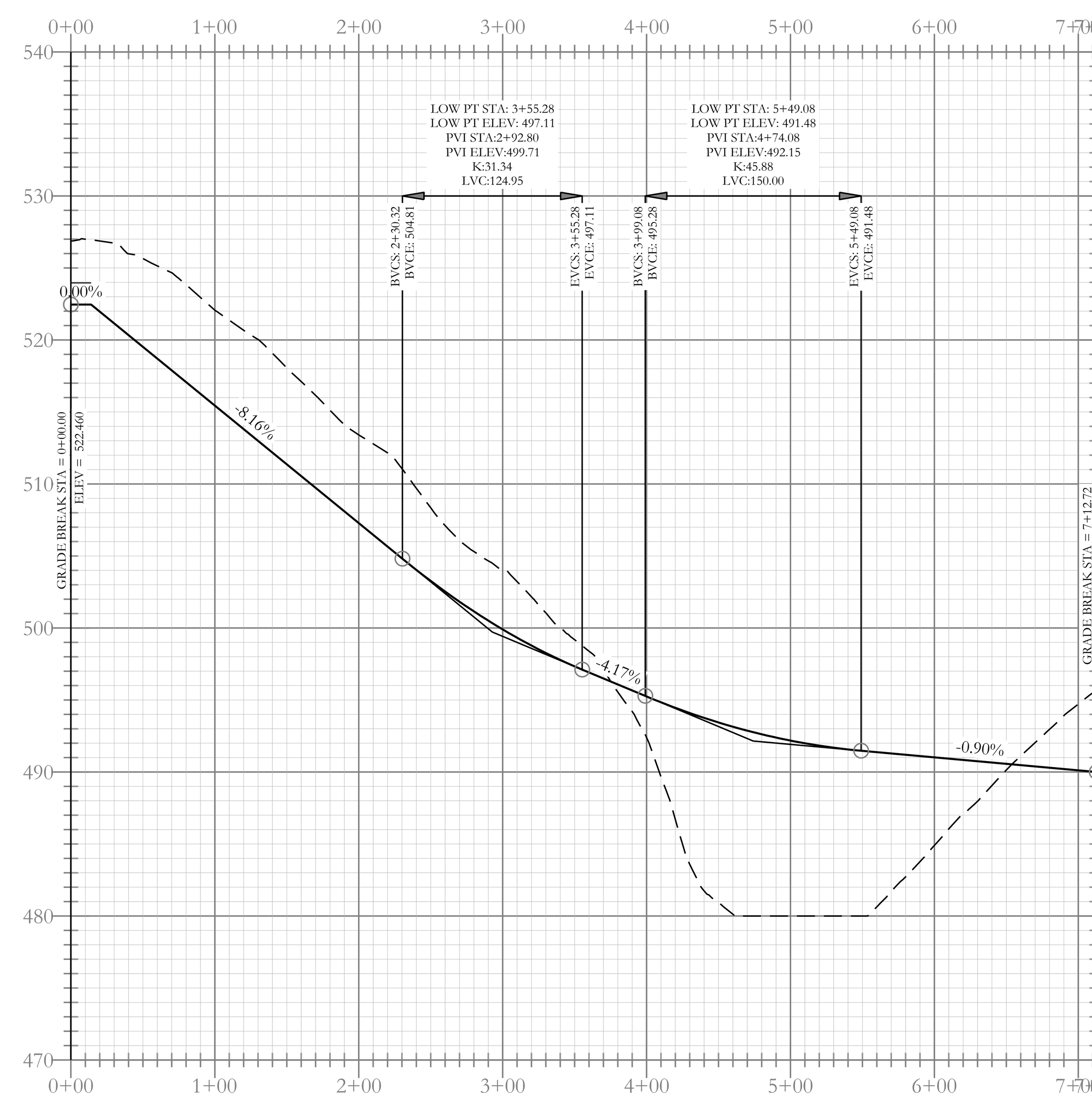
500	01S	14W	0	09	200	62	1762

K:\LAND PROJECTS 2004\SUBDIVISIONS\2020\20-1341 MILLER & HILLTOP\CIVIL\DWG\20-1341-CONSTRUCTION DRAWING 04-06-2023.DWG

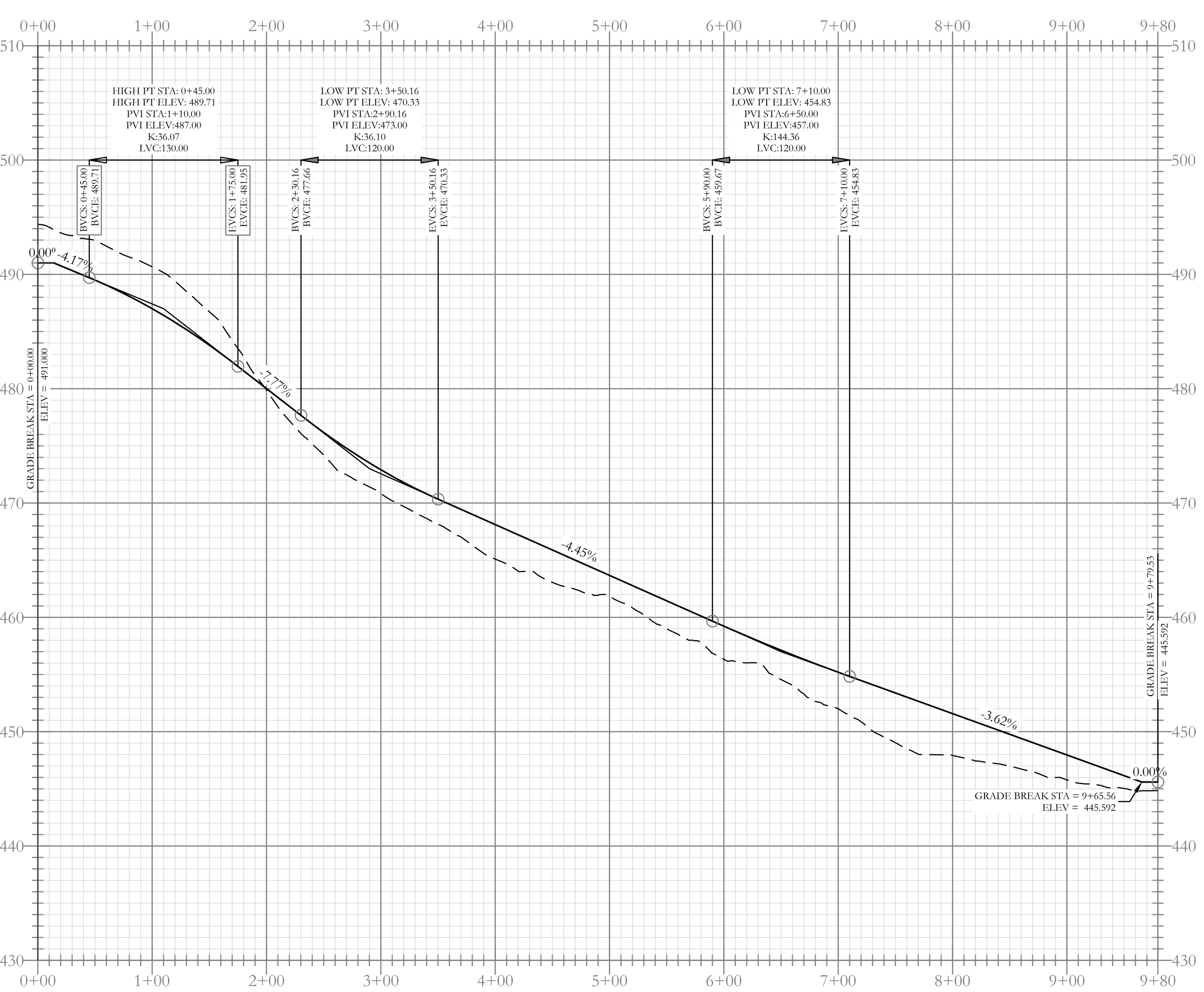




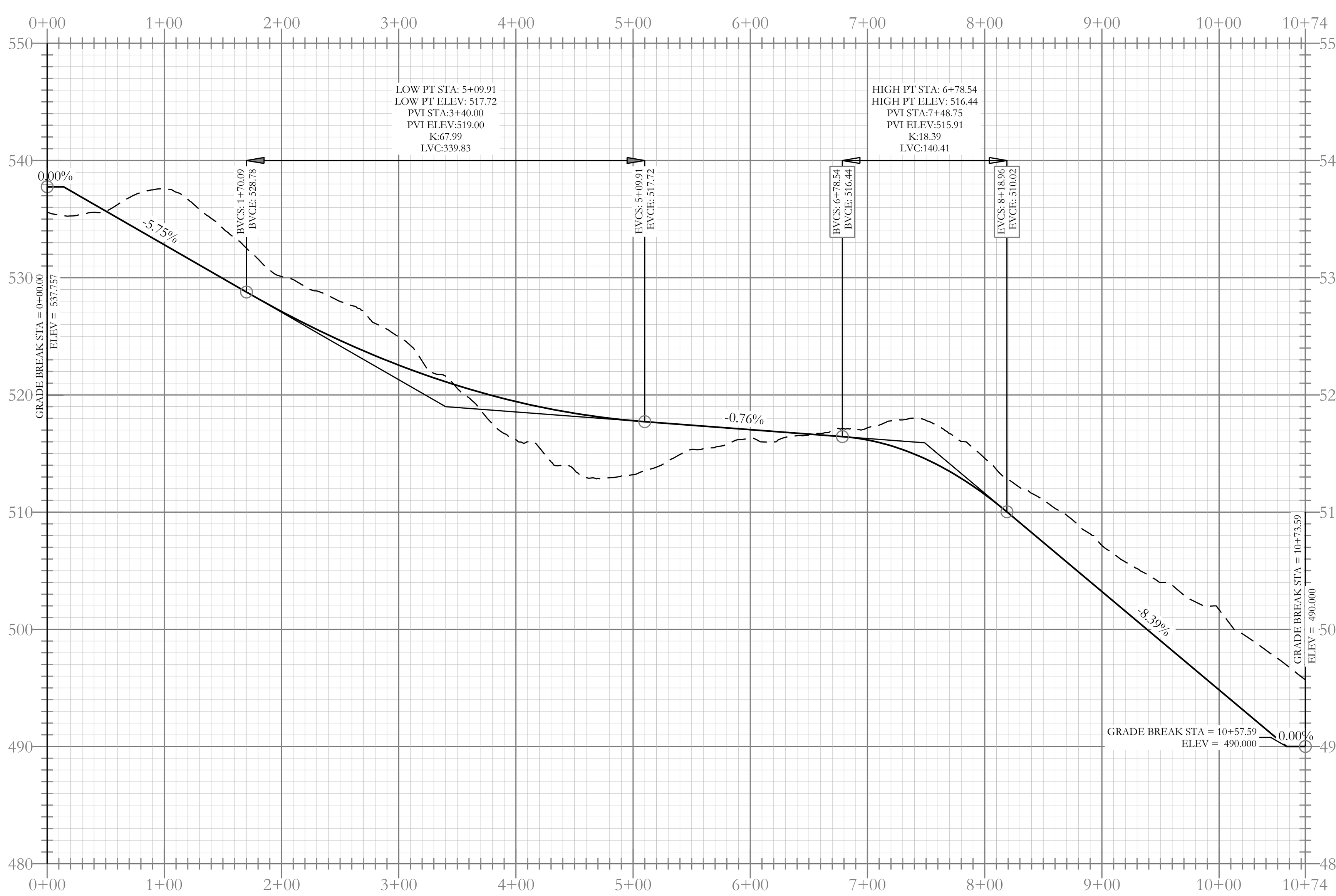
Woodmoor Ct Profile



Princeton Square Profile



Black Hawk Profile



Princeton Square Profile

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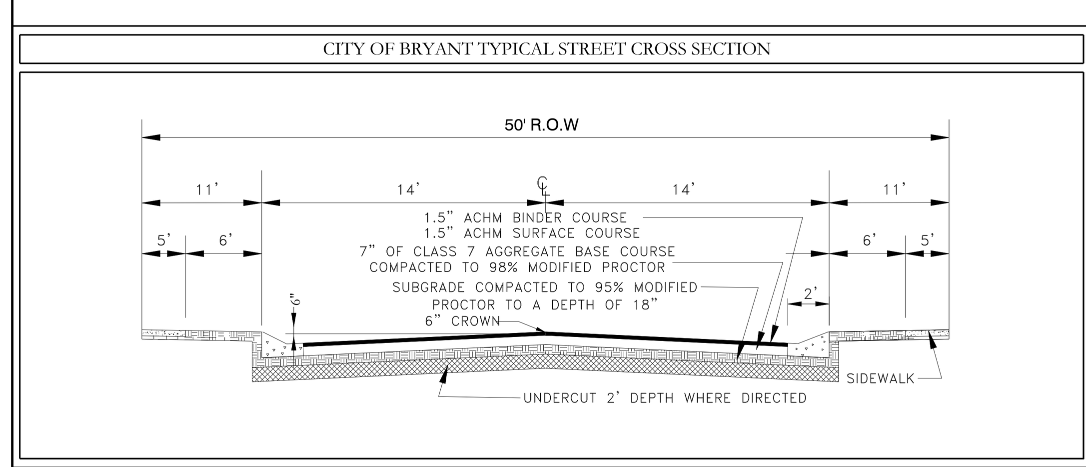
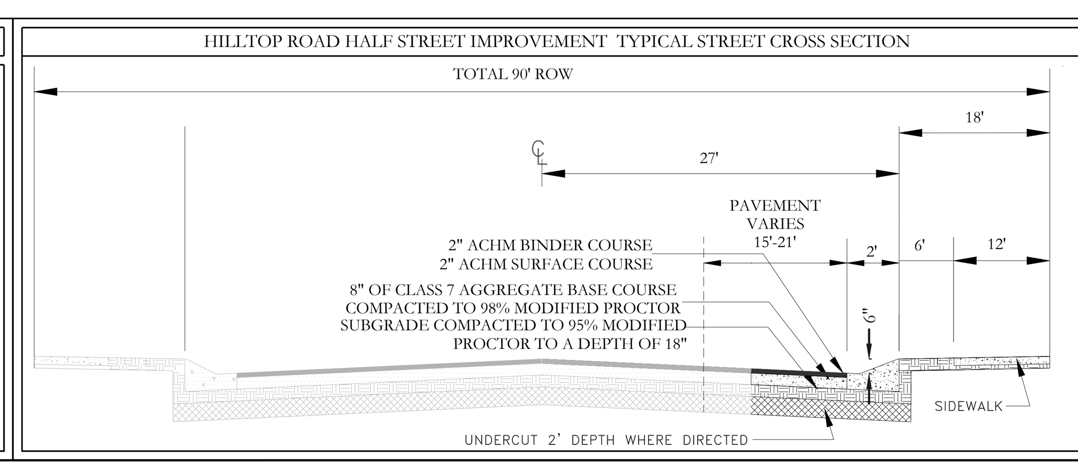
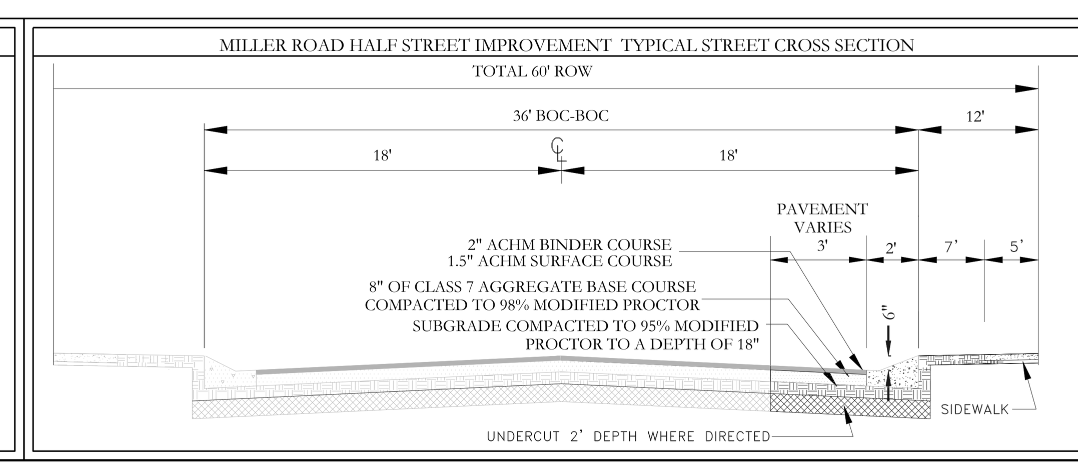
CERTIFICATE OF AUTHORIZATION
HOPE CONSULTING, INC.
No. 1531
ARKANSAS

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







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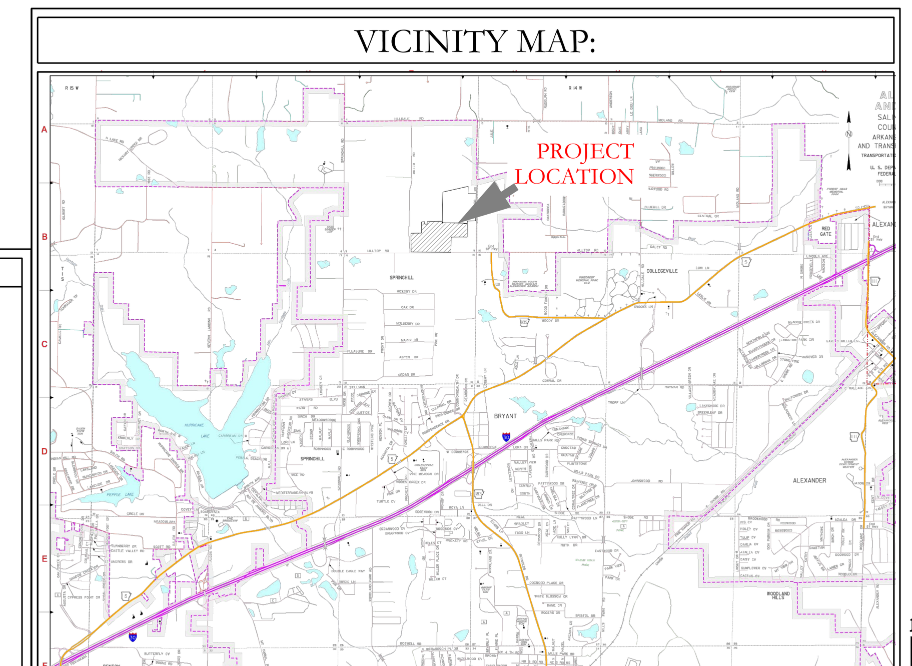

N

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

100' 50' 0 100'

HOPE CONSULTING
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129 N. Main Street,
Benton, Arkansas 72015
PH. (501)315-2626
FAX (501) 315-0024
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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: 04/19/2023	CHECKED BY:		20-1341
SHEET: C-1.1	SCALE: 1" =120'		

500	01S	14W	0	09	200	62	1762

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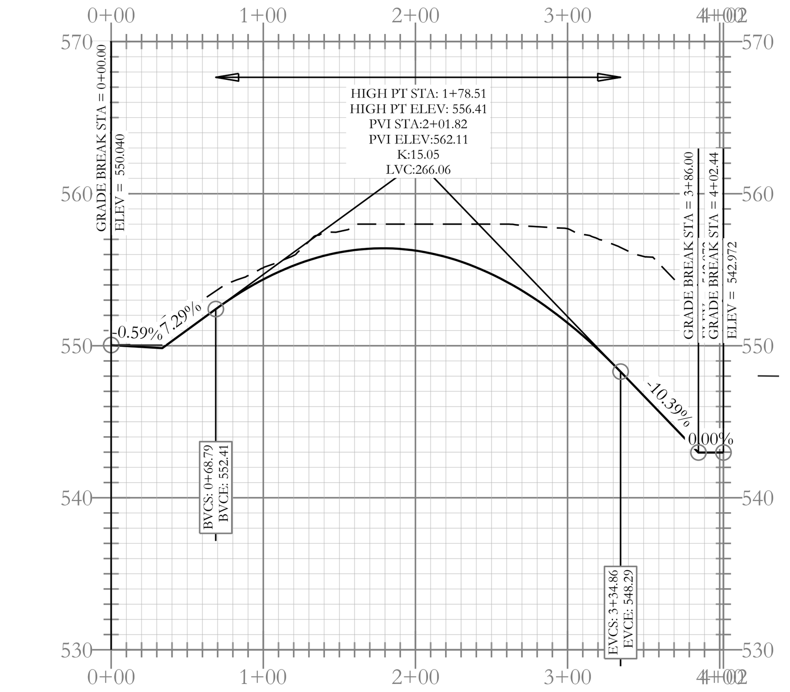
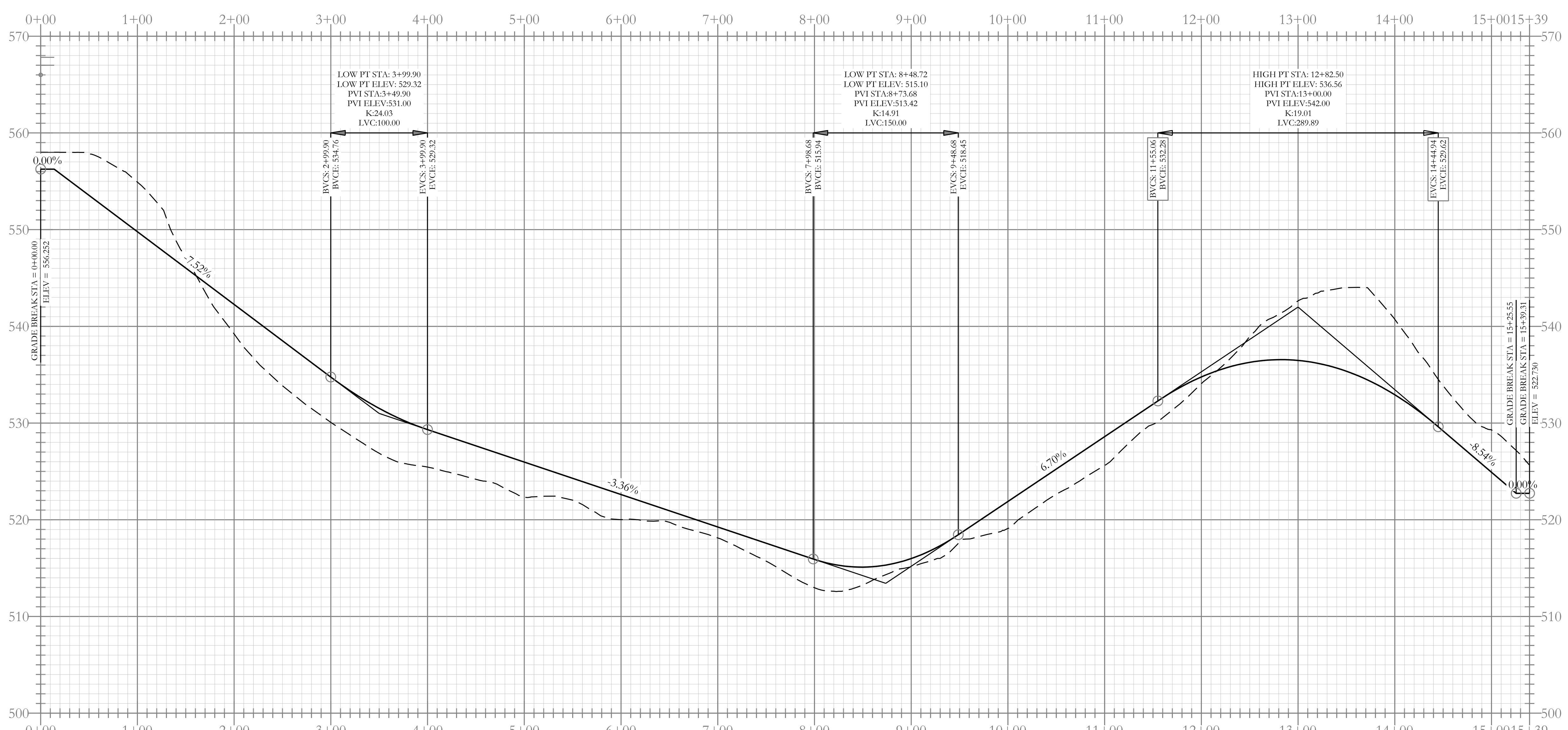
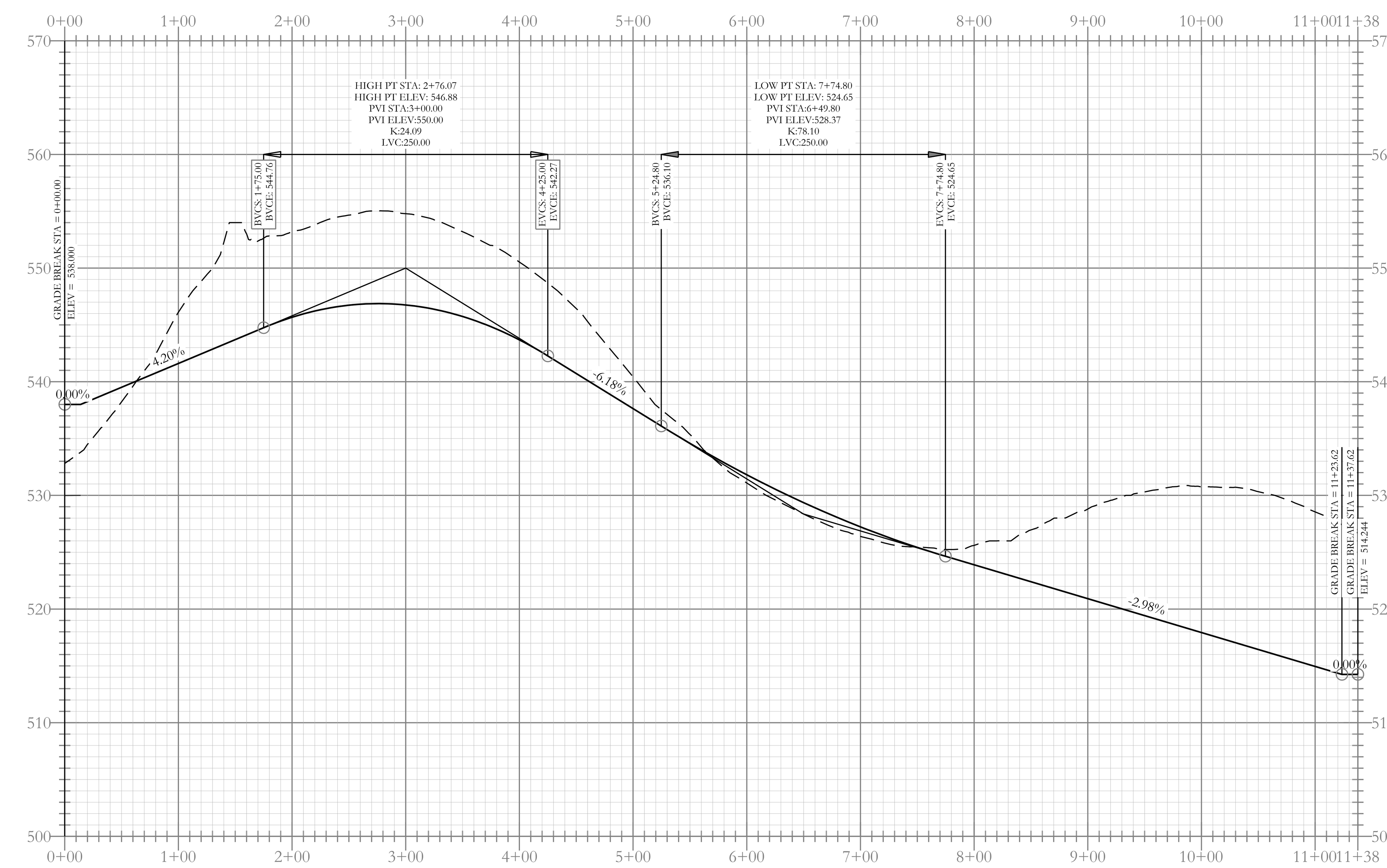


Kenton Ave Profile



Nightingale Ct-Bluff Springs Ave Profile



Lone Oak Ave Profile

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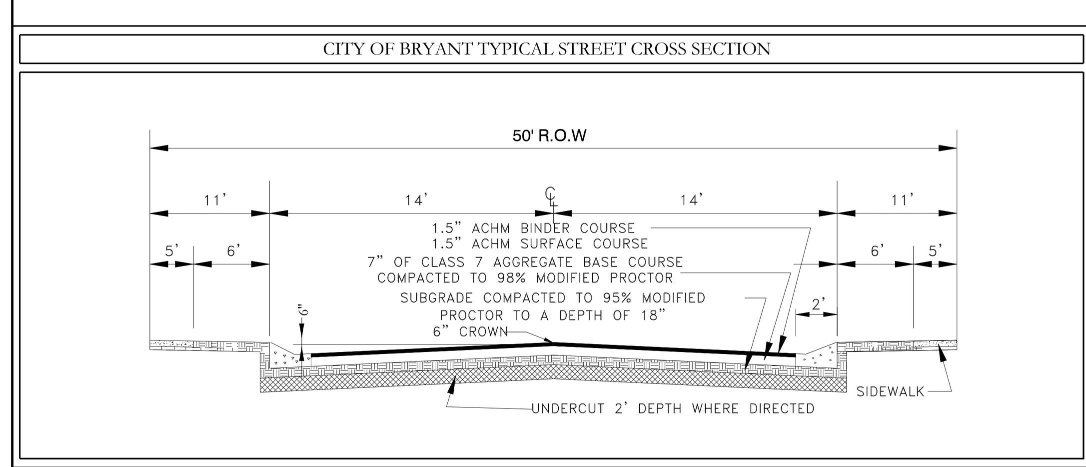

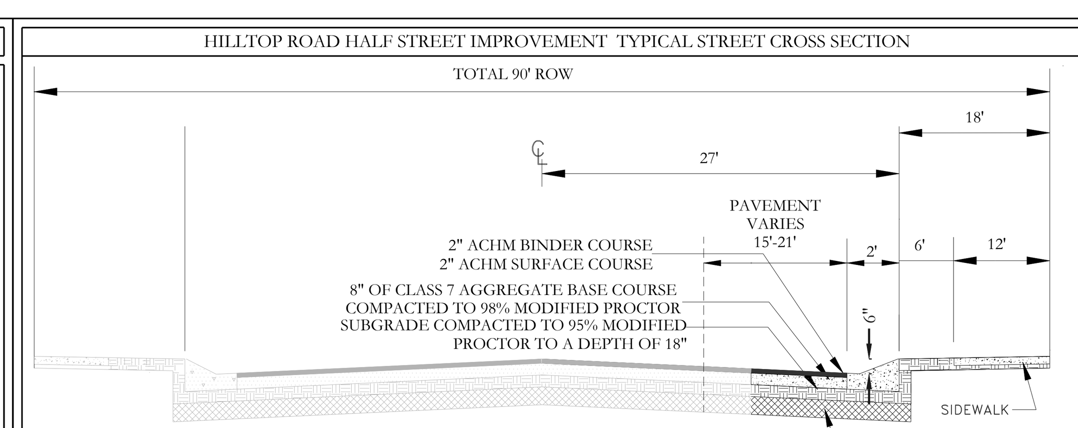

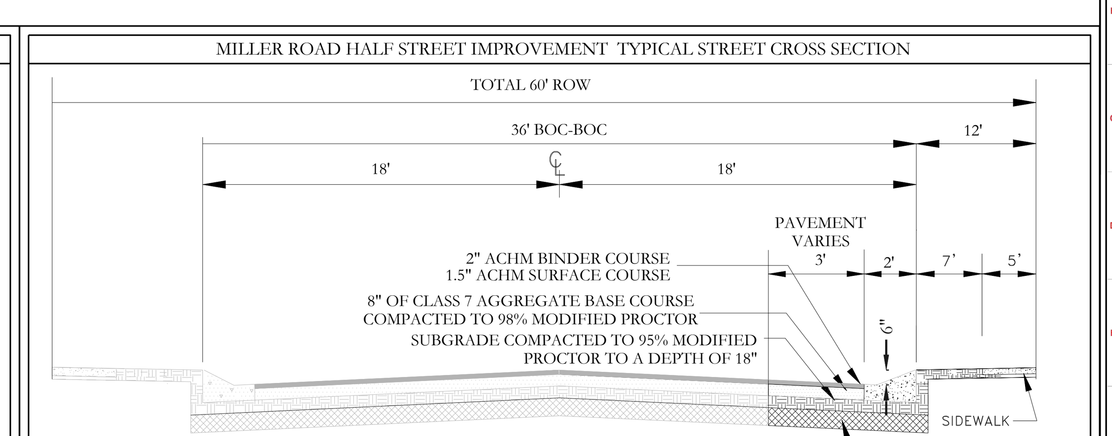

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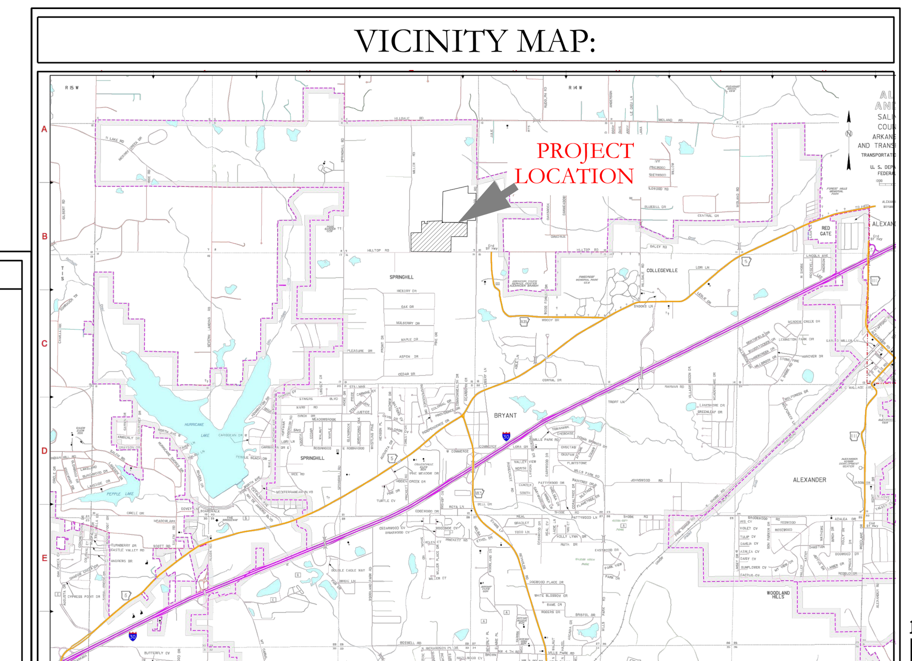

N

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

100' 60' 0 100'

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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:	04/19/2023	CHECKED BY:		20-1341
SHEET:	C-1.2	SCALE:	1" = 120'	

500	01S	14W	0	09	200	62	1762

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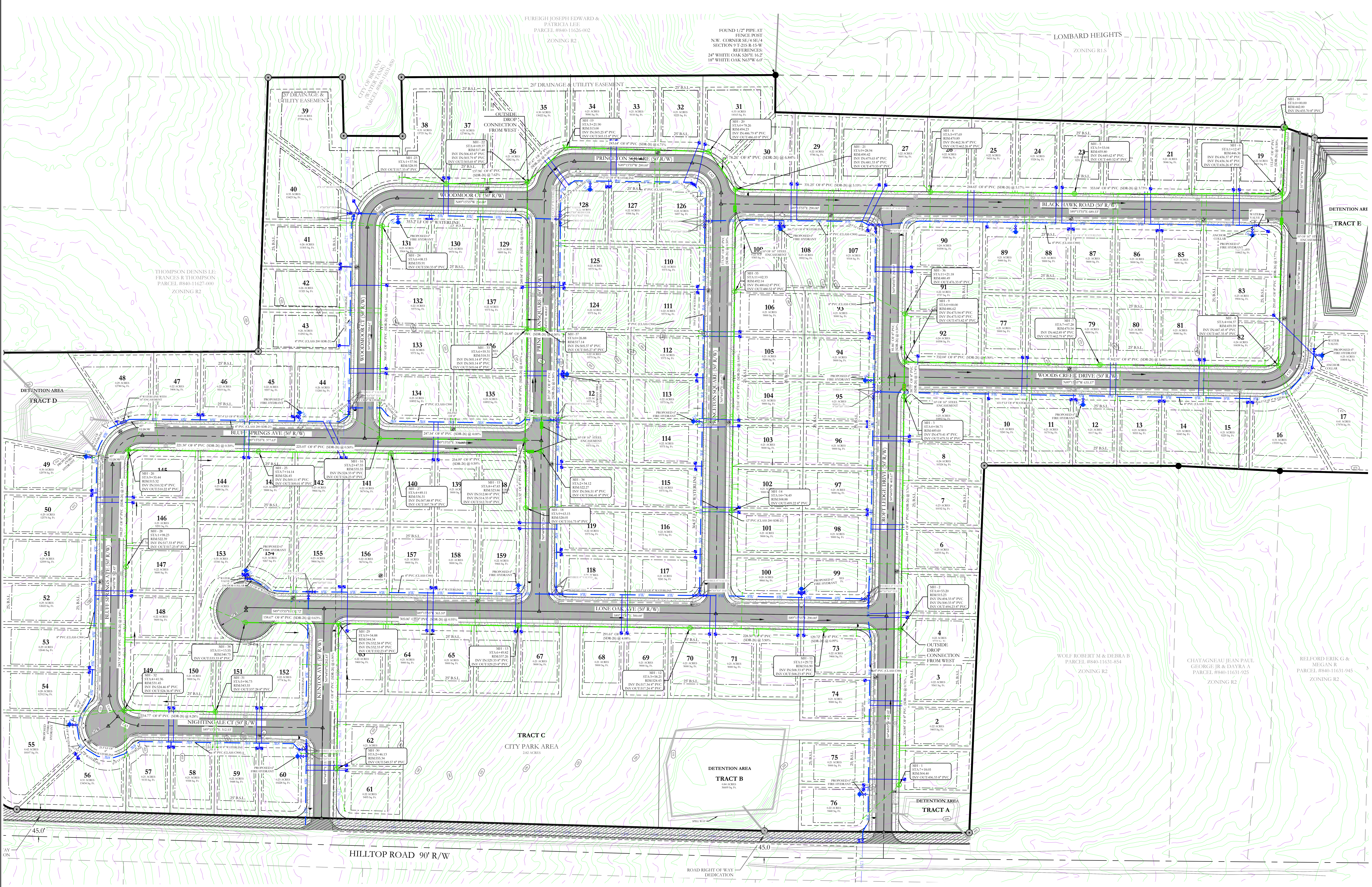

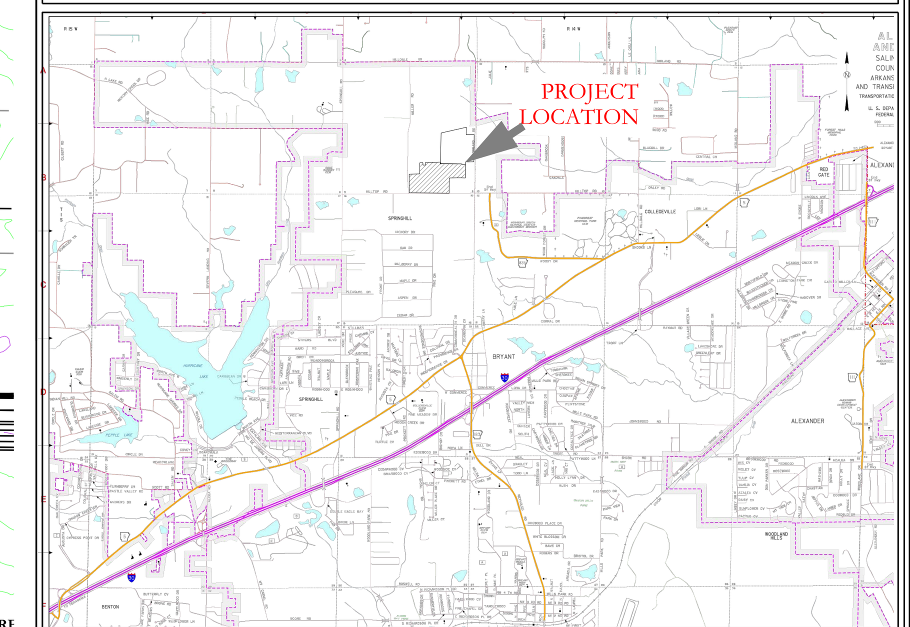

SEWER CONSTRUCTION NOTES:

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 KAZI TAMZIDUL ISLAM

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:	04/19/2023	CHECKED BY:		20-1341			
SHEET:	C-2.0	SCALE:	1" = 80'				
500	01S	14W	0	09	200	62	1762

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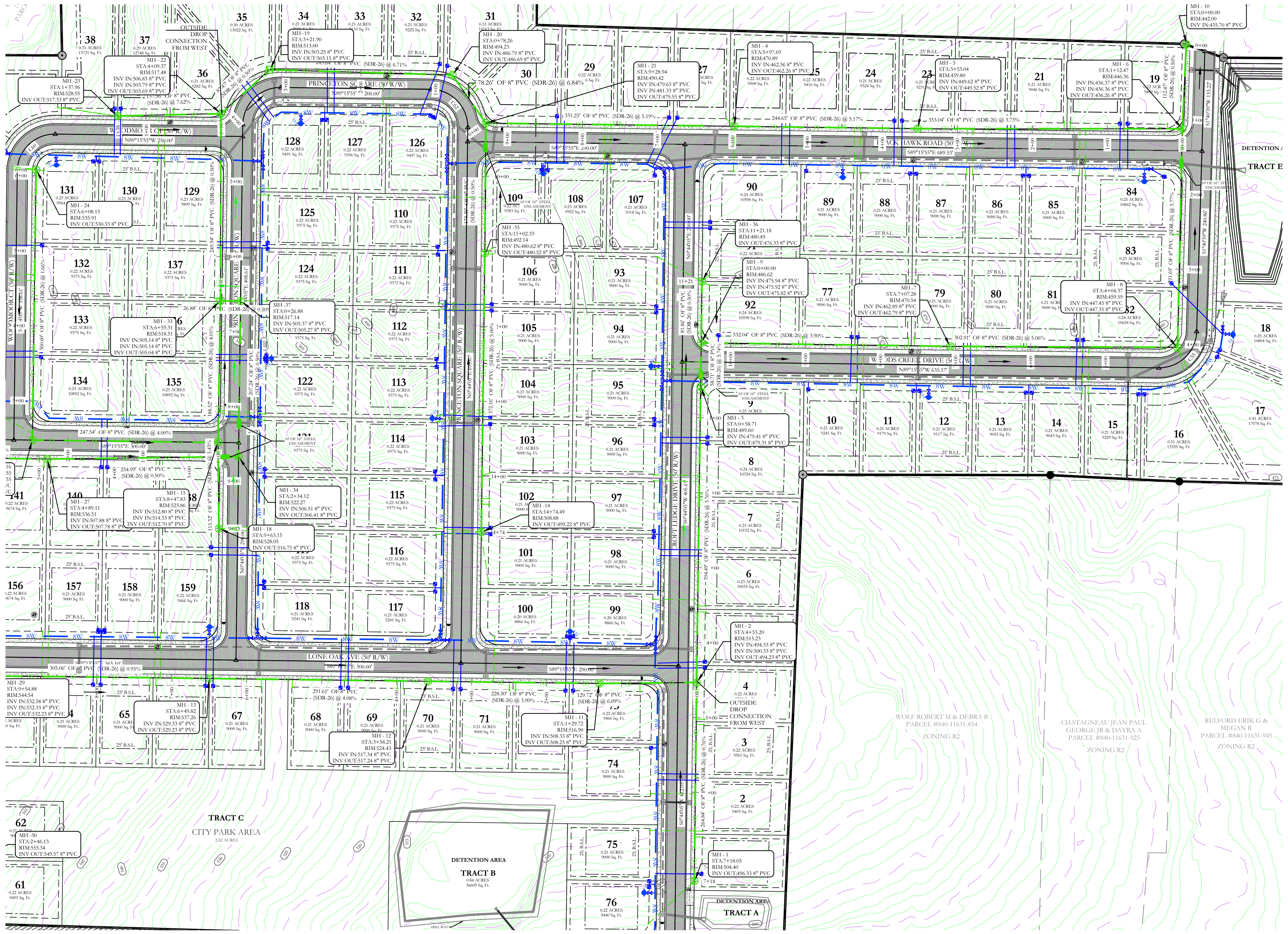
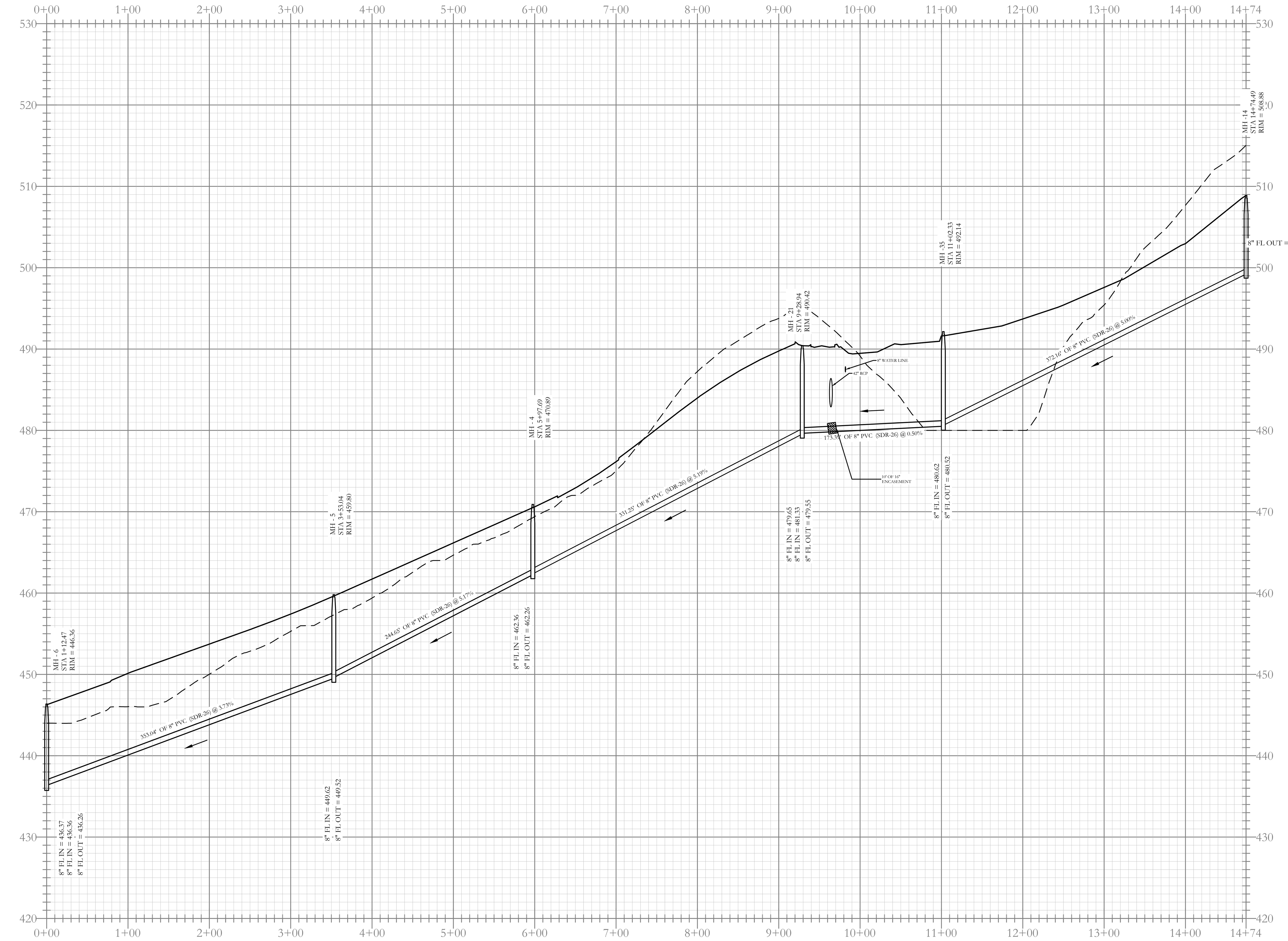
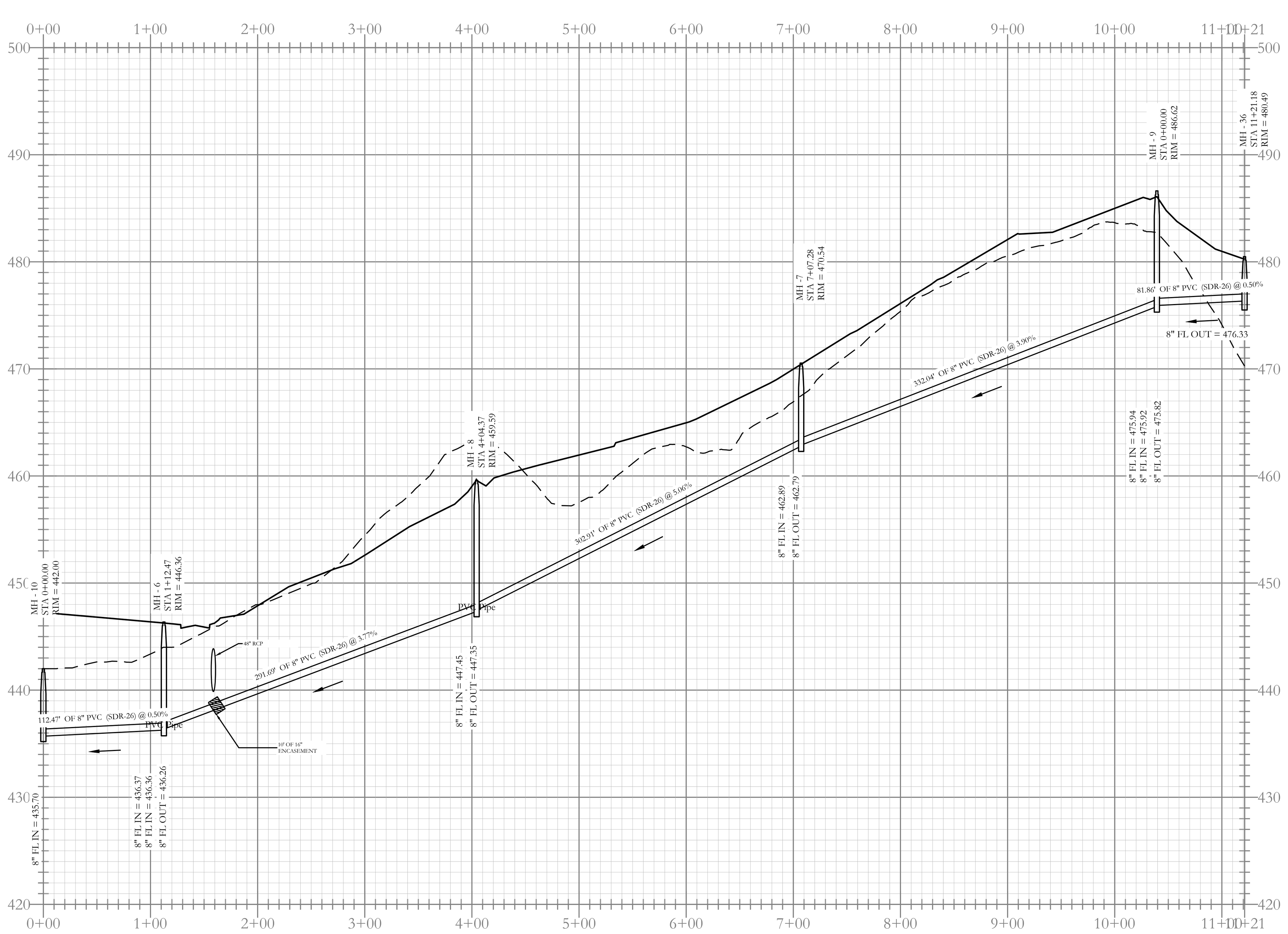
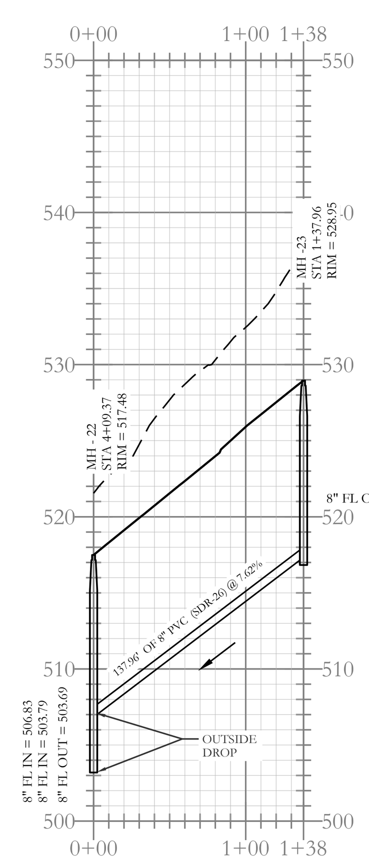




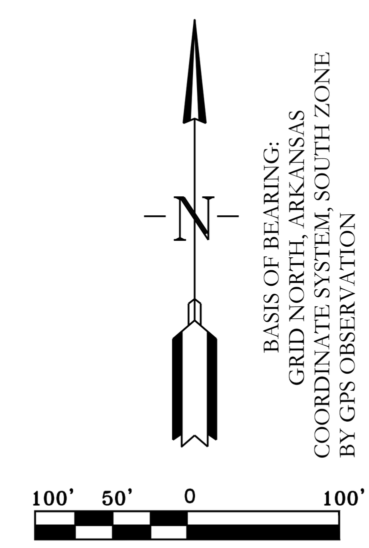
Sewer D Profile

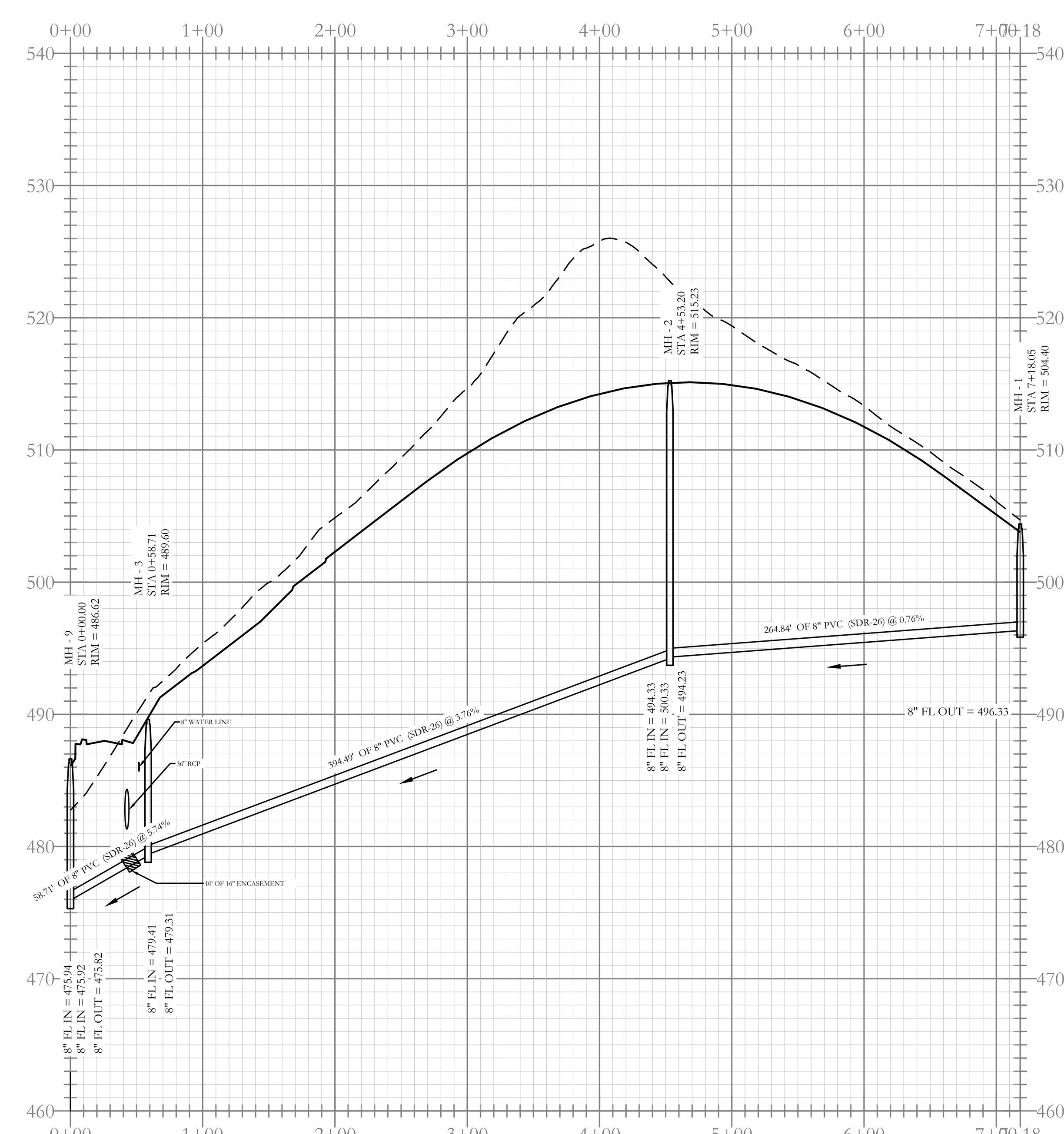


Sewer A Profile

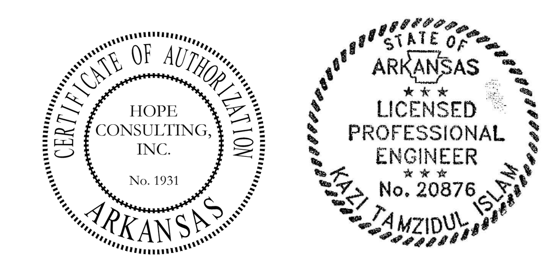


Sewer B-1 Profile





Sewer Entrance Profile



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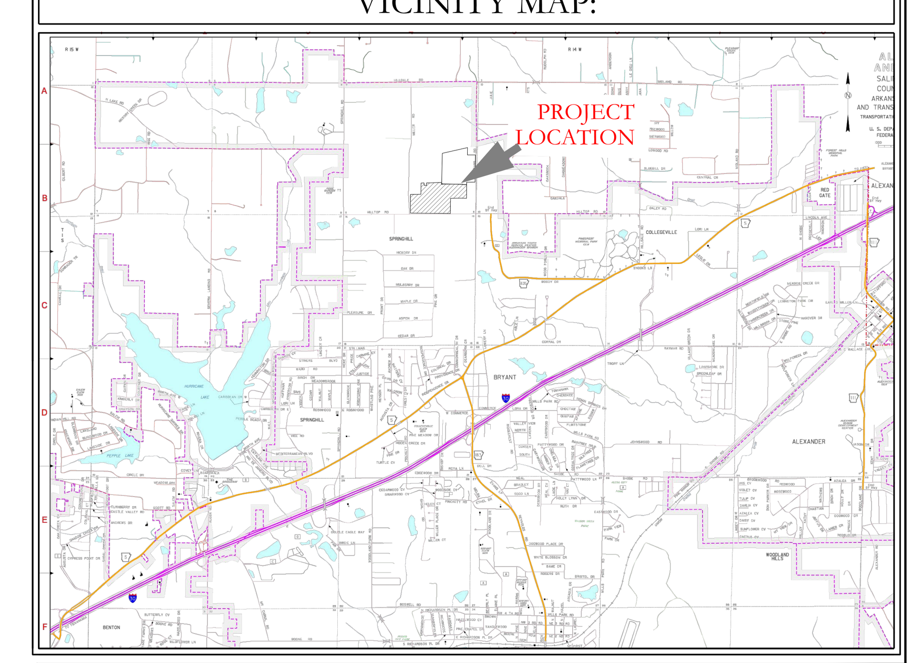

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HILLTOP LANDING
SEWER PLAN AND PROFILE
A SUBDIVISION IN THE CITY OF BRYANT, SALINE COUNTY, ARKANSAS

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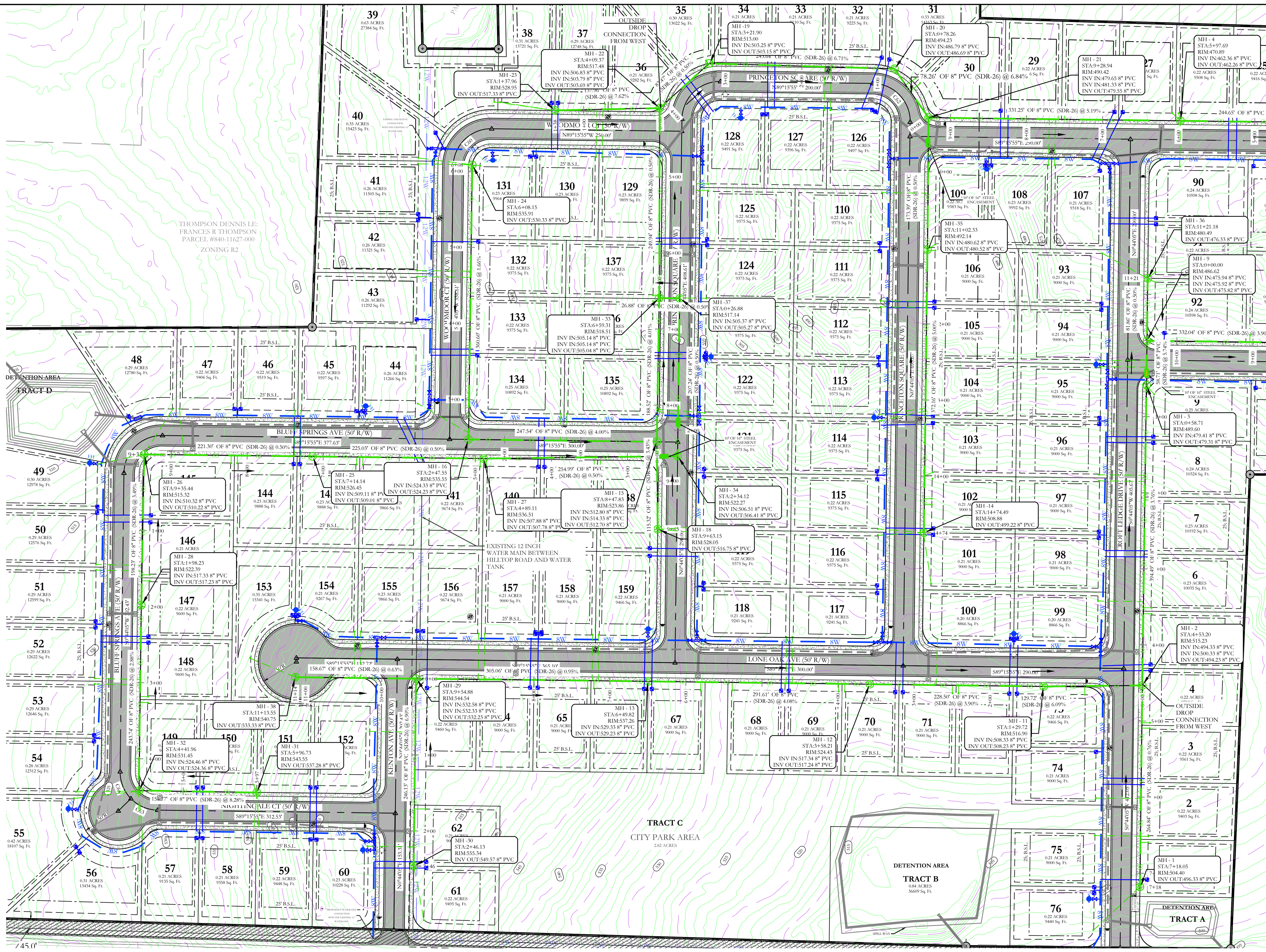

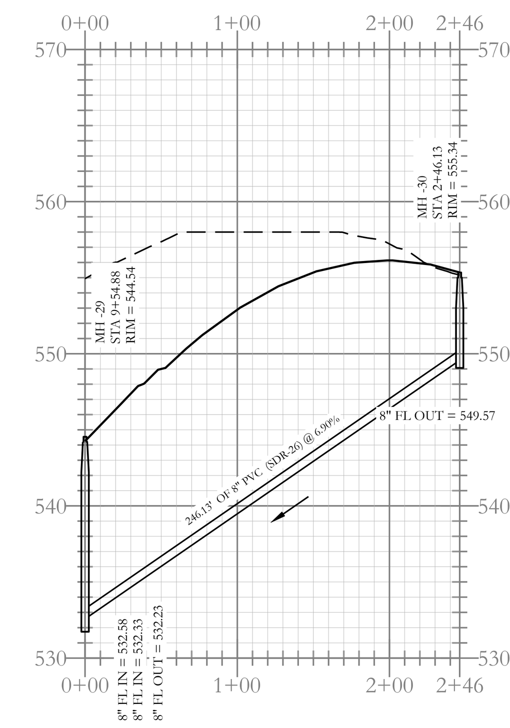

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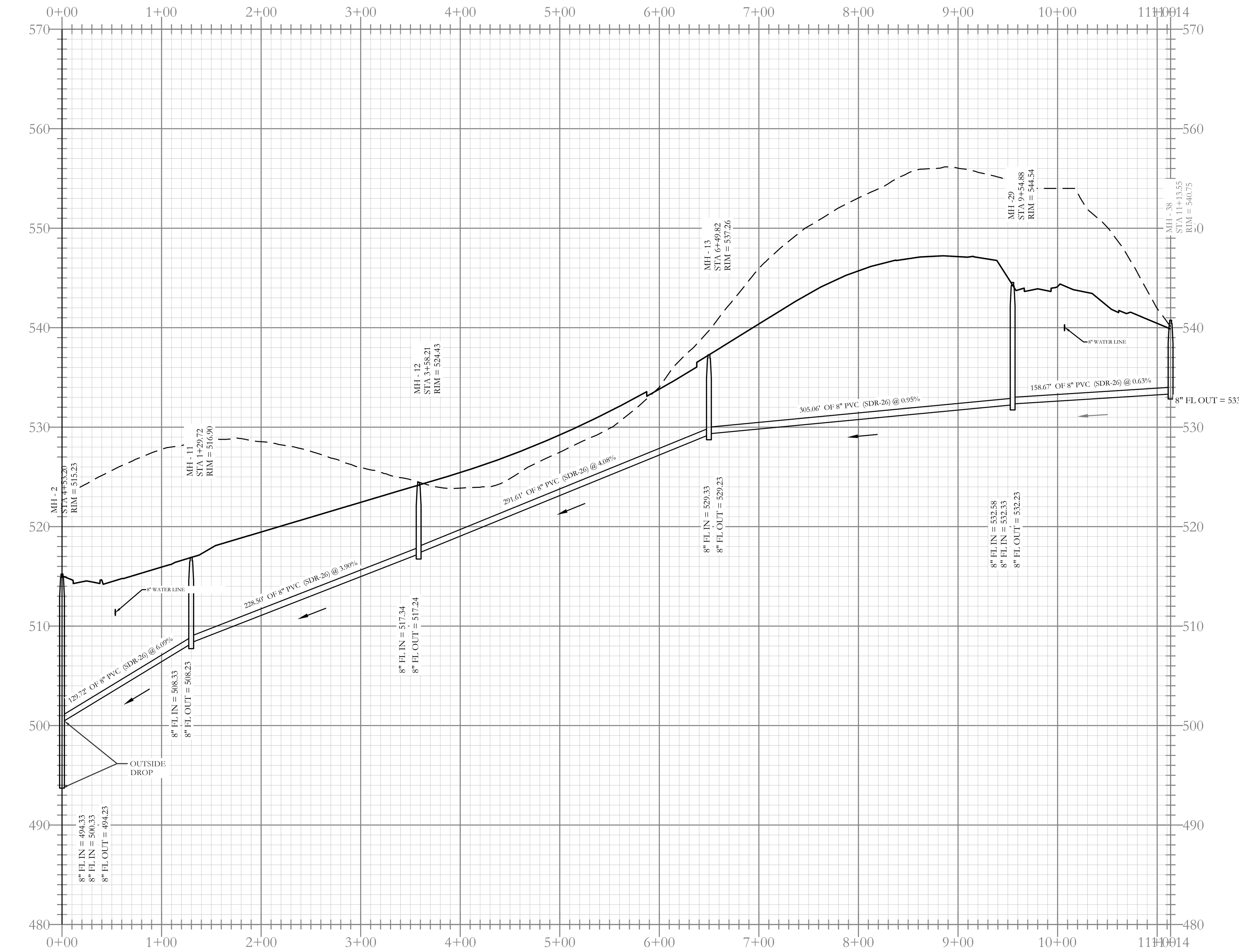
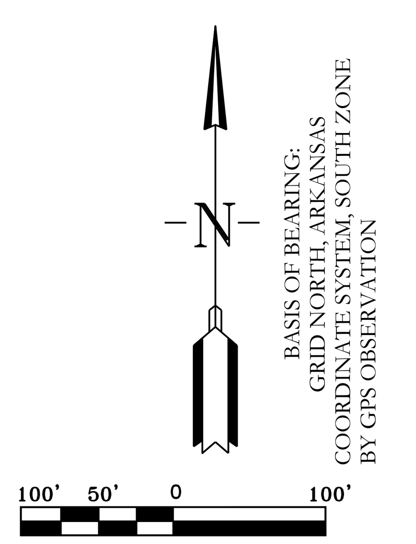
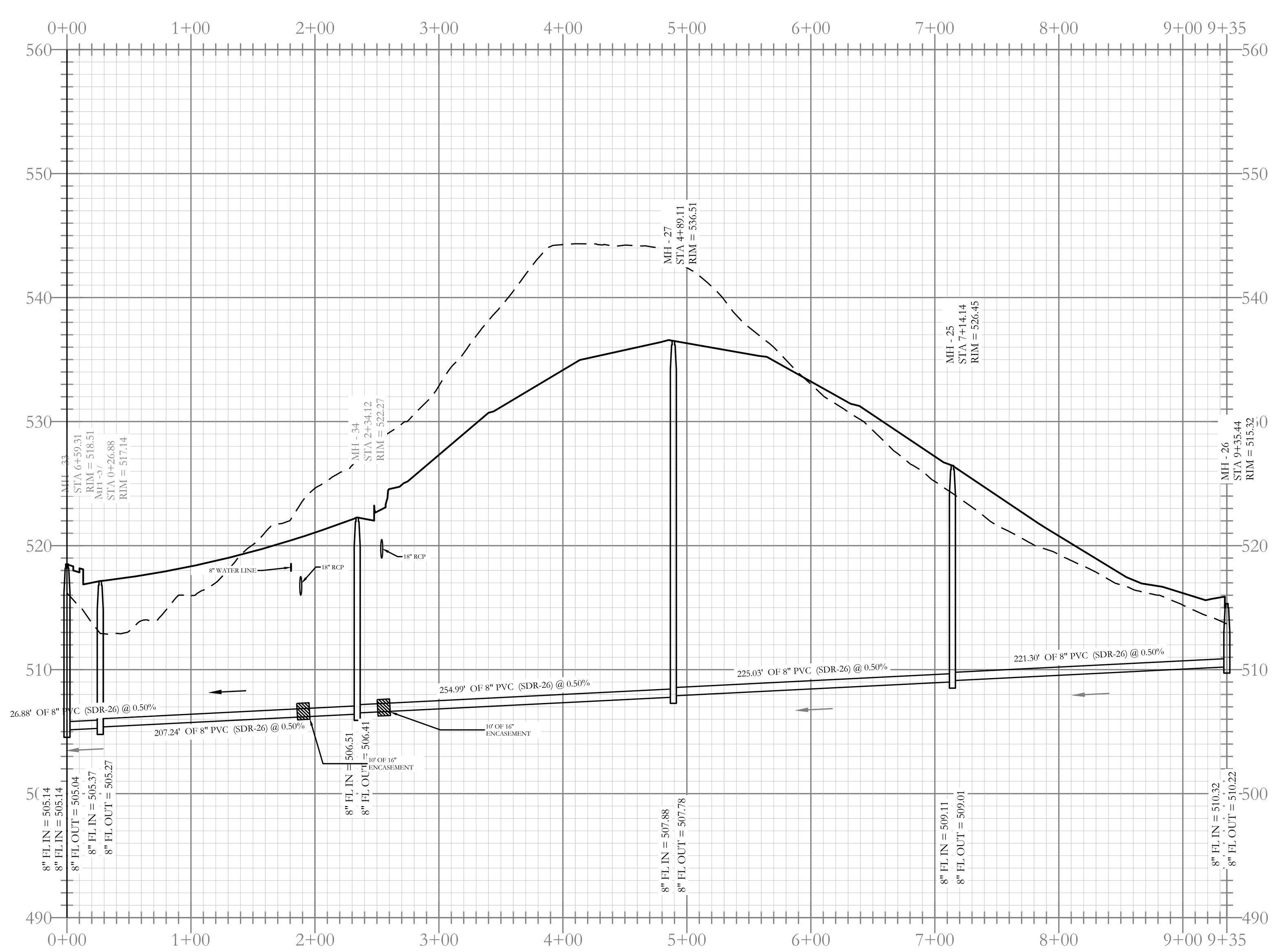


Sewer F-1 Profile





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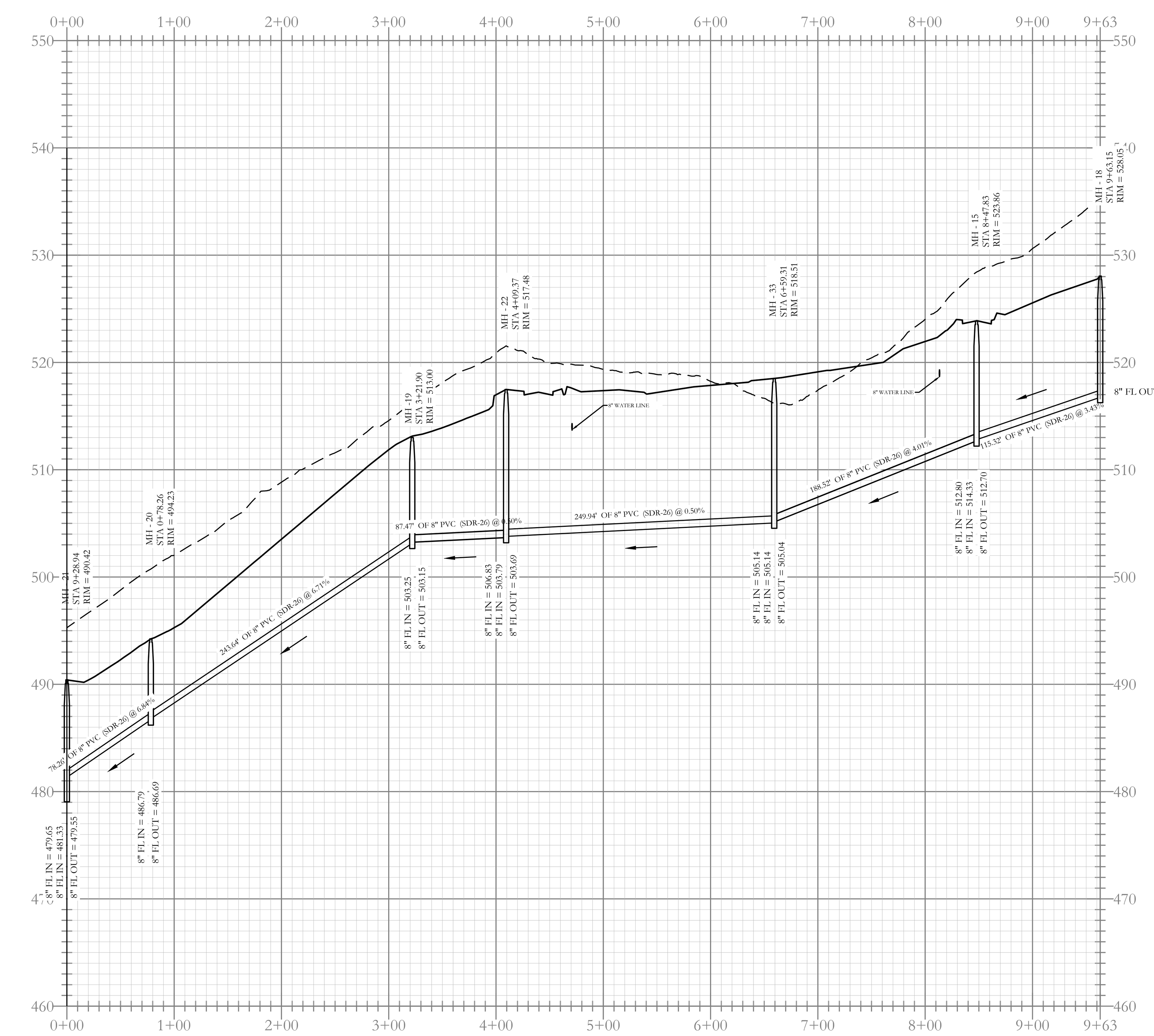
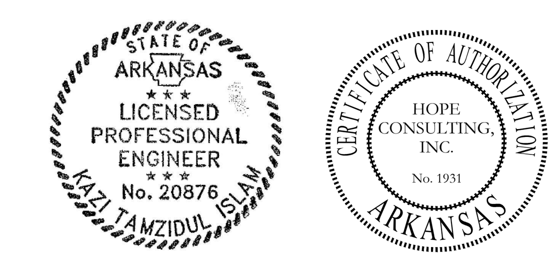


Sewer C Profile



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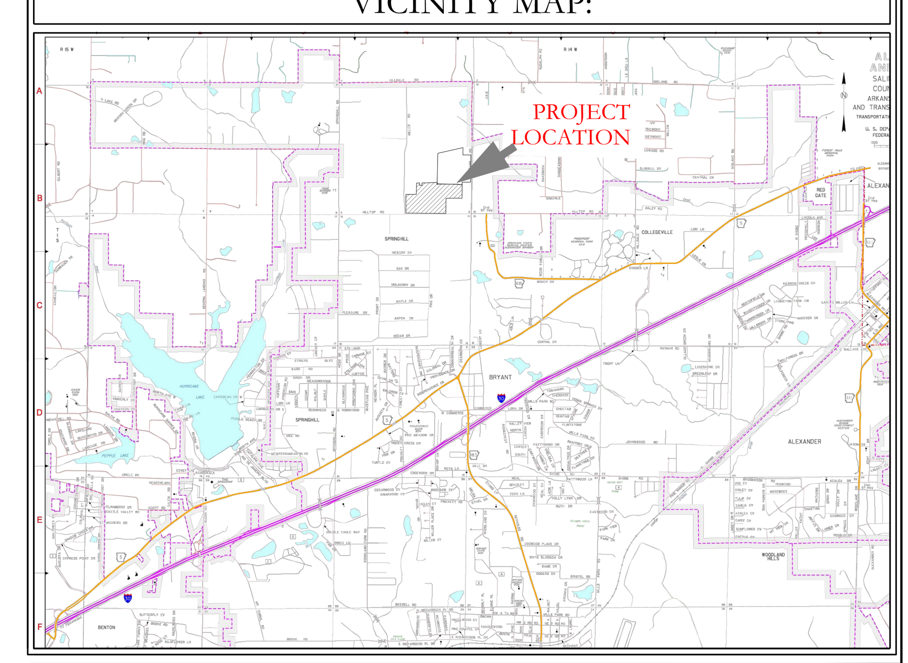

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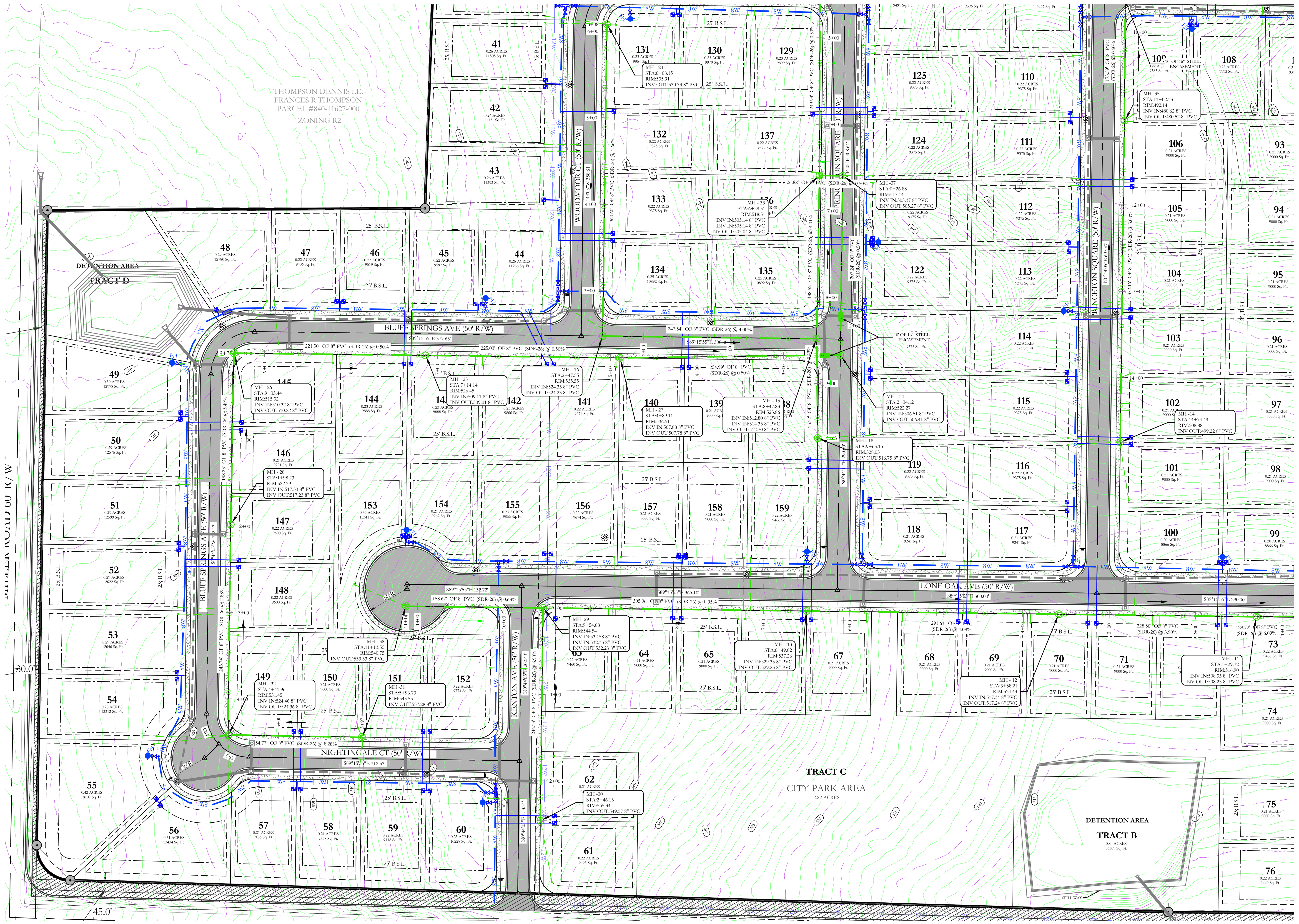

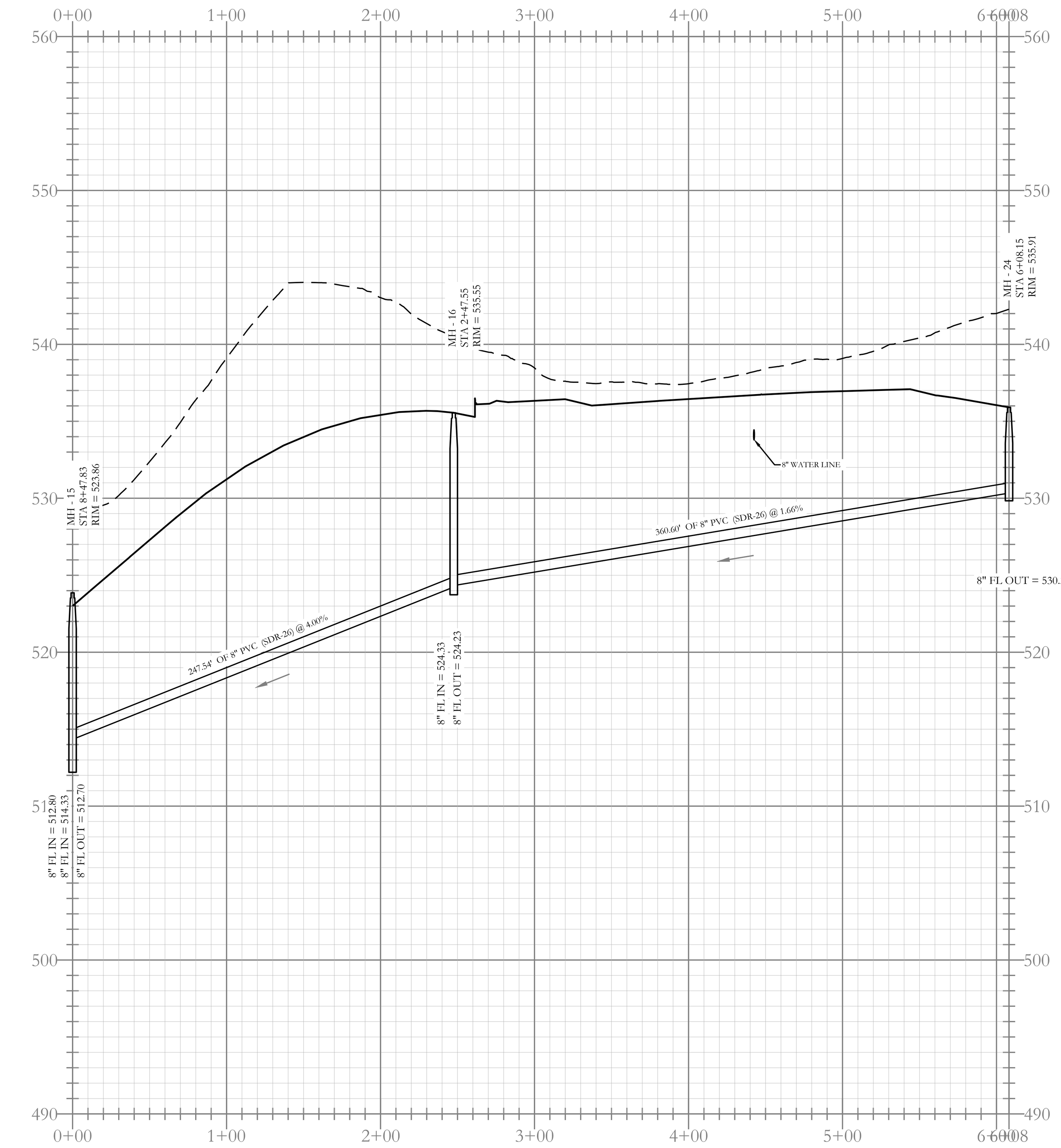

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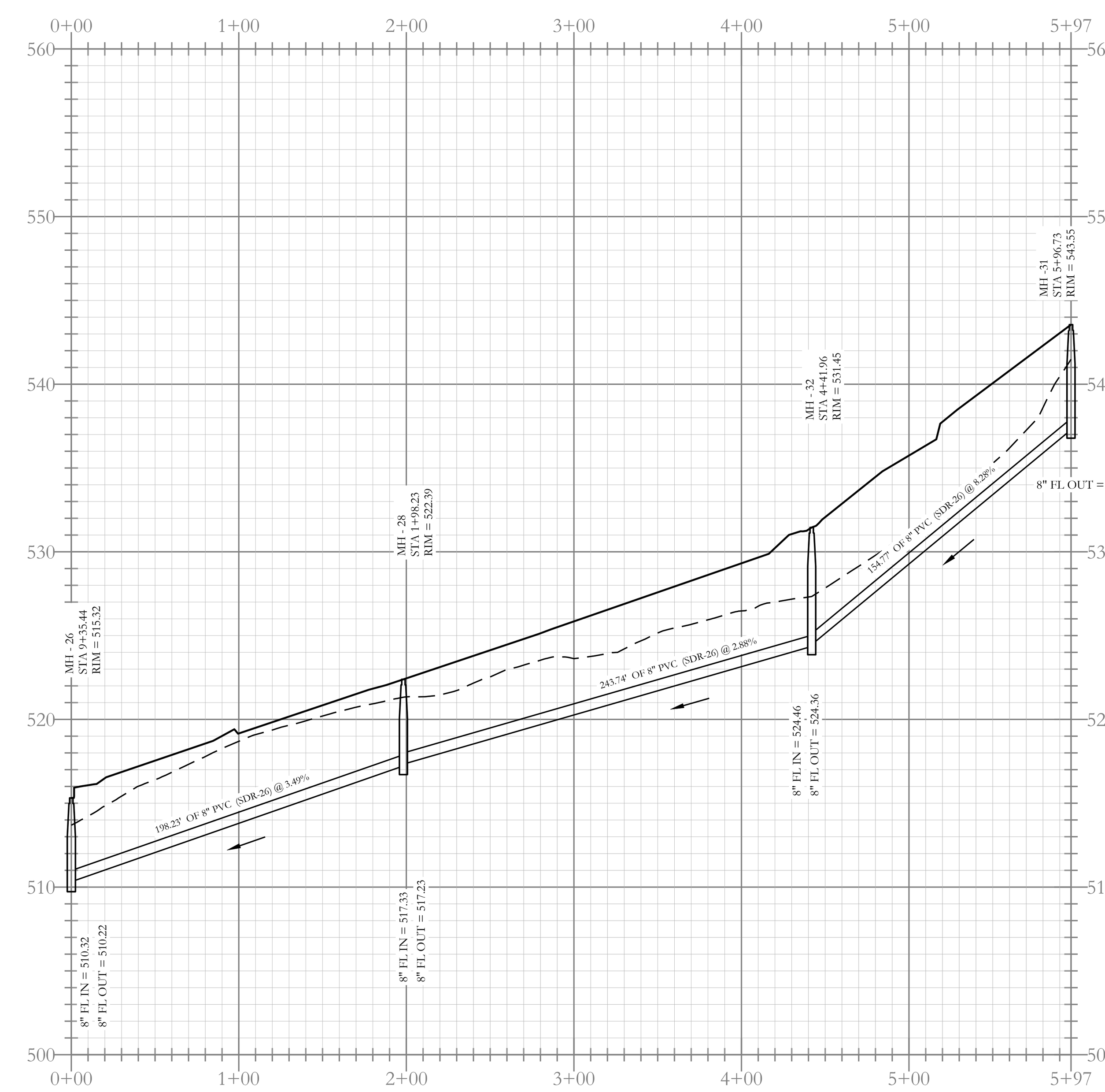
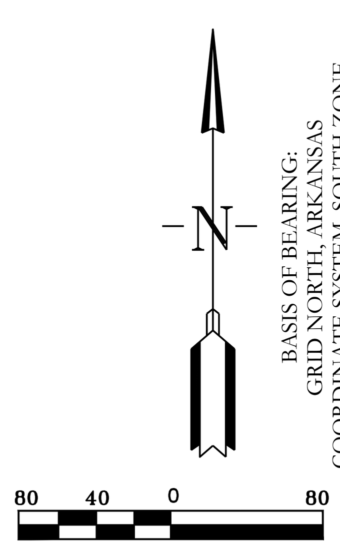


Sewer E-1 Profile

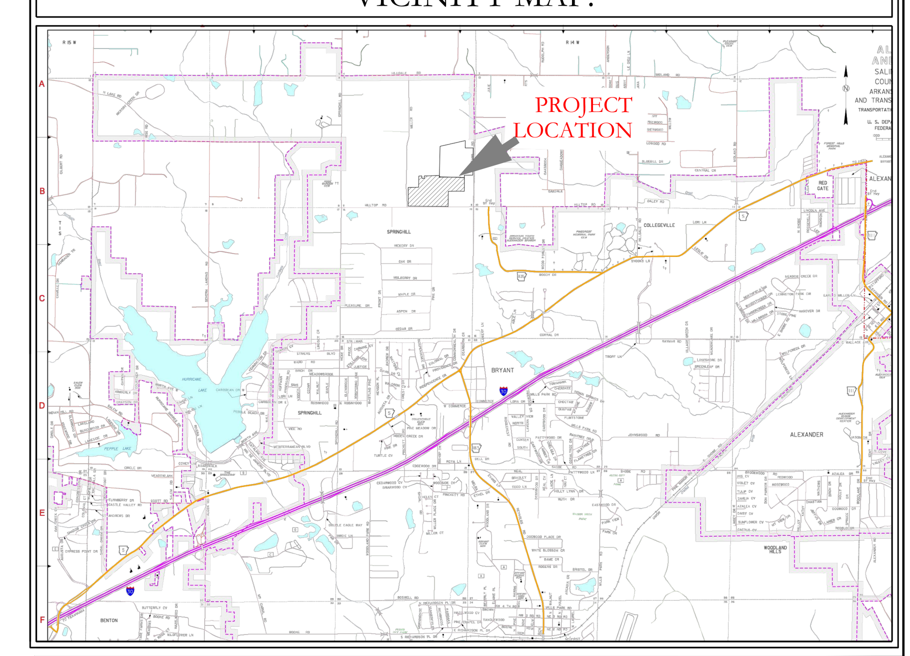
BASIS OF BEARING:
GRID NORTH, ARKANSAS
COORDINATE SYSTEM, SOUTH ZONE
BY GPS OBSERVATION



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

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

VICINITY MAP:



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REVISED:	04/19/2023	CHECKED BY:		20-1341
SHEET:	C-2.3	SCALE:	1" =80'	

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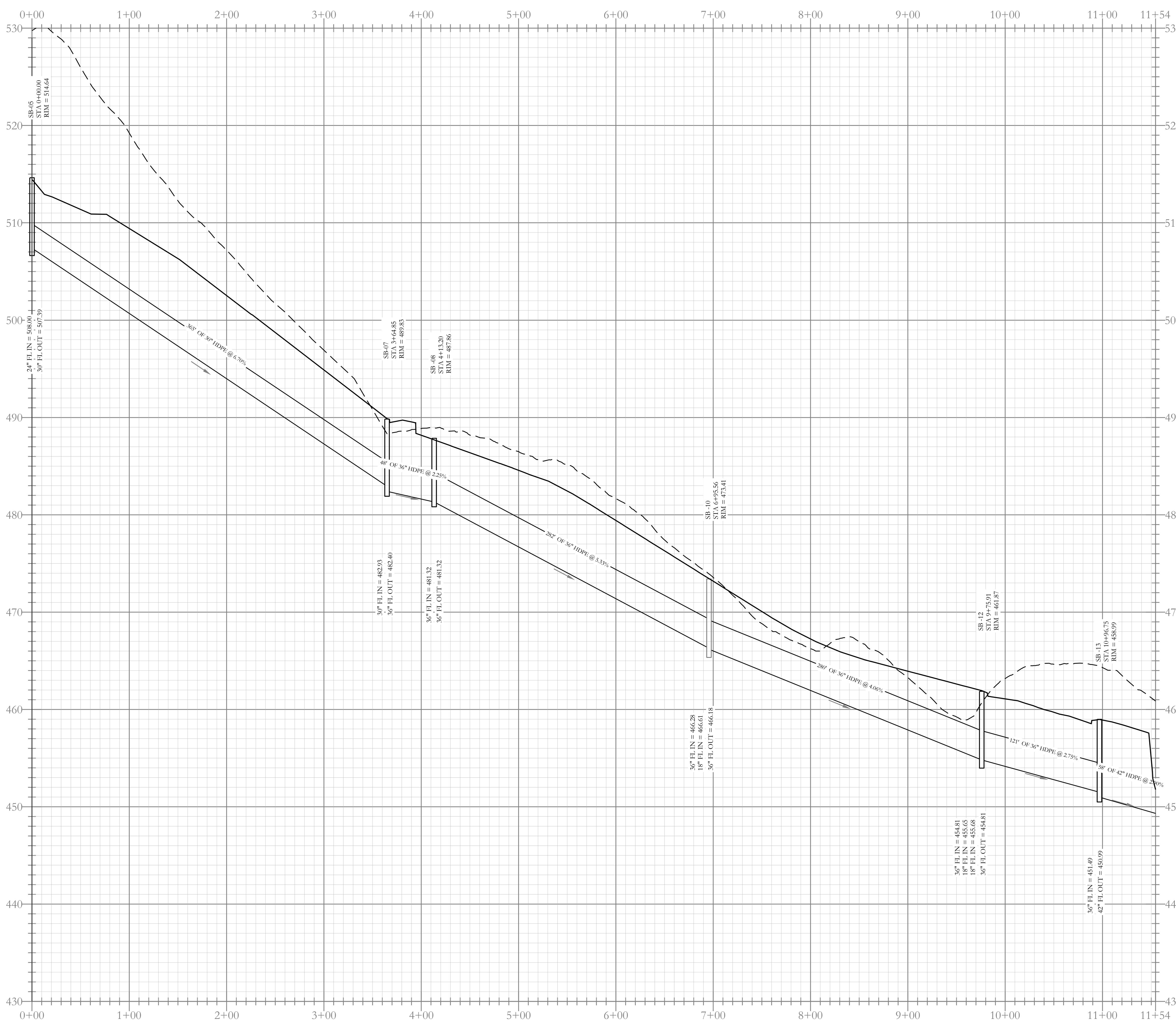
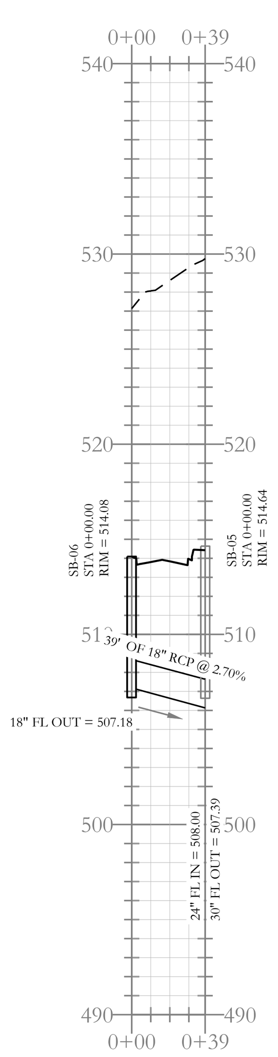
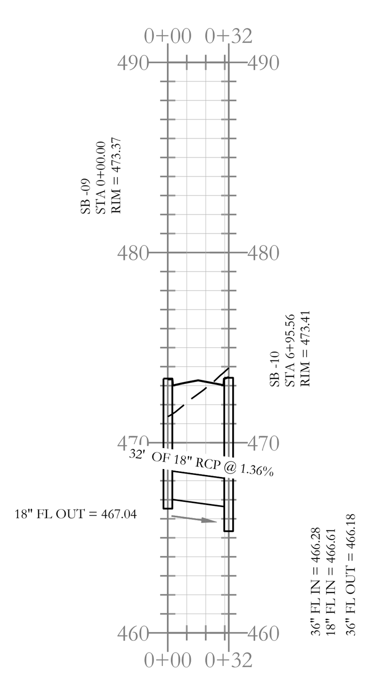


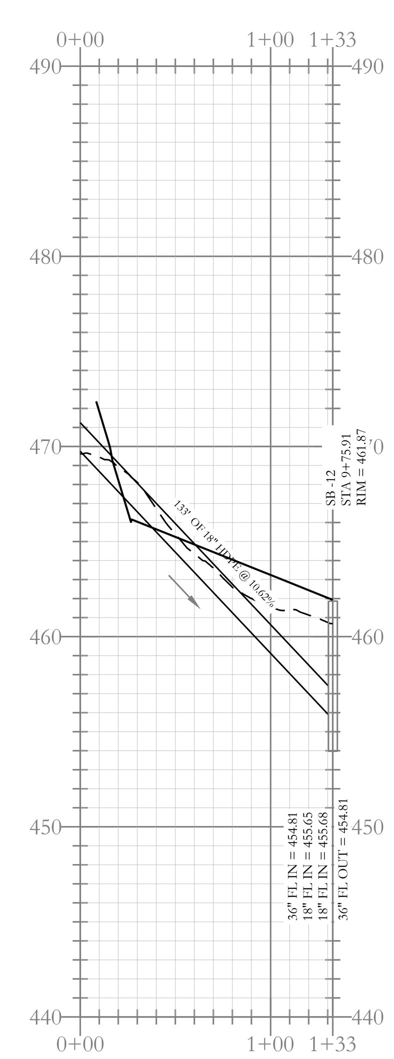
Stormwater A Profile



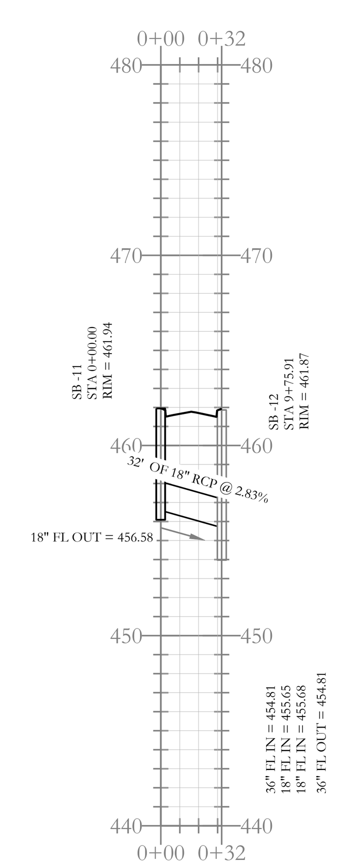
Stormwater A(i) Profile



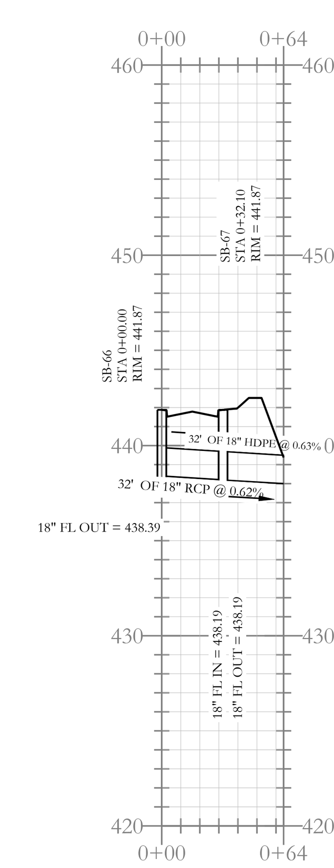
Stormwater A(ii) Profile



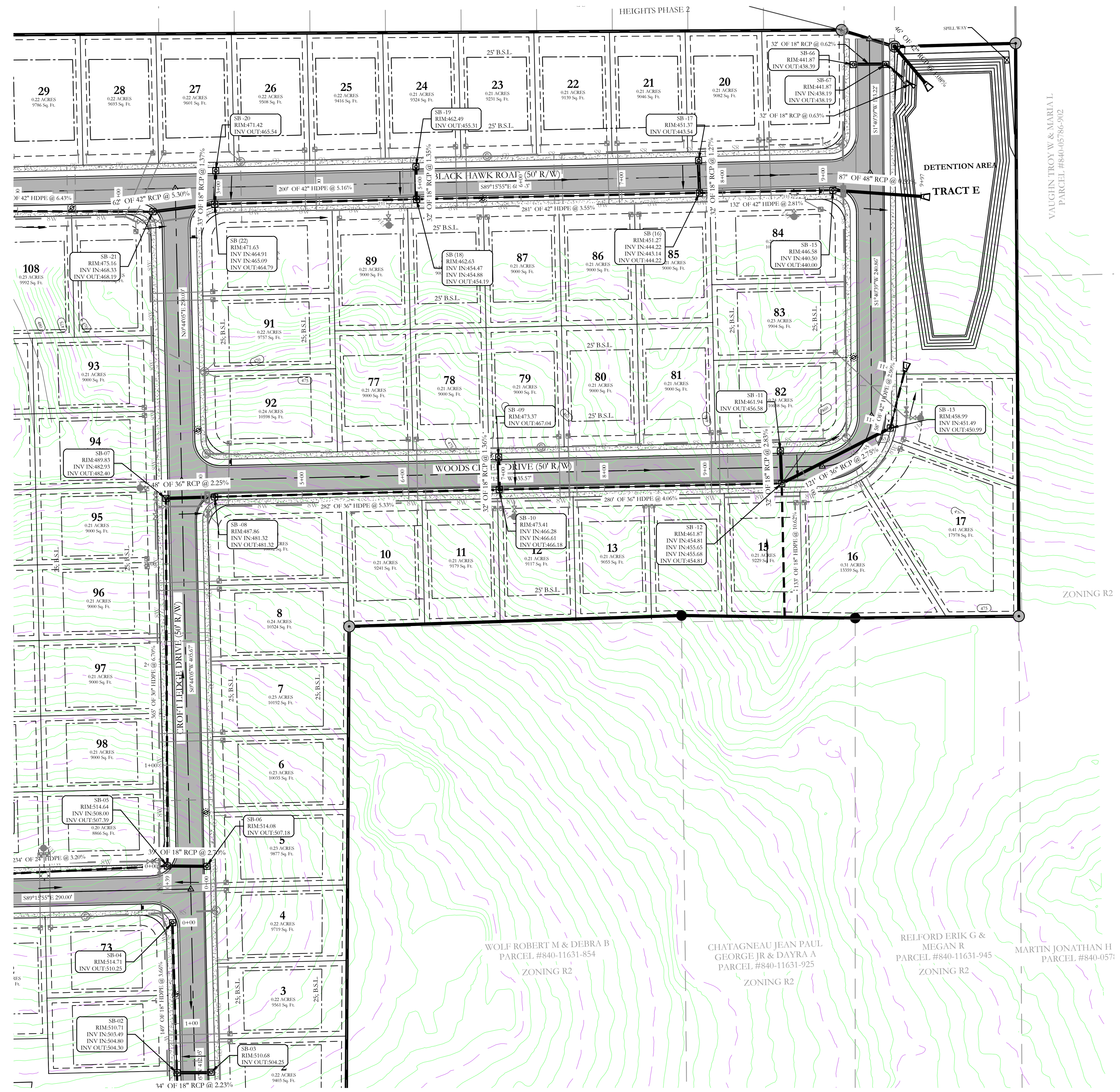
Stormwater A(iii)-Pipe behind the property Profile



Stormwater A(iv) Profile



Stormwater A(v) Profile



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No. 1593
ARKANSAS

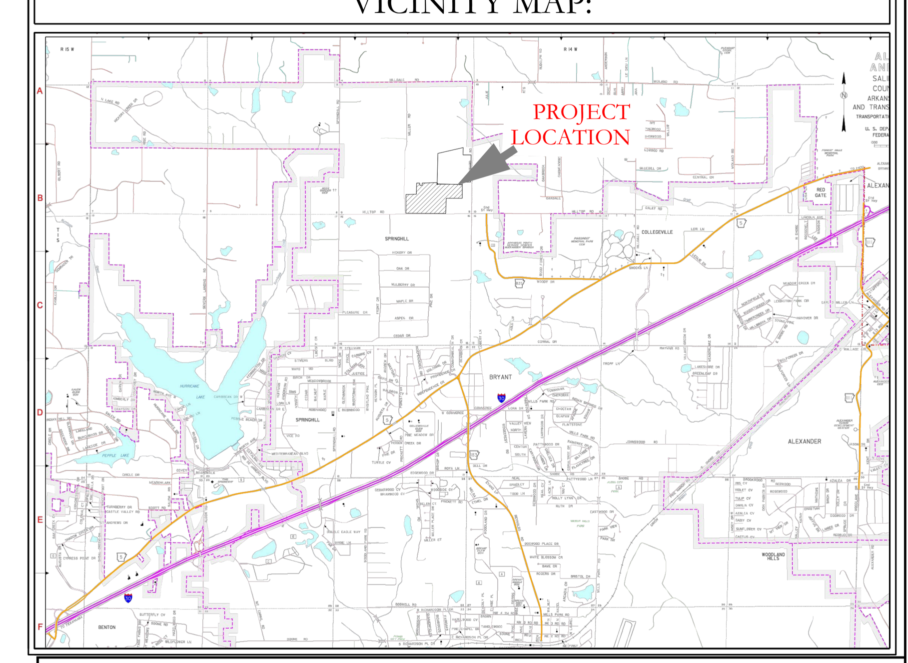
STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 20876
KAZI TAMZIDUL ISLAM

N

80 40 0 80

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

VICINITY MAP:



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ENGINEERS - SURVEYORS

129 N. Main Street,
Benton, Arkansas 72015
PH. (501)315-2626
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FOR USE AND BENEFIT OF:
NXT GEN HOMES LLC.

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

DATE:	03/08/2023	C.A.D. BY:			DRAWING NUMBER:		
REVISED:	04/19/2023	CHECKED BY:			20-1341		
SHEET:	C-3.1	SCALE:	1" = 80'				
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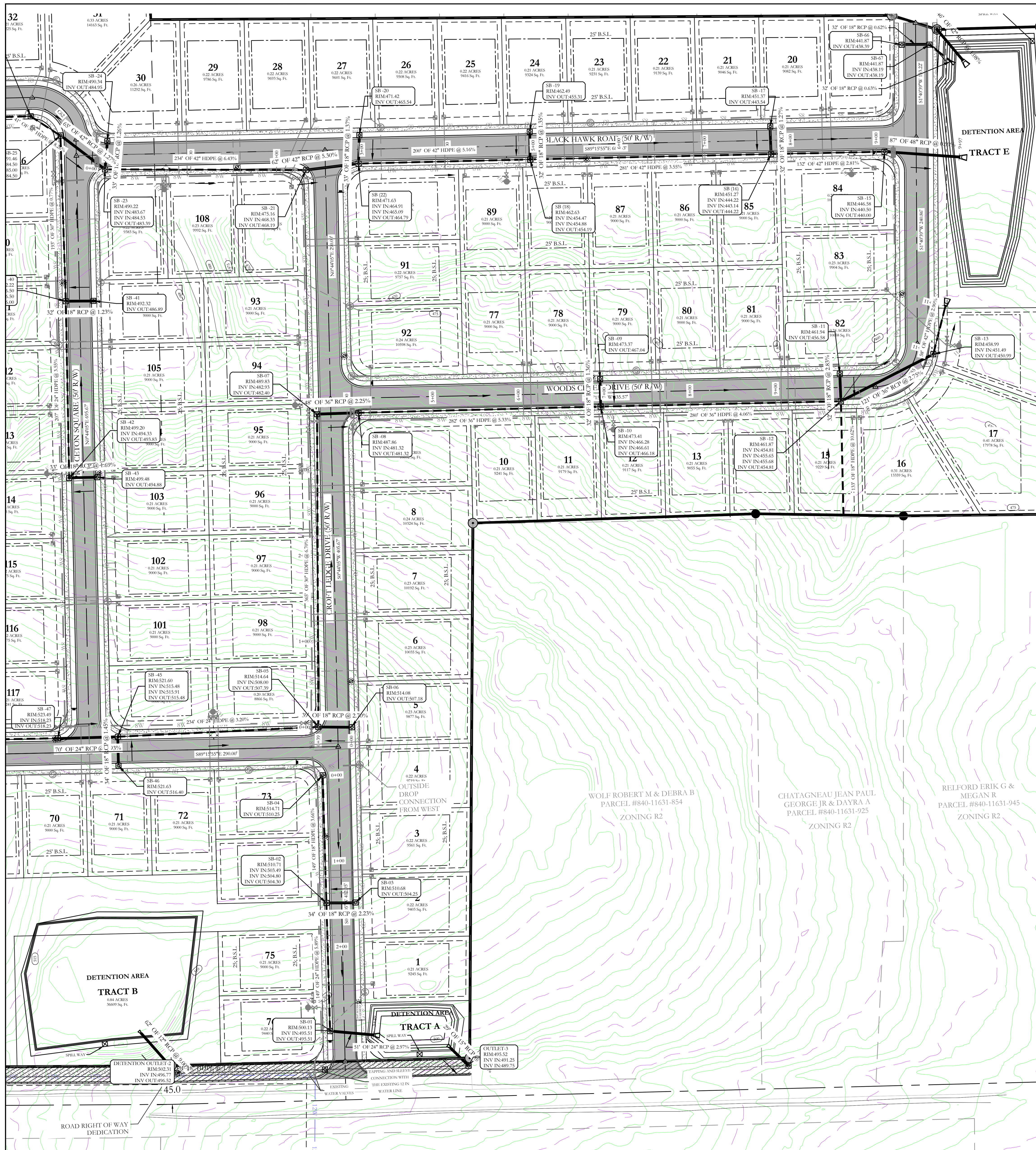

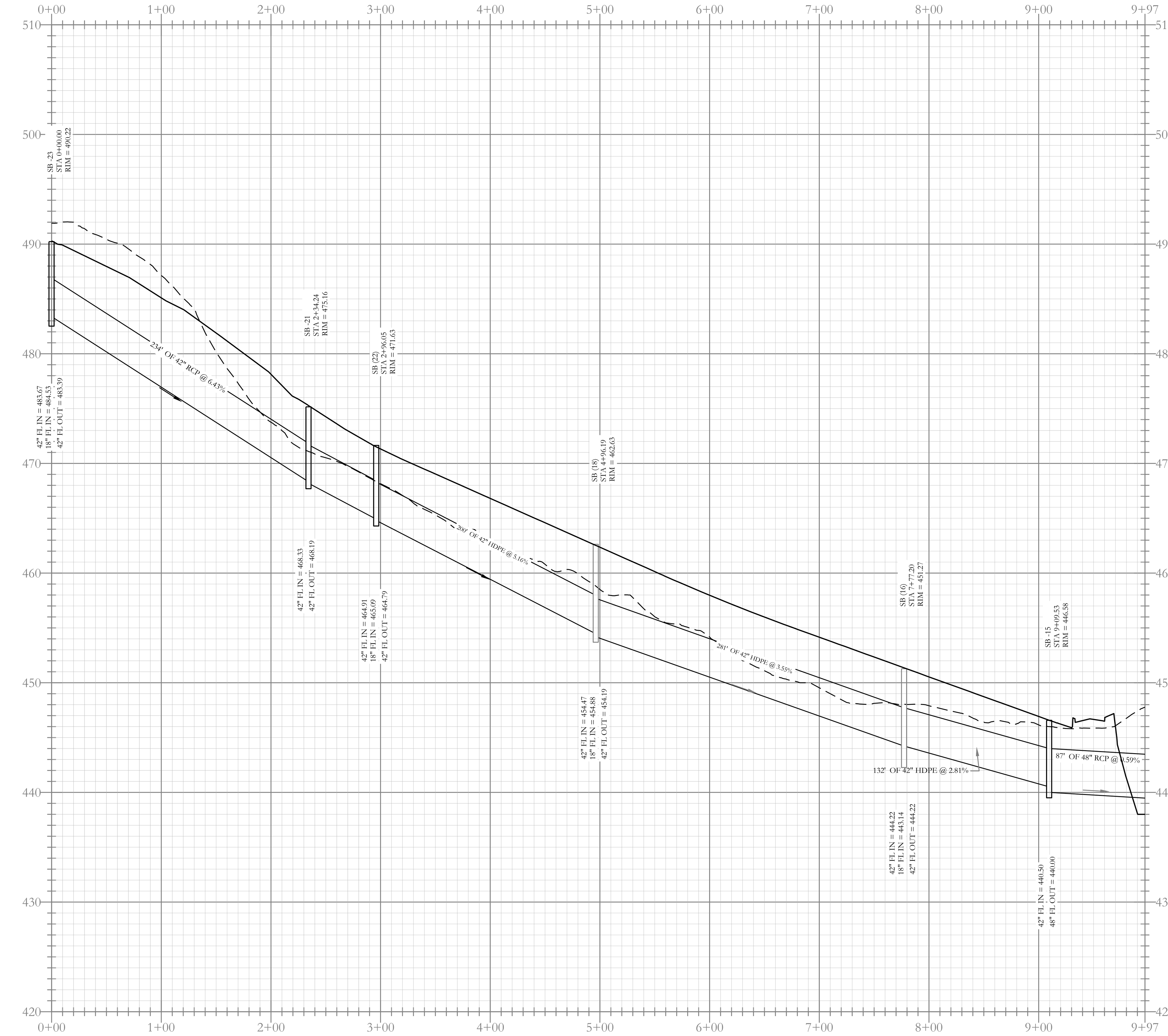

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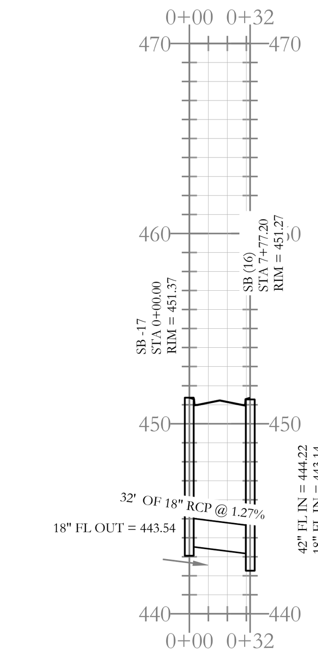

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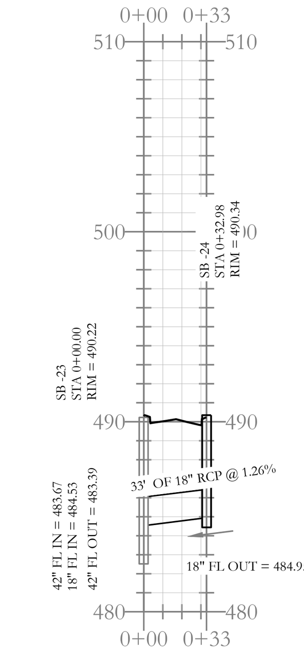

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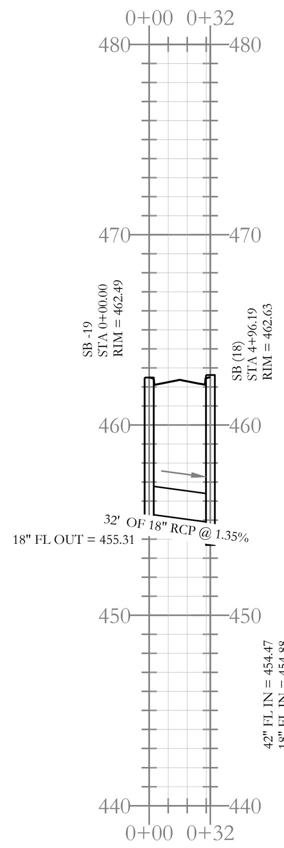

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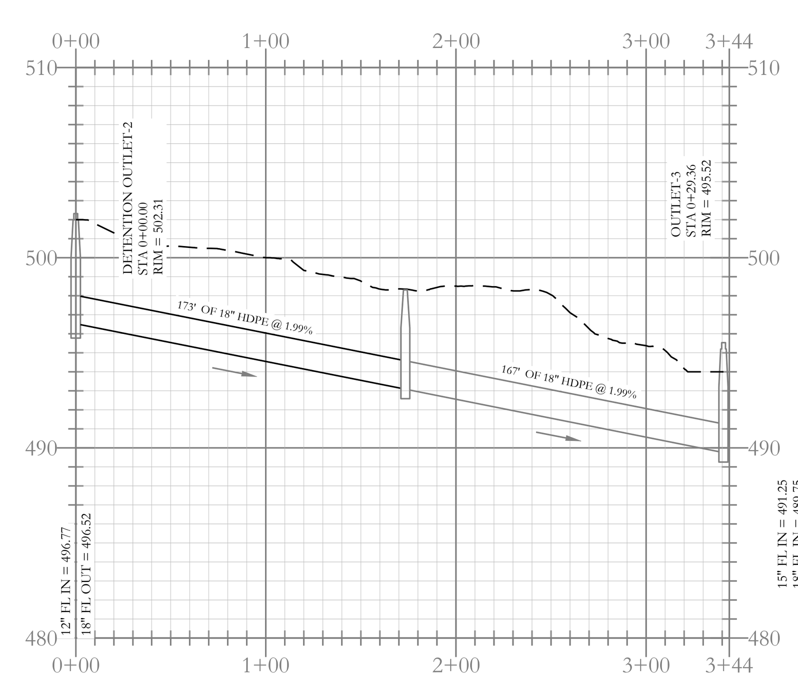
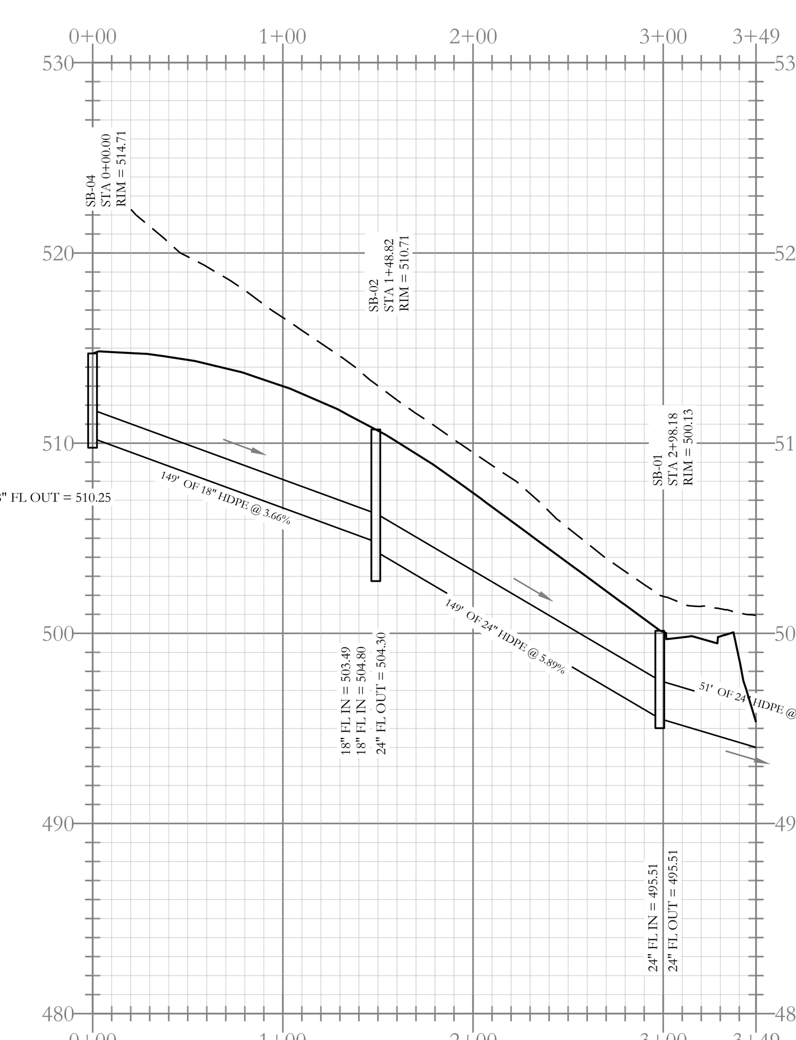


Detention Outlet to ditch Profile



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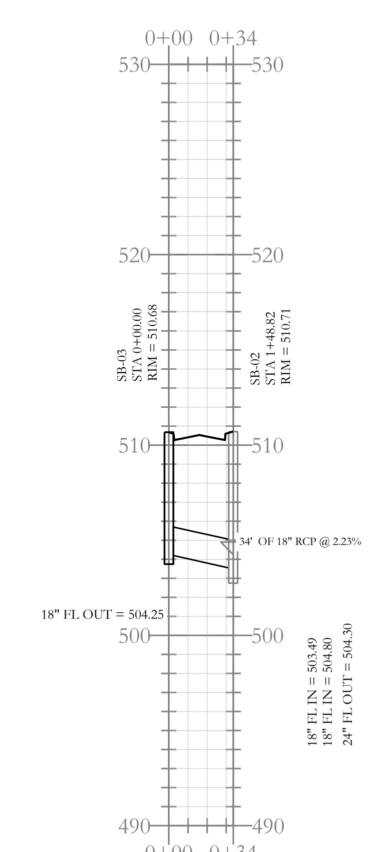

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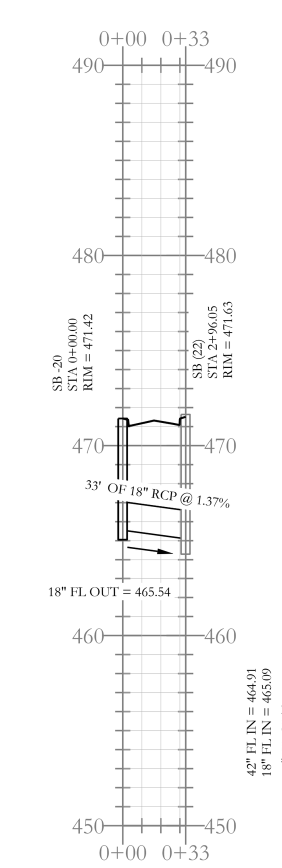


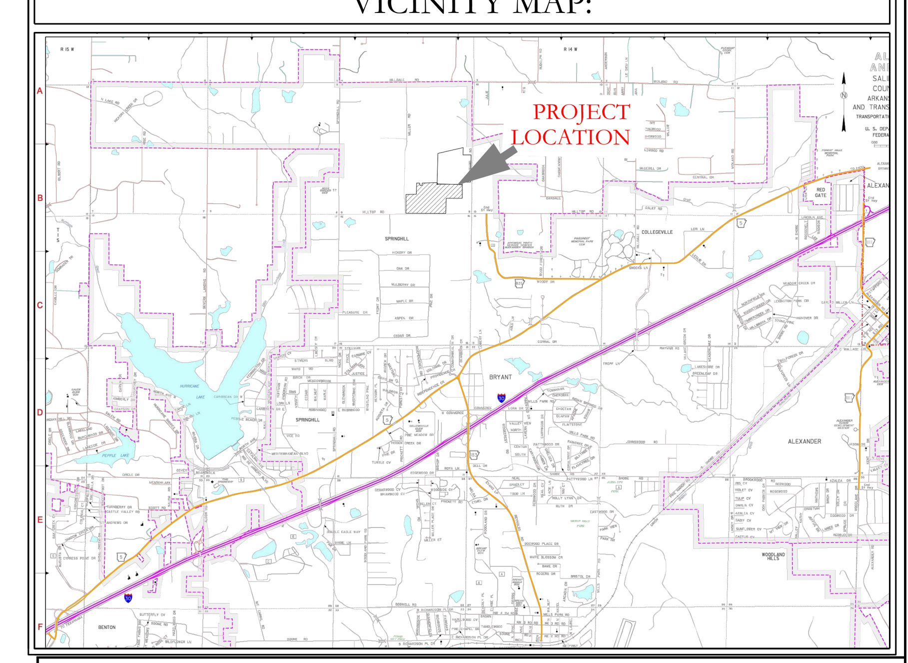
Stormwater G(d) Profile

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

— — — HDPE

——— RCP

VICINITY MAP:



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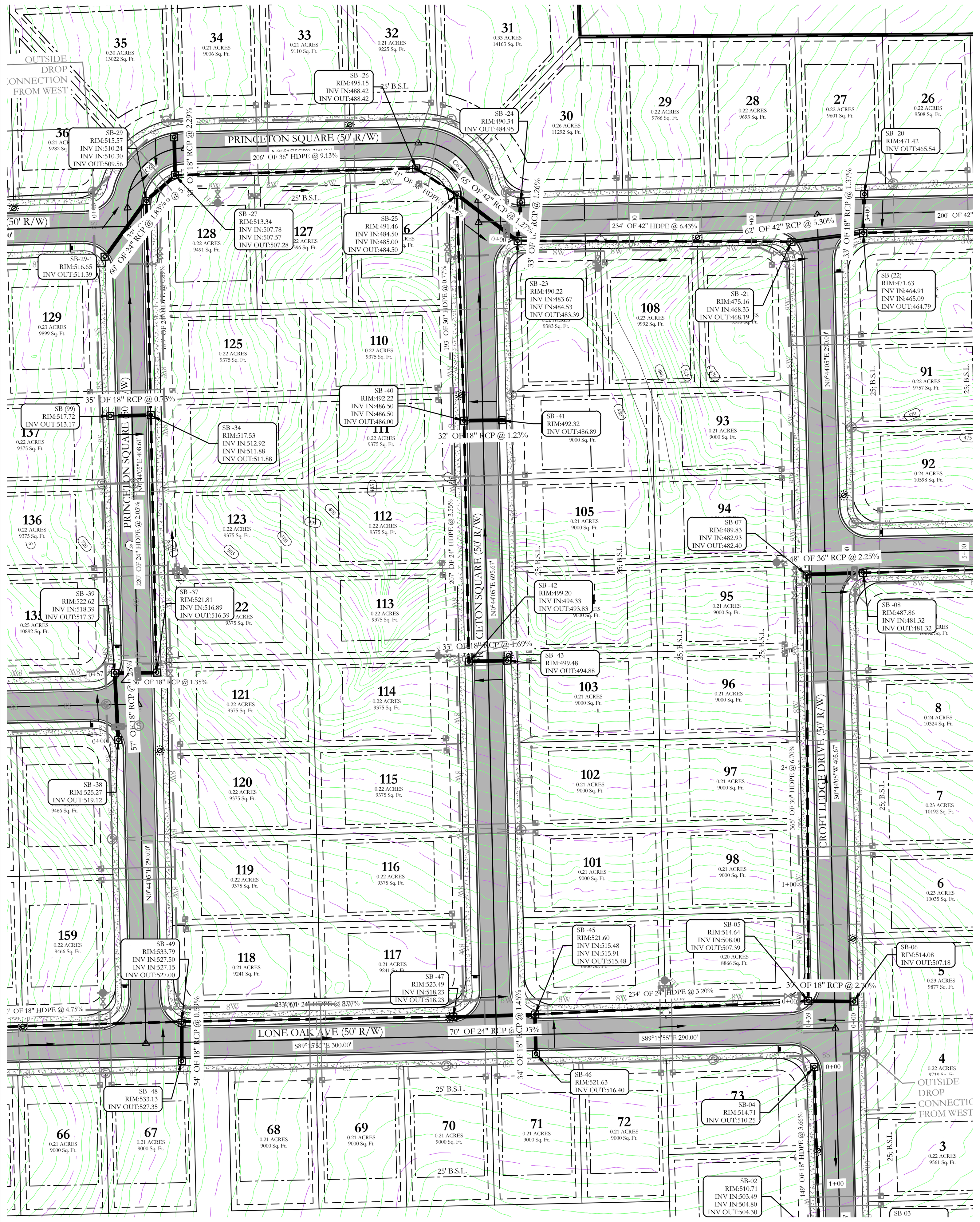

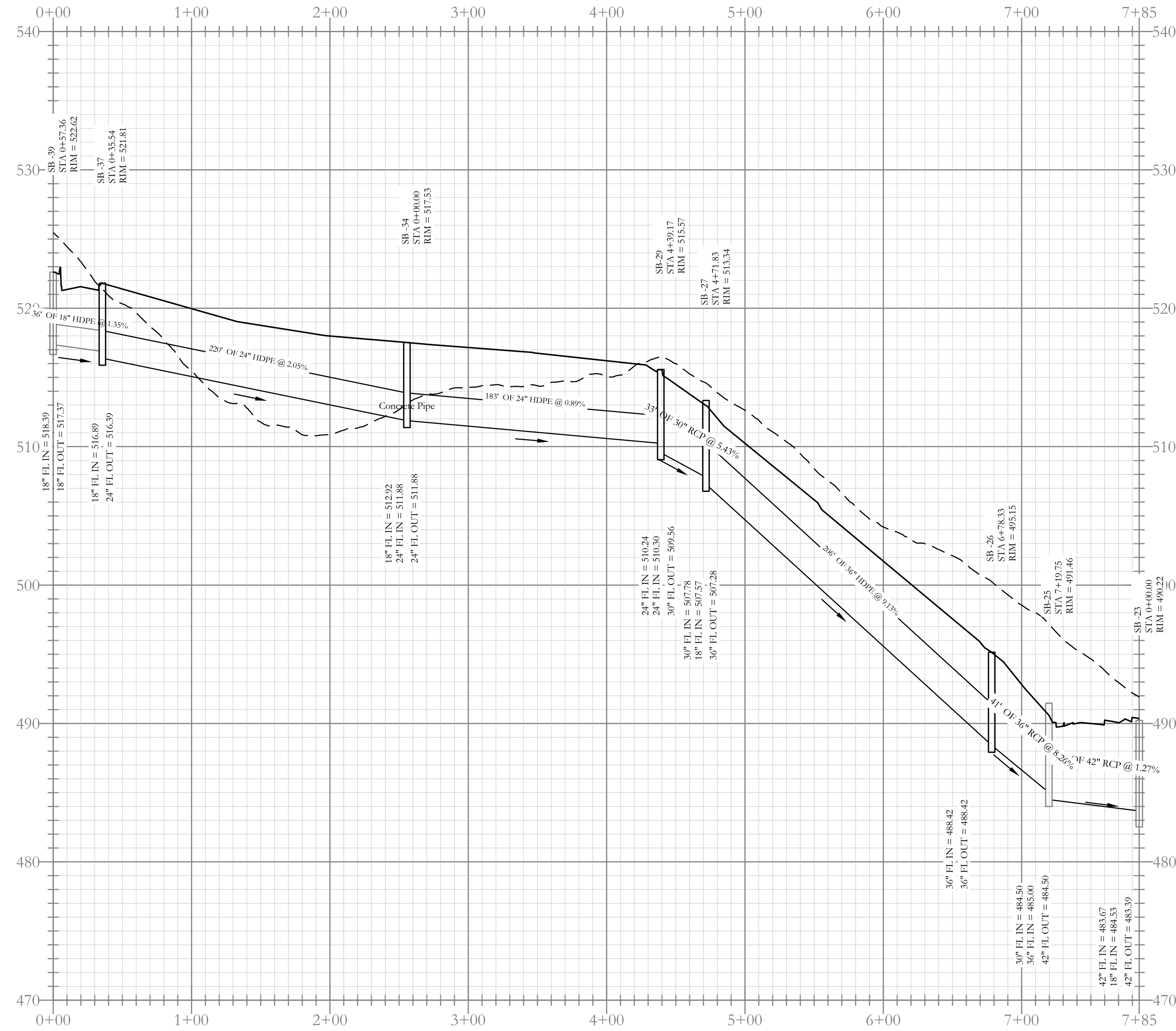

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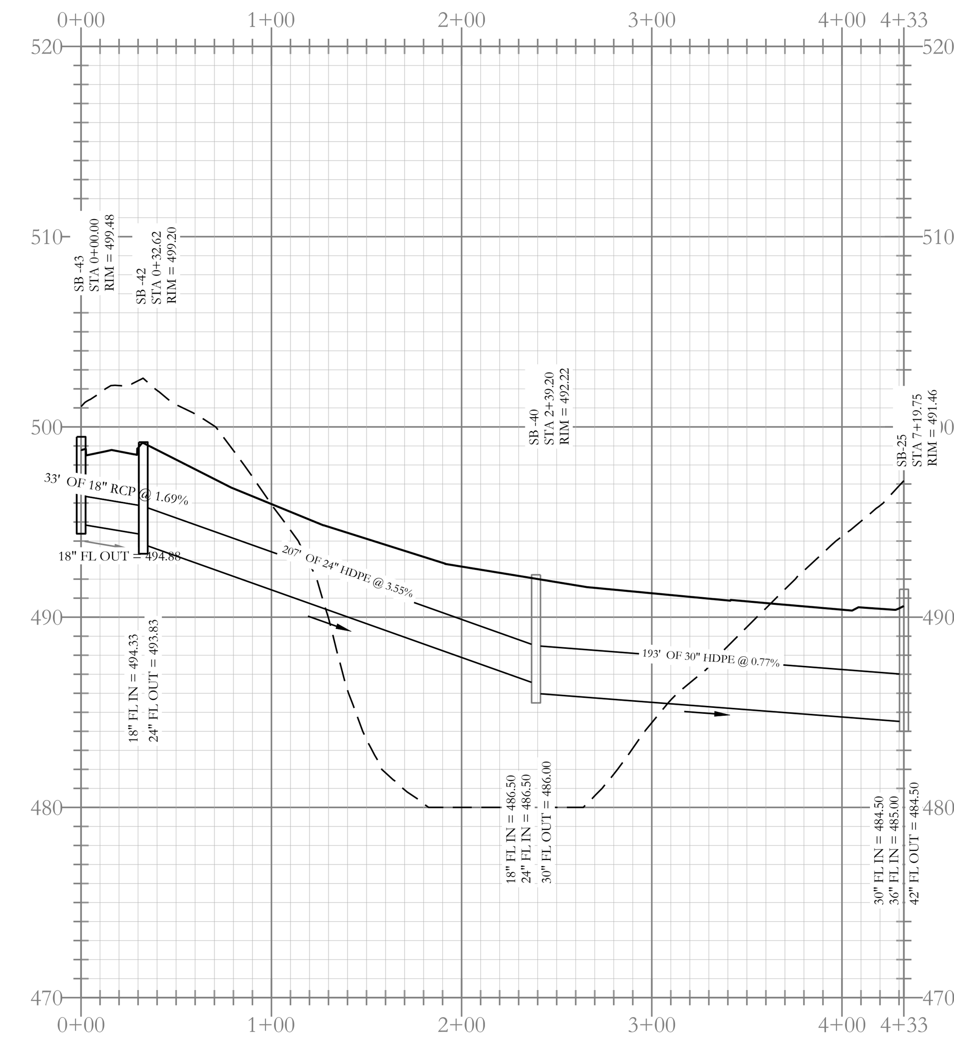

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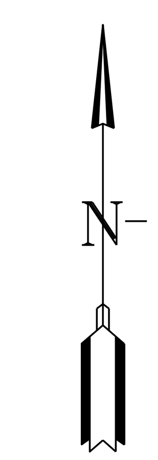

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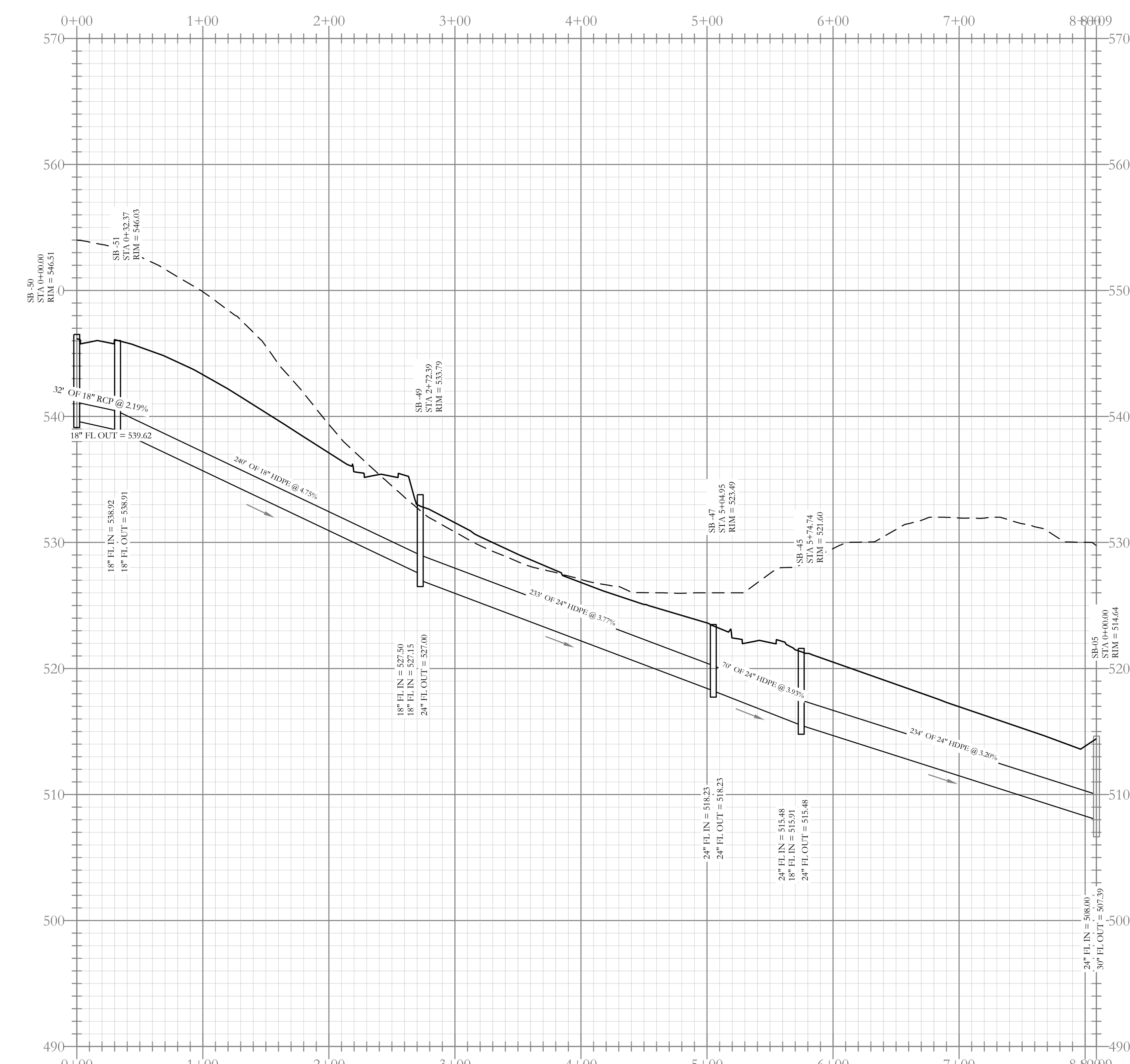
STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 20876
KAZI TAMZIDUL ISLAM

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



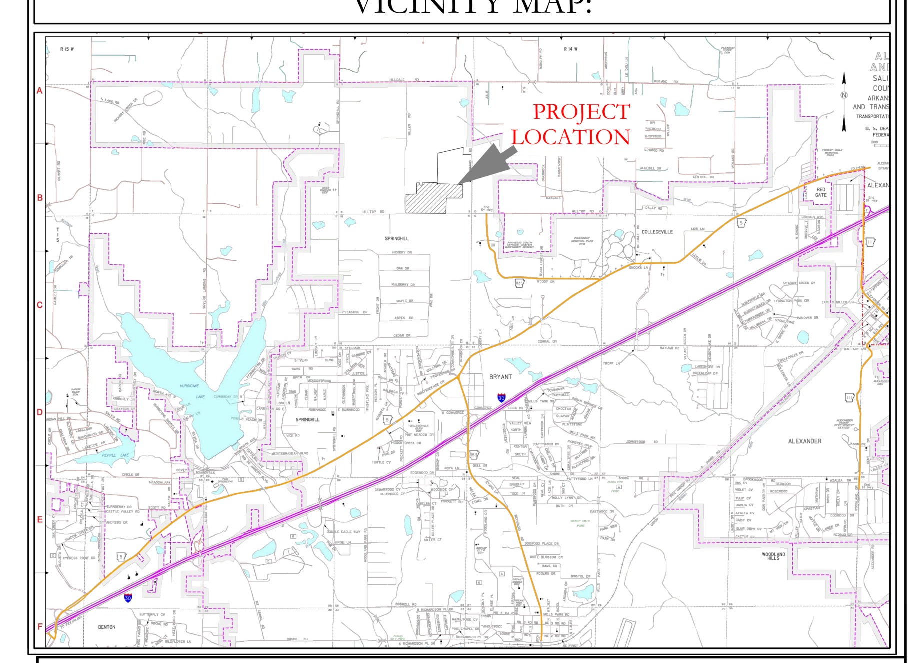
Stormwater F Profile

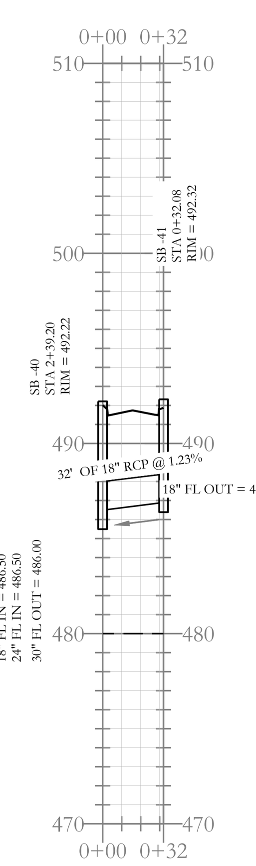
HDPE

RCP

80 40 0 80

VICINITY MAP:





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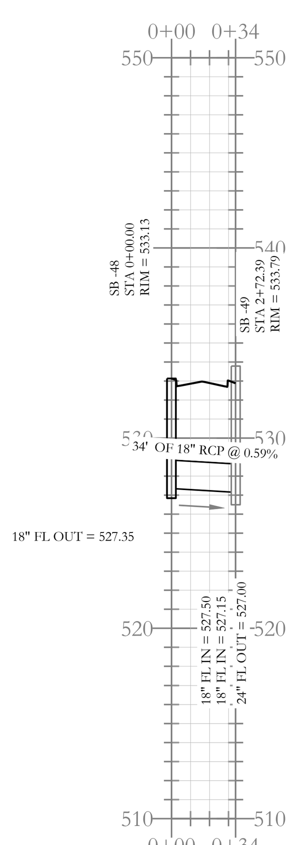

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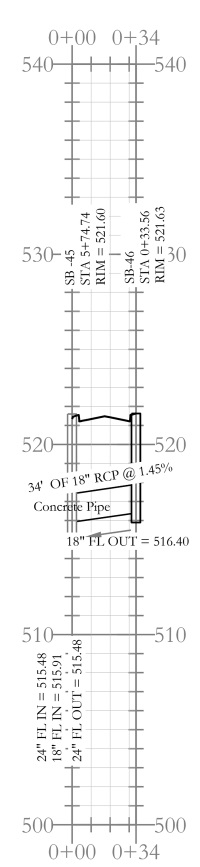

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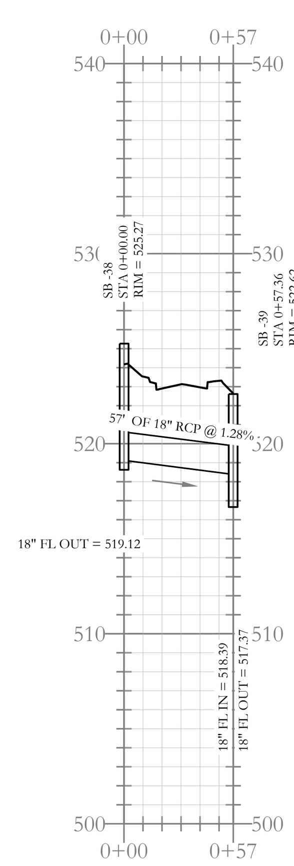
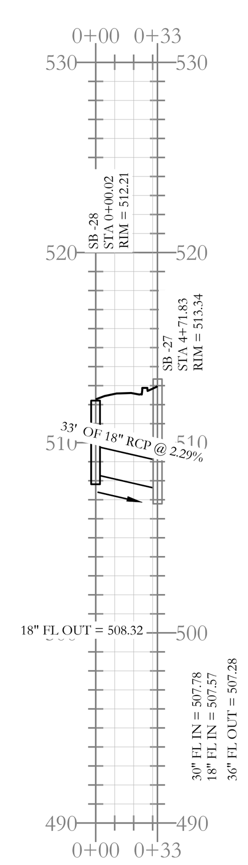


Stormwater E-1 Profile



Stormwater C-1 Profile

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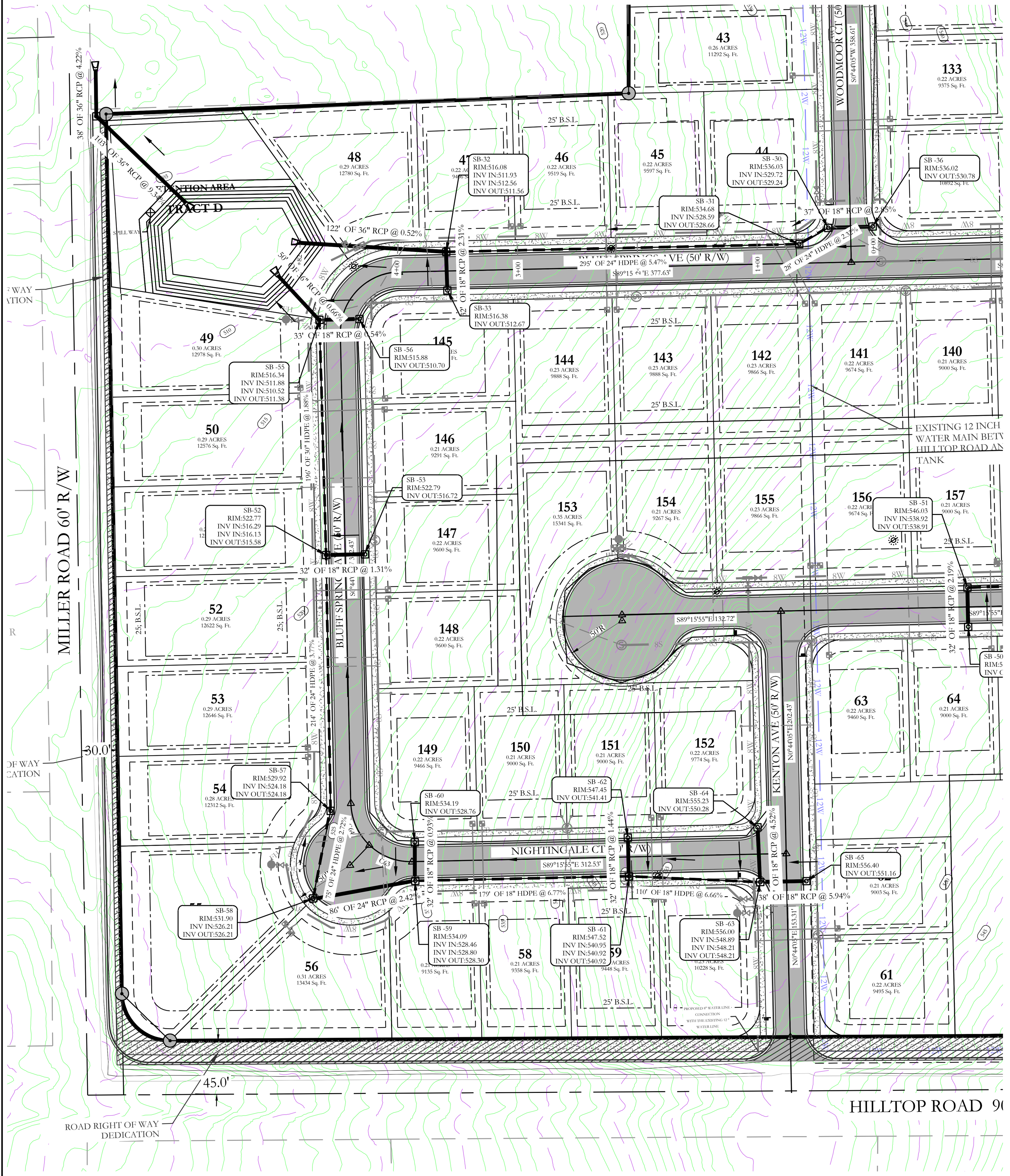

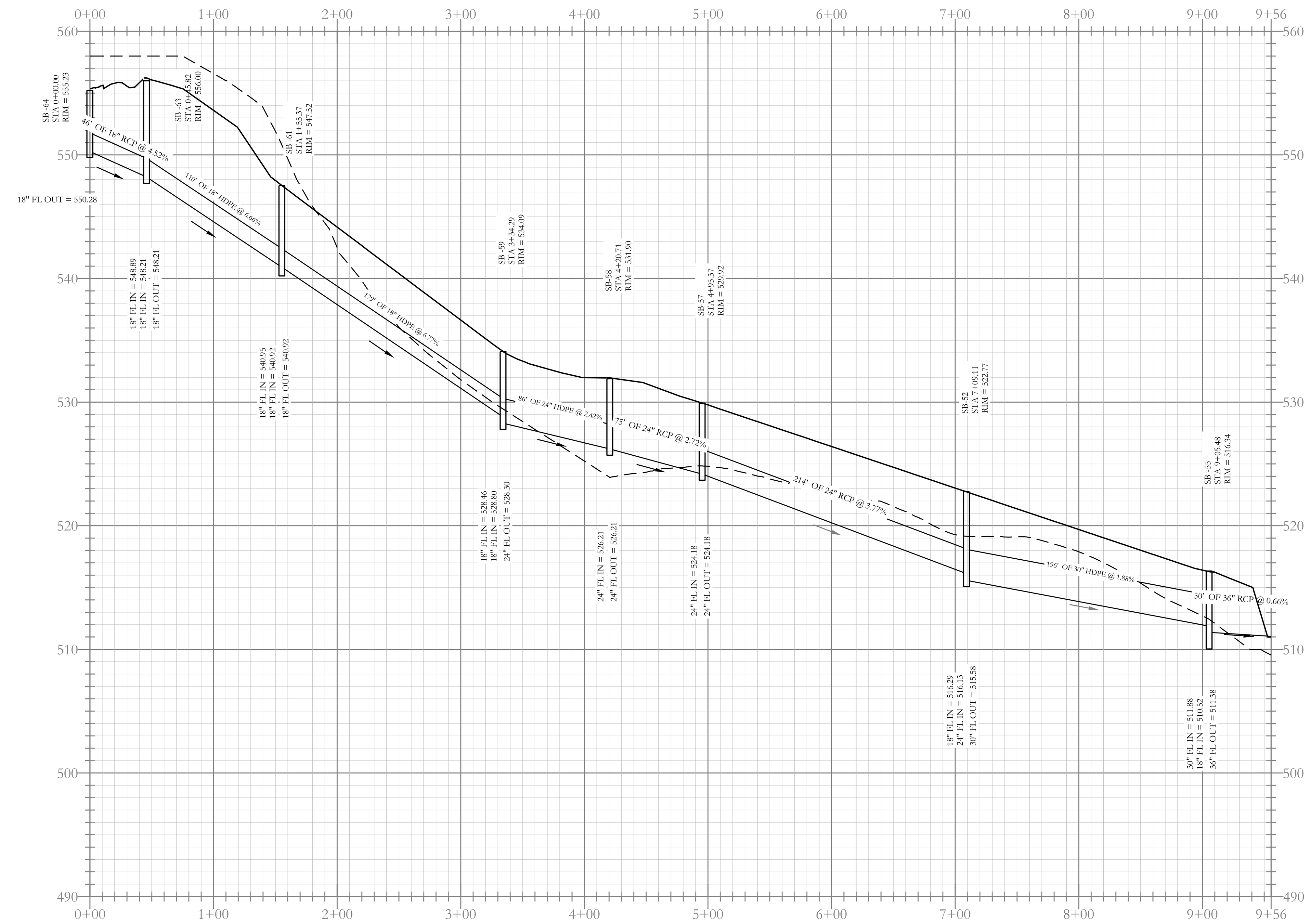

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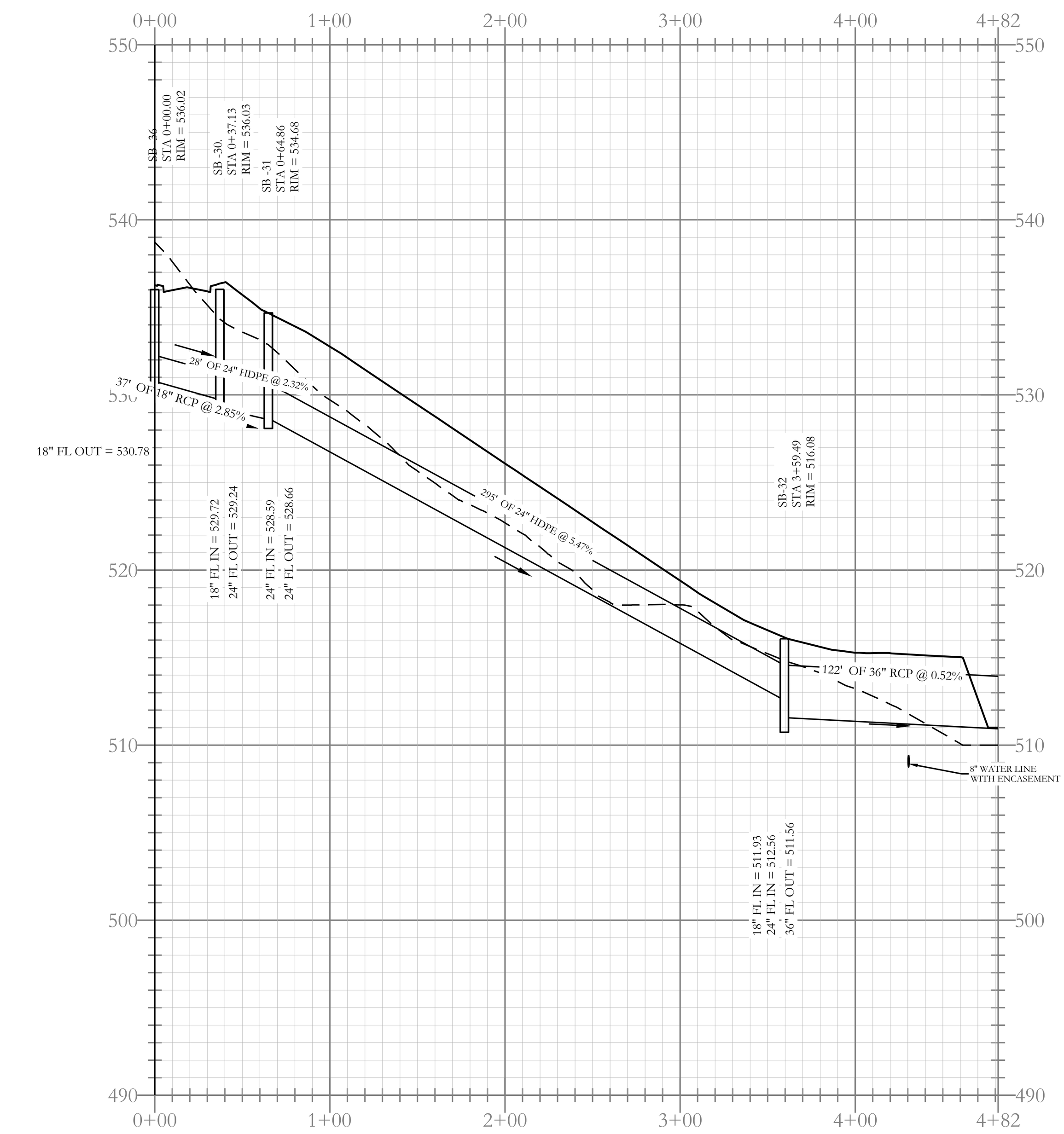

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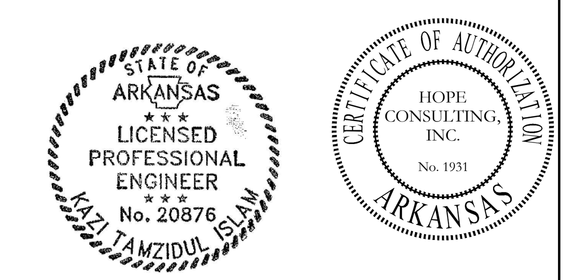
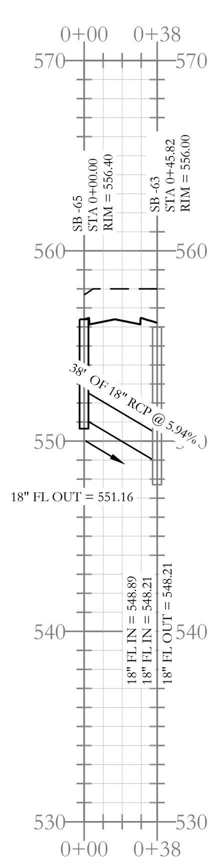
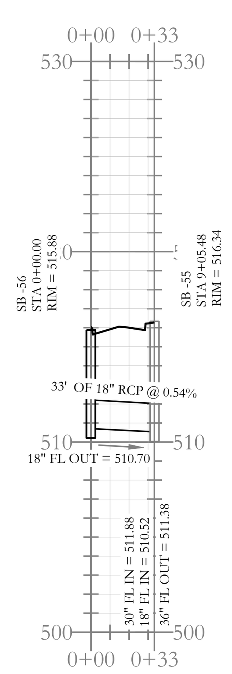


HDPE

RCP



Stormwater Entrance-2 Profile



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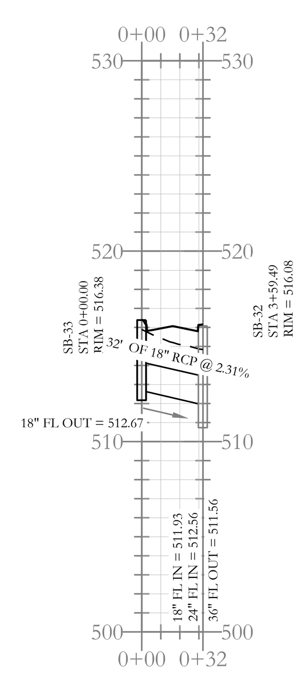

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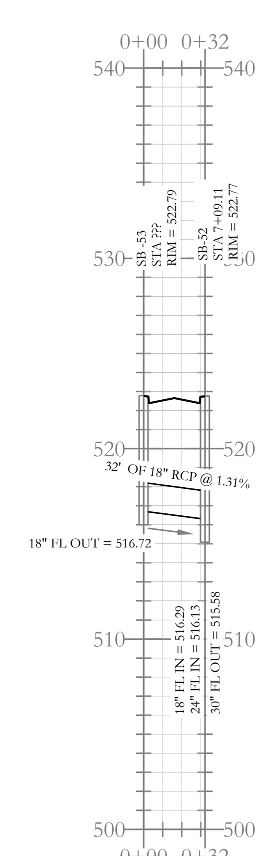

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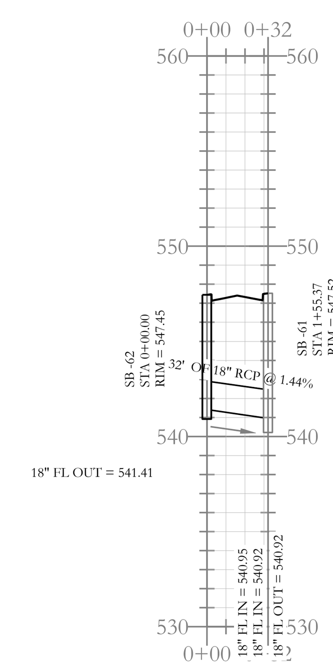
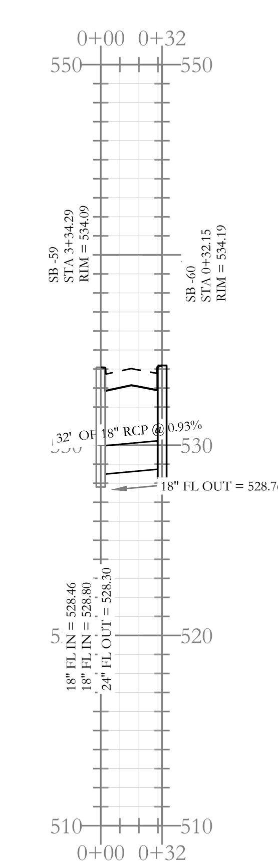
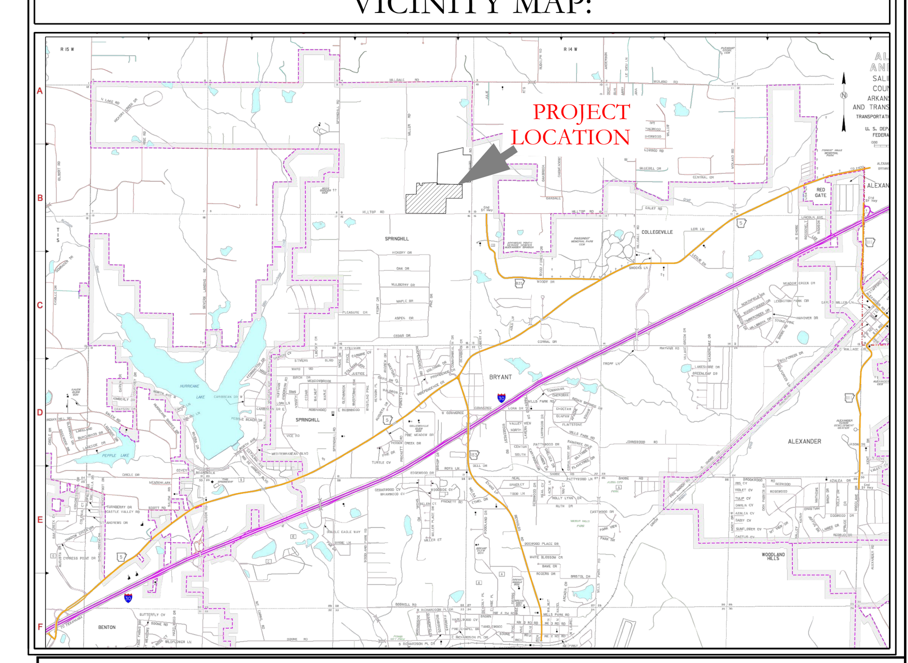


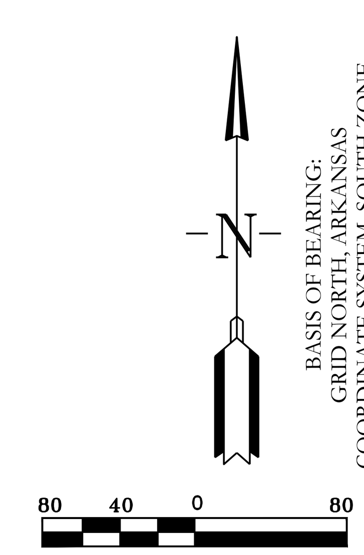
Stormwater E-d Profile



Stormwater E-e Profile

VICINITY MAP:





BASIS OF BEARING:
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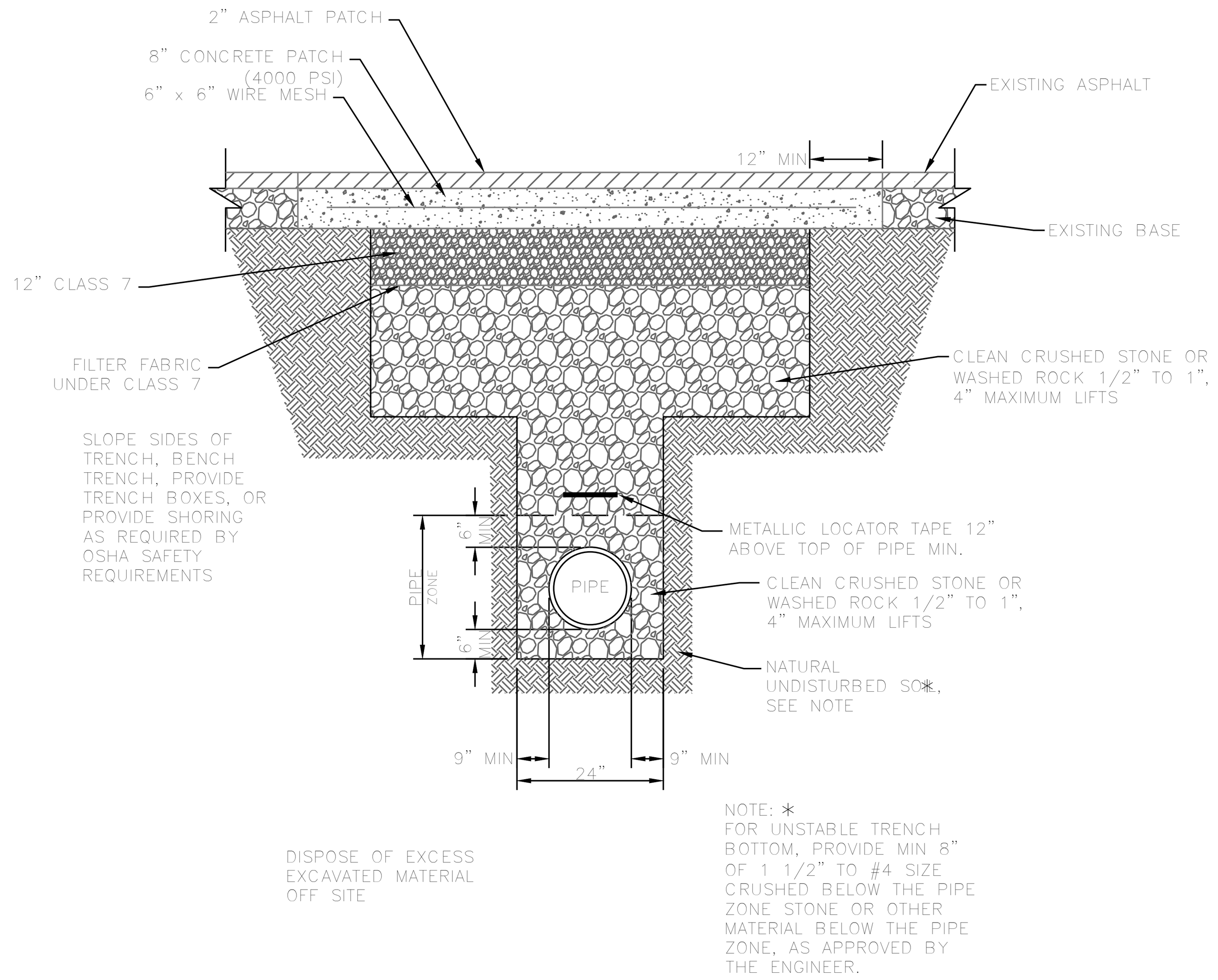

PVC SEWER TRENCH UNDER EXISTING ASPHALT STREET

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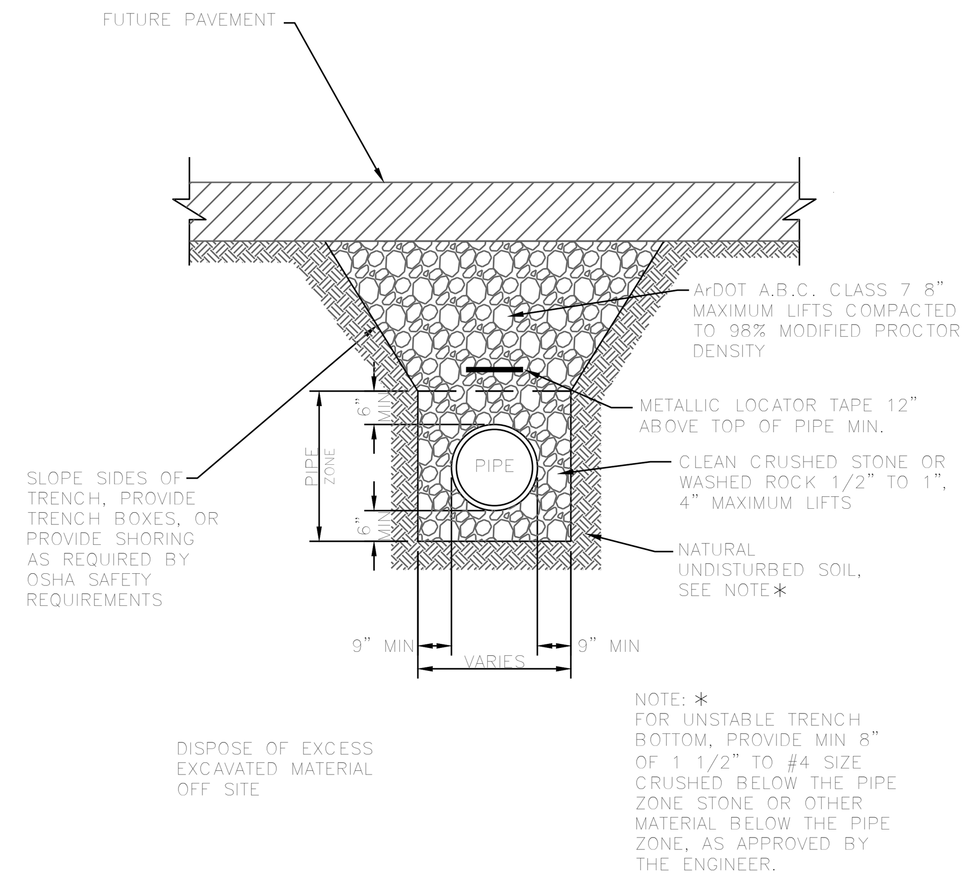

PVC SEWER TRENCH UNDER FUTURE ASPHALT STREET

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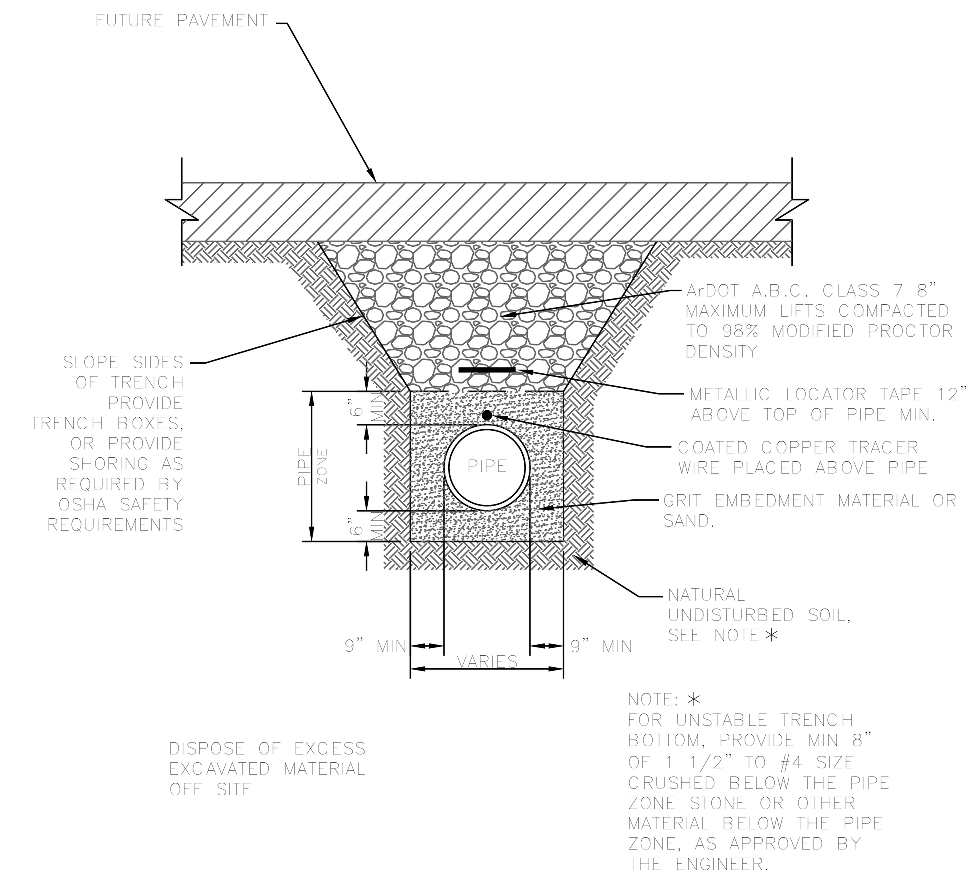

PVC WATER LINE TRENCH UNDER FUTURE ASPHALT STREET

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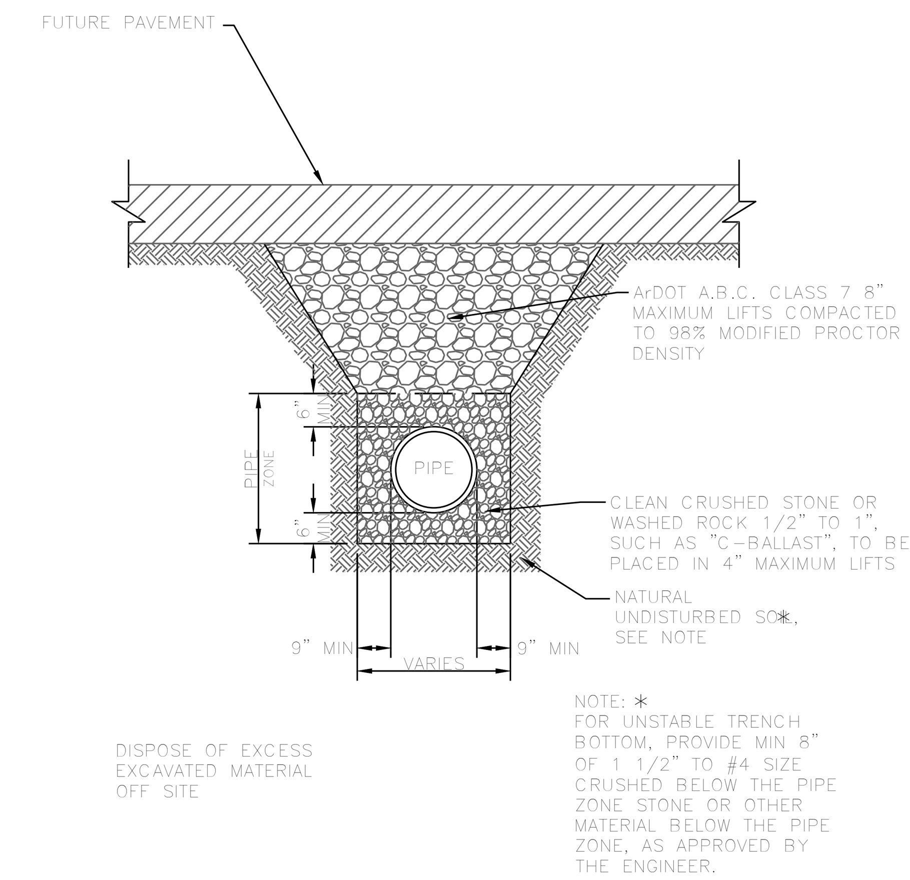

DRAINAGE PIPE TRENCH UNDER FUTURE ASPHALT STREET

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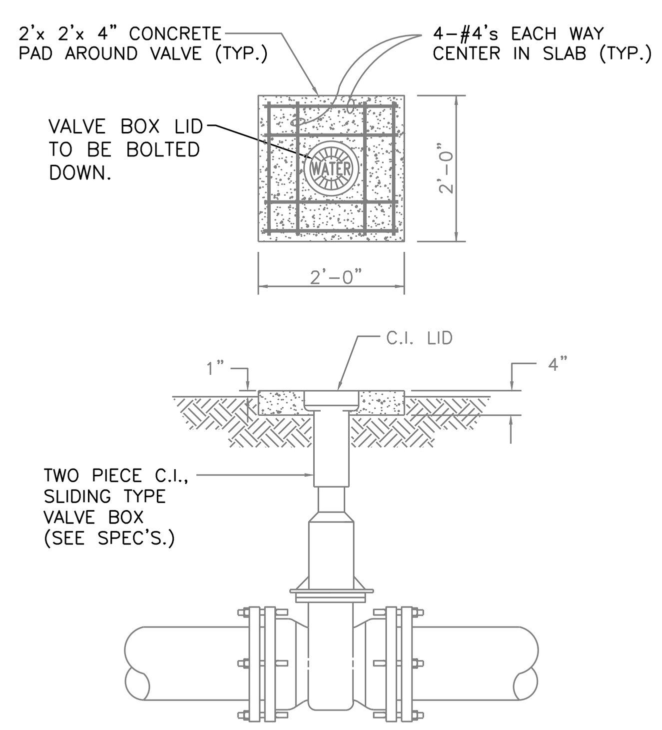
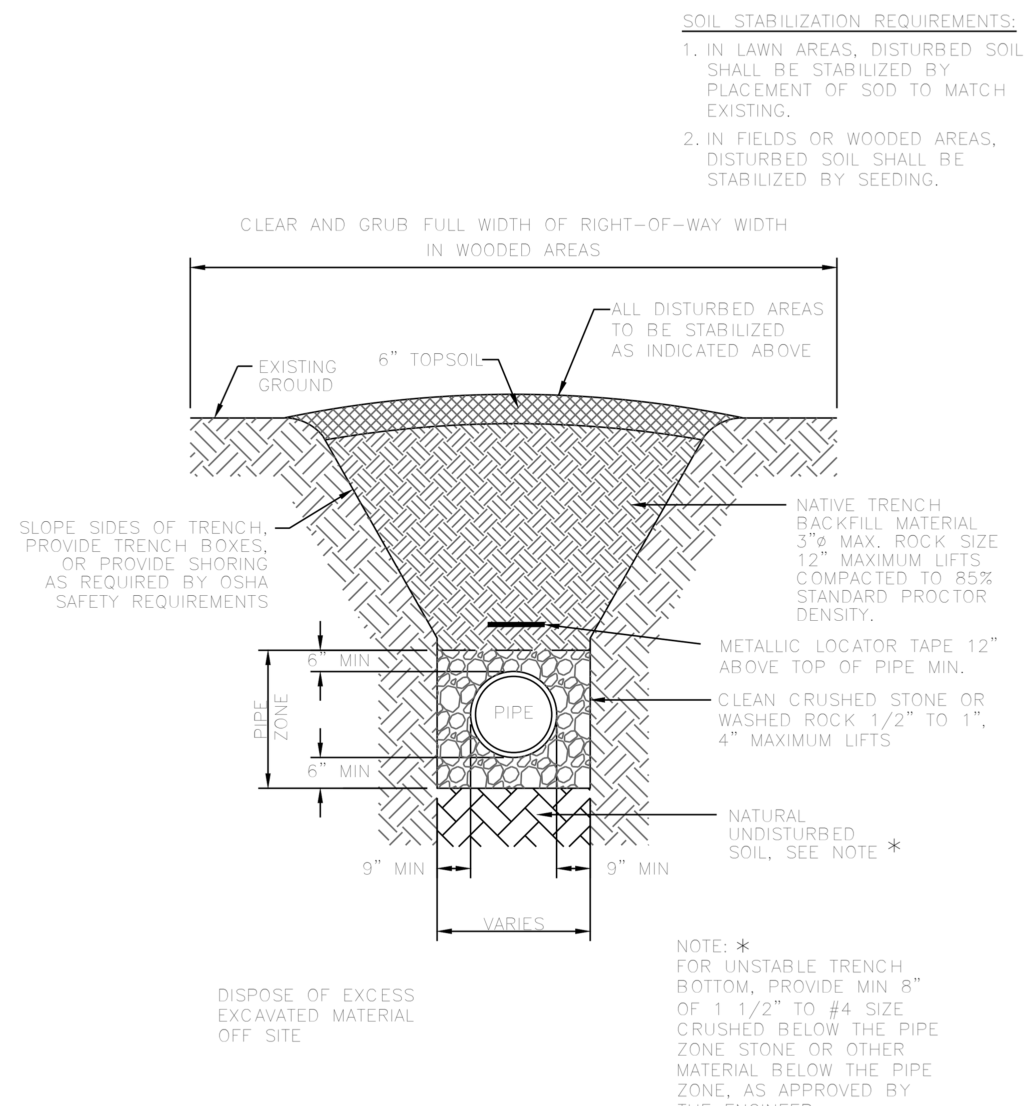


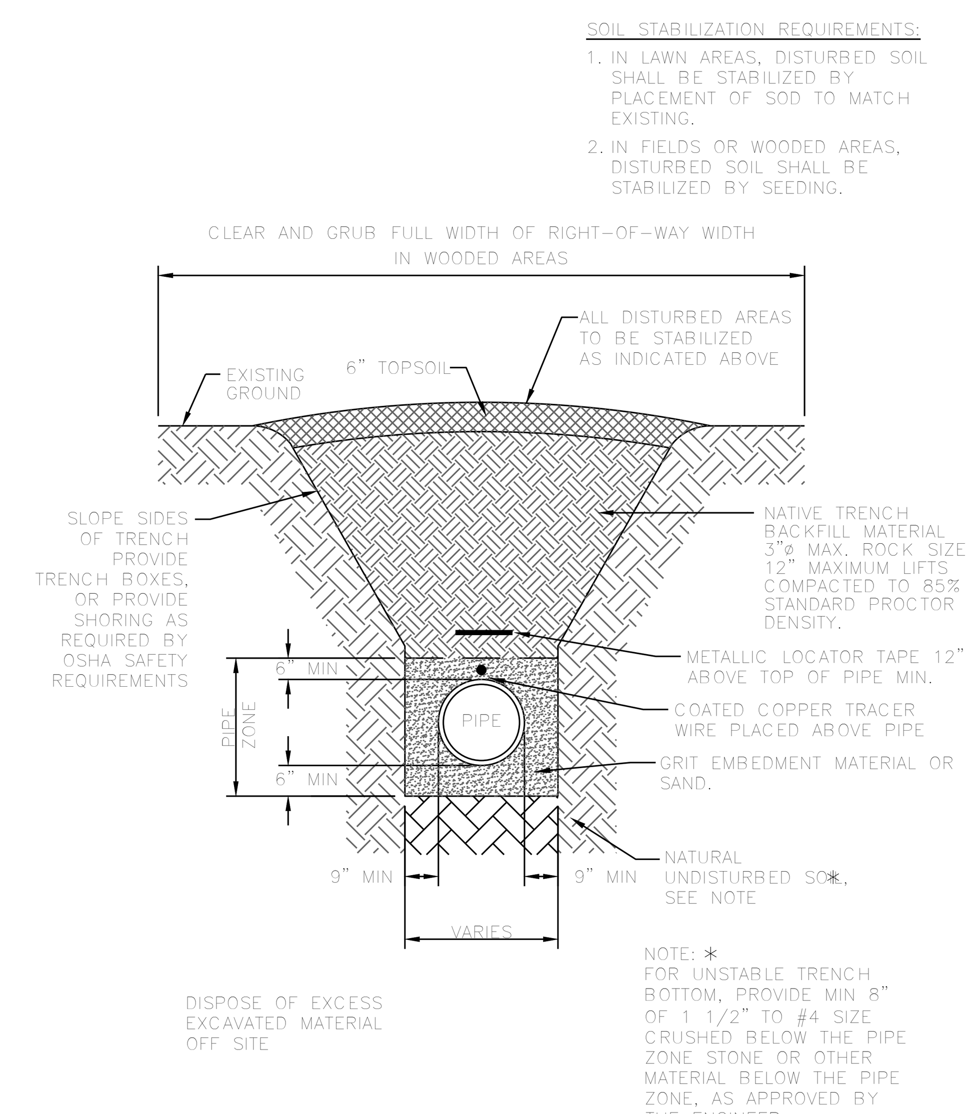
DETAIL-VALVE BOX

N.T.S.



PVC SEWER TRENCH IN UNPAVED AREAS

N.T.S.



PVC WATER LINE TRENCH IN UNPAVED AREAS

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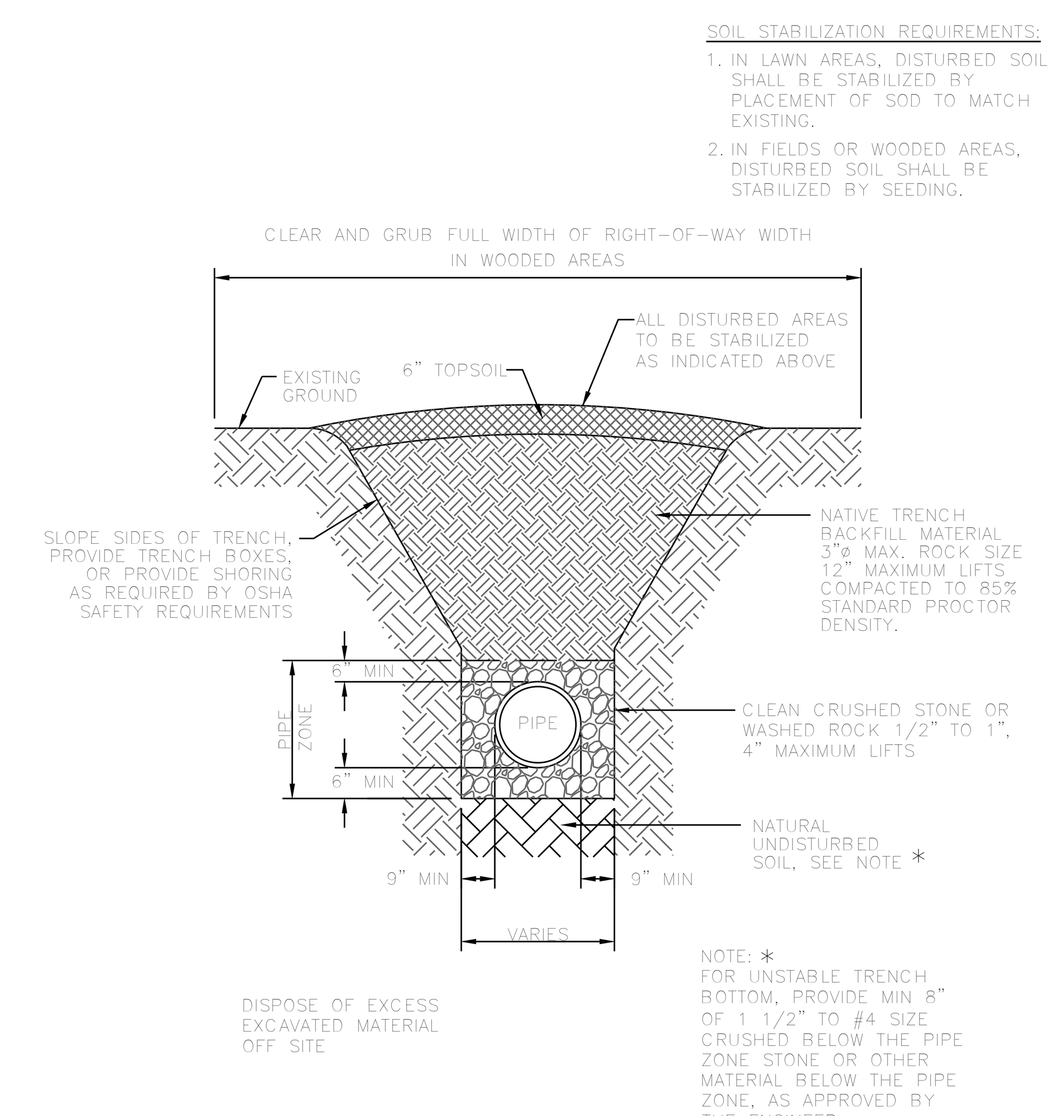
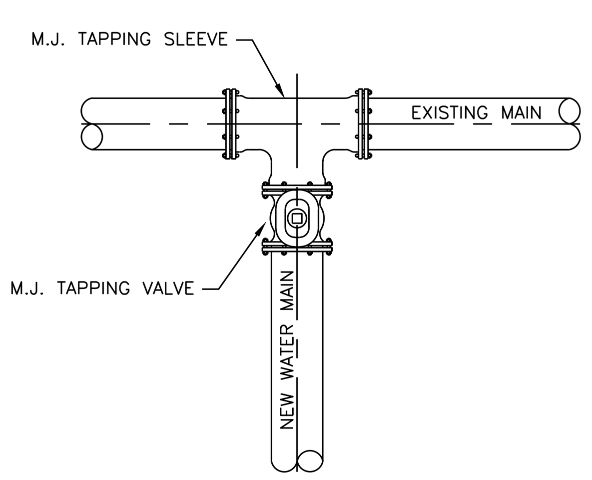


DRAINAGE PIPES IN UNPAVED AREAS

N.T.S.



WATER MAIN CONNECTION DETAIL

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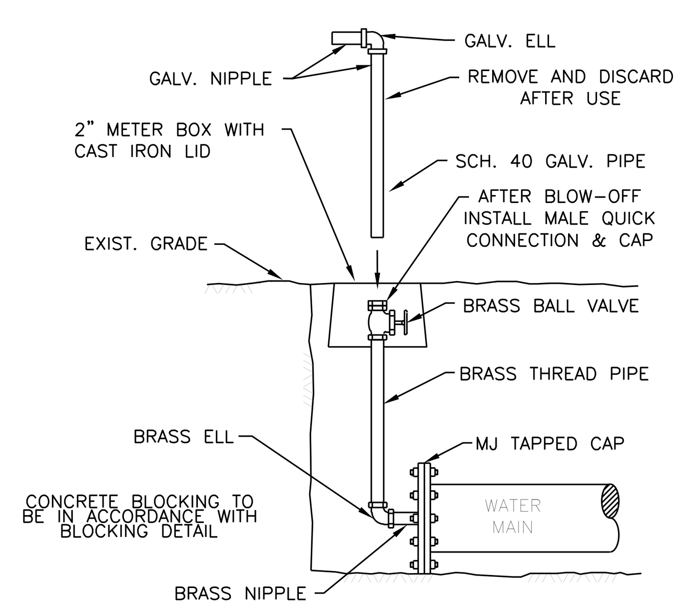
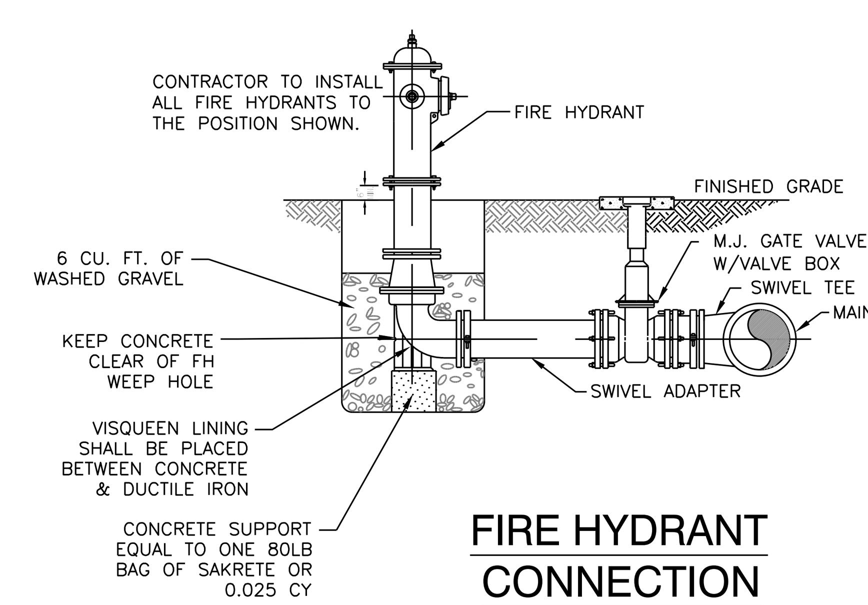


2" BLOW-OFF RISER

N.T.S.



FIRE HYDRANT CONNECTION

NTS

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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.
I. All sidewalk ramps shall meet ADA requirements with corrugated dome ramp requirements.

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.

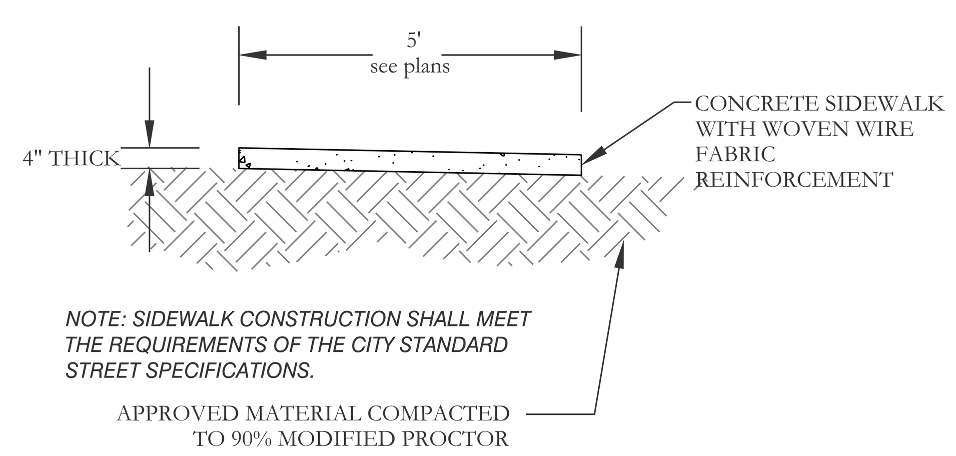
Subgrade

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

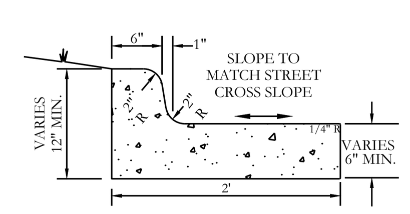
General

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.



NOTE: SIDEWALK CONSTRUCTION SHALL MEET ADA REQUIREMENTS WITH CORRUGATED DOME RAMP REQUIREMENTS

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
ENGINEERS - SURVEYORS
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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
CIVIL SPECIFICATIONS
A SUBDIVISION IN THE CITY OF BRYANT, SALINE COUNTY, ARKANSAS

DATE:	03/08/2023	C.A.D. BY:			DRAWING NUMBER:		
REVISED:	04/19/2023	CHECKED BY:			20-1341		
SHEET:	C-5.0	SCALE:	1' = 20"				
500	01S	14W	0	09	200	62	1762

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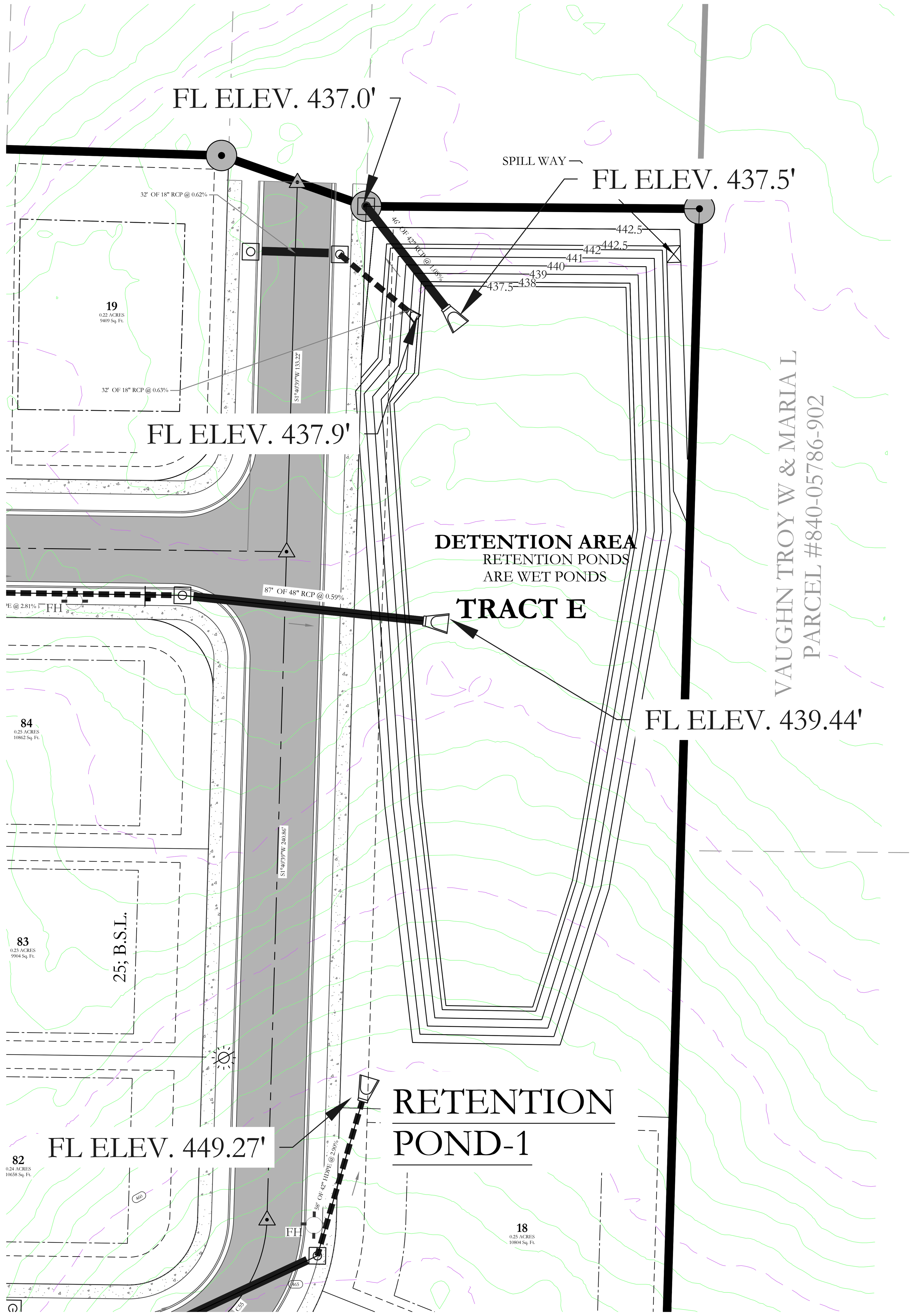
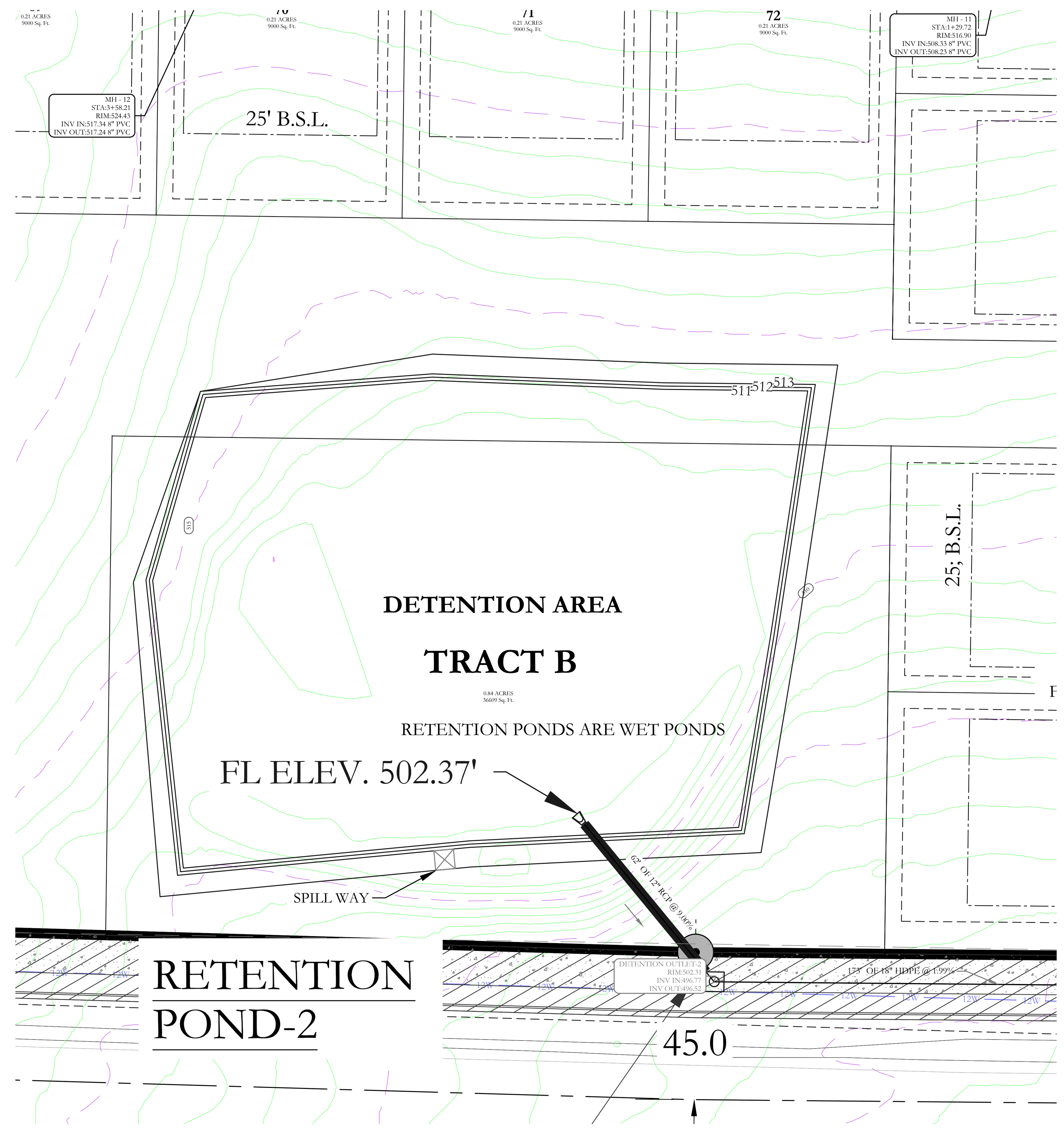
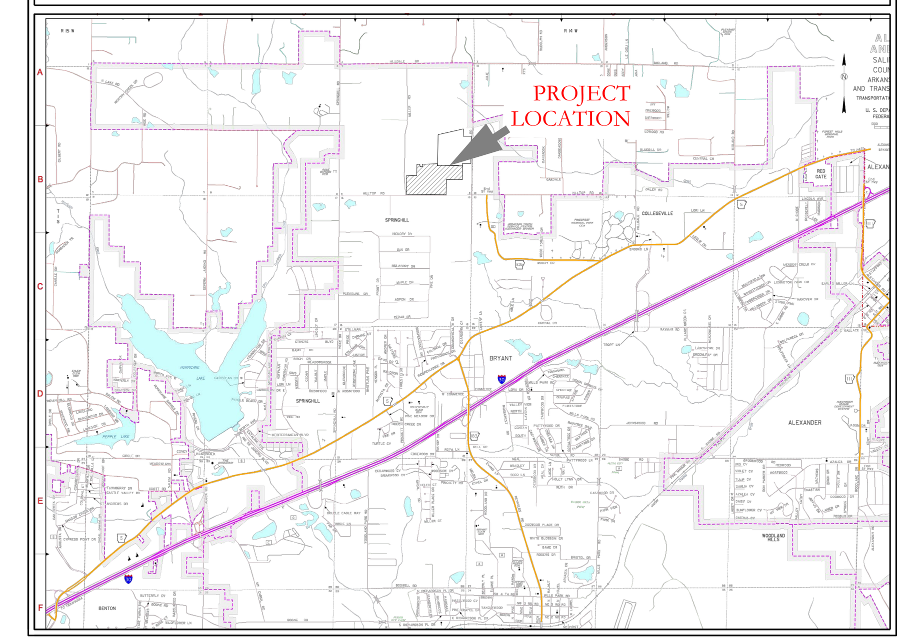




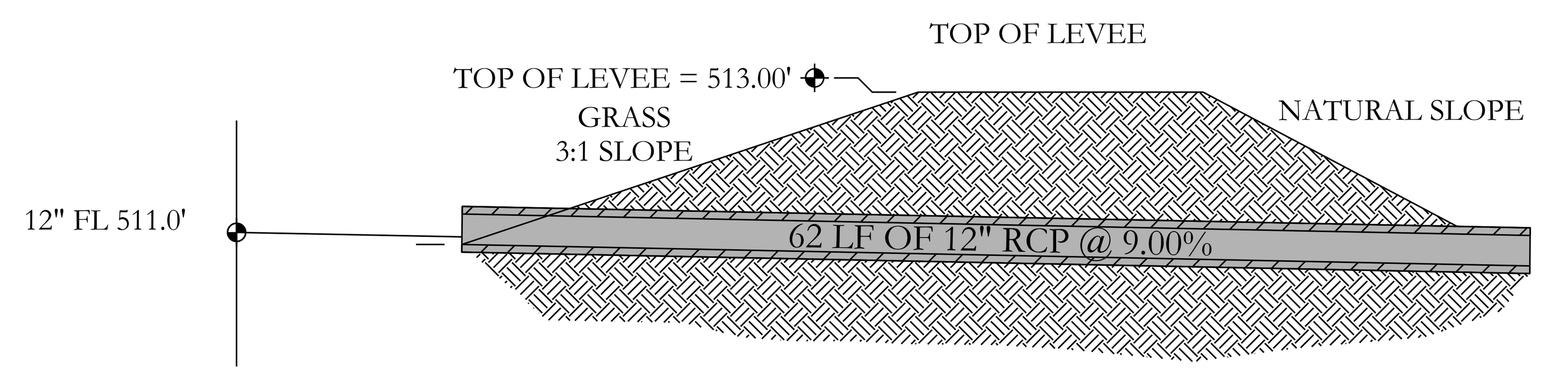
VICINITY MAP:



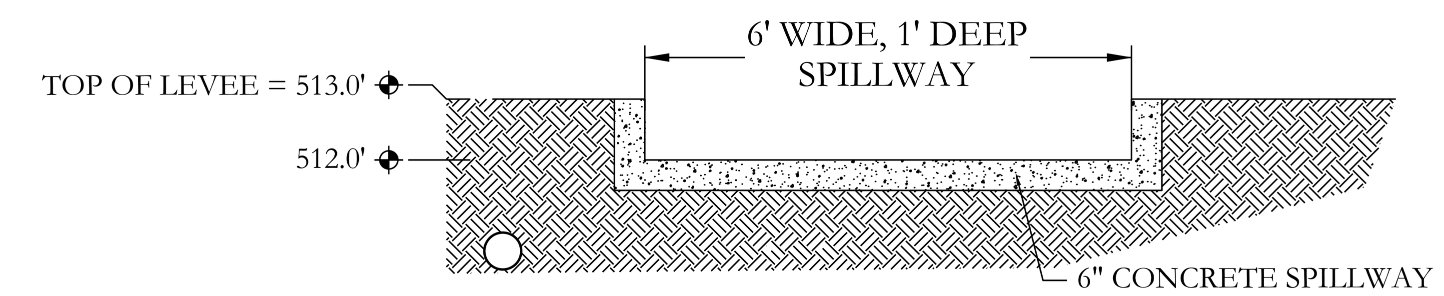
EARTHEN SLOPE NOTE:
ALL EARTHEN RETENTION POND SLOPES ON BOTH THE INTERIOR AND EXTERIOR OF THE POND SHALL HAVE A MAXIMUM SLOPE OF 3:1.

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

TOP BANKS OF ALL RETENTION PONDS WILL BE 6' WIDE .



OUTLET SECTION
NTS



SPILLWAY END VIEW
NTS

RETENTION 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.

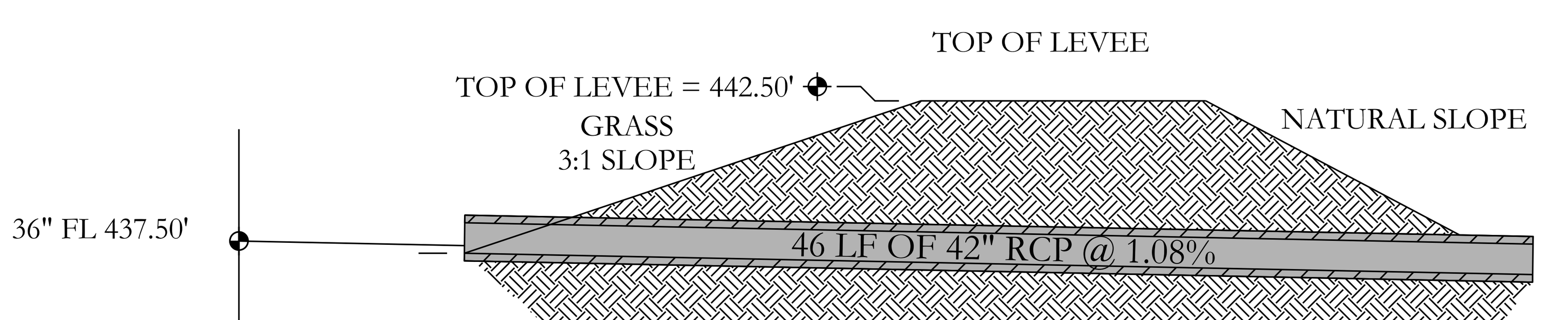
Periodic or Non-Routine Maintenance
The routine inspection of the ponds areas and discharge pipes will identify needed repairs and non-routine maintenance. These items may include but not be limited to:

-Re-growth of trees on or around the pond bank. These should be cut and removed from the pond area.

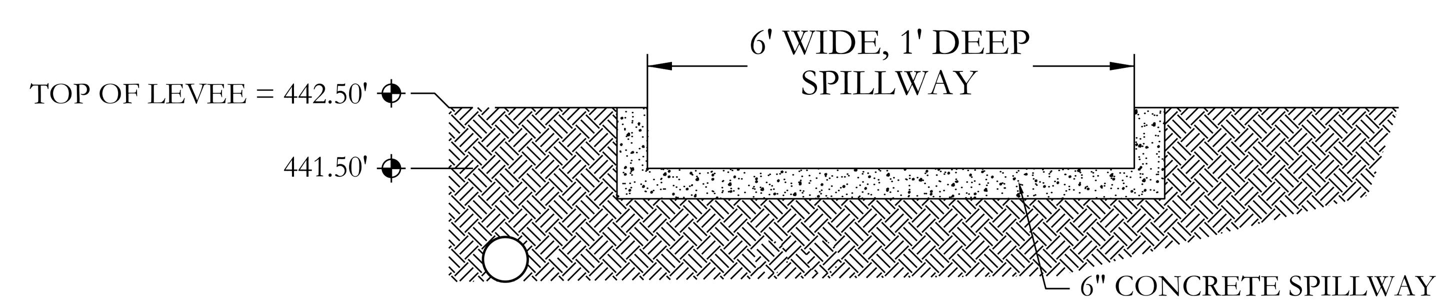
-Sediment from the site may accumulate in the pond bottom and reduce the pond to below design volume requirements. The pond should be excavated if the pond bottom elevation reached a level that allows excessive aquatic growth or reduces the pond efficiency such, that the sediments are passing the discharge 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

RETENTION POND-1

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

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

N

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

30 15 0 30

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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
DETENTION POND
A SUBDIVISION IN THE CITY OF BRYANT, SALINE COUNTY, ARKANSAS

DATE:	03/08/2023	C.A.D. BY:			DRAWING NUMBER:		
REVISED:	04/19/2023	CHECKED BY:			20-1341		
SHEET:	C-6.0	SCALE:	1"=30'				
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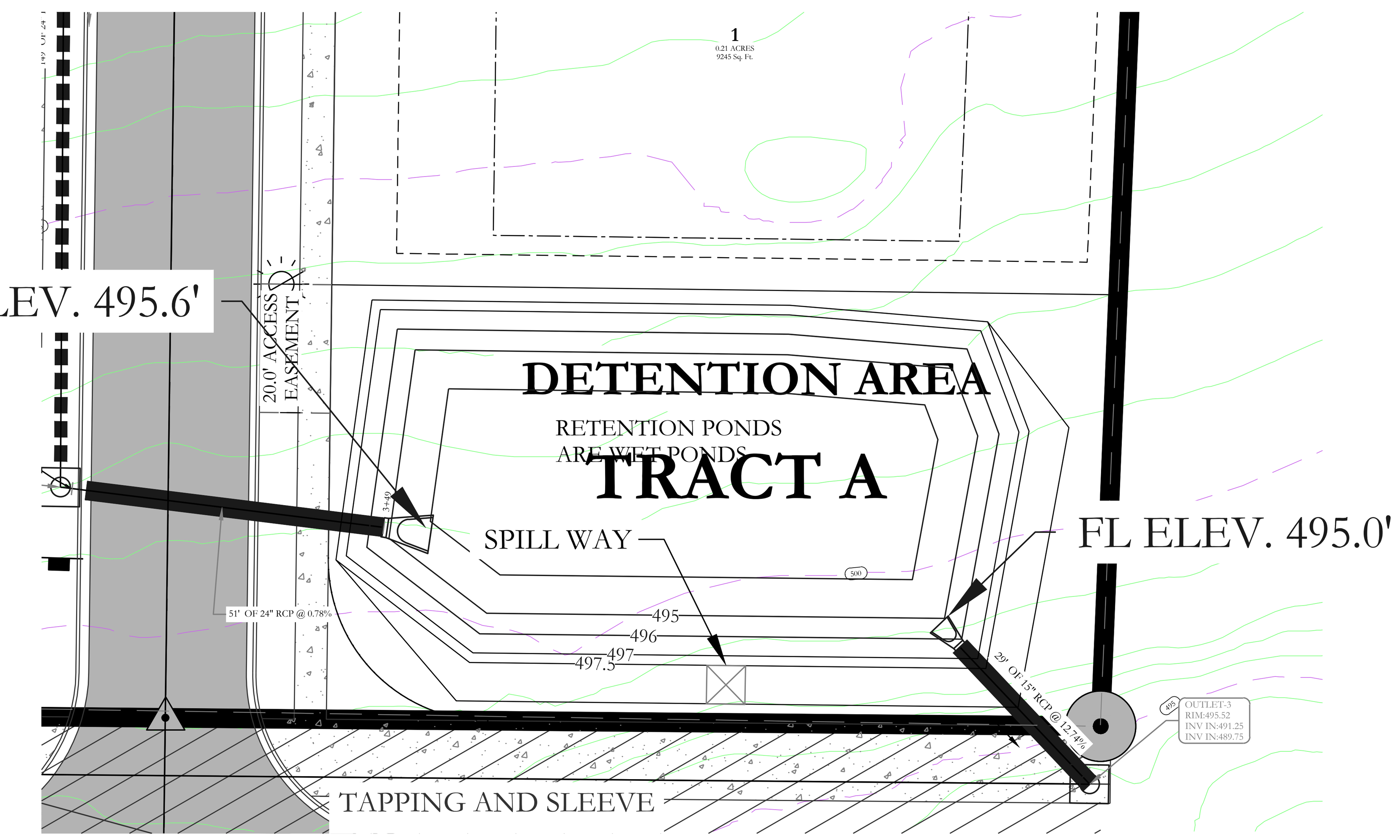
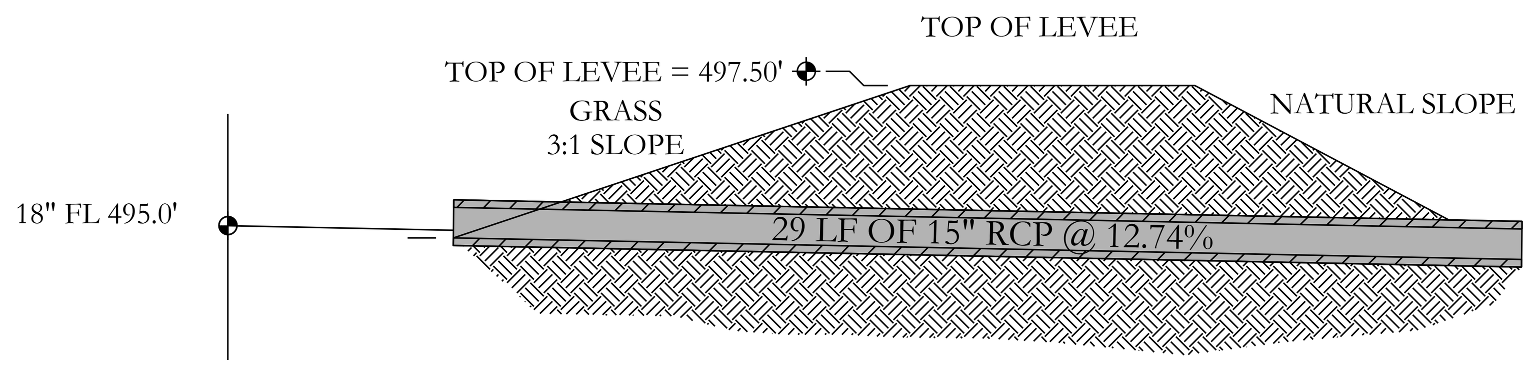
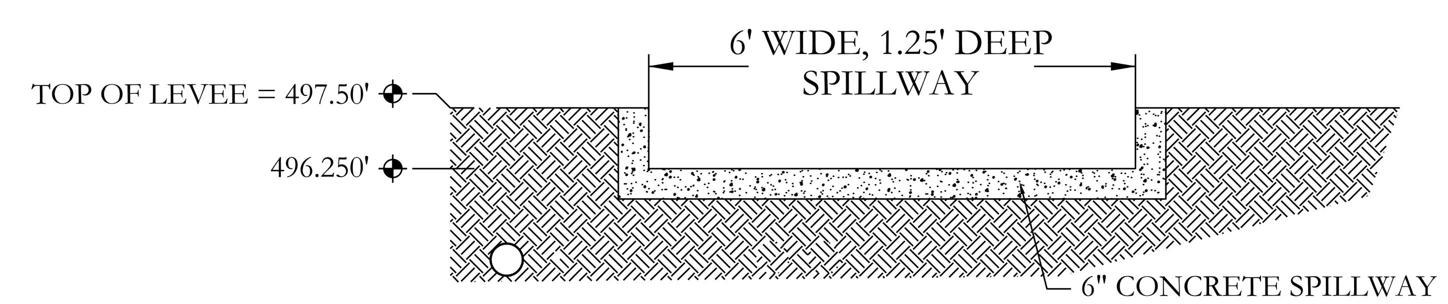


RETENTION POND-3

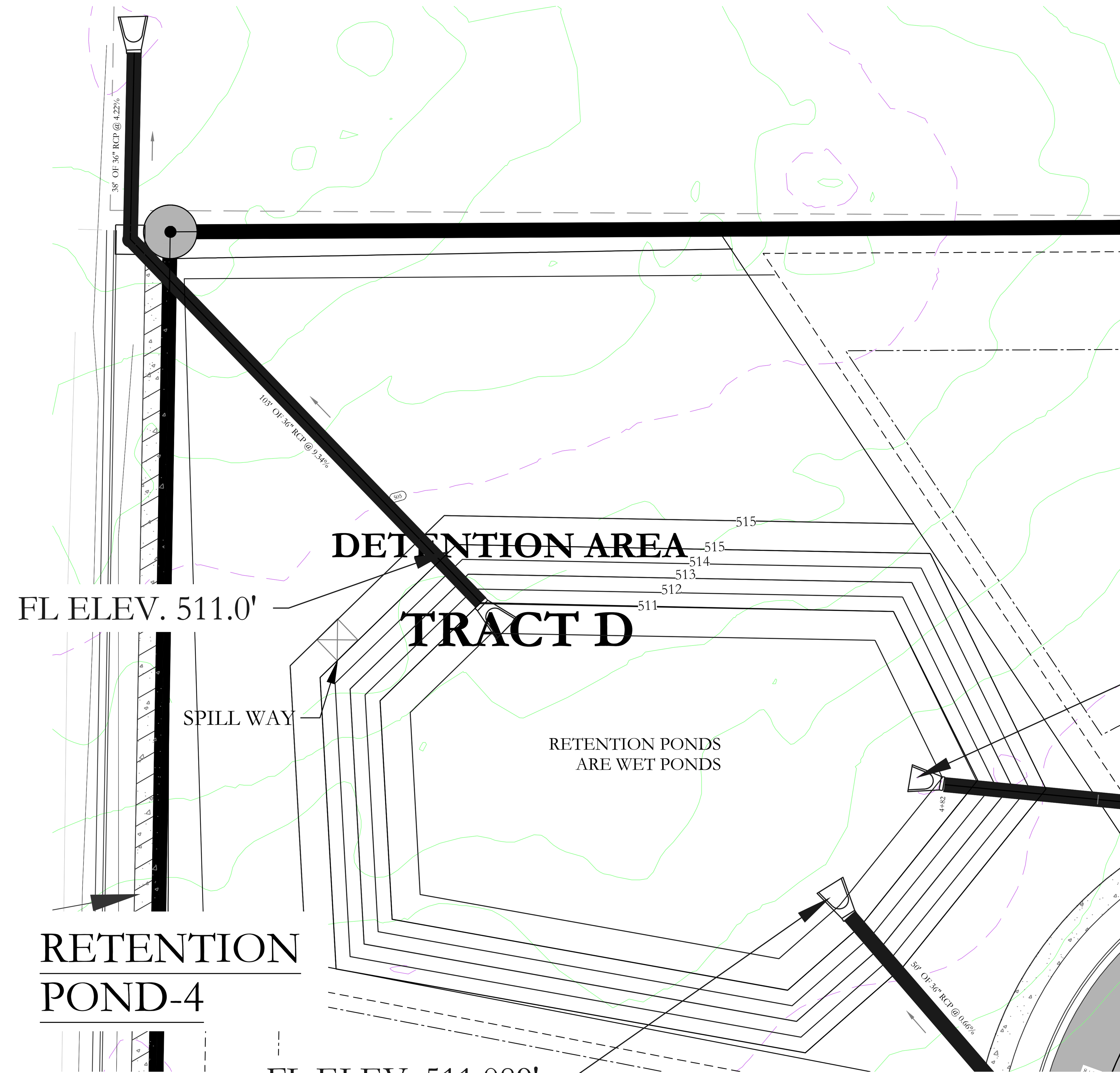


OUTLET SECTION
NTS

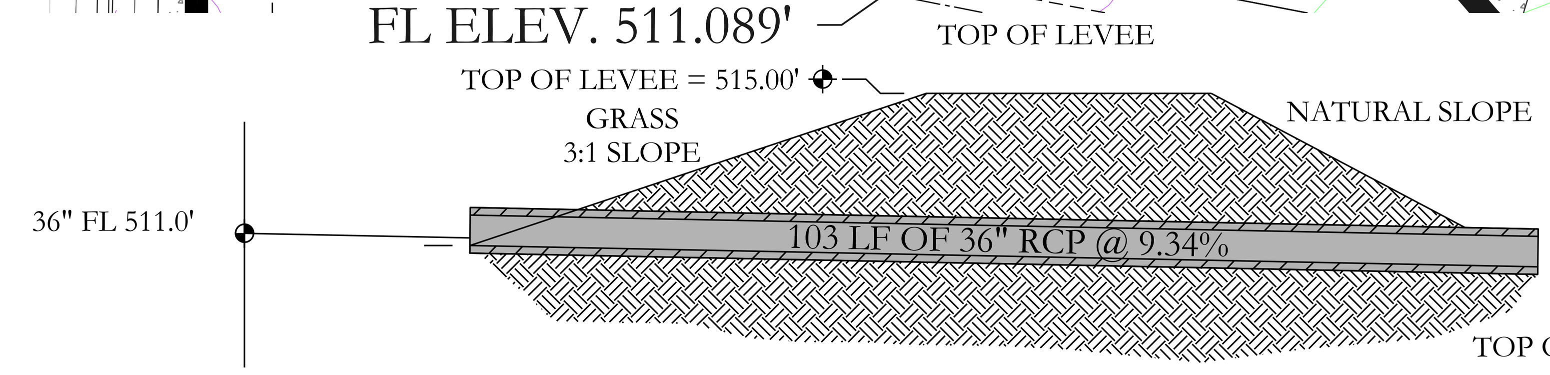


SPILLWAY END VIEW
NTS

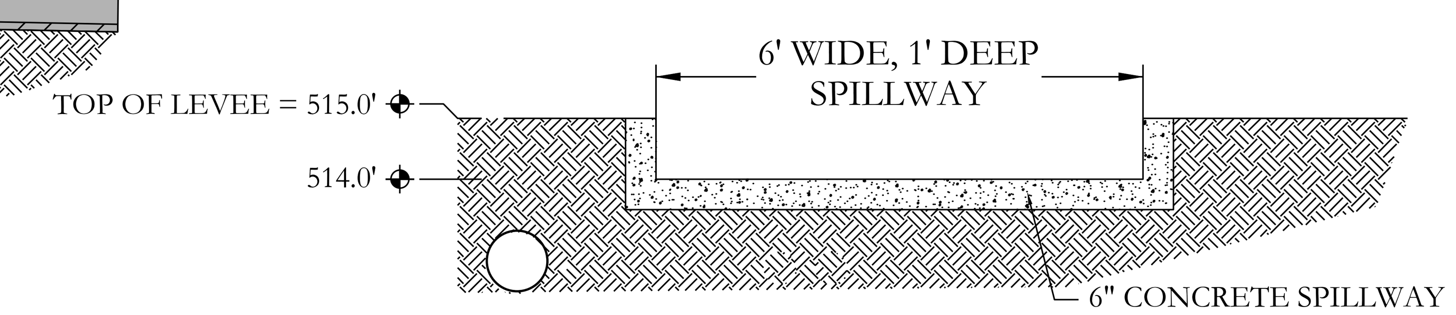
DETENTION POND-3



RETENTION POND-4



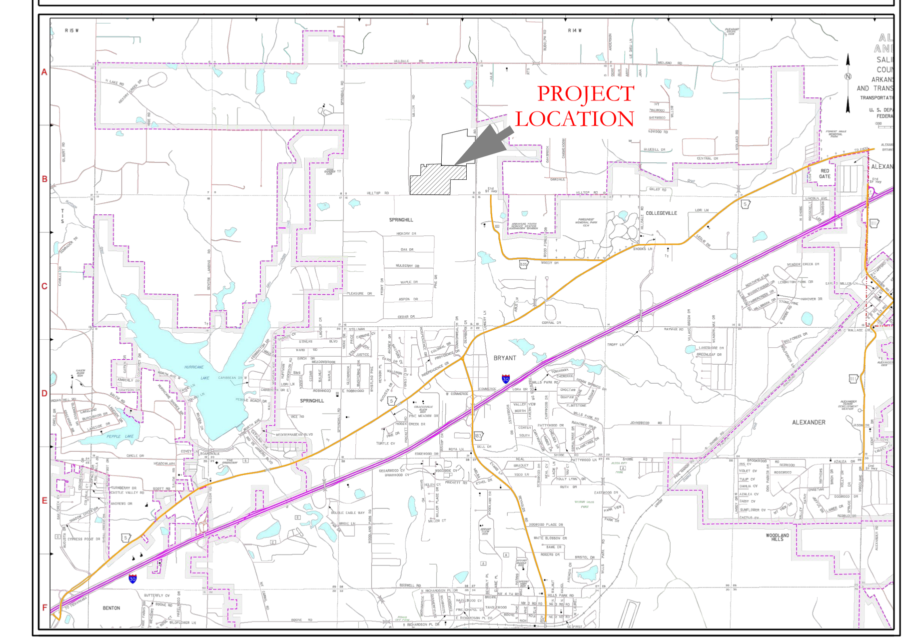
OUTLET SECTION
NTS



SPILLWAY END VIEW
NTS

RETENTION POND -4

VICINITY MAP:



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

NOTE:
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TOP BANKS OF ALL RETENTION PONDS WILL BE 6' WIDE .

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.

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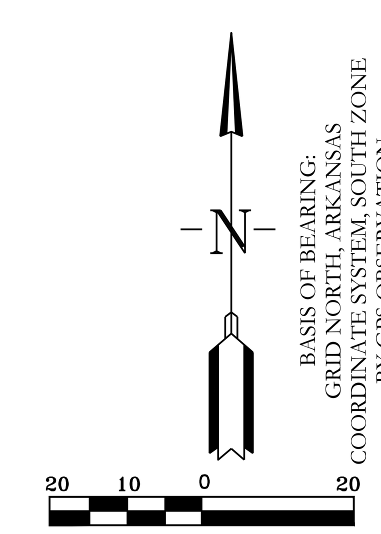
-Stabilization or re-grading of side slopes may be required periodically or after excessive rain events. Any disturbance of slopes should be reseeded or may require installation of erosion control materials until seeding can reestablish adequate grasses to prevent future erosion.

-Any other maintenance or repairs which would minimize other maintenance to the pond or outfall structures.

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

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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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.

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:	04/19/2023	CHECKED BY:	20-1341
SHEET:	C-6.0	SCALE: 1"=20'	

500	01S	14W	0	09	200	62	1762

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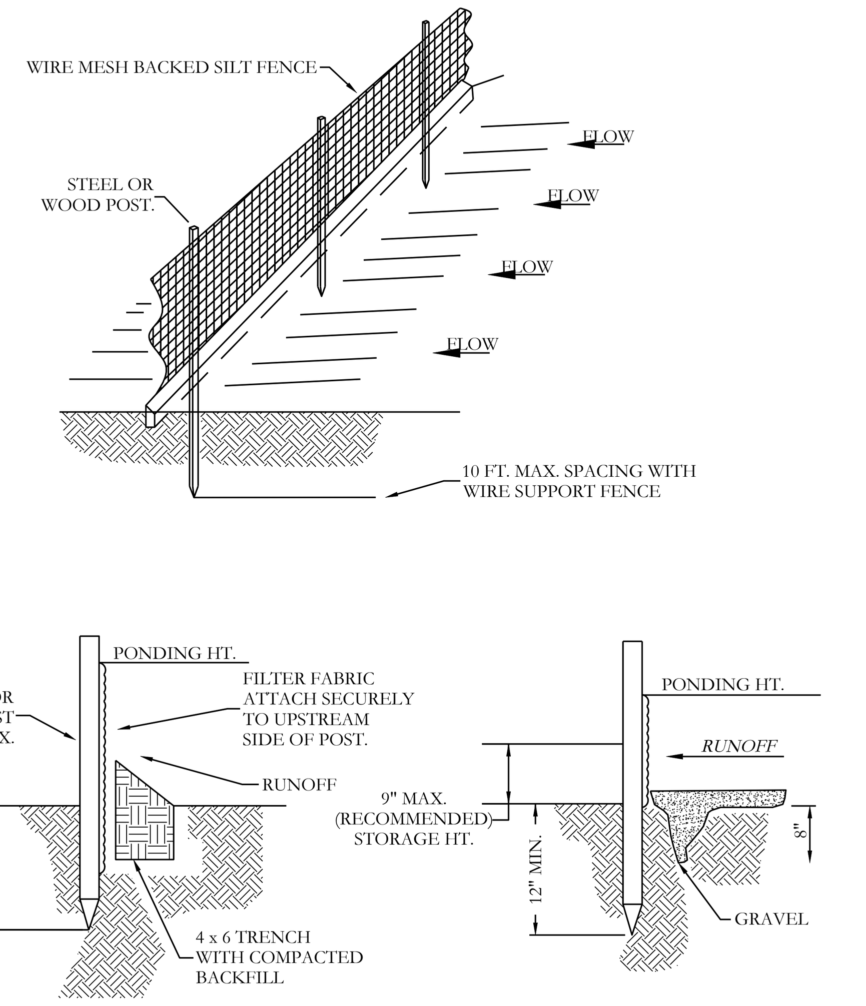


STANDARD DETAIL
TRENCH WITH NATIVE BACKFILL

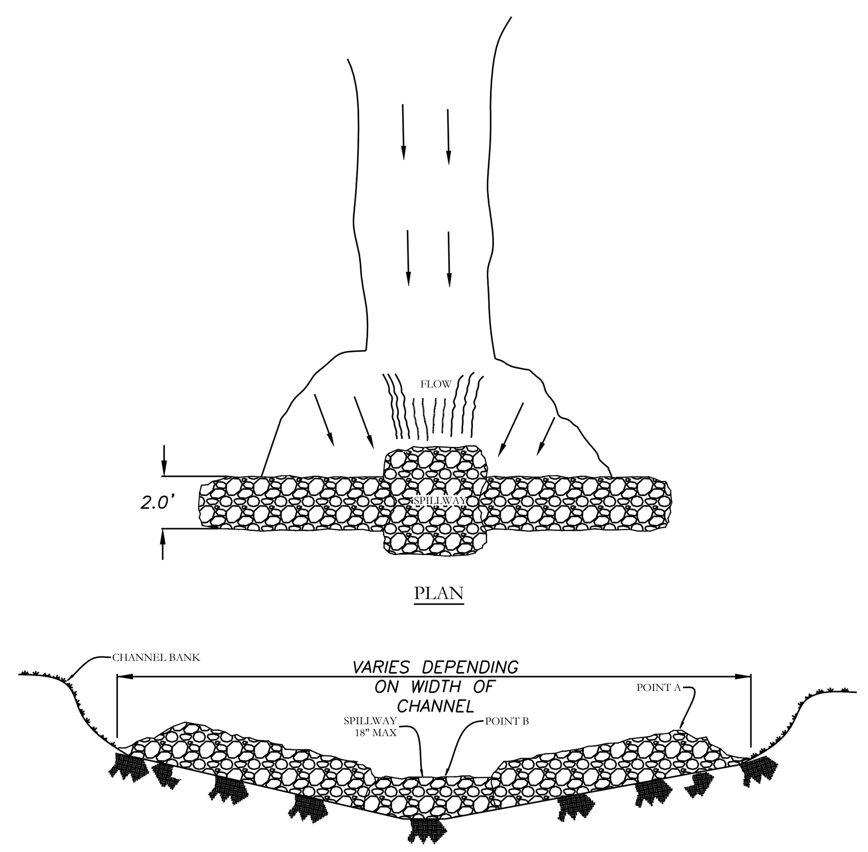
ALTERNATE DETAIL
TRENCH WITH GRAVEL

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



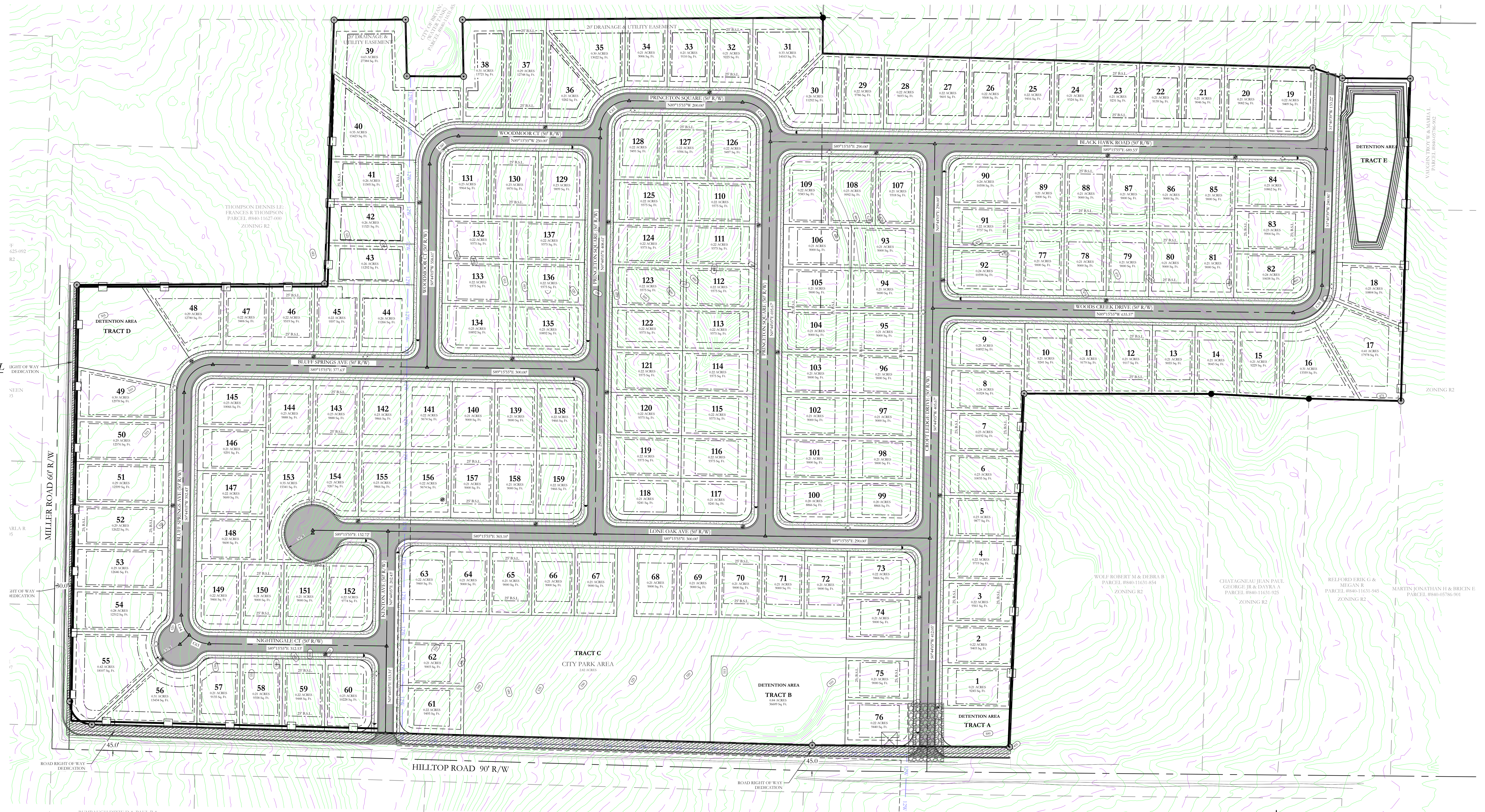
PLAN

VIEW LOOKING UPSTREAM

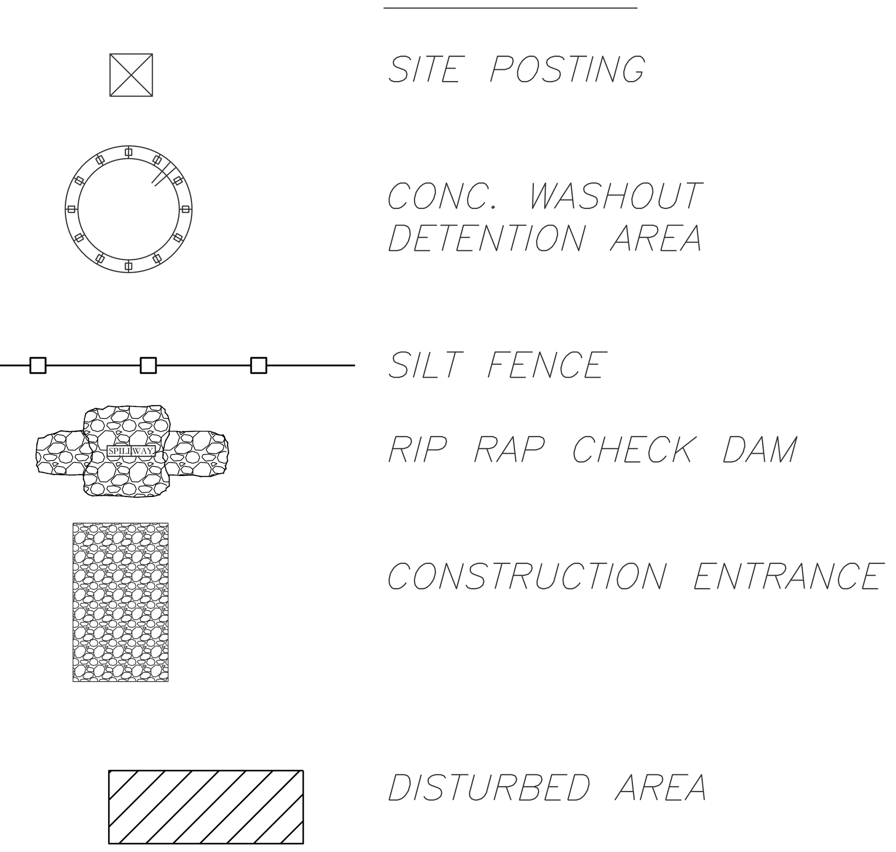
NOTES:

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



ERC LEGEND

	SITE POSTING
	CONC. WASHOUT DETENTION AREA
	SILT FENCE
	RIP RAP CHECK DAM
	CONSTRUCTION ENTRANCE
	DISTURBED AREA

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

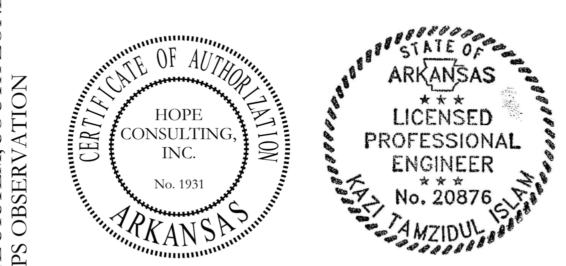
N

100' 50' 0 100'

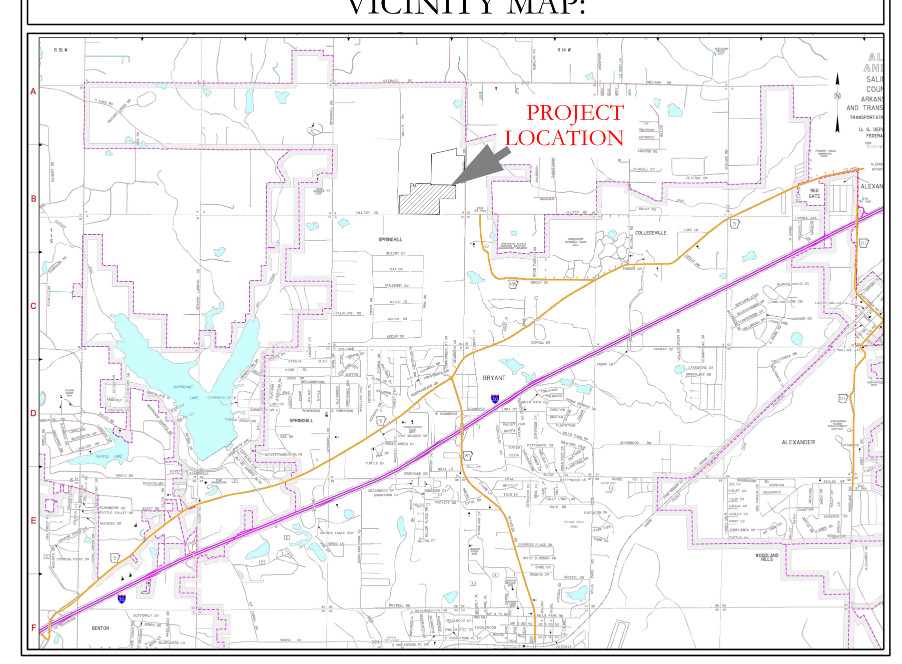
BASIS OF BEARING: GRID NORTH, ARKANSAS COORDINATE SYSTEM, SOUTH ZONE BY GPS OBSERVATION

N

100 50 0 100



VICINITY MAP:



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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:
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SHEET:	C-7.0	SCALE:	1" =100'	

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Comment Responses for Hilltop Landing

Public Works

1. Site will require a Stormwater Detention Maintenance Plan.
Response- Stormwater Detention Maintenance Plan is provided.

2. Developer will be required to submit signed and notarized Stormwater Infrastructure Warranty Bond SOP per Ordinance 2019-32.
Response- Stormwater Infrastructure Warranty Bond SOP will be provided.

3. Site will require a ADEQ Large Scale Development Permit.
Response- ADEQ Large Scale Development Permit is provided.

4. Ponds will be required to be labeled retention ponds.
Response- The comment has been addressed.

5. Top bank of both retention ponds shall be a minimum of 5' in width, this shall be noted on plans.
Response- The comment has been addressed.

6. Sediment ponds will be required during construction due to development exceeding 10 acres. If development is phased a SWPP will be required for each phase: 2019-31 Stormwater Management Manual Section 1100, 1102 Control of Erosion 1102.1 and 1102.2.
Response- SWPP is provided.

7. All sidewalk ramps shall meet ADA requirements with corrugated dome ramp requirements. (note is required on plans)
Response- The note has been added into the plans. (See Sheet C-5).

8. On Street Utility Legend (show detail for Street Lighting)
Response – Street light legend has been shown in the plat.

9. Erosion control plan will be required to be updated to show silt fencing on the interior of the subdivision.
Response- The comment has been addressed.

10. Erosion control plan will be required to be updated to show use of wire-backed silt fencing.
Response- The comment has been addressed.

11. Discuss access easements to all retention ponds.
Response- All retention ponds have access to the road.

Engineering

1. Give status on rerouting of sanitary sewer in Creekside Cove (Dawson Point) to allow for capacity increase. Sanitary sewer can not be developed until sewer is rerouted around Creek side Cove.
Response- Process is under going to get easements for future sewer improvement . Downstream sewer capacity will be increased before the construction of this project.

4. Show water and sewer to be steel encased under any RCP (Culverts/Drainage) per sections 3100-9-3.18,A for sewer and 4100-13-3.19,A for water.
Response- Water and sewer will be encased under any RCP.

5. 12" Water line must be Ductile Iron.
Response- There will be no 12" proposed water line.

6. 8" Water must be C900 or SDR 14.
Response- The comment has been addressed.

8. Show sidewalk design on half street improvements on Hilltop and Miller road per street specifications section 5-4 Part 5.10.
Response- The comment has been addressed.

Planning

1. Rezoning Procedures (Property should already be zoned R-2 residential)
Response- Rezoning procedure has been done.

2. Sheet C-5, Sidewalk spec needs to be corrected to show sidewalks 5ft in width.
Response- The comment has been addressed.

3. Sidewalks not shown along Hilltop Road or Miller Road
Response- The side walks have been shown along Hilltop Road or Miller Road.

4. Preliminary Plat Fees
Response- The fees will be provided.

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

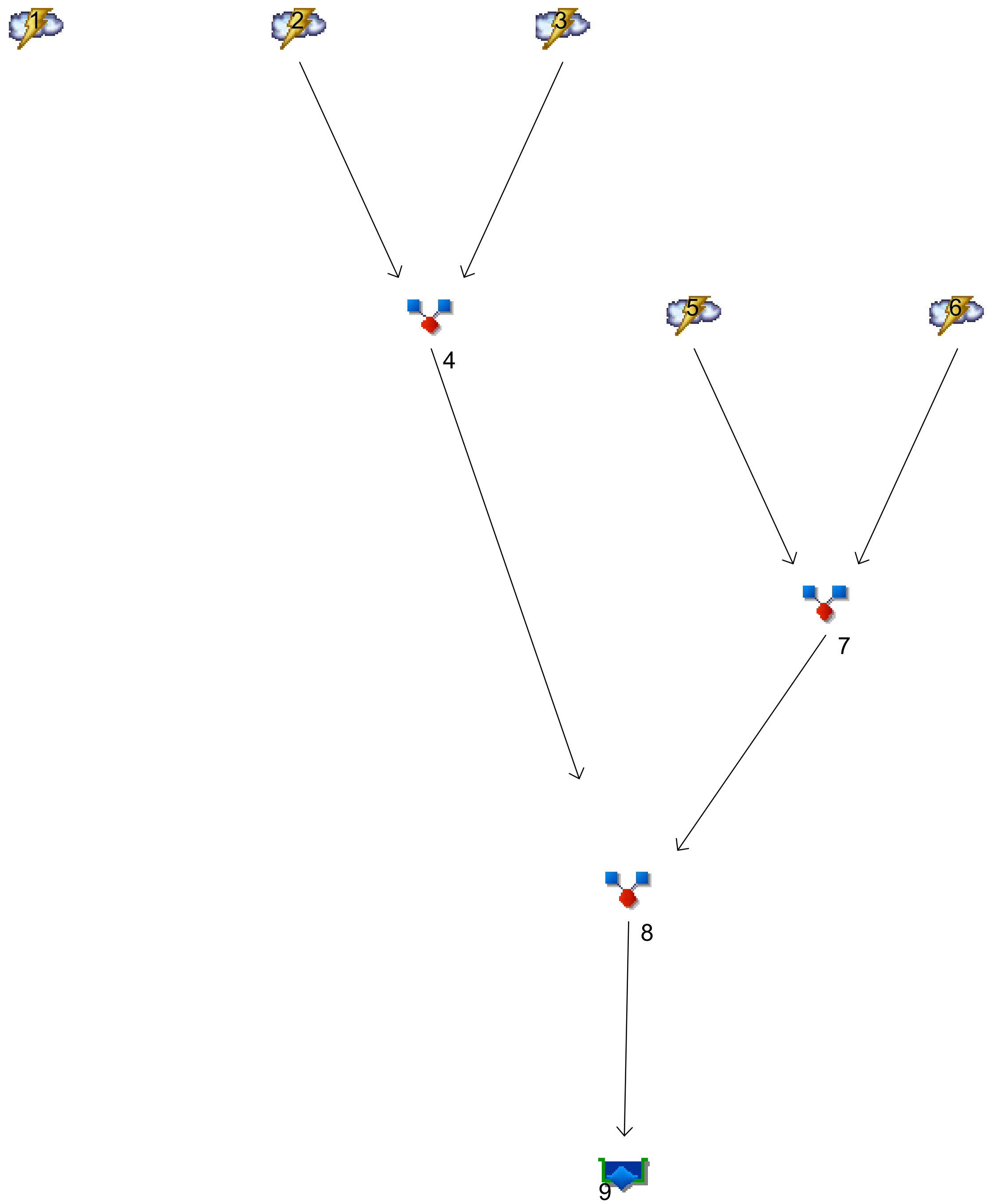
CONCLUSION

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

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



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

Project: drainage one pond.gpw

Thursday, 10 / 6 / 2022

Multi-Hydrograph Plot

Hyd. No. 1

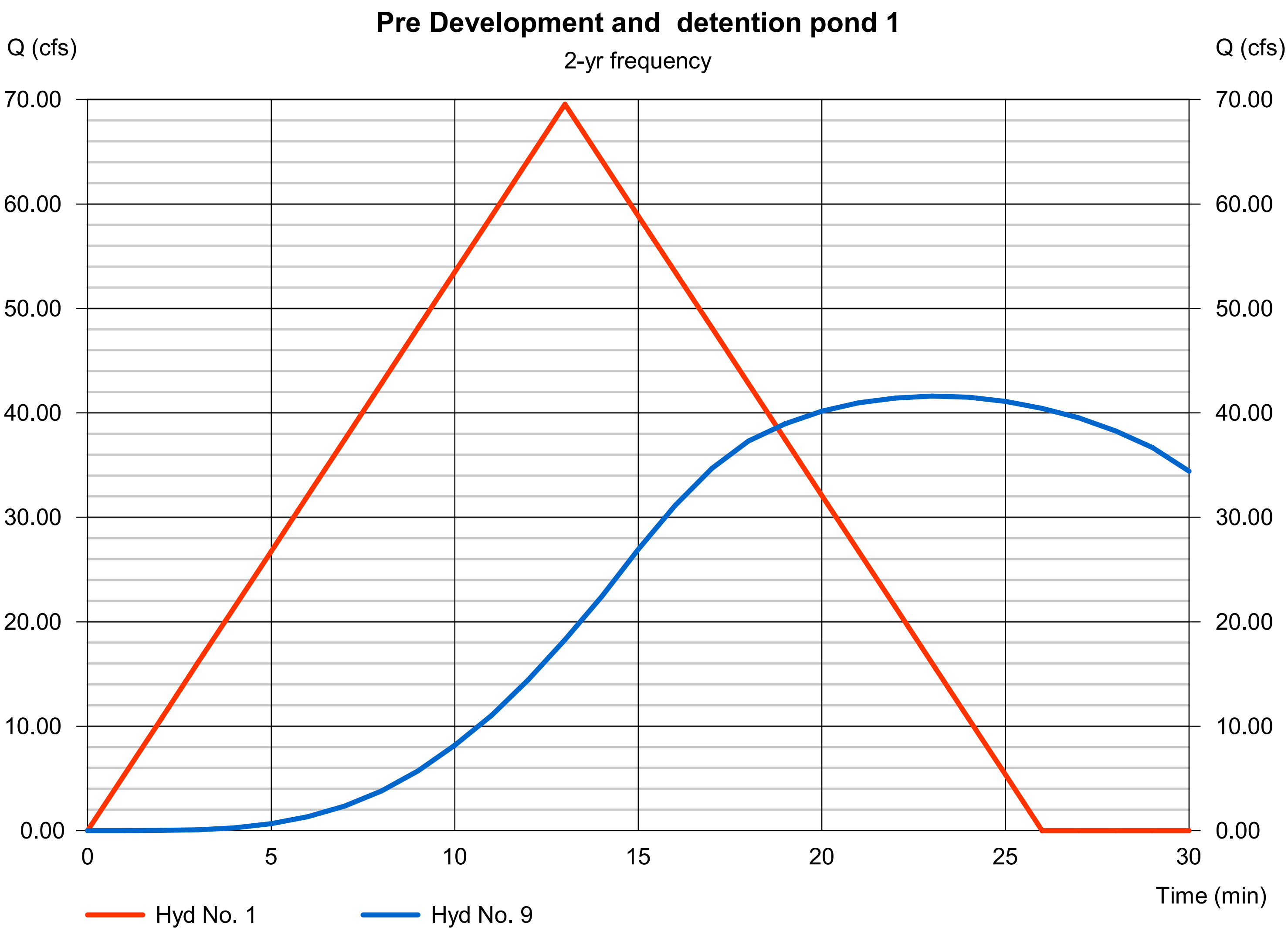
Pre Development

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

Hyd. No. 1

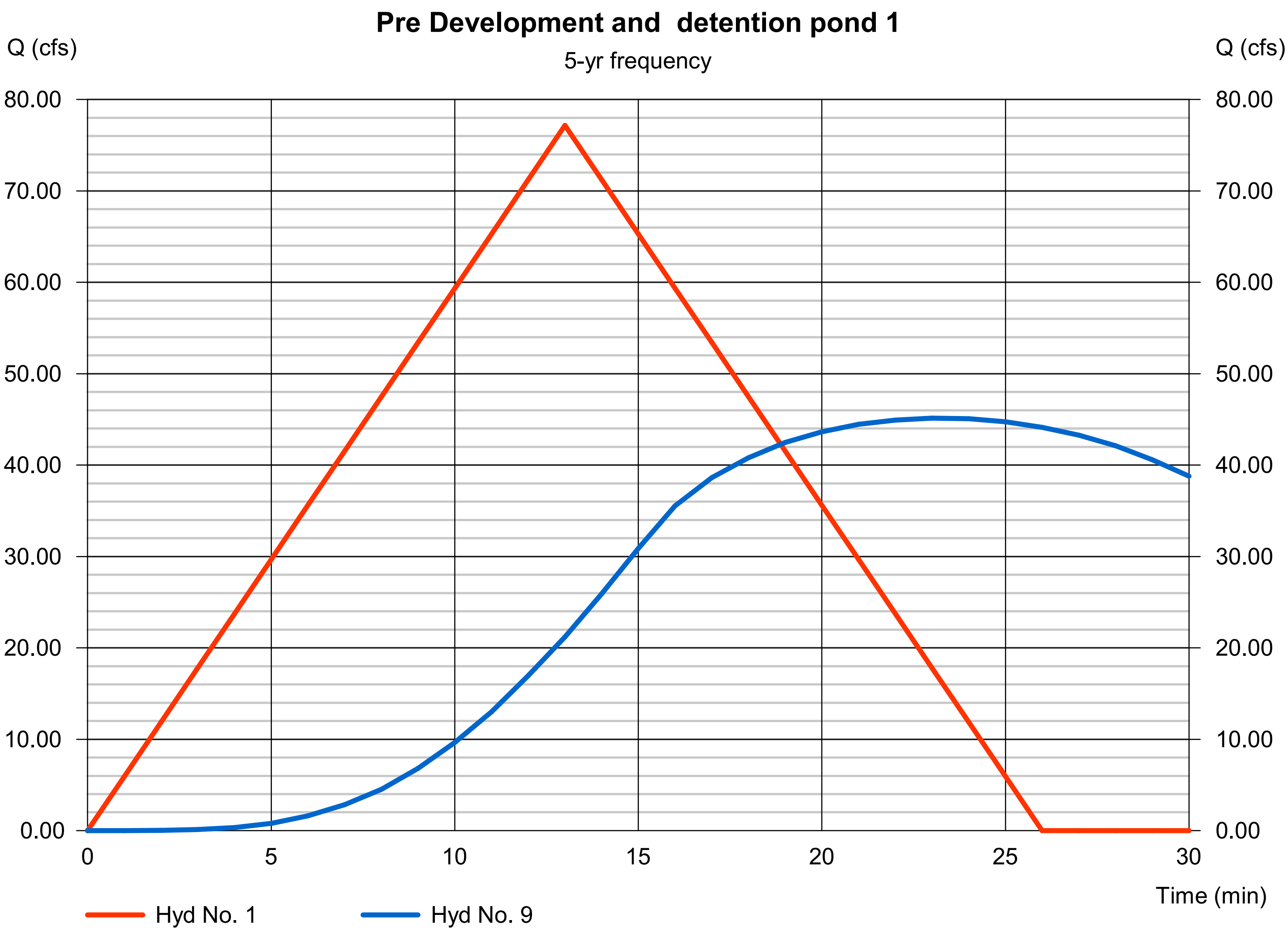
Pre Development

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

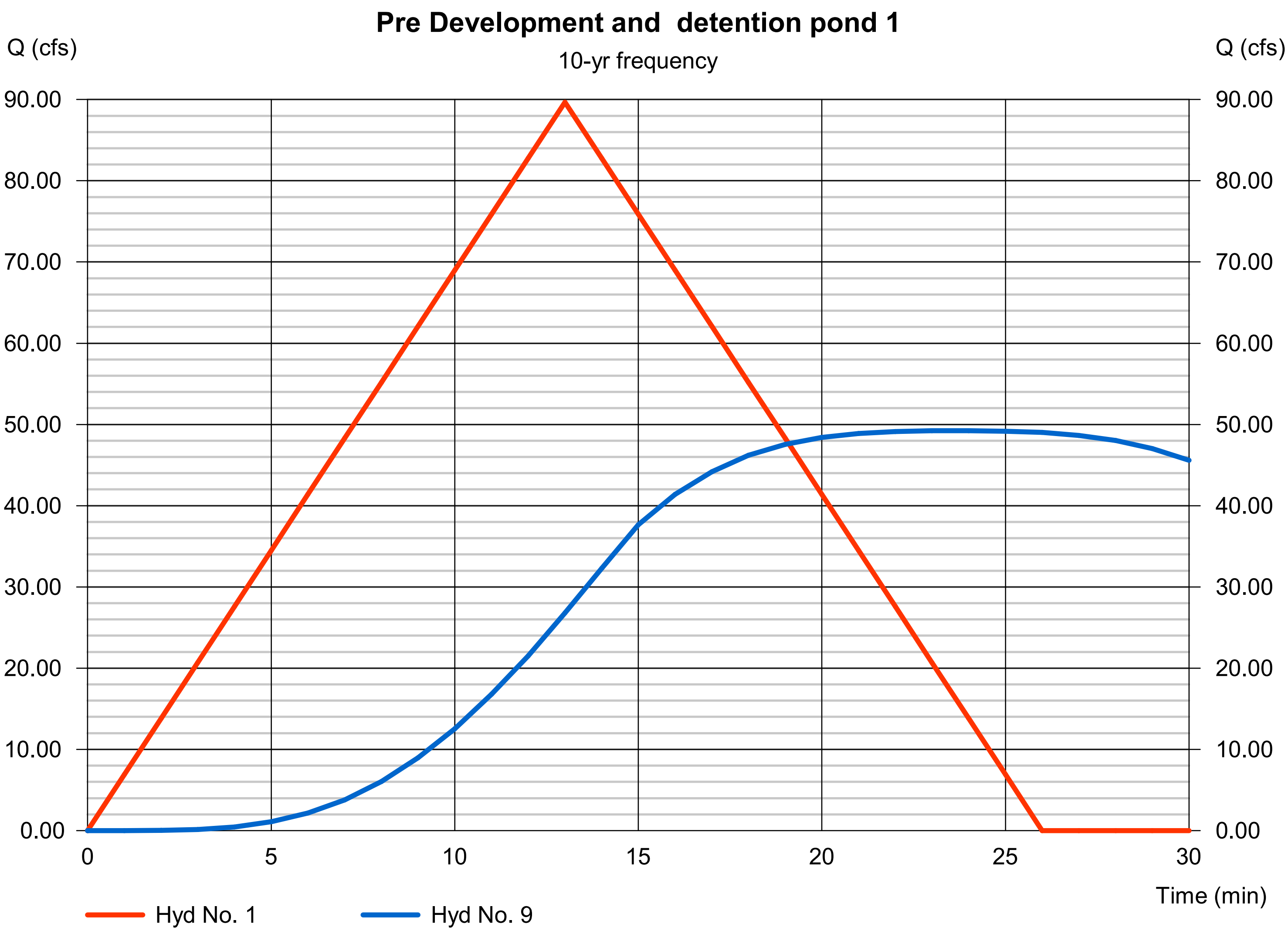
Pre Development

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

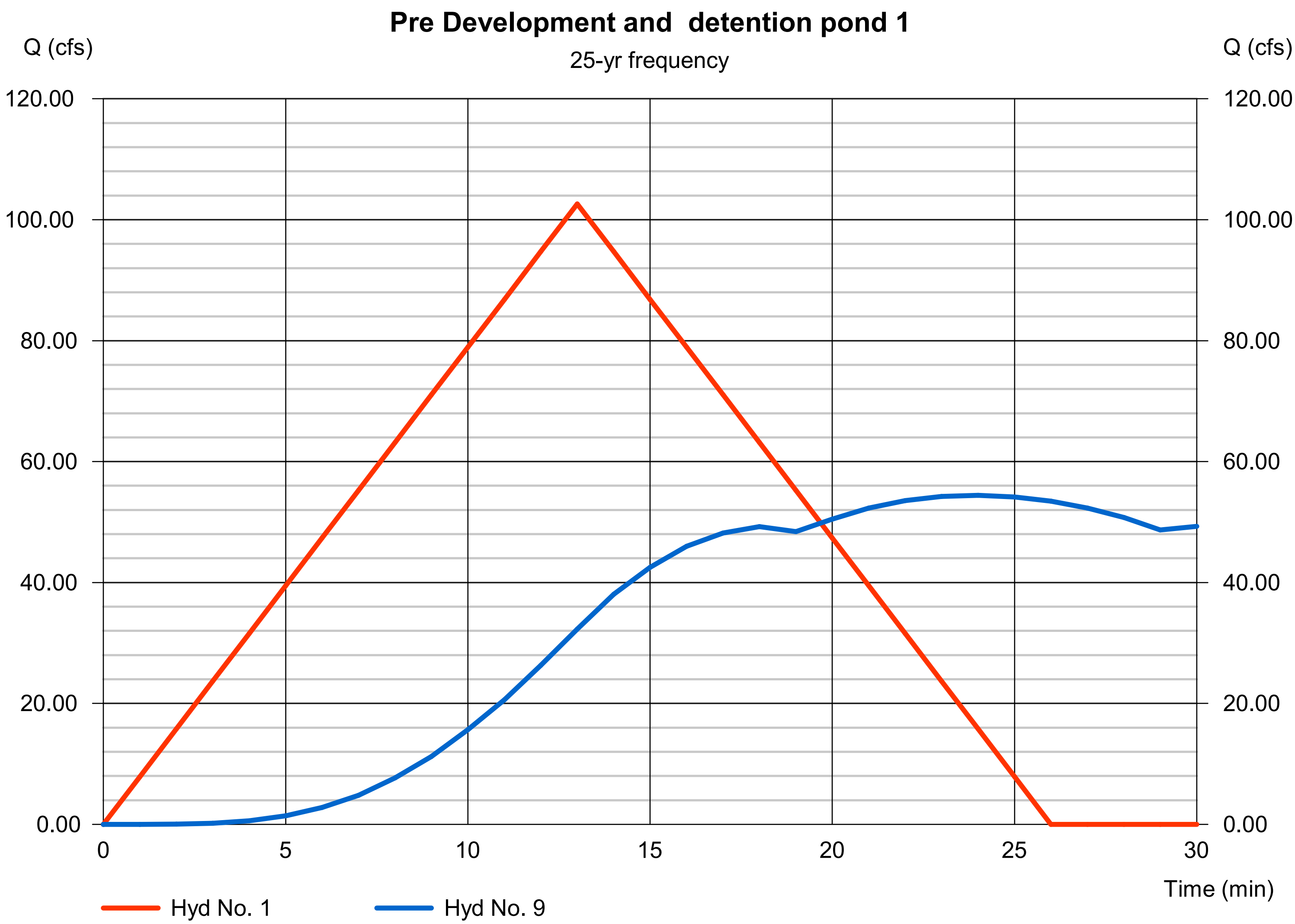
Pre Development

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

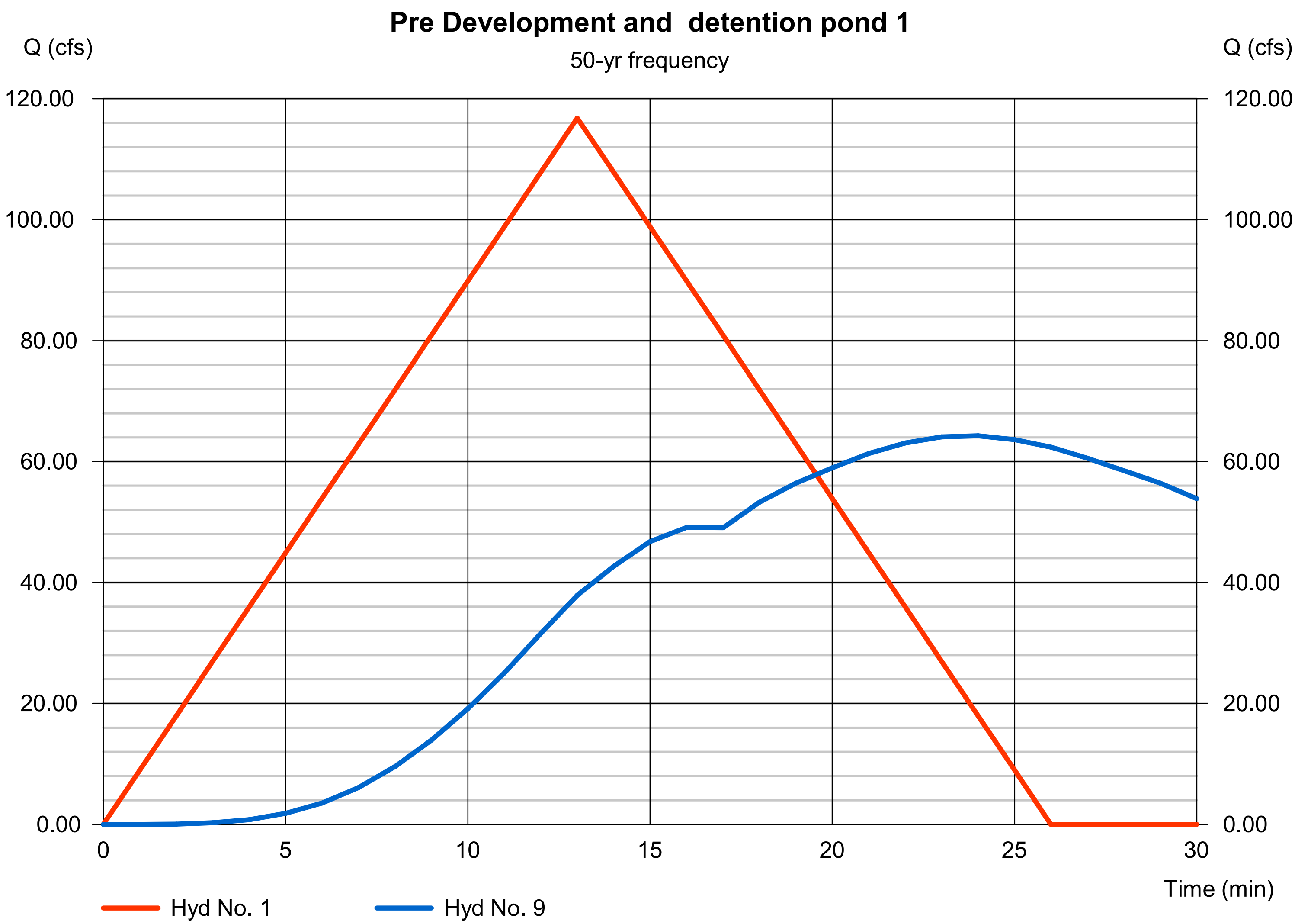
Pre Development

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

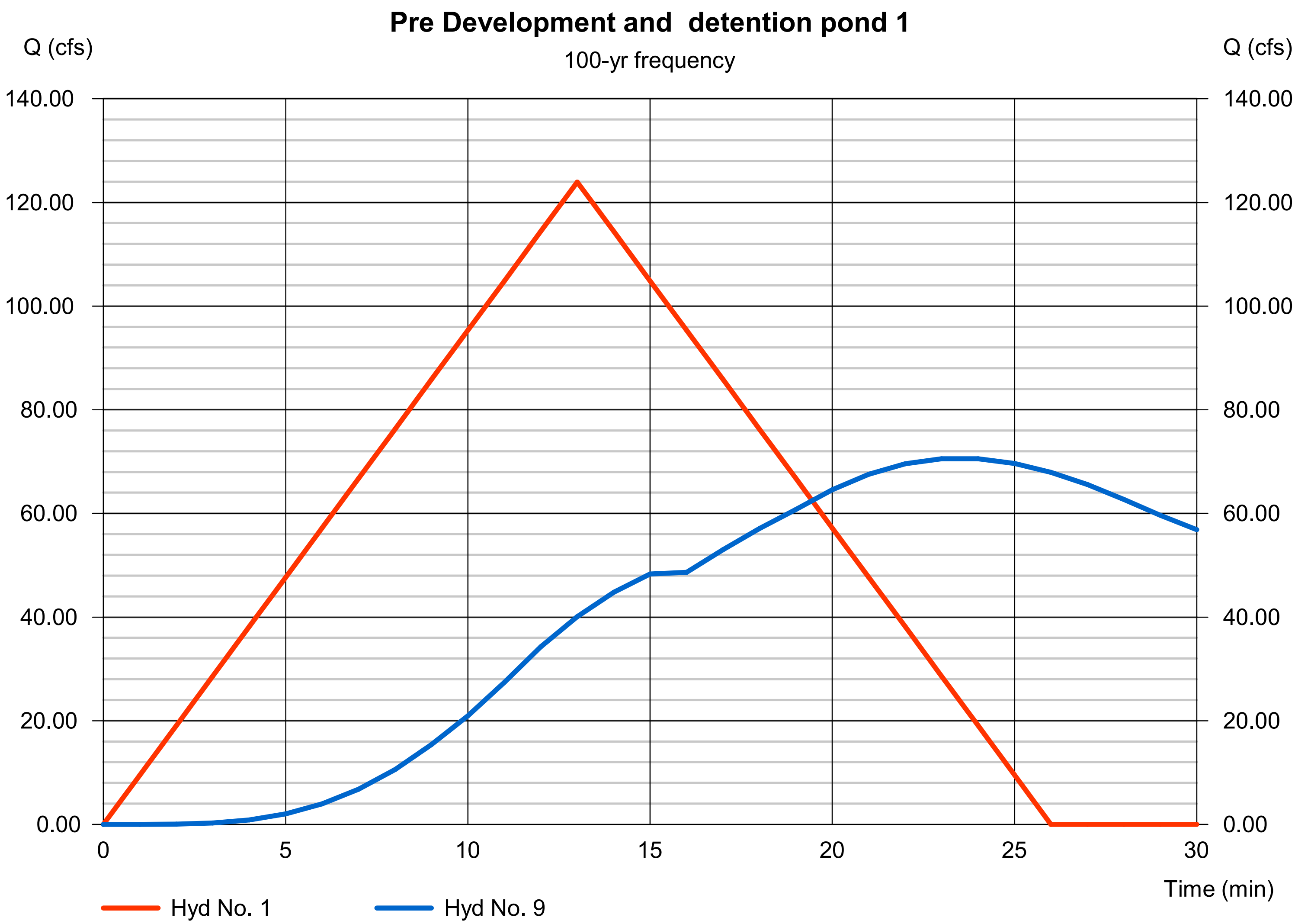
Pre Development

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

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

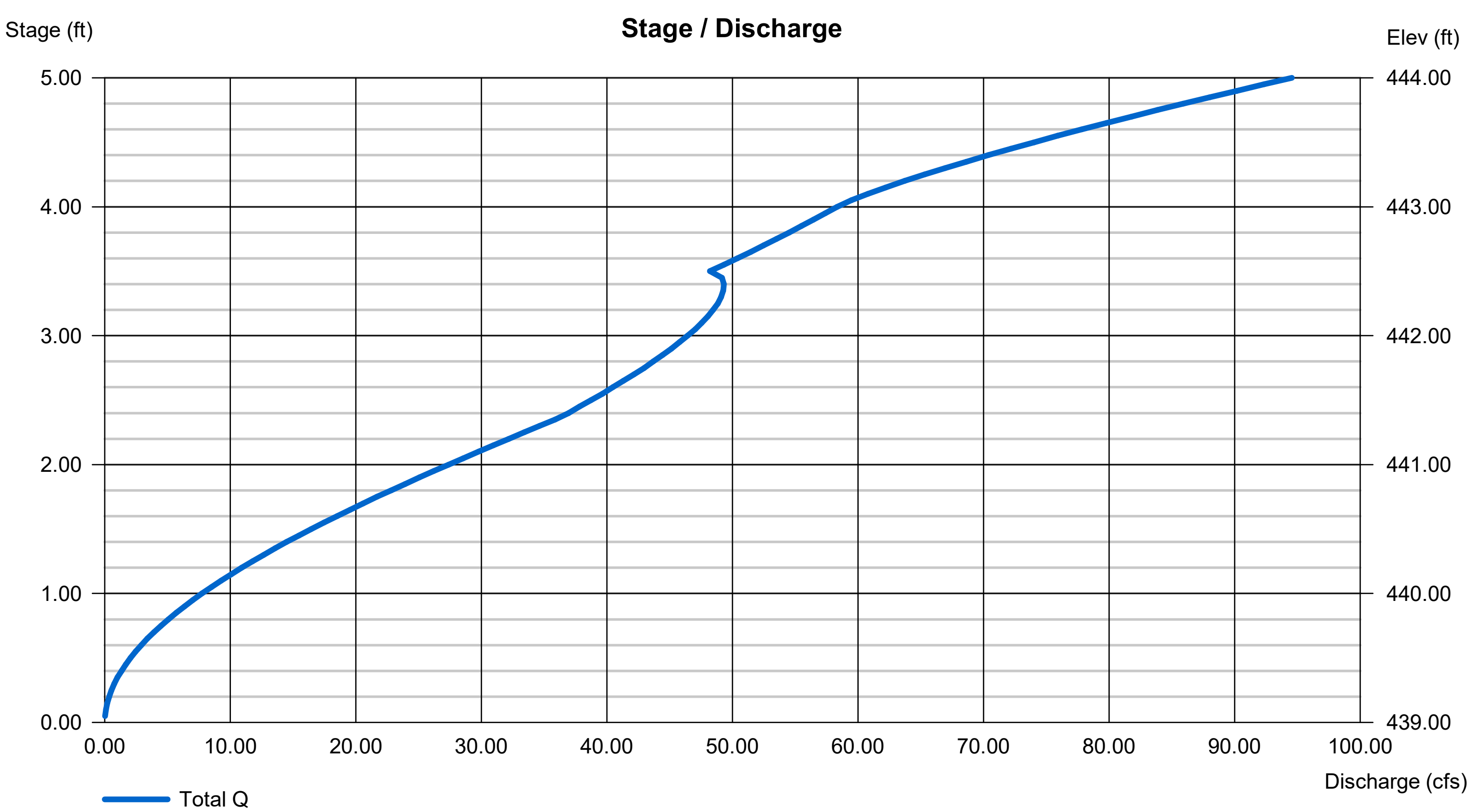
	[A]	[B]	[C]	[PrfRsr]
Rise (in)	= 42.00	Inactive	Inactive	0.00
Span (in)	= 42.00	0.00	0.00	0.00
No. Barrels	= 1	0	0	0
Invert El. (ft)	= 439.00	0.00	0.00	0.00
Length (ft)	= 215.00	0.00	0.00	0.00
Slope (%)	= 0.50	0.00	0.00	n/a
N-Value	= .013	.013	.013	n/a
Orifice Coeff.	= 0.60	0.60	0.60	0.60
Multi-Stage	= 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

drainage one pond.gpw	Return Period: 2 Year	Thursday, 10 / 6 / 2022

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

drainage one pond.gpw	Return Period: 25 Year	Thursday, 10 / 6 / 2022

Hydrograph Summary Report

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

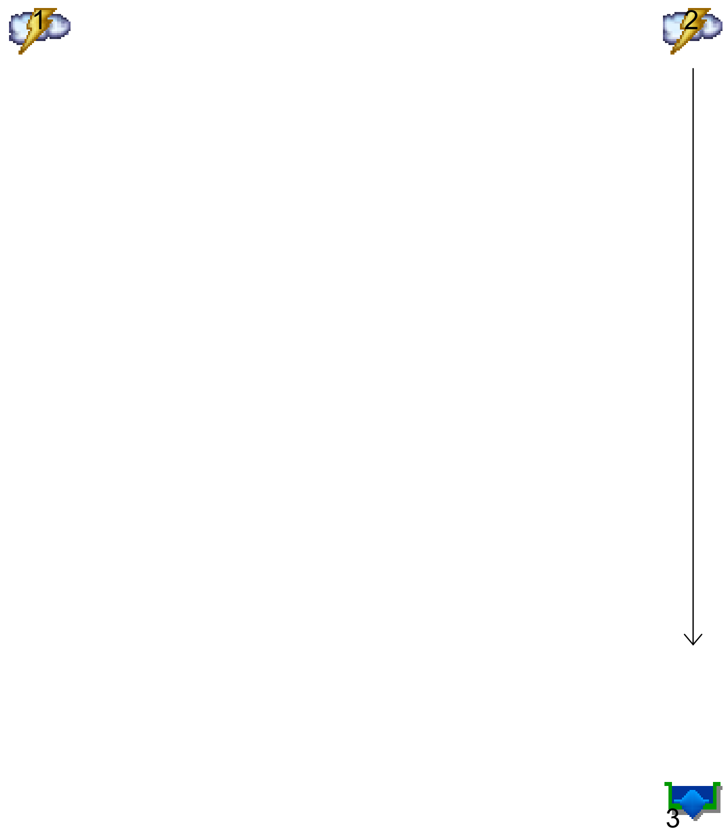
Hyd. No.	Hydrograph type (origin)	Peak flow (cfs)	Time interval (min)	Time to Peak (min)	Hyd. volume (cuft)	Inflow hyd(s)	Maximum elevation (ft)	Total strge used (cuft)	Hydrograph Description
1	Rational	116.82	1	13	91,121	------	------	------	Pre Development
2	Rational	101.77	1	15	91,590	------	------	------	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

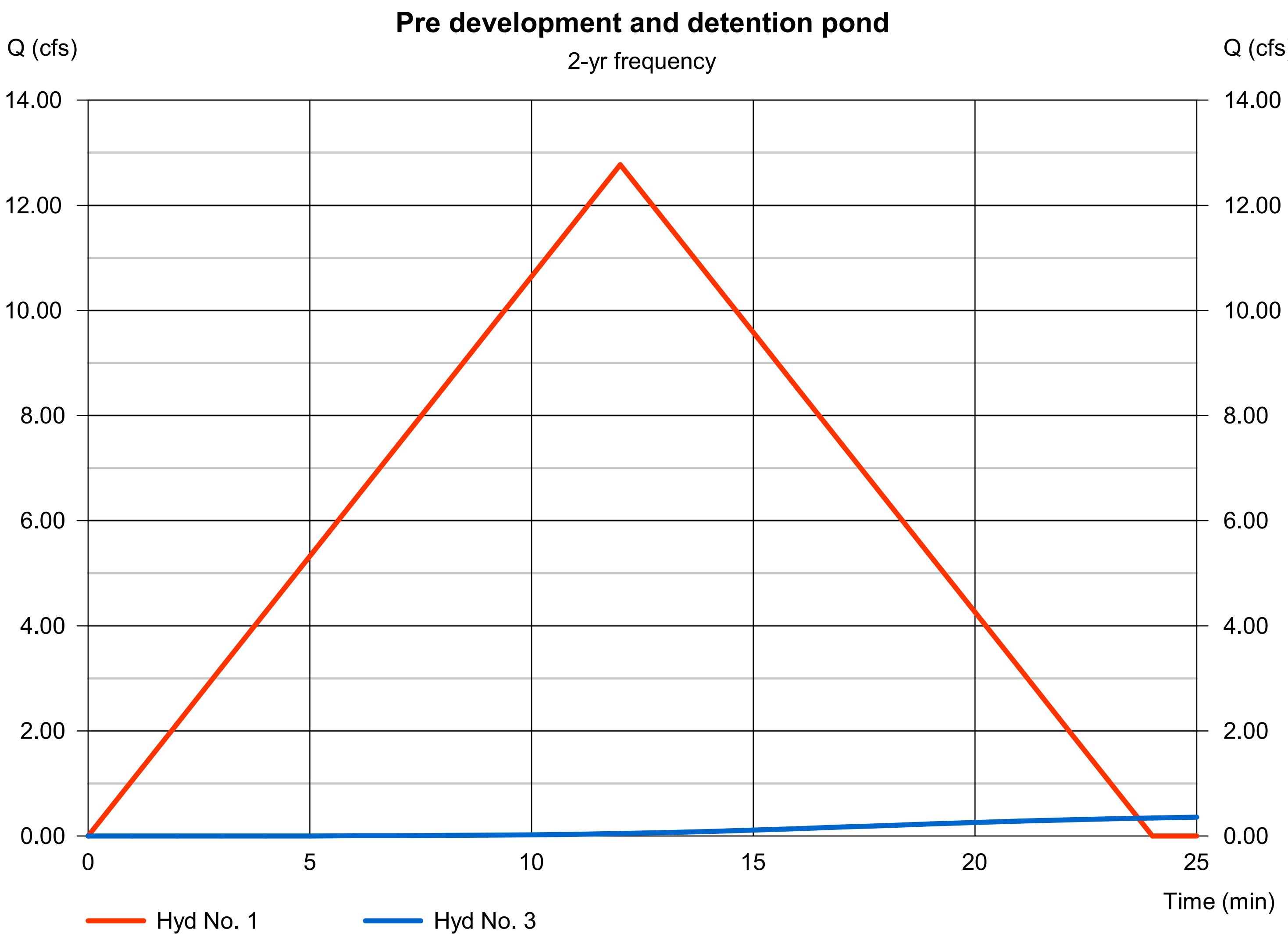
Pre development

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

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

Hyd. No. 1

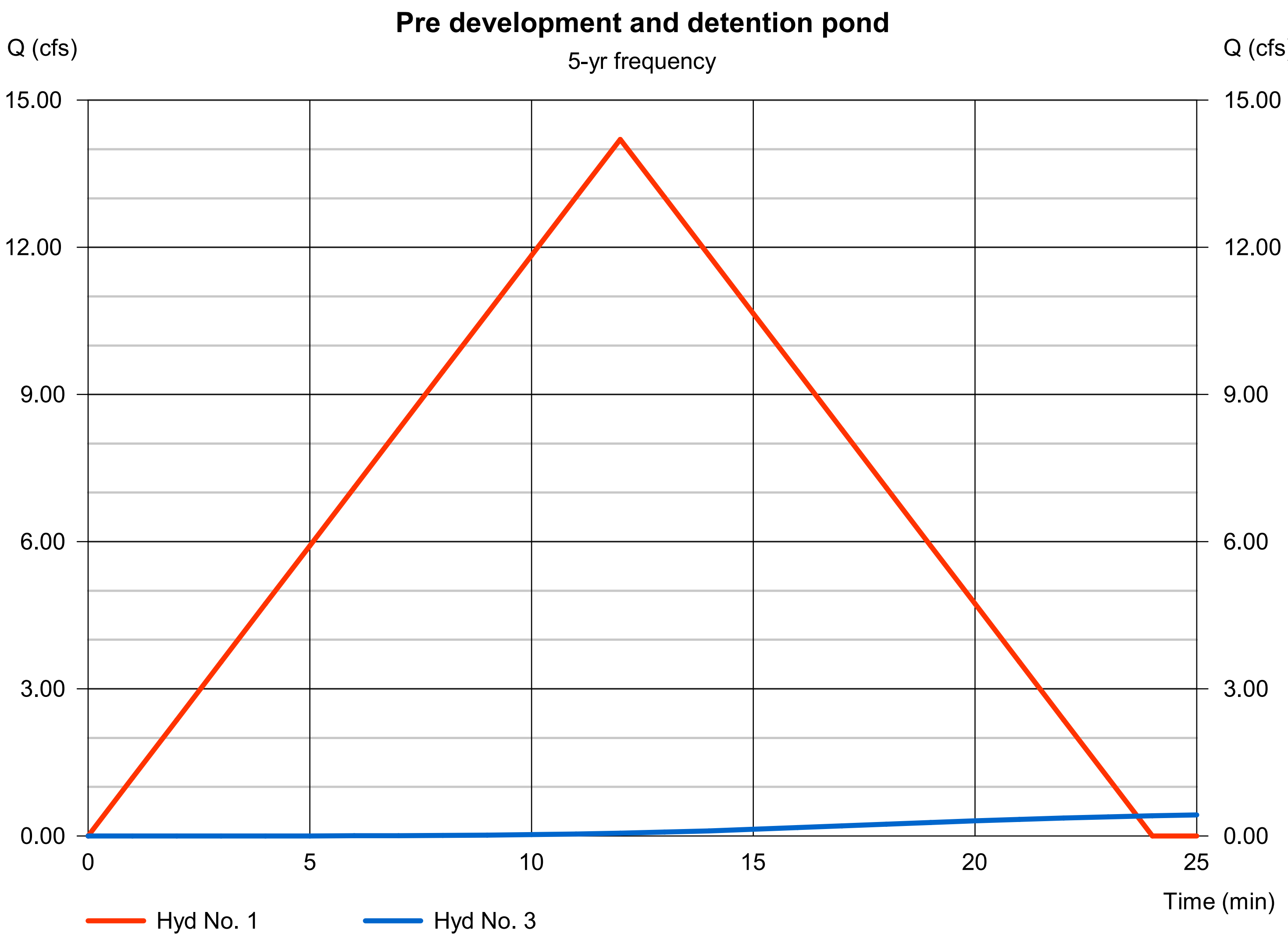
Pre development

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

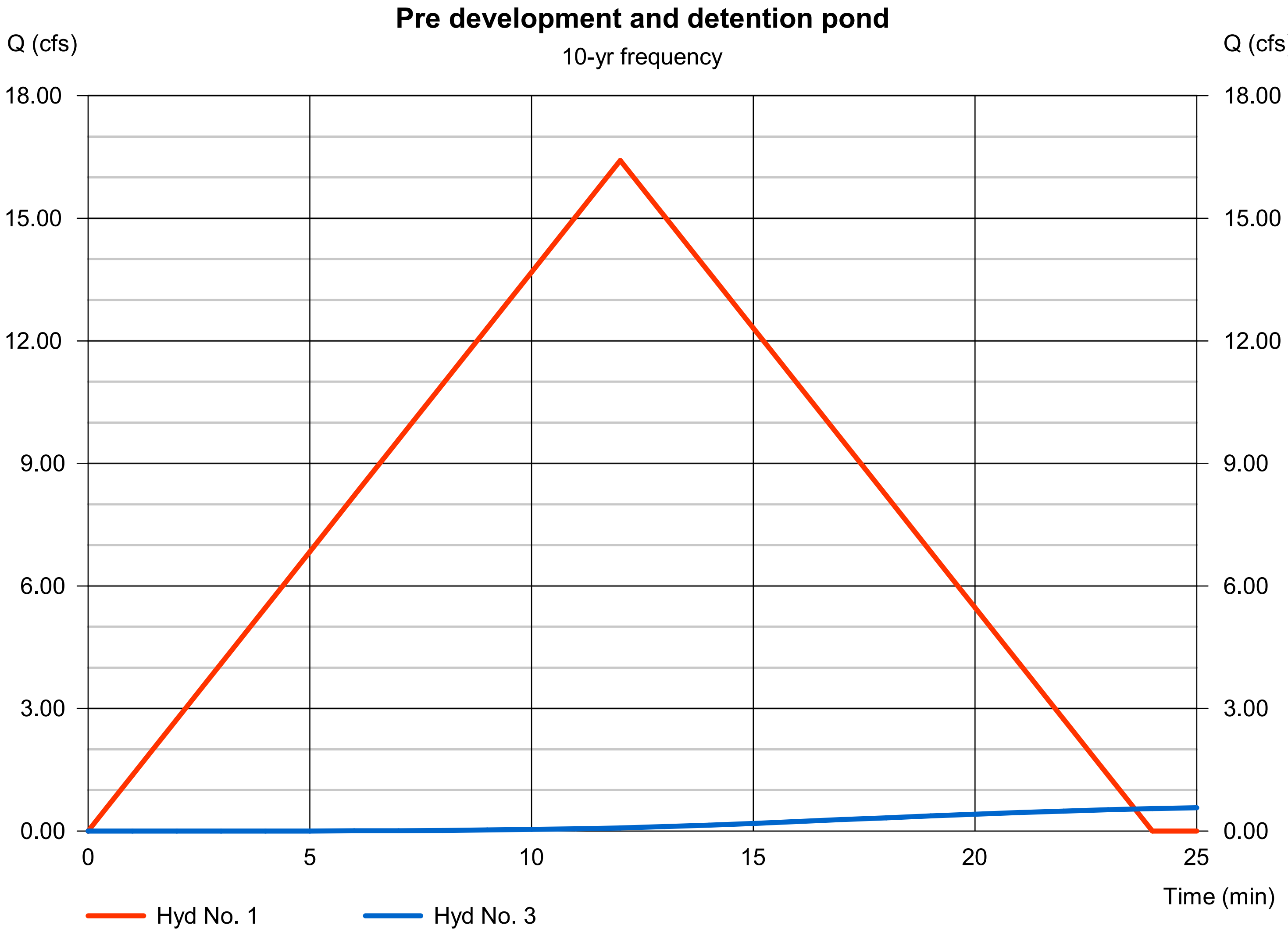
Pre development

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

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

Hyd. No. 1

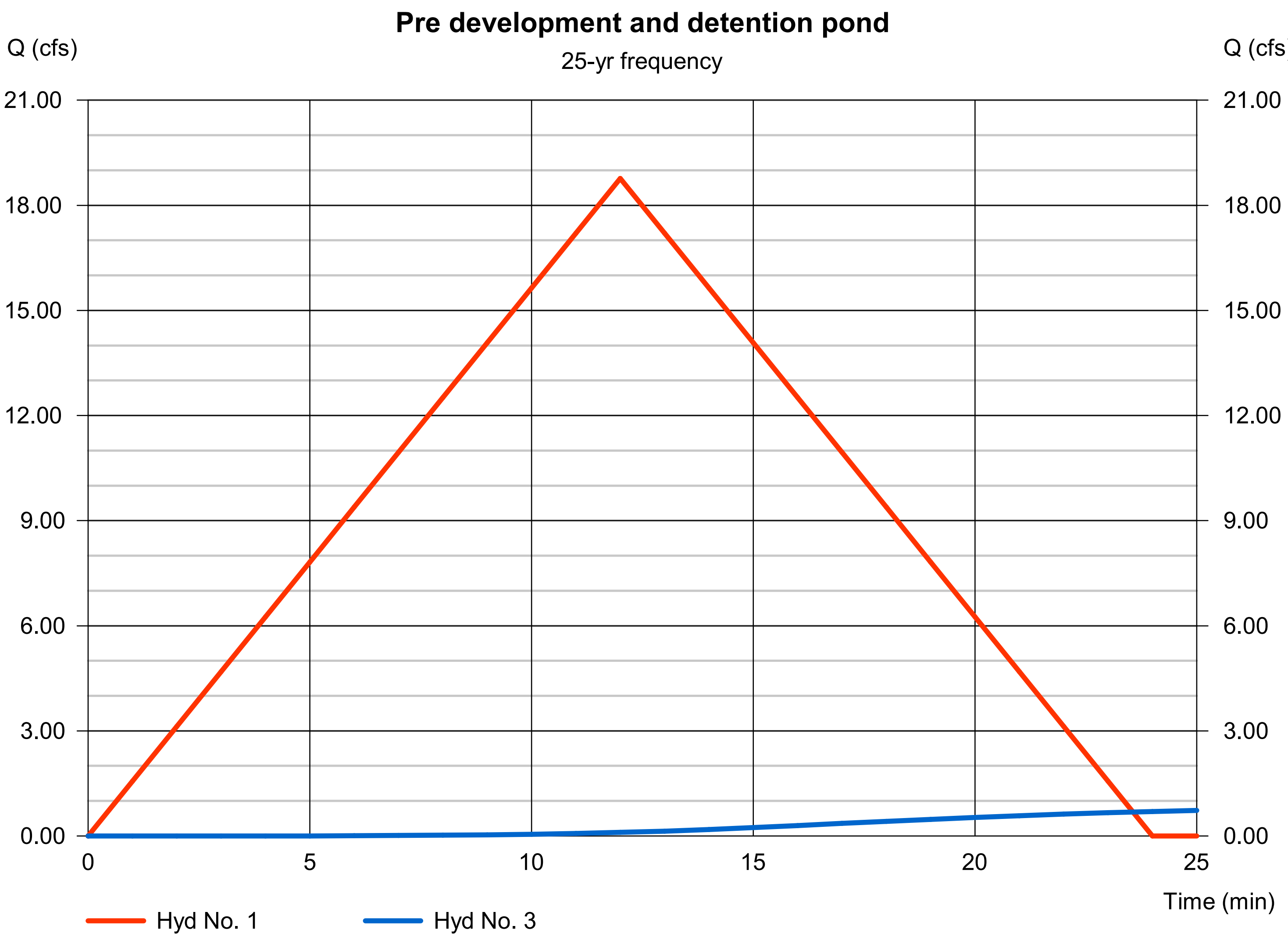
Pre development

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

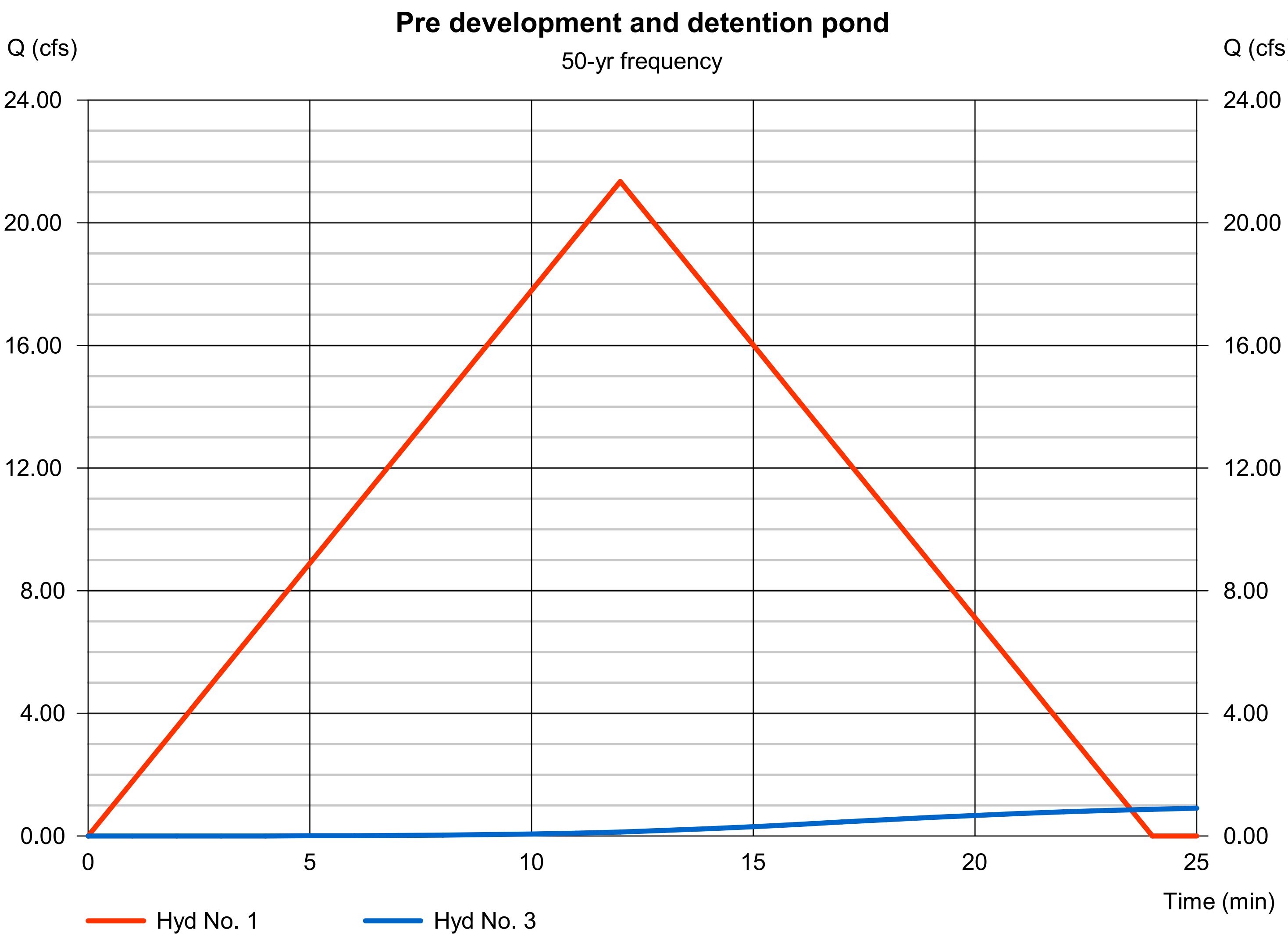
Pre development

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

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

Hyd. No. 1

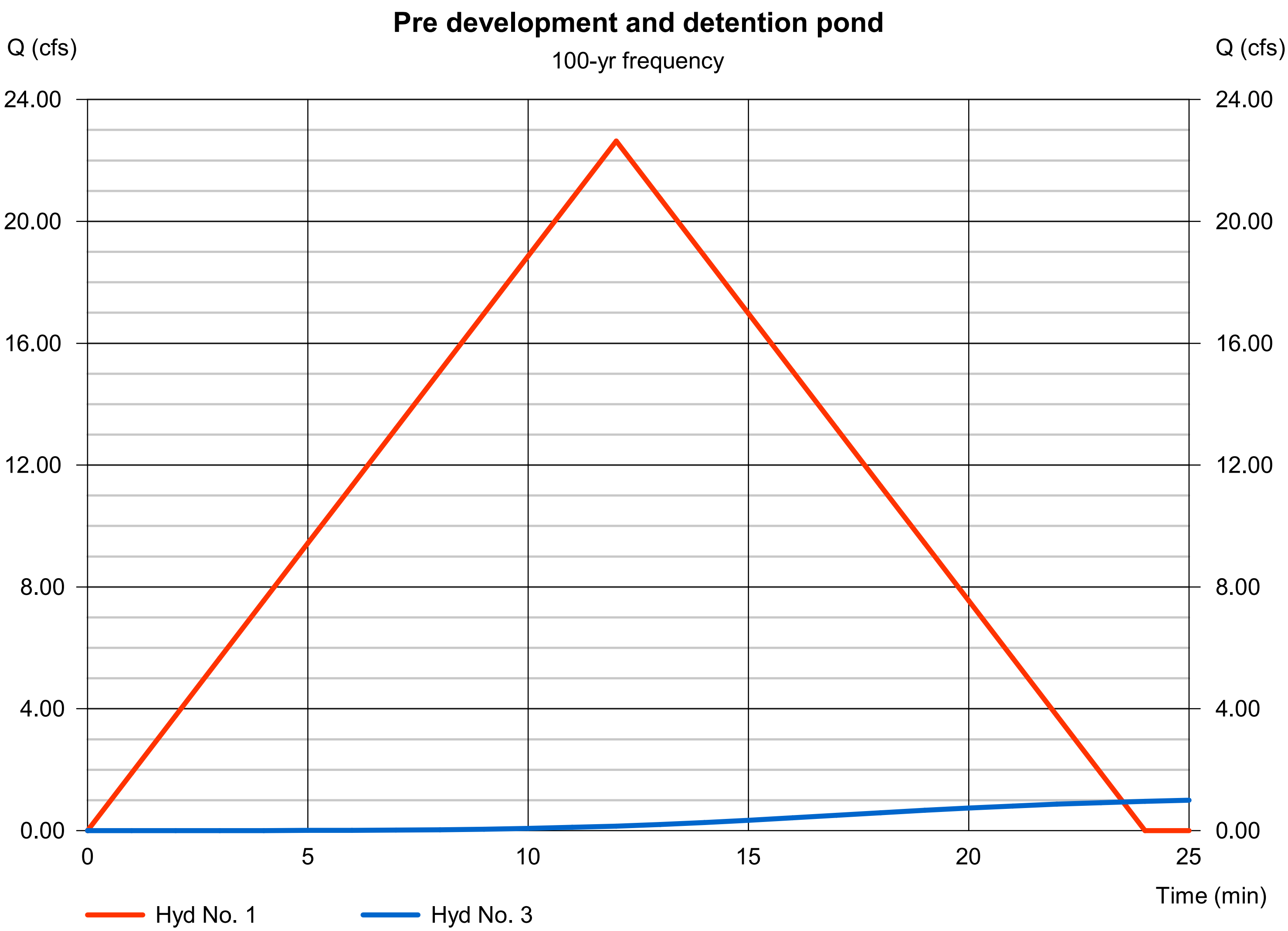
Pre development

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

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

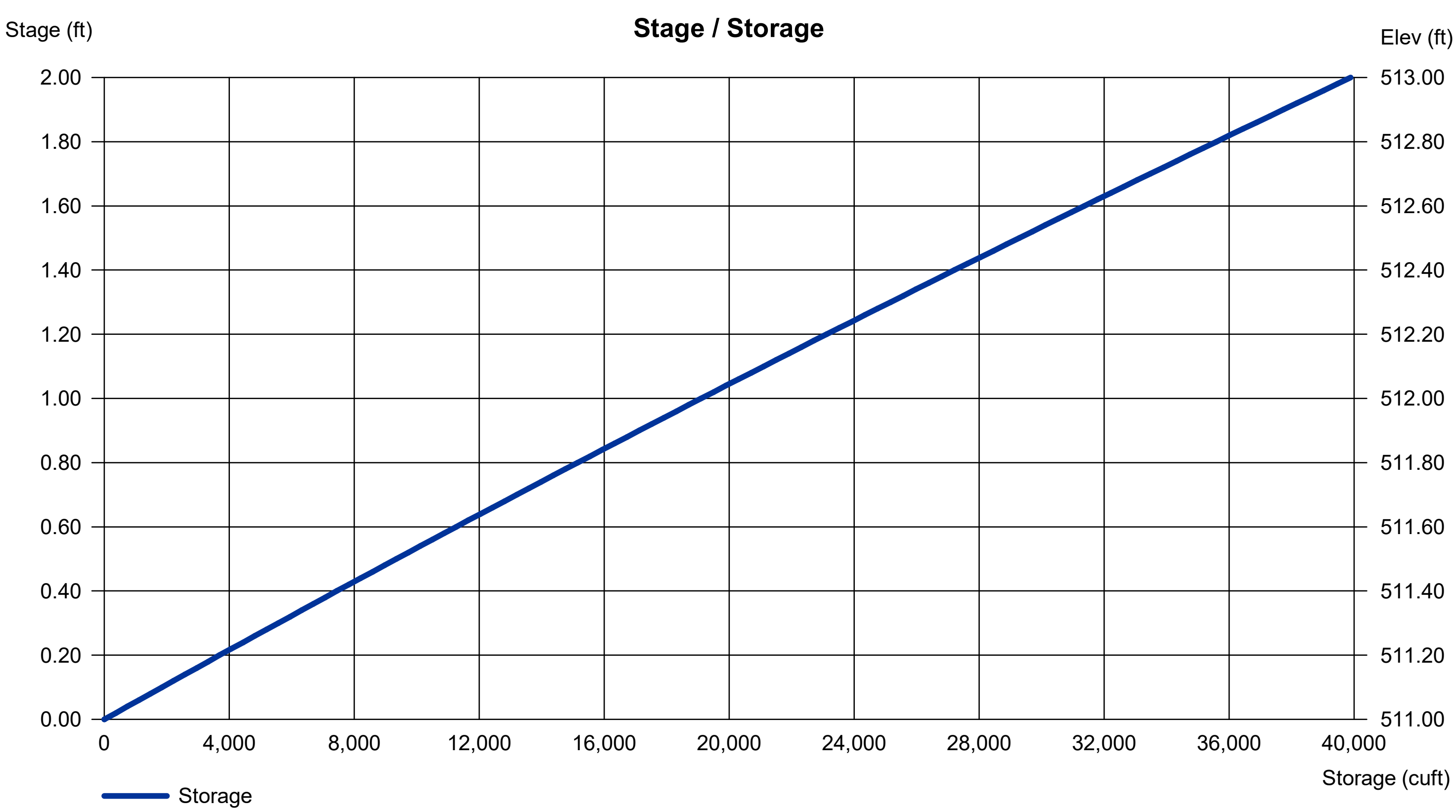
Weir Structures

	[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

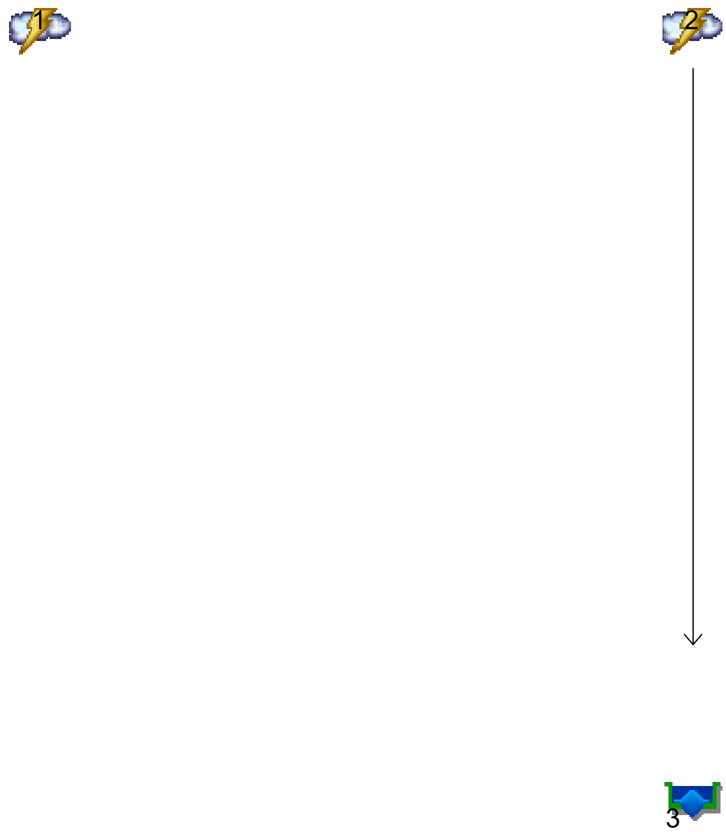
Hydrograph Summary Report

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

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



Project: detention pond 3.gpw	Thursday, 03 / 2 / 2023

Multi-Hydrograph Plot

Hyd. No. 1

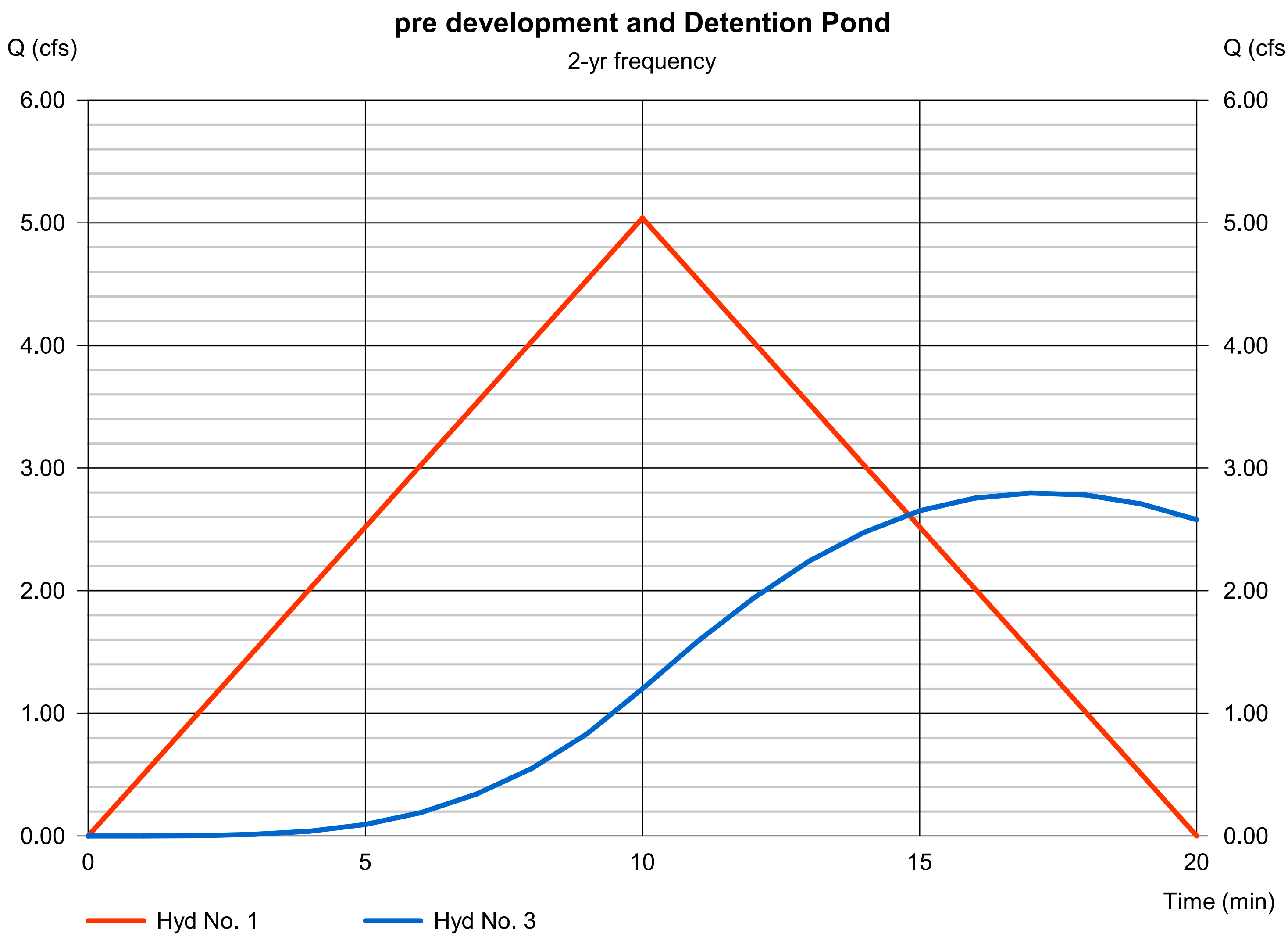
pre development

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

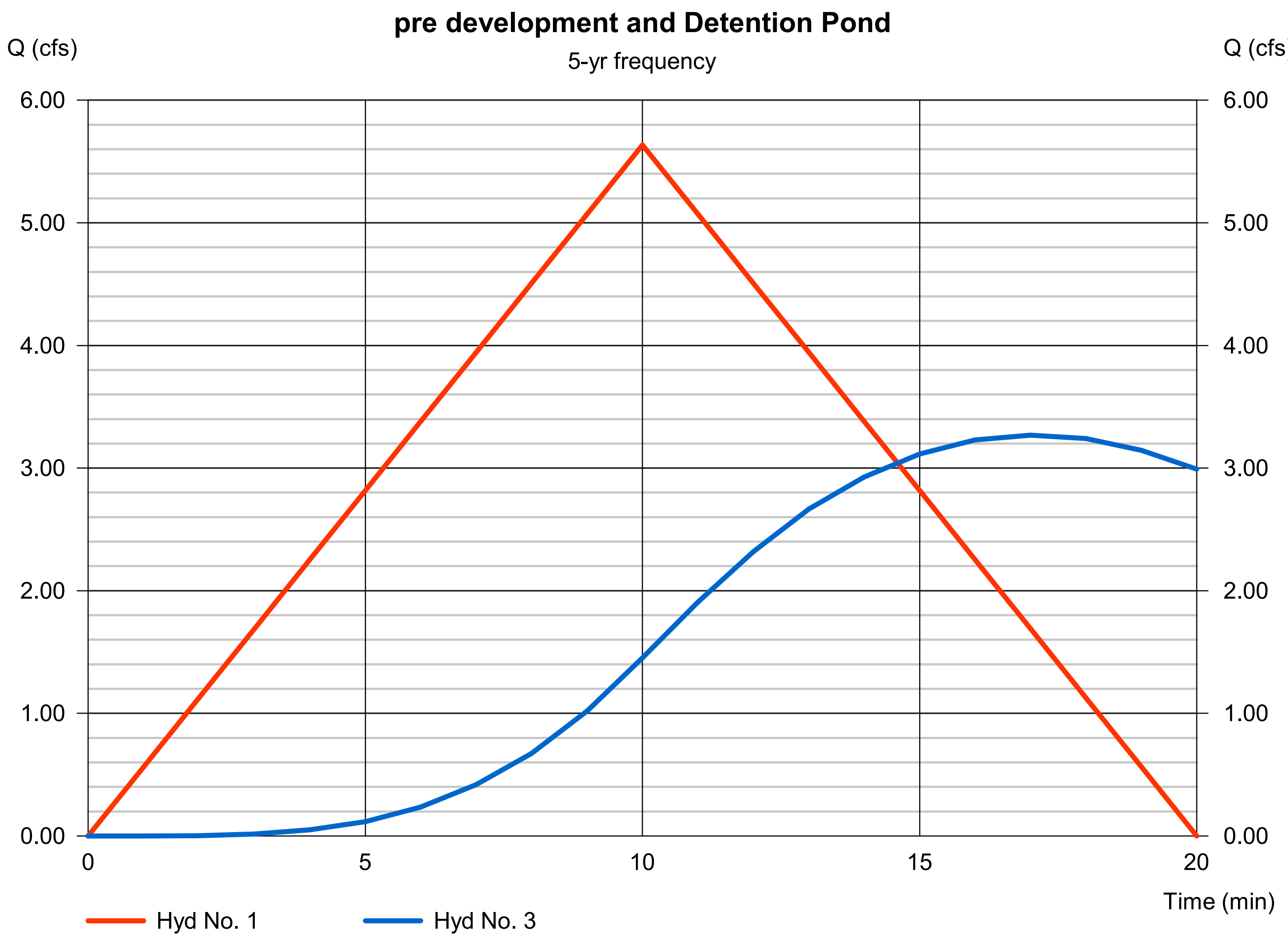
pre development

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

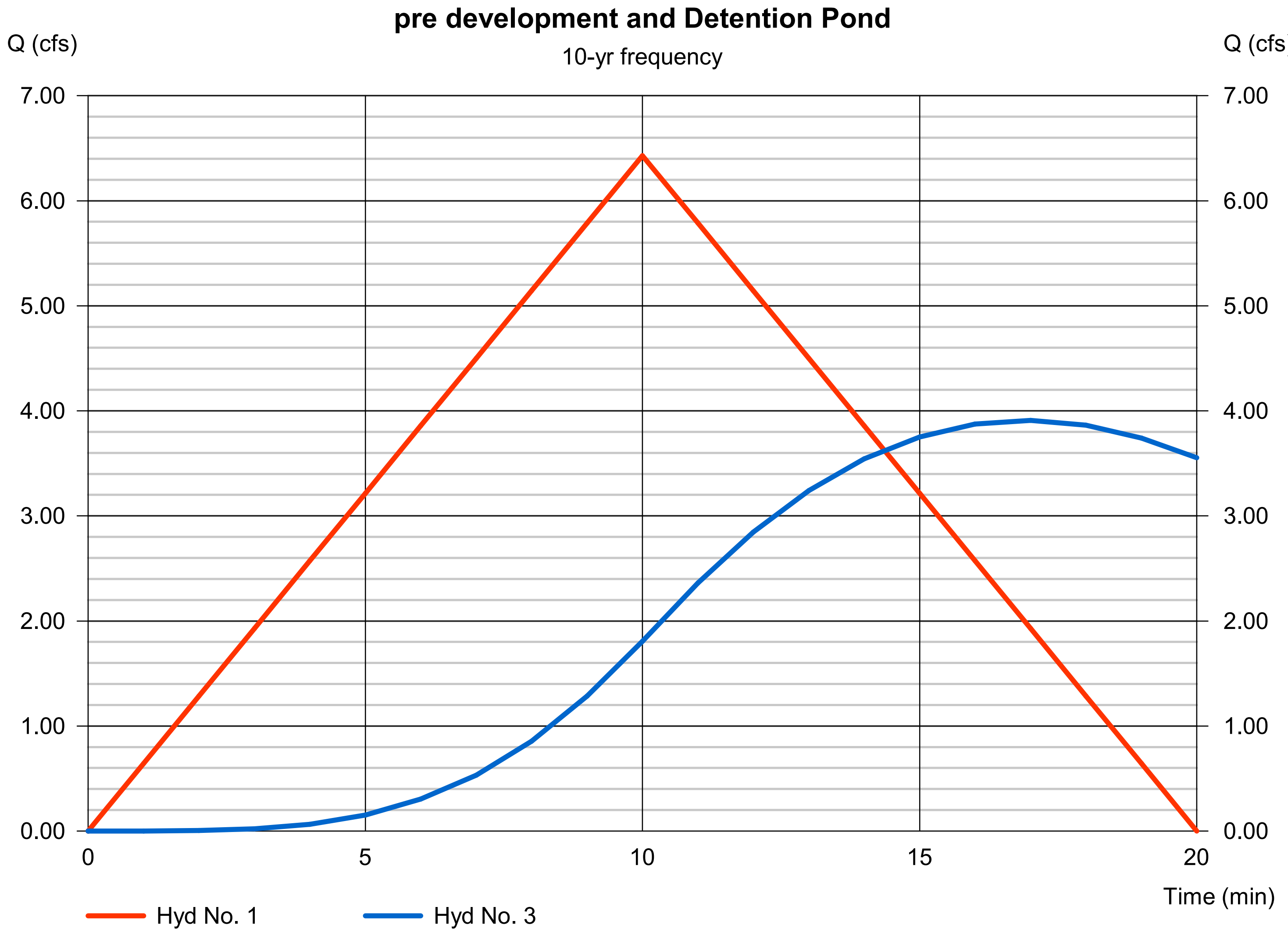
pre development

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

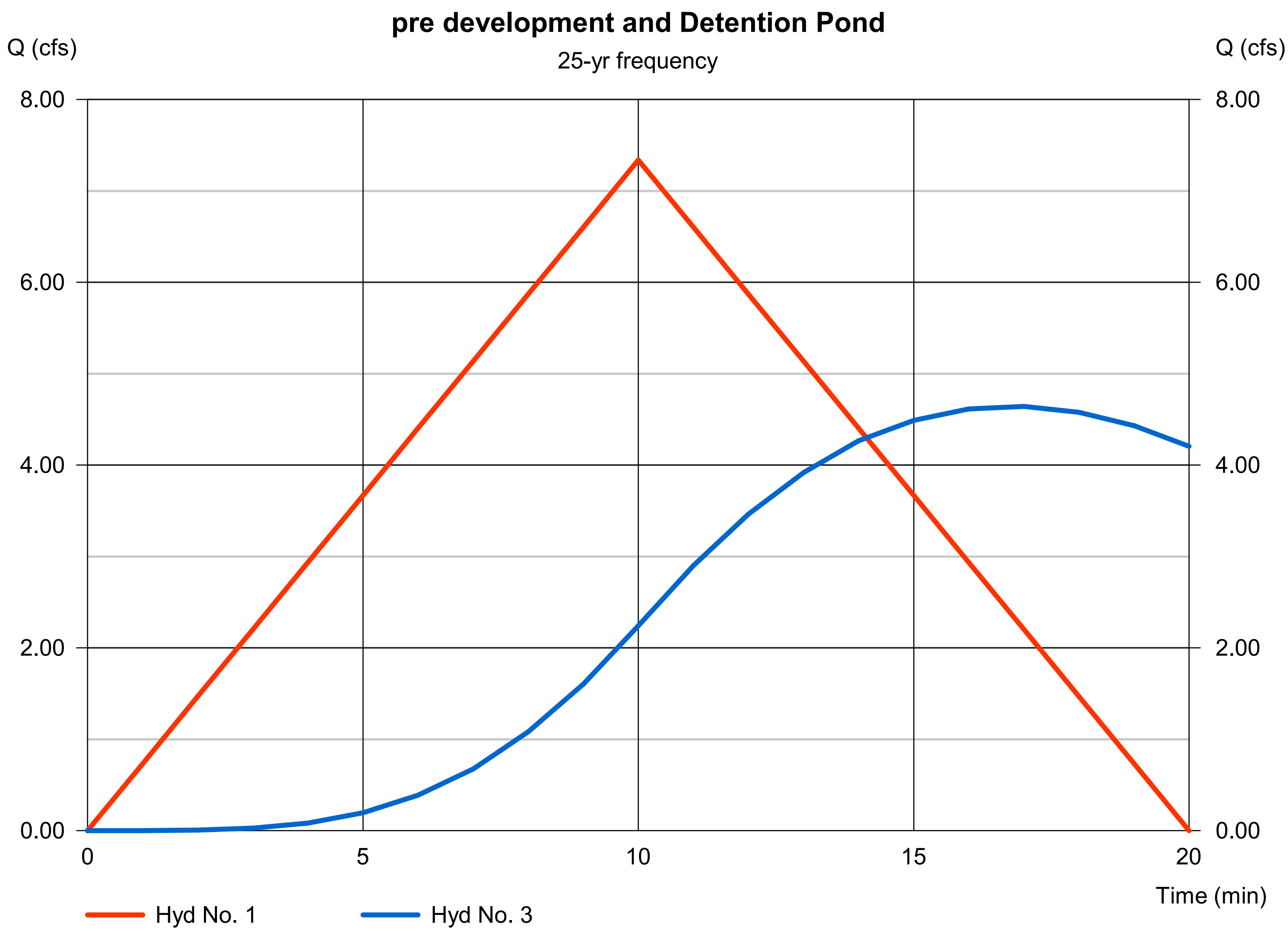
pre development

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

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

Hyd. No. 1

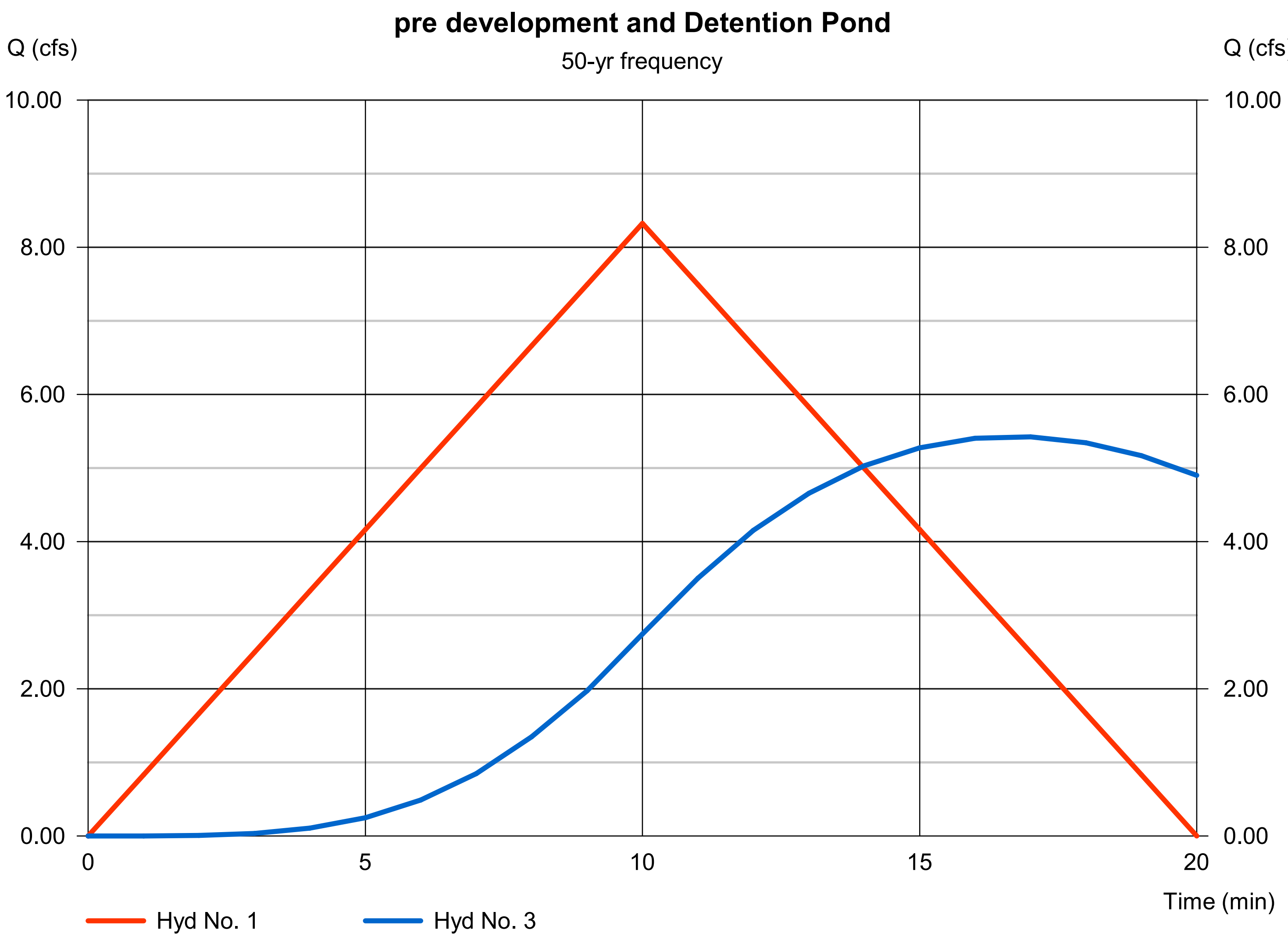
pre development

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

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

Hyd. No. 1

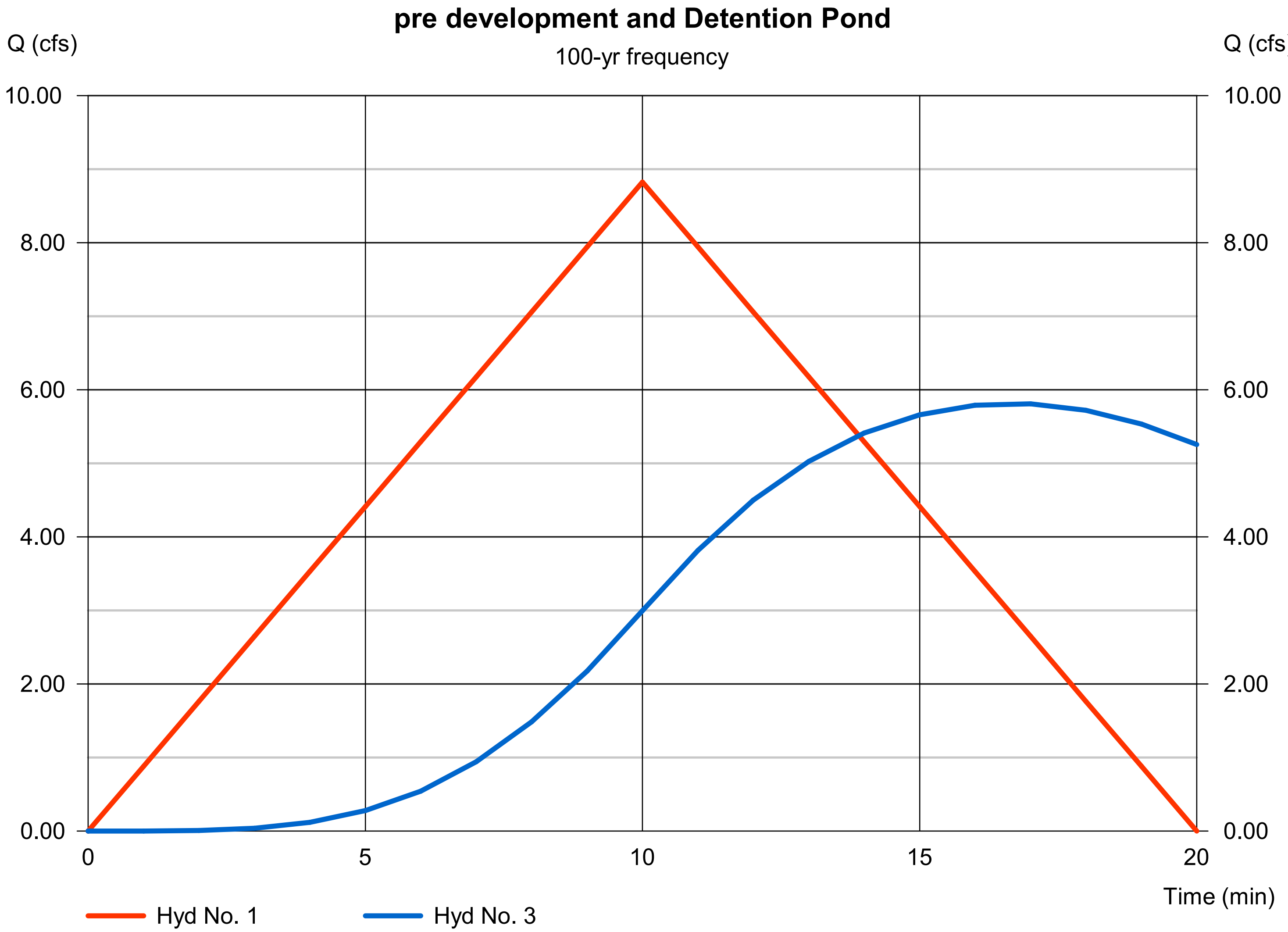
pre development

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

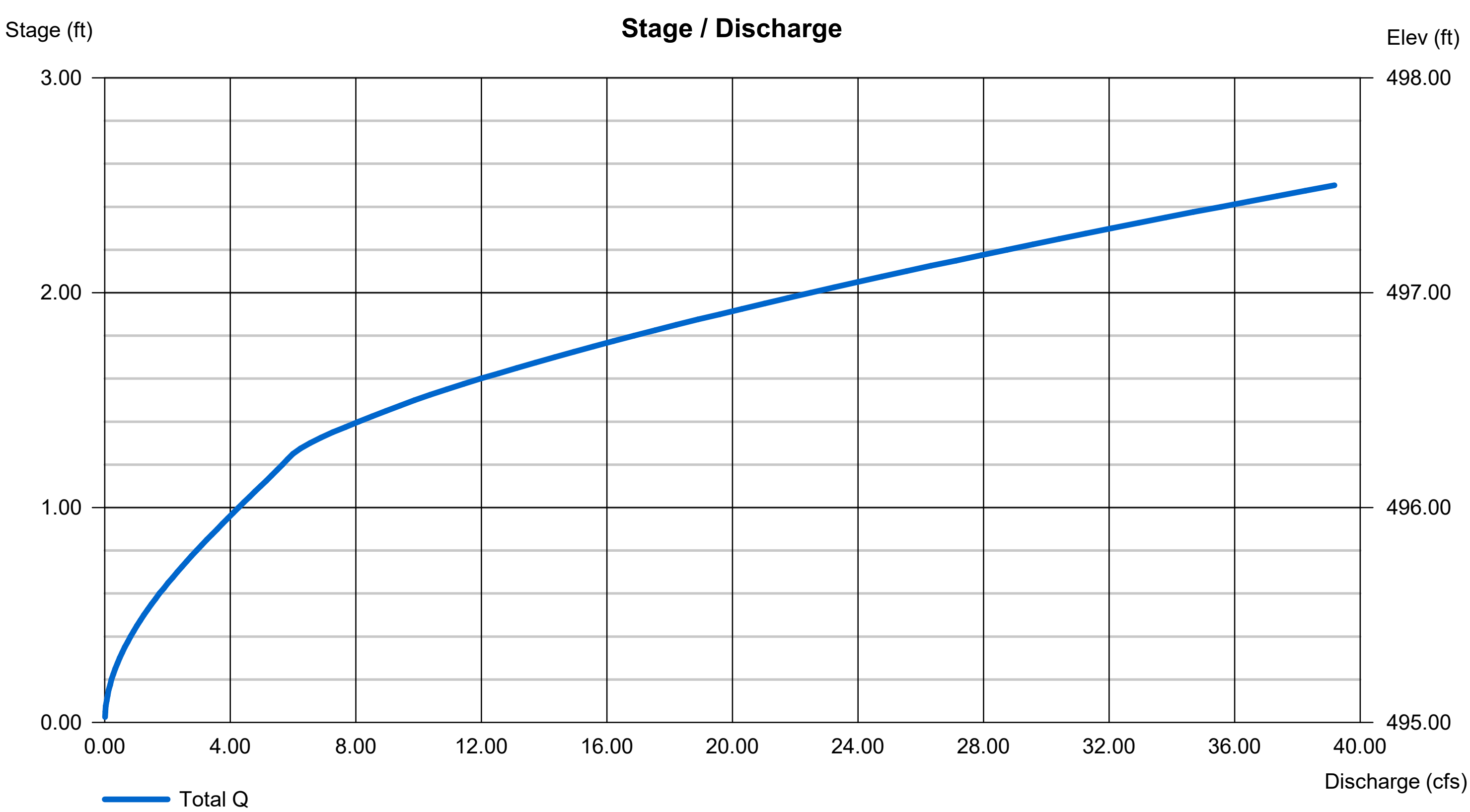
Weir Structures

	[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

detention pond 3.gpw	Return Period: 2 Year	Thursday, 03 / 2 / 2023

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

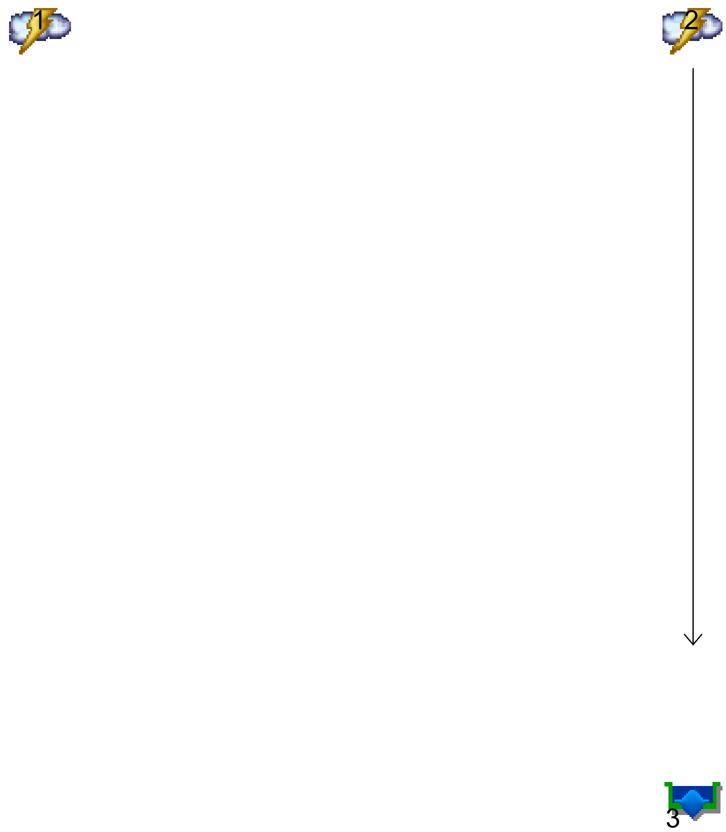
Hydrograph Summary Report

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

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



Legend

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

Project: detention pond 4.gpw	Tuesday, 02 / 14 / 2023

Multi-Hydrograph Plot

Hyd. No. 1

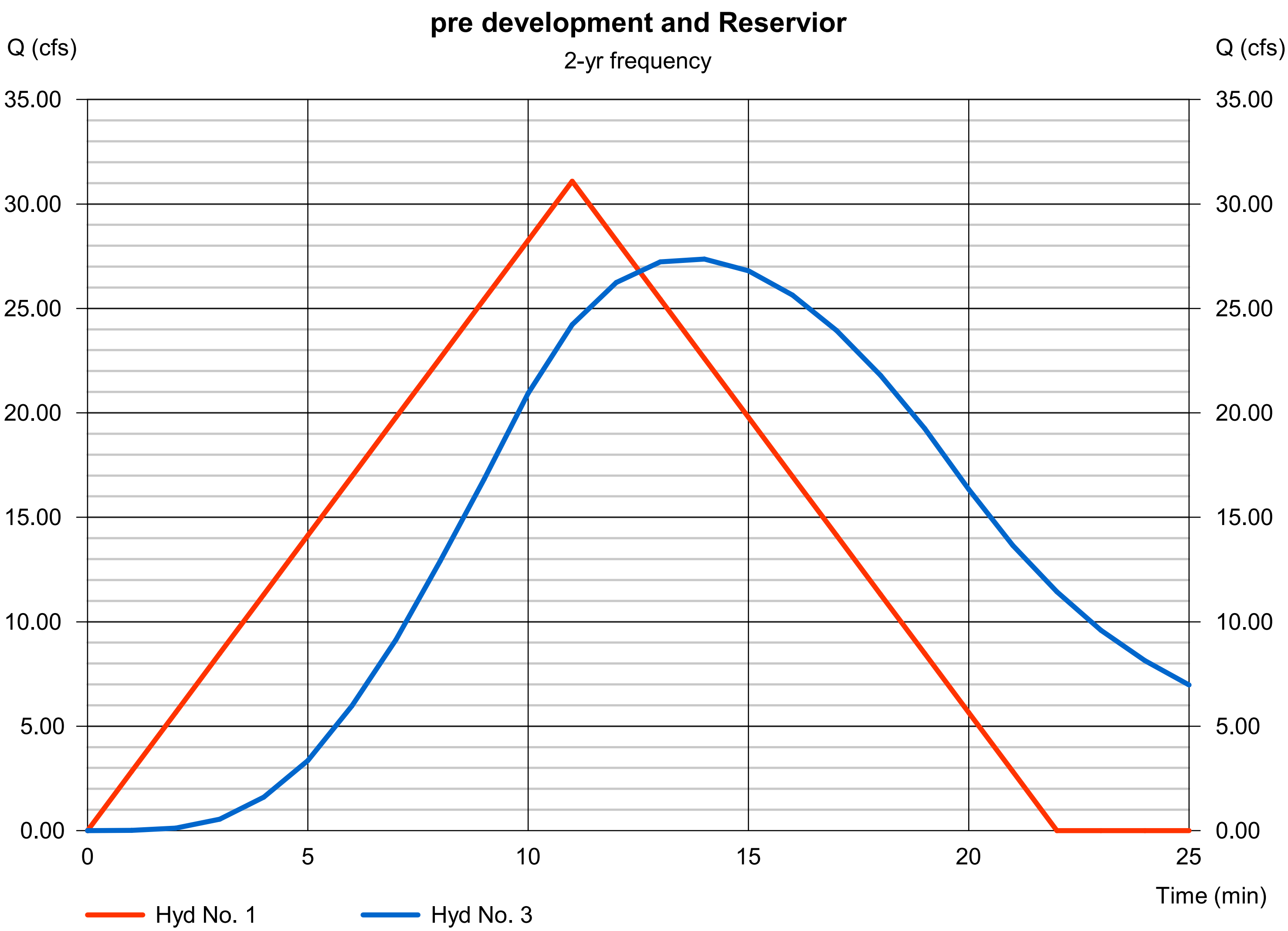
pre development

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

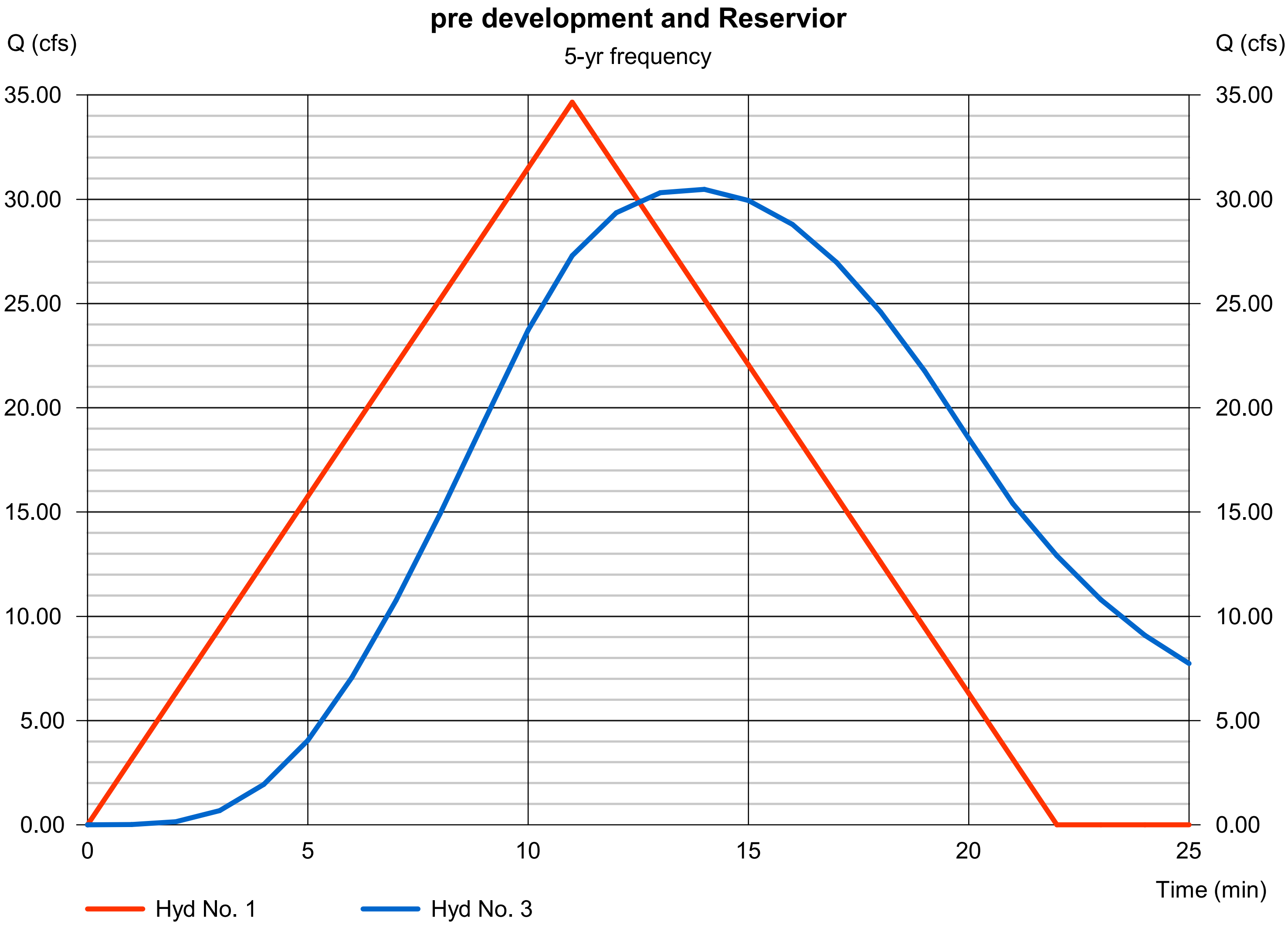
pre development

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

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

Hyd. No. 1

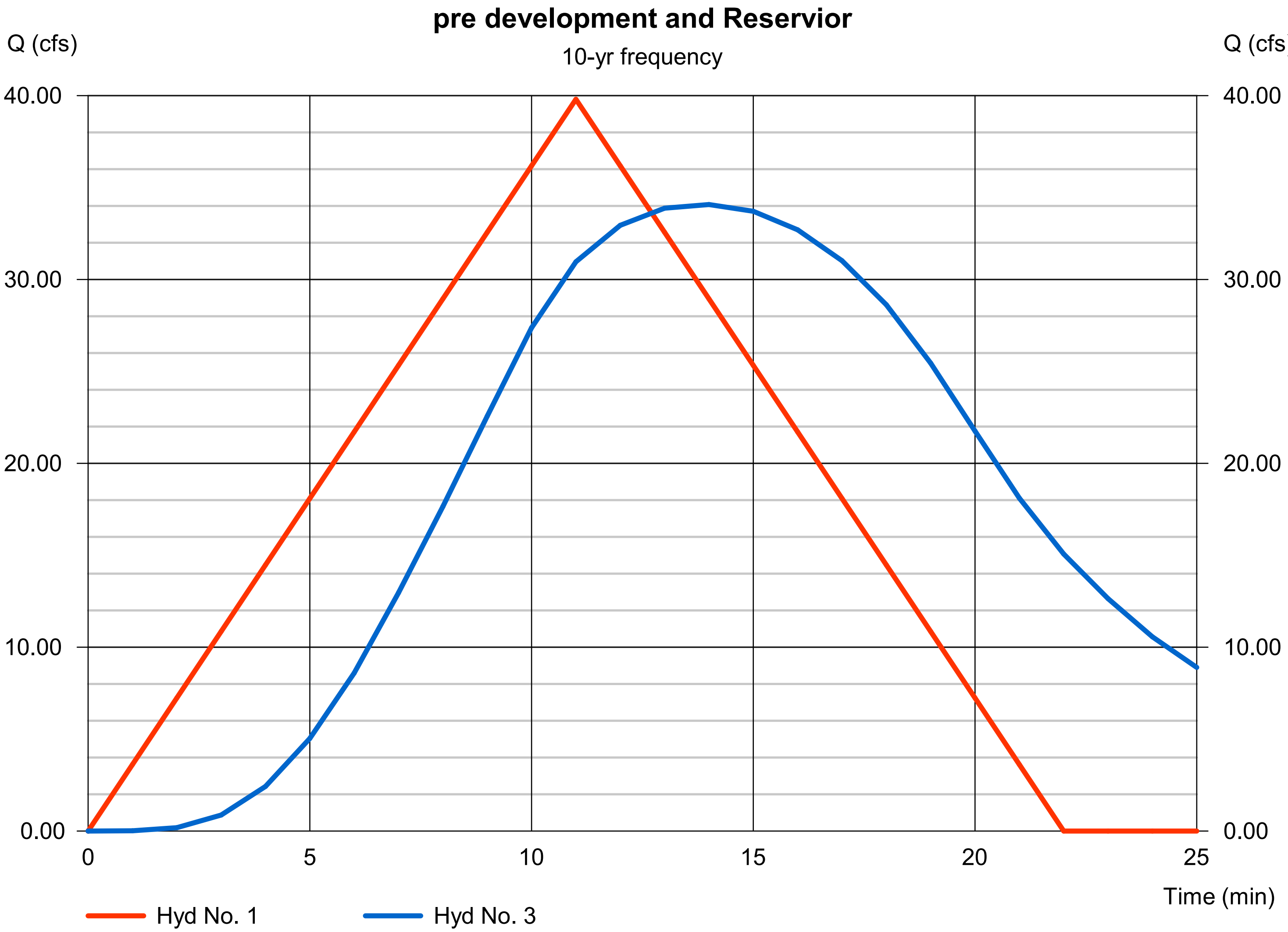
pre development

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

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

Hyd. No. 1

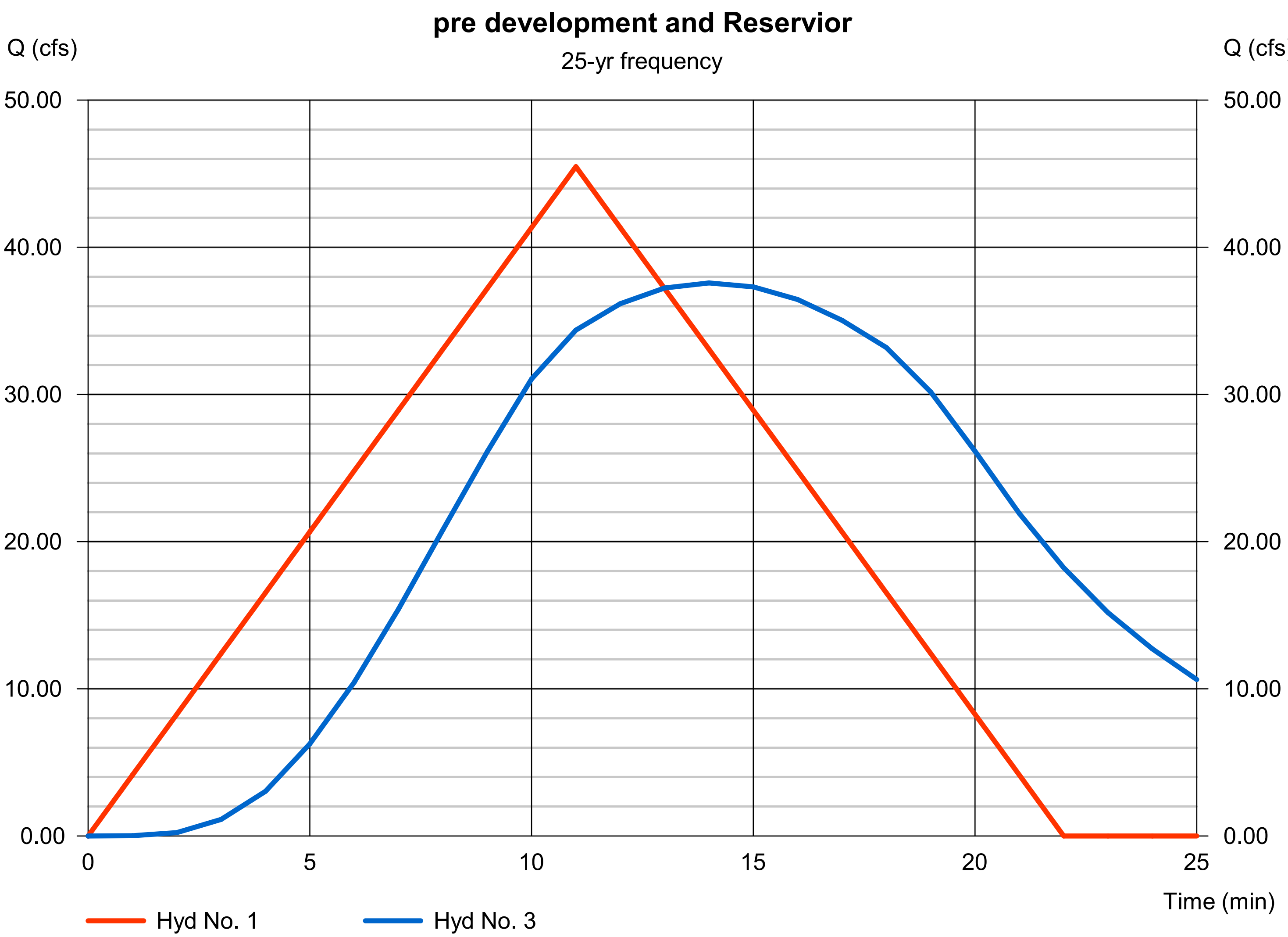
pre development

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

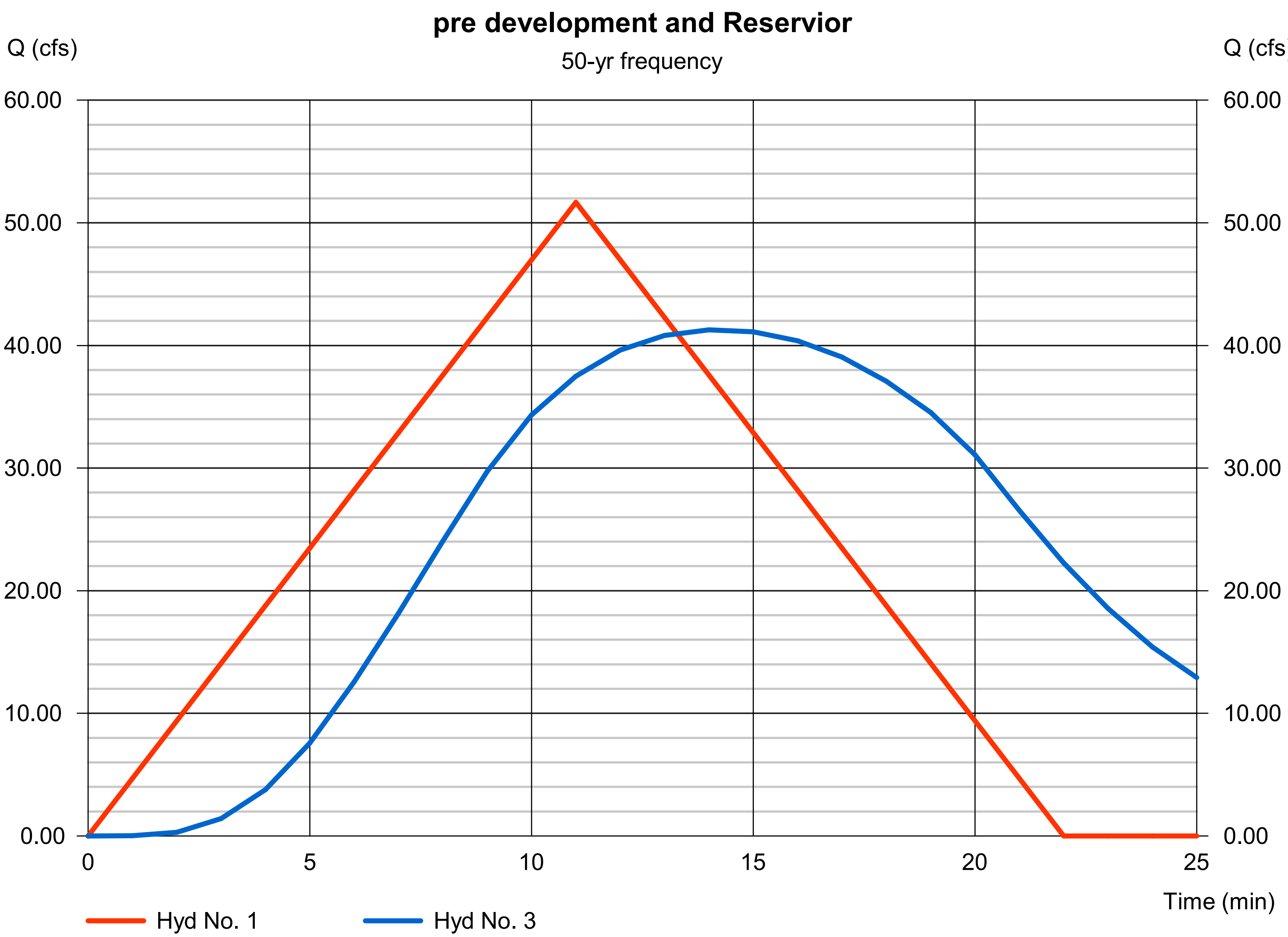
pre development

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

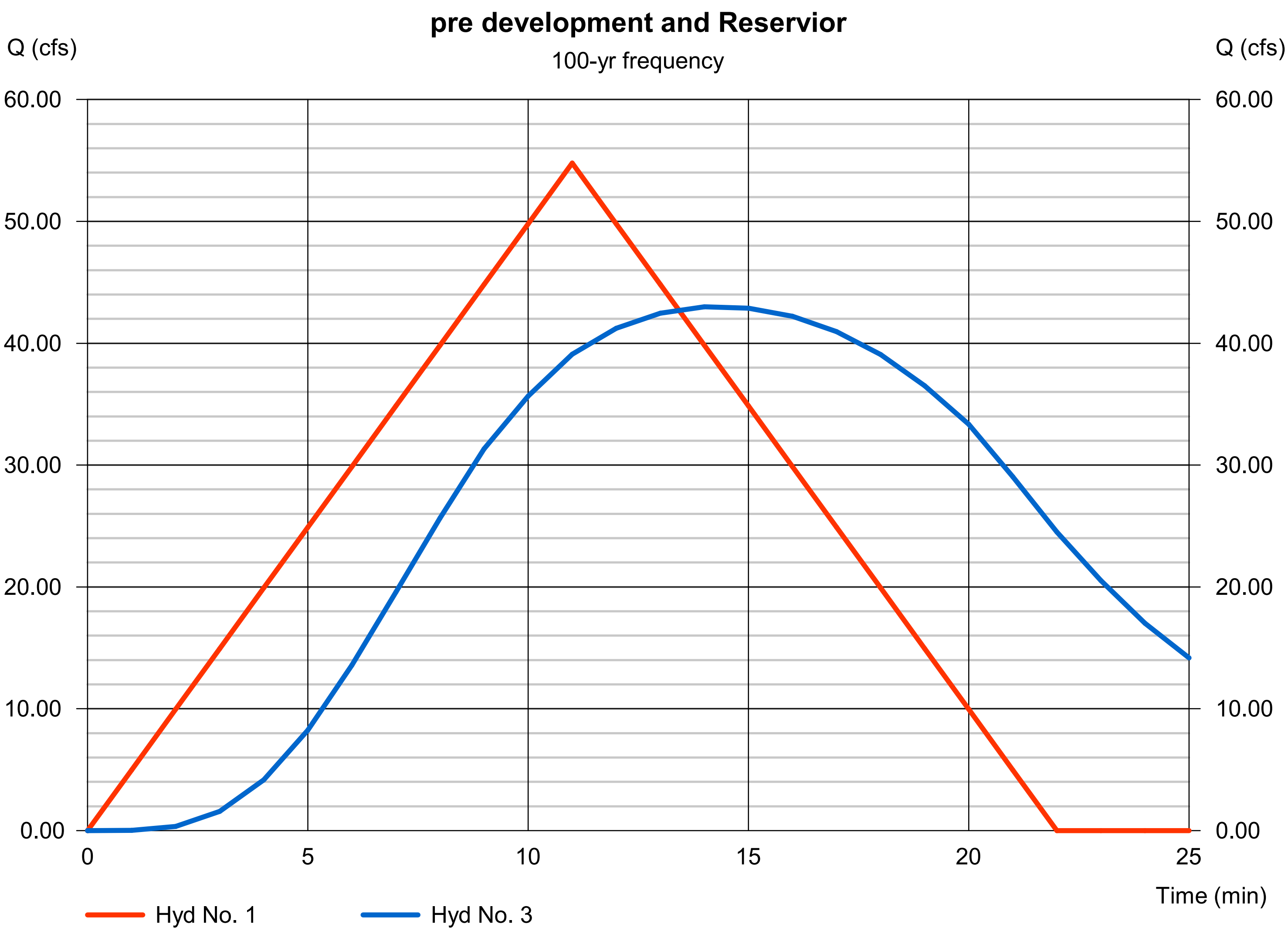
pre development

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

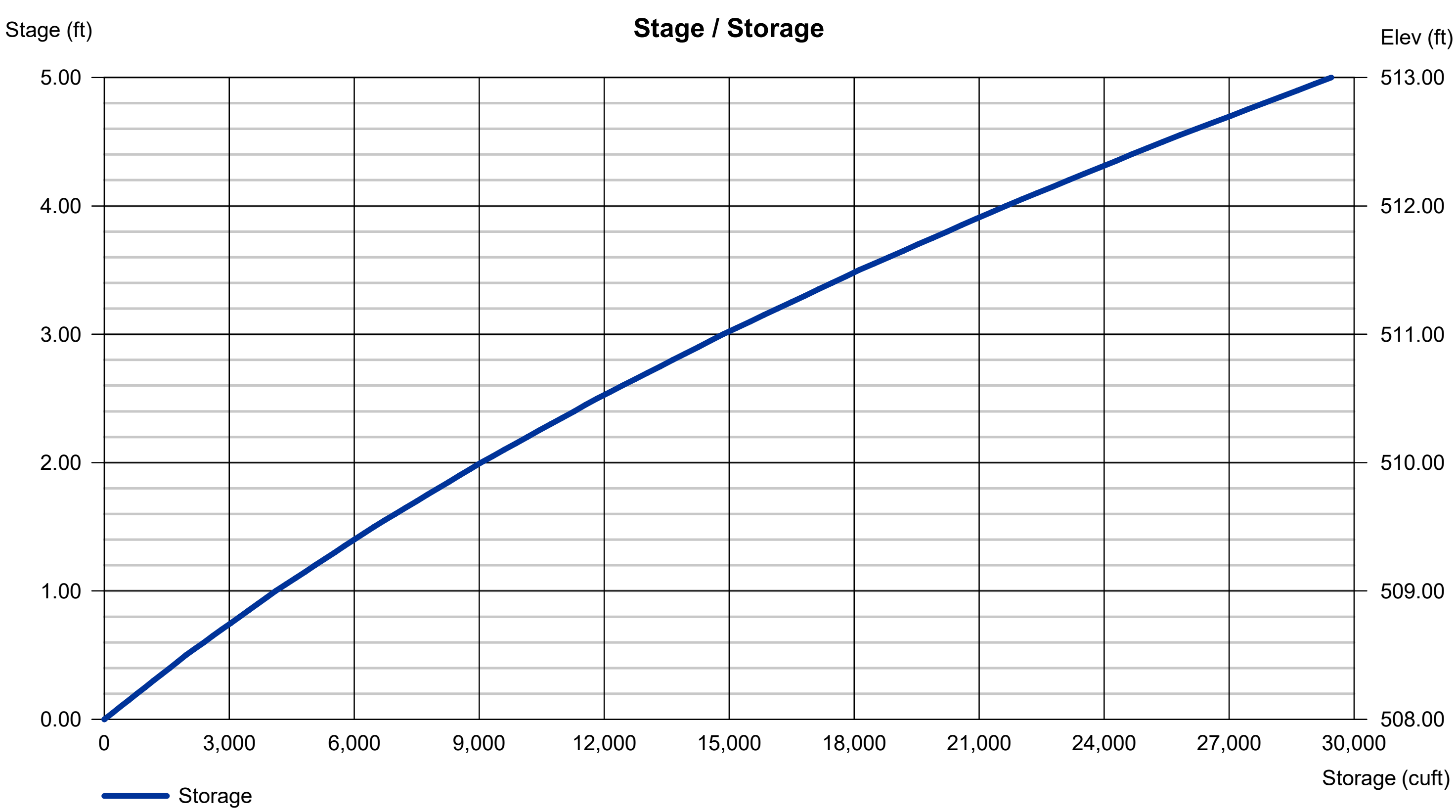
	[A]	[B]	[C]	[PrfRsr]
Rise (in)	= 36.00	Inactive	Inactive	0.00
Span (in)	= 36.00	24.00	24.00	0.00
No. Barrels	= 1	1	1	0
Invert El. (ft)	= 508.00	511.00	513.00	0.00
Length (ft)	= 86.00	0.50	0.00	0.00
Slope (%)	= 3.79	0.01	0.00	n/a
N-Value	= .013	.013	.013	n/a
Orifice Coeff.	= 0.50	0.60	0.60	0.60
Multi-Stage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

detention pond 4.gpw	Return Period: 100 Year	Tuesday, 02 / 14 / 2023

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

PROPERTY SPECIFIC NOTES:

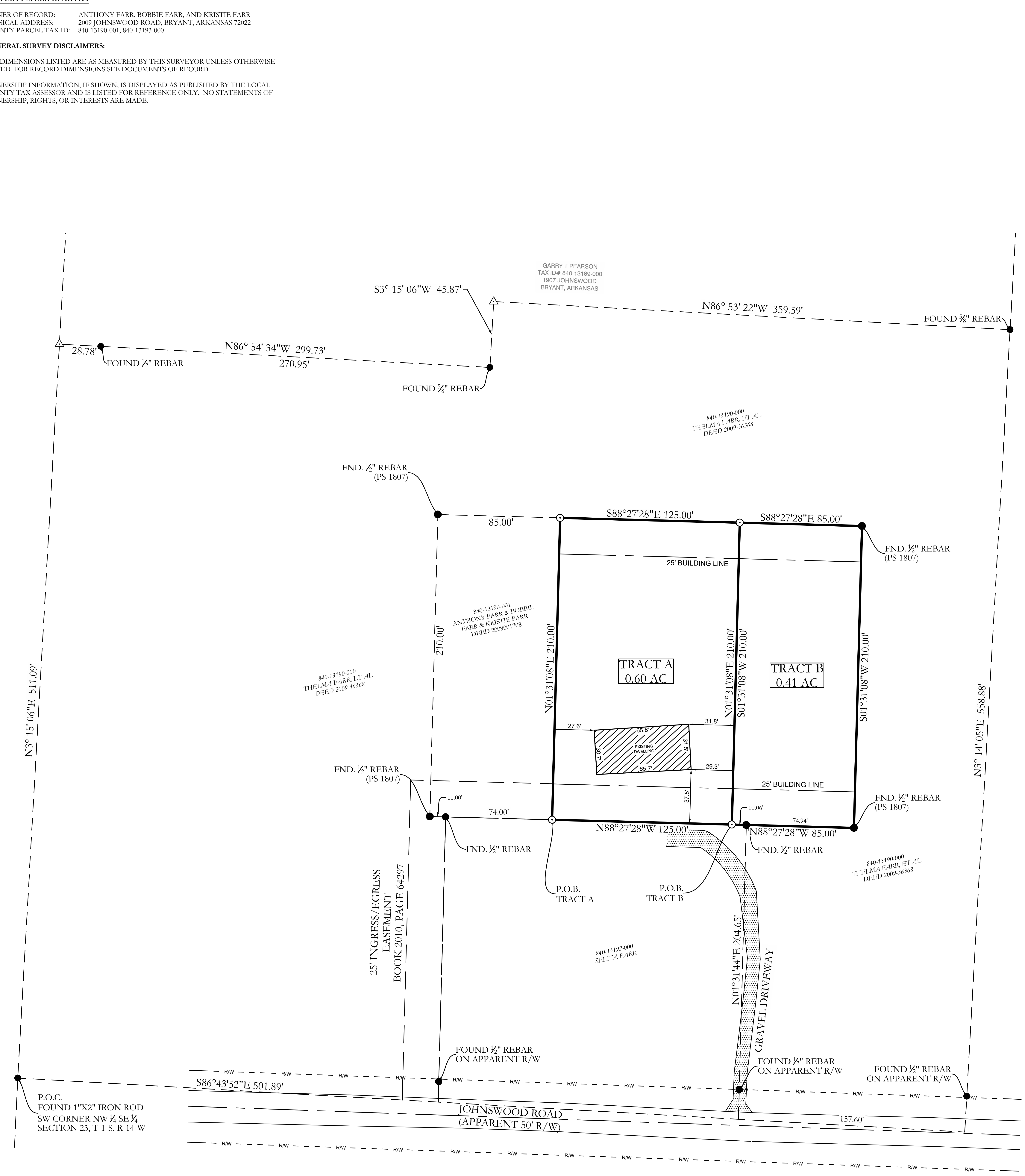
OWNER OF RECORD: ANTHONY FARR, BOBBIE FARR, AND KRISTIE FARR
PHYSICAL ADDRESS: 2009 JOHNSWOOD ROAD, BRYANT, ARKANSAS 72022
COUNTY PARCEL TAX ID: 840-13190-001; 840-13193-000

GENERAL SURVEY DISCLAIMERS:

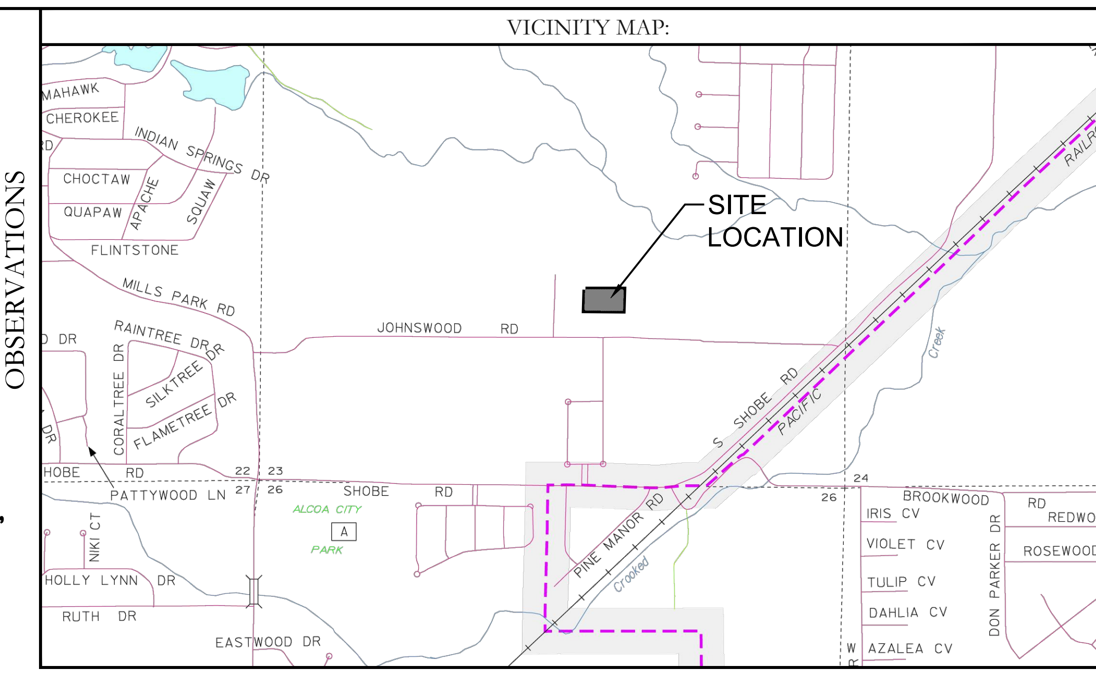
ALL DIMENSIONS LISTED ARE AS MEASURED BY THIS SURVEYOR UNLESS OTHERWISE NOTED. FOR RECORD DIMENSIONS SEE DOCUMENTS OF RECORD.

OWNERSHIP INFORMATION, IF SHOWN, IS DISPLAYED AS PUBLISHED BY THE LOCAL COUNTY TAX ASSESSOR AND IS LISTED FOR REFERENCE ONLY. NO STATEMENTS OF OWNERSHIP, RIGHTS, OR INTERESTS ARE MADE.

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



VICINITY MAP:



PARENT TRACT RECORD DESCRIPTION:
SALINE COUNTY DEED BOOK 2010, PAGE 64297

ALL THAT PART OF THE W1/2 OF THE NW1/4 SE1/4, SECTION 23, TOWNSHIP 1 SOUTH, RANGE 14 WEST, SALINE COUNTY, ARKANSAS, MORE FULLY DESCRIBE AS FOLLOWS: ,BEGINNING AT A POINT THAT IS 367.3 FEET EAST AND 209 FEET NORTH OF THE SOUTHWEST CORNER OF SAID W 1/4 NW1/4 SE 1/4 AND RUN THENCE WEST 85 FEET; THENCE NORTH 210 FEET; THENCE EAST 85 FEET; THENCE SOUTH 210 FEET TO THE POINT OF BEGINNING.

ALL THAT PART OF THE WEST HALF OF THE NORTHWEST QUARTER OF SOUTHEAST QUARTER, SECTION 23, TOWNSHIP 1 SOUTH, RANGE 14 WEST, SALINE COUNTY, ARKANSAS, MORE FULLY DESCRIBED AS FOLLOWS:
BEGINNING AT A POINT THAT IS 367.3 FEET EAST AND 209 FEET NORTH OF THE SOUTHWEST CORNER OF SAID WEST HALF OF NORTHWEST QUARTER OF SOUTHEAST QUARTER AND RUN THENCE EAST 210 FEET; THENCE NORTH 210 FEET; THENCE WEST 210 FEET; THENCE SOUTH 210 FEET TO THE POINT OF BEGINNING.

ALSO AN EASEMENT FOR ROAD PURPOSES OVER AND ACROSS THE FOLLOWING DESCRIBED PROPERTY, TO-WIT: A PART OF THE WEST ONE-FOURTH OF THE NORTHWEST QUARTER OF THE SOUTHEAST QUARTER, SECTION 23, TOWNSHIP 1 SOUTH, RANGE 14 WEST, SALINE COUNTY, ARKANSAS, DESCRIBED AS FOLLOWS: BEGINNING AT A POINT ON THE SOUTH LINE OF SAID WEST HALF OF NORTHWEST QUARTER OF SOUTHEAST QUARTER THAT IS 293.3 FEET EAST OF THE SOUTHWEST CORNER THEREOF; RUN THENCE NORTH 209 FEET; THENCE EAST 74 FEET; THENCE NORTH 25 FEET; THENCE WEST 99 FEET; THENCE SOUTH 234 FEET TO SOUTH LINE THEREOF; THENCE EAST 25 FEET TO THE POINT OF BEGINNING.

AS SURVEYED DESCRIPTIONS

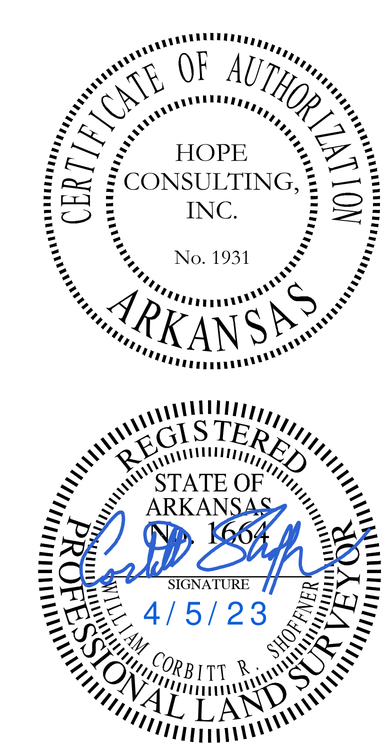
TRACT A
A PART OF THE WEST 1/2, NORTHWEST 1/4, SOUTHEAST 1/4 OF SECTION 23, TOWNSHIP 1 SOUTH, RANGE 14 WEST, SALINE COUNTY, ARKANSAS, MORE PARTICULARLY DESCRIBED AS FOLLOWS:
COMMENCING AT A 1X2 IRON AT THE SOUTHWEST CORNER OF SAID NW1/4, SE1/4 OF SECTION 23; THENCE S86°43'52"E A DISTANCE OF 501.89 FEET TO A POINT; THENCE N01°31'44"E A DISTANCE OF 204.65 FEET TO A 1/2" REBAR; THENCE N88°27'28"W A DISTANCE OF 10.06 FEET TO A 1/2" REBAR & CAP (PS 1664) AND THE POINT OF BEGINNING; THENCE N 88°27'28" W A DISTANCE OF 125.00 FEET TO A 1/2" REBAR & CAP (PS 1664); THENCE N 01°31'08" E A DISTANCE OF 210.00 FEET TO A 1/2" REBAR & CAP (PS 1665); THENCE S 88°27'28" E A DISTANCE OF 125.00 FEET TO A 1/2" REBAR & CAP (PS 1664); THENCE S 01°31'08" W A DISTANCE OF 210.00 FEET TO THE POINT OF BEGINNING; CONTAINING 26,250.00 SQUARE FEET, OR 0.603 ACRES, MORE OR LESS.

TRACT B
A PART OF THE WEST 1/2, NORTHWEST 1/4, SOUTHEAST 1/4 OF SECTION 23, TOWNSHIP 1 SOUTH, RANGE 14 WEST, SALINE COUNTY, ARKANSAS, MORE PARTICULARLY DESCRIBED AS FOLLOWS:
COMMENCING AT A 1x2 IRON AT THE SOUTHWEST CORNER OF SAID NW1/4, SE1/4 OF SECTION 23; THENCE S86°43'52"E A DISTANCE OF 501.89 FEET TO A POINT; THENCE N01°31'44"E A DISTANCE OF 204.65 FEET TO A 1/2" REBAR; THENCE N88°27'28"W A DISTANCE OF 10.06 FEET TO A 1/2" REBAR & CAP (PS 1664) AND THE POINT OF BEGINNING; THENCE N 01°31'08" E A DISTANCE OF 210.00 FEET TO A POINT; THENCE S 88°27'28" E A DISTANCE OF 85.00 FEET TO A FND. 1/2" REBAR (PS 1807); THENCE S 01°31'08" W A DISTANCE OF 210.00 FEET TO A FND. 1/2" REBAR (PS 1807); THENCE N 88°27'28" W A DISTANCE OF 85.00 FEET TO THE POINT OF BEGINNING; CONTAINING 17,850.00 SQUARE FEET, OR 0.410 ACRES, MORE OR LESS.

By affixing my seal and signature, I Corbitt Shoffner, Arkansas PLS No, 1664, 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 # 05125C0380D, Dated: 6/19/2012 .



ORIGINAL SIGNATURE ON FILE

LEGEND
△ - Computed point
● - Found monument
⊙ - Set ½" Rebar
(M)- Measured
(P) - Plat/Deed

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:
BOBBIE FARR

PART OF THE NW 1/4, SE 1/4, SECTION 23, TOWNSHIP 1 SOUTH, RANGE 14 WEST SALINE COUNTY, ARKANSAS

DATE: 04/05/2023			C.A.D. BY: JPAYNE			DRAWING NUMBER:		
REVISED:			CHECKED BY:			23-0320 (17-049)		
SHEET:			SCALE: 1"=50'					
500	01S	14W	0	23	240	62	1807	

K:\Land Projects 2004\Surveys\2023\23-0320 FS 2009 Johnswood Dr\DWG\23-0320 FS 2009 JOHNSWOOD RD-BRYANT.dwg

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

Variance Application

Applicants are advised to read the Board of Adjustment and Variances 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: 4/19/2023

Applicant or Designee:

Name JONATHAN HOPE

Address 129 N. MAIN ST., BENTON

Phone 501-315-2626

Email Address: JONATHAN@HOPECONSULTING.COM

Project Location:

Property Address LOT 15 CORAL RIDGE DR. BRYANT, AR.

Parcel Number LOT 15

Zoning Classification R-2

Property Owner (If different from Applicant):

Name HOMES BY IBARRA LLC

Phone 501-213-5648

Address 3808 NORTHLAKE RD

Email Address arreguin.brian10@gmail.com

Additional Information:

Legal Description (Attach description if necessary)

LOT 15, CORAL RIDGE, A SUBDIVISION IN THE CITY OF BRYANT, SALINE COUNTY, ARKANSAS

Description of Variance Request (Attach any necessary drawings or images)

REDUCTION OF REAR SETBACKS TO 23' AND 13'.

Proposed Use of Property R-2

HOPE
CONSULTING
ENGINEERS - SURVEYORS

March 20, 2023

City of Bryant Board of Zoning Adjustments
210 Southwest Third St., Bryant, AR 72022

Dear Board Members,

We would like to request a variance for Lot 15, Coral Ridge Subdivision in Bryant, on behalf of the owner Brian Ibarra with Homes by Ibarra, LLC. We would like to request that the rear setbacks be reduced to 23' and 13'.

Thank you for your consideration in this matter.

Sincerely,

Jonathan Hope

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www.hopeconsulting.com
(P) 501-315-2626
(F) 501-315-0024

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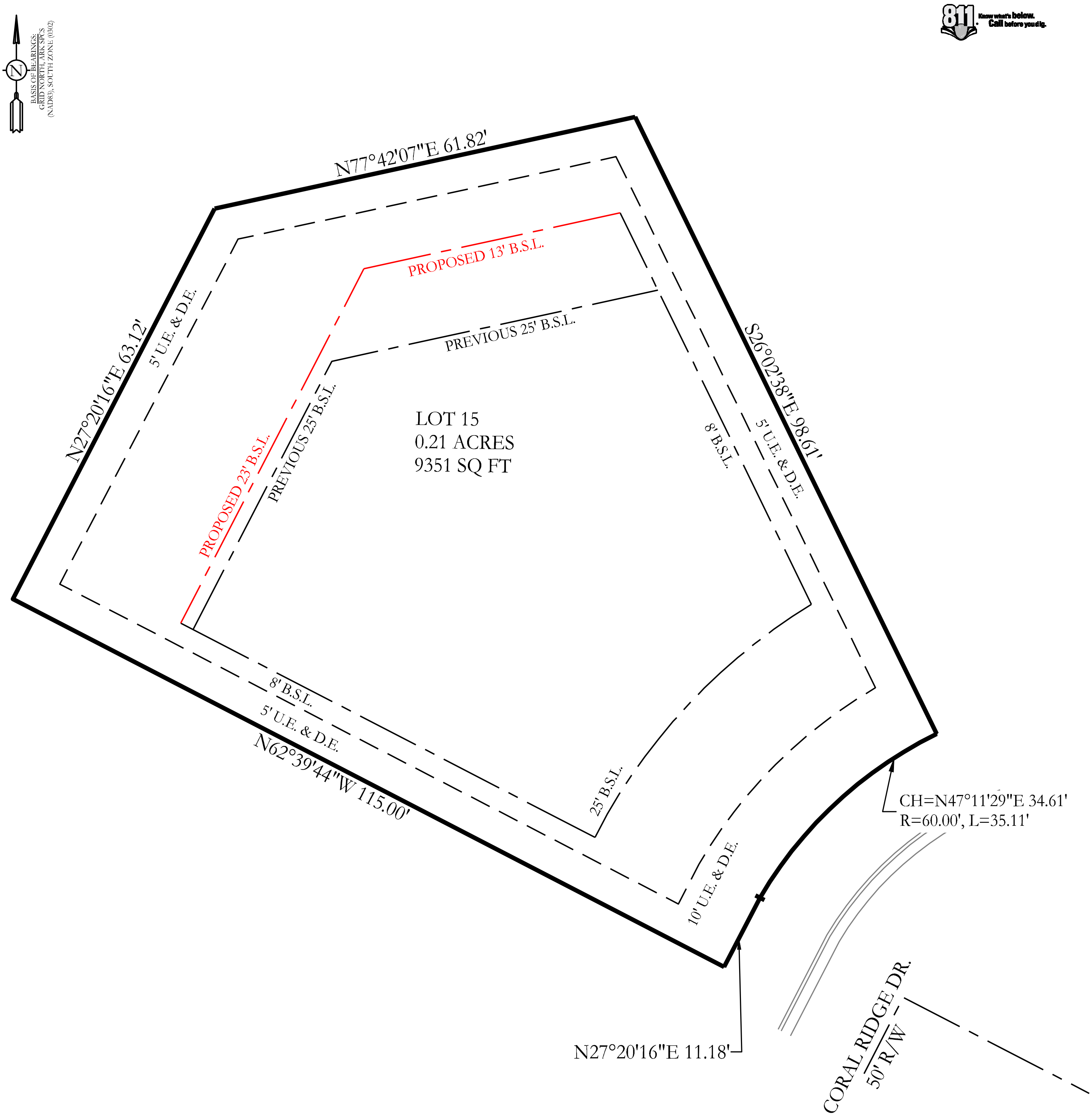
23-0245
Drawing No.



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

RECORD DESCRIPTION

LOT 15, CORAL RIDGE SUBDIVISION, A SUBDIVISION IN THE CITY OF BRYANT, SALINE COUNTY, ARKANSAS.

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

By affixing my seal and signature, I, Jonathan Hope, PS No. 1762, hereby certify that this drawing correctly depicts a survey compiled under my supervision.
This survey is for the exclusive use and benefit of parties shown hereon. Use or duplication of this document by any other parties is prohibited and voids said document.
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 flood plain, according to the Flood Insurance Rate Map,
panel # 05125C0225E , dated: 06/05/2020 .
For the Exclusive Use and Benefit of:

Address Coral Ridge Dr.
Bryant, AR
Date DATE

500	01S	14W	0	07	130	62	1664

20' 10' 0 20'

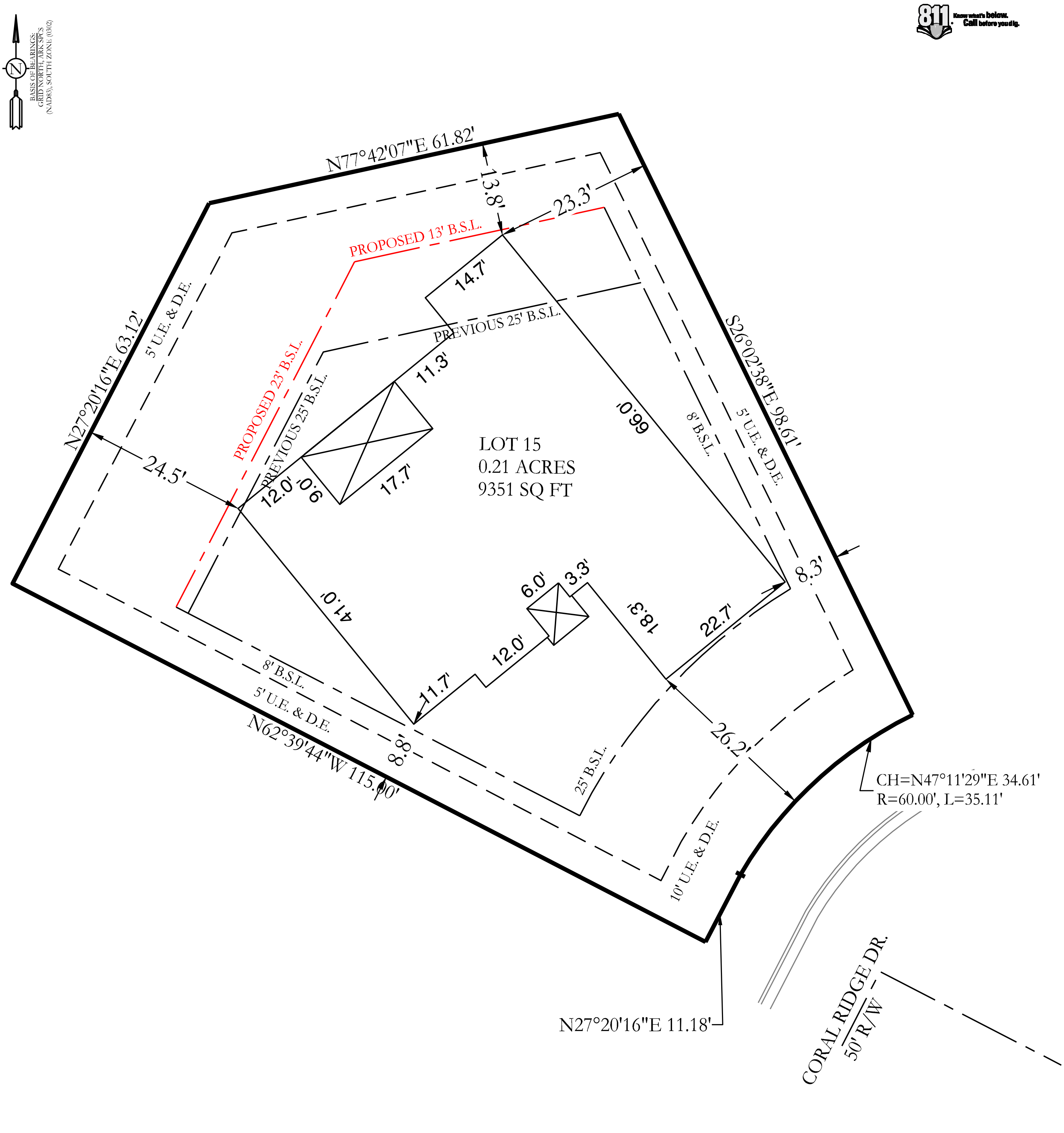
LEGEND
- △ - Computed Point
- ● - Found monument
- ⊙ - Set 1/2" Rebar #1664
- (M) - Measured
- (D/P) - Record

Drawn By MD
Checked By WCS

HOPE CONSULTING
ENGINEERS • SURVEYORS

129 N. Main Street, Benton, Arkansas 72015
Ph. (501) 315-2626 Fax (501)315-0024
www.HopeConsulting.com

23-0245
Drawing No.



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

RECORD DESCRIPTION

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

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For the Exclusive Use and Benefit of:

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Bryant, AR
Date DATE

20' 10' 0 20'

LEGEND

- △ - Computed Point
- ● - Found monument
- ⊙ - Set 1/2" Rebar #1664
- (M) - Measured
- (D/P) - Record

Drawn By MD
Checked By WCS

500	01S	14W	0	07	130	62	1664

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

Variance Application

Applicants are advised to read the Board of Adjustment and Variances 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: 3/21/23

Applicant or Designee:

Name JONATHAN HOPE
Address 129 N. MAIN ST., BENTON
Phone 501-315-2626
Email Address: JONATHAN@HOPECONSULTING.COM

Project Location:

Property Address LOT 1 CORAL RIDGE DR. BRYANT, AR.
Parcel Number LOT 1
Zoning Classification R-2

Property Owner (If different from Applicant):

Name OLTMAN'S DEVELOPMENT, INC.
Phone
Address 1930 N. REYNOLDS RD., UNIT 1P, BRYANT
Email Address JEREMIAH.OLTMANS@CRYE-LEIKE.COM

Additional Information:

Legal Description (Attach description if necessary)
LOT 1, CORAL RIDGE, A SUBDIVISION IN THE CITY OF BRYANT, SALINE COUNTY, ARKANSAS

Description of Variance Request (Attach any necessary drawings or images)
REDUCTION OF REAR SETBACK TO 22' AND SIDE SETBACK TO 7'.

Proposed Use of Property R-2

HOPE
CONSULTING
ENGINEERS - SURVEYORS

March 20, 2023

City of Bryant Board of Zoning Adjustments
210 Southwest Third St., Bryant, AR 72022

Dear Board Members,

We would like to request a variance for Lot 1, Coral Ridge Subdivision in Bryant, on behalf of the owner Oltman's Development, Inc. We would like to request that the rear setback be reduced to 22' and the sideset back be reduced to 7'.

Thank you for your consideration in this matter.

Sincerely,

Jonathan Hope

129 North Main St. Benton, Arkansas 72015
www.hopeconsulting.com
(P) 501-315-2626
(F) 501-315-0024

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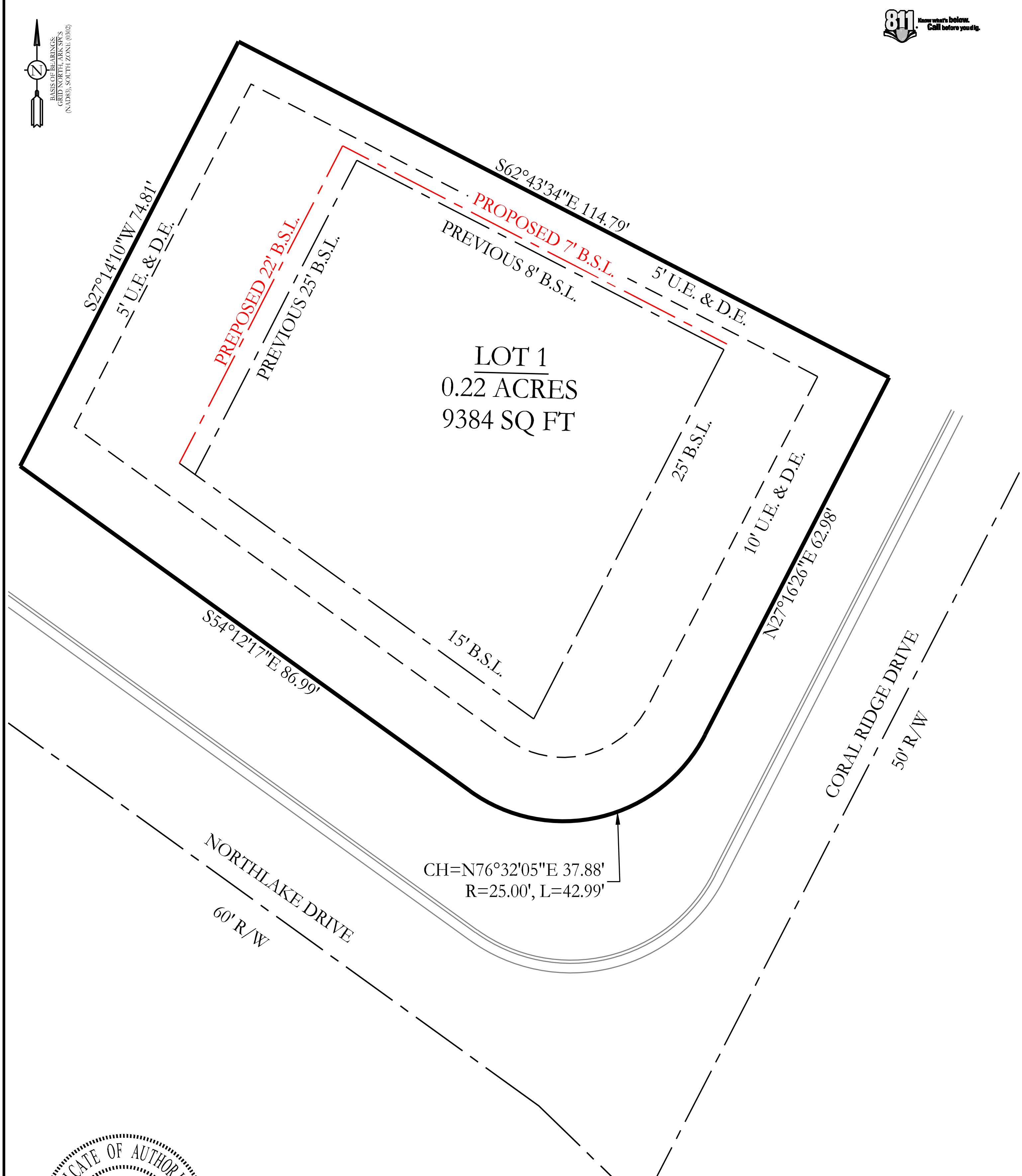
23-0221
Drawing No.



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No. 1931
ARKANSAS

RECORD DESCRIPTION

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REGISTERED PROFESSIONAL LAND SURVEYOR
STATE OF ARKANSAS NO. 1762
SIGNATURE
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panel # 05125C0225E , dated: 06/05/2020 .

For the Exclusive Use and Benefit of:
Oltman's Development Inc.

Address Coral Ridge Dr.
Bryant, AR
Date DATE

500	01S	14W	0	07	130	62	1664

20' 10' 0 20'

LEGEND
- Computed Point
- Found monument
- Set 1/2" Rebar #1664
(M) - Measured
(D/P) - Record

Drawn By MD
Checked By WCS

HOPE CONSULTING
ENGINEERS • SURVEYORS

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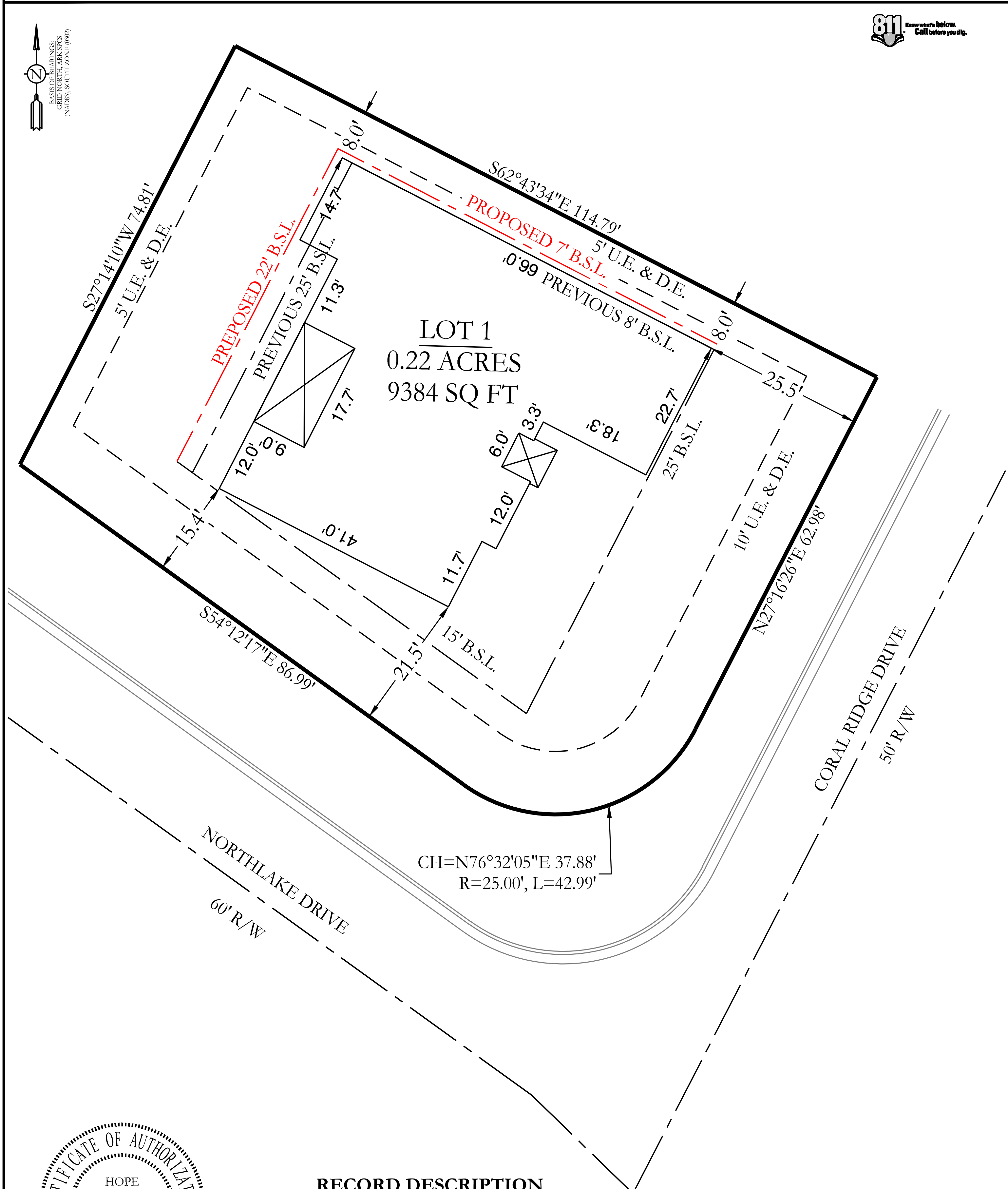
23-0221
Drawing No.



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No. 1931
ARKANSAS

RECORD DESCRIPTION

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REGISTERED PROFESSIONAL LAND SURVEYOR
STATE OF ARKANSAS
NO. 1762
SIGNATURE
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panel # 05125C0225E , dated: 06/05/2020 .

For the Exclusive Use and Benefit of:
Oltman's Development Inc.

Address Coral Ridge Dr.
Bryant, AR
Date DATE

20' 10' 0 20'

LEGEND

- △ - Computed Point
- ● - Found monument
- ⊙ - Set 1/2" Rebar #1664
- (M) - Measured
- (D/P) - Record

Drawn By MD
Checked By WCS

500	01S	14W	0	07	130	62	1664

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

Variance Application

Applicants are advised to read the Board of Adjustment and Variances 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: 3/21/23

Applicant or Designee:

Name JONATHAN HOPE

Address 129 N. MAIN ST., BENTON

Phone 501-315-2626

Email Address: JONATHAN@HOPECONSULTING.COM

Project Location:

Property Address LOT 7 CORAL RIDGE DR. BRYANT, AR.

Parcel Number LOT 7

Zoning Classification R-2

Property Owner (If different from Applicant):

Name OLTMAN'S DEVELOPMENT, INC.

Phone

Address 1930 N. REYNOLDS RD., UNIT 1P, BRYANT

Email Address JEREMIAH.OLTMANS@CRYE-LEIKE.COM

Additional Information:

Legal Description (Attach description if necessary)

LOT 7, CORAL RIDGE, A SUBDIVISION IN THE CITY OF BRYANT, SALINE COUNTY, ARKANSAS

Description of Variance Request (Attach any necessary drawings or images)

REDUCTION OF REAR SETBACK TO 23'.

Proposed Use of Property R-2

HOPE CONSULTING

ENGINEERS - SURVEYORS

March 20, 2023

City of Bryant Board of Zoning Adjustments
210 Southwest Third St., Bryant, AR 72022

Dear Board Members,

We would like to request a variance for Lot 7, Coral Ridge Subdivision in Bryant, on behalf of the owner Oltman's Development, Inc. We would like to request that the rear setback be reduced to 23'.

Thank you for your consideration in this matter.

Sincerely,

Jonathan Hope

129 North Main St. Benton, Arkansas 72015
www.hopeconsulting.com
(P) 501-315-2626
(F) 501-315-0024

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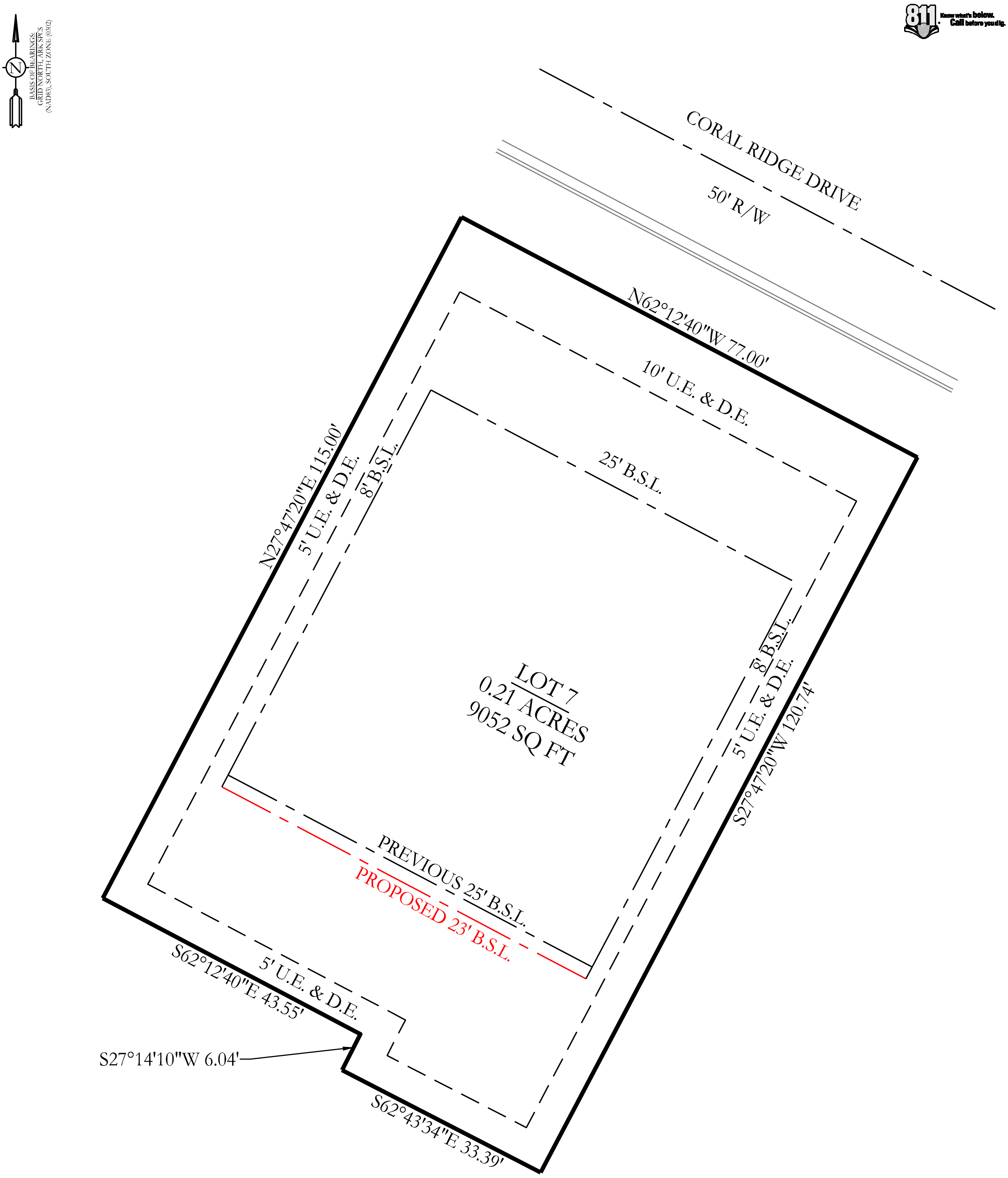
23-0220
Drawing No.



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No. 1931
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RECORD DESCRIPTION

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REGISTERED
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NO. 1762
SIGNATURE
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panel # 05125C0225E, dated: 06/05/2020.
For the Exclusive Use and Benefit of:
Oltman's Development Inc.

Address Coral Ridge Dr.
Bryant, AR
Date DATE

500	01S	14W	0	07	130	62	1664

20' 10' 0 20'

LEGEND
- Computed Point
- Found monument
- Set 1/2" Rebar #1664
(M) - Measured
(D/P) - Record

Drawn By MD
Checked By WCS

HOPE CONSULTING
ENGINEERS - SURVEYORS

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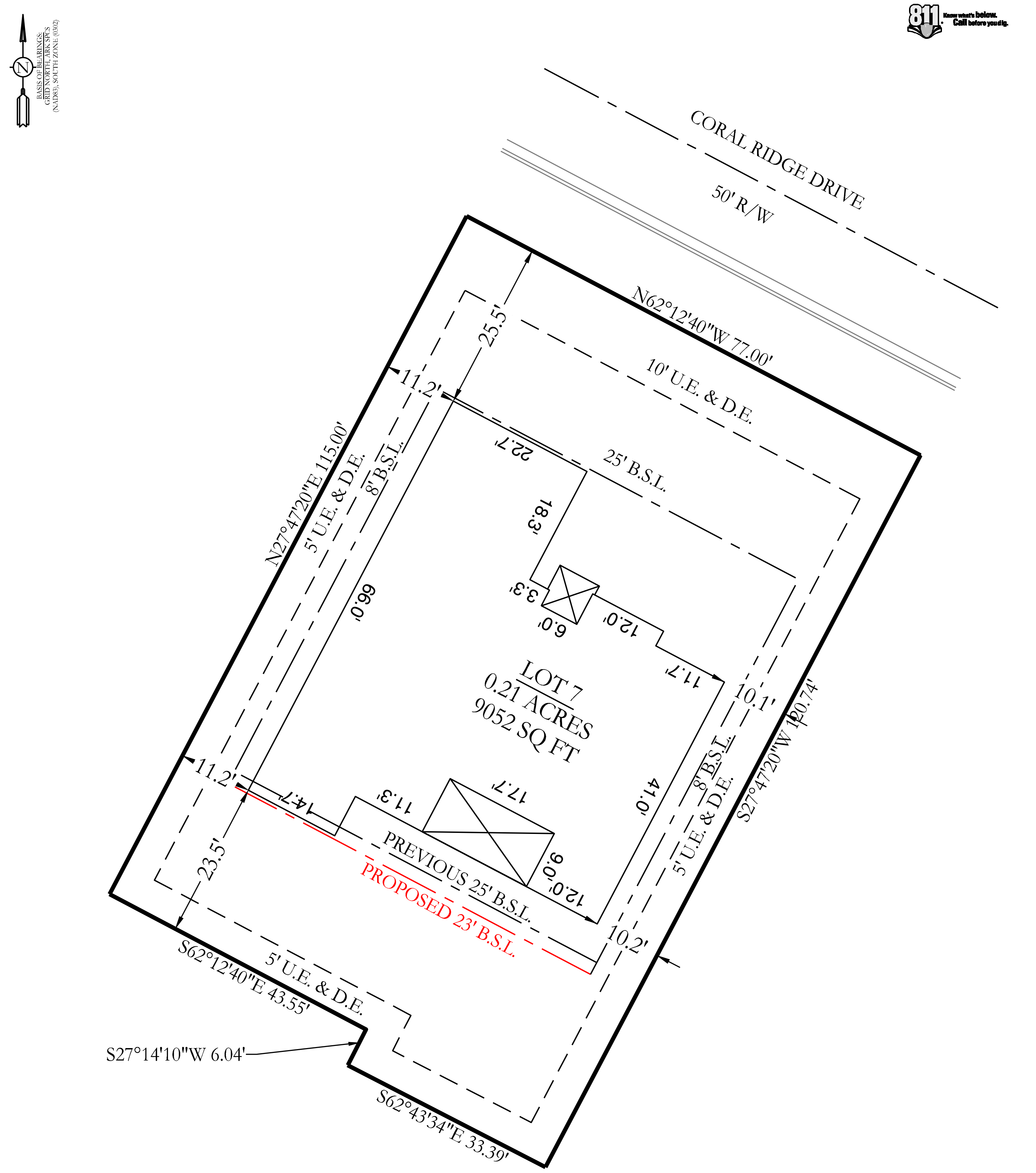
www.HopeConsulting.com

23-0220
Drawing No.



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

RECORD DESCRIPTION

LOT 7, CORAL RIDGE SUBDIVISION, A SUBDIVISION IN THE CITY OF BRYANT, SALINE COUNTY, ARKANSAS.

20' 10' 0 20'

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

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panel # 05125C0225E , dated: 06/05/2020 .

For the Exclusive Use and Benefit of:
Oltman's Development Inc.

Address Coral Ridge Dr.
Bryant, AR
Date DATE

500	01S	14W	0	07	130	62	1664

LEGEND
- △ - Computed Point
- ● - Found monument
- ⊙ - Set 1/2" Rebar #1664
- (M) - Measured
- (D/P) - Record

Drawn By MD
Checked By WCS

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

Variance Application

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Date: 3/21/23

Applicant or Designee:

Name JONATHAN HOPE
Address 129 N. MAIN ST., BENTON
Phone 501-315-2626
Email Address: JONATHAN@HOPECONSULTING.COM

Project Location:

Property Address LOT 11 CORAL RIDGE DR. BRYANT, AR.
Parcel Number LOT 11
Zoning Classification R-2

Property Owner (If different from Applicant):

Name OLTMAN'S DEVELOPMENT, INC.
Phone
Address 1930 N. REYNOLDS RD., UNIT 1P, BRYANT
Email Address JEREMIAH.OLTMANS@CRYE-LEIKE.COM

Additional Information:

Legal Description (Attach description if necessary)
LOT 11, CORAL RIDGE, A SUBDIVISION IN THE CITY OF BRYANT, SALINE COUNTY, ARKANSAS

Description of Variance Request (Attach any necessary drawings or images)
REDUCTION OF REARSET BACK TO 7'.

Proposed Use of Property R-2

HOPE
CONSULTING
ENGINEERS - SURVEYORS

March 20, 2023

City of Bryant Board of Zoning Adjustments
210 Southwest Third St., Bryant, AR 72022

Dear Board Members,

We would like to request a variance for Lot 11, Coral Ridge Subdivision in Bryant, on behalf of the owner Oltman's Development, Inc. We would like to request that the rear setback be reduced to 7'.

Thank you for your consideration in this matter.

Sincerely,

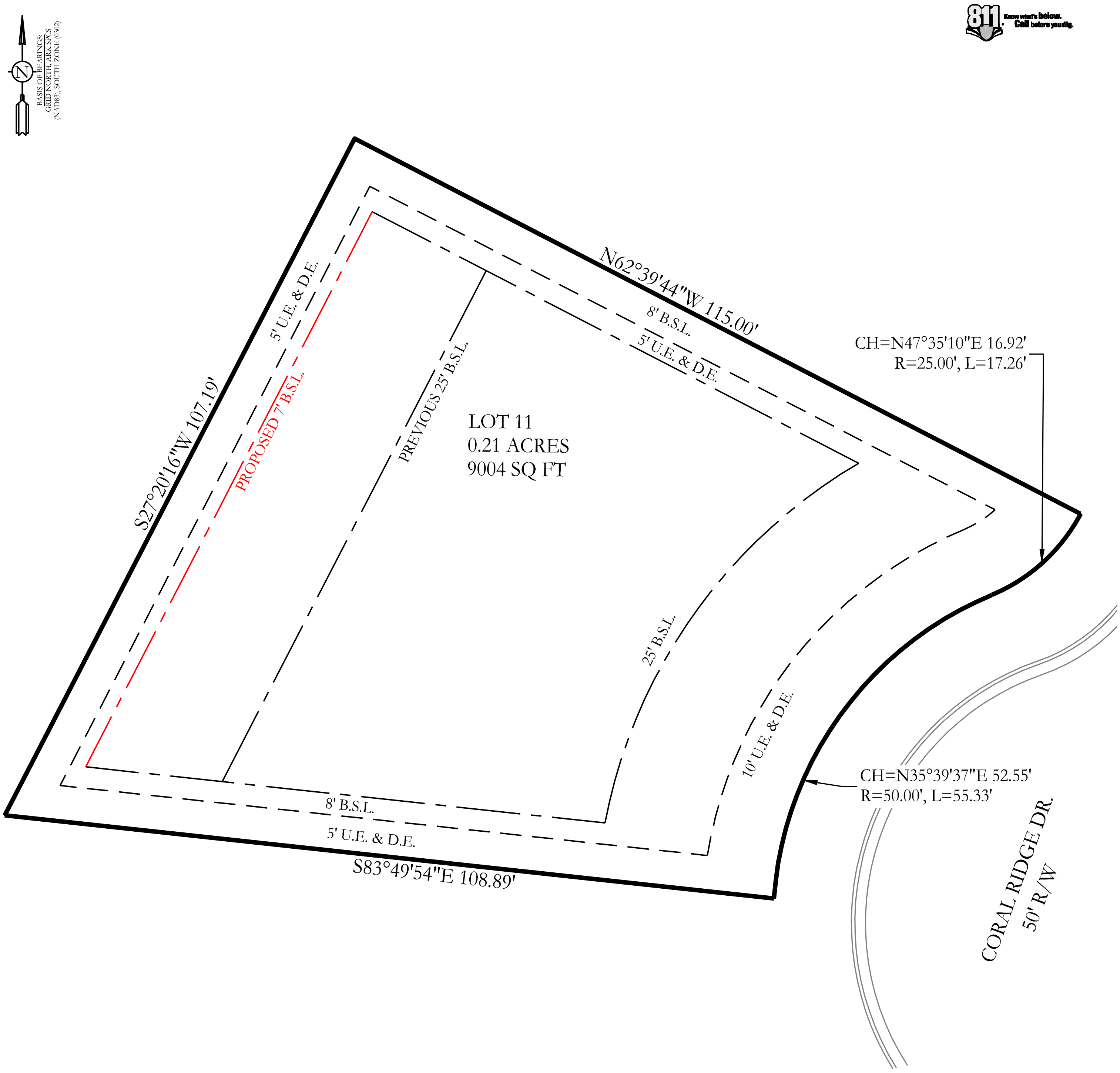
Jonathan Hope

129 North Main St. Benton, Arkansas 72015
www.hopeconsulting.com
(P) 501-315-2626
(F) 501-315-0024

HOPE CONSULTING
ENGINEERS • SURVEYORS

129 N. Main Street, Benton, Arkansas 72015
Ph. (501) 315-2626 Fax (501)315-0024
www.HopeConsulting.com

LOT 11CR
Drawing No.



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

RECORD DESCRIPTION

LOT 11, CORAL RIDGE SUBDIVISION, A SUBDIVISION IN THE CITY OF BRYANT, SALINE COUNTY, ARKANSAS.

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

By affixing my seal and signature, I, Jonathan Hope, PS No. 1762, hereby certify that this drawing correctly depicts a survey compiled under my supervision.
This survey is for the exclusive use and benefit of parties shown hereon. Use or duplication of this document by any other parties is prohibited and voids said document.
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 flood plain, according to the Flood Insurance Rate Map,
panel # 05125C0225E , dated: 06/05/2020 .

For the Exclusive Use and Benefit of:
Oltman's Development Inc.

Address Coral Ridge Dr.
Bryant, AR
Date DATE

500	01S	14W	0	07	130	62	1664

20' 10' 0 20'

LEGEND
- Computed Point
- Found monument
- Set 1/2" Rebar #1664
(M) - Measured
(D/P) - Record

Drawn By MD
Checked By WCS

HOPE CONSULTING
ENGINEERS • SURVEYORS

129 N. Main Street, Benton, Arkansas 72015
Ph. (501) 315-2626 Fax (501)315-0024
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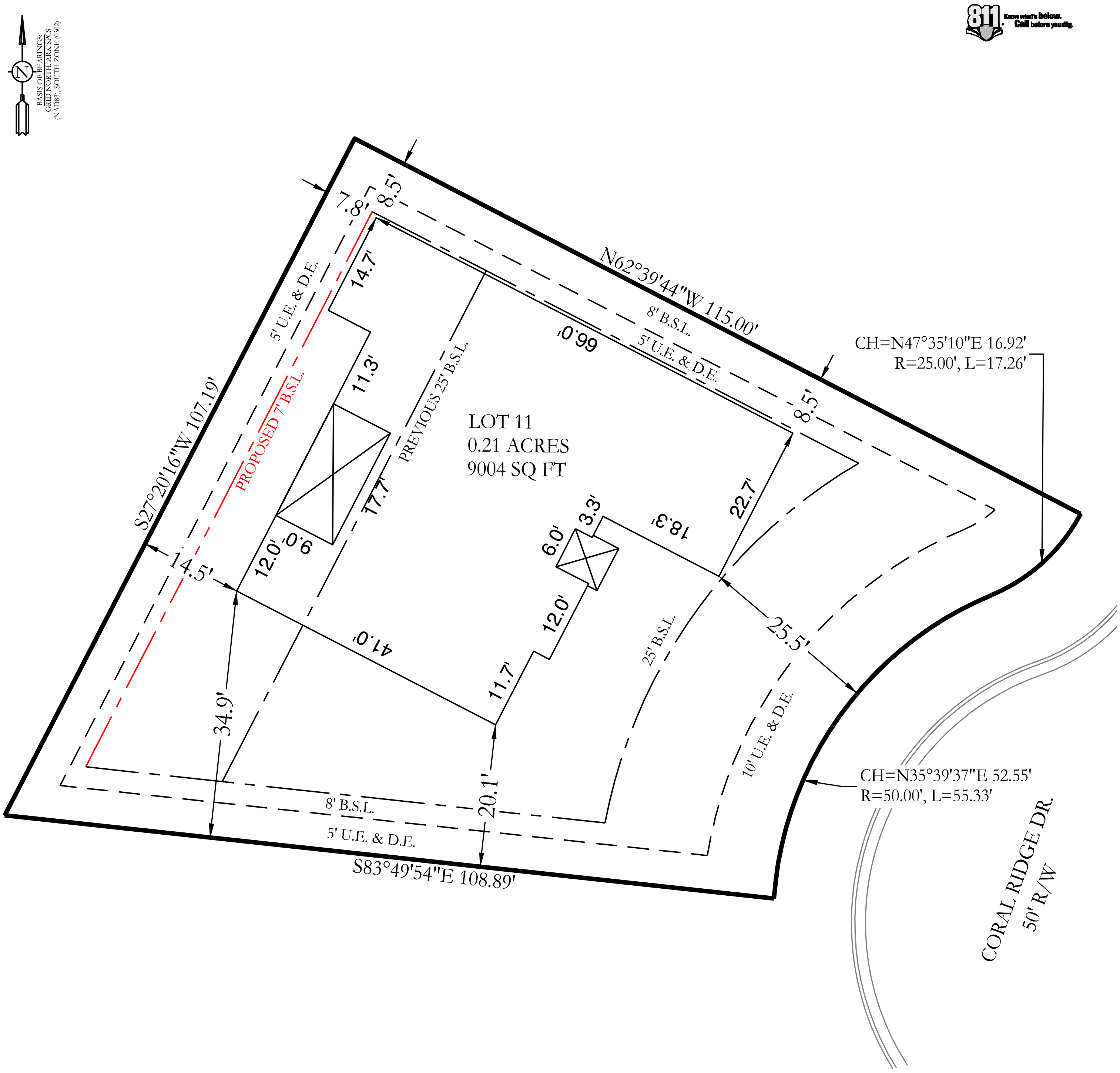
LOT 11CR
Drawing No.



RECORD DESCRIPTION

LOT 11, CORAL RIDGE SUBDIVISION, A SUBDIVISION IN THE CITY OF BRYANT, SALINE COUNTY, ARKANSAS.

By affixing my seal and signature, I, Jonathan Hope, PS No. 1762, hereby certify that this drawing correctly depicts a survey compiled under my supervision.
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For the Exclusive Use and Benefit of:
Oltman's Development Inc.

Address Coral Ridge Dr.
Bryant, AR
Date DATE

20' 10' 0 20'

LEGEND

- Computed Point
- Found monument
- Set 1/2" Rebar #1664
(M) - Measured
(D/P) - Record

Drawn By MD
Checked By WCS

500	01S	14W	0	07	130	62	1664

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

Variance Application

Applicants are advised to read the Board of Adjustment and Variances 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: 3/21/23

Applicant or Designee:

Name JONATHAN HOPE
Address 129 N. MAIN ST., BENTON
Phone 501-315-2626
Email Address: JONATHAN@HOPECONSULTING.COM

Project Location:

Property Address LOT 16 CORAL RIDGE DR. BRYANT, AR.
Parcel Number LOT 16
Zoning Classification R-2

Property Owner (If different from Applicant):

Name OLTMAN'S DEVELOPMENT, INC.
Phone
Address 1930 N. REYNOLDS RD., UNIT 1P, BRYANT
Email Address JEREMIAH.OLTMANS@CRYE-LEIKE.COM

Additional Information:

Legal Description (Attach description if necessary)
LOT 16, CORAL RIDGE, A SUBDIVISION IN THE CITY OF BRYANT, SALINE COUNTY, ARKANSAS

Description of Variance Request (Attach any necessary drawings or images)
REDUCTION OF REAR SETBACK TO 5'.

Proposed Use of Property R-2

HOPE
CONSULTING
ENGINEERS - SURVEYORS

March 20, 2023

City of Bryant Board of Zoning Adjustments
210 Southwest Third St., Bryant, AR 72022

Dear Board Members,

We would like to request a variance for Lot 16, Coral Ridge Subdivision in Bryant, on behalf of the owner Oltman's Development, Inc. We would like to request that the rear setback be reduced to 5'.

Thank you for your consideration in this matter.

Sincerely,

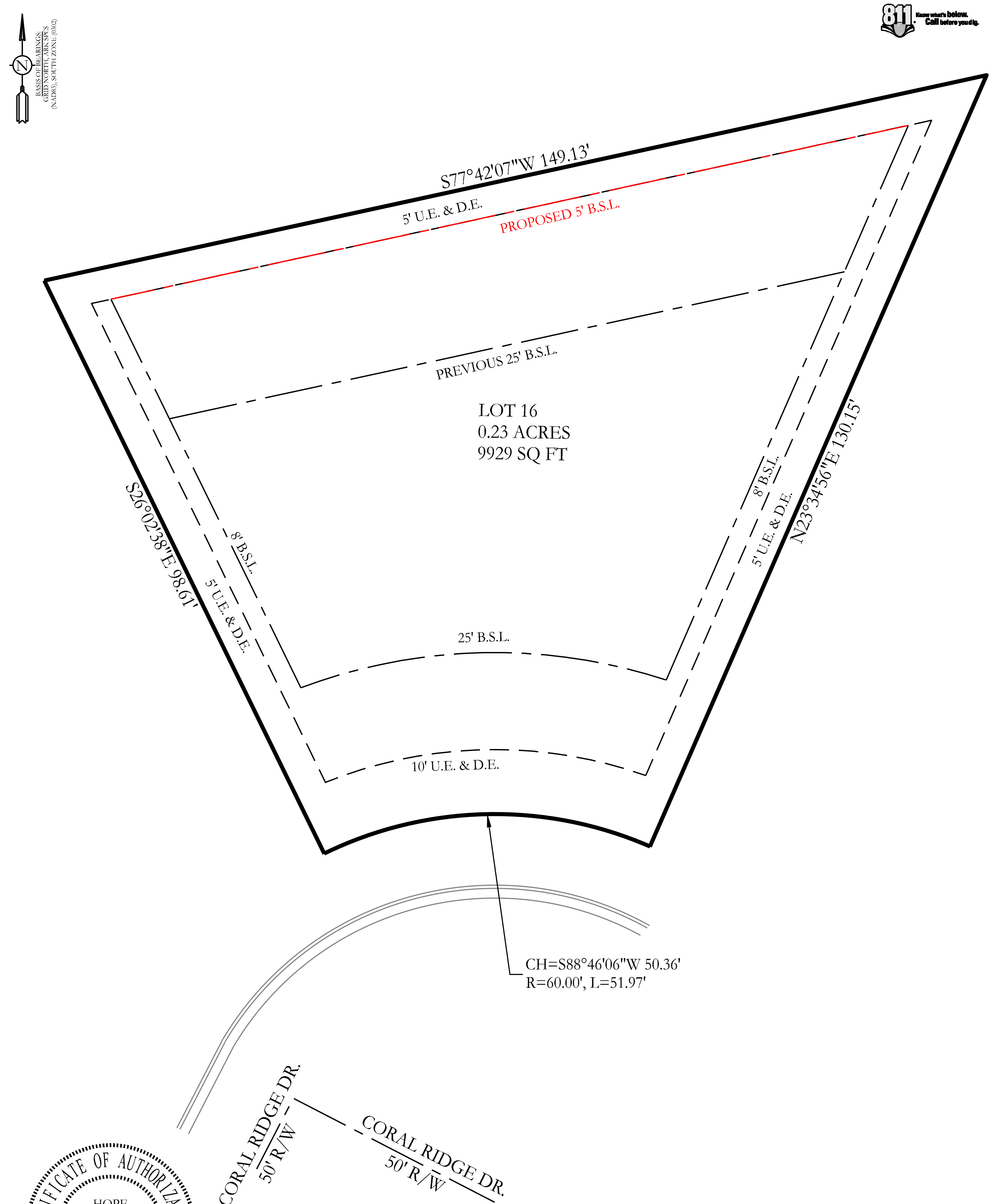
Jonathan Hope

129 North Main St. Benton, Arkansas 72015
www.hopeconsulting.com
(P) 501-315-2626
(F) 501-315-0024

HOPE CONSULTING
ENGINEERS - SURVEYORS

129 N. Main Street, Benton, Arkansas 72015
Ph. (501) 315-2626 Fax (501)315-0024
www.HopeConsulting.com

LOT 16CR
Drawing No.



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

RECORD DESCRIPTION

LOT 16, CORAL RIDGE SUBDIVISION, A SUBDIVISION IN THE CITY OF BRYANT, SALINE COUNTY, ARKANSAS.

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

By affixing my seal and signature, I, Jonathan Hope, PS No. 1762, hereby certify that this drawing correctly depicts a survey compiled under my supervision.
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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 flood plain, according to the Flood Insurance Rate Map,
panel # 05125C0225E , dated: 06/05/2020 .

For the Exclusive Use and Benefit of:
Oltman's Development Inc.

Address Coral Ridge Dr.
Bryant, AR
Date DATE

500	01S	14W	0	07	130	62	1664

20' 10' 0 20'

LEGEND

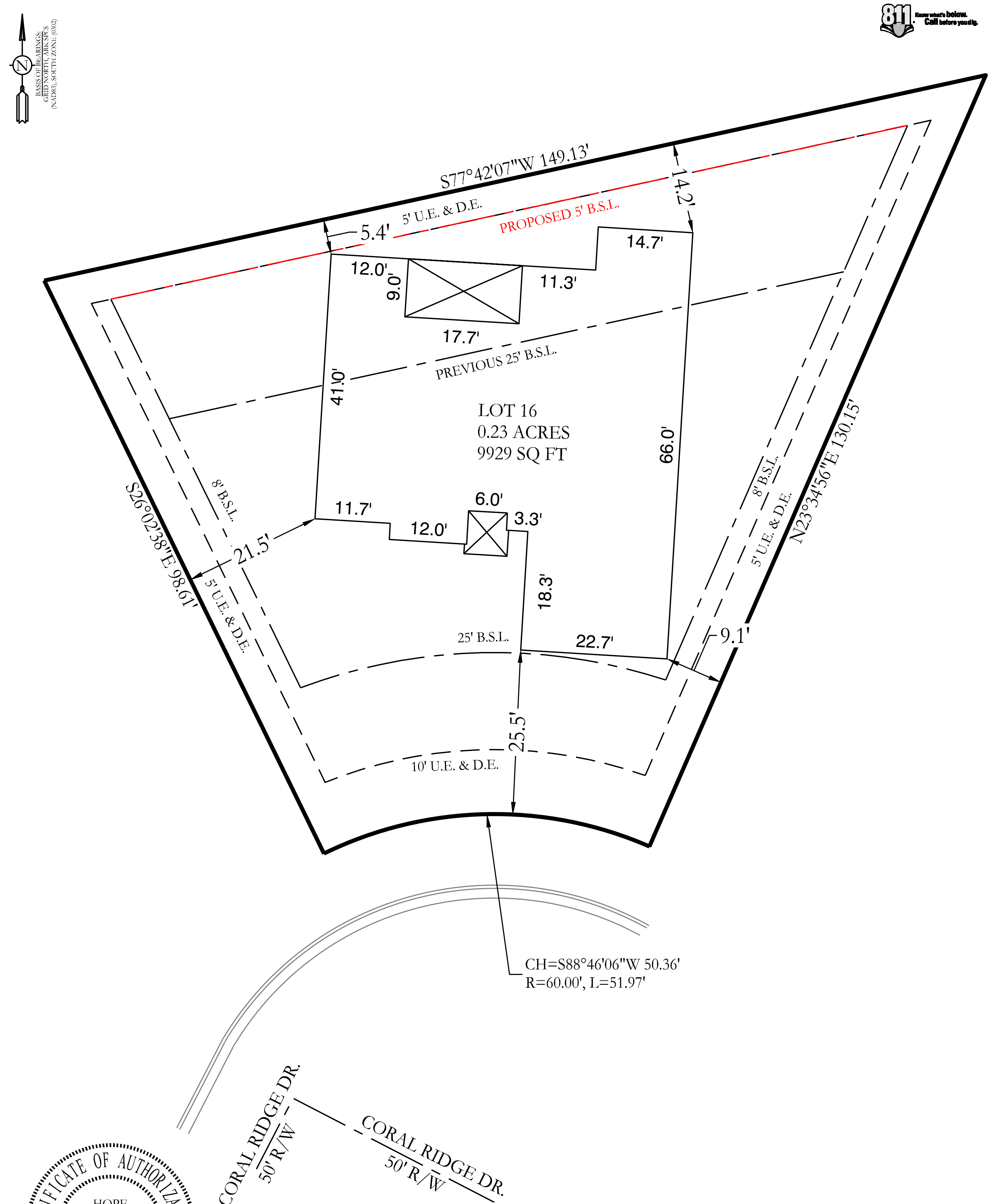
- △ - Computed Point
- ● - Found monument
- ⊙ - Set 1/2" Rebar #1664
- (M) - Measured
- (D/P) - Record

Drawn By MD
Checked By WCS

HOPE CONSULTING
ENGINEERS • SURVEYORS

129 N. Main Street, Benton, Arkansas 72015
Ph. (501) 315-2626 Fax (501)315-0024
www.HopeConsulting.com

LOT 16CR
Drawing No.



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

RECORD DESCRIPTION

LOT 16, CORAL RIDGE SUBDIVISION, A SUBDIVISION IN THE CITY OF BRYANT, SALINE COUNTY, ARKANSAS.

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

By affixing my seal and signature, I, Jonathan Hope, PS No. 1762, hereby certify that this drawing correctly depicts a survey compiled under my supervision.
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No portion of the property described hereon lies within the 100 year flood plain, according to the Flood Insurance Rate Map, panel # 05125C0225E, dated: 06/05/2020.

For the Exclusive Use and Benefit of:
Oltman's Development Inc.

Address Coral Ridge Dr.
Bryant, AR
Date DATE

500	01S	14W	0	07	130	62	1664

20' 10' 0 20'

LEGEND

- △ - Computed Point
- ● - Found monument
- ⊙ - Set 1/2" Rebar #1664
- (M) - Measured
- (D/P) - Record

Drawn By MD
Checked By WCS

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

Variance Application

Applicants are advised to read the Board of Adjustment and Variances 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: 3/21/23

Applicant or Designee:

Name JONATHAN HOPE

Address 129 N. MAIN ST., BENTON

Phone 501-315-2626

Email Address: JONATHAN@HOPECONSULTING.COM

Project Location:

Property Address LOT 24 CORAL RIDGE DR. BRYANT, AR.

Parcel Number LOT 24

Zoning Classification R-2

Property Owner (If different from Applicant):

Name OLTMAN'S DEVELOPMENT, INC

Phone

Address 1930 N. REYNOLD'S RD., UNIT 1P, BRYANT

Email Address JEREMIAH.OLTMANS@CRYE-LEIKE.COM

Additional Information:

Legal Description (Attach description if necessary)

LOT 24, CORAL RIDGE, A SUBDIVISION IN THE CITY OF BRYANT, SALINE COUNTY, ARKANSAS

Description of Variance Request (Attach any necessary drawings or images)

REDUCTION OF REAR SETBACK TO 9.5'.

Proposed Use of Property R-2

HOPE
CONSULTING
ENGINEERS - SURVEYORS

March 20, 2023

City of Bryant Board of Zoning Adjustments
210 Southwest Third St., Bryant, AR 72022

Dear Board Members,

We would like to request a variance for Lot 24, Coral Ridge Subdivision in Bryant, on behalf of the owner Oltman's Development, Inc. We would like to request that the rear setback be reduced to 9.5'.

Thank you for your consideration in this matter.

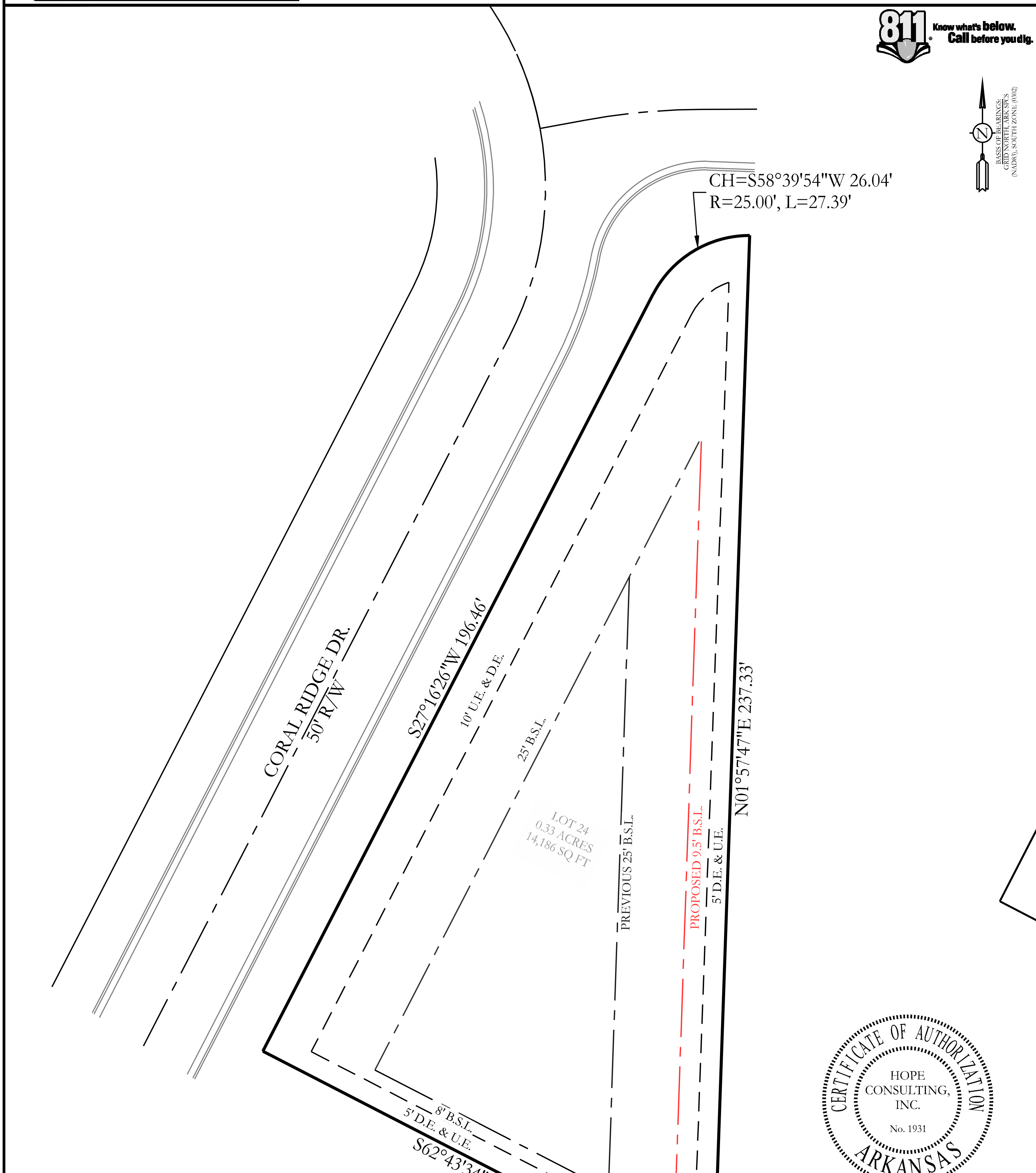
Sincerely,

Jonathan Hope

129 North Main St. Benton, Arkansas 72015
www.hopeconsulting.com
(P) 501-315-2626
(F) 501-315-0024

HOPE CONSULTING
ENGINEERS ~ SURVEYORS
129 N. Main Street, Benton, Arkansas 72015
Ph. (501)315-2626 Fax (501)315-0024
www.HopeConsulting.com

22-LOT24RE
Drawing No.



RECORD DESCRIPTION
SALINE COUNTY INSTRUMENT 2022-027345

LOT 24, CORAL RIDGE, A SUBDIVISION IN THE CITY OF BRYANT, SALINE COUNTY, ARKANSAS.

30' 15' 0 30'

REGISTERED PROFESSIONAL LAND SURVEYOR
STATE OF ARKANSAS
No. 1664
SIGNATURE
WILLIAM CORBITT R. SHOFFNER

ORIGINAL SIGNATURE ON FILE

By affixing my seal and signature, I, Corbitt Shoffner, PS No. 1664, hereby certify that this drawing correctly depicts a survey compiled under my supervision.
This survey is for the exclusive use and benefit of parties shown hereon. Use or duplication of this document by any other parties is prohibited and voids said document.
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 flood plain, according to the Flood Insurance Rate Map,
panel # 05125C0225E , dated: 06/05/2022 .

For the Exclusive Use and Benefit of:

Oltman's Development, Inc.

Address Lot 24 Coral Ridge Dr.
Bryant, AR

Date 12/21/2022

500	01S	14W	0	07	130	62	1664

LEGEND

- △ - Computed Point
- ● - Found monument
- ⊙ - Set 1/2" Rebar #1664
- (M) - Measured
- (D/P) - Record

Drawn By MD
Checked By WCS

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

Variance Application

Applicants are advised to read the Board of Adjustment and Variances 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: 3/21/23

Applicant or Designee:

Name JONATHAN HOPE
Address 129 N. MAIN ST., BENTON
Phone 501-315-2626
Email Address: JONATHAN@HOPECONSULTING.COM

Project Location:

Property Address LOT 28 CORAL RIDGE DR. BRYANT, AR.
Parcel Number LOT 28
Zoning Classification R-2

Property Owner (If different from Applicant):

Name OLTMAN'S DEVELOPMENT, INC.
Phone
Address 1930 N. REYNOLDS RD., UNIT 1P, BRYANT
Email Address JEREMIAH.OLTMANS@CRYE-LEIKE.COM

Additional Information:

Legal Description (Attach description if necessary)
LOT 28, CORAL RIDGE, A SUBDIVISION IN THE CITY OF BRYANT, SALINE COUNTY, ARKANSAS

Description of Variance Request (Attach any necessary drawings or images)
REDUCTION OF REAR SETBACK TO 8'.

Proposed Use of Property R-2

HOPE CONSULTING
ENGINEERS - SURVEYORS

March 20, 2023

City of Bryant Board of Zoning Adjustments
210 Southwest Third St., Bryant, AR 72022

Dear Board Members,

We would like to request a variance for Lot 28, Coral Ridge Subdivision in Bryant, on behalf of the owner Oltman's Development, Inc. We would like to request that the rear setback be reduced to 8'.

Thank you for your consideration in this matter.

Sincerely,

Jonathan Hope

129 North Main St. Benton, Arkansas 72015
www.hopeconsulting.com
(P) 501-315-2626
(F) 501-315-0024

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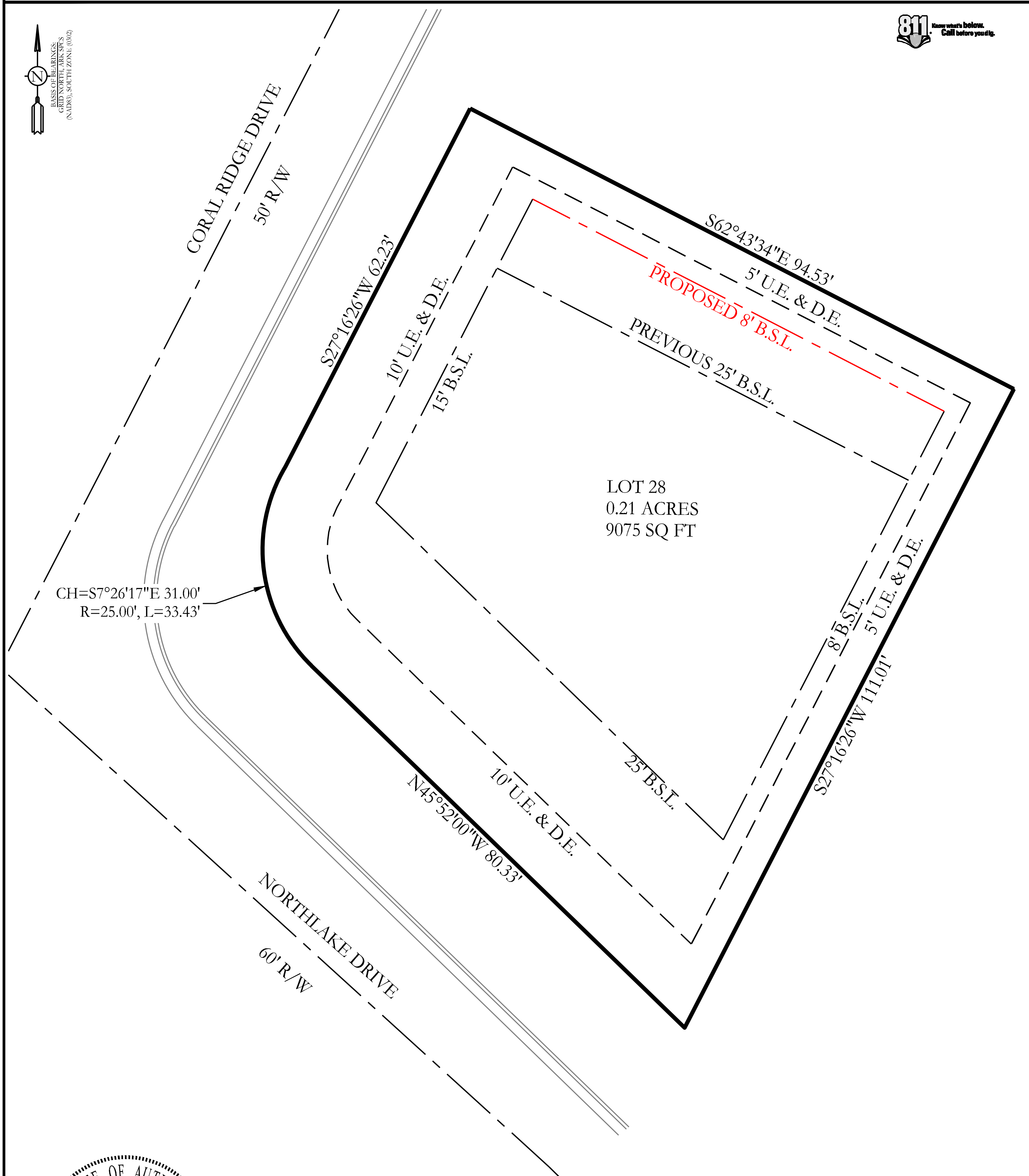
129 N. Main Street, Benton, Arkansas 72015
Ph. (501) 315-2626 Fax (501)315-0024
www.HopeConsulting.com

LOT28 CR
Drawing No.



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

RECORD DESCRIPTION

LOT 28, CORAL RIDGE SUBDIVISION, A SUBDIVISION IN THE CITY OF BRYANT, SALINE COUNTY, ARKANSAS.

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

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panel # 05125C0225E, dated: 06/05/2020.

For the Exclusive Use and Benefit of:
Oltman's Development Inc.

Address Coral Ridge Dr.
Bryant, AR

Date DATE

500	01S	14W	0	07	130	62	1664

20' 10' 0 20'

LEGEND
- Computed Point
- Found monument
- Set 1/2" Rebar #1664
(M) - Measured
(D/P) - Record

Drawn By MD
Checked By WCS

HOPE CONSULTING
ENGINEERS - SURVEYORS

129 N. Main Street, Benton, Arkansas 72015
Ph. (501) 315-2626 Fax (501)315-0024
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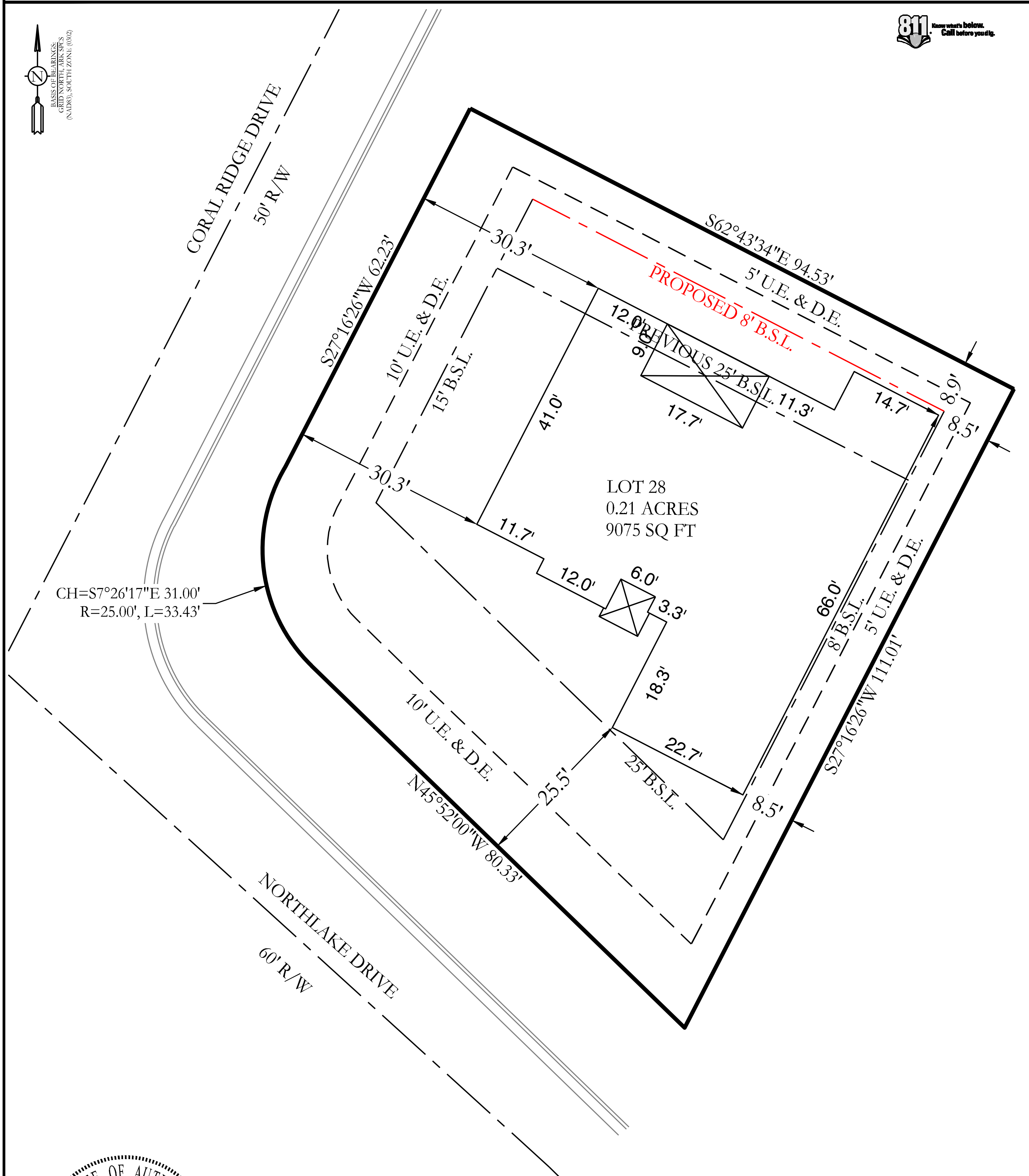
LOT28 CR
Drawing No.



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

RECORD DESCRIPTION

LOT 28, CORAL RIDGE SUBDIVISION, A SUBDIVISION IN THE CITY OF BRYANT, SALINE COUNTY, ARKANSAS.

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

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panel # 05125C0225E , dated: 06/05/2020 .

For the Exclusive Use and Benefit of:
Oltman's Development Inc.

Address Coral Ridge Dr.
Bryant, AR
Date DATE

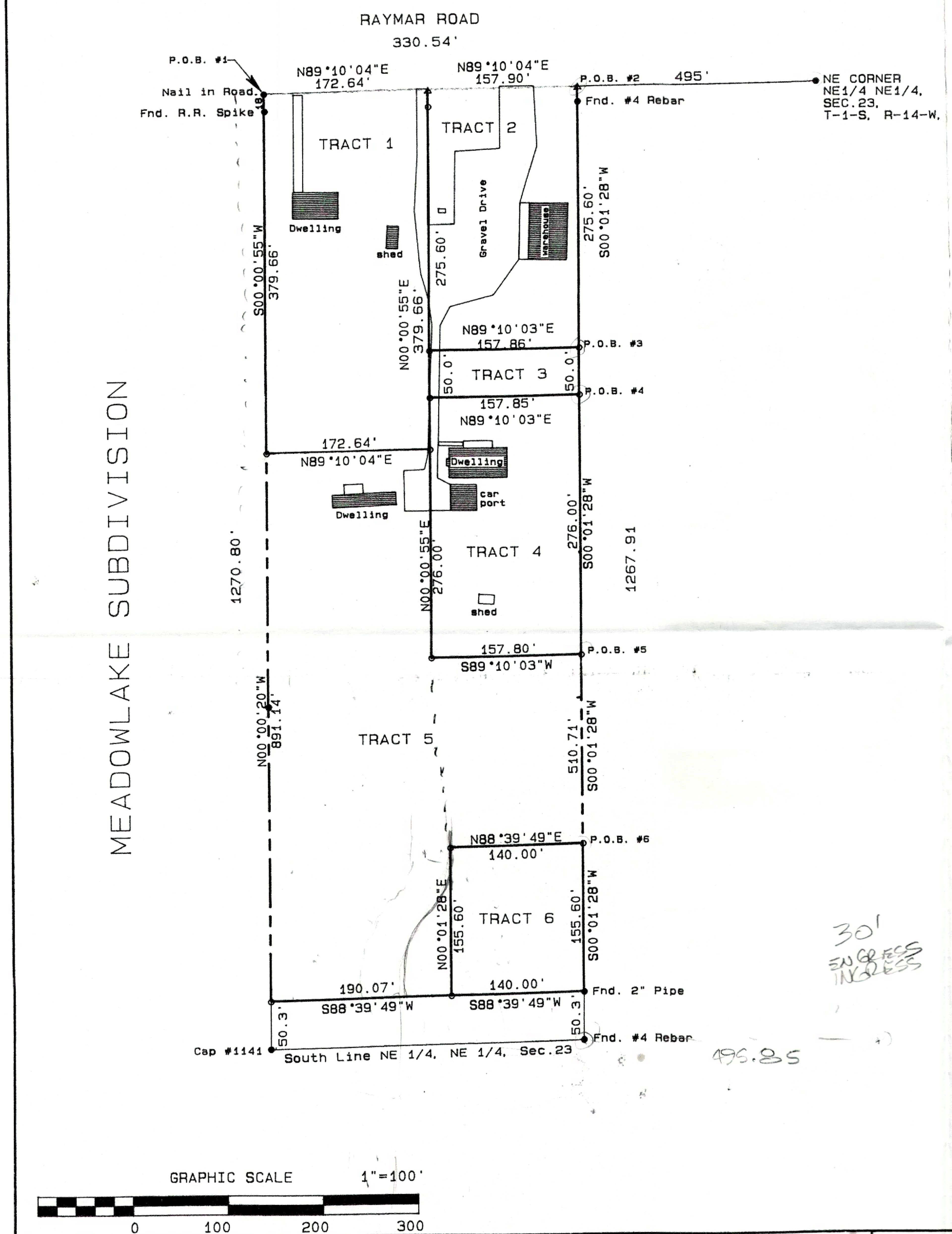
500	01S	14W	0	07	130	62	1664

20' 10' 0 20'

LEGEND

- △ - Computed Point
- ● - Found monument
- ⊙ - Set 1/2" Rebar #1664
- (M) - Measured
- (D/P) - Record

Drawn By MD
Checked By WCS



THE BEARING SYSTEM IS BASED ON

THE NORTH LINE OF THE NE1/4 NE1/4 AS DEFINED BY THIS SURVEY AND THE UNDECLINATED MAGNETIC COMPASS.

ORIGINAL DESCRIPTION
TRACT 1

ALL THAT PART OF THE NORTHEAST QUARTER OF THE NORTHEAST QUARTER OF SECTION 23, TOWNSHIP 1 SOUTH, RANGE 14 WEST, SALINE COUNTY, ARKANSAS MORE FULLY DESCRIBED AS FOLLOWS:
COMMENCING AT THE NORTHEAST CORNER OF THE SAID NE1/4 NE1/4, AND RUN SOUTH 89°10'04" WEST, ALONG THE NORTH LINE THEREOF, FOR A DISTANCE OF 825.54 FEET, TO THE POINT OF BEGINNING PROPER;
THENCE NORTH 89°10'04" EAST, ALONG THE SAID NORTH LINE, FOR A DISTANCE OF 172.64 FEET, TO THE NORTHWEST CORNER OF THE PROPERTY DESCRIBED IN SALINE COUNTY MISC. BOOK 66 ON PAGE 87; THENCE SOUTH 00°00'55" WEST, ALONG THE WEST LINE THEREOF, FOR A DISTANCE OF 379.66 FEET; THENCE SOUTH 89°10'04" WEST, LEAVING THE SAID WEST LINE, FOR A DISTANCE OF 172.64 FEET, TO A POINT ON THE EAST LINE OF THE MEADOWLAKE PHASE 1 SUBDIVISION; THENCE NORTH 00°00'55" EAST, ALONG THE SAID EAST LINE OF THE SUBDIVISION, FOR A DISTANCE OF 379.66 FEET, TO THE POINT OF BEGINNING, CONTAINING 1.5 ACRES, MORE OR LESS.

LEGAL DESCRIPTION, MISC. BOOK 235, PAGE 421
TRACT 2

ALL THAT PART OF THE NORTHEAST QUARTER OF THE NORTHEAST QUARTER OF SECTION 23, TOWNSHIP 1 SOUTH, RANGE 14 WEST, SALINE COUNTY, ARKANSAS MORE FULLY DESCRIBED AS FOLLOWS:
BEGINNING AT A POINT ON THE NORTH LINE OF THE SAID NE1/4 NE1/4, THAT IS 495.0 FEET WEST OF THE NE CORNER THEREOF; THENCE SOUTH 275.6 FEET; THENCE WEST 157.9 FEET; THENCE NORTH 275.6 FEET TO A POINT ON THE NORTH LINE; THENCE EAST ALONG SAID NORTH LINE, 157.9 FEET TO THE POINT OF BEGINNING, CONTAINING 1.0 ACRES, MORE OR LESS.

ORIGINAL DESCRIPTION
TRACT 3

ALL THAT PART OF THE NORTHEAST QUARTER OF THE NORTHEAST QUARTER OF SECTION 23, TOWNSHIP 1 SOUTH, RANGE 14 WEST, SALINE COUNTY, ARKANSAS MORE FULLY DESCRIBED AS FOLLOWS:
COMMENCING AT THE NORTHEAST CORNER OF THE SAID NE1/4 NE1/4, AND RUN SOUTH 89°10'04" WEST, ALONG THE NORTH LINE THEREOF, FOR A DISTANCE OF 495.0 FEET, TO THE NORTHEAST CORNER OF THE PROPERTY DESCRIBED IN SALINE COUNTY DEED BOOK 235 ON PAGE 421; THENCE SOUTH 00°01'28" WEST, ALONG THE EAST LINE THEREOF, FOR A DISTANCE OF 275.6 FEET, TO THE SOUTHEAST CORNER OF THE PROPERTY DESCRIBED IN SALINE COUNTY MISC. BOOK 66 ON PAGE 87, AND BEING THE POINT OF BEGINNING PROPER;
THENCE SOUTH 00°01'28" WEST, CONTINUING ALONG THE SAID EAST LINE, OF THE PROPERTY DESCRIBED IN SALINE COUNTY DEED BOOK 235 ON PAGE 421, FOR A DISTANCE OF 50.00 FEET; THENCE SOUTH 89°10'03" WEST, LEAVING THE SAID EAST LINE, FOR A DISTANCE OF 157.85 FEET; THENCE NORTH 00°00'55" EAST, FOR A DISTANCE OF 50.00 FEET, TO THE SOUTHWEST CORNER OF THE PROPERTY DESCRIBED IN MISC. BOOK 66 ON PAGE 87; THENCE NORTH 89°10'03" EAST, ALONG THE SOUTH LINE THEREOF, FOR A DISTANCE OF 157.86 FEET, TO THE POINT OF BEGINNING, CONTAINING 0.18 ACRES, MORE OR LESS.

ORIGINAL DESCRIPTION
TRACT 4

ALL THAT PART OF THE NORTHEAST QUARTER OF THE NORTHEAST QUARTER OF SECTION 23, TOWNSHIP 1 SOUTH, RANGE 14 WEST, SALINE COUNTY, ARKANSAS MORE FULLY DESCRIBED AS FOLLOWS:
COMMENCING AT THE NORTHEAST CORNER OF THE SAID NE1/4 NE1/4, AND RUN SOUTH 89°10'04" WEST, ALONG THE NORTH LINE THEREOF, FOR A DISTANCE OF 495.0 FEET, TO THE NORTHEAST CORNER OF THE PROPERTY DESCRIBED IN SALINE COUNTY DEED BOOK 235 ON PAGE 421; THENCE SOUTH 00°01'28" WEST, ALONG THE EAST LINE THEREOF, FOR A DISTANCE OF 325.6 FEET, TO THE POINT OF BEGINNING PROPER;
THENCE SOUTH 00°01'28" WEST, CONTINUING ALONG THE SAID EAST LINE, FOR A DISTANCE OF 276.00 FEET; THENCE SOUTH 89°10'03" WEST, LEAVING THE SAID EAST LINE, FOR A DISTANCE OF 157.80 FEET; THENCE NORTH 00°00'55" EAST, FOR A DISTANCE OF 276.00 FEET; THENCE NORTH 89°10'03" EAST, FOR A DISTANCE OF 157.85 FEET, TO THE POINT OF BEGINNING, CONTAINING 1.0 ACRES, MORE OR LESS.

ORIGINAL DESCRIPTION
TRACT 5

ALL THAT PART OF THE NORTHEAST QUARTER OF THE NORTHEAST QUARTER OF SECTION 23, TOWNSHIP 1 SOUTH, RANGE 14 WEST, SALINE COUNTY, ARKANSAS MORE FULLY DESCRIBED AS FOLLOWS:
COMMENCING AT THE NORTHEAST CORNER OF THE SAID NE1/4 NE1/4, AND RUN SOUTH 89°10'04" WEST, ALONG THE NORTH LINE THEREOF, FOR A DISTANCE OF 495.0 FEET, TO THE NORTHEAST CORNER OF THE PROPERTY DESCRIBED IN SALINE COUNTY DEED BOOK 235 ON PAGE 421; THENCE SOUTH 00°01'28" WEST, ALONG THE EAST LINE THEREOF, FOR A DISTANCE OF 601.6 FEET, TO THE POINT OF BEGINNING PROPER;
THENCE SOUTH 00°01'28" WEST, CONTINUING ALONG THE SAID EAST LINE, FOR A DISTANCE OF 510.71 FEET; THENCE SOUTH 88°39'49" WEST, LEAVING THE SAID EAST LINE, FOR A DISTANCE OF 140.00 FEET; THENCE SOUTH 00°01'28" WEST, FOR A DISTANCE OF 155.60 FEET, TO A POINT ON THE SOUTH LINE OF THE PROPERTY DESCRIBED IN DEED BOOK 235 ON PAGE 421; THENCE SOUTH 88°39'49" WEST, ALONG THE SAID SOUTH LINE, FOR A DISTANCE OF 190.07 FEET, TO THE SOUTHWEST CORNER THEREOF; THENCE NORTH 00°00'55" EAST, ALONG THE WEST LINE OF THE SAID PROPERTY DESCRIBED IN DEED BOOK 235 ON PAGE 421, FOR A DISTANCE OF 891.14 FEET; THENCE NORTH 89°10'04" EAST, LEAVING THE SAID WEST LINE, FOR A DISTANCE OF 172.64 FEET; THENCE SOUTH 00°00'55" WEST, FOR A DISTANCE OF 276.00 FEET; THENCE NORTH 89°10'03" EAST, FOR A DISTANCE OF 157.80 FEET, TO THE POINT OF BEGINNING, CONTAINING 3.09 ACRES, MORE OR LESS.

ORIGINAL DESCRIPTION
TRACT 6

ALL THAT PART OF THE NORTHEAST QUARTER OF THE NORTHEAST QUARTER OF SECTION 23, TOWNSHIP 1 SOUTH, RANGE 14 WEST, SALINE COUNTY, ARKANSAS MORE FULLY DESCRIBED AS FOLLOWS:
COMMENCING AT THE NORTHEAST CORNER OF THE SAID NE1/4 NE1/4, AND RUN SOUTH 89°10'04" WEST, ALONG THE NORTH LINE THEREOF, FOR A DISTANCE OF 495.0 FEET, TO THE NORTHEAST CORNER OF THE PROPERTY DESCRIBED IN SALINE COUNTY DEED BOOK 235 ON PAGE 421; THENCE SOUTH 00°01'28" WEST, ALONG THE EAST LINE THEREOF, FOR A DISTANCE OF 1112.31 FEET, TO THE POINT OF BEGINNING PROPER;
THENCE SOUTH 00°01'28" WEST, CONTINUING ALONG THE SAID EAST LINE, FOR A DISTANCE OF 155.60 FEET, TO THE SOUTHEAST CORNER OF THE SAID PEOPERTY DESCRIBED IN DEED BOOK 235 ON PAGE 421; THENCE SOUTH 88°39'49" WEST, ALONG THE SOUTH LINE THEREOF, FOR A DISTANCE OF 140.00 FEET; THENCE NORTH 00°01'28" EAST, FOR A DISTANCE OF 155.60 FEET; THENCE NORTH 88°39'49" EAST, FOR A DISTANCE OF 140.00 FEET, TO THE POINT OF BEGINNING, CONTAINING 0.5 ACRES, MORE OR LESS.

JOHN CHARLES MITCHELL
REG. PROF. LAND SURVEYOR
1100 MILITARY ROAD
BENTON, ARKANSAS 72015
PHONE (501) 776-2114
FAX (501) 776-1792

FOR THE USE AND BENEFIT OF:
Fred A. Elders
SUBJECT PROPERTY ADDRESS:
2501 Raymar Road
Alexander, Arkansas

DATE	11/02/99
JOB NO.	99-285
SCALE	1"=100'
FILE	1S14W23-110
TYPE	BOUND./DIV.

THIS IS TO CERTIFY THAT THE ABOVE PLAT REPRESENTS A SURVEY MADE BY ME OR UNDER MY SUPERVISION AND THAT ALL CORNER MARKERS HAVE BEEN SET IN ACCORDANCE WITH MONUMENTS FOUND AND ACCEPTED IN THE AREA AND THAT THIS PLAT CONFORMS TO THAT SURVEY. NO INDEPENDANT SEARCH OR INVESTIGATION WAS MADE BY THE SURVEYOR REGARDING EASEMENTS, COVENANTS, ENCUMBRANCES, OR ANY OTHER FACTS WHICH AN ACCURATE TITLE SEARCH MAY DISCLOSE.

I HEREBY CERTIFY THAT THE ABOVE PROPERTY DOES NOT LIE WITHIN THE 100 YEAR FLOOD PRONE AREA. SOURCE: FEMA MAP PANEL NO. 050191 0180 B, DATED: 11/17/82

LEGEND

- ● = FOUND MONUMENT AS SHOWN.
- ⊙ = SET RB W/CAP #1199.
- △ = CALC. PT., NO MONUMENT SET.
- —X— = FENCE LINE
- ——— = PAINTED LINE
- —E— = OVERHEAD ELEC. LINE

2415 Raymar Rd, Bryant, AR 72022 – More specifically described as followed.

Legal Description: MISC. BOOK 235, PAGE 421

TRACT 2

ALL THAT PART OF THE NORTHEAST QUARTER OF THE NORTHEAST QUARTER OF SECTION 23, TOWNSHIP 1 SOUTH, RANGE 14 WEST, SALINE COUNTY, ARKANSAS MORE FULLY DESCRIBED AS FOLLOWS:

BEGINNING AT A POINT ON THE NORTH LINE OF THE SAID NE 1/4 NE ¼, THAT IS 495.0 FEET WEST OF THE NE CORNER THEREOF; THENCE SOUTH 275.6 FEET; THENCE WEST 157.9 FEET; THENCE NORTH 275.6 FEET TO THE POINT OF BEGINNING, CONTAINING 1.0 ACRES, MORE OR LESS.

List of Owners within 300ft of Property

- Lillith Jones – 840-05806-000, 3508 Meadowlake DR, Bryant, AR 72022
- Freddie D Gardner – 840-05804-000, 3600 Meadowlake DR, Bryant, AR 72022
- Gunner Lee and Carmen Griffin – 840-05801-000, 3612 Meadowlake DR, Bryant, AR 72022
- James Blake Holland – 840-05802-000, 2608 Meadowlake DR, Bryant, AR 72022
- David M and Margueritte Christina Guarno – 840-05803-000, 3604 Meadowlake DR, Bryant, AR 72022
- John B Sanchez – 840-05805-000, 3512 Meadowlake DR, Bryant, AR 72022
- Judy A Davidson – 840-05807-000, 3504 Meadowlake DR, Bryant, AR 72022
- Theresa Ann Keener – 840-05885-210, 3609 Lacross Drive, Bryant, AR 72022
- Donna C Watkins – 840-05885-214, 3513 Lacross Drive, Bryant, AR 72022
- Melissa L Crowley – 840-05885-215, 3509 Lacross Drive, Bryant, AR 72022
- Jose Juarez-Guiterrez – 840-05885-212, 3601 Lacross DR, Bryant, AR 72022
- Amber M Hill – 840-05885-204, 3506 Lacross DR, Bryant, AR 72022
- Robin Wilson – 840-05885-205, 3510 Lacross DR, Bryant, AR 72022

- James Jr and Toshiko Sibert – 840-05885-208, 3612 Lacross DR, Bryant, AR 72022
- Brittany N Jackson – 840-05885-226, 3604 Lacross DR, Bryant, AR 72022
- Carol A and John L Shelton – 840-05885-207, 3518 Lacross DR, Bryant, AR 72022
- Nolan Robinson – 840-05885-209, 3613 Lacross DR, Bryant, AR 72022
- Gerald F Perrier – 840-05885-216 – 3505 Lacross DR, Bryant, AR 72022
- Joe W. and Karen C. Leopard – 840-05885-206, 3514 Lacross DR, Bryant, AR 72022
- Esther R. Jones – 840-05885-213, Property Address: 3517 Lacross DR, Bryant, AR 72022; Mailing Address: 3505 Meadowlake DR, Bryant, AR 72022,
- Venkata Sridhar and Uttharadevi Challa – 840-05885-211, Property Address: 3605 Lacross DR, Bryant, AR, 72022; Mailing Address: 10121 Longbranch DR, McKinney, TX 75071
- The Spin-Off Inc. – 840-11678-000, Mailing Address: 2311 Biscayne DR, STE 120, Little Rock, AR 72227
- Bryant Crossing Development Inc. – 840-02990-003, 2311 Biscayne DR, STE 120, Little Rock, AR 72227
- Stag Industrial Holdings LLC – 840-02990-001, Physical Address: Bryant Crossing Dr; Mailing Address: C/O Stag Bryant, One Federal ST. 23rd Floor, Boston, MA 02110
- Courtney Rockwell – 840-05885-184, 3511 Longmeadow DR, Bryant, AR 72022
- Henri and Hillary Heaberlin – 840-05885-183, 3515 Longmeadow DR, Bryant, AR 72022
- Peter H. and Margaret M. Thompson – 840-05885-181, 3611 Longmeadow DR, Bryant, AR 72022
- Brandon Kalz – 840-05885-182, 3519 Longmeadow DR, Bryant, AR 72022
- Michael Todd and Connie Sue Elder – 840-13094-002, 2407 Raymar RD, Bryant, AR 72022
- Michael T and Connie S Elder – 840-13094-000, Property Address: 2401 Raymar RD; Mailing Address: 2407 Raymar RD, Bryant, AR 72022

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: 4/11/23

Applicant or Designee:

Name MARK Elder
Address 2419 Raymar Rd
Phone 501-219-6337 (6337)
Email Address arkansasfrozenfreight@gmail.com

Property Owner (If different from Applicant):

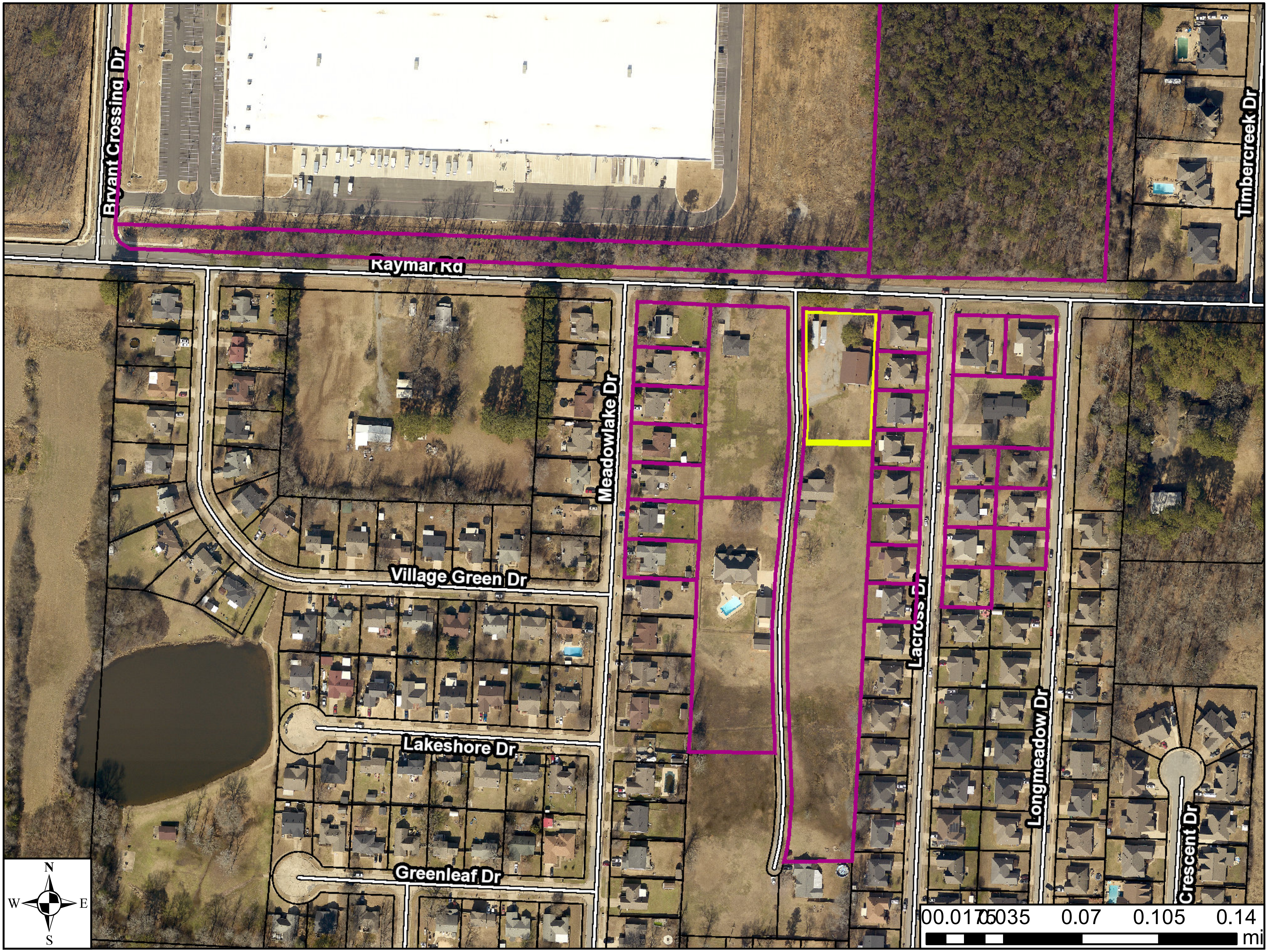
Name
Address 2501 Raymar Rd
Phone
Email Address

Property Information:

Address 2501 Raymar Rd
Parcel Number
Existing Zoning Classification
Requested Zoning Classification
Legal Description (If Acreage or Metes and Bounds description, please attach in a legible typed format)
1 Acre X Warehouse 40X60 Concrete Block

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


Bryant Crossing Dr
Timbercreek Dr
Raymar Rd
Meadowlake Dr
Village Green Dr
Lacross Dr
Longmeadow Dr
Lakeshore Dr
Greenleaf Dr
Crescent Dr
N
W
E
S
0
0.0175
0.035
0.07
0.105
0.14
mi

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: 4/7/2023

Sign Co. or Sign Owner	**Property Owner**
Name L. Graphics (Joe lam)	Name Bart Furguson
Address 701 N. Reynolds Rd	Address 3417 Market Pl Ave
City, State, Zip Bryant, AR 72022	City, State, Zip Bryant, AR 72022
Phone (501) 653-4444	Phone (501) 840-2282
Alternate Phone 501-773-0544	Alternate Phone

GENERAL INFORMATION

Name of Business Cynergy KiDS ~~Therapy~~ pediatric Therapy

Address/Location of sign 3417 Marketplace Ave Ste 400

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 <u>required</u>** to be submitted. **Renderings of the sign(s) showing the correct dimensions is also <u>required</u>** 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 Joe lam, 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 mount	42" X 112"	116	15 Feet	11' 6"	
B						
C						
E						
F						
G						

3417 Marketplace Ave Ste 400
Bryant, AR 72022
Kimberly Hunt 501-951-5728

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

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Date: 4/7/2023

Sign Co. or Sign Owner		**Property Owner**	
Name	L. Graphics (Joe Lam)	Name	Bart Furguson
Address	701 N. Reynolds Rd	Address	3417 Market place Ave
City, State, Zip	Bryant, AR 72022	City, State, Zip	Bryant, AR 72022
Phone	(501) 653-4444	Phone	(501) 840-2282
Alternate Phone	(501) 773-0544	Alternate Phone	

GENERAL INFORMATION

Name of Business: Farmer Union insurance

Address/Location of sign: 3417 Market Pl Ave Suite ~~[illegible]~~ - 300

Zoning Classification: ______

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

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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/mount	60" X 135"	58	16 Feet	11 Feet	
B						
C						
E						
F						
G						

3417 Marketplace Ave Ste 200-300
Bryant, AR 72022

Kevin Ressler
~~50~~ 701-663-3419