MEMORANDUM

ROBERTSON COUNTY PLANNING AND ZONING
527 SOUTH BROWN STREET, SPRINGFIELD, TN 37172
TEL. (615) 384-3666

TO: Planning Commission Members
FROM: Planning Staff
DATE: August 21, 2025

The Robertson County Planning Commission will hold its monthly meeting on **Thursday August 28, 2025, at 7:00 P. M.** on the 2nd Floor, Judicial Complex, Robertson County Office Building. Assistant Director, Hunter Mantooth, is available to answer questions at (615) 384-3666 or hmantooth@robcotn.org.

AGENDA

1. Roll Call:
2. Comments from Citizens: Persons wishing to speak for or against any item must sign the log sheet prior to the meeting.
3. Announcements: Rezonings from this agenda will be heard at the next County Commission meeting on September 15, 2025.
4. Approval of Minutes: Approval of Minutes of July 24, 2025, meeting.
5. Old Business: None
6. New Business:
   - A **Robertson County Highway Department: Resolution No. 25-291-09:** Resolution Making Certain Changes in the Official Maintenance Road List and Map Due to Annexations of Various Cities.
   - B. **Robertson County Planning and Zoning: Resolution No. 2025-03:** Resolution to Amend the Robertson County Zoning Resolution Pertaining to Lot Widths of RP-80 and AG-2 Zoned Lots
   - C. **Mary Dehmlow:** Rezone Request for 2.55 acres of property located at 5433 Ashburn Road, Springfield. Tax Map 020, Parcel 033.00 from AG-2 to R-40 (8th Voting District). Represented by Jeff Chandler, Chandler Surveying.
   - D. **Morgan Kinch:** Rezone Request for 1.47 acres of the 5.83 acres of property located at 2686 Bellar Road, Greenbrier. Tax Map 115, Part of Parcel 063.00 from AG-2 to R-40 (3rd Voting District). Represented by Todd Bolinger, Todd Bollinger & Associates.

E. **Kenneth Foster**: Rezone Request for 7.64 surveyed acres of the 124.30 acres of property located at 5525 Minnis Road, Springfield. Tax Map 031, Part of Parcel 104.00 from AG-2 to RP-80 (7th Voting District). Represented by Steve Artz, Steven E Artz & Associates, Inc.

F. **KOE Construction on behalf of Terminus Capital Investing, LLC:** Rezone Request for 5.02 surveyed acres of property located at 4067 Woodard Rd., Springfield. Tax Map 044, Parcel 069.00 from AG-2 to RP-80 (7th Voting District). Represented by Todd Bollinger, Todd Bollinger & Associates.

G. **Clay Jones:** Preliminary Plat approval for Sturgeon Creek Reserve located at 6841 Hwy 41 N., Cedar Hill. Tax Map 054, Parcel 013.00 (8th Voting District). Represented by Steve Artz, Steven E. Artz and Associates, Inc.

H. **Iglesia Ebenezer Church:** Final Site Plan for new church building located at 5649 Lakeview Road, Springfield. Tax Map 046, Parcel 066.00 (8th Voting District). Represented by Josh Lyon, P.E., Klober Engineering Services.

I. **CJ Murrell, 615 Design Group on behalf of Marcia Fox:** Final Site Plan for Dollar General to be constructed on Highway 25 E., Springfield. Tax Map 059 Parcel 066.00 (8th Voting District). Represented by CJ Murrell, 615 Design Group.

J. Reports from Staff: Planner to discuss:

   a. Traffic Impact Studies / Assessments
   b. Industrial Zoning
   c. Subdivision Regulations Articles I - V

K. Adjourn

The Robertson County Planning Commission met on July 24, 2025 at 7:00 p.m. in the Judicial Complex, Second Floor, Robertson County Office Building, Springfield, Tennessee.

Roll Call:

MEMBERS PRESENT:
William B Henry
Eric Thompson
Charles "Gene" Federman
Robert Buck
Jeremiah Pierce
Matt Crabtree
Jeremy Stinson
Cheryl Elliott

MEMBERS ABSENT:

OTHERS PRESENT:
Hunter Mantooth
Pam Groves
Amanda Harrington
Beth Keith

The meeting was called to order by Chairman Cheryl Elliott at 7:00 pm.

Roll Call was completed by Hunter Mantooth. Eight were present.

Announcements: Chairman Cheryl Elliott announced that the zoning from this agenda will be heard at the County Commission on August 18, 2025. Any citizens wishing to speak for or against any items on the agenda will need to sign in on the sheet provided. One citizen signed up to speak, however it was one of the applicants.

Motion to approve Minutes from the previous meeting of June 26, 2025, made by Jeremiah Pierce with a second by Matt Crabtree.
Motion passed 7 – 0.

1. Old Business: None

2. New Business:

   A. **Josh Bush:** Rezone Request for 3.44 surveyed acres of property located at 12810 Owens Chapel Rd., Springfield. Tax Map 083, Parcel 004.00 from AG-2 to R-40 (8th Voting District). Represented by Steve Artz, Steven E Artz & Associates, Inc.
   Josh Bush was there to present and answer questions. Josh stated he was trying to get the lot into compliance. Amanda asked Josh to explain why the lot wasn't in compliance now, so he explained to the board that there were 2 houses on the lot, and he was trying to get the lot into compliance and that after a survey R-40 was the zone he needed. Amanda stated that after the explanation that her recommendation changes and that she would approve this rezone request since being in compliance with today's regulations took precedence over the land use map. Several other questions were asked from the board and answered. No one signed up to speak on this matter.

   Motion to recommend was made by William B Henry with a second from Eric Thompson.
   Motion passed 7 - 0.

B. **Jim Brinkley:** Rezone Request for 7.46 acres of property located at 7535 Swift Rd., Greenbrier. Tax Map 117, Parcel 160 from AG-2 to RP-80 (4th Voting District). Represented by James Davis, Davis Land Surveying & Planning.
James Davis was there to present and answer questions. One question from the commission was asked and answered. No one signed up to speak on this matter.

Motion to recommend was made by Eric Thompson with a second by Gene Federman. Motion passed 7 – 0.

Reports from Staff: None

A motion to adjourn made by Jeremy Stinson with a second by Jeremiah Pierce. Motion passed 7-0 and the meeting was adjourned at 7:07 pm.

Respectfully submitted,

Gene Federman

Gene Federman, Secretary

New Business: A

RESOLUTION NO._____
HIGHWAY DEPARTMENT RESOLUTION NO. 25-291-09

RESOLUTION MAKING CERTAIN CHANGES IN THE OFFICIAL MAINTENANCE ROAD LIST AND MAP DUE TO ANNEXATIONS OF VARIOUS CITIES

WHEREAS, Tennessee Code Annotated, Section 54-10-103, authorizes the Robertson County legislative body to accept and classify roads; and

WHEREAS, Tennessee Code Annotated, Section 54-10-103, provides; prior to the County legislative body classifying a road as provided herein, the County legislative body shall receive the recommendation of the Chief Administrative Officer of the County Highway Department and / or the Robertson County Private Act so requires the review and recommendation of the Highway Superintendent and/or the elected Highway Commission; and

WHEREAS, the Highway Commission of Robertson County, assembled in regular session the 24th day of July, 2025, recognized that since the last adoption of the Official Road List, that certain roads, or portions of roads previously designated on that list have now become official public roads of various cities within Robertson County, as a result of the recent annexation of those areas, and that the Robertson County Highway Department, as required by law, has ceased to maintain those roads / portions of roads lying within the various cities, as described on attachment hereto, and thus the Official Maintenance List and Map should be changed accordingly, and the Highway Superintendent is in agreement with this recommendation; and

WHEREAS, the Robertson County Regional Planning Commission met in regular session the 28th day of August, 2025, voted and agreed that the following changes, as described on attachment hereto, should be made to the Official Maintenance Road List and Map; and

NOW, THEREFORE BE IT RESOLVED by the Board of County Commissioners of Robertson County, Tennessee assembled in regular session this 15th day of September, 2025, that the road or portions of roads, as described on attachment hereto, due to the annexation of the various cities, and as required by law are not hereafter a part of the Official County Maintenance Road List and Map.

BE IT FURTHER RESOLVED that this Resolution shall take effect from and after its passage, the public welfare requiring it.

Pass this the 15th day of September, 2025

_____ _____
COUNTY COMMISSIONER WILLIAM A. VOGLE, COUNTY MAYOR

ATTEST:

_____
ANGIE H. GROVES, COUNTY CLERK

REMOVING A PORTION / ALL OF THE FOLLOWING ROADS FROM THE OFFICIAL COUNTY MAINTENANCE ROAD LIST & MAP DUE TO ANNEXATIONS OF

CITY OF SPRINGFIELD

	INDEX	ROAD NAME	MILE	FEET	BEGINNING	ENDING	ROW	ROADBED	SURFACE	TYPE	CLASS	DIST.	CITY LIMITS
205	D-3	High Oaks Place	0.04	215	WDBL	county portion	33'	22'	14'	ASP	2	11	N/A
456	D-3	WDBL	0.08	400	Springfield limits	turnaround	25'	17'	14'	ASP	3	11	N/A
		TOTALS	**0.12**	**615**									

New Business: B

Resolution 2025-03

A Resolution to Amend the Robertson County Zoning Resolution Pertaining to Lot Widths of RP-80 and AG-2 Zoned Lots.

Whereas, the Robertson County Planning Commission has observed a trend in rezonings coming before the Board, citing lot width as the reason for the need for rezoning; and

Whereas, the Planning Commission requested staff research the County's lot widths compared to surrounding jurisdictions to see if Robertson County's bulk regulations were in line with comparable communities; and

Whereas, the Planning Commission recommends, after much discussion, to modify the lot width requirement in the AG-2 from 250 feet to 175 feet, keeping the remaining bulk requirements the same, and;

Whereas, the Planning Commission also recommends the modification of the lot width requirement for the RP 80 be adjusted from 175 feet to 150 feet;

NOW, THEREFORE, BE IT RESOLVED BY THE ROBERTSON COUNTY COMMISSION THAT THE ROBERTSON COUNTY ZONING RESOLUTION BE AMENDED BY:

1. Amending Table 6-5-A, *Dimensional Requirements for Single Family Dwellings in Agricultural and Residential Districts,* so that the Minimum Lot Width (ft) at Building Setback Line for the AG-2 district is 175 feet.

2. Amending Table 6-5-A, *Dimensional Requirements for Single Family Dwellings in Agricultural and Residential Districts,* so that the Minimum Lot Width (ft) at Building Setback Line for the RP-80 district is 150 feet.

This Resolution shall go into effect immediately upon passage, the public welfare requiring the same.

New Business: C

ROBERTSON COUNTY DEVELOPMENT OFFICE
ROBERTSON COUNTY OFFICE BUILDING
527 SOUTH BROWN STREET, SPRINGFIELD, TENNESSEE 37172
615-384-3666

Application for Rezoning

Applicant Information:

Name: MARY JETT TAYLOR DEHMLOW
Mailing Address: 5453 ASHBURN ROAD, SPRINGFIELD, TN 37172
Email: NONE
Telephone Number:

Applicant's Representative Information:

Name: JEFF CHANDLER
Name of Firm: CHANDLER SURVEYING
Mailing Address: 3421 COOPER NICHOLSON ROAD, PLEASANT VIEW, TN 37146
Email:
Telephone Number:

Property Information:

Owner (if not applicant provide letter giving applicate permission): MARY JETT TAYLOR DEHMLOW
Physical Address: 5433 ASHBURN ROAD, SPRINGFIELD, TN 37172
Tax Map and Parcel Number: MAP 020, PARCEL 033.00
Current Zoning Designation: AG-2
Requested Zoning Designation: R-40

Will this property be subdivided (or combined) in some way within the next year? *Yes* ✓ *No*

Purpose of rezoning request:

WANTING TO SUBDIVIDE PROPERTY INTO TWO LOTS

SUBMITTAL REVIEW PROCEDURE:

1. Deliver one (1) copy of this application & any supporting materials to the Development Office before or by the final due date (Please see attached schedule- the "Corrections Due" does not apply to this type of application)
2. Provide copy of deed to prove ownership.
3. Provide aerial photograph of the property from TN Property Viewer
4. Provide Legal description **AND** Survey of the areas to be rezoned including map and parcel number
5. Provide water letter from utility company stating location and size of current water line, adequate pressure for domestic use and if/where fire hydrants are required
6. Pay the review fee.
7. Email a .PDF of the application & supporting materials to hmantooth@robcotn.org
8. Attend the Planning Commission meeting. Be ready to present and answer questions. Failure to appear at the Planning Commission meeting may result in the denial of the application.

Mary Dehmlow 06-26-25
Owner of Record Signature & DATE

Jeff Chandler 06-26-25
Applicant's Signature & DATE

Robertson County - Parcel: 020 033.00



Date: June 26, 2025

County: ROBERTSON
Owner: DEHMLOW MARY JETT TAYLOR
Address: ASHBURN RD 5433
Parcel ID: 020 033.00
Deeded Acreage: 2.55
Calculated Acreage: 0

1:2,257

0 0.01 0.03 0.06 mi

0 0.02 0.04 0.09 km

State of Tennessee, Comptroller of the Treasury, Division of Property Assessments (DPA), Esri Community Maps Contributors, © OpenStreetMap, Microsoft, Esri, TomTom, Garmin, SafeGraph, GeoTechnologies, Inc, METI/NASA, USGS, EPA, NPS, US Census Bureau, USDA, USFWS

The property lines are compiled from information maintained by various local

GENERAL NOTES

1. BEARING SYSTEM IS DERIVED FROM TENNESSEE STATE PLANE COORDINATE SYSTEM (NAD83) ZONE 4100, UNLESS OTHERWISE NOTED DISTANCES AND COORDINATES RECITED ARE BASED ON GROUND MEASUREMENTS, NO SCALE FACTOR APPLIED.

2. G.P.S. EQUIPMENT USED TO ESTABLISH GRID NORTH: CARLSON BRX 7 DUAL FREQUENCY RECEIVER.

3. PROPERTY SUBJECT TO ANY AND ALL FINDINGS OF A CURRENT AND ACCURATE TITLE SEARCH. NO TITLE REPORT WAS FURNISHED TO THE SURVEYOR PRIOR TO SURVEY.

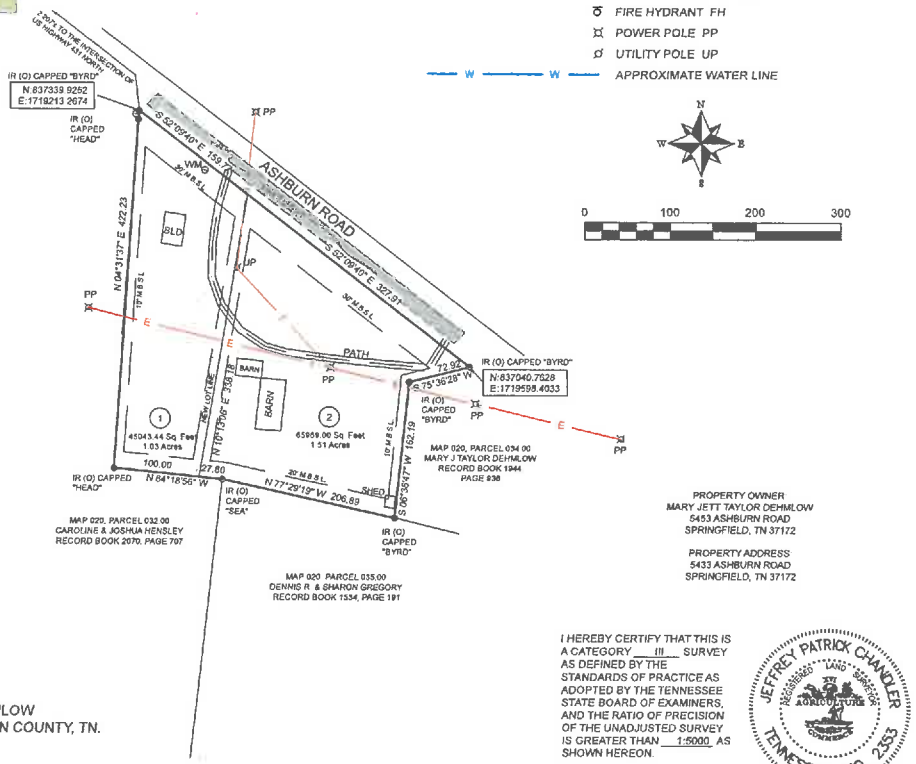
4. THIS SURVEYOR HAS NOT PHYSICALLY LOCATED THE UNDERGROUND UTILITIES. THE ABOVE GRADE AND UNDERGROUND UTILITIES SHOWN WERE TAKEN FROM VISIBLE APPURTENANCES AT THE SITE, PUBLIC RECORDS AND/OR MAPS PREPARED BY OTHERS. THE SURVEYOR MAKES NO GUARANTEE THAT THE UNDERGROUND UTILITIES SHOWN COMPRISE ALL SUCH UTILITIES IN THE AREA, EITHER IN SERVICE OR ABANDONED. THE SURVEYOR FURTHER DOES NOT WARRANT THAT THE UNDERGROUND UTILITIES ARE IN THE EXACT LOCATION INDICATED. THEREFORE, RELIANCE UPON THE TYPE, SIZE AND LOCATION OF UTILITIES SHOWN SHOULD BE DONE SO WITH THIS CIRCUMSTANCE CONSIDERED. DETAILED VERIFICATION OF EXISTENCE, LOCATION AND DEPTH SHOULD ALSO BE MADE PRIOR TO ANY DECISION RELATIVE THERETO IS MADE. AVAILABILITY AND COST OF SERVICE SHOULD BE CONFIRMED WITH THE APPROPRIATE UTILITY COMPANY.

5. IN TENNESSEE IT IS A REQUIREMENT OF THE UNDERGROUND UTILITY DAMAGE PREVENTION ACT, THAT ANYONE WHO ENGAGES IN EXCAVATION MUST NOTIFY ALL KNOWN UNDERGROUND UTILITY OWNER(S), NO LESS THAN (3) NOR MORE THAN (10) WORKING DAYS PRIOR TO THE DATE OF THE INTENT TO EXCAVATE AND ALSO TO AVOID ANY HAZARD OR CONFLICT, TENNESSEE ONE CALL 1-800-351-1111 UTILITIES NOT CHECKED.

6. SURVEYORS LIABILITY FOR THIS DOCUMENT SHALL BE LIMITED TO THE ORIGINAL PURCHASER AND DOES NOT EXTEND TO ANY UNNAMED PERSON OR ENTITY WITHOUT AN EXPRESSED RE-CERTIFICATION BY THE SURVEYOR WHOSE NAME APPEARS UPON THIS SURVEY.

7. THIS PROPERTY WAS PREPARED FROM CURRENT DEEDS AND PLATS OF RECORD AND DOES NOT REPRESENT A TITLE SEARCH OR A GUARANTEE OF TITLE AND IS SUBJECT TO ANY STATE OF FACTS A CURRENT AND ACCURATE TITLE SEARCH MAY REVEAL. THE PROPERTY SHOWN ON THIS PLAT IS SUBJECT TO ALL COVENANTS, RIGHT-OF-WAYS, EASEMENTS, AND RESTRICTIONS WHETHER IMPLIED OR OF RECORD.





LEGEND

These standard symbols will be found in the drawing.

- WATER METER WM
- IRON ROD (NEW) I.R. (N)
- IRON ROD (OLD) I.R. (O)
- FIRE HYDRANT FH
- POWER POLE PP
- UTILITY POLE UP
- W W APPROXIMATE WATER LINE

N, W, E, S

0 100 200 300

REZONE

PROPERTY OF
MARY JETT TAYLOR DEHMLOW
3RD CIVIL DISTRICT OF ROBERTSON COUNTY, TN.

PROPERTY OWNER
MARY JETT TAYLOR DEHMLOW
5453 ASHBURN ROAD
SPRINGFIELD, TN 37172

PROPERTY ADDRESS
5433 ASHBURN ROAD
SPRINGFIELD, TN 37172

I HEREBY CERTIFY THAT THIS IS A CATEGORY III SURVEY AS DEFINED BY THE STANDARDS OF PRACTICE AS ADOPTED BY THE TENNESSEE STATE BOARD OF EXAMINERS, AND THE RATIO OF PRECISION OF THE UNADJUSTED SURVEY IS GREATER THAN 1:5000 AS SHOWN HEREON.

JEFFREY P. CHANDLER
RLS 2353

JEFFREY PATRICK CHANDLER
REGISTERED LAND SURVEYOR
TENNESSEE NO. 2353

GPS METADATA

Type of GPS field procedure :	Real-time Kinematic Network
Positional Accuracy Vectors does not exceed :	H0.03014, V0.04946.
Date of survey :	FEBRUARY 6 - APRIL 7, 2025
Datum and Epoch Coordinates :	USA/NAD83/TN
Designation of fixed-control :	TN31
Geoid Model :	ContinentalUS_NGS2018
Combined grid factor(s) :	None

CHANDLER SURVEYING
3421 COOPER NICHOLSON ROAD
PLEASANT VIEW, TN. 37146
(615) 746-5900 FAX (615) 746-6420
email: chandlersurv@yahoo.com

PROJECT INFORMATION:
BEING THE SAME PROPERTY DESCRIBED IN RECORD BOOK 2071, PAGE 437, REGISTER'S OFFICE OF ROBERTSON COUNTY, TN.

CLIENT INFORMATION:
JOSEPH WILLOUGHBY
311 GOLF CLUB LANE
SPRINGFIELD, TN 37122

REVISIONS

REZONE AG-2 - TO R-40

DRAWN	JORDAN C	MAP AND PARCEL	MAP 020, PARCEL 033.00
DATE	APRIL 07, 2025		
APPROVED	JEFF C	CURRENTLY ZONED	AG-2
DATE	JUNE 28, 2025		
SCALE	1" = 100'	SHEET	ONE OF ONE
		PROJECT NO.	3-583

CITY OF SPRINGFIELD
Water/Wastewater Department

924 Central Avenue • Springfield, Tennessee 37172 • (615) 382-1600 • FAX (615) 384-6951
www.springfieldtn.gov

June 30, 2025

TO WHO IT MAY CONCERN:

There has been a water availability letter requested by Mr. Joseph Lee Willoughby for a property located at 5433 Ashburn Rd in Robertson County. The property is located by Tax Map 20 Parcel 33. This letter will serve as notice that there is an existing 4" water main adjacent to this property. The property is currently provided water services by the City of Springfield's Water and Wastewater Department.

If you need further information or have questions, please contact me at 615-382-1600.

Thank you,

Terry Beers, P.E.
Director
Springfield Water and Wastewater Department

Robertson County Development Office
Agenda Review Sheet
Planning Commission Meeting
August 28, 2025
Amanda Harrington, Planning Advisor

Applicant: Mary Dehmlow
Surveyor: Jeff Chandler

Request: Rezone **2.55 *acres***
Tax Map 020, Parcel 033.00
from AG-2 to R-40



Figure 1: TN Property Viewer: Tax Map 020, Parcel 033.00
In its entirety is highlighted

Property Information:

- Tax Map 020, Parcel 033.00
- 5433 Ashburn Rd., Springfield
- Total lot acreage: 2.55 acres (111,078 sq. ft.)
- **Rezone Request: 2.55 acres. (111,078 sq. ft.)**

Project Narrative:
R-40 Minimum Requirements
Minimum Lot Size: 40,000 sq. ft.
Front: 50'
Side: 20'
Rear: 30'
Min. Lot Width @ Front Bldg. Setback Line: 150'
Min Road Frontage: 50'
Maximum Height: 35'
Max Bldg. Coverage: 40%.

Zoning: The applicant wishes to rezone 2.55 acres to subdivide into 2 lots. The subject property has a mixture of AG-2 and R-40 property in the immediate vicinity with varying lot sizes. There are several non-conforming lots in the immediate vicinity that would be classified as R-40 in today's standards. The applicant's request to rezone R-40 appears to be dimensionally appropriate. *Please see Exhibit 1 for zoning map exhibit.*

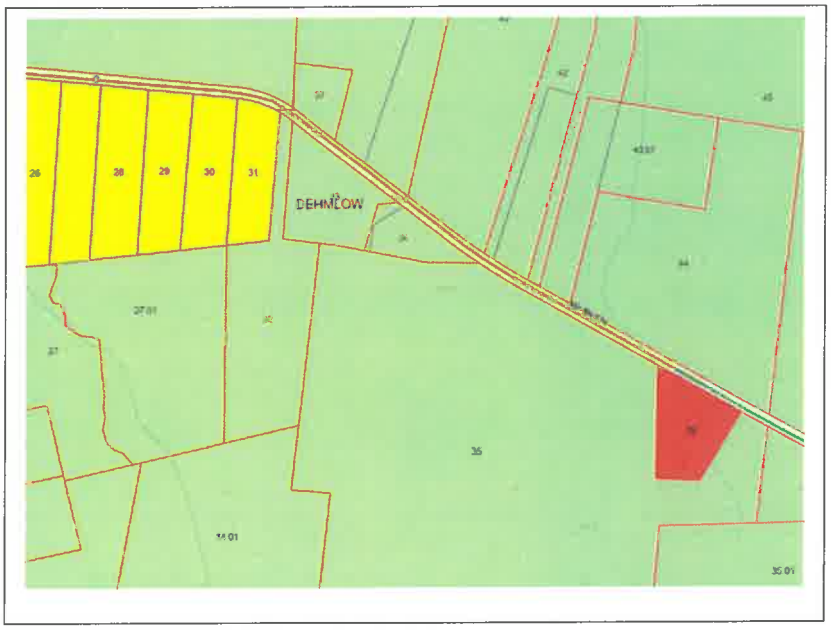
Conformance with the Robertson County Land Use Plan: The 2040 Land Use Plan designates this area as Rural. Agrarian and rural types of uses, ranging from open space to agriculture, homesteads associated with agricultural activities, and agricultural service businesses, are encouraged within this category.

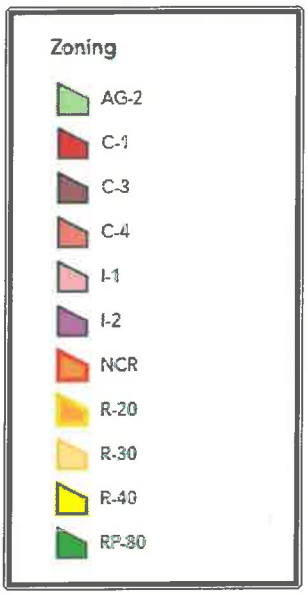
Recommendation: Denial. The R-40 zoning designation is intended for use in Suburban and general urban areas of the adopted 2040 Comprehensive Growth and Development Plan.

**** END COMMENTS ****

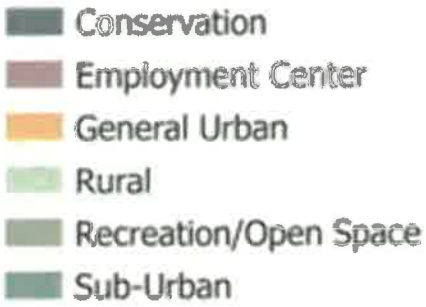
Exhibit 1

Austin Peay University Zoning Map









New Business: D

ROBERTSON COUNTY DEVELOPMENT OFFICE
ROBERTSON COUNTY OFFICE BUILDING
527 SOUTH BROWN STREET, SPRINGFIELD, TENNESSEE 37172
615-384-3666

Application for Rezoning

Applicant Information:

Name: Morgan Kinch
Mailing Address: 2686 Bellar Road Greenbrier, TN 37073
Email:
Telephone Number:

Applicant's Representative Information:

Name: Todd Bollinger
Name of Firm: Todd Bollinger + Assoc
Mailing Address: 1119 Fisher Dr Greenbrier, TN 37073
Email:
Telephone Number:

Property Information:

Owner (if not applicant provide letter giving applicate permission): Morgan Kinch
Physical Address: 2686 Bellar Road Greenbrier, TN 37073
Tax Map and Parcel Number: Map 115, PCL 63.00
Current Zoning Designation: AG-2
Requested Zoning Designation: R-40

Will this property be subdivided (or combined) in some way within the next year? *Yes* *No*

Purpose of rezoning request:

Cutting off 1 Lot

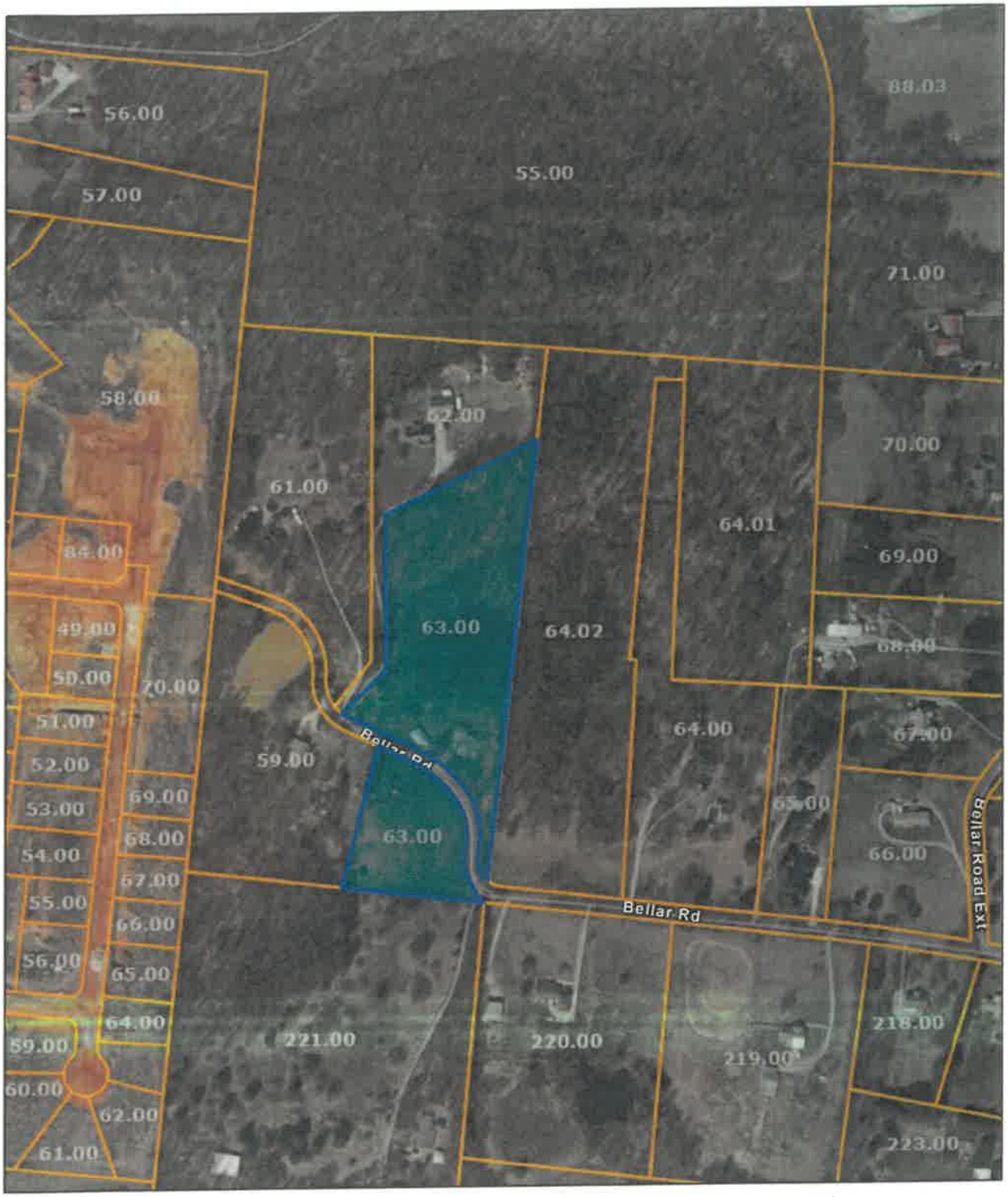
SUBMITTAL REVIEW PROCEDURE:

1. Deliver one (1) copy of this application & any supporting materials to the Development Office before or by the final due date (Please see attached schedule- the "Corrections Due" does not apply to this type of application)
2. Provide copy of deed to prove ownership.
3. Provide aerial photograph of the property from TN Property Viewer
4. Provide Legal description **AND** Survey of the areas to be rezoned including map and parcel number
5. Provide water letter from utility company stating location and size of current water line, adequate pressure for domestic use and if/where fire hydrants are required
6. Pay the review fee.
7. Email a .PDF of the application & supporting materials to hmantooth@robcotn.org
8. Attend the Planning Commission meeting. Be ready to present and answer questions. Failure to appear at the Planning Commission meeting may result in the denial of the application.

6/25/2025
Owner of Record Signature & DATE

6/25/2025
Applicant's Signature & DATE

Robertson County - Parcel: 115 063.00



Date: June 26, 2025

County: ROBERTSON
Owner: KINCH MORGAN ETAL ROBSON CHERI
Address: BELLAR RD 2686
Parcel ID: 115 063.00
Deeded Acreage: 5.83
Calculated Acreage: 0
Vexcel Imagery Date: 2023

1:4,514

0 0.03 0.06 0.12 mi

0 0.05 0.1 0.2 km

State of Tennessee, Comptroller of the Treasury, Division of Property Assessments (DPA), Esri Community Maps Contributors, © OpenStreetMap, Microsoft, Esri, TomTom, Garmin, SafeGraph, GeoTechnologies, Inc, METI/NASA, USGS, EPA, NPS. US Census Bureau, USDA, USFWS

The property lines are compiled from information maintained by your local county Assessor's office but are not conclusive evidence of property ownership in any court of law.

PLAT CONTAINS 1.47 ACRES

NOTE:
THIS SURVEY WAS PREPARED FROM CURRENT DEEDS OF RECORD AND DOES NOT REPRESENT A TITLE SEARCH OR A GUARANTEE OF TITLE. THIS SURVEY IS SUBJECT TO ANY STATE OF FACTS A CURRENT AND ACCURATE TITLE SEARCH MAY OR WILL REVEAL.

NOTE:
THIS SURVEYOR HAS NOT PHYSICALLY LOCATED ANY UTILITIES. UTILITIES, IF SHOWN HEREON, ARE AS PER INFORMATION FURNISHED BY THE ASSOCIATED UTILITY AUTHORITY AND ARE APPROXIMATE. THIS SURVEYOR MAKES NO GUARANTEE THAT THE UTILITIES, IF SHOWN, COMPRISE ALL SUCH UTILITIES IN THE AREA, EITHER IN SERVICE OR ABANDONED. THE SURVEYOR FURTHER DOES NOT WARRANT THAT THE UTILITIES, IF SHOWN, HEREON ARE IN THE EXACT LOCATION INDICATED. THEREFORE, THE SIZE, TYPE, AVAILABILITY AND ACTUAL LOCATION OF ANY AND ALL UTILITIES SHOULD BE VERIFIED PRIOR TO MAKING ANY DECISION RELATIVE TO THIS PROPERTY.

IN TENNESSEE IT IS A REQUIREMENT OF THE "UNDERGROUND UTILITY DAMAGE PREVENT ACT", THAT ANYONE WHO ENGAGES IN EXCAVATION OF ANY TYPE MUST NOTIFY ALL KNOWN UTILITY OWNER(S), NO LESS THAN (3) NOR MORE THAN (10) WORKING DAYS PRIOR TO THE DATE OF THEIR INTENT TO EXCAVATE AND ALSO TO AVOID ANY HAZARD OR CONFLICT. TENNESSEE ONE CALL "811".

NOTE:
ALL BEARINGS ARE REFERENCED TO THE OWNER'S DEED OF RECORD RECORDED IN THE COUNTY REGISTER'S OFFICE.

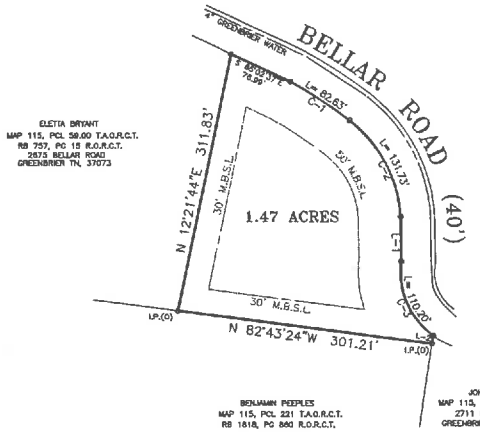
CURVE DATA TABLE

CURVE	RADIUS	TANGENT	LENGTH	DELTA	CHORD	CH.BEARING
C-1	548.48'	41.39'	82.63'	8°37'55"	82.55'	S 56°20'55"E
C-2	152.85'	70.27'	131.73'	49°22'48"	127.69'	S 27°20'35"E
C-3	93.08'	55.58'	100.20'	61°40'49"	95.43'	S 22°22'42"E

CALL TABLE

COURSE	BEARING	DISTANCE
L-1	S 00°01'09"E	53.46'
L-2	S 09°03'12"W	9.51'

MORGAN KINCH
MAP 115, PCL 63.00 T.A.O.R.C.T.
RB 2331, PG 78 R.O.R.C.T.
2686 BELLAR RD
GREENBRIER, TN 37073



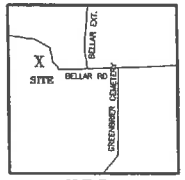
ELETIA BRYANT
MAP 115, PCL 58.00 T.A.O.R.C.T.
RB 757, PG 15 R.O.R.C.T.
2673 BELLAR ROAD
GREENBRIER TN, 37073

BENJAMIN PEEPLES
MAP 115, PCL 221 T.A.O.R.C.T.
RB 1618, PG 860 R.O.R.C.T.
2701 BELLAR ROAD
GREENBRIER TN, 37073

JOHN TABB
MAP 115, PCL 220 R.O.R.C.T.
2711 BELLAR RD
GREENBRIER TN, 37073



VICINITY MAP



N.T.S.

ZONED AG2
REQUESTING R-40

PROPERTY REFERENCE

MORGAN KINCH
MAP 115, PCL 63.00 T.A.O.R.C.T.
RB 2331, PG 78 R.O.R.C.T.
2686 BELLAR RD
GREENBRIER, TN 37073

SCALE 1" = 100'



ANTHONY T. BOLLINGER, R.L.S.
119 FISHER DRIVE
GREENBRIER, TENNESSEE 37073
615/218-0169

REZONING PLAT FOR

MORGAN KINCH
BELLAR ROAD

SCALE	DRAWN BY	APPROVED	DATE
1" =100'	A.T.B.	A.T.B.	10/24/24

12TH CIVIL DISTRICT

ROBERTSON COUNTY
TENNESSEE

DRAWING NO.
2686BELL

Property description

1.47 Acres

Being a tract of land in the 12th Civil District of Robertson County Tennessee, and a portion of that property conveyed to Morgan Kinch RB 2331, PG 78 R.O.R.C.T., and more accurately described according to a survey by Anthony T. Bollinger R.L.S. TN LIC. No. 2095 dated 10/24/24 as follows:

Beginning at an existing iron pin, said pin being a common corner to Eletta Bryant RB 2675, PG 15 R.O.R.C.T. and being the most southwest corner of herein described tract; Thence with said Bryant N 12°21'14"E 311.83 feet to an existing iron pin in the southerly margin of Bellar Road; Thence now leaving said Bryant with said margin for the next 5 calls: S 65°02'37"E 76.99 feet to a point; Thence with a curve to the right having a radius 548.46 feet and having a chord bearing and chord of S 56°20'55"E 82.55 feet to a point; Thence with a curve to the right having a radius of 152.85 feet and having a chord bearing and chord of S 27°20'35"E 127.69 feet to a point; Thence S 00°01'09"E 53.46 feet to a point; Thence with a curve to the left having a radius of 93.08 feet and having a chord bearing and chord of S 22°22'42"E 95.43 feet to a point, said point being a common corner to John Tabb Map 115, PCL 220 R.O.R.C.T.; Thence now leaving said margin with said Tabb S 09°03'12"W 9.51 feet to an existing iron pin, said pin being a common corner to Benjamin Peeples RB 1818, PG 880 R.O.R.C.T.; Thence now leaving said Tabb with said Peeples N 82°43'24"W 301.21 feet to the point of beginning containing 1.47 acres.

CITY OF GREENBRIER
P. O. BOX 466 • 2414 HWY 41 S
GREENBRIER, TENNESSEE 37073
PHONE (615) 643-4531 • FAX (629) 236-9721

6/30/25

Hunter Mantooth,

A water tap is available for 2686 Bellar Rd. The nearest fire protection is located at approximately 2000-2200' on Cemetery Rd.

Please let me know if you have further questions.

Director of Public Works

Mark Plush

Robertson County Development Office
Agenda Review Sheet
Planning Commission Meeting
August 28, 2025
Amanda Harrington, Planning Advisor

Applicant: Morgan Kinch
Surveyor: Todd Bollinger

Request: Rezone **1.47 *acres***
Tax Map 115, Part of Parcel 063.00
from AG-2 to R-40



Figure 1: TN Property Viewer: Tax Map 115, Part of Parcel 063.00 In its entirety is highlighted

Property Information:

- Tax Map 115, Part of Parcel 063.00
- 2686 Bellar Rd., Greenbrier
- Total lot acreage: 5.83 acres (253,954.80 sq. ft.)
- **Rezone Request: 1.47 acres. (64,033.20 sq. ft.)**

Project Narrative:
R-40 Minimum Requirements
Minimum Lot Size: 40,000 sq. ft.
Front: 50'
Side: 20'
Rear: 30'
Min. Lot Width @ Front Bldg. Setback Line: 150'
Min Road Frontage: 50'
Maximum Height: 35'
Max Bldg. Coverage: 40%.

Zoning: The applicant wishes to rezone 1.47 surveyed acres of 5.83 acres. The subject property has mostly AG-2 with a few R-40 and one RP-80 zoned property in the immediate vicinity with varying lot sizes. There are several non-conforming lots in the immediate vicinity that would be classified as R-40 in today's standards. The applicant's request to rezone to R-40 appears to be dimensionally appropriate. *Please see Exhibit 1 for zoning maps and comprehensive plan exhibits.*

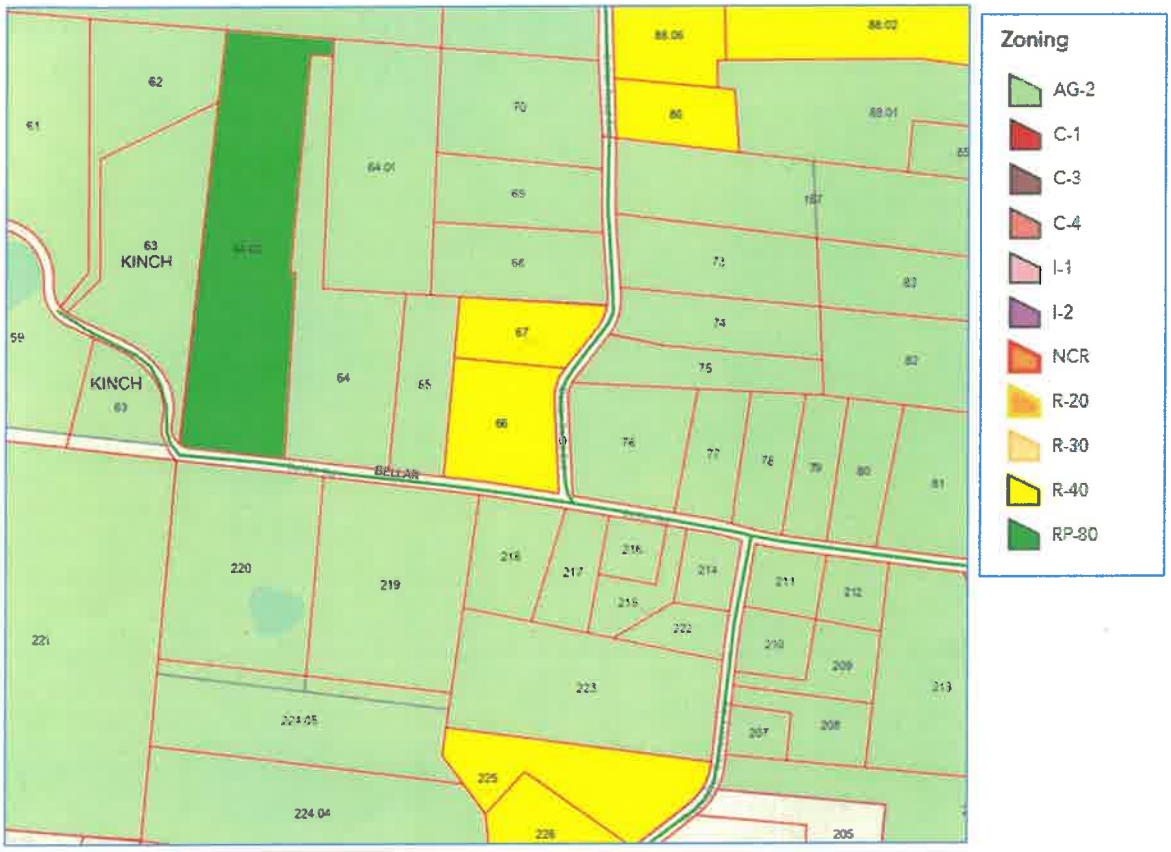
Conformance with the Robertson County Land Use Plan: The 2040 Land Use Plan designates this area as Rural. Agrarian and rural types of uses, ranging from open space to agriculture, homesteads associated with agricultural activities, and agricultural service businesses, are encouraged within this category.

Recommendation: Denial. The R-40 application is not appropriate for a rural designation.

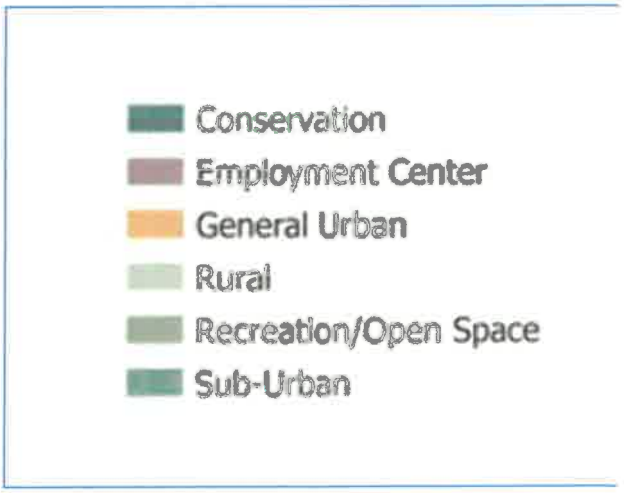
**** END COMMENTS ****

Exhibit 1

Austin Peay University Zoning Map







New Business: E

ROBERTSON COUNTY DEVELOPMENT OFFICE
ROBERTSON COUNTY OFFICE BUILDING
527 SOUTH BROWN STREET, SPRINGFIELD, TENNESSEE 37172
615-384-3666

Application for Rezoning

Applicant Information:

Name: Kenneth Foster
Mailing Address: 5110 Foster Rd, Cedar Hill, TN, 37032
Email: -
Telephone Number:

Applicant's Representative Information:

Name: Steve Artz
Name of Firm: Steven E. Artz and Associates, Inc.
Mailing Address: 4800 Hwy. 431 N Springfield, TN. 37172
Email:
Telephone Number:

Property Information:

Owner (if not applicant provide letter giving applicate permission): Kenneth Foster
Physical Address: 5525 Minnis Road, Springfield, TN, 37172
Tax Map and Parcel Number: Map 31 Parcel 104
Current Zoning Designation: AG-2
Requested Zoning Designation: R80

Will this property be subdivided (or combined) in some way within the next year? *Yes* *No*

Purpose of rezoning request:

The purpose of this rezoning request is to convert 7.64 acres of map 31, parcel 104, from AG-2 into R80 to subdivide into 4 separate tracts.

SUBMITTAL REVIEW PROCEDURE:

1. Deliver one (1) copy of this application & any supporting materials to the Development
2. Office before or by the final due date (Please see attached schedule- the "Corrections Due" does not apply to this type of application)
3. Provide copy of deed to prove ownership.
4. Provide aerial photograph of the property from TN Property Viewer
5. Provide Legal description **AND** Survey of the areas to be rezoned including map and parcel number
6. Provide water letter from utility company stating location and size of current water line, adequate pressure for domestic use and if/where fire hydrants are required
7. Pay the review fee.
8. Email a .PDF of the application & supporting materials to hmantooth@robcotn.org
9. Attend the Planning Commission meeting. Be ready to present and answer questions. Failure to appear at the Planning Commission meeting may result in the denial of the application.

7-10-25
Owner of Record Signature & DATE

7-10-25
Applicant's Signature & DATE

Robertson County - Parcel: 031 104.00



Date: June 4, 2025

County: ROBERTSON
Owner: FOSTER KENNETH
Address: MINNIS RD 5525
Parcel ID: 031 104.00
Deeded Acreage: 0
Calculated Acreage: 124.3
Vexcel Imagery Date: 2023

1:9,028

0 0.05 0.1 0.2 mi

0 0.07 0.15 0.3 km

State of Tennessee, Comptroller of the Treasury, Division of Property Assessments (DPA), Esri Community Maps Contributors, © OpenStreetMap, Microsoft, Esri, TomTom, Garmin, SafeGraph, GeoTechnologies, Inc, METI/NASA, USGS, EPA, NPS, US Census Bureau, USDA, USFWS

The property lines are compiled from information maintained by your local county Assessor's office but are not conclusive evidence of property ownership in any court of law.

Curve Table						
Curve	Delta Angle	Radius	Tangent	Arc Length	Chord Bearing	Chord Length
C1	26°46'14"	480.00	114.22	224.27	S 17°11'45" W	222.24
C2	2°58'56"	920.00	12.02	24.04	S 29°15'24" W	24.04

Line Table		
Line	Bearing	Distance
L1	S 27°55'56" W	15.00

Bearing Basis Note:
Bearings shown hereon are based on the Tennessee State Plane Coordinate System of 1983, Two (2) control points were established using a Carlson BRx7O Dual Frequency Receiver on January 17, 2025. The grid coordinates of the control points were derived using the TDOT Real-Time Kinematic Network, Virtual Reference Station, (VRS) Northing: 812682.89, Easting: 1580965.90 - Referenced to NAD83 (2011) (EPOCH 2010), GEOID 12B.

TSPCS Grid North (NAD83)

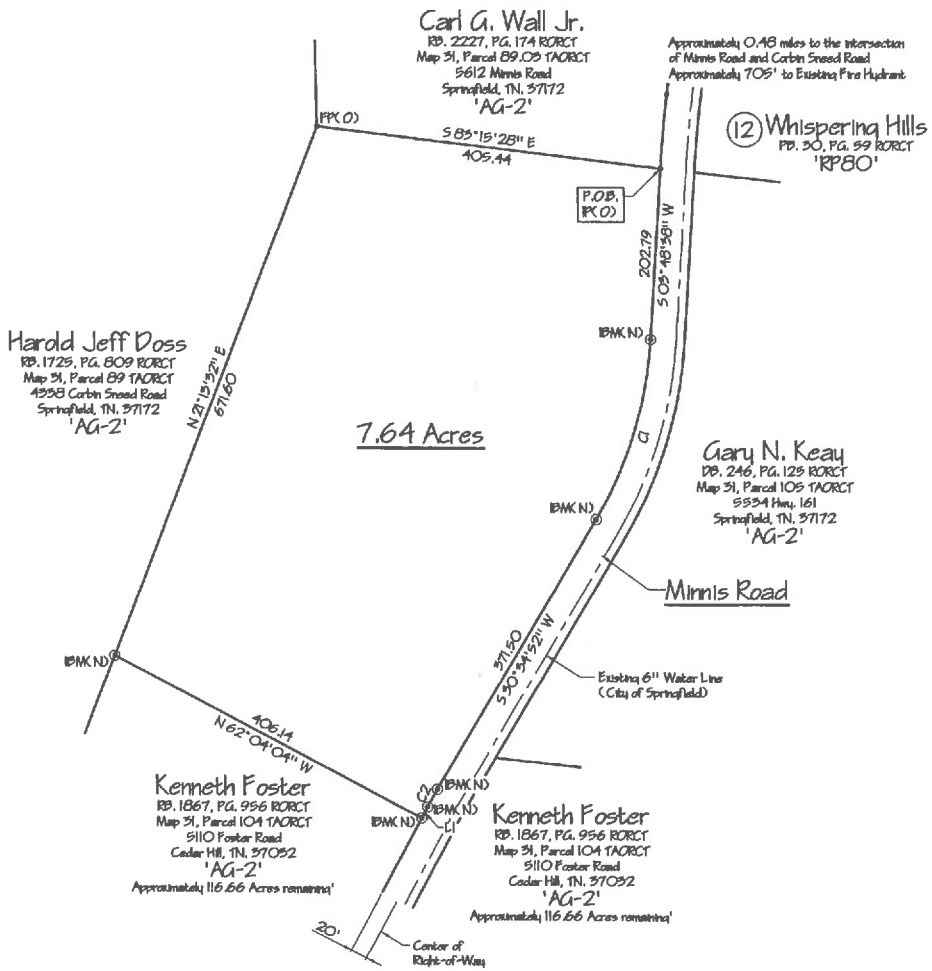
Surveying The Past, Present and Future

100 50 0 100 200

Scale In Feet
1"=100'

Surveyor's Notes:

1. No Title Report was furnished to this surveyor therefore the survey shown hereon is subject to any and all findings an accurate Title Report may reveal.
2. This survey was made using the latest recorded deeds and physical evidence found in the field.
3. All distances shown hereon are based on a field run survey using EDM equipment and have been adjusted for temperature.
4. The survey shown hereon was made in accordance with Chapter 0820-3-.07, Standards of Practice as adopted by the State of Tennessee Board of Examiners for Land Surveyors.



Kenneth Foster
Owner / Developer
5110 Foster Road
Cedar Hill, TN. 37032
(615) 351-8312

Legend
P.O.B. Point of Beginning
IPC (O) Iron Pin (Old)
IBMK (N) Iron Bar monument (New)
FPC (O) Fence Post (Old)
L1 Refer to Line Table Shown Hereon for Data
C1 Refer to Curve Table Shown Hereon for Data

Cad File No. 250013SCA
Coord. File No. 250013CA

CALL BEFORE YOU DIG
811 CALL 811 NATIONWIDE
Know what's below. Call before you dig.

Present Zoning Classification - 'AG-2'
Proposed Zoning Classification - 'RBO'

I hereby certify that this General Property Survey is a Category III Survey and the Ratio of Precision of the Unadjusted Survey is 1:5000+ and that this survey meets the current Tennessee Minimum Standards of Practice.

STEVEN E. ARTZ
REGISTERED LAND SURVEYOR
TENNESSEE NO. 1708

Property Address:
5525 Minnis Road
Springfield, TN. 37172

Deed Reference:
Record Book 1867, Page 956 RORCT
Map 31, Parcel 104 TAORCT

Rezoning Request For
Kenneth Foster
4th Civil District
Robertson County, Tennessee

Revisions			
Number	Date	By	Comment

Steven E. Artz and Associates, Inc.
Land Surveyors
P.O. Box 923 Springfield, TN. 37172
email: srtzlandsurv@gmail.com
(615) 382-0413

Drawn By: SEA
Checked By: DMB
Proj. No.: 250013
Date: 5/28/25

RZ1
Sheet Number

Steven E. Artz and Associates, Inc.

Surveyor's Description
May 28, 2025

The following paragraph describes a tract of land in the 4th Civil District of Robertson County, Tennessee, said tract being a portion of that property which was conveyed to Kenneth Foster, by D.M. Rickard, et ux, in a deed of record which is recorded in Record Book 1867, Page 956, Register's Office for Robertson County, Tennessee, RORCT.

Beginning at an iron pin (old), in the westerly margin of Minnis Road, the southeast corner of a tract of land which belongs to Carl G. Wall, Jr., having a deed reference in Record Book 2227, Page 174,RORCT, the northeast corner of this tract and continuing with the westerly margin of said road, as follows:
S 03°48'38" W, 202.79 feet to an iron bar monument (new);
thence with a curve to the right, having a radius of 480.00 feet, an arc distance of 224.27 feet, and a chord bearing and distance of S 17°11'45" W, 222.24 feet to an iron bar monument (new);
thence, S 30°34'52" W, 371.50 feet to an iron bar monument (new);
thence with a curve to the left, having a radius of 520.00 feet, an arc distance of 24.04 feet, and a chord bearing and distance of S 29°15'24" W, 24.04 feet to an iron bar monument (new);
thence, S 27°55'56" W, 15.00 feet to an iron bar monument (new);
thence with a new line, N 62°04'04" W, 406.14 feet to an iron bar monument (new), in the easterly boundary of a tract of land which belongs to Harold Jeff Doss, having a deed reference in Record Book 1725, Page 809, RORCT;
thence, N 21°13'32" E, 671.60 feet to a fence post (old), a common corner of said tract of land which belongs to Harold Jeff Doss, and said tract of land which belongs to Carl G. Wall, Jr.;
thence, S 83°15'28" E, 405.44 feet, to the point of beginning, containing **7.64 acres,** as surveyed by Steven E. Artz, Tennessee License No. 1708, d/b/a, Steven E. Artz and Associates, Inc., 4800 Highway 431 North, Springfield, Tennessee, 37172, dated May 28, 2025.

The above described tract of land may be found on Tax Map 31, part of Parcel 104, in the Tax Assessor's Office for Robertson County, Tennessee.

File:Steve\250013L

Land Surveyors-Tennessee and Kentucky
Phone: (615) 382-0481 **Fax: (615) 382-0262**
4800 Highway 431 North **Springfield, Tennessee 37172**

CITY OF SPRINGFIELD
Water/Wastewater Department

924 Central Avenue • Springfield, Tennessee 37172 • (615) 382-1600 • FAX (615) 384-6951
www.springfieldtn.gov

July 10, 2025

TO WHO IT MAY CONCERN:

There has been a water availability letter requested by Mr. Kenneth Foster for a property located at Minnis Rd in Robertson County. The property is located by Tax Map 31 Parcel 104. This letter will serve as notice that there is an existing 6" water main adjacent to this property. The request is four (4) water services. The property is currently provided with water services by the City of Springfield's Water and Wastewater Department. The request can be granted at this time. If the taps and meters are not installed by May 1, 2026, the request will need to be re-evaluated.

If you need further information or have questions, please contact me at 615-382-1600.

Thank you,

Terry Beers, P.E.
Director
Springfield Water and Wastewater Department

Robertson County Development Office
Agenda Review Sheet
Planning Commission Meeting
August 28, 2025
Amanda Harrington, Planning Advisor

Applicant: Kenneth Foster
Surveyor: Steve Artz

Request: Rezone ***7.64 surveyed acres***
Tax Map 031, Part of Parcel 104.00
from AG-2 to RP-80



Property Information:
- Tax Map 031, Part of Parcel 104.00
- 5525 Minnis Rd., Springfield
- Total lot acreage: 124.30 acres (5,414,508 sq. ft.)
- **Rezone Request: 7.64 surveyed acres (332,798.40 sq. ft.)**

Project Narrative:
RP-80 Minimum Requirements
Minimum Lot Size: 80,000 sq. ft.
Front: 60'
Side: 25'
Rear: 35'
Min. Lot Width @ Front Bldg. Setback Line: 175'
Min Road Frontage: 50'
Maximum Height: 35'
Max Bldg. Coverage: 30%.

Zoning: The applicant wishes to rezone 7.64 surveyed acres of the 124.30 acres. The subject property is mainly surrounded by AG-2 and RP-80 zones with varying lot sizes in the immediate vicinity. A couple of the surrounding AG-2 zoned lots are nonconforming that would be considered RP-80 and R-40 by today's zoning regulations. The applicant's request to rezone RP-80 appears to be dimensionally appropriate. *Please see Exhibit 1 for the Comprehensive Plan and zoning map exhibits.*

Robertson County 2040 Comprehensive Plan: The plan designates this area as rural. Location of Rural Preservation Areas: The majority of the county will stay designated as Rural during this land use planning period. *Uses in Rural Areas*: Agricultural and rural activities, ranging from open space to farming, homesteads related to farming, and agriculture support businesses, are encouraged within this category.

Recommendation: Approval. The RP-80 district is appropriate to the AG2 Rural designation.

**** END COMMENTS ****

Exhibit 1

Austin Peay University Zoning Map



New Business: F

ROBERTSON COUNTY DEVELOPMENT OFFICE
ROBERTSON COUNTY OFFICE BUILDING
527 SOUTH BROWN STREET, SPRINGFIELD, TENNESSEE 37172
615-384-3666

Application for Rezoning

Applicant Information:

Name: KOE Construction LLC
Mailing Address: 509 Burgess Rd - Mt Juliet, TN 37122
Email: _
Telephone Number: _

Applicant's Representative Information:

Name: Todd Bollinger
Name of Firm: Bollinger & Associates
Mailing Address: 119 Fisher Drive Greenbrier, TN 37073
Email: _
Telephone Number: _

Property Information:

Owner (if not applicant provide letter giving applicate permission): Tennions Capital Lending
Physical Address: 4067 Woodland Rd. Springfield, TN 37172
Tax Map and Parcel Number: 044 069.00
Current Zoning Designation: AG-2
Requested Zoning Designation: RP80

Will this property be subdivided (or combined) in some way within the next year? (Yes) No

Purpose of rezoning request:

Division into two lots for 1 new residence

SUBMITTAL REVIEW PROCEDURE:

1. Deliver one (1) copy of this application & any supporting materials to the Development Office before or by the final due date (Please see attached schedule- the "Corrections Due" does not apply to this type of application)
2. Provide copy of deed to prove ownership.
3. Provide aerial photograph of the property from TN Property Viewer
4. Provide Legal description **AND** Survey of the areas to be rezoned including map and parcel number
5. Provide water letter from utility company stating location and size of current water line, adequate pressure for domestic use and if/where fire hydrants are required
6. Pay the review fee.
7. Email a .PDF of the application & supporting materials to hmantooth@robcotn.org
8. Attend the Planning Commission meeting. Be ready to present and answer questions. Failure to appear at the Planning Commission meeting may result in the denial of the application.

5/3/25
Owner of Record Signature & DATE

5/3/25
Applicant's Signature & DATE

Robertson County - Parcel: 044 069.00



Date: May 5, 2025

County: ROBERTSON
Owner: CRAWFORD JARRETT K
Address: WOODARD RD 4067
Parcel ID: 044 069.00
Deeded Acreage: 5.02
Calculated Acreage: 0
Vexcel Imagery Date: 2023

1:2,257

0 0.01 0.03 0.06 mi

0 0.02 0.04 0.09 km

State of Tennessee, Comptroller of the Treasury, Division of Property Assessments (DPA), Esri Community Maps Contributors, © OpenStreetMap, Microsoft, Esri, TomTom, Garmin, SafeGraph, GeoTechnologies, Inc, METI/NASA, USGS, EPA, NPS, US Census Bureau, USDA, USFWS

The property lines are compiled from information maintained by your local county Assessor's office but are not conclusive evidence of property ownership in any court of law.

Terminus Capital Investing LLC
4067 Woodard Rd
Springfield TN 37172

Date: May 1, 2025

Robertson County Planning Commission
527 South Brown Street
Springfield TN 37172

RE: **Permission to Pursue Rezoning for 4067 Woodard Rd, Springfield, TN 37172**

To Whom it May Concern,

This letter serves as formal authorization from **Terminus Capital Investing LLC**, the current owner of the property located at **4067 Woodard Rd, Springfield, TN 37172**, identified by its current zoning designation of **AG-2**, granting **KOE Construction LLC** permission to pursue a rezoning application on our behalf

We specifically authorize KOE Construction LLC to initiate and represent our interests in the rezoning of the above-referenced property from **AG-2 (Agricultural)** to **R40 (Residential)** zoning, including submission of required documentation, participation in meetings or hearings and any necessary correspondence with the Robertson County Planning Commission or other relevant authorities

Please do not hesitate to contact us should any additional information or documentation be required in support of this request

Terminus Capital Investing LLC

By _____

Title _____

Date 5/2/25

State of Tennessee
County of Rutherford

On this 2nd day of May, 2025, before me personally appeared Patrick Miller, known to me (or satisfactorily proven) to be the person whose name is subscribed to the foregoing instrument and acknowledged that they executed the same for the purposes therein contained, as a duly authorized representative of Terminus Capital Investing LLC

Witness my hand and official seal.

Heidi Thomas

Notary Public

My Commission Expires 11/22/2025

HEIDI THOMAS
STATE OF TENNESSEE NOTARY PUBLIC
RUTHERFORD COUNTY

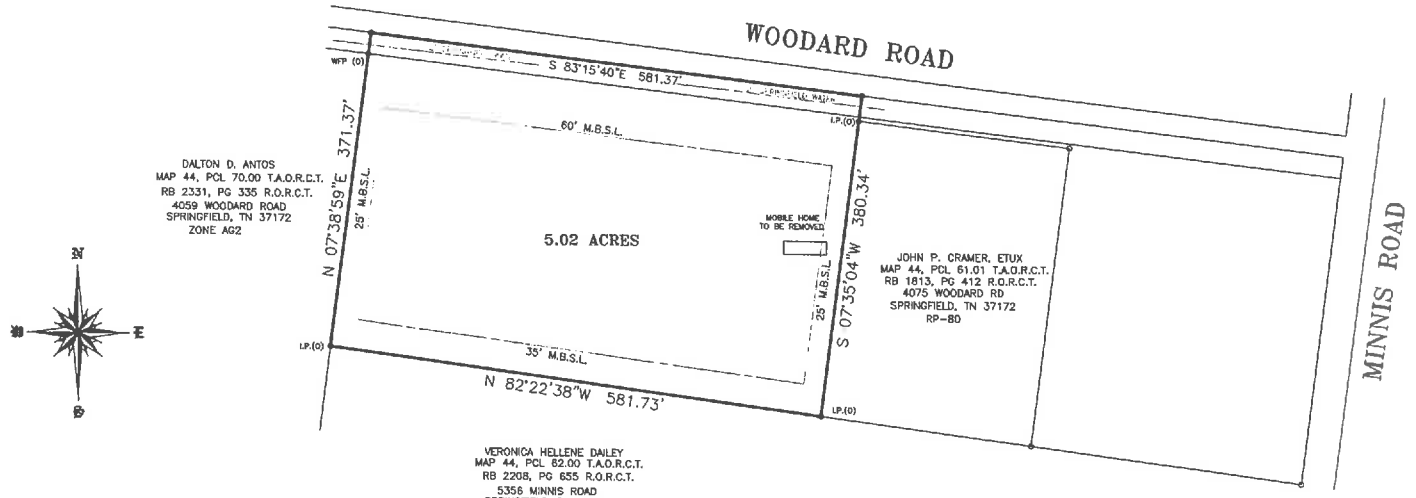
PLAT CONTAINS 5.02 ACRES

NOTE:
THIS SURVEY WAS PREPARED FROM CURRENT DEEDS OF RECORD AND DOES NOT REPRESENT A TITLE SEARCH OR A GUARANTEE OF TITLE. THIS SURVEY IS SUBJECT TO ANY STATE OF FACTS A CURRENT AND ACCURATE TITLE SEARCH MAY OR WILL REVEAL.

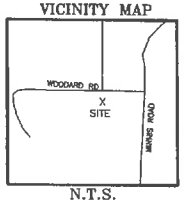
NOTE:
THIS SURVEYOR HAS NOT PHYSICALLY LOCATED ANY UTILITIES. UTILITIES, IF SHOWN HEREON, ARE AS PER INFORMATION FURNISHED BY THE ASSOCIATED UTILITY AUTHORITY AND ARE APPROXIMATE. THIS SURVEYOR MAKES NO GUARANTEE THAT THE UTILITIES, IF SHOWN, COMPRISE ALL SUCH UTILITIES IN THE AREA, EITHER IN SERVICE OR ABANDONED. THE SURVEYOR FURTHER DOES NOT WARRANT THAT THE UTILITIES, IF SHOWN, HEREON ARE IN THE EXACT LOCATION INDICATED. THEREFORE, THE SIZE, TYPE, AVAILABILITY AND ACTUAL LOCATION OF ANY AND ALL UTILITIES SHOULD BE VERIFIED PRIOR TO MAKING ANY DECISION RELATIVE TO THIS PROPERTY.

IN TENNESSEE IT IS A REQUIREMENT OF THE "UNDERGROUND UTILITY DAMAGE PREVENT ACT", THAT ANYONE WHO ENGAGES IN EXCAVATION OF ANY TYPE MUST NOTIFY ALL KNOWN UTILITY OWNER(S), NO LESS THAN (3) NOR MORE THAN (10) WORKING DAYS PRIOR TO THE DATE OF THEIR INTENT TO EXCAVATE AND ALSO TO AVOID ANY HAZARD OR CONFLICT. TENNESSEE ONE CALL "811".

NOTE:
ALL BEARINGS ARE REFERENCED TO THE OWNER'S DEED OF RECORD RECORDED IN THE COUNTY REGISTER'S OFFICE.



VICINITY MAP



N.T.S.

ZONED AG
REQUESTING RP-8D

PROPERTY REFERENCE
TERMINUS CAPITAL INVESTING, LLC
MAP 44, PCL 69.00 T.A.O.R.C.T.
RB 2388, PG 122 R.O.R.C.T.

DEVELOPER
TERMINUS CAPITAL INVESTING, LLC
24410 OLD FORT PARKWAY # 420
MURFREESBORO, TN 37128
AUSTIN KEPLY
615-905-1577

ANTHONY T. BOLLINGER, R.L.S.
119 FISHER DRIVE
GREENBRIER, TENNESSEE 37073
615/218-0169

0 100 200 300

REZOING PLAT FOR
TERMINUS CAPITAL INVESTING, LLC
4067 WOODARD ROAD

SCALE	DRAWN BY	APPROVED	DATE
1" =100'	A.T.B.	A.T.B.	05/06/25

4TH CIVIL DISTRICT
ROBERTSON COUNTY
TENNESSEE

DRAWING NO.
4067WOOD

Property Description

5.02 Acres

Being a tract of land in the 4th Civil District of Robertson County Tennessee, and that property conveyed to Terminus Capital Investing, LLC in RB 2386, PG 122 R.O.R.C.T., and more accurately described according to a survey by Anthony T. Bollinger R.L.S., TN LIC. No. 2095 dated 05/06/25 as follows:

Beginning at an existing iron pin at the southwest corner of John P. Cramer in RB 1813, PG 412 R.O.R.C.T., said pin being the most southeast corner of herein described tract; Thence now leaving said Cramer with Veronica Dailey in RB 2208, PG 655 R.O.R.C.T., N 82°22'38" W, 581.73' to an existing iron pin in the line of Dalton Antos in RB 2331, PG 335 R.O.R.C.T.. thence with said Antos N 07°38'59" E, passing through a wood post on the margin of Woodard Road, a distance of 371.37' to a point in the center of Woodard Road; Thence with said centerline S 83°15'40" E, 581.37' to a point; Thence now leaving said centerline passing through an existing iron pin on the margin S 07°35'04" W, 380.34' to the point of beginning containing 5.02 acres.

CITY OF SPRINGFIELD
Water/Wastewater Department

924 Central Avenue • Springfield, Tennessee 37172 • (615) 382-1600 • FAX (615) 384-6951
www.springfieldtn.gov

April 8, 2025

TO WHO IT MAY CONCERN:

There has been a water availability letter requested by Mr. Patrick Miller for a property located on Woodard Road in Robertson County. The request is for three (3) water services to be installed on an existing property that has not been subdivided. The property is located by Tax Map 44 Parcel 69.00. There is an existing 2" water main that is adjacent to this property. This letter will serve as notice that there is sufficient water pressure to provide residential service. Fire protection is not available, due the line not being a minimum of 6". Fire hydrants can only be installed on a 6" water main or greater. The services will not be installed until an approved plat for the subdivision of the property has been approved and recorded. A water service will not be installed on this property after May 1, 2026, at this location.

If you need further information or have questions, please contact me at 615-382-1600.

Thank you,

, P.E.

Terry Beers, P.E.
Director
Springfield Water and Wastewater Department

Robertson County Development Office
Agenda Review Sheet
Planning Commission Meeting
August 28, 2025
Amanda Harrington, Planning Advisor

Applicant: KOE Construction on behalf of Terminus Capital Investing, LLC
Surveyor: Todd Bollinger

Request: Rezone **5.02 *surveyed acres***
Tax Map 044, Parcel 069.00
from AG-2 to RP-80



Figure 1: TN Property Viewer: Tax Map 044, Parcel 069.00 In its entirety is highlighted

Property Information:

- Tax Map 044, Parcel 069.00
- 4067 Woodard Rd., Springfield
- Total lot acreage: 5.02 surveyed acres (218,671.20 sq. ft.)
- **Rezone Request: 5.02 surveyed acres (218,671.20 sq. ft.)**

Project Narrative:
RP-80 Minimum Requirements
Minimum Lot Size: 80,000 sq. ft.
Front: 60'
Side: 25'
Rear: 35'
Min. Lot Width @ Front Bldg. Setback Line: 175'
Min Road Frontage: 50'
Maximum Height: 35'
Max Bldg. Coverage: 30%.

Zoning: The applicant wishes to rezone 5.02 surveyed acres. The subject property has a mixture of AG-2, and a few RP-80 and R-40 properties in the immediate vicinity with varying lot sizes. Several non-conforming lots would be considered RP-80 by today's standards. The applicant's request to rezone RP-80 appears to be dimensionally appropriate. *Please see Exhibit 1 for Comprehensive plan and zoning map exhibits.*

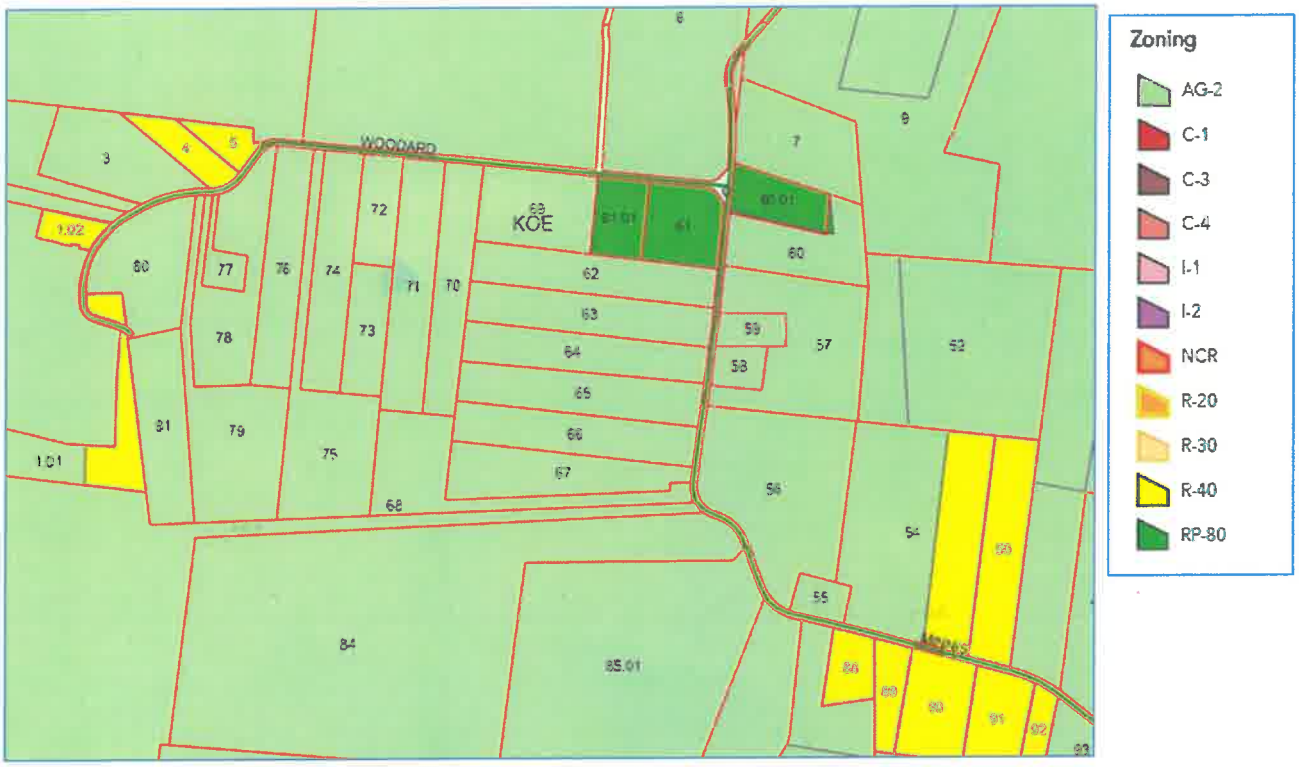
Conformance with the Robertson County Land Use Plan: The 2040 Land Use Plan designates this area as Rural. Agrarian and rural types of uses, ranging from open space to agriculture, homesteads associated with agricultural activities, and agricultural service businesses, are encouraged within this category.

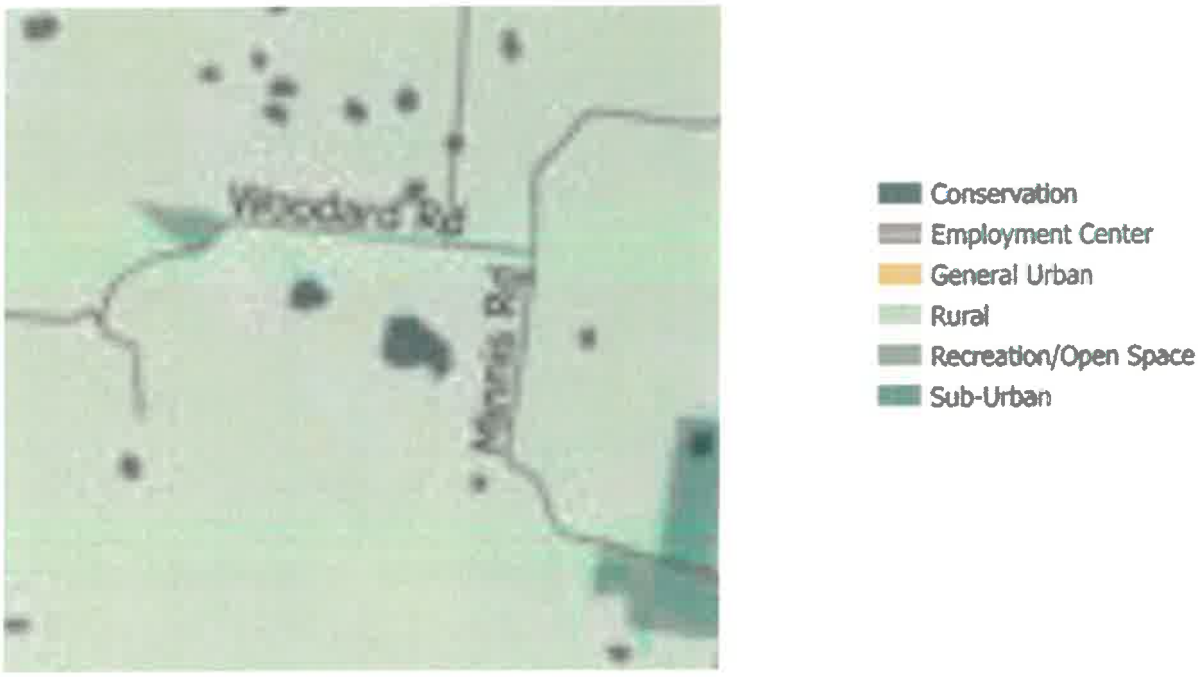
Recommendation: Approval. The RP-80 land designation is appropriate for the Rural Designation.

**** END COMMENTS ****

Exhibit 1

Austin Peay University Zoning Map





New Business: G

ROBERTSON COUNTY DEVELOPMENT OFFICE
ROBERTSON COUNTY OFFICE BUILDING,
527 SOUTH BROWN STREET, SPRINGFIELD, TENNESSEE
37172 (615- 384-3666

Application for Plat Approval

Type of Plat (Please Circle One): *Sketch Plat* *Preliminary Plat* *Final Plat*

Property Information:

Subdivision Name: Sturgeon Creek Reserve

Current Zoning of Property: AG-2

Physical Address of Property: Hwy 41N 6841, Adams, TN, 37010

Tax Map & Parcel Number: Map 54 Parcel 13.00

Size of Property (square feet or acres): 19.67 acres

Property Owner of Record Information:

Name: Clay Jones

Mailing Address (No P.O. Boxes, please): 3002 Old Greenbrier Pike, Greenbrier, TN, 37073

Email:

Telephone Number:

Owner's Representative Information (Surveyor, Self, Engineer, etc.)

Name: Steve Artz

Name of Firm: Steven E. Artz and Associates, Inc.

Mailing Address (No P.O. Boxes, please): 4800 Hwy. 431 N Springfield, TN. 37172

Email:

Telephone Number:

Purpose of Plat: The purpose of this plat is to get preliminary approval for creating a six lot subdivision "Sturgeon Creek Reserve" on current Map 54, Parcel 13.00.

SUBMITTAL REVIEW PROCEDURE:

1. Submit 1 hard copy (no smaller than 17" x 22") of the plat, this completed application, and fee payment to the Robertson County Planning & Zoning Department. Please ensure the application is signed. *Attach proof of ownership of property (copy of deed is typical). Pay the review fee.*
2. Email a .PDF of the submitted plat to hmantooth@robcotn.org (Hunter Mantooth).
3. Application and plat will be reviewed, and corrective comments provided, by date listed on calendar (see attached).
4. Submit corrections by date listed on Planning Commission Submittal & Meeting Calendar
5. FINAL SUBMITTAL: Deliver one (1) folded hard copies of the corrected plat, no smaller than 17" x 22", and any supporting documentation to the Development Office before or by the final due date.
6. Email a .PDF of the corrected plat to hmantooth@robcotn.org
7. Attend the Planning Commission meeting. Be ready to present and answer questions. Failure to appear at the Planning Commission meeting may result in the denial of the application.

7/8/25

Owner's Signature & DATE

7.8.25

Owner's Representative Signature & DATE

Note:
In the event any portion of the new residence falls within an area where the slopes exceed 15% a site plan shall be required prior to the issuance of a Building Permit.
The site plan shall meet the established regulations as set forth in the Robertson County Subdivision Regulations.

Note:
All lots shall be graded in a manner which avoids discharging additional storm water into downstream properties. The developer shall comply with all State of Tennessee drainage laws.

Bearing Basis Note:
Bearings shown hereon are based on the Tennessee State Plane Coordinate System of 1983. Two (2) control points were established using a Carlson BRX7 Dual Frequency Receiver on June 25, 2025.
The grid coordinates of the control points were derived using the TDOT Real-Time Kinematic Network, Virtual Reference Station, (VRS) Northing 692662.09, Easting 1850965.90 - Referenced to NAD83 (2011) (EPOCH 2010), GEOID 12B.

Topographic Notes:
1. Contour Interval = 2 feet.
2. Vertical Datum based upon NAVD88 arrived at with the use of a Carlson BRX7 Dual Frequency Receiver on June 25, 2025 using the TDOT Real-Time Kinematic Network.

TSPCS Grid North (NAD83)

Surveyor's Notes:
1. No Title Report was furnished to this surveyor therefore the survey shown hereon is subject to any and all findings an accurate Title Report may reveal.
2. This survey was made using the latest recorded deeds and physical evidence found in the field.
3. All distances shown hereon are based on a field run survey using EDM equipment and have been adjusted for temperature.
4. The survey shown hereon was made in accordance with Chapter 0820-3-.07, Standards of Practice as adopted by the State of Tennessee Board of Examiners for Land Surveyors.

Card A. Owens
DB. 1211, PG. 209 RORCT
Map 42, Parcel 99 TAORCT
4959 Bill Baggett Road
Cedar Hill, TN. 37032
'AG-2'

Henry W. Baggett Jr.
DB. 1342, PG. 629 RORCT
Map 42, Parcel 91.02 TAORCT
5002 Bill Baggett Road
Cedar Hill, TN. 37032
'AG-2'

Bill Baggett Road

Carl Brewer
DB. 1746, PG. 148 RORCT
Map 54, Parcel 12 TAORCT
1602 Lone Smith Road
Pendleton, SC. 29670-8959
'AG-2'

Daniel Moseley
DB. 1785, PG. 611 RORCT
Map 42, Parcel 98.02 TAORCT
5014 Bill Baggett Road
Cedar Hill, TN. 37032
'AG-2'

Daniel Moseley
DB. 1342, PG. 631 RORCT
Map 54, Parcel 14 TAORCT
5014 Bill Baggett Road
Cedar Hill, TN. 37032
'AG-2'

Erich Lorenz
DB. 169, PG. 461 RORCT
Map 54, Parcel 24 TAORCT
P.O. Box 49
Cedar Hill, TN. 37032
'AG-2'

Erich Lorenz
DB. 282, PG. 14 RORCT
Map 54, Parcel 27 TAORCT
P.O. Box 49
Cedar Hill, TN. 37032
'AG-2'

Cemetery
No Deed Reference Found
Map 54, Parcel 27 TAORCT
'AG-2'

Erich Lorenz
DB. 282, PG. 14 RORCT
Map 54, Parcel 27 TAORCT
P.O. Box 49
Cedar Hill, TN. 37032
'AG-2'

Larry Lee King
DB. 1669, PG. 989 RORCT
Map 54, Parcel 29 TAORCT
6766 Hwy. 41 North
Cedar Hill, TN. 37032
'AG-2'

U.S. Highway #41 North

Sturgeon Creek

20' Private Water and Sanitary Sewer Easement which serves Lot 6

20' Private Water and Sanitary Sewer Easement which serves Lot 5

30' Overhead Power Line Easement, centered on line

Cross hatched area denotes Public Drainage and Utility and Temporary Flooding Easement

25' Springfield Gas System Easement - RB. 1369, PG. 198 RORCT

15' Easement for Wastewater Lines - RB. 1285, PG. 461 RORCT

Agreement for Dedication of Easement - RB. 1771, PG. 493 RORCT

Proposed Fire Hydrant

Proposed 8" Water Line

Existing Shed

Existing Well House

Gravel Drive

Min. F.F.E. 600.00

Lot 1 - 1.54 Ac.
Lot 2 - 2.99 Ac.
Lot 3 - 3.18 Ac.
Lot 4 - 2.99 Ac.
Lot 5 - 3.19 Ac.
Lot 6 - 3.91 Ac.

Legend
= Iron Pin (New)
● Iron Pin Monument (New)
WPC NO Witness Pin (New)
○ Meander Point
Power Pole
OHP — Overhead Power Line
—W— Water Line
—Gas— Gas Line
SSFM — Sanitary Sewer Force Main
CMP Corrugated Metal Pipe
L1 Refer to Line Table Shown Hereon for Data
C1 Refer to Curve Table Shown Hereon for Data
F.F.E. Finish Floor Elevation
M.B.S.L. Minimum Building Setback Line
P.U.D.E. Public Utility and Drainage Easement

Notes
This property does not lie within a Flood Boundary Area according to the FEMA National Flood Insurance Program - Flood Insurance Rate Map - Map Number 47147C0135C and 47147C0195C Effective Date - April 16, 2008.

DRIVEWAY NOTES:
1. A DRIVEWAY PERMIT SHALL BE OBTAIN FROM LOCAL ROAD AUTHORITY PRIOR TO ISSUANCE OF BUILDING PERMIT.
2. DRIVEWAY CULVERT SHALL BE A MINIMUM DIAMETER OF 15" OR MATCH THE DIAMETER OF THE NEAREST UPSTREAM CULVERT. THE MINIMUM LENGTH SHALL BE 20' OR AS DIRECTED BY LOCAL ROAD AUTHORITY. NO CULVERT SHALL BE LESS THAN 15" IN DIAMETER.

Cad File No. 250139SCA
Coord. File No. 250856CA

Vicinity Map
Subject Property

Line Table

Line	Bearing	Distance
L1	N 07° 44' 06" E	50.46
L2	N 10° 04' 08" E	107.95
L3	S 08° 54' 58" W	86.96
L4	S 00° 49' 12" W	86.46
L5	S 19° 59' 12" W	18.50
L6	S 19° 39' 12" W	84.26
L7	S 14° 09' 10" W	32.58
L8	S 45° 06' 52" E	36.08
L9	S 67° 14' 39" E	47.40
L10	S 56° 58' 44" E	110.49
L11	S 44° 46' 29" E	67.56
L12	S 44° 46' 29" E	14.09
L13	S 66° 48' 39" E	30.97
L14	S 79° 48' 21" E	80.82
L15	S 11° 48' 39" E	61.68
L16	S 00° 20' 48" W	71.24
L17	S 17° 19' 51" E	47.45
L18	S 45° 15' 55" E	168.55
L19	S 11° 22' 21" E	85.09
L20	S 45° 02' 20" E	52.46
L21	S 18° 39' 20" E	102.69
L22	S 21° 48' 08" E	72.62
L23	S 28° 19' 39" E	86.85

Lot Summary

Area	Square Feet	Acres
1	167546.90	3.84
2	130378.08	2.99
3	138699.30	3.18
4	130198.98	2.99
5	139198.28	3.19
6	170291.86	3.91

Curve Table

Curve	Delta Angle	Radius	Tangent	Arc Length	Chord Bearing	Chord Length
C1	69° 26' 56"	29.00	17.52	30.50	N 26° 59' 12" W	28.80
C2	0° 35' 50"	1928.00	87.70	175.39	N 08° 09' 51" E	175.39
C3	1° 41' 09"	523.00	14.79	29.75	N 09° 15' 56" E	29.78
C4	102° 01' 54"	49.00	55.20	80.14	N 61° 05' 02" E	69.96

CALL BEFORE YOU DIG
811 CALL 811 WATCHWORK
Know what's below. Call before you dig.

Approved by the Robertson County Regional Planning Commission, with such exceptions or conditions as are indicated in the minutes of the Commission on

Dated Secretary, Planning Commission

Clay Jones Construction LLC
Owner
5002 Old Greenbrier Pike
Greenbrier, TN. 37073
(615) 586-1000
designers55@gmail.com

Certificate of Survey Accuracy
I (WE) HEREBY CERTIFY THAT TO THE BEST OF MY (OUR) KNOWLEDGE AND BELIEF THIS IS A TRUE AND ACCURATE SURVEY OF THE PROPERTY SHOWN HEREON, THAT THIS IS A CATEGORY "I" LAND SURVEY AS DEFINED IN TABLE 1, CHAPTER 1S, TENNESSEE CODE ANNOTATED, AND THAT THE KIND OF PRECISION IS GREATER THAN OR EQUAL TO 1:7500+.

DATE

TENNESSEE LAND SURVEYOR NUMBER 1708

Steven E. Artz and Associates, Inc.
Land Surveyors
P.O. Box 929 Spradfield, TN 37172
email: artz.steve@gmail.com (615) 202-0419

Preliminary Plat of
Sturgeon Creek Reserve
Plat 7/3/25 Date

Total No. Lots 6
Total Acres 19.67
6th Civil District
Deed Reference:
Record Book 2396, Page 216 RORCT
Map 54, Parcel 15 TAORCT

Main New Road O
Proposed Zoning 'AG-2'
Robertson Co., TN.

Scale 1"=100'

Staff Comments
August 2025
Amanda Harrington, Planning Advisor

Request: Preliminary Plat Approval for Sturgeon Creek Reserve
Property: Tax Map 054, Parcel 013.00
Address: 6841 Highway 41N, Adams, TN 37010
Zoning: AG-2

The purpose of this plat is to create six independent lots of record. The plat was reviewed utilizing the Preliminary Plat Checklist found in the Robertson County Subdivision Regulations, Article 5, Section 5-102.2, Preliminary Plat Features.

No corrections were required from that review.

Staff recommends approval of the preliminary plat.



** END COMMENTS **

EARL R. MAYO **CONSULTING ENGINEER AND SURVEYOR**
119 SUESAND COURT PLEASANT VIEW, TN 37146 (615)522-4704

July 24, 2025

Traye Fann
County Engineer
Robertson County Planning and Zoning
527 South Brown Street
Springfield, Tennessee 37172

RE: Review of Revised Sturgeon Creek Reserve Preliminary Plat

Dear Traye:

I have reviewed the referenced revised preliminary plat that I received on July 22, 2025 for the August 28, 2025 Planning Commission meeting. Following is a list of my comments. These are for your information, there is nothing else for the surveyor to address.

1. There are potential sight distance problems.
2. Bill Baggett Road is a narrow road.

Only a very cursory review has been performed of these documents in order to get an overall sense of general compliance with the surveying and engineering requirements contained in the Robertson County Subdivision Regulations. No planning related review was performed. This review is not intended as a check of accuracy of the documents or compliance with other state or federal laws and regulations, including Erosion Protection and Sediment Control or water quality design that was not reviewed by me but is to be reviewed by TDEC. No liability for the correctness or completeness of design or surveying performed by others is assumed by me or Robertson County by my review of these documents.

Please contact me if you have any questions or comments. Thank you for the opportunity to serve you.

Sincerely,

Rick Mayo, PE, RLS

New Business: H

ROBERTSON COUNTY DEVELOPMENT OFFICE
ROBERTSON COUNTY OFFICE BUILDING
527 SOUTH BROWN STREET, SPRINGFIELD, TENNESSEE 37172
615- 384-3666

Application for Site Plan Approval

Type of Site Plan (Please Circle One): *Sketch Site Plan* *Preliminary Site Plan* (*Final Site Plan*)

Property Information:

1. Current Zoning of Property: AG-2
2. Physical Address of Property: 5649 Lakeview Rd, Springfield, TN 37172
3. Tax Map & Parcel Number: Map 46, Parcel 66
4. Size of Property (square feet or acres): 5.72 Ac.

5. Owner of Record Information
   Name: Iglesia Cristiana Eben-Ezer
   Mailing Address (No P.O. Boxes, please): 5649 Lakeview Rd, Springfield, TN 37172
   Email:
   Telephone Number:

6. Owner's Representative Information (Surveyor, Self, Engineer, etc.)
   Name: Josh Lyon, P.E.
   Name of Firm: Klober Engineering Services
   Mailing Address (No P.O. Boxes, please): 3556 Tom Austin Hwy, Ste 1, Springfield, TN 37172
   Email:
   Telephone Number:

7. Purpose of Site Plan:
   11,000 sf Building Addition

SUBMITTAL REVIEW PROCEDURE:

1. Submit 1 hard copy (no smaller than 17" x 22") of the site plan, this completed application, and fee payment to the Robertson County Development Office. Please ensure the application is signed. *Attach proof of ownership of property (copy of deed is typical). Pay the review fee.*
2. Email a .PDF of the submitted site plan to [illegible] (Hunter Mantooth).
3. Application and site plan will be reviewed, and corrective comments provided, by date listed on calendar (see attached).
4. Submit corrections by date listed on Planning Commission Submittal & Meeting Calendar
5. FINAL SUBMITTAL: Deliver one (1) folded hard copies of the corrected plat, no smaller than 17" x 22", and any supporting documentation to the Development Office before or by the final due date.
6. Email a .PDF of the corrected site plan to [illegible]
7. Attend the Planning Commission meeting. Be ready to present and answer questions. Failure to appear at the Planning Commission meeting may result in the denial of the application.

7-8-25
Owner's Signature & DATE

7/8/25
Owner's Representative Signature & DATE

Staff Comments
August 2025
Amanda Harrington, Planning Advisor

Project: Iglesia Ebenezer Church – Site Plan Review

Location: 5649 Lakeview Road, Springfield, Robertson County, TN

Applicant: Iglesia Ebenezer Church

Engineer: Klober Engineering Services

I. PROJECT OVERVIEW

The applicant proposes a new church facility with parking, utility hookups, and a stormwater management system. The site layout includes one building, two entrances to Lakeview Road, sidewalks, and landscape buffers.

II. ZONING & LAND USE

Zoning: AG-2

Use: Religious institution

Surroundings: Residential and agricultural uses

III. SITE PLAN HIGHLIGHTS

- • Central church building with sidewalk access
- • Two driveways with one-way and two-way circulation
- • 108 parking spaces including ADA
- • Stormwater system and utility connections shown
- • Landscape buffers and internal islands

V. RECOMMENDATION: Approval.

** END COMMENTS **

EARL R. MAYO **CONSULTING ENGINEER AND SURVEYOR**
119 SUESAND COURT PLEASANT VIEW, TN 37146 (615)522-4704

August 13, 2025

Traye Fann
County Engineer
Robertson County Planning and Zoning
527 South Brown Street
Springfield, Tennessee 37172

RE: Review of Revised Iglesia Ebenezer Church Site Plan

Dear Traye:

I have reviewed the referenced revised site plan that I received on August 12, 2025 for the August 28, 2025 Planning Commission meeting. All of my previous comments have been addressed.

Only a very cursory review has been performed of these documents in order to get an overall sense of general compliance with the surveying and engineering requirements contained in the Robertson County Subdivision Regulations. No planning related review was performed. This review is not intended as a check of accuracy of the documents or compliance with other state or federal laws and regulations, including Erosion Protection and Sediment Control or water quality design that was not reviewed by me but is to be reviewed by TDEC. No liability for the correctness or completeness of design or surveying performed by others is assumed by me or Robertson County by my review of these documents.

Please contact me if you have any questions or comments. Thank you for the opportunity to serve you.

Sincerely,

Rick Mayo, PE, RLS

SITE PLAN FOR

IGLESIA EBENEZER CHURCH

5649 LAKEVIEW ROAD
SPRINGFIELD, TN 37172
ROBERTSON COUNTY

DATE: 8/12/2025 IGLESIA EBENEZER CHURCH

SHEET INDEX

NOTE	PROJECT NOTES
C1.01	DEMO AND INITIAL EPSC
C1.02	SITE LAYOUT
C1.03	GRADING PLAN
C1.04	INTERMEDIATE EPSC
C1.05	DRAINAGE PLAN
C1.06	FINAL STABILIZATION
C1.07	PHOTOMETRIC PLAN
C1.08	FIRE TRUCK ACCESS PLAN
C1.09*	WATER MAIN LOWERING
C2.01	CONSTRUCTION DETAILS
C2.02	CONSTRUCTION DETAILS
C2.03	CONSTRUCTION DETAILS
C2.04*	CONSTRUCTION DETAILS
A-1	ARCH. FLOOR PLAN
A-2	ARCH. ELEVATIONS

* SEPARATE SUBMITTALS TO UTILITY AGENCIES

PUBLIC UTILITY NOTE

REFER TO TENNESSEE DEPARTMENT OF ENVIRONMENT & CONSERVATION (TDEC) STAMPED APPROVED PLANS FOR ALL PUBLIC UTILITY CONSTRUCTION DOCUMNETS

NOT FOR CONSTRUCTION



Vicinity Map
Not to Scale

KLOBER
ENGINEERING SERVICES

APPLICANT/ DEVELOPER:

ELU MALDENADO
5648 LAKEVIEW ROAD
SPRINGFIELD, TN 37172
(615)474-0384

PROPERTY OWNER:

IGLESIA CRISTIANA EBEN-EZER
ASAMBLEAS DE DIOS
5649 LAKEVIEW ROAD
SPRINGFIELD, TN 37172

DEED REFERENCE:

MAP 48, PARCEL 86 TRONCT
RB 1573, PG 180 RONCT

PROPERTY INFORMATION:

ZONING: AG-2, AGRICULTURAL/RESIDENTIAL DISTRICT
AREA: 249,158 S.F. = 5.72 ACRES

SITE USE

EXISTING USE: CHURCH
PROPOSED USE: CHURCH

PARKING INFORMATION:

REQUIRED PARKING:
1/4 SEATS (CHURCH SANCTUARY) = 432/4 = 108 SPACES

PROVIDED: 108 SPACES INCLUDING 5 ACCESSIBLE SPACES

LOT COVERAGE

EXISTING BUILDING AREA = 8,400 S.F.
NEW BUILDING AREA = 19,400 S.F.
BUILDING COVERAGE = 7.8%
MAX BUILDING HEIGHT: 35'-0"
PROP'D + EXIST'G CONCRETE SURFACE: ±3,324 S.F.
PROPOSED ASPHALT SURFACE: ±44,184 S.F.
IMPERVIOUS AREA: ±75,308 S.F. = 30.22%

PERFORMANCE STANDARDS NOTE:

ALL CONSTRUCTION AND USE OF THE PROPOSED FACILITY TO MEET THE APPLICABLE PERFORMANCE STANDARDS AS SET FORTH IN THE ROBERTSON COUNTY ZONING ORDINANCE.

STATEMENT OF FINANCIAL RESPONSIBILITY:

THE OWNER/DEVELOPER IS RESPONSIBLE FOR ALL IMPROVEMENTS SHOWN ON THIS SITE PLAN.

TEMPORARY BENCHMARK:

ANOTHER BENCHMARK TO BE SET OUTSIDE OF THE LIMITS OF CONSTRUCTION. FOR NEW LOCATION CONTACT STEVE E. ARTZ AND ASSOCIATES, INC
(615) 382-0481

SIGN NOTE:

ALL SIGNS SHALL COMPLY WITH THE MOST CURRENT EDITION OF THE ROBERTSON COUNTY ZONING ORDINANCE, SECTION 9.1. SEPARATE SIGN PERMIT REQUIRED.

UTILITIES NOTE:

COORDINATE LOCATION AND INSTALLATION OF UTILITIES WITH MECHANICAL, ELECTRICAL AND PLUMBING PLANS, SPRINGFIELD WATER DEPARTMENT AND TENNESSEE WATER RESOURCES

WATER: SPRINGFIELD WATER DEPARTMENT
924 CENTRAL AVENUE WEST
SPRINGFIELD, TENNESSEE 37172
TELEPHONE: (615) 382-1800

SEPTIC: TDEC GROUNDWATER PROTECTION
501 SOUTH BROWN STREET
SPRINGFIELD, TENNESSEE 37172
TELEPHONE: (615) 384-0240

ELECTRIC: CEMC
CONTACT: MICKY ROBERTS
1201 5TH AVE. WEST
SPRINGFIELD, TENNESSEE 37172
TELEPHONE (800) 987-2362

GAS: SPRINGFIELD GAS DEPT.
1311 N.W. CORSON DRIVE
SPRINGFIELD, TENNESSEE 37172
TELEPHONE (615) 382-1621

TDOT DRAINAGE NOTE:

THIS DEVELOPMENT WILL NOT INCREASE STORMWATER RUNOFF WITHIN THE STATE'S RIGHT OF WAY.

Q50 PRE: 20.12 CFS
Q50 POST: 17.17 CFS

Q100 PRE: 23.21 CFS
Q100 POST: 18.35 CFS

SIGHT DISTANCE NOTE:

THIS SITE COMPLIES WITH THE AASHTO GREENBOOK INTERSECTION SITE DISTANCE

SOLID WASTE:

RESIDENTIAL STYLE ROLLING TRASH RECEPTACLES TO BE USED FOR SOLID WASTE DISPOSAL.

GENERAL NOTES:

1. PRIOR TO BEGINNING CONSTRUCTION ON THIS SITE THE LOCATION OF UTILITIES MUST BE IDENTIFIED BY CALLING THE TOLL-FREE TENNESSEE ONE CALL REFERENCE NUMBER 1-800-351-1111.
2. ALL CONSTRUCTION ON THIS SITE SHALL COMPLY WITH APPLICABLE REGULATIONS AS SPECIFIED BY ROBERTSON COUNTY AND THE STATE OF TENNESSEE.
3. THE BOUNDARY SURVEY SHOWN HEREON WAS TAKEN FROM A SURVEY BY STEVEN E. ARTZ OF SPRINGFIELD, TN, DATED 7/4/2012.
4. ACCORDING TO MAP 47147C0230C, DATED 4/18/2008, THIS SITE IS NOT IN A FLOOD HAZARD AREA.
5. SITE CONSTRUCTION WILL BEGIN FOLLOWING PLAN APPROVAL BY ROBERTSON COUNTY.

GENERAL UTILITY NOTES:

1. WATER AND SEWER CONSTRUCTION SHALL BE PERFORMED IN ACCORDANCE WITH ALL LOCAL CODES AND SPECIFICATIONS.
2. THE CONTRACTOR SHALL PAY ALL FEES AND OBTAIN ALL PERMITS.
3. ALL EXISTING UNDERGROUND UTILITY LOCATIONS ARE APPROXIMATE AND ARE BASED ON TOPOGRAPHIC SURVEYS AND RECORD DRAWINGS FROM THE FACILITY. ADDITIONAL UTILITIES MAY BE PRESENT. SHOULD UNCHARTED UTILITIES BE ENCOUNTERED DURING EXCAVATION OPERATIONS, THE CONTRACTOR SHALL NOTIFY THE ENGINEER AS SOON AS POSSIBLE FOR INSTRUCTIONS.
4. THE CONTRACTOR SHALL NOTIFY THE TENNESSEE ONE-CALL SYSTEM, INC. (TOCS) AT 1-800-351-1111 OR 811 AND ANY NON-TOCS MEMBER UTILITY INDIVIDUALLY, AT LEAST 3 WORKING DAYS PRIOR TO ANY EXCAVATION AND/OR DEMOLITION. IT IS THE CONTRACTOR'S RESPONSIBILITY TO CONTACT THE LOCAL UTILITY COMPANY NO LESS THAN 72 HOURS PRIOR TO COMMENCING WORK.
5. MAINTAIN 10-FOOT HORIZONTAL AND 18-INCH VERTICAL SEPARATION BETWEEN SANITARY SEWER AND WATER SUPPLY LINES UNLESS NOTED OTHERWISE.
6. CONTRACTOR SHALL VERIFY THE EXACT LOCATION OF ALL EXISTING UTILITIES INCLUDING IRRIGATION. TAKE CARE TO PROTECT UTILITIES THAT ARE TO REMAIN. REPAIR DAMAGE ACCORDING TO LOCAL STANDARDS AND AT THE CONTRACTOR'S EXPENSE. COORDINATE ALL CONSTRUCTION WITH THE APPROPRIATE UTILITY COMPANY. RELOCATE IRRIGATION LINES AS NECESSARY FOR CONSTRUCTION.
7. THE CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING THE SEQUENCING OF CONSTRUCTION FOR ALL UTILITY LINES SO THAT WATER LINES AND UNDERGROUND ELECTRIC DO NOT CONFLICT WITH SANITARY SEWERS OR STORM SEWERS. INSTALL UTILITIES PRIOR TO FINAL PAVEMENT CONSTRUCTION.
8. BACKFILL UTILITY TRENCHES UNDER PAVEMENT AREAS WITH CRUSHED STONE OR GRAVEL. BACKFILL UTILITY TRENCHES IN LAWN AREAS WITH SATISFACTORY FILL MATERIAL COMPACTED TO AT LEAST 95% OF MAXIMUM PER ASTM D698.
9. ADJUST ALL EXISTING CASTINGS TO MATCH PROPOSED FINISH GRADE.
10. THRUST BLOCK ALL WATERLINE FITTINGS WITH CONCRETE (4,000 P.S.I. MINIMUM) POURED AGAINST UNDISTURBED EARTH TO SUSTAIN TEST PRESSURE SPECIFIED. FORM THRUST BLOCKING SO AS TO NOT EMBED JOINTS, BOLTS, VALVE BOXES, OR OPERATING NUTS.
11. PROVIDE VENTS AT HIGH POINTS IN WATERLINE AS NECESSARY FOR EXPELLING AIR DURING FILLING OF WATERLINE. PROVIDE BRONZE CORPORATION STOP FOR CLOSING VENT DURING TESTING AND SERVICE. LEAVE VENT COMPONENTS PLUGGED AND ATTACHED TO PIPE AFTER SUCCESSFUL TEST.
12. EXCESS MATERIAL SHALL BE DISPOSED OF BY THE CONTRACTOR OFF THE OWNER'S PROPERTY AT NO ADDITIONAL COST IN A LEGAL MANNER.
13. ALL SANITARY SEWER PIPE SHALL BE CLASS SDR 35 PVC UNLESS NOTED OTHERWISE.
14. ALL WATER MAINS SHALL BE PRESSURE C900 PVC UNLESS NOTED OTHERWISE.
15. ALL FIRE HYDRANT ASSEMBLIES SHALL BE INSTALLED BETWEEN 3' AND 7' FROM PAVED SURFACE.
16. PROVIDE AS-BUILT DRAWINGS WHICH INCLUDE AT LEAST TWO DIMENSIONS TO EACH VALVE AND MANHOLE FROM KNOWN SITE FEATURES. DRAWINGS SHALL INCLUDE VERTICAL AND HORIZONTAL INFORMATION ON ALL NEW UTILITIES AS WELL AS EXISTING UTILITIES ENCOUNTERED.

LAYOUT AND PAVING NOTES:

1. THE CONTRACTOR SHALL CHECK EXISTING GRADES, DIMENSIONS, AND INVERTS IN THE FIELD AND REPORT ANY DISCREPANCIES TO THE ENGINEER PRIOR TO BEGINNING WORK.
2. THE CONTRACTOR SHALL VERIFY THE EXACT LOCATION OF ALL EXISTING UTILITIES, INCLUDING IRRIGATION LINES. TAKE CARE TO PROTECT UTILITIES THAT ARE TO REMAIN, AND REPAIR CONTRACTOR CAUSED DAMAGE ACCORDING TO CURRENT LOCAL STANDARDS AND AT THE CONTRACTOR'S EXPENSE. COORDINATE ALL CONSTRUCTION WITH THE APPROPRIATE UTILITY COMPANY. RELOCATE IRRIGATION LINES AS NECESSARY FOR CONSTRUCTION.
3. THE CONTRACTOR SHALL COMPLY WITH ALL LOCAL CODES. OBTAIN ALL PERMITS, AND PAY ALL FEES PRIOR TO BEGINNING WORK.
4. PROVIDE A SMOOTH TRANSITION BETWEEN EXISTING PAVEMENT AND NEW PAVEMENT. FIELD ADJUSTMENT OF FINAL GRADES MAY BE NECESSARY. INSTALL ALL UTILITIES PRIOR TO INSTALLATION OF PAVEMENT.
5. THE CONTRACTOR SHALL PROTECT ALL TREES TO REMAIN, IN ACCORDANCE WITH THE SPECIFICATIONS. DO NOT OPERATE OR STORE HEAVY EQUIPMENT, NOR HANDLE, NOR STORE MATERIALS WITHIN THE DRIPLINES OF TREES OR OUTSIDE THE LIMIT OF GRADING.
6. CONCRETE WALKS AND PADS SHALL HAVE A BROOM FINISH. ALL CONCRETE SHALL BE 3,500 P.S.I. UNLESS OTHERWISE NOTED. CURB RAMPS, SIDEWALK SLOPES, AND DRIVEWAY RAMPS SHALL BE CONSTRUCTED IN ACCORDANCE WITH ALL CURRENT ADA & LOCAL REQUIREMENTS. IF APPLICABLE, THE CONTRACTOR SHALL REQUEST INSPECTION OF SIDEWALK AND RAMP FORMS PRIOR TO PLACEMENT OF CONCRETE.
7. ALL DAMAGE TO EXISTING ASPHALT PAVEMENT TO REMAIN WHICH RESULTS FROM NEW CONSTRUCTION SHALL BE REPLACED WITH LIKE MATERIALS AT CONTRACTOR'S EXPENSE.
8. DIMENSIONS ARE TO THE FACE OF CURB, EDGE OF CONCRETE, OR TO THE FACE OF BUILDING, UNLESS OTHERWISE NOTED.
9. COORDINATES ARE FOR FACE OF BUILDINGS, CENTER LINES OF DRIVEWAYS, CENTER OF SANITARY SEWER MANHOLES, AND CENTER AT FACE OF CURB ON CURB INLETS, UNLESS OTHERWISE NOTED.
10. EXCESS MATERIAL SHALL BE DISPOSED OF BY THE CONTRACTOR OFF THE OWNER'S PROPERTY AT NO ADDITIONAL COST IN A LEGAL MANNER.
11. MAINTAIN ONE SET OF APPROVED CONSTRUCTION DRAWINGS ON THE JOB SITE, WITH FIELD REVISIONS, FOR DISTRIBUTION TO THE ENGINEER UPON COMPLETION.
12. PARKING STRIPES SHALL BE 4-INCH WHITE PAVEMENT PAINT.
13. CONTRACTION JOINTS SHALL BE CONSTRUCTED TO A DEPTH OF AT LEAST 1/4 THE CONCRETE THICKNESS, AND SHALL DIVIDE THE CONCRETE ROUGHLY INTO SQUARES WITH MAXIMUM 10' SEGMENTS.
14. REFER TO THE MOST CURRENT ARCHITECTURAL PLANS FOR BUILDING LAYOUT AND DIMENSIONS

GRADING AND DRAINAGE NOTES:

1. TOPSOIL SHALL BE STRIPPED FROM ALL CUT AND FILL AREAS, STOCKPILED AND REDISTRIBUTED OVER GRADED AREAS TO A MINIMUM DEPTH OF 4 INCHES. MAKE STOCKPILES FREE DRAINING AND PROVIDE EROSION AND SEDIMENTATION CONTROLS AROUND STOCKPILES.
2. ALL GRADED AREAS SHALL BE SEEDED AND MULCHED WITHIN 14 DAYS AFTER GRADING IS COMPLETED.
3. CONSTRUCT TEMPORARY EROSION CONTROL AS SHOWN ON THE DRAWINGS PRIOR TO BEGINNING GRADING OPERATIONS
4. ALL DRAINAGE STRUCTURES, PIPES WITHIN THE LIMITS OF CONSTRUCTION, AND DETENTION PONDS SHALL HAVE SEDIMENT REMOVED PRIOR TO FINAL ACCEPTANCE.

EP&SC NOTES:

22. SEDIMENT THAT HAS ESCAPED THE CONSTRUCTION SITE AND HAS COLLECTED IN THE STREET OR DRAINAGE STRUCTURES MUST IMMEDIATELY BE PHYSICALLY REMOVED.
23. BUILDING AND WASTE MATERIALS, AND NON STORM WATER DISCHARGES, SUCH AS CONCRETE, PAINT WASH WATER, OR MACHINERY LEAKAGE, OR SPILLAGE MUST BE MANAGED TO PREVENT THEM FROM ENTERING THE STORM WATER SYSTEM, GROUND WATER, OR NEARBY WATER BODY.
24. ALL EPSCS HAVE BEEN DESIGNED TO CONTROL THE RAINFALL AND RUNOFF FROM A 5 YEAR, 24 HOUR STORM EVENT.
25. TEMPORARY SEEDING FOR TENNESSEE PROJECTS INCLUDE THE FOLLOWING OPTIONS:
    JAN 1 – MAY 1 ITALIAN RYE / KOREAN LESPEDEZA / SUMMER OATS
    MAY 1 – JULY 15 SUDAN OR SWAMP MILLET
    JULY 15 – JAN 1 BALBOA RYE / ITALIAN RYE
26. MULCHING SHALL CONSIST OF LOOSE HAY OR STRAW APPLIED AT THE RATE OF 2 TONS/ACRE.
27. UPON COMPLETION OF SITE STABILIZATION, THE OWNER AND CONTRACTOR SHALL PROVIDED A NOTICE OF TERMINATION (NOT) FOR THE PROJECT TO THE LOCAL ENVIRONMENTAL ASSISTANCE CENTER. A COPY OF THE NOT SHALL BE PROVIDED TO THE ENGINEER.
28. THE CONTRACTOR SHALL MAINTAIN RECORDS OF EROSION CONTROL INSPECTIONS AND REPAIRS FOR A MINIMUM OF 3 YEARS AFTER COMPLETION OF CONSTRUCTION.
29. TOPSOIL SHALL BE PLACED ON EXCAVATED AREAS WHICH REQUIRE NEW VEGETATION. GROUND COVER SHALL BE REESTABLISHED WITH KENTUCKY 31 FESCUE SEEDED AT A MINIMUM OF 250 LBS. PER ACRE WITHIN 72 HOURS OF FINAL GRADING. SLOPES 2:1 OR GREATER, AND AREAS INDICATED ON PLANS, SHALL BE LINED WITH NORTH AMERICAN GREEN S150 GRASS MATTING OR EQUAL. SOD MAY BE SUBSTITUTED FOR MATTING OR SEED & STRAW AREAS.
30. SILT FENCE SHALL BE INSTALLED IN ALL EROSION AREAS WHICH COULD ALLOW UNTREATED STORMWATER RUNOFF TO BE DISCHARGED FROM THE PROPERTY. ALL EROSION CONTROL MEASURES SHALL BE CONSISTENT WITH THE PROVISIONS DESCRIBED IN THE MOST CURRENT EDITION OF THE TENNESSEE EROSION & SEDIMENT CONTROL HANDBOOK.
31. SILT BARRIERS SHALL BE CLEANED OF ACCUMULATED SEDIMENT WHEN APPROXIMATELY 1/3 FILLED.
32. ALL LOCATIONS OF TEMPORARY EROSION CONTROL DEVICES SHALL BE SUBJECT TO ADJUSTMENT AS DIRECTED BY THE ENGINEER.
33. WHEN THE TEMPORARY EROSION CONTROL DEVICES ARE NO LONGER REQUIRED FOR THE INTENDED PURPOSE THEY SHALL BE REMOVED.
34. REPLACE DAMAGED AND WORN OUT SILT BARRIERS AS DIRECTED BY THE COUNTY/ENGINEER.
35. PROVIDE TEMPORARY SEEDING ON STOCKPILES AND ALL OTHER AREAS OF THE SITE THAT WILL REMAIN UNDISTURBED FOR 14 DAYS OR MORE.
36. I CERTIFY THAT THESE PLANS HAVE BEEN PREPARED BY ME AND/OR UNDER MY DIRECT SUPERVISION. THIS PROJECT IS PLANNED TO DISTURB MORE THAN ONE ACRE, IT THEREFORE FALLS UNDER THE TENNESSEE DIVISION OF WATER POLLUTION CONTROL'S GENERAL NPDES PERMIT TO DISCHARGE STORMWATER ASSOCIATED WITH CONSTRUCTION ACTIVITY. KLOBER ENGINEERING SERVICES WILL ASSIST THE CONTRACTOR IN SUBMITTING THE 'NOTICE OF INTENT (NOI) TO CONSTRUCT' TO THE STATE AT LEAST 30 DAYS PRIOR TO BEGINNING LAND DISTURBANCE. THE TN GENERAL CONSTRUCTION PERMIT IS TNR247950

KYLE A. SCHNEIDER, P.E., PROJECT ENGINEER

8/12/25
DATE

LANDSCAPE NOTES:

1. PLANT TYPES FOR ALL AREAS OTHER THAN THE BIORETENTION ARE AT THE DISCRETION OF THE OWNER. SEVERAL NATIVE VARIETY SHALL BE USED.
2. THE LANDSCAPE CONTRACTOR SHALL VERIFY THE LOCATION OF ALL UTILITIES AND TAKE PRECAUTIONS TO PREVENT DAMAGE TO THESE UTILITIES.
3. THE LANDSCAPE CONTRACTOR SHALL COORDINATE ALL CONSTRUCTION WITH THE APPROPRIATE UTILITY COMPANIES AND SHALL BE RESPONSIBLE FOR ALL DAMAGE TO UTILITIES.
4. ALL PLANTING BEDS OR MULCH BEDS SHALL BE SPRAYED WITH WEED-KILLER/HERBICIDE OR HAND WEEDED (CONTRACTOR'S OPTION) PRIOR TO THE INSTALLATION OF MULCH OR STONE COVER.
5. THE LANDSCAPE CONTRACTOR SHALL BE RESPONSIBLE FOR THE FINE GRADING OF ALL PLANTING AREAS. INSURE POSITIVE DRAINAGE OF LANDSCAPE BERMS.
6. ALL PLANTING AREAS SHALL BE FERTILIZED WITH 12 lbs./1000 S.F. OF 10-10-10 FERTILIZER.
7. ALL PLANTING BEDS SHALL HAVE A MINIMUM OF 3" DEPTH OF PINE BARK MULCH OR STONE IS SPECIFIED BY OWNER.
8. THE LANDSCAPE CONTRACTOR SHALL VERIFY ALL MATERIAL TYPES AND QUANTITIES WITH THE OWNER.
9. THE LANDSCAPE CONTRACTOR SHALL PROVIDE THE OWNER WITH WRITTEN INSTRUCTIONS ON THE PROPER CARE OF ALL SPECIFIED PLANT MATERIALS PRIOR TO FINAL PAYMENT.
10. ALL DISTURBED AREAS NOT SODDED SHALL BE SEEDED AND STRAWED.
11. INSTALL EROSION CONTROL MATTING ON ALL SLOPES GREATER THAN 3:1, DITCH LINE AND WHERE SHOWN ON THE STABILIZATION PLAN
12. GROUND COVER, WHEN USED, SHOULD EXTEND UNDER SHRUBS AND TREES.
13. NO TREES SHALL BE PLANTED WITHIN THE 40 FT. SIGHT TRIANGLE AT THE ENTRANCE. ALL SHRUBS MUST BE MAINTAINED AT A MAXIMUM HEIGHT OF 2 1/2'.
14. SPREADING SHRUB SPECIES SHALL BE 18 INCH MINIMUM SPREAD & 3 GAL. TRUNK.
15. STREET TREE CALIPERS SHALL BE 2 INCH MINIMUM.
16. ONLY GRADE "A" PLANT MATERIAL WILL BE ACCEPTED. INFERIOR/DAMAGED PLANT MATERIAL WILL BE REJECTED. ALL PLANT MATERIAL MUST COMPLY WITH CURRENT ANSI NURSERY STOCK STANDARDS.
17. VOID AREAS BETWEEN TREES AND SHRUBS MAY BE INTERSPERSED WITH PERENNIALS SUCH AS MARSH MILKWEED, SLENDER MOUNTAIN MINT, LYRE-LEAF SAGE, OR GRAY GOLDENROD.

LEGEND:

LEGEND NOTES:

1. SCALES OF HATCHING WILL VARY FROM LEGEND DUE TO SCALE OF SHEETS
2. LINE THICKNESS WILL VARY FROM SHEET TO SHEET. THICKER LINE WEIGHT IS USE TO EMPHASIZE THE MOST RELEVANT INFORMATION ON EACH SHEET.

CALL BEFORE YOU DIG

811 CALL 811 NATIONWIDE

KLOBER ENGINEERING SERVICES

KYLE A. SCHNEIDER, P.E. TN#121697

NOT FOR CONSTRUCTION

IGLESIA EBENEZER CHURCH

5649 LAKEVIEW ROAD
SPRINGFIELD, TN 37172
ROBERTSON COUNTY

DRAWN BY DRL
CHECKED BY KAS
PROJECT NO C05217

PROJECT NOTES

SHEET NUMBER NOTE

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SCALE IN FEET

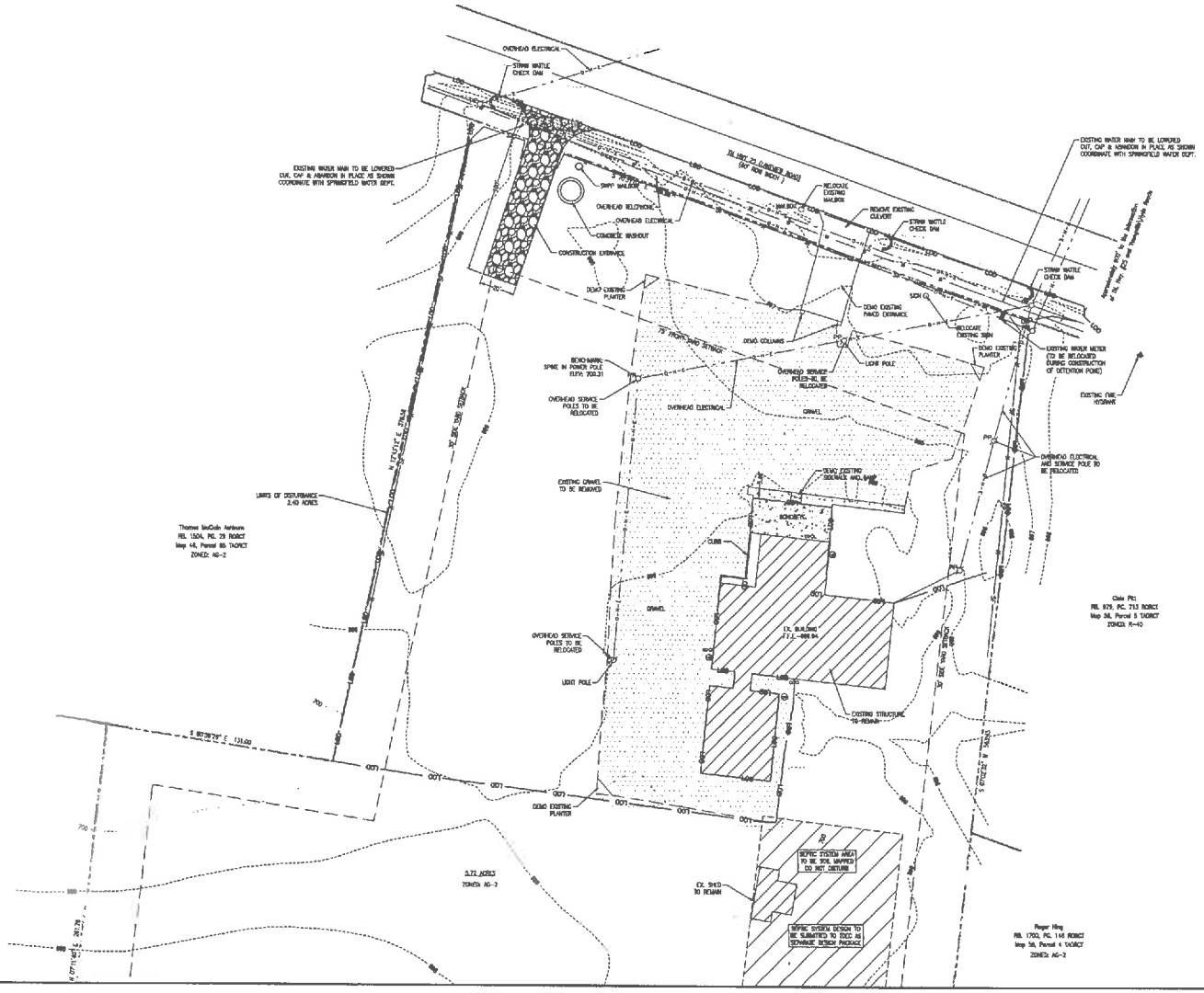
EROSION CONTROL CONSTRUCTION SEQUENCING

INITIAL PHASE

- CONTRACTOR & NECESSARY PROJECT REPRESENTATIVES TO ATTEND PRE-CONSTRUCTION MEETING WITH CITY REPRESENTATIVES
- INSTALL SWPPP BOX, CONSTRUCTION ENTRANCE, PERIMETER MEASURES, AND INLET PROTECTION ON EXISTING STRUCTURES
- INSTALL CONCRETE WASHOUT & OTHER REQUIRED EPSC CONTROLS ON SITE PRIOR TO AREA CLEARING & GRUBBING, SITE DEMOLITION, CULVERT INSTALLATION, OR ANY OTHER EARTHWORK EFFORTS OCCUR
- IF REQUIRED, EPSC MEASURES SHALL BE INSPECTED BY CITY OFFICIAL. ADDITIONAL EPSC MEASURES SHALL BE INSTALLED AT THE REQUEST OF CITY OFFICIALS
- ALL SLOPES 3:1 OR STEEPER TO BE STABILIZED WITHIN 7 DAYS

INTERMEDIATE PHASE

- MAINTAIN, ADJUST, & REPAIR ALL EPSC MEASURES FROM INITIAL PHASE
- CONSTRUCT REMAINING SITE ACCORDING TO APPROVED GRADING, UTILITY, AND EPSC PLANS
- PROPOSED STORM INLETS SHALL BE INSTALLED WITH INLET PROTECTION



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www.klober.com

NO	BY	DATE	DESCRIPTION

KYLE A. SCHNEIDER
REGISTERED ENGINEER
No. 121097
STATE OF TENNESSEE

KYLE A. SCHNEIDER, P.E. TN#121097

NOT FOR CONSTRUCTION

IGLESIA EBENEZER CHURCH

5649 LAKEVIEW ROAD
SPRINGFIELD TN 37172
ROBERTSON COUNTY

DRAWN BY	DRL
CHECKED BY	KAS
PROJECT NO	C05217

DEMO AND INITIAL EP&SC

SHEET NUMBER
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SIGHT DISTANCE NOTE:

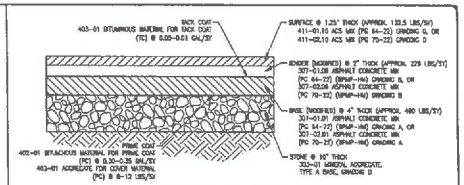
THIS SITE COMPLIES WITH THE AASHTO GREENBOOK INTERSECTION SITE DISTANCE.

TDOT DRAINAGE NOTE:

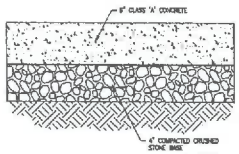
THIS DEVELOPMENT WILL NOT INCREASE STORMWATER RUNOFF OF THE EXISTING DITCH WITHIN THE STATE'S RIGHT OF WAY.

Q50 PRE: 16.88 CFS
Q50 POST: 14.08 CFS

Q100 PRE: 18.50 CFS
Q100 POST: 15.17 CFS



TDOT ASPHALT PAVING DETAIL (IN R.O.W.)
NOT TO SCALE



ALTERNATE TDOT CONCRETE ENTRANCE DETAIL (IN R.O.W.)
NOT TO SCALE

GENERAL SITE INFORMATION

PROPERTY INFORMATION:
ADDRESS: 5849 LAKEVIEW ROAD SPRINGFIELD, TN 37172
TAX MAP: 46
GROUP: 4/4
PARCEL NO: 66
TOTAL ACREAGE: 249,158 S.F. = 7.22 ACRES
CURRENT ZONING: AG-2, AGRICULTURAL/RESIDENTIAL DISTRICT

PROPERTY OWNER:
PROPERTY OWNER: ELIU MALDONADO
5849 LAKEVIEW ROAD
SPRINGFIELD, TN 37172

DEVELOPER: IGLESIA CRISTIANA EBEN-EZER ASAMBLEAS DE DIOS
5849 LAKEVIEW ROAD
SPRINGFIELD, TN 37172

PROJECT INFORMATION:
PROPOSED USE: CHURCH SANCTUARY
PROPOSED BUILDING AREA: 8,400 S.F.
MAX BUILDING HEIGHT: 35'-0"
PROP'D + DIST'D CONCRETE SURFACE: 63,324 S.F. = 0.27 AC.
PROPOSED IMPERVIOUS AREA: 175,328 S.F. = 1.68 AC.
PROPOSED LIMIT OF DISTURBANCE: 8101,258 S.F. = 2.90 AC

PARKING INFORMATION:
REQUIRED PARKING:
1/4 SEATS (CHURCH/SANCTUARY) = 432/4 = 108 SPACES

PROVIDED PARKING:
108 SPACES INCLUDING 5 ACCESSIBLE SPACE

SURVEY INFORMATION:
THE BOUNDARY & TOPOGRAPHIC SURVEY SHOWN HEREON WAS TAKEN FROM A SURVEY BY STEVEN C. ARTZ OF SPRINGFIELD, TN, DATED 07/06/2017

FLOOD INFORMATION:
ACCORDING TO MAP 47141C0210C, DATED 04/16/2008, THIS SITE IS NOT IN A FLOOD HAZARD AREA.

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			REVISIONS

KYLE A. SCHNEIDER, P.E. TN#121687

NOT FOR CONSTRUCTION

IGLESIA EBENEZER CHURCH

5849 LAKEVIEW ROAD
SPRINGFIELD, TN 37172
ROBERTSON COUNTY

DRAWN BY:	DRL
CHECKED BY:	KAS
PROJECT NO:	C65217

SITE LAYOUT

SHEET NUMBER
C1.02

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SIGHT DISTANCE NOTE:

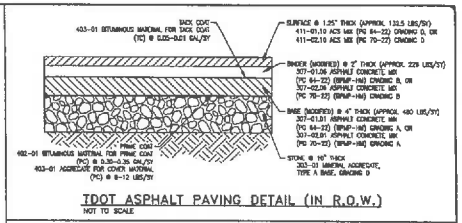
THIS SITE COMPLIES WITH THE AASHTO GREENBOOK INTERSECTION SITE DISTANCE.

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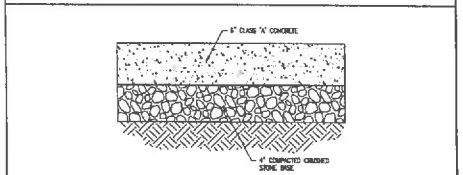
THIS DEVELOPMENT WILL NOT INCREASE STORMWATER RUNOFF OF THE EXISTING DITCH WITHIN THE STATE'S RIGHT OF WAY.

Q50 PRE: 14.06 CFS
Q50 POST: 14.06 CFS

Q100 PRE: 19.50 CFS
Q100 POST: 19.17 CFS



TDOT ASPHALT PAVING DETAIL (IN R.O.W.)
NOT TO SCALE



ALTERNATE TDOT CONCRETE ENTRANCE DETAIL (IN R.O.W.)
NOT TO SCALE

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IGLESIA EBENEZER CHURCH

5681 LAKEVIEW ROAD
SPRINGFIELD, TN 37172
ROBERTSON COUNTY

DRAWN BY	DRL
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PROJECT NO	C05217

GRADING PLAN

SHEET NUMBER
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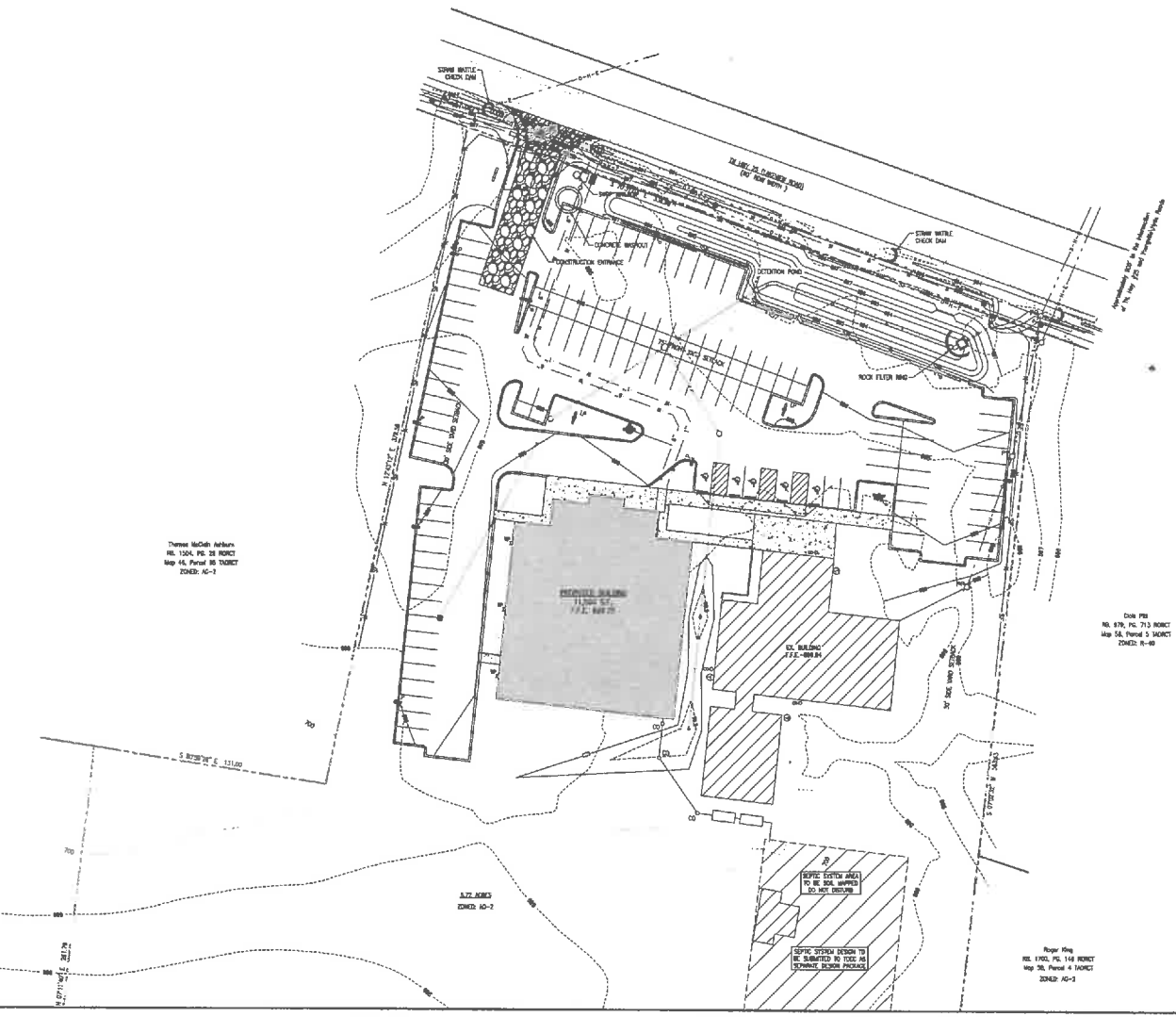
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IGLESIA EBENEZER CHURCH

5691 ANDOVIEW ROAD
SPRINGFIELD, TN 37172
ROBERTSON COUNTY

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PROJECT NO.:	C05217

INTERMEDIATE EPSC

SHEET NUMBER
C1.04

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SCALE IN FEET

SIGHT DISTANCE NOTE:

THIS SITE COMPLIES WITH THE AASHTO CREEKBOOK INTERSECTION SITE DISTANCE.

TDOT DRAINAGE NOTE:

THIS DEVELOPMENT WILL NOT INCREASE STORMWATER RUNOFF OF THE EXISTING DITCH WITHIN THE STATE'S RIGHT OF WAY.

Q50 PRE: 18.88 CFS
Q50 POST: 14.06 CFS

Q100 PRE: 19.39 CFS
Q100 POST: 15.17 CFS



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IGLESIA EBENEZER CHURCH

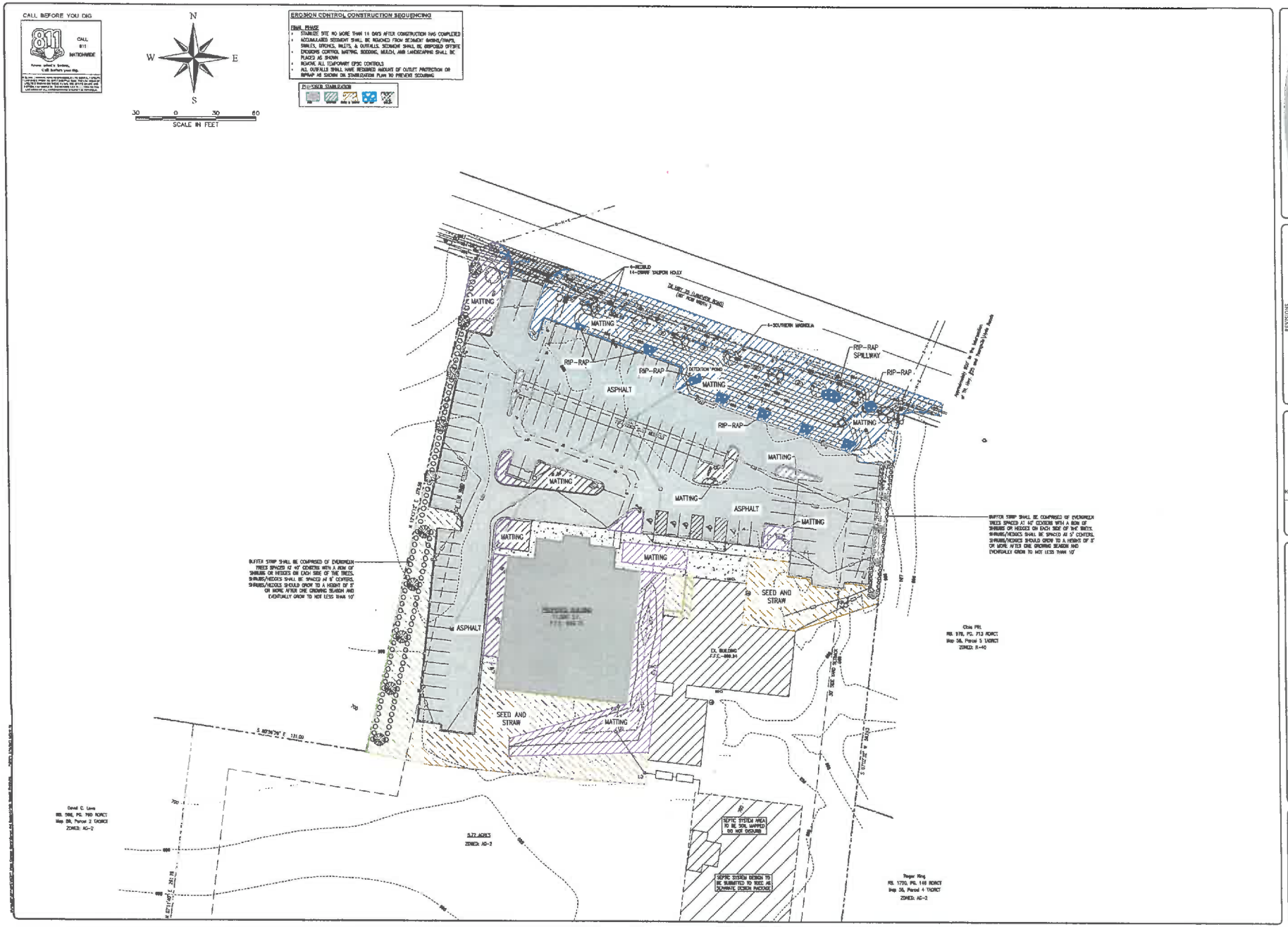
5496 LAUDERDALE ROAD
STRAWBERRY PLAINS, TN 37871
ROBERTSON COUNTY

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CHECKED BY:	KAS
PROJECT NO:	C05217

DRAINAGE PLAN

SHEET NUMBER
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IGLESIA EBENEZER CHURCH

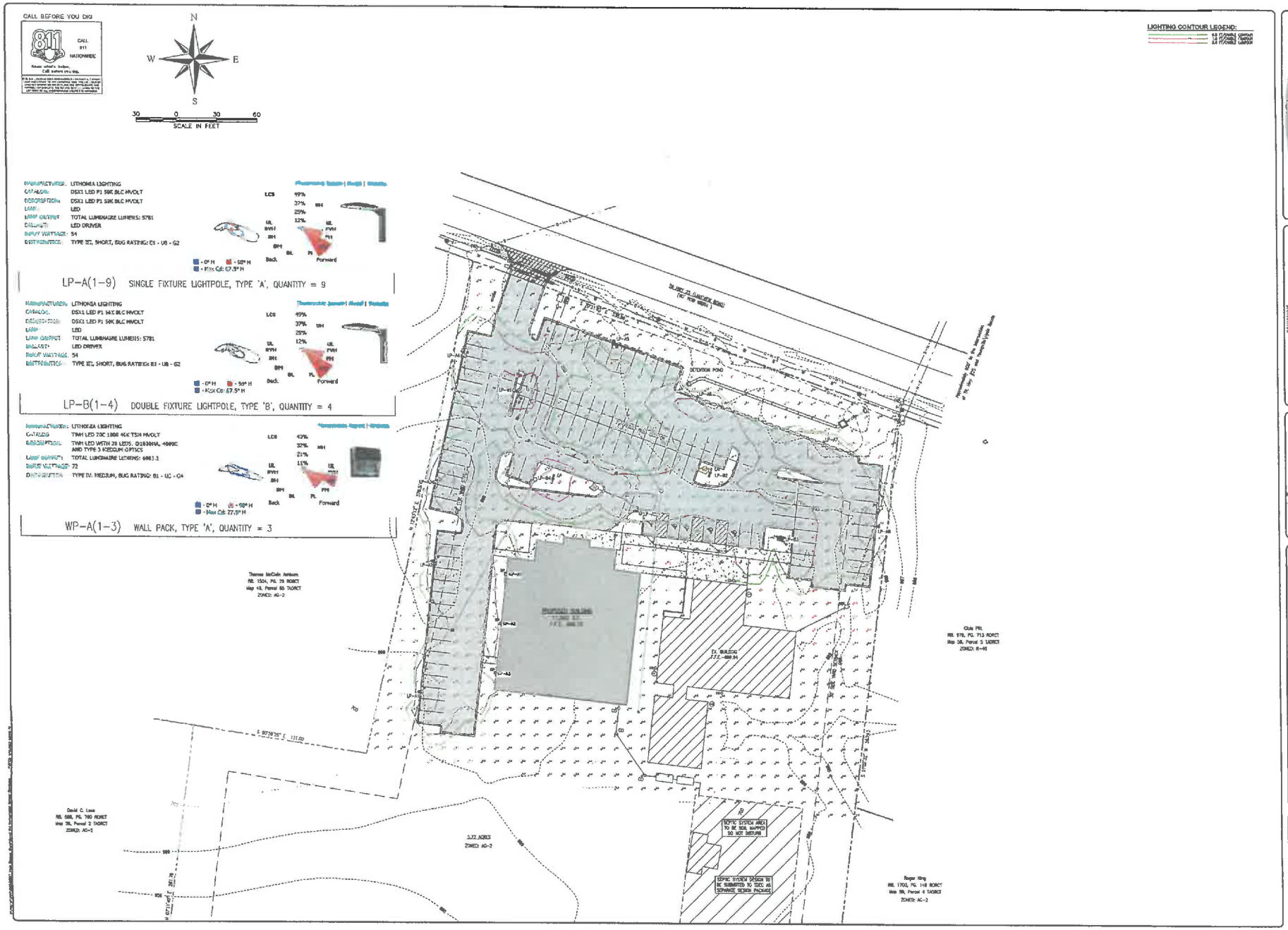
5661 LAKESTOW ROAD
SPRINGFIELD, TN 37172
ROBERTSON COUNTY

DRAWN BY	DRL
CHECKED BY	KAS
PROJECT NO.	005217

FINAL STABILIZATION

SHEET NUMBER
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KLOBER ENGINEERING SERVICES

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NO	BY	DATE	DESCRIPTION

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IGLESIA EBENEZER CHURCH

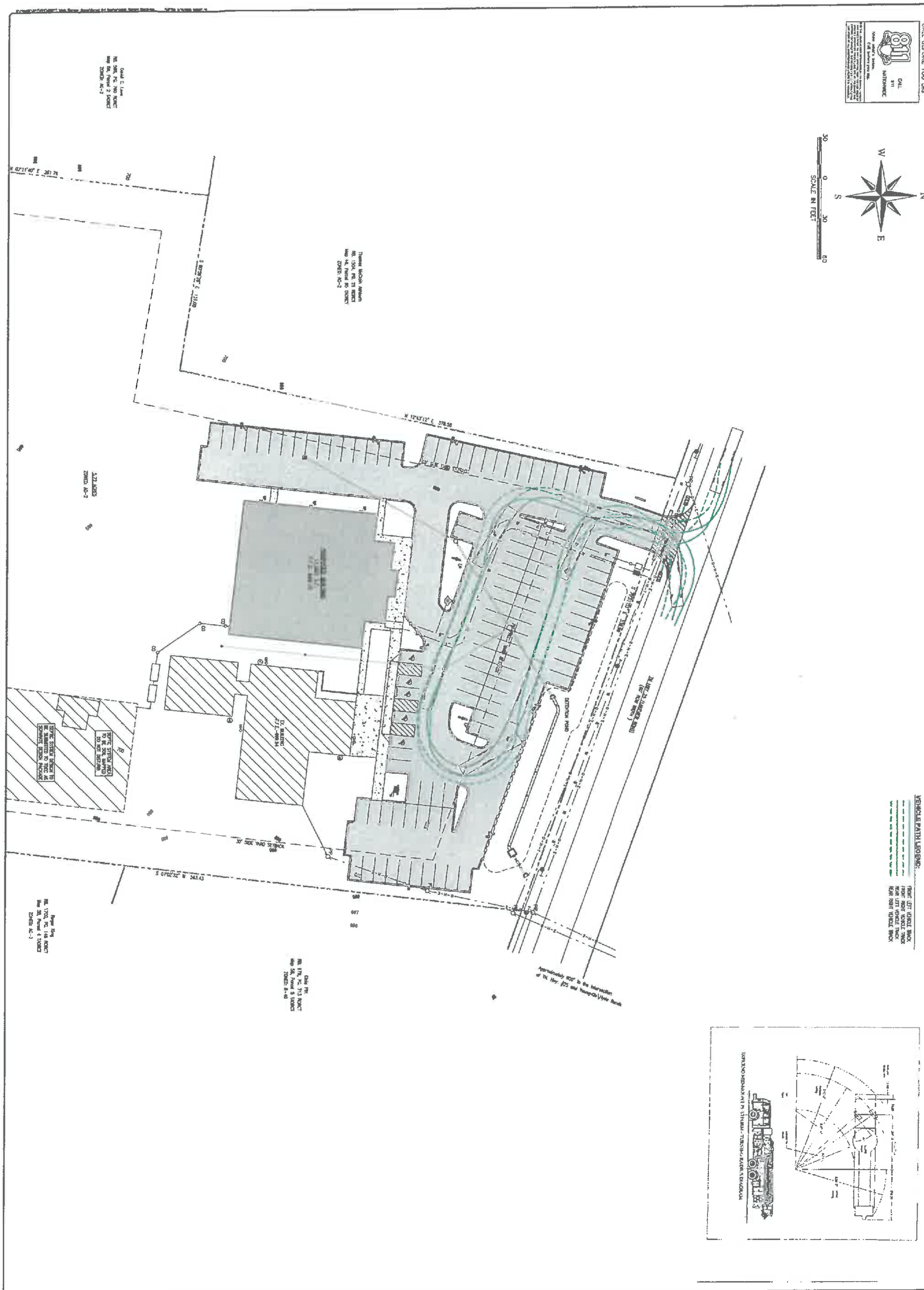
5649 LAKEVIEW ROAD
SPRINGFIELD, TN 37172
ROBERTSON COUNTY

DRAWN BY	DRL
CHECKED BY	KAS
PROJECT NO.	C01217

PHOTOMETRIC PLAN

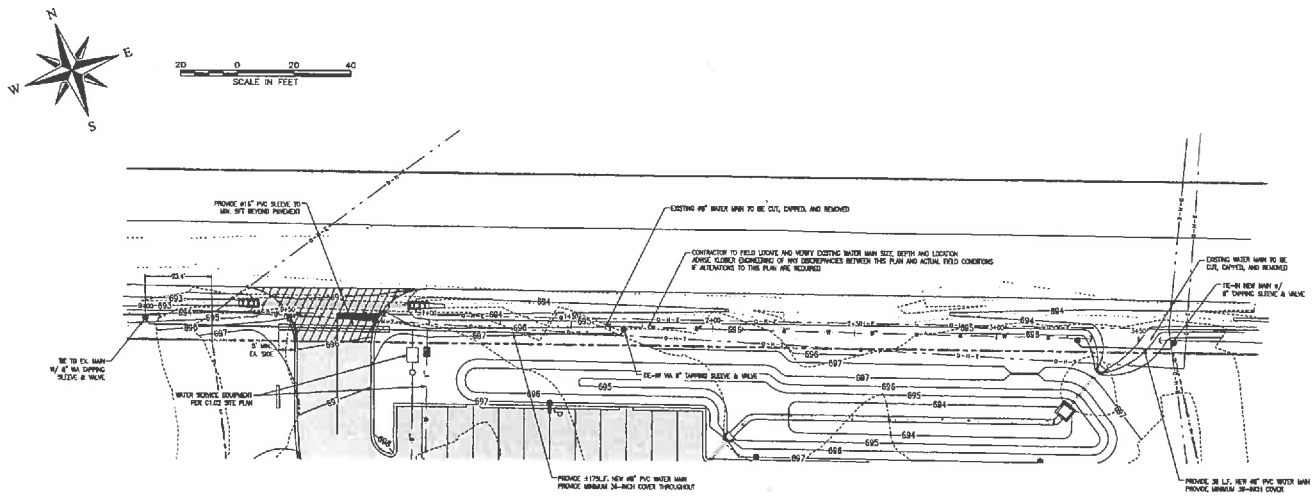
SHEET NUMBER
C1.07

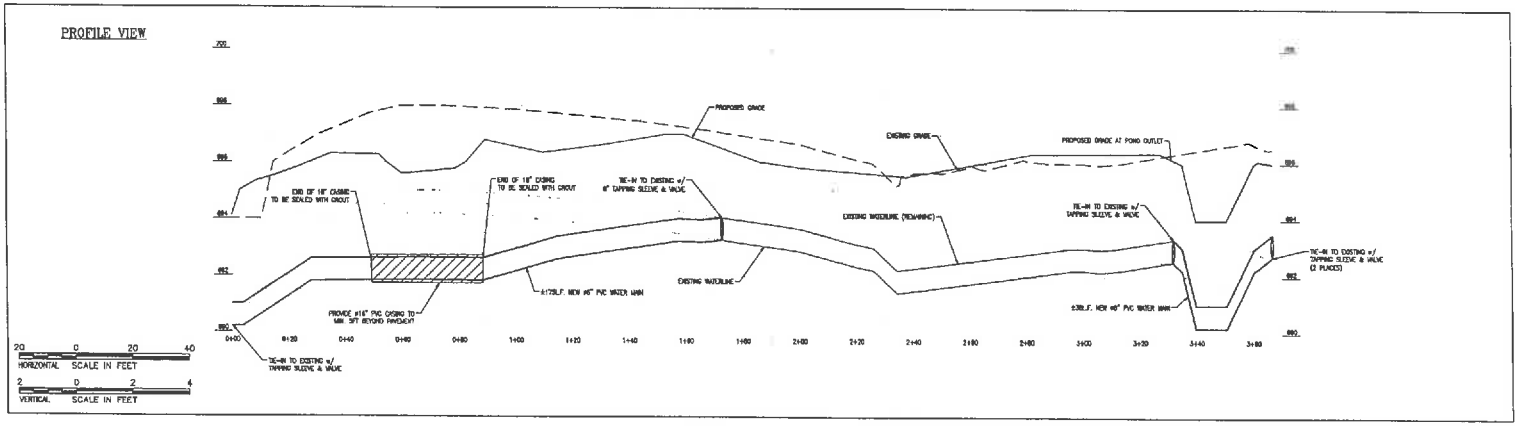
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FIRE TRUCK ACCESS PLAN	IGLESIA EBENEZER CHURCH	NOT FOR CONSTRUCTION	REVISIONS	KLOBER ENGINEERING SERVICES
DRAWN BY: DRL CHECKED BY: KAS PROJECT NO: C05217 SHEET NUMBER: C1.08	5649 LAKEVIEW ROAD SPRINGFIELD TN 37172 ROBERTSON COUNTY	KYLE A. SCHNEIDER, P.E. TN#121867	NO. / BY / DATE / DESCRIPTION	SERVING CLIENTS WITH CIVIL AND ENVIRONMENTAL ENGINEERING SERVICES 3668 TOM AUSTIN HWY, SUITE 1, SPRINGFIELD, TN 37172 PHONE (615) 382-2000 FAX (888) 373-4485 www.klobereng.com

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www.kloberenvg.com

NO	BY	DATE	DESCRIPTION

KYLE A. SCHNEIDER, P.E. TN#121867

NOT FOR CONSTRUCTION

IGLESIA EBENEZER CHURCH

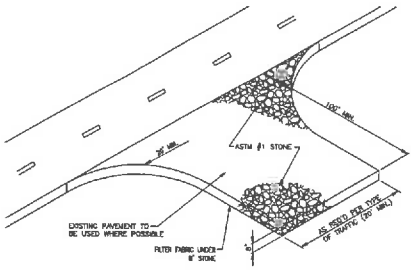
5660 LAKEVIEW ROAD
SPRINGFIELD TN 37172
ROBERTSON COUNTY

DRAWN BY:	DRL
CHECKED BY:	KAS
PROJECT NO.:	C05217

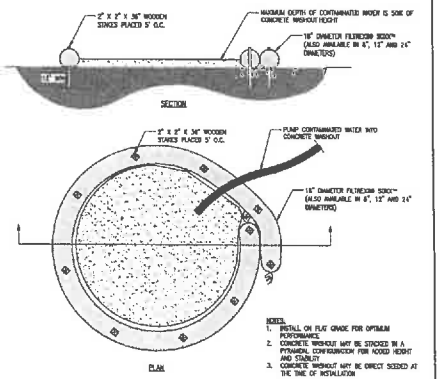
WATER MAIN LOWERING

SHEET NUMBER
C1.09

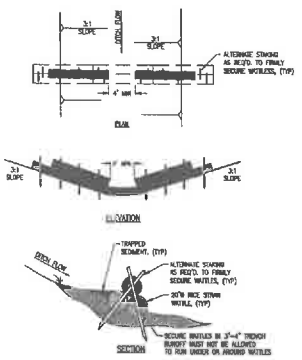
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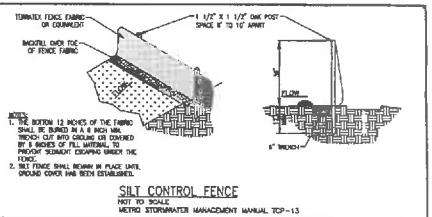
TEMPORARY CONSTRUCTION ENTRANCE DETAIL
NOT TO SCALE METRO STORMWATER MANAGEMENT MANUAL TCP-03



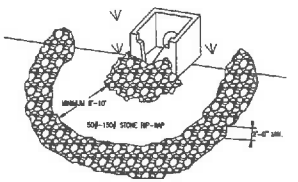
FILTREXX® CONCRETE WASHOUT
NOT TO SCALE



STRAW FILTER CHECK DAM
NOT TO SCALE



SILT CONTROL FENCE
NOT TO SCALE
METRO STORMWATER MANAGEMENT MANUAL TCP-13



FILTER RING
NOT TO SCALE

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www.klobereng.com

NO	BY	DATE	DESCRIPTION
			REVISIONS

KYLE A. SCHNEIDER, P.E. TN#121687

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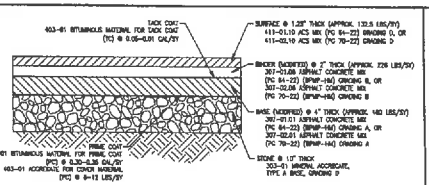
IGLESIA EBENEZER CHURCH
5660 LASETER VIEW ROAD
SPRINGFIELD TN 37172
ROBERTSON COUNTY

DRAWN BY	DRL
CHECKED BY	KAS
PROJECT NO	L033217

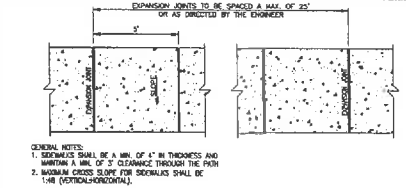
CONSTRUCTION DETAILS

SHEET NUMBER
C2.01

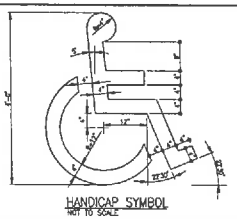
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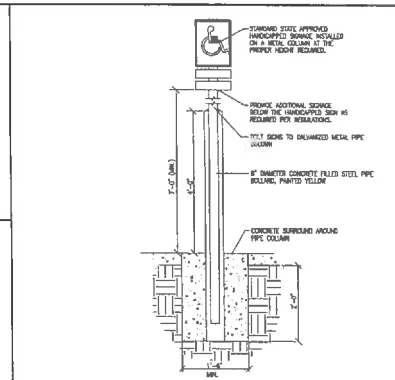
TDOT ASPHALT PAVING DETAIL (IN R.O.W.)
NOT TO SCALE



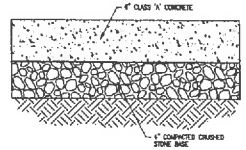
TYPICAL CONCRETE SIDEWALK
NOT TO SCALE



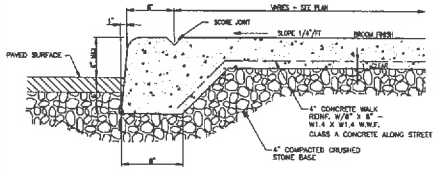
HANDICAP SYMBOL
NOT TO SCALE



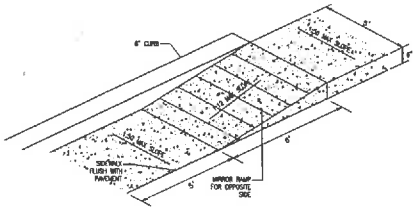
EXTERIOR HANDICAPPED SIGN
NOT TO SCALE



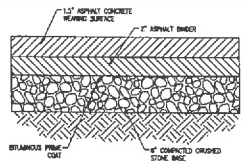
ALTERNATE TDOT CONCRETE ENTRANCE DETAIL (IN R.O.W.)
NOT TO SCALE



CONCRETE SIDEWALK & HAUNCHED CURB
NOT TO SCALE

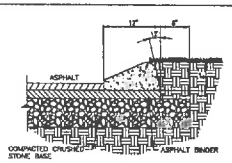


HANDICAP RAMP
NOT TO SCALE

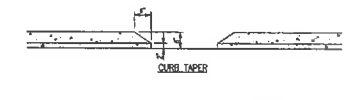


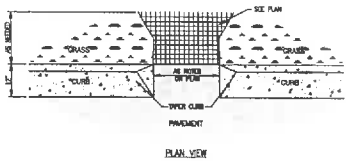
LIGHT DUTY ASPHALT PAVING DETAIL
NOT TO SCALE

VERIFY PAVEMENT AND STONE THICKNESS WITH ANY CURRENT GEOTECH REPORTS



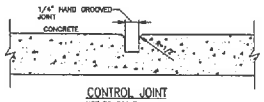
EXTRUDED CURB DETAIL
NOT TO SCALE



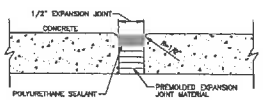


PLAN VIEW

TYPICAL CURB CUT
NOT TO SCALE



CONTROL JOINT
NOT TO SCALE



EXPANSION JOINT
NOT TO SCALE

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NO	BY	DATE	DESCRIPTION

KYLE A. SCHNEIDER, P.E. TN#121997

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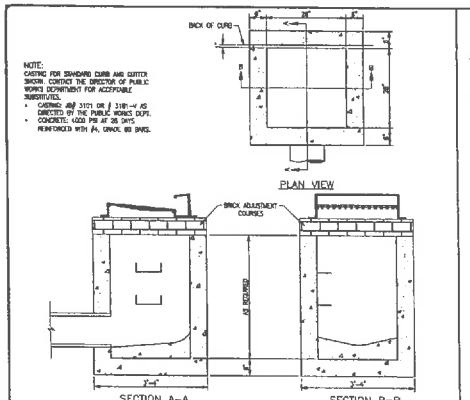
IGLESIA EBENEZER CHURCH
5681 LAKEVIEW ROAD
SPRINGFIELD, TN 37172
ROBERTSON COUNTY

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CHECKED BY	KAS
PROJECT NO	C05317

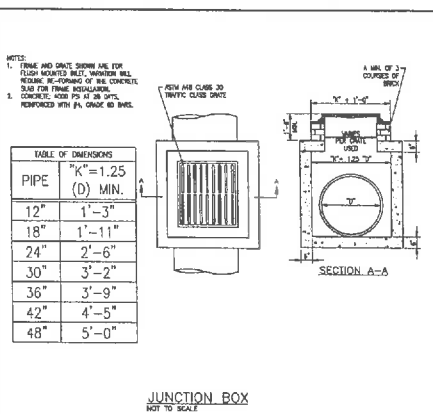
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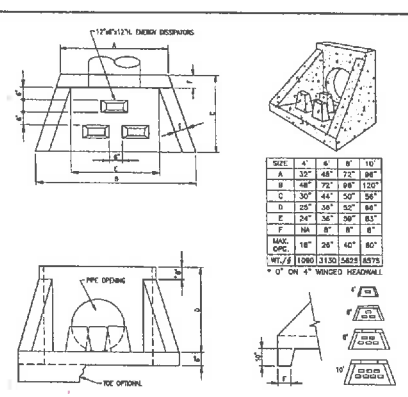
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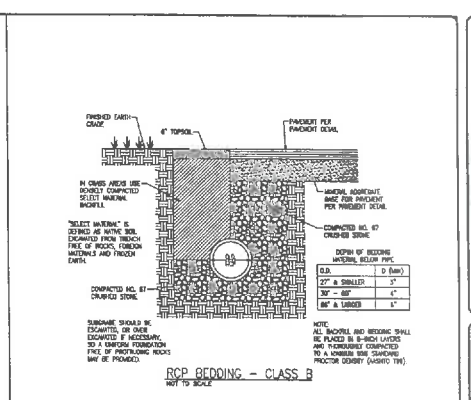
TYPICAL PRECAST SINGLE INLET
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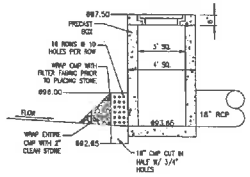
JUNCTION BOX
NOT TO SCALE



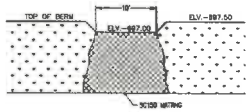
WINGED HEADWALL W/ENERGY DISSIPATORS
NOT TO SCALE
CLOUD SW-301 OR EQUAL



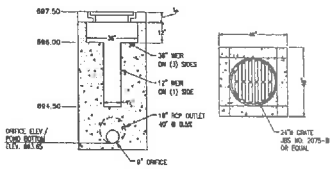
RCP BEDDING - CLASS B
NOT TO SCALE



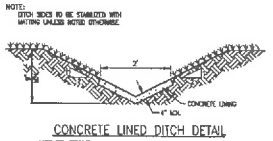
POND OUTLET PROTECTION
NOT TO SCALE



SPILLWAY DETAIL
NOT TO SCALE



POND DISCHARGE STRUCTURE
NOT TO SCALE



CONCRETE LINED DITCH DETAIL
NOT TO SCALE

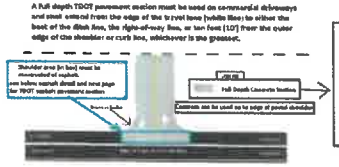
(Entrance Permit Checklist Page 4 of 6)

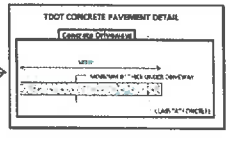
TO ENGINEERS DESIGNING PLANS: PLEASE SHADE AREA ON PLANS WHERE THE FULL DEPTH PAVEMENT SECTION IS LOCATED. PLEASE INCUDE APPROPRIATE TDOT PAVEMENT DETAIL ON ALL DRIVEWAY PLANS (SEE BELOW)

PLEASE NOTE ON CURB AND GUTTER SECTIONS, THE SHOULDER OF THE ROADWAY IS TYPICALLY FULL DEPTH PAVEMENT, SO REINFORCEMENT OF THE SHOULDER IS NOT NECESSARY. PLEASE USE TDOT STANDARD DRAWINGS RP-D-13 or RP-D-16 WHEN CONSTRUCTING DRIVEWAYS IN CURB AND GUTTER SECTIONS. A FULL DEPTH TDOT PAVEMENT SECTION MUST BE USED FROM THE CURB TO EITHER THE BACK OF THE DITCH LINE, THE RIGHT-OF-WAY LINE, OR TEN FEET (10') FROM THE OUTER EDGE OF THE SHOULDER OR CURB LINE, WHICHEVER IS THE GREATEST.

CONCRETE DRIVEWAY IN SHOULDER SECTION

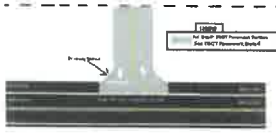
A full depth TDOT pavement section must be used on commercial driveways and shall extend from the edge of the travel lane (white line) to either the back of the ditch line, the right-of-way line, or ten feet (10') from the outer edge of the shoulder or curb line, whichever is the greatest.

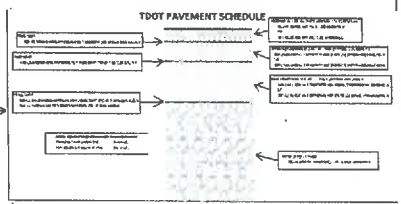




ASPHALT DRIVEWAY IN SHOULDER SECTION

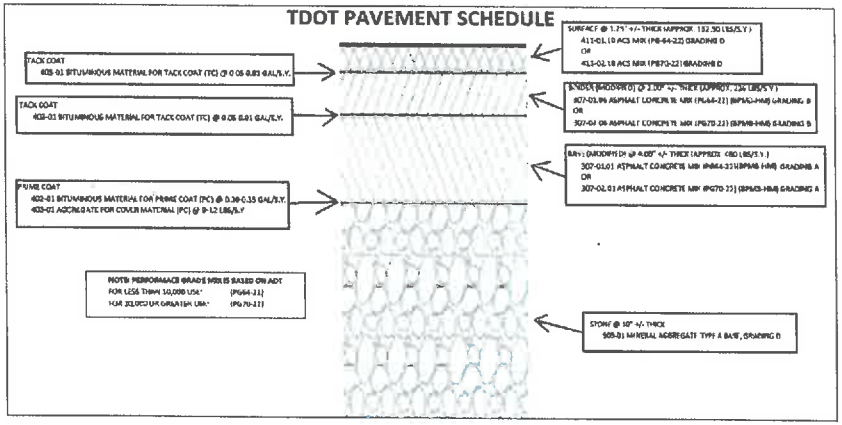
A full depth TDOT pavement section must be used on commercial driveways and shall extend from the edge of the travel lane (white line) to either the back of the ditch line, the right-of-way line, or ten feet (10') from the outer edge of the shoulder or curb line, whichever is the greatest.





Enlarged Pavement Schedule included on next page

(Entrance Permit Checklist Page 5 of 6)



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KYLE A. SCHNEIDER, P.E. TN#121867

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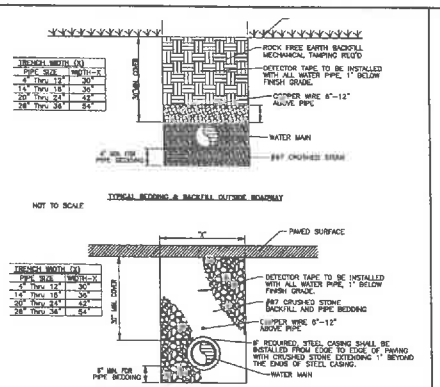
IGLESIA EBENEZER CHURCH
5691 LAUDERDALE ROAD
SPRINGFIELD, TN 37172
ROBERTSON COUNTY

DRAWN BY	DRL
CHECKED BY	KAS
PROJECT NO	055217

CONSTRUCTION DETAILS

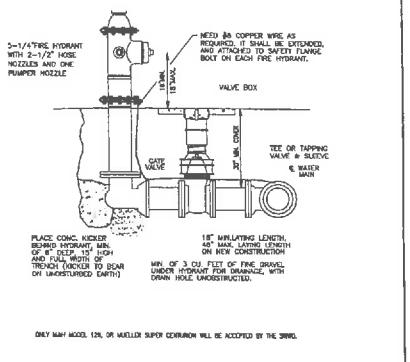
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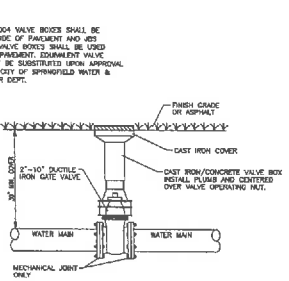


TYPICAL BEDDING & BACKFILL OUTSIDE ROADWAY
NOT TO SCALE

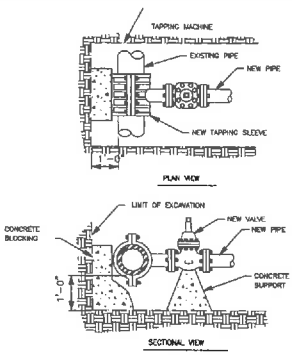
TYPICAL BEDDING & BACKFILL IN ROADWAY
NOT TO SCALE



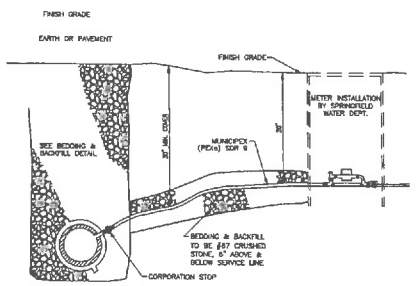
TYPICAL FIRE HYDRANT
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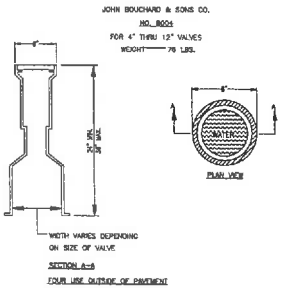
TYPICAL GATE VALVE DETAIL
NOT TO SCALE



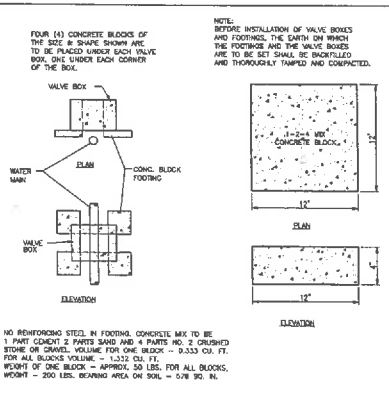
TAPPING SLEEVE AND VALVE
NOT TO SCALE



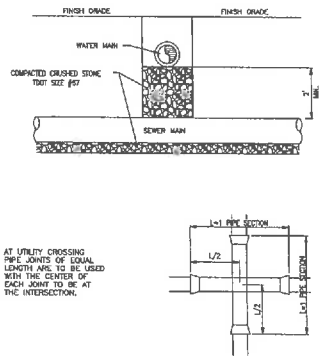
TYPICAL SERVICE CONNECTION
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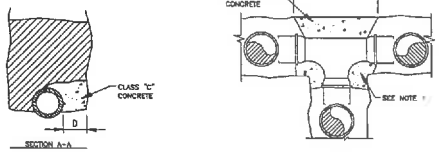
TYPICAL VALVE BOX
NOT TO SCALE



CONCRETE VALVE BOX FOOTING FOR
NOT TO SCALE — JOG NO. 8008 OR EQUAL



TYPICAL UTILITY CROSSING
NOT TO SCALE



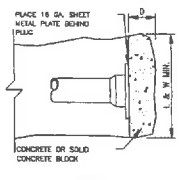
NOTE 1:
RESTRAINED JOINTS REQUIRED; CONCRETE THRUST BLOCKS MAY BE USED IN ADDITION TO RESTRAINED JOINTS, PER 3.3.1 AND 3.3.2.

NOTE 2:
FELT PAPER OR PLASTIC SHEET SHALL BE INSTALLED AROUND TEE BEFORE KICKER IS POURED TO PROTECT HARDWARE.

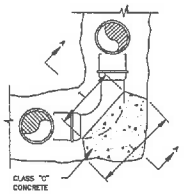
PLUGS & TEES							
SIZE	2"	3"	4"	6"	8"	10"	12"
D	6"	6"	8"	8"	8"	8"	8"
L&W	14"	18"	18"	20"	22"	24"	24"

(45) EIGHTH BENDS							
SIZE	2"	3"	4"	6"	8"	10"	12"
D	6"	6"	8"	6"	8"	8"	8"
L	12"	14"	18"	18"	20"	22"	24"
T	10"	12"	14"	16"	16"	18"	18"

(90) QUARTER BENDS							
SIZE	2"	3"	4"	6"	8"	10"	12"
D	8"	8"	8"	8"	10"	12"	12"
L	15"	18"	21"	24"	27"	30"	34"
T	10"	12"	14"	18"	18"	20"	22"



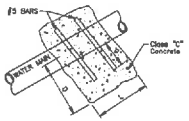
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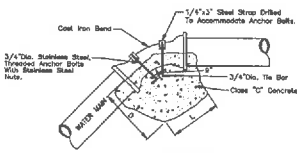


45° & 90° BENDS

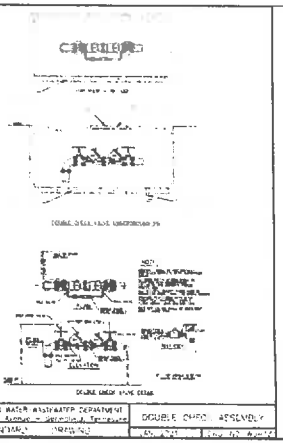
VERTICAL BEND & STRAIGHT PIPE							
SIZE	2"	3"	4"	6"	8"	10"	12"
"D"	10"	12"	12"	15"	15"	18"	18"
"L"	12"	18"	18"	24"	24"	30"	30"

NOTE: Anchors To Be Full Width Of Trench. Anchors Must Be Placed Against Undisturbed Earth.





TYPICAL CONCRETE ANCHOR BLOCK
NOT TO SCALE



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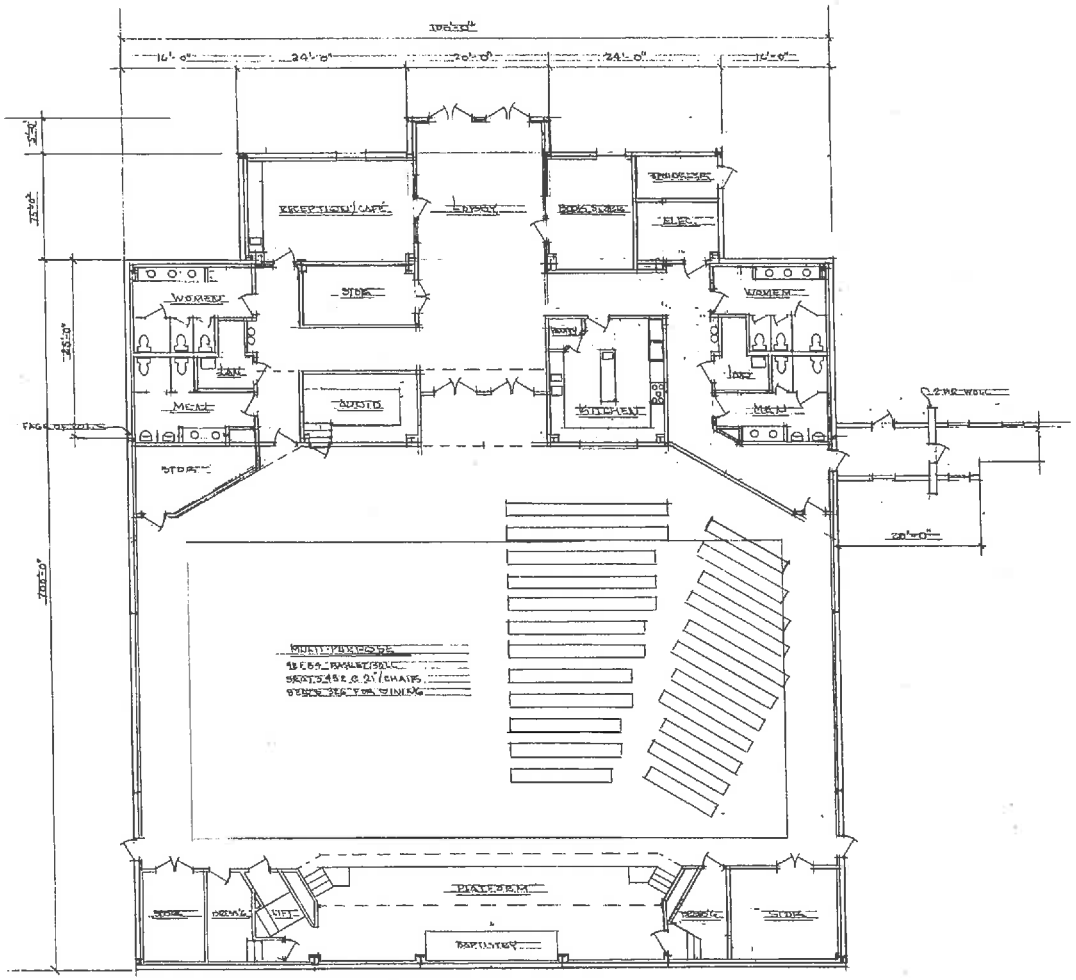
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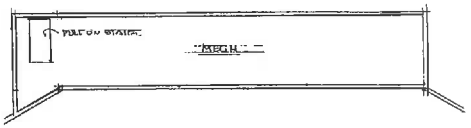
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CHECKED BY	KAS
PROJECT NO.	C05217

SHEET NUMBER
C2.04

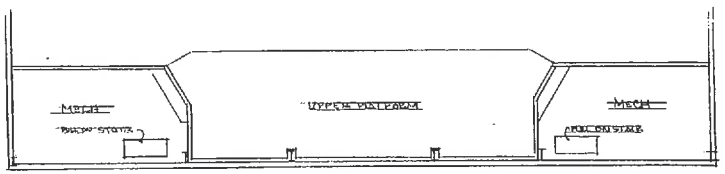
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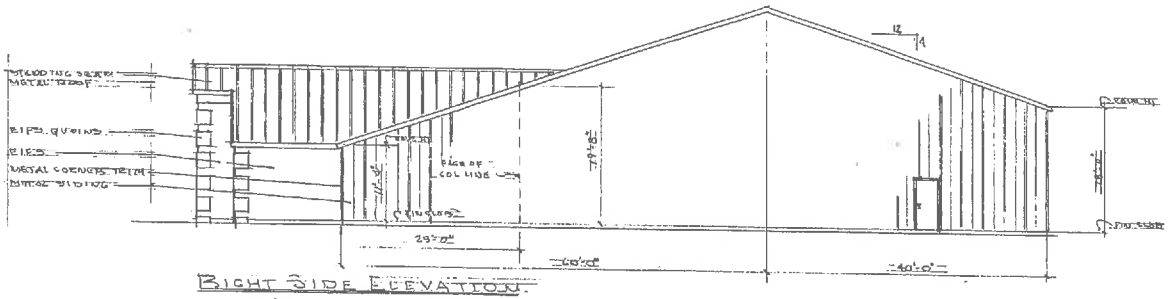
MAIN FLOOR PLAN



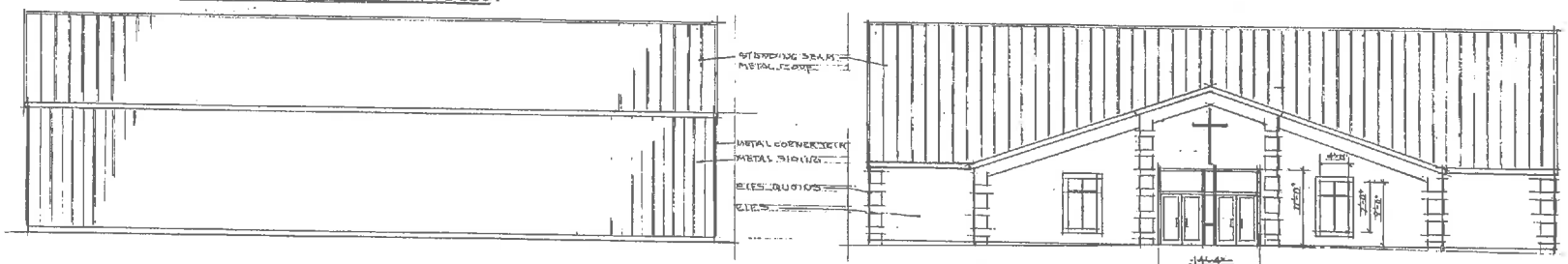
MECH. LOFT PLAN



MECHANICAL LOFT PLAN

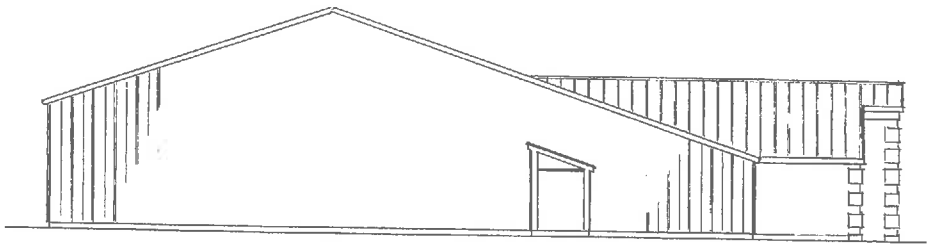


RIGHT SIDE ELEVATION



REAR ELEVATION

FRONT ELEVATION



LEFT SIDE ELEVATION

SCALE: 1/8" = 1'-0"

STORMWATER DESIGN CALCULATIONS

FOR

IGLESIA EBENEZER CHURCH

5649 LAKEVIEW RD
SPRINGFIELD, TN 37172

July 3, 2025



Prepared By

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STORM WATER CALCULATIONS

NOTE: Storm water runoff is calculated using the TR-55 Method. All flow calculations are based on methods established in the Nashville / Davidson County Stormwater Management Manual.

The following pages contain calculations for the storm water drainage system.

Stormwater Detention

As seen on DM-1, the current site conditions convey runoff to an existing outfall located at the north side of the development. The existing outfall drains north via unnamed tributaries towards Valley Branch. The post developed site was analyzed by conveying a majority of the site runoff to a detention pond on the north side of the site and will be discharged at the existing outfall point. The detention pond will utilize a standard pond discharge box with multiple weirs.

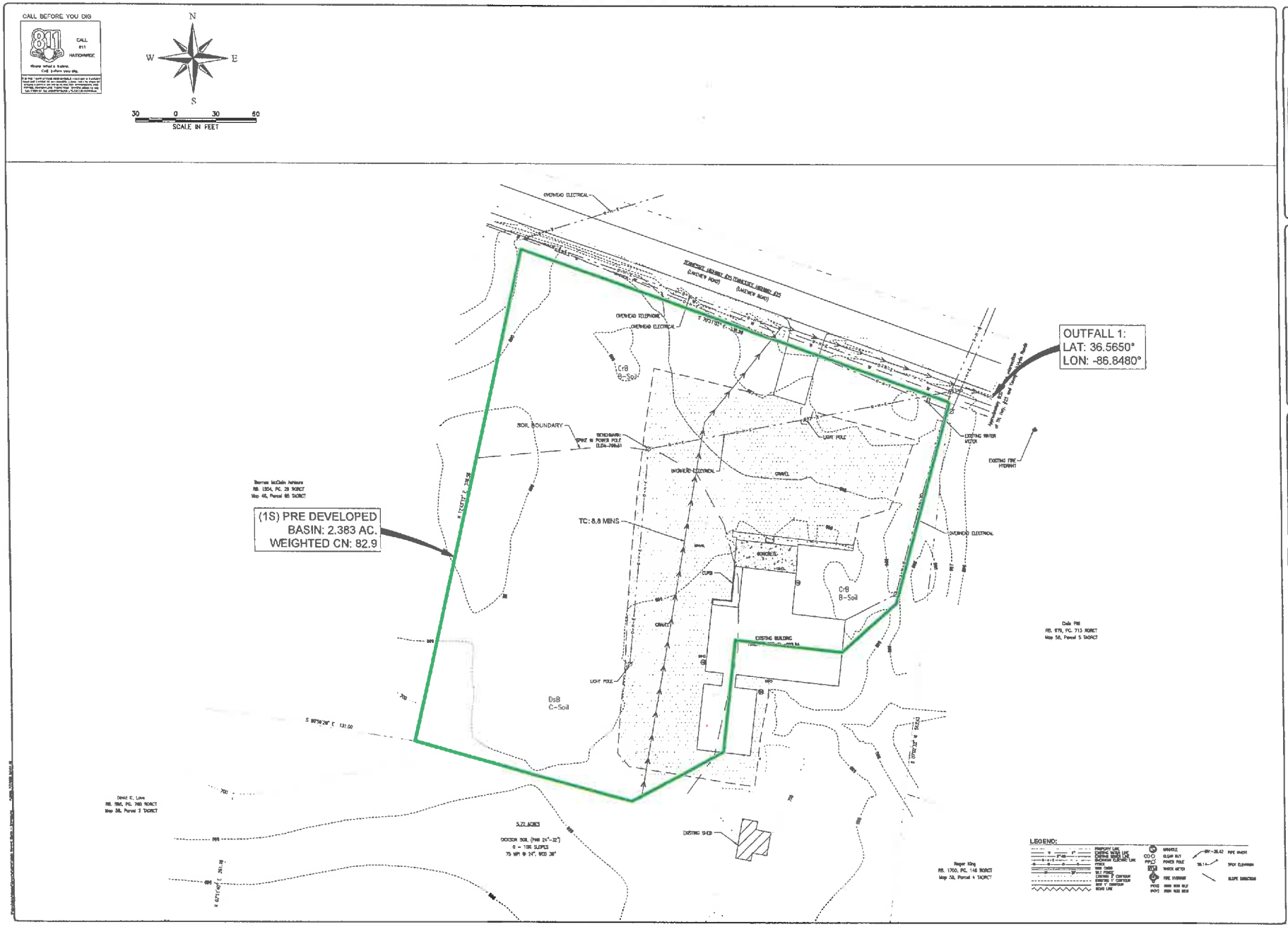
The following tables illustrate storm water runoff data for all drainage basins. The discharge from the pond and the portions that bypass the pond will be below predeveloped conditions.

Table 1

Storm Event	1S: Pre-Dev Runoff (cfs)	2S: Post-Dev to Pond (cfs)	1P: Pond Discharge	Pond Elev (Top: 697.50)	1P: Pond Bypass (cfs)	1R: Total Post-Dev Discharge (cfs)
2 yr.	7.18	9.28	5.81	695.65	0.67	6.35
5 yr.	9.63	11.66	7.07	695.95	1.00	7.80
10 yr.	11.69	13.63	9.12	696.14	1.29	10.12
25 yr.	14.61	16.39	11.71	696.35	1.72	13.05
50 yr.	16.99	18.62	12.33	696.55	2.08	14.06
100 yr.	19.50	20.96	13.14	696.78	2.47	15.17

Table 1: Total Drainage Basin Calculation Results

PRE-DEVELOPED



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ROBERTSON COUNTY

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CHECKED BY	JML
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PRE DRAINAGE MAP

SHEET NUMBER
DM-1

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Pre Developed

Subcat Reach Pond Link

Routing Diagram for Drainage - Updated
Prepared by Klober Engineering, Printed 7/3/2025
HydroCAD® 10.20-2h s/n 09895 © 2024 HydroCAD Software Solutions LLC

Summary for Subcatchment 1S: Pre Developed

Runoff = 7.18 cfs @ 12.00 hrs, Volume= 0.348 af, Depth> 1.75"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type II 24-hr 2-Year Rainfall=3.56"

	Area (ac)	CN	Description
	0.122	98.0	Roofs, HSG B
*	0.053	98.0	Concrete Sidewalks
	0.749	96.0	Gravel surface, HSG B
	0.666	69.0	50-75% Grass cover, Fair, HSG B
	0.793	79.0	50-75% Grass cover, Fair, HSG C
	2.383	82.9	Weighted Average
	2.208		92.66% Pervious Area
	0.175		7.34% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
3.6	290	0.0069	1.34		**Shallow Concentrated Flow,** Unpaved Kv= 16.1 fps
0.3	35	0.0143	1.93		**Shallow Concentrated Flow,** Unpaved Kv= 16.1 fps
4.0	60	0.0583	0.25		**Sheet Flow,** Grass: Short n= 0.150 P2= 3.56"
0.9	165	0.0418	3.07		**Shallow Concentrated Flow,** Grassed Waterway Kv= 15.0 fps
8.8	550	Total			

Summary for Subcatchment 1S: Pre Developed

Runoff = 9.63 cfs @ 12.00 hrs, Volume= 0.472 af, Depth> 2.38"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type II 24-hr 5-Year Rainfall=4.33"

	Area (ac)	CN	Description
	0.122	98.0	Roofs, HSG B
*	0.053	98.0	Concrete Sidewalks
	0.749	96.0	Gravel surface, HSG B
	0.666	69.0	50-75% Grass cover, Fair, HSG B
	0.793	79.0	50-75% Grass cover, Fair, HSG C
	2.383	82.9	Weighted Average
	2.208		92.66% Pervious Area
	0.175		7.34% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
3.6	290	0.0069	1.34		**Shallow Concentrated Flow,** Unpaved Kv= 16.1 fps
0.3	35	0.0143	1.93		**Shallow Concentrated Flow,** Unpaved Kv= 16.1 fps
4.0	60	0.0583	0.25		**Sheet Flow,** Grass: Short n= 0.150 P2= 3.56"
0.9	165	0.0418	3.07		**Shallow Concentrated Flow,** Grassed Waterway Kv= 15.0 fps
8.8	550	Total			

Summary for Subcatchment 1S: Pre Developed

Runoff = 11.69 cfs @ 12.00 hrs, Volume= 0.579 af, Depth> 2.92"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type II 24-hr 10-Year Rainfall=4.97"

	Area (ac)	CN	Description
	0.122	98.0	Roofs, HSG B
*	0.053	98.0	Concrete Sidewalks
	0.749	96.0	Gravel surface, HSG B
	0.666	69.0	50-75% Grass cover, Fair, HSG B
	0.793	79.0	50-75% Grass cover, Fair, HSG C
	2.383	82.9	Weighted Average
	2.208		92.66% Pervious Area
	0.175		7.34% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
3.6	290	0.0069	1.34		**Shallow Concentrated Flow,** Unpaved Kv= 16.1 fps
0.3	35	0.0143	1.93		**Shallow Concentrated Flow,** Unpaved Kv= 16.1 fps
4.0	60	0.0583	0.25		**Sheet Flow,** Grass: Short n= 0.150 P2= 3.56"
0.9	165	0.0418	3.07		**Shallow Concentrated Flow,** Grassed Waterway Kv= 15.0 fps
8.8	550	Total			

Summary for Subcatchment 1S: Pre Developed

Runoff = 14.61 cfs @ 12.00 hrs, Volume= 0.733 af, Depth> 3.69"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type II 24-hr 25-Year Rainfall=5.87"

	Area (ac)	CN	Description
	0.122	98.0	Roofs, HSG B
*	0.053	98.0	Concrete Sidewalks
	0.749	96.0	Gravel surface, HSG B
	0.666	69.0	50-75% Grass cover, Fair, HSG B
	0.793	79.0	50-75% Grass cover, Fair, HSG C
	2.383	82.9	Weighted Average
	2.208		92.66% Pervious Area
	0.175		7.34% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
3.6	290	0.0069	1.34		**Shallow Concentrated Flow,** Unpaved Kv= 16.1 fps
0.3	35	0.0143	1.93		**Shallow Concentrated Flow,** Unpaved Kv= 16.1 fps
4.0	60	0.0583	0.25		**Sheet Flow,** Grass: Short n= 0.150 P2= 3.56"
0.9	165	0.0418	3.07		**Shallow Concentrated Flow,** Grassed Waterway Kv= 15.0 fps
8.8	550	Total			

Summary for Subcatchment 1S: Pre Developed

Runoff = 16.99 cfs @ 12.00 hrs, Volume= 0.861 af, Depth> 4.34"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type II 24-hr 50-Year Rainfall=6.60"

	Area (ac)	CN	Description
	0.122	98.0	Roofs, HSG B
*	0.053	98.0	Concrete Sidewalks
	0.749	96.0	Gravel surface, HSG B
	0.666	69.0	50-75% Grass cover, Fair, HSG B
	0.793	79.0	50-75% Grass cover, Fair, HSG C
	2.383	82.9	Weighted Average
	2.208		92.66% Pervious Area
	0.175		7.34% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
3.6	290	0.0069	1.34		**Shallow Concentrated Flow,** Unpaved Kv= 16.1 fps
0.3	35	0.0143	1.93		**Shallow Concentrated Flow,** Unpaved Kv= 16.1 fps
4.0	60	0.0583	0.25		**Sheet Flow,** Grass: Short n= 0.150 P2= 3.56"
0.9	165	0.0418	3.07		**Shallow Concentrated Flow,** Grassed Waterway Kv= 15.0 fps
8.8	550	Total			

Summary for Subcatchment 1S: Pre Developed

Runoff = 19.50 cfs @ 12.00 hrs, Volume= 0.997 af, Depth> 5.02"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type II 24-hr 100-Year Rainfall=7.37"

	Area (ac)	CN	Description
	0.122	98.0	Roofs, HSG B
*	0.053	98.0	Concrete Sidewalks
	0.749	96.0	Gravel surface, HSG B
	0.666	69.0	50-75% Grass cover, Fair, HSG B
	0.793	79.0	50-75% Grass cover, Fair, HSG C
	2.383	82.9	Weighted Average
	2.208		92.66% Pervious Area
	0.175		7.34% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
3.6	290	0.0069	1.34		**Shallow Concentrated Flow,** Unpaved Kv= 16.1 fps
0.3	35	0.0143	1.93		**Shallow Concentrated Flow,** Unpaved Kv= 16.1 fps
4.0	60	0.0583	0.25		**Sheet Flow,** Grass: Short n= 0.150 P2= 3.56"
0.9	165	0.0418	3.07		**Shallow Concentrated Flow,** Grassed Waterway Kv= 15.0 fps
8.8	550	Total			

POST-DEVELOPED

CALL BEFORE YOU DIG

811 CALL 811 NATIONWIDE

Know what's below. Call before you dig.

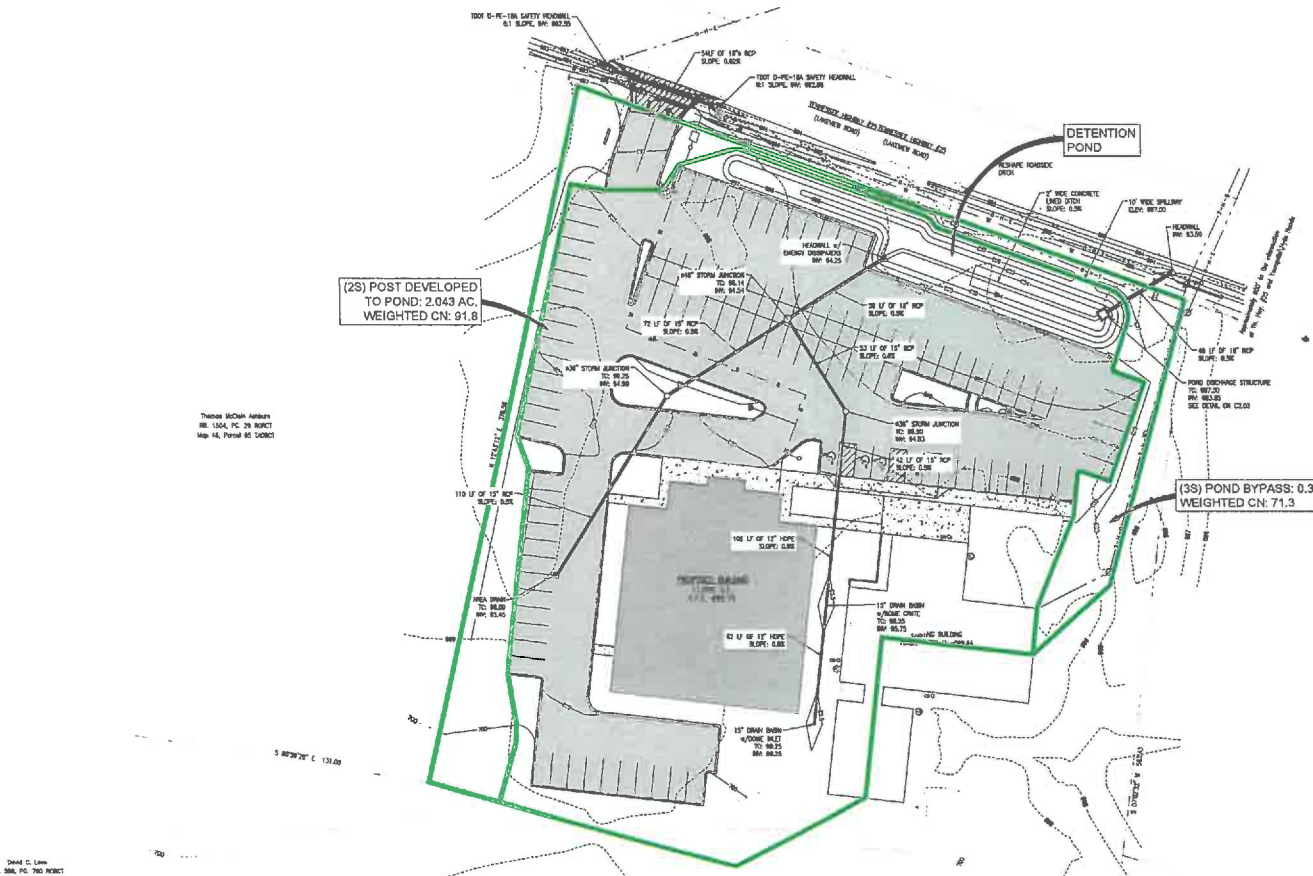
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SCALE IN FEET



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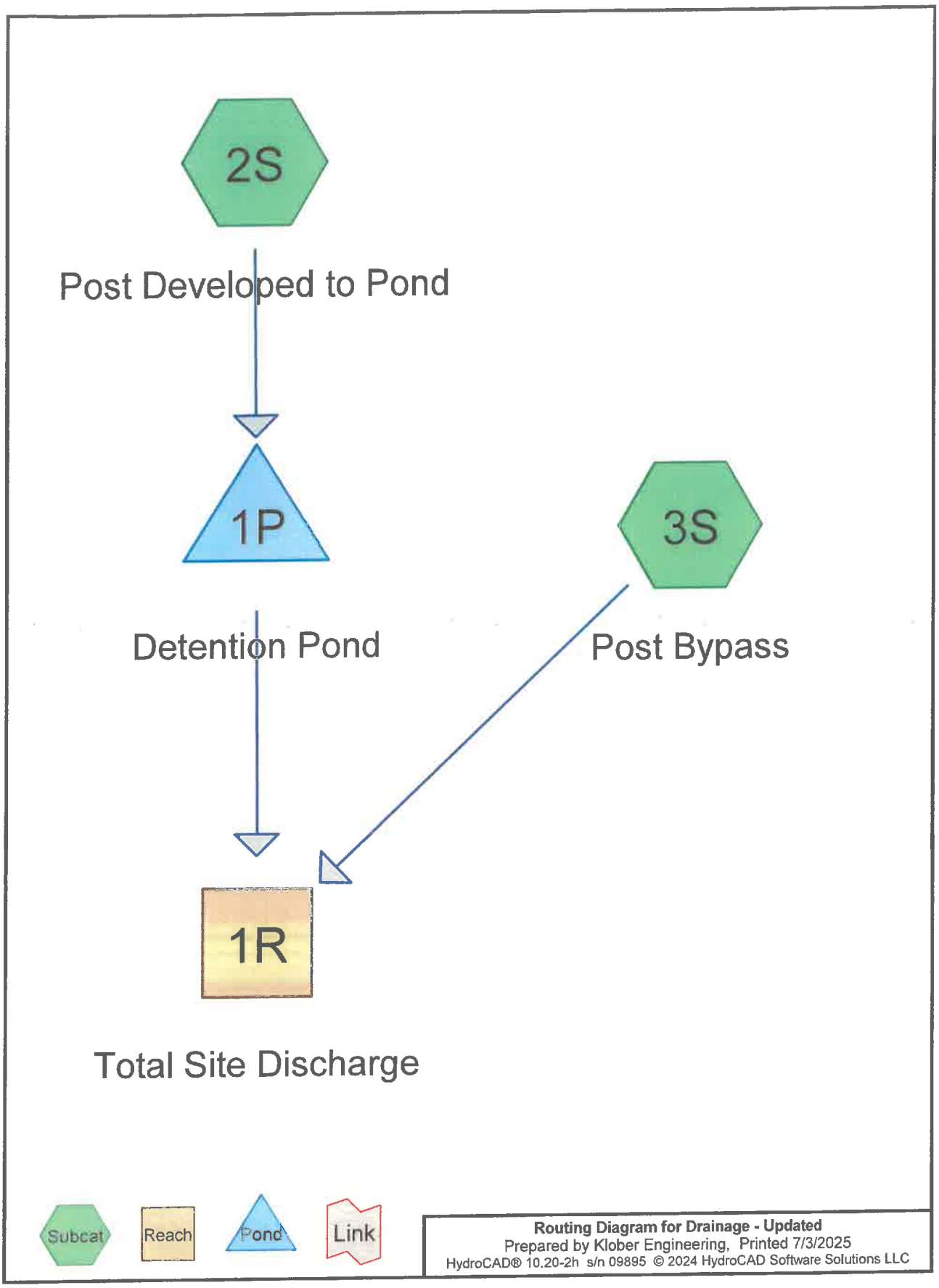
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POST DRAINAGE MAP

SHEET NUMBER

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2S
Post Developed to Pond
1P
Detention Pond
3S
Post Bypass
1R
Total Site Discharge
Subcat
Reach
Pond
Link
Routing Diagram for Drainage - Updated
Prepared by Klober Engineering, Printed 7/3/2025
HydroCAD® 10.20-2h s/n 09895 © 2024 HydroCAD Software Solutions LLC

Summary for Subcatchment 2S: Post Developed to Pond

Runoff = 9.28 cfs @ 11.95 hrs, Volume= 0.427 af, Depth> 2.51"
Routed to Pond 1P : Detention Pond

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type II 24-hr 2-Year Rainfall=3.56"

Area (ac)	CN	Description
0.375	98.0	Roofs, HSG B
1.120	98.0	Paved roads w/curbs & sewers, HSG B
0.218	69.0	50-75% Grass cover, Fair, HSG B
0.330	79.0	50-75% Grass cover, Fair, HSG C
2.043	91.8	Weighted Average
0.548		26.82% Pervious Area
1.495		73.18% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					**Direct Entry, DIRECT**

Summary for Subcatchment 3S: Post Bypass

Runoff = 0.67 cfs @ 11.97 hrs, Volume= 0.028 af, Depth> 1.01"
Routed to Reach 1R : Total Site Discharge

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type II 24-hr 2-Year Rainfall=3.56"

Area (ac)	CN	Description
0.027	98.0	Paved parking, HSG B
0.312	69.0	50-75% Grass cover, Fair, HSG B
0.339	71.3	Weighted Average
0.312		92.04% Pervious Area
0.027		7.96% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					**Direct Entry,**

Summary for Reach 1R: Total Site Discharge

Inflow Area = 2.382 ac, 63.90% Impervious, Inflow Depth > 2.29" for 2-Year event
Inflow = 6.35 cfs @ 12.01 hrs, Volume= 0.455 af
Outflow = 6.35 cfs @ 12.01 hrs, Volume= 0.455 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

Summary for Pond 1P: Detention Pond

Inflow Area = 2.043 ac, 73.18% Impervious, Inflow Depth > 2.51" for 2-Year event
Inflow = 9.28 cfs @ 11.95 hrs, Volume= 0.427 af
Outflow = 5.81 cfs @ 12.03 hrs, Volume= 0.427 af, Atten= 37%, Lag= 4.7 min
Primary = 5.81 cfs @ 12.03 hrs, Volume= 0.427 af
Routed to Reach 1R : Total Site Discharge

Routing by Stor-Ind method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Peak Elev= 695.65' @ 12.03 hrs Surf.Area= 3,255 sf Storage= 3,416 cf

Plug-Flow detention time= 6.5 min calculated for 0.427 af (100% of inflow)
Center-of-Mass det. time= 6.1 min (762.4 - 756.3)

Volume	Invert	Avail.Storage	Storage Description
#1	693.65'	12,159 cf	**Custom Stage Data (Irregular)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Perim. (feet)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
693.65	16	16.0	0	0	16
694.00	815	170.0	110	110	2,296
695.00	2,326	382.0	1,506	1,616	11,612
696.00	3,825	475.0	3,045	4,661	17,969
697.00	5,305	496.0	4,545	9,206	19,663
697.50	6,530	509.0	2,953	12,159	20,732

Device	Routing	Invert	Outlet Devices
#1	Primary	693.65'	**18.0" Round Culvert** L= 40.0' RCP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 693.65' / 693.45' S= 0.0050 '/' Cc= 0.900 n= 0.012 Concrete pipe, finished, Flow Area= 1.77 sf
#2	Device 1	693.65'	**9.0" Vert. Orifice/Grate** C= 0.600 Limited to weir flow at low heads
#3	Device 1	694.50'	**1.0' long x 1.50' rise Sharp-Crested Rectangular Weir** 2 End Contraction(s)
#4	Device 1	696.00'	**3.0' long x 1.00' rise Sharp-Crested Rectangular Weir X 3.00** 2 End Contraction(s)

Primary OutFlow Max=5.73 cfs @ 12.03 hrs HW=695.63' (Free Discharge)
↑—**1=Culvert** (Passes 5.73 cfs of 8.20 cfs potential flow)
↑—**2=Orifice/Grate** (Orifice Controls 2.69 cfs @ 6.10 fps)
—**3=Sharp-Crested Rectangular Weir** (Weir Controls 3.04 cfs @ 3.48 fps)
—**4=Sharp-Crested Rectangular Weir** (Controls 0.00 cfs)

Summary for Subcatchment 2S: Post Developed to Pond

Runoff = 11.66 cfs @ 11.95 hrs, Volume= 0.546 af, Depth> 3.20"
Routed to Pond 1P : Detention Pond

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type II 24-hr 5-Year Rainfall=4.33"

Area (ac)	CN	Description
0.375	98.0	Roofs, HSG B
1.120	98.0	Paved roads w/curbs & sewers, HSG B
0.218	69.0	50-75% Grass cover, Fair, HSG B
0.330	79.0	50-75% Grass cover, Fair, HSG C
2.043	91.8	Weighted Average
0.548		26.82% Pervious Area
1.495		73.18% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					**Direct Entry, DIRECT**

Summary for Subcatchment 3S: Post Bypass

Runoff = 1.00 cfs @ 11.96 hrs, Volume= 0.042 af, Depth> 1.50"
Routed to Reach 1R : Total Site Discharge

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type II 24-hr 5-Year Rainfall=4.33"

Area (ac)	CN	Description
0.027	98.0	Paved parking, HSG B
0.312	69.0	50-75% Grass cover, Fair, HSG B
0.339	71.3	Weighted Average
0.312		92.04% Pervious Area
0.027		7.96% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					**Direct Entry,**

Summary for Reach 1R: Total Site Discharge

Inflow Area = 2.382 ac, 63.90% Impervious, Inflow Depth > 2.96" for 5-Year event
Inflow = 7.80 cfs @ 12.01 hrs, Volume= 0.587 af
Outflow = 7.80 cfs @ 12.01 hrs, Volume= 0.587 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

Summary for Pond 1P: Detention Pond

Inflow Area = 2.043 ac, 73.18% Impervious, Inflow Depth > 3.20" for 5-Year event
Inflow = 11.66 cfs @ 11.95 hrs, Volume= 0.546 af
Outflow = 7.02 cfs @ 12.03 hrs, Volume= 0.545 af, Atten= 40%, Lag= 4.9 min
Primary = 7.02 cfs @ 12.03 hrs, Volume= 0.545 af
Routed to Reach 1R : Total Site Discharge

Routing by Stor-Ind method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Peak Elev= 695.95' @ 12.03 hrs Surf.Area= 3,746 sf Storage= 4,483 cf

Plug-Flow detention time= 6.9 min calculated for 0.545 af (100% of inflow)
Center-of-Mass det. time= 6.5 min (757.7 - 751.2)

Volume	Invert	Avail.Storage	Storage Description
#1	693.65'	12,159 cf	**Custom Stage Data (Irregular)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Perim. (feet)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
693.65	16	16.0	0	0	16
694.00	815	170.0	110	110	2,296
695.00	2,326	382.0	1,506	1,616	11,612
696.00	3,825	475.0	3,045	4,661	17,969
697.00	5,305	496.0	4,545	9,206	19,663
697.50	6,530	509.0	2,953	12,159	20,732

Device	Routing	Invert	Outlet Devices
#1	Primary	693.65'	**18.0" Round Culvert** L= 40.0' RCP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 693.65' / 693.45' S= 0.0050 '/' Cc= 0.900 n= 0.012 Concrete pipe, finished, Flow Area= 1.77 sf
#2	Device 1	693.65'	**9.0" Vert. Orifice/Grate** C= 0.600 Limited to weir flow at low heads
#3	Device 1	694.50'	**1.0' long x 1.50' rise Sharp-Crested Rectangular Weir** 2 End Contraction(s)
#4	Device 1	696.00'	**3.0' long x 1.00' rise Sharp-Crested Rectangular Weir X 3.00** 2 End Contraction(s)

Primary OutFlow Max=6.95 cfs @ 12.03 hrs HW=695.93' (Free Discharge)
↑**1=Culvert** (Passes 6.95 cfs of 9.66 cfs potential flow)
↑**2=Orifice/Grate** (Orifice Controls 2.94 cfs @ 6.65 fps)
3=Sharp-Crested Rectangular Weir (Weir Controls 4.01 cfs @ 3.92 fps)
4=Sharp-Crested Rectangular Weir (Controls 0.00 cfs)

Summary for Subcatchment 2S: Post Developed to Pond

Runoff = 13.63 cfs @ 11.95 hrs, Volume= 0.645 af, Depth> 3.79"
Routed to Pond 1P : Detention Pond

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type II 24-hr 10-Year Rainfall=4.97"

Area (ac)	CN	Description
0.375	98.0	Roofs, HSG B
1.120	98.0	Paved roads w/curbs & sewers, HSG B
0.218	69.0	50-75% Grass cover, Fair, HSG B
0.330	79.0	50-75% Grass cover, Fair, HSG C
2.043	91.8	Weighted Average
0.548		26.82% Pervious Area
1.495		73.18% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					**Direct Entry, DIRECT**

Summary for Subcatchment 3S: Post Bypass

Runoff = 1.29 cfs @ 11.96 hrs, Volume= 0.055 af, Depth> 1.94"
Routed to Reach 1R : Total Site Discharge

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type II 24-hr 10-Year Rainfall=4.97"

Area (ac)	CN	Description
0.027	98.0	Paved parking, HSG B
0.312	69.0	50-75% Grass cover, Fair, HSG B
0.339	71.3	Weighted Average
0.312		92.04% Pervious Area
0.027		7.96% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					**Direct Entry,**

Summary for Reach 1R: Total Site Discharge

Inflow Area = 2.382 ac, 63.90% Impervious, Inflow Depth > 3.52" for 10-Year event
Inflow = 10.12 cfs @ 12.01 hrs, Volume= 0.699 af
Outflow = 10.12 cfs @ 12.01 hrs, Volume= 0.699 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

Summary for Pond 1P: Detention Pond

Inflow Area = 2.043 ac, 73.18% Impervious, Inflow Depth > 3.79" for 10-Year event
Inflow = 13.63 cfs @ 11.95 hrs, Volume= 0.645 af
Outflow = 9.12 cfs @ 12.02 hrs, Volume= 0.644 af, Atten= 33%, Lag= 4.4 min
Primary = 9.12 cfs @ 12.02 hrs, Volume= 0.644 af
Routed to Reach 1R : Total Site Discharge

Routing by Stor-Ind method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Peak Elev= 696.14' @ 12.02 hrs Surf.Area= 4,024 sf Storage= 5,228 cf

Plug-Flow detention time= 7.1 min calculated for 0.642 af (100% of inflow)
Center-of-Mass det. time= 6.6 min (754.6 - 748.0)

Volume	Invert	Avail.Storage	Storage Description
#1	693.65'	12,159 cf	**Custom Stage Data (Irregular)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Perim. (feet)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
693.65	16	16.0	0	0	16
694.00	815	170.0	110	110	2,296
695.00	2,326	382.0	1,506	1,616	11,612
696.00	3,825	475.0	3,045	4,661	17,969
697.00	5,305	496.0	4,545	9,206	19,663
697.50	6,530	509.0	2,953	12,159	20,732

Device	Routing	Invert	Outlet Devices
#1	Primary	693.65'	**18.0" Round Culvert** L= 40.0' RCP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 693.65' / 693.45' S= 0.0050 '/' Cc= 0.900 n= 0.012 Concrete pipe, finished, Flow Area= 1.77 sf
#2	Device 1	693.65'	**9.0" Vert. Orifice/Grate** C= 0.600 Limited to weir flow at low heads
#3	Device 1	694.50'	**1.0' long x 1.50' rise Sharp-Crested Rectangular Weir** 2 End Contraction(s)
#4	Device 1	696.00'	**3.0' long x 1.00' rise Sharp-Crested Rectangular Weir X 3.00** 2 End Contraction(s)

Primary OutFlow Max=8.85 cfs @ 12.02 hrs HW=696.12' (Free Discharge)
↑—**1=Culvert** (Passes 8.85 cfs of 10.51 cfs potential flow)
↑—**2=Orifice/Grate** (Orifice Controls 3.08 cfs @ 6.96 fps)
—**3=Sharp-Crested Rectangular Weir** (Orifice Controls 4.61 cfs @ 4.39 fps)
—**4=Sharp-Crested Rectangular Weir** (Weir Controls 1.16 cfs @ 1.12 fps)

Summary for Subcatchment 2S: Post Developed to Pond

Runoff = 16.39 cfs @ 11.95 hrs, Volume= 0.785 af, Depth> 4.61"
Routed to Pond 1P : Detention Pond

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type II 24-hr 25-Year Rainfall=5.87"

Area (ac)	CN	Description
0.375	98.0	Roofs, HSG B
1.120	98.0	Paved roads w/curbs & sewers, HSG B
0.218	69.0	50-75% Grass cover, Fair, HSG B
0.330	79.0	50-75% Grass cover, Fair, HSG C
2.043	91.8	Weighted Average
0.548		26.82% Pervious Area
1.495		73.18% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					**Direct Entry, DIRECT**

Summary for Subcatchment 3S: Post Bypass

Runoff = 1.72 cfs @ 11.96 hrs, Volume= 0.073 af, Depth> 2.59"
Routed to Reach 1R : Total Site Discharge

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type II 24-hr 25-Year Rainfall=5.87"

Area (ac)	CN	Description
0.027	98.0	Paved parking, HSG B
0.312	69.0	50-75% Grass cover, Fair, HSG B
0.339	71.3	Weighted Average
0.312		92.04% Pervious Area
0.027		7.96% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					**Direct Entry,**

Summary for Reach 1R: Total Site Discharge

Inflow Area = 2.382 ac, 63.90% Impervious, Inflow Depth > 4.32" for 25-Year event
Inflow = 13.05 cfs @ 12.01 hrs, Volume= 0.857 af
Outflow = 13.05 cfs @ 12.01 hrs, Volume= 0.857 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

Summary for Pond 1P: Detention Pond

Inflow Area = 2.043 ac, 73.18% Impervious, Inflow Depth > 4.61" for 25-Year event
Inflow = 16.39 cfs @ 11.95 hrs, Volume= 0.785 af
Outflow = 11.71 cfs @ 12.02 hrs, Volume= 0.784 af, Atten= 29%, Lag= 4.3 min
Primary = 11.71 cfs @ 12.02 hrs, Volume= 0.784 af
Routed to Reach 1R : Total Site Discharge

Routing by Stor-Ind method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Peak Elev= 696.35' @ 12.02 hrs Surf.Area= 4,322 sf Storage= 6,103 cf

Plug-Flow detention time= 7.1 min calculated for 0.781 af (100% of inflow)
Center-of-Mass det. time= 6.6 min (751.1 - 744.5)

Volume	Invert	Avail.Storage	Storage Description
#1	693.65'	12,159 cf	**Custom Stage Data (Irregular)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Perim. (feet)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
693.65	16	16.0	0	0	16
694.00	815	170.0	110	110	2,296
695.00	2,326	382.0	1,506	1,616	11,612
696.00	3,825	475.0	3,045	4,661	17,969
697.00	5,305	496.0	4,545	9,206	19,663
697.50	6,530	509.0	2,953	12,159	20,732

Device	Routing	Invert	Outlet Devices
#1	Primary	693.65'	**18.0" Round Culvert** L= 40.0' RCP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 693.65' / 693.45' S= 0.0050 '/' Cc= 0.900 n= 0.012 Concrete pipe, finished, Flow Area= 1.77 sf
#2	Device 1	693.65'	**9.0" Vert. Orifice/Grate** C= 0.600 Limited to weir flow at low heads
#3	Device 1	694.50'	**1.0' long x 1.50' rise Sharp-Crested Rectangular Weir** 2 End Contraction(s)
#4	Device 1	696.00'	**3.0' long x 1.00' rise Sharp-Crested Rectangular Weir X 3.00** 2 End Contraction(s)

Primary OutFlow Max=11.41 cfs @ 12.02 hrs HW=696.32' (Free Discharge)
↑**1=Culvert** (Barrel Controls 11.41 cfs @ 6.45 fps)
↑**2=Orifice/Grate** (Passes < 3.23 cfs potential flow)
3=Sharp-Crested Rectangular Weir (Passes < 5.22 cfs potential flow)
4=Sharp-Crested Rectangular Weir (Passes < 5.30 cfs potential flow)

Summary for Subcatchment 2S: Post Developed to Pond

Runoff = 18.62 cfs @ 11.95 hrs, Volume= 0.898 af, Depth> 5.28"
Routed to Pond 1P : Detention Pond

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type II 24-hr 50-Year Rainfall=6.60"

Area (ac)	CN	Description
0.375	98.0	Roofs, HSG B
1.120	98.0	Paved roads w/curbs & sewers, HSG B
0.218	69.0	50-75% Grass cover, Fair, HSG B
0.330	79.0	50-75% Grass cover, Fair, HSG C
2.043	91.8	Weighted Average
0.548		26.82% Pervious Area
1.495		73.18% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					**Direct Entry, DIRECT**

Summary for Subcatchment 3S: Post Bypass

Runoff = 2.08 cfs @ 11.96 hrs, Volume= 0.089 af, Depth> 3.15"
Routed to Reach 1R : Total Site Discharge

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type II 24-hr 50-Year Rainfall=6.60"

Area (ac)	CN	Description
0.027	98.0	Paved parking, HSG B
0.312	69.0	50-75% Grass cover, Fair, HSG B
0.339	71.3	Weighted Average
0.312		92.04% Pervious Area
0.027		7.96% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					**Direct Entry,**

Summary for Reach 1R: Total Site Discharge

Inflow Area = 2.382 ac, 63.90% Impervious, Inflow Depth > 4.97" for 50-Year event
Inflow = 14.06 cfs @ 12.00 hrs, Volume= 0.986 af
Outflow = 14.06 cfs @ 12.00 hrs, Volume= 0.986 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

Summary for Pond 1P: Detention Pond

Inflow Area = 2.043 ac, 73.18% Impervious, Inflow Depth > 5.28" for 50-Year event
Inflow = 18.62 cfs @ 11.95 hrs, Volume= 0.898 af
Outflow = 12.33 cfs @ 12.02 hrs, Volume= 0.897 af, Atten= 34%, Lag= 4.3 min
Primary = 12.33 cfs @ 12.02 hrs, Volume= 0.897 af
Routed to Reach 1R : Total Site Discharge

Routing by Stor-Ind method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Peak Elev= 696.55' @ 12.02 hrs Surf.Area= 4,614 sf Storage= 6,991 cf

Plug-Flow detention time= 7.3 min calculated for 0.894 af (100% of inflow)
Center-of-Mass det. time= 6.7 min (749.1 - 742.4)

Volume	Invert	Avail.Storage	Storage Description
#1	693.65'	12,159 cf	**Custom Stage Data (Irregular)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Perim. (feet)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
693.65	16	16.0	0	0	16
694.00	815	170.0	110	110	2,296
695.00	2,326	382.0	1,506	1,616	11,612
696.00	3,825	475.0	3,045	4,661	17,969
697.00	5,305	496.0	4,545	9,206	19,663
697.50	6,530	509.0	2,953	12,159	20,732

Device	Routing	Invert	Outlet Devices
#1	Primary	693.65'	**18.0" Round Culvert** L= 40.0' RCP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 693.65' / 693.45' S= 0.0050 '/' Cc= 0.900 n= 0.012 Concrete pipe, finished, Flow Area= 1.77 sf
#2	Device 1	693.65'	**9.0" Vert. Orifice/Grate** C= 0.600 Limited to weir flow at low heads
#3	Device 1	694.50'	**1.0' long x 1.50' rise Sharp-Crested Rectangular Weir** 2 End Contraction(s)
#4	Device 1	696.00'	**3.0' long x 1.00' rise Sharp-Crested Rectangular Weir X 3.00** 2 End Contraction(s)

Primary OutFlow Max=12.21 cfs @ 12.02 hrs HW=696.53' (Free Discharge)
↑**1=Culvert** (Barrel Controls 12.21 cfs @ 6.91 fps)
↑**2=Orifice/Grate** (Passes < 3.36 cfs potential flow)
3=Sharp-Crested Rectangular Weir (Passes < 5.73 cfs potential flow)
4=Sharp-Crested Rectangular Weir (Passes < 10.81 cfs potential flow)

Summary for Subcatchment 2S: Post Developed to Pond

Runoff = 20.96 cfs @ 11.95 hrs, Volume= 1.018 af, Depth> 5.98"
Routed to Pond 1P : Detention Pond

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type II 24-hr 100-Year Rainfall=7.37"

Area (ac)	CN	Description
0.375	98.0	Roofs, HSG B
1.120	98.0	Paved roads w/curbs & sewers, HSG B
0.218	69.0	50-75% Grass cover, Fair, HSG B
0.330	79.0	50-75% Grass cover, Fair, HSG C
2.043	91.8	Weighted Average
0.548		26.82% Pervious Area
1.495		73.18% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					**Direct Entry, DIRECT**

Summary for Subcatchment 3S: Post Bypass

Runoff = 2.47 cfs @ 11.96 hrs, Volume= 0.106 af, Depth> 3.76"
Routed to Reach 1R : Total Site Discharge

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type II 24-hr 100-Year Rainfall=7.37"

Area (ac)	CN	Description
0.027	98.0	Paved parking, HSG B
0.312	69.0	50-75% Grass cover, Fair, HSG B
0.339	71.3	Weighted Average
0.312		92.04% Pervious Area
0.027		7.96% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					**Direct Entry,**

Summary for Reach 1R: Total Site Discharge

Inflow Area = 2.382 ac, 63.90% Impervious, Inflow Depth > 5.66" for 100-Year event
Inflow = 15.17 cfs @ 12.00 hrs, Volume= 1.123 af
Outflow = 15.17 cfs @ 12.00 hrs, Volume= 1.123 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

Summary for Pond 1P: Detention Pond

Inflow Area = 2.043 ac, 73.18% Impervious, Inflow Depth > 5.98" for 100-Year event
Inflow = 20.96 cfs @ 11.95 hrs, Volume= 1.018 af
Outflow = 13.14 cfs @ 12.03 hrs, Volume= 1.017 af, Atten= 37%, Lag= 4.6 min
Primary = 13.14 cfs @ 12.03 hrs, Volume= 1.017 af
Routed to Reach 1R : Total Site Discharge

Routing by Stor-Ind method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Peak Elev= 696.78' @ 12.03 hrs Surf.Area= 4,956 sf Storage= 8,069 cf

Plug-Flow detention time= 7.5 min calculated for 1.017 af (100% of inflow)
Center-of-Mass det. time= 6.9 min (747.4 - 740.5)

Volume	Invert	Avail.Storage	Storage Description
#1	693.65'	12,159 cf	**Custom Stage Data (Irregular)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Perim. (feet)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
693.65	16	16.0	0	0	16
694.00	815	170.0	110	110	2,296
695.00	2,326	382.0	1,506	1,616	11,612
696.00	3,825	475.0	3,045	4,661	17,969
697.00	5,305	496.0	4,545	9,206	19,663
697.50	6,530	509.0	2,953	12,159	20,732

Device	Routing	Invert	Outlet Devices
#1	Primary	693.65'	**18.0" Round Culvert** L= 40.0' RCP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 693.65' / 693.45' S= 0.0050 '/' Cc= 0.900 n= 0.012 Concrete pipe, finished, Flow Area= 1.77 sf
#2	Device 1	693.65'	**9.0" Vert. Orifice/Grate** C= 0.600 Limited to weir flow at low heads
#3	Device 1	694.50'	**1.0' long x 1.50' rise Sharp-Crested Rectangular Weir** 2 End Contraction(s)
#4	Device 1	696.00'	**3.0' long x 1.00' rise Sharp-Crested Rectangular Weir X 3.00** 2 End Contraction(s)

Primary OutFlow Max=13.04 cfs @ 12.03 hrs HW=696.75' (Free Discharge)
↑**1=Culvert** (Inlet Controls 13.04 cfs @ 7.38 fps)
↑**2=Orifice/Grate** (Passes < 3.51 cfs potential flow)
3=Sharp-Crested Rectangular Weir (Passes < 6.24 cfs potential flow)
4=Sharp-Crested Rectangular Weir (Passes < 18.15 cfs potential flow)

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CHECKED BY	JML
PROJECT NO	C05217

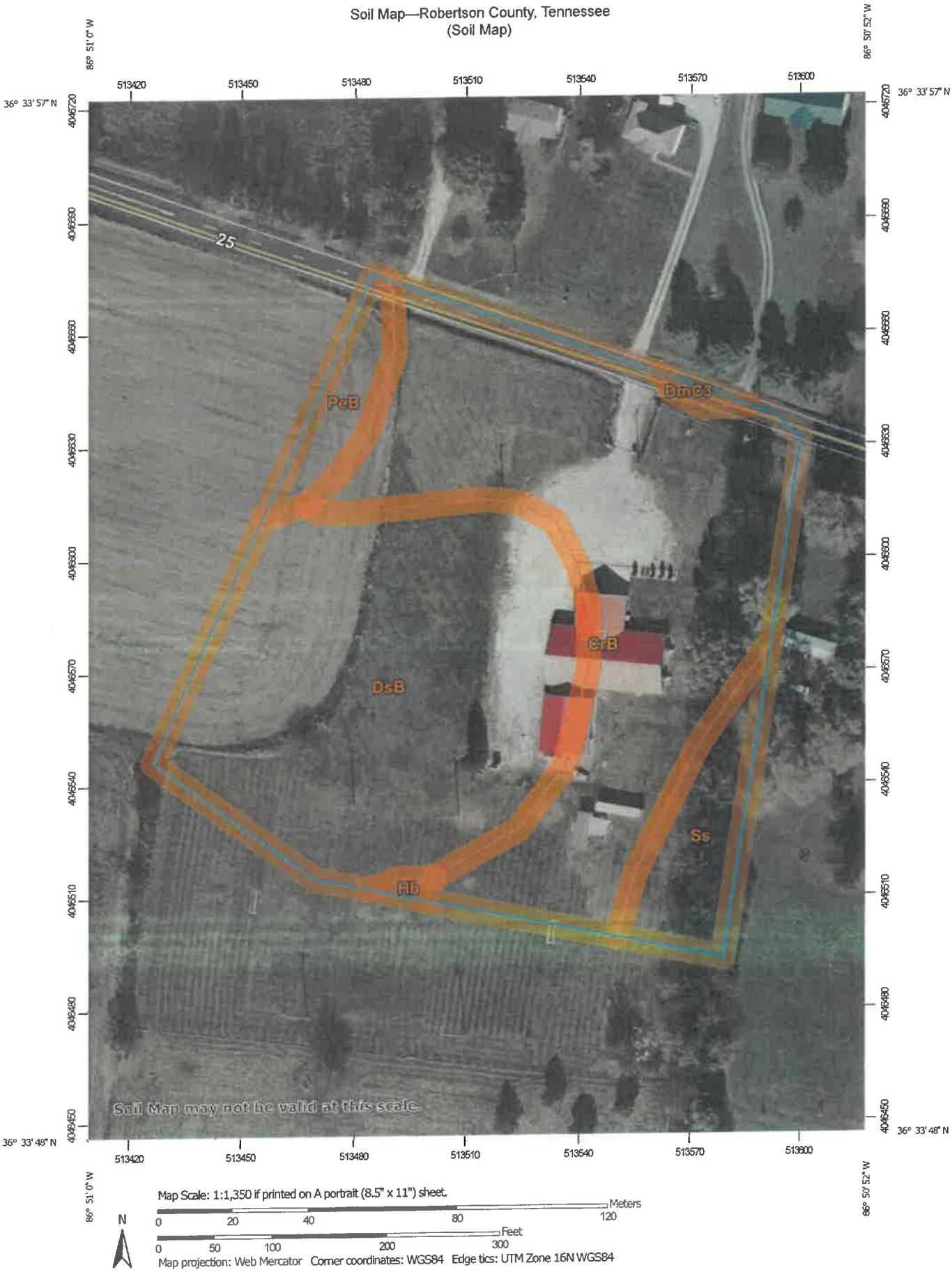
SUBCATCHMENT MAP

SHEET NUMBER

DM-3

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Soil Map—Robertson County, Tennessee
(Soil Map)



Map Scale: 1:1,350 if printed on A portrait (8.5" x 11") sheet.

N

Meters: 0 20 40 80 120

Feet: 0 50 100 200 300

Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 16N WGS84

MAP LEGEND

Area of Interest (AOI)
- Area of Interest (AOI)

Soils
- Soil Map Unit Polygons
- Soil Map Unit Lines
- Soil Map Unit Points

Special Point Features
- Blowout
- Borrow Pit
- Clay Spot
- Closed Depression
- Gravel Pit
- Gravelly Spot
- Landfill
- Lava Flow
- Marsh or swamp
- Mine or Quarry
- Miscellaneous Water
- Perennial Water
- Rock Outcrop
- Saline Spot
- Sandy Spot
- Severely Eroded Spot
- Sinkhole
- Slide or Slip
- Sodic Spot
- Spoil Area
- Stony Spot
- Very Stony Spot
- Wet Spot
- Other
- Special Line Features

Water Features
- Streams and Canals

Transportation
- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

Background
- Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:15,800.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Robertson County, Tennessee
Survey Area Data: Version 22, Sep 12, 2024

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Oct 5, 2024—Dec 6, 2024

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres In AOI	Percent of AOI
CrB	Crider silt loam, 2 to 6 percent slopes	2.4	46.1%
DmC3	Dewey silty clay loam, 5 to 12 percent slopes, severely eroded	0.0	0.3%
DsB	Dickson silt loam, 2 to 5 percent slopes	2.2	42.3%
Hb	Hamblen silt loam	0.0	0.3%
PeB	Pembroke silt loam, 2 to 6 percent slopes	0.2	3.9%
Ss	Staser silt loam	0.4	7.0%
Totals for Area of Interest		**5.3**	**100.0%**

New Business: I

ROBERTSON COUNTY DEVELOPMENT OFFICE
ROBERTSON COUNTY OFFICE BUILDING
527 SOUTH BROWN STREET, SPRINGFIELD, TENNESSEE 37172
615- 384-3666

Application for Site Plan Approval

Type of Site Plan (Please Circle One): *Sketch Site Plan* *Preliminary Site Plan* *Final Site Plan*

Property Information:

1. Current Zoning of Property: C-1 GENERAL COMMERCIAL
2. Physical Address of Property: 0 HIGHWAY 25E, SPRINGFIELD, TN 37172
3. Tax Map & Parcel Number: TAX MAP 069 PARCEL 66.00 069 066.00
4. Size of Property (square feet or acres): 1.29 AC (56,409 SF)

5. **Owner of Record Information**
   Name: ~~Turner & Associates Realty, Inc.~~ Marcia Lynne Fox
   Mailing Address (No P.O. Boxes, please): ~~P.O. Box 158828, Nashville, TN 37215~~ 0 HIGHWAY 25E, SPRINGFIELD, TN 37127
   Email: [redacted]
   Telephone Number: [redacted]

6. **Owner's Representative Information (Surveyor, Self, Engineer, etc.)**
   Name: CJ Murrell
   Name of Firm: 615 Design Group
   Mailing Address (No P.O. Boxes, please): 1517 Hunt Club Blvd, Gallatin, TN 37066
   Email: [redacted]
   Telephone Number: [redacted]

7. **Purpose of Site Plan:**
   Construction of one commercial building with associated parking and facilities.

SUBMITTAL REVIEW PROCEDURE:

1. Submit 1 hard copy (no smaller than 17" x 22") of the site plan, this completed application, and fee payment to the Robertson County Development Office. **Please ensure the application is signed.** ***Attach proof of ownership of property (copy of deed is typical). Pay the review fee.***
2. Email a .PDF of the submitted site plan to hmantooth@robcotn.org (**Hunter Mantooth**).
3. Application and site plan will be reviewed, and corrective comments provided, by date listed on calendar (see attached).
4. Submit corrections by date listed on Planning Commission Submittal & Meeting Calendar
5. **FINAL SUBMITTAL:** Deliver **one (1)** folded hard copies of the corrected plat, no smaller than 17" x 22", and any supporting documentation to the Development Office before or by the final due date.
6. Email a .PDF of the corrected site plan to hmantooth@robcotn.org
7. Attend the Planning Commission meeting. Be ready to present and answer questions. **Failure to appear at the Planning Commission meeting may result in the denial of the application.**

Marcia Lynne Fox
Owner's Signature & DATE 7-17-2025

CJ Murrell 07/18/2025
Owner's Representative Signature & DATE

Staff Comments
August 2025
Amanda Harrington, Planning Advisor

Project: Dollar General– Site Plan Review

Location: Unaddressed Highway 25E & Highway 49E, Springfield, TN

Applicant: Turner & Associates

Engineer: 615 Design Group



I. PROJECT OVERVIEW

The applicant proposes a new Dollar General on **Tax Map 059, Parcel 66**, which is currently a vacant parcel zoned C-1.

Site Area: ±1.29 acres (56,409 SF)

Building Area: 9,100 SF, single-story

Building Height: 35 ft max.

Lot Coverage:
- Permitted: 60% (33,845 SF)
- Proposed: 16.1% (9,100 SF)

Setbacks (Required/Provided):
- Front: 30 ft / 30 ft
- Side: 25 ft / 25 ft
- Rear: 40 ft / 40 ft

Parking:
- Required: 37 spaces (1 per 250 SF retail)
- Provided: 37 spaces, including 2 ADA

Access:
- One commercial entrance on Highway 25E, designed with adequate site distance.
- Internal circulation provides direct access to the parking and dumpster enclosure.

Utilities:
- **Water:** White House Utility District
- **Sewer:** Private septic system
- **Electric:** Cumberland Electric Membership Co.

RECOMMENDATION: Approval.

**** END COMMENTS ****

EARL R. MAYO **CONSULTING ENGINEER AND SURVEYOR**
119 SUESAND COURT PLEASANT VIEW, TN 37146 (615)522-4704

August 15, 2025

Traye Fann
County Engineer
Robertson County Planning and Zoning
527 South Brown Street
Springfield, Tennessee 37172

RE: Review of Revised Springfield North Dollar Store Site Plan

Dear Traye:

I have reviewed the referenced revised site plan that I received on August 14, 2025 for the August 28, 2025 Planning Commission meeting. All of my previous comments have been addressed with the following note. The discharge of the pipe from the detention pond should be stabilized in order to dissipate the flow so as to not create any issues with this flow on the adjacent property. I have discussed this with the engineer and they said they would address this.

Only a very cursory review has been performed of these documents in order to get an overall sense of general compliance with the surveying and engineering requirements contained in the Robertson County Subdivision Regulations. No planning related review was performed. This review is not intended as a check of accuracy of the documents or compliance with other state or federal laws and regulations, including Erosion Protection and Sediment Control or water quality design that was not reviewed by me but is to be reviewed by TDEC. No liability for the correctness or completeness of design or surveying performed by others is assumed by me or Robertson County by my review of these documents.

Please contact me if you have any questions or comments. Thank you for the opportunity to serve you.

Sincerely,

Rick Mayo, PE, RLS

Hunter Mantooth

From: Rick Mayo <rickmayo3000@gmail.com>
Sent: Friday, August 15, 2025 1:13 PM
To: Traye Fann; Hunter Mantooth; Pam Groves
Subject: [EXTERNAL]Re: FW: [EXTERNAL]Springfield North Dollar General - Site Plan Resubmittal

Traye/Hunter,

The engineer followed through with what they proposed in order to answer my questions. All of my other comments have been addressed.

Thanks.

Rick

On Thu, Aug 14, 2025 at 3:01 PM Traye Fann <tfann@robcotn.org> wrote:

Ready for your review. Thanks!!

From: Hunter Mantooth <hmantooth@robcotn.org>
Sent: Thursday, August 14, 2025 11:40 AM
To: Traye Fann <tfann@robcotn.org>; Amanda Harrington <rcsplanners@gmail.com>
Cc: Pam Groves <pgroves@robcotn.org>; Hunter Mantooth <hmantooth@robcotn.org>
Subject: FW: [EXTERNAL]Springfield North Dollar General - Site Plan Resubmittal
Importance: High

Traye and Amanda,

Below are the corrections for the DG site plan. Final staff notes are due by end of day Tuesday August 19th. If we don't get approval by then we will have to hold off till the September PC meeting.

WHITE HOUSE UTILITY DISTRICT
P.O. BOX 608, 3303 HIGHWAY 31-W — WHITE HOUSE, TENNESSEE 37188
TELEPHONE (615) 672-4110 — FAX (615) 672-8098

June 6, 2025

Mr. Montgomery G. Turner, Sr.
PO Box 150326
Nashville, TN 37215

RE: Water Availability for Turner – Hwy 25 Retail Dollar General
Property South of the Intersection of Hwy 25 and Hwy 49
Springfield, TN

Dear Mr. Turner,

Based on the information submitted to WHUD on May 21, 2025, you are requesting water service for a Dollar General retail market to be constructed near the intersection noted above. Water requirements for the project are listed in the attached schedule.

In order for WHUD to provide water service to the project, the developer will be required to do the following:

1. Upgrade approximately 38,000' of existing water mains along Hwy 25 to 12" water main extending from the intersection of Hwy 25 and Calista Road to the site
2. Install fire line, domestic and landscape irrigation metering assemblies at the site
3. Pay fees noted in the attached schedule

See the attached overview map for approximate locations of the required improvements.

New offsite utility easements will be required for this project. WHUD will manage and facilitate the acquisition process for all required easements. The developer shall be responsible for all costs associated with the acquisition of easements required for this project.

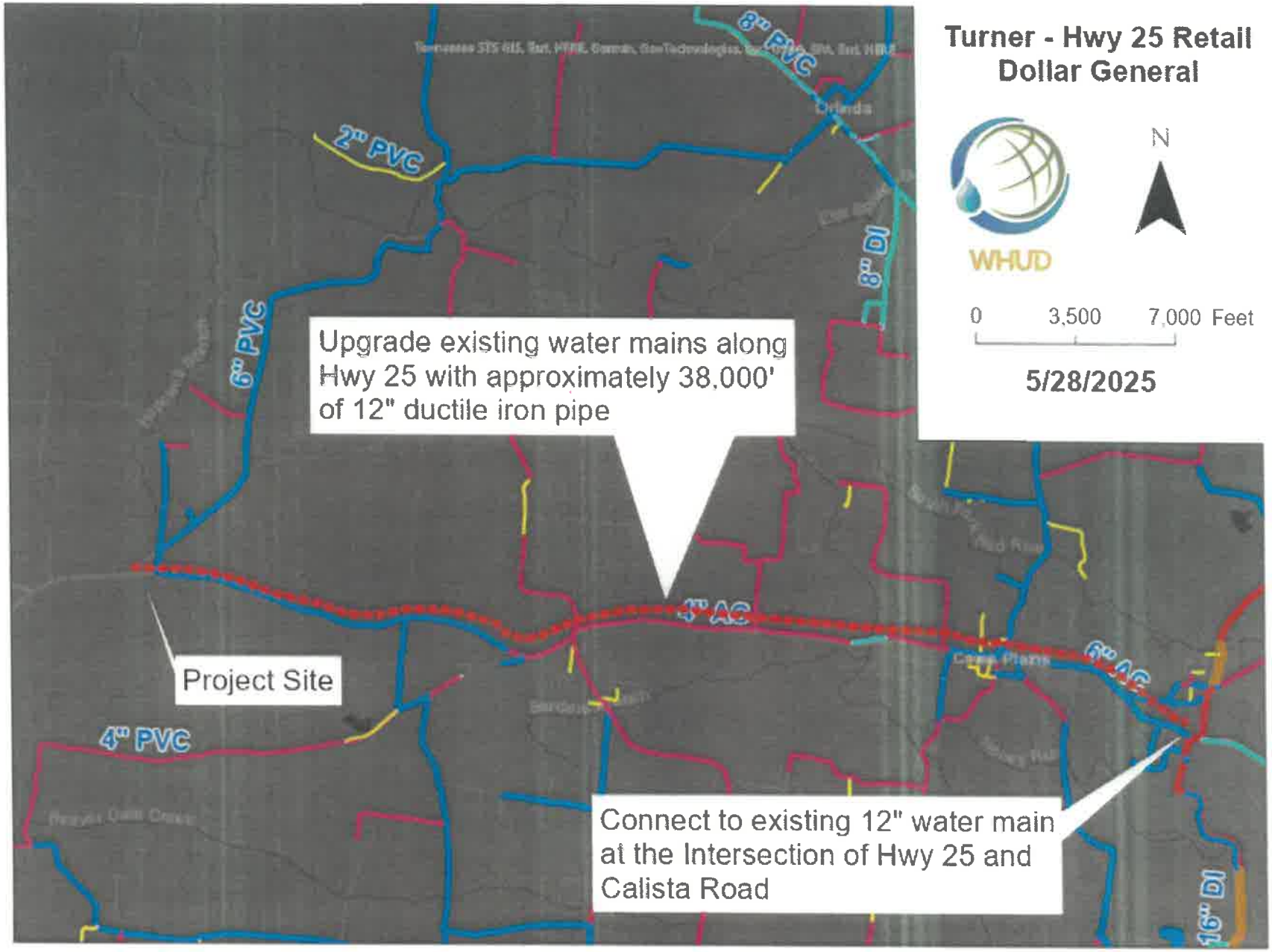
In conclusion, the information provided is to be considered due diligence in nature. This letter is neither a commitment nor a contract between the developer and WHUD nor is it to be relied upon for the purpose of design.

Should the developer desire to move beyond the due diligence inquiry phase of this project it will be necessary for the developer to submit plans and pay noted fees.

Should you have any questions, please contact our Engineering Department at 615-672-4110 ext. 262 or via email at WHUDEngineering@whud.org.

Sincerely,

Pat Harrell, P.E.
District Engineer


Turner - Hwy 25 Retail
Dollar General
WHUD
N
0 3,500 7,000 Feet
5/28/2025
8" PVC
2" PVC
8" DI
6" PVC
Upgrade existing water mains along Hwy 25 with approximately 38,000' of 12" ductile iron pipe
4" AC
6" AC
Project Site
4" PVC
Connect to existing 12" water main at the Intersection of Hwy 25 and Calista Road
16" DI

SPRINGFIELD NORTH DOLLAR GENERAL

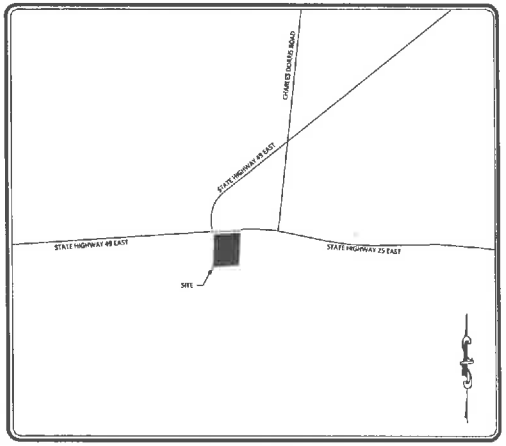
SITE PLAN SUBMITTAL

SITE DATA TABLE

SITE ADDRESS:	HIGHWAY 25E, SPRINGFIELD, TN 37172
OWNER:	TURNER & ASSOCIATES REALTY, LLC
PARCEL ID	TAX MAP 059 PARCEL 66 00
COUNCIL WARD COUNCIL MEMBER:	
SITE AREA	+/- 1.29 ACRES (56,409 SF)
EXISTING IMPERVIOUS AREA: PROPOSED IMPERVIOUS AREA:	0.00 ACRES (0 SF) 0.66 ACRES (28,962 SF)
TOTAL DISTURBANCE:	+/ 1.55 ACRES (67,667 SF)
EXISTING ZONING.	C-1
EXISTING USE PROPOSED USE.	VACANT LOT COMMERCIAL RETAIL
MINIMUM SETBACKS FRONT REAR SIDE	 50 FT 40 FT (NO FIRE PROTECTION) 25 FT (NO FIRE PROTECTION)
EXISTING BLDG AREA. PROPOSED ADDED BLDG AREA PROPOSED TOTAL BLDG AREA	0 SF 9,100 SF 9,100 SF
PROPOSED BLDG HEIGHT	35 FT MAX
MAX BLDG COVERAGE: PROPOSED LOT COVERAGE.	60 0% (33,845 SF) 16.1% (9,100 SF)
MINIMUM LOT WIDTH AT BLDG SETBACK:	100 FT (REQUIRED) 200 FT (PROVIDED)
PARKING REQUIRED: GENERAL RETAIL:	 1 SPACE / 250 SF (37 SPACES)
PARKING PROVIDED:	37 SPACES (2 ADA)

NOTES:

1. EXISTING SURVEY INFORMATION IS DERIVED FROM A BOUNDARY AND TOPOGRAPHIC SURVEY PROVIDED BY BRIAN REIFSCHNEIDER, DATED 04/05/2021.
2. NO PORTION OF THIS PROPERTY IS LOCATED IN A SPECIAL FLOOD AREA AS PER F.I.R.M MAP NO 47147C0237C, DATED 4/16/2008.



LOCATION MAP
SCALE: 1" = 500'

CONTACTS

CONTACTS:

DEVELOPER:

TURNER AND ASSOCIATES REALTY, INC
P O BOX 150325
NASHVILLE, TN 37215
615-210-3646
monica@turnerrealtynash com

CIVIL ENGINEER:

CJ MURRELL
615 DESIGN GROUP
1317 HUNT CLUB BLVD
SUITE 300
GALLATIN, TN 37066
615-499-7719
corey@615designgroup.com

SURVEYOR:

BRIAN REIFSCHNEIDER
BLUE RIDGE SURVEYING SERVICES
P O BOX 8072
GALLATIN, TN 37066
615-428-4449
blueridgesurveying@yahoo com

UTILITY CONTACTS

SEWER:

PRIVATE SEPTIC SYSTEM

WATER:

WHITE HOUSE UTILITY DISTRICT
1303 HWY 31W
WHITE HOUSE, TN 37188
615-672-4110
WHUDEng-manmg@whud org

ELECTRIC:

CUMBERLAND ELECTRIC MEMBERSHIP CO
18040 MADISON EXTENSION
CLARKSVILLE, TN 37043
931-672-4110

Sheet List Table

Sheet Number	Sheet Title
C0.0	COVER
C0.1	GENERAL NOTES
C1.0	EXISTING CONDITIONS
C2.0	SITE PLAN
C3.0	SWPPP
C3.1	EROSION CONTROL PLAN - INITIAL
C3.2	EROSION CONTROL PLAN - INTERMEDIATE
C3.3	EROSION CONTROL PLAN - FINAL
C3.4	EROSION CONTROL DETAILS
C3.5	EROSION CONTROL DETAILS
C4.0	GRADING AND DRAINAGE PLAN
C4.1	DETENTION POND DETAILS
C5.0	UTILITY PLAN
C5.1	SEWER PLAN
C5.2	UTILITY DETAILS
C6.0	SITE DETAILS
L1.0	LANDSCAPE COMPLIANCE PLAN
A1.0	ELEVATIONS
A1.1	ELEVATIONS
A1.2	ELEVATIONS
A1.3	ELEVATIONS

615 DESIGN GROUP
1317 HUNT CLUB BLVD, GALLATIN, TN 37066
www.615designgroup.com

COLLYN J. MURRELL
REGISTERED ENGINEER
No. 124174
STATE OF TENNESSEE

DOLLAR GENERAL
0 HWY 25E, SPRINGFIELD TN
TURNER AND ASSOCIATES

REVISIONS		
NUMBER	DESCRIPTION	DATE

PROJECT #:	1082001
DESIGNED BY	CJM
DRAWN BY:	CJM
DATE	08/14/2023

COVER

C0.0

GENERAL NOTES:

1. PRIOR TO CONSTRUCTION THE CONTRACTOR SHALL BE RESPONSIBLE FOR:
   - A. THE CONTRACTOR SHALL VERIFY ALL PROPOSED AND EXISTING CONDITIONS INCLUDING UTILITIES (INVERTS, CONNECTIONS, MATERIALS, ETC.) AND DIMENSIONS WITHIN THE LIMITS OF WORK PRIOR TO THE START OF CONSTRUCTION
   - B. THE LOCATION OF EXISTING UTILITIES, SUCH AS WATER, SEWER, GAS, ELECTRICAL, ETC., AS SHOWN ON THE PLANS HAVE BEEN DETERMINED FROM THE BEST AVAILABLE INFORMATION BY ACTUAL SURVEYS, OR TAKEN FROM THE RECORDS AND DRAWINGS OF THE EXISTING UTILITIES. HOWEVER, THE CIVIL ENGINEER DOES NOT ASSUME RESPONSIBILITY THAT, DURING CONSTRUCTION, THE POSSIBILITY OF UTILITIES OTHER THAN THOSE SHOWN MAY BE ENCOUNTERED OR THAT ACTUAL LOCATION OF THOSE SHOWN MAY VARY SOMEWHAT FROM THE LOCATION DESIGNATED ON THE PLANS. IN AREAS WHERE IT IS NECESSARY THAT THE EXACT LOCATION OF UNDERGROUND LINES BE KNOWN, THE CONTRACTOR SHALL, AT HIS OWN EXPENSE, FURNISH ALL LABOR AND TOOLS TO EITHER VERIFY OR ESTABLISH THE LOCATION OF THE UTILITY.
   - C. REFER TO ARCHITECTURAL DRAWINGS FOR INFORMATION RELATED TO THE CONSTRUCTION OF THE PROPOSED BUILDINGS ONSITE.
   - D. THE CONTRACTOR IS RESPONSIBLE FOR ALL NOTIFICATIONS AND LIAISONS WITH UTILITY COMPANIES DURING THE PROCESS OF LOCATING, RELOCATING, AND TYING INTO PUBLIC UTILITIES.
   - E. PRIOR TO COMMENCING LAND DISTURBANCE ACTIVITY, THE LIMITS OF LAND DISTURBANCE SHALL BE CLEARLY AND ACCURATELY DEMARCATED WITH STAKES, RIBBONS, OR OTHER APPROPRIATE MEANS. THE LOCATION AND EXTENT OF ALL AUTHORIZED LAND DISTURBANCE SHALL OCCUR INSIDE THE APPROVED LIMITS INDICATED ON THE APPROVED PLANS.
   - F. THE CONTRACTOR SHALL USE MATERIALS AND EMPLOY CONSTRUCTION METHODS IN ORDER TO COMPLY AND CONFORM TO THE PLANS, STANDARDS, SPECIFICATIONS, AND CODES OF THE GOVERNING MUNICIPALITIES. IT IS SOLELY THE CONTRACTOR'S RESPONSIBILITY TO FOLLOW ALL APPLICABLE SAFETY CODES AND REGULATIONS DURING ALL PHASES OF CONSTRUCTION. WHERE A CONFLICT OCCURS, THE STRICTEST DESIGN SHALL GOVERN. THE ENGINEER'S REVIEW OF SHOP DRAWINGS, PRODUCT DATA, ETC., DOES NOT RELIEVE THE CONTRACTOR FROM COMPLYING WITH THE CONTRACT DOCUMENTS. IN CASE OF UNFORESEEN OR FORESEEN CONSTRUCTION DEVIATIONS AND/OR DISCREPANCIES THE CONTRACTOR IS TO IMMEDIATELY INFORM THE ENGINEER IN WRITING AND OBTAIN ENGINEER'S WRITTEN APPROVAL OF THE SPECIFIC DEVIATION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR DEVIATIONS FROM THESE PLANS AND SPECIFICATIONS WITHOUT PRIOR WRITTEN CONSENT OF THE ENGINEER MAY CAUSE THE WORK TO BE UNACCEPTABLE
   - G. CONSTRUCTION SHALL MEET ALL CURRENT STANDARDS SET FORTH IN THE AMERICANS WITH DISABILITIES ACT (ADA).
   - H. IF THE CONTRACTOR DAMAGES ANY EXISTING UTILITIES DURING CONSTRUCTION, HE SHALL, AT HIS OWN EXPENSE, REPLACE OR REPAIR THE UTILITIES TO ORIGINAL CONDITION AND QUALITY AS APPROVED BY THE OWNER AND REPRESENTATIVE OF THE APPROPRIATE UTILITY COMPANY.
   - I. FIRE DEPARTMENT ACCESS SHALL BE MAINTAINED AT ALL TIMES.
   - J. CONTRACTOR SHALL SHORE AND BRACE ALL EARTH, FORMS, CONCRETE, STEEL, WOOD, AND MASONRY TO RESIST GRAVITY, EARTH, WIND, THERMAL, CONSTRUCTION, AND MISCELLANEOUS LOADS DURING CONSTRUCTION.
   - K. UNLESS OTHERWISE NOTED THE CONTRACTOR SHALL SUBMIT SHOP DRAWINGS OF ALL FABRICATED MATERIALS TO THE ENGINEER. DESIGN DOCUMENTS SHALL NOT BE REPRODUCED AS SHOP DRAWINGS.
   - L. AS-BUILT DRAWINGS OF ROADWAYS, STORM DRAINS, SANITARY SEWER AND WATER LINES, FIELD APPROVAL BY THE ENGINEER, AND ALL APPLICABLE BONDS ARE REQUIRED PRIOR TO FINAL ACCEPTANCE BY THE OWNER
   - M. CONTRACTOR SHALL MAINTAIN CONTINUOUS UTILITY SERVICE TO ALL EXISTING BUILDINGS THROUGHOUT CONSTRUCTION UNLESS APPROVAL FOR SERVICE INTERRUPTION IS OBTAINED FROM THE OWNERS IN ADVANCE.
   - N. THE CONTRACTOR SHALL VERIFY EXISTING CONDITIONS TO ENSURE THAT THE NEW WORK SHALL FIT INTO THE EXISTING SITE IN THE MANNER INTENDED AND AS SHOWN ON THE DRAWINGS. SHOULD ANY CONDITIONS EXIST THAT ARE CONTRARY TO THOSE SHOWN ON THE DRAWINGS, THE CONTRACTOR SHALL NOTIFY THE OWNER'S REPRESENTATIVE PRIOR TO PERFORMING ANY WORK IN THE AREA INVOLVING DIFFERENCES. NOTIFICATION SHALL BE IN THE FORM OF A DRAWING OR SKETCH INDICATING FIELD MEASUREMENTS AND NOTES RELATING TO THE AREA.
   - O. ANY FOREIGN ITEM FOUND DURING CONSTRUCTION IS THE PROPERTY OF THE OWNER. THIS INCLUDES, BUT IS NOT LIMITED TO, PRECIOUS METALS, COINS, PAPER CURRENCY, ARTIFACTS AND ANTIQUITIES.
   - P. THE CONTRACTOR SHALL FURNISH, INSTALL AND MAINTAIN ALL NECESSARY TEMPORARY WORKS FOR THE PROTECTION OF THE WORK AND THE PUBLIC, INCLUDING BARRICADES, WARNING SIGNS, LIGHTS, ETC.
   - Q. THE CONTRACTOR ACKNOWLEDGES & AGREES THAT THE WORK IS ENTIRELY AT HIS RISK UNTIL SITE IS ACCEPTED, AND HE WILL BE HELD RESPONSIBLE FOR ITS SAFETY BY THE OWNER. THE CONTRACTOR WILL INDEMNIFY THE OWNER & OWNER'S REPRESENTATIVE FROM LIABILITY AT THE SITE THROUGHOUT THE CONSTRUCTION PROCESS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGE DONE TO THE PREMISES OR ADJACENT PREMISES, OR INJURIES TO THE PUBLIC DURING THE CONSTRUCTION OF THE WORK, WHETHER CAUSED BY HIMSELF, HIS SUBCONTRACTORS, OR THE CARELESSNESS OF ANY OF HIS EMPLOYEES.
   - R. THE CONTRACTOR SHALL COMPLY WITH ALL CITY, COUNTY AND STATE BUILDING LAWS, ORDINANCES OR REGULATIONS RELATING TO BUILDING SIDEWALKS, STREETS, BLASTING, PUBLIC INFRASTRUCTURE, STORMWATER REGULATIONS, ETC.
   - S. THE CONTRACTOR IS TO CHECK AND VERIFY ALL MEASUREMENTS, LEVELS, ETC. BEFORE ORDERING MATERIALS AND PROCEEDING WITH THE WORK, AND IS TO BE RESPONSIBLE FOR THE SAME.
   - T. THE CONTRACTOR WILL BE HELD RESPONSIBLE FOR THE DAMAGE OR LOSS OF ANY REFERENCE POINTS AND HUBS DURING THE CONSTRUCTION OF HIS WORK, AND SHALL BEAR THE COST OF REPLACING SAME.
   - U. CARE SHALL BE TAKEN TO PROTECT ANY UTILITIES, TREES, ETC. WHICH ARE TO REMAIN AND NOT TO BE DISTURBED BY THE CONSTRUCTION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGES TO SUCH PROPERTY.
   - V. NOTHING IN THE GENERAL NOTES OR PLANS SHALL RELIEVE THE CONTRACTOR FROM HIS RESPONSIBILITIES TOWARD THE SAFETY AND CONVENIENCE OF THE GENERAL PUBLIC AND THE RESIDENTS AT OR ALONG THE PROPOSED CONSTRUCTION AREA. THE CONTRACTOR WILL INDEMNIFY THE OWNER & OWNER'S REPRESENTATIVE FROM LIABILITY AT THE SITE THROUGHOUT THE CONSTRUCTION PROCESS.

DEMOLITION AND CLEARING INFORMATION:

1. NOTIFICATIONS:
   - A. THE CONTRACTOR SHALL NOTIFY THE OWNER AND CITY INSPECTOR(S) 24 HOURS PRIOR TO ANY DEMOLITION OR CONSTRUCTION. THE CONTRACTOR SHALL OBTAIN ALL NECESSARY PERMITS PRIOR TO CONSTRUCTION.
   - B. THE CONTRACTOR SHALL FIELD VERIFY THE LIMITS OF DEMOLITION WITH THE OWNER'S REPRESENTATIVE PRIOR TO COMMENCEMENT OF WORK.
   - C. THE CONTRACTOR SHALL CONFORM TO LOCAL CODES, OBTAIN ALL PERMITS AND GIVE ALL NOTICES REQUIRED FOR EXECUTION OF THE WORK.
2. DISPOSAL GUIDELINES:
   - A. THE CONTRACTOR SHALL ESTABLISH AND MAINTAIN A PROACTIVE METHOD TO PREVENT LITTER AND CONSTRUCTION WASTES FROM ENTERING WATERS OF THE STATE/U.S. THESE MATERIALS SHALL BE REMOVED FROM STORMWATER EXPOSURE PRIOR TO ANTICIPATED STORM EVENTS OR BEFORE BEING CARRIED OFFSITE BY WIND, OR OTHERWISE PREVENTED FROM BECOMING A POLLUTANT SOURCE FOR STORMWATER DISCHARGES. AFTER USE, MATERIALS USED FOR EPSC SHALL BE REMOVED FROM THE SITE.
   - B. ONLY ITEMS SPECIFICALLY NOTED TO BE DEMOLISHED SHALL BE REMOVED FROM THE SITE.
   - C. REMOVE EXISTING PAVED AREAS AS SHOWN INCLUDING DRIVEWAYS. SIDEWALKS, PARKING AREAS, SERVICE AREAS, EQUIPMENT PADS, AND ALL MISCELLANEOUS PAVING.
   - D. ALL DEBRIS RESULTING FROM DEMOLITION SHALL BE REMOVED FROM THE SITE AND DISPOSED OF LEGALLY BY THE CONTRACTOR IN ACCORDANCE WITH LOCAL STATE AND FEDERAL REGULATIONS. BACKFILL ALL TRENCHES AND EXCAVATIONS RESULTING FROM DEMOLITION.
   - E. ALL DEMOLISHED MATERIAL BECOMES THE PROPERTY OF THE CONTRACTOR UNLESS OTHERWISE NOTED.
3. TREE PROTECTION GUIDELINES:
   - A. PROTECT ALL EXISTING TREES NOTED "TO REMAIN" AND ALL ITEMS TO BE TURNED OVER TO THE OWNER DURING DEMOLITION. TAKE ALL NECESSARY PRECAUTIONS AND PROTECTIVE MEASURES. ANY EXISTING ITEMS TO BE TURNED OVER TO THE OWNER WHICH ARE DAMAGED DURING DEMOLITION SHALL BE REPAIRED AT NO ADDITIONAL COST TO THE OWNER. TREES WHICH ARE DAMAGED WILL BE REPLACED OR REIMBURSED AT A RATE TO BE DETERMINED BY THE OWNER.
4. UTILITIES:
   - A. PRIOR TO REMOVING OR ABANDONING ANY UTILITY THE CONTRACTOR SHALL VERIFY THAT NO UPSTREAM SERVICE WILL BE TERMINATED. THE CONTRACTOR SHALL INFORM THE ENGINEER IN WRITING OF ANY TERMINATION NOT SHOWN ON THE PLANS.
   - B. ALL ABANDONED WATER LINES, STORM SEWER PIPE, SANITARY SEWER PIPES, GAS LINES, OR ANY OTHER ABANDONED UNDERGROUND UTILITY SHALL BE ABANDONED IN PLACE UNLESS NOTED OTHERWISE.
5. CLEARING AND GRUBBING:
   - A. DO NOT EXCEED CLEARING AND GRUBBING LIMITS OF CONSTRUCTION LINES INDICATED ON THE PLANS.
   - B. ALL AREAS OUTSIDE THE LIMITS OF CONSTRUCTION LINE SHALL NOT BE CROSSED BY HEAVY EQUIPMENT OR USED FOR STORING HEAVY EQUIPMENT OR MATERIALS.
   - C. NO EQUIPMENT SHALL BE STORED UNDER THE DRIP LINE OF TREES TO REMAIN.
   - D. DO NOT FALL ANY TREES OR PUSH PILES OF DEBRIS AGAINST ANY TREES TO REMAIN.
   - E. REMOVE ALL STUMPS, ROCKS, ASPHALT & CONCRETE DEBRIS, ETC. AND DISPOSE OFF SITE IN ACCORDANCE WITH LOCAL, STATE & FEDERAL REGULATIONS
   - F. CONTACT ALL UTILITY AUTHORITIES WHO HAVE LINES WITHIN THE CLEARING AND GRUBBING LIMITS BEFORE STARTING WORK.
   - F. ALL EROSION CONTROL SEDIMENT BARRIERS, SILT FENCES, AND TREE PROTECTION DEVICES SHALL BE INSTALLED PRIOR TO STARTING CLEARING AND GRUBBING.
   - F. AFTER STAKING IS COMPLETED, TREES WITHIN GRADING LIMITS TO BE SAVED WILL BE IDENTIFIED BY THE OWNER'S REPRESENTATIVE. FIELD CHANGES TO GRADING PLANS SHALL BE MADE FOR SMOOTH TRANSITION OF GRADES AROUND ALL TREES WHICH REQUITE TREE WELLS WITHIN THE GRADING LIMITS.
   - G. ALL CLEARING SHALL BE LIMITED TO AREAS TO BE GRADED WITHIN 15 CALENDAR DAYS.

SITE INFORMATION:

1. THE FOLLOWING ARE APPLICABLE TO ALL CIVIL DOCUMENTS:
   - A. WHERE A DETAIL SECTION, TYPICAL SECTION, OR A NOTE IS SHOWN FOR ONE CONDITION, IT SHALL APPLY FOR ALL LIKE OR SIMILAR CONDITIONS, UNLESS OTHERWISE NOTED ON THE PLANS.
   - B. EXISTING AND PROPOSED CONTOURS ARE AT ONE (2) FOOT INTERVALS UNLESS OTHERWISE NOTED
   - C. ALL DIMENSIONS ARE TO FACE OF CURB UNLESS OTHERWISE NOTED.
   - D. ALL PIPE LENGTHS SPECIFIED IN THESE PLANS ARE THE HORIZONTAL DISTANCE AND ARE SHOWN FOR REFERENCE ONLY. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO DETERMINE ACTUAL LENGTHS BASED ON PROPOSED PIPE SLOPE.
   - E. PIPE LENGTHS IN PLANS ARE MEASURED FROM CENTER OF STRUCTURE TO CENTER OF STRUCTURE UNLESS OTHERWISE NOTED.
   - F. HANDICAP RAMPS SHALL HAVE A MAXIMUM SLOPE OF 1:12
   - G. IN THE EVENT OF ANY DISCREPANCIES AND/OR ERRORS FOUND IN THE DRAWING, OR IF PROBLEMS ARE ENCOUNTERED DURING CONSTRUCTION, THE CONTRACTOR SHALL NOTIFY THE ENGINEER BEFORE PROCEEDING WITH THE WORK.

EROSION AND SEDIMENT CONTROL INFORMATION:

- A. THE CONTRACTOR IS RESPONSIBLE FOR MAKING SURE THAT A COPY OF THE SWPPP IS RETAINED ON-SITE AT OR NEAR THE CONSTRUCTION ENTRANCE. IF A CONSTRUCTION TRAILER IN NOT AVAILABLE, THE CONTRACTOR SHALL PROVIDE A WATERPROOF ENCLOSURE NEAR THE CONSTRUCTION ENTRANCE TO PLACE THE SWPPP. IN ADDITION TO THE SWPPP, THE CONTRACTOR SHALL MAKE CERTAIN THAT THE FOLLOWING INFORMATION MUST ALSO BE POSTED AT THE CONSTRUCTION SITE (IN A CONSTRUCTION TRAILER OR IN THE WATERPROOF ENCLOSURE):
  - A) A COPY OF THE NOTICE OF COVERAGE (NOC) WITH THE NPDES PERMIT TRACKING NUMBER FOR THE CONSTRUCTION PROJECT NUMBER
  - B) NAME, COMPANY NAME, EMAIL ADDRESS, TELEPHONE NUMBER AND ADDRESS OF THE PROJECT SITE OWNER OR A LOCAL CONTACT PERSON
  - C) A BRIEF DESCRIPTION OF THE PROJECT
  - D) THE LOCATION OF THE SWPPP IF AN ON-SITE LOCATION FOR STORING THE PLAN IS NOT AVAILABLE.
- B. PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL INSTALL ALL EROSION CONTROL MEASURES SPECIFIED IN THE EROSION CONTROL PLANS OR REQUIRED BY THE RESPECTIVE MUNICIPALITY THAT THE PROJECT IS LOCATED. EROSION CONTROL MEASURES SHALL BE INSTALLED PRIOR TO LAND DISTURBANCE.
- C. PROVISIONS TO PREVENT EROSION OF SOIL FROM THE SITE SHALL BE AT A MINIMUM IN CONFORMANCE WITH THE REQUIREMENTS OF THE TENNESSEE EROSION AND SEDIMENT CONTROL HANDBOOKS. EROSION CONTROL MEASURES SHALL BE MAINTAINED AT ALL TIMES. IF FULL IMPLEMENTATION OF THE APPROVED PLAN DOES NOT PROVIDE FOR EFFECTIVE EROSION CONTROL, ADDITIONAL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE IMPLEMENTED TO CONTROL OR TREAT THE SEDIMENT SOURCE.
- D. FAILURE TO INSTALL, OPERATE, OR MAINTAIN ALL EROSION CONTROL MEASURES WILL RESULT IN ALL CONSTRUCTION BEING STOPPED ON THE JOB SITE UNTIL SUCH MEASURES ARE CORRECTED BACK TO THE STANDARDS SPECIFIED IN THE TENNESSEE EROSION AND SEDIMENT CONTROL HANDBOOKS, CURRENT EDITION.
- E. CONSTRUCTION EXITS SHALL BE CONSTRUCTED AT EACH POINT OF ENTRY OR EXIT FROM THE SITE AND SHALL BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OR FLOW OF MUD ONTO PUBLIC RIGHTS-OF-WAY.

GRADING INFORMATION:

- A. THE CONTRACTOR SHALL CALL "TENNESSEE ONE CALL" (811) 72 HOURS PRIOR TO PROCEEDING WITH ANY EXCAVATION.
- B. ANY AREA THAT IS DISTURBED OUTSIDE LIMITS OF CONSTRUCTION DURING THE LIFE OF THIS PROJECT SHALL BE REPAIRED BY THE CONTRACTOR BY HIS EXPENSE.
- C. THE CONTRACTOR SHALL NOT DISPOSE OF ANY MATERIAL EITHER ON OR OFF STATE-OWNED RIGHT-OF-WAY IN A REGULATORY FLOOD WAY AS DEFINED BY THE FEDERAL EMERGENCY MANAGEMENT AGENCY (FEMA) WITHOUT APPROVAL BY FEMA. ALL MATERIAL SHALL BE DISPOSED OF IN UPLAND (NON-WETLAND) AREAS AND ABOVE ORDINARY HIGH WATER OF ANY ADJACENT WATERCOURSE. THE DESIRE TO NOT ELIMINATE THE NEED TO OBTAIN ANY OTHER LICENSES OR PERMITS THAT MAY BE REQUIRED BY ANY OTHER FEDERAL, STATE, OR LOCAL AGENCY
- D. TOPSOIL SHALL BE STORED ON SITE IN LOCATIONS APPROVED BY THE OWNER'S REPRESENTATIVE. STOCKPILED TOPSOIL OR FILL MATERIAL SHALL BE TREATED SO NO SEDIMENT RUN-OFF WILL CONTAMINATE SURROUNDING AREAS OR ENTER NEARBY STREAMS.
- E. UNSUITABLE SOILS SHALL BE UNIFORMLY SPREAD ACROSS NON-STRUCTURAL FILL AREAS AND COVERED WITH TOPSOIL AND SEEDED.
- F. FILL AREA SHALL BE PROOF-ROLLED WITH RUBBER-TIRED EQUIPMENT WITH A MINIMUM WEIGHT OF FIFTEEN TONS PRIOR TO BEGINNING FILL OPERATION. AREAS WHICH ARE SOFT OR UNSTABLE SHALL BE UNDERCUT UNTIL STABLE SOILS ARE FOUND. RE-COMPACTION OF THESE SOILS SHALL BE TO 98% MAXIMUM DRY DENSITY AS PER ASTM D698 (STANDARD PROCTOR)
- G. CUT AREA SHALL BE PROOF-ROLLED AFTER FINAL SUBGRADE IS ACHIEVED IN THE SAME MANNER AS FILLED AREAS. SOFT OR UNSTABLE SOILS SHALL BE SCARIFIED TO A DEPTH OF 12" AND RE-COMPACTED TO THE RECOMMENDATIONS PROVIDED BY THE GEOTECHNICAL ENGINEER.
- H. ALL GRADING SHALL BE COMPLETED TO THE LEVEL INDICATED BY THE SCOPE OF WORK LISTED IN THE BID DOCUMENTS.
- I. ELEVATIONS SHOWN ON THE PLANS IS THE FINISH GRADE ELEVATION.
- J. GRADING SHALL BE SEQUENCED SO THAT BASE STONE IS PLACED WITHIN 10 CALENDAR DAYS PF ACHIEVING OPTIMUM SUBGRADE COMPACTION.
- K. CONTRACTOR TO EMPLOY A QUALIFIED SOILS TESTING LABORATORY/ ENGINEER TO OBSERVE AN REQUIRED SOILS TESTING AND MAKE TESTS AS REQUIRED.
- L. HAVE EARTH BORROW FILL, AGGREGATE, AND TOPSOIL AND STRUCTURAL FILL TESTED AND APPROVED BY DESIGNATED TESTING LABORATORY BEFORE MOVING IT TO THE JOB SITE.
- M. CONTRACTOR SHALL OBSERVE PROOF-ROLLING OF AREAS WHERE BUILDING AND PAVING WILL BE LOCATED TO DETERMINE ADEQUACY OF SOIL COMPACTION AND IN-PLACE SOILS. OTHER AREAS WILL BE INSPECTED BY SOILS ENGINEER TO DETERMINE ADEQUACY IN THOSE AREAS. IF SOILS ARE NOT ADEQUATE TO BEAR WEIGHTS THAT WILL BE IMPOSED, TESTING LABORATORY WILL OBSERVE AND REPORT CORRECTIVE ACTION TAKEN.
- N. TEST IN-PLACE SOIL AND FILLED AND COMPACTED AREAS. IF THESE ARE NOT ADEQUATE TO BEAR WEIGHTS IMPOSED, TESTING LABORATORY WILL ADVICE THE OWNER'S REPRESENTATIVE OF THEIR RECOMMENDATIONS. HE WILL DIRECT ANY CORRECTIVE MEASURES THAT ARE NECESSARY.
- O. SOILS COMPACTION TESTING OF IN-PLACE AND FILLED AND COMPACTED AREAS WILL BE PERFORMED BY TESTING LABORATORY IN ACCORDANCE WITH THEIR REQUIREMENTS
- P. THE SOILS ENGINEER'S AND TESTING LABORATORY'S FEES WILL BE PAID BY THE CONTRACTOR.
- Q. APPLICABLE SPECIFICATIONS FOR COMPACTED FILL: THE FOLLOWING CURRENT AMERICAN SOCIETY OF TESTING MATERIALS (ASTM) STANDARDS ARE HEREBY MADE PART OF THIS SPECIFICATION:
  - D421-58, DRY PREPARATION OF SOIL SAMPLES FOR GRAIN-SIZE ANALYSIS AND DETERMINATION OF SOIL CONSTANTS.
  - D422 63, STANDARD METHOD OF PARTICLE SIZE ANALYSIS OF SOILS.
  - D1140-54, METHOD OF TEST FOR AMOUNT OF MATERIAL IN SOILS FINER THAN NO.200 SIEVE.
  - D698, METHOD FOR LABORATORY COMPACTION CHARACTERISTICS OF SOIL USING STANDARD EFFORT
  - D1557-78, STANDARD TEST METHODS FOR MOISTURE-DENSITY RELATIONS OF SOILS AND SOIL-AGGREGATE MIXTURES USING 10 LB. (4.54-KG) RAMMER AND 18-INCH (457 MM) DROP.
- O. PROVIDE POSITIVE DRAINAGE AWAY FROM BUILDINGS AT ALL LOCATIONS UNLESS OTHERWISE NOTED.
- P. CONTRACTOR SHALL REVIEW THE SITE SPECIFIC GEOTECHNICAL REPORT PRIOR TO COMMENCING WITH GRADING OPERATIONS. WHERE CONFLICTS BETWEEN THE GRADING NOTES AND GEOTECHNICAL REPORT EXIST, THE MORE STRINGENT REQUIREMENT SHALL APPLY.
- Q. CONTRACTOR IS RESPONSIBLE FOR DOCUMENTING WITH LOAD TICKETS, PHOTOGRAPHS, LOG BOOK, VIDEO RECORDING AND OTHER MEANS AS NECESSARY TO VERIFY THE INSTALLATION OF STORMWATER BEST MANAGEMENT PRACTICES REQUIRED BY THE LOCAL MUNICIPALITY AND JURISDICTION. AS-BUILT TOPOGRAPHY AND UTILITY PLANS HAVING BEEN PREPARED BY A QUALIFIED LAND SURVEYOR ARE REQUIRED TO BE SUBMITTED TO 615 DESIGN GROUP AT THE CONCLUSION OF THE PROJECT FOR VERIFICATION OF DESIGN INTENT. ANY MODIFICATIONS TO THE GRADING AND UTILITY SYSTEMS REQUIRED, NOT PREVIOUSLY APPROVED BY THE OWNER AND ENGINEER ARE THE RESPONSIBILITY OF THE CONTRACTOR.

STORM INFORMATION:

1. REINFORCED CONCRETE PIPE SHALL BE RCP CLASS III UNLESS OTHERWISE NOTED WITH BELL-AND-SPIGOT AND GASKETED JOINTS WITH ASTM C 443 RUBBER GASKETS. FILL HEIGHTS OVER 33 FEET SHALL REQUIRE CLASS IV RCP STORM PIPE.
2. STORM INLETS SHALL BE PRECAST IN ACCORDANCE WITH ROBERTSON COUNTY SPECIFICATIONS WHICH MEET OR EXCEED ASTM C 478.
3. ALL MANHOLE FRAMES AND COVERS ARE TO BE PER ROBERTSON COUNTY STANDARD DETAIL FOR DIMENSIONS AND MATERIALS AND AS BELOW IF NOT OTHERWISE INDICATED. FERROUS; 24-INCH (610-MM) ID BY 7- TO 9-INCH (175- TO 225-MM) RISER WITH 4-INCH- (102-MM-) MINIMUM WIDTH FLANGE AND 26-INCH- (660-MM-) DIAMETER COVER. INCLUDE INDENTED TOP DESIGN WITH LETTERING CAST INTO COVER, USING WORDING EQUIVALENT TO "STORM SEWER."
4. MATERIAL: GRAY IRON ASTM A48 CLASS 30 UNLESS OTHERWISE INDICATED.
5. ALL HDPE PIPE SHALL BE CORRUGATED HIGH DENSITY POLYETHYLENE SMOOTH INTERIOR PIPE. HDPE PIPE SHALL CONFORM TO ASTM D3350 WITH SOIL TIGHT JOINTS.
6. ALL HDPE SHALL BE INSTALLED PER MANUFACTURER'S RECOMMENDATIONS AND AASHTO SECTION 30.
7. CONTRACTOR TO PROVIDE AND INSTALL MANUFACTURER RECOMMENDED FITTINGS ON RCP CONNECTIONS TO HDPE STRUCTURES.
8. REFER TO PIPE CHART FOR CASTING TYPES. INSTALL REDUCERS AS NECESSARY PER MANUFACTURER'S SPECIFICATIONS TO ACCOMMODATE LARGER INLET SIZES.
9. FOLLOW CONSTRUCTION PLANS AND MANUFACTURER DETAILS, SPECIFICATIONS, AND INSTALLATION INSTRUCTION AS INCLUDED WITHIN THE PLANS AND PROVIDED BY MANUFACTURER FOR THE INSTALLATION OF WATER QUALITY AND DETENTION SYSTEMS
10. CONTRACTOR SHALL SUBMIT SHOP DRAWINGS FOR ALL STORM SEWER PIPE, STRUCTURES, WATER QUALITY STRUCTURES, AND DETENTION STRUCTURES FOR ENGINEER AND OWNER APPROVAL PRIOR TO ORDERING MATERIALS
11. WHERE A CULVERT (PIPE, SLAB, OR BOX) IS MOVED TO A NEW LOCATION OTHER THAN THAT SHOWN ON THE PLANS, INCREASING OR DECREASING THE AMOUNT OF CULVERT EXCAVATION WILL NOT RESULT IN AN INCREASE OR DECREASE IN THE AMOUNT OF PAYMENT THAT WILL BE MADE DUE TO SUCH CHANGE.

PAVEMENT INFORMATION:

1. PAVEMENT:
   - A. ALL MATERIALS, EQUIPMENT, METHODS OF CONSTRUCTION, AND WORKMANSHIP SHALL CONFORM TO THE TENNESSEE DEPARTMENT OF TRANSPORTATION, TDOT, STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, CURRENT EDITION.
   - B. SEE PAVEMENT DETAILS ON CONSTRUCTION DOCUMENTS FOR SPECIFIC DESIGN INFORMATION AND REQUIREMENTS.
   - C. ALL CURB AND GUTTER TO BE 24" AND CONSTRUCTED OF 3000 P.S.I. CONCRETE UNLESS OTHERWISE NOTED.
   - D. THE CONTRACTOR SHALL BE REQUIRED TO COLD PLANE AND/OR PAVE IN THE DIRECTION OF TRAFFIC.
   - E. THE CONTRACTOR SHALL ATTACH A DEVICE TO THE SCREED OF THE PAVER SUCH THAT MATERIAL IS CONFINED AT THE END GATE AND EXTRUDES THE ASPHALT MATERIAL IN SUCH A WAY THAT RESULTS IN A CONSOLIDATED WEDGE-SHAPE PAVEMENT EDGE OF APPROXIMATELY 25 TO 30 DEGREES AS IT LEAVES THE PAVER (MEASURED FROM A LINE PARALLELL TO THE PAVEMENT SURFACE.) THE DEVICE SHALL MEET THE REQUIREMENTS THAT ARE CURRENTLY SET FORTH IN SPECIAL PROVISION 407SE.
2. SIGNING AND STRIPING:
   - A. SIGNING AND STRIPING TO BE PROVIDED BY THE CONTRACTOR ACCORDING TO THE DRAWINGS AND SPECIFICATIONS
   - B. ALL PAVEMENT MARKINGS SHALL CONFORM TO CURRENT MUTCD STANDARDS. ALL PAVEMENT MARKINGS ON PRIVATE PROPERTY SHALL BE PAINT, UNLESS NOTED OTHERWISE. ALL PAVEMENT MARKINGS ON PUBLIC RIGHT-OF-WAY SHALL BE PREFORMED PLASTIC OR THERMOPLASTIC, UNLESS NOTED OTHERWISE.

TRAFFIC CONTROL:

- A. SUFFICIENT BARRICADES, LIGHTS, SIGNS, AND OTHER TRAFFIC CONTROL METHODS IN ACCORDANCE WITH GOVERNING ORDINANCES MAY BE NECESSARY FOR THE PROTECTION AND SAFETY OF THE PUBLIC. SAID CONTROL DEVICES SHALL BE PER THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD), CURRENT EDITION, AND SHALL BE PROVIDED AND MAINTAINED THROUGHOUT CONSTRUCTION.
- B. TRAFFIC CONTROLS AND OTHER WARNING DEVICES SHALL BE INSTALLED PRIOR TO THE COMMENCEMENT OF ANY WORK ON CITY, COUNTY, OR TENNESSEE DEPARTMENT OF TRANSPORTATION ROADS. THEY SHALL BE MAINTAINED THROUGHOUT CONSTRUCTION AND SHALL REMAIN IN PLACE UNTIL THE CONCLUSION OF ALL WORK. CONTRACTOR TO COORDINATE ANY (ROAD CLOSURE, LANE CLOSURE) WITH LOCAL CITY, POLICE, AND FIRE DEPARTMENT IN ADVANCE MINIMUM 7 DAY NOTICE.
- C. ALL WARNING DEVICES SHALL BE EITHER TYPE I BARRICADES OR DRUMS WITH WARNING LIGHTS ON EVERY OTHER DEVICE. THEY SHALL CONFORM TO THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD), CURRENT EDITION, AND LOCAL MUNICIPALITY STANDARDS FOR COLOR, SIZE, REFLECTIVITY, HEIGHT, AND PLACEMENT.

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REGISTERED ENGINEER
120717
STATE OF TENNESSEE

DOLLAR GENERAL
0 HWY 25E, SPRINGFIELD TN

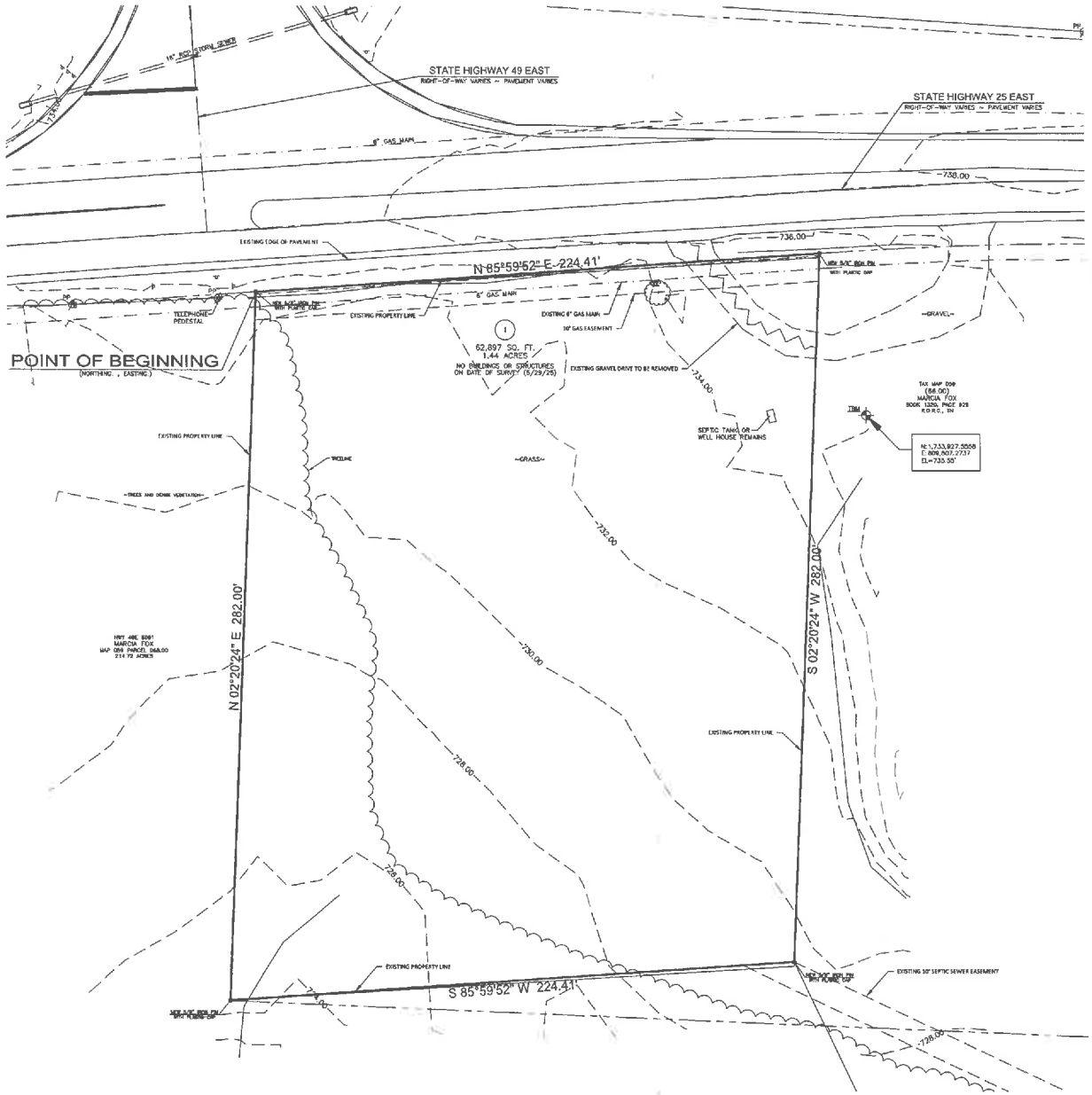
TURNER AND ASSOCIATES

REVISIONS		
NUMBER	DESCRIPTION	DATE

PROJECT #:	1062002
DESIGNED BY:	CJM
DRAWN BY:	CJM
DATE:	08/14/2025

GENERAL NOTES

C0.1



EXISTING CONDITIONS NOTES

1. EXISTING SURVEY INFORMATION IS DERIVED FROM A BOUNDARY AND TOPOGRAPHIC SURVEY PROVIDED BY BRIAN REITSCHNEIDER, DATED 06/05/2025.
2. CONTRACTOR TO NOTIFY CITY INSPECTOR PRIOR TO ANY DEMOLITION ON SITE
3. ALL EXISTING STRUCTURES TO BE DEMOLISHED UNLESS OTHERWISE NOTED
4. PRIOR TO THE START OF DEMOLITION / GRADING OPERATIONS, ALL OVERHEAD AND UNDERGROUND UTILITIES SHALL BE LOCATED. ALL REMOVAL AND / OR RELOCATION OF UTILITIES SHALL BE COORDINATED WITH THE RESPECTIVE UTILITY COMPANIES
5. THE CONTRACTOR WILL PROVIDE ALL NECESSARY PROTECTIVE MEASURES TO SAFEGUARD EXISTING UTILITIES FROM DAMAGE DURING CONSTRUCTION OF THIS PROJECT.
6. ALL MATERIAL REMOVED FROM THE SITE ARE TO BE DISPOSED OF IN ACCORDANCE WITH LOCAL AND STATE REGULATIONS

EXISTING UTILITIES NOTE

CONTRACTOR TO VERIFY LOCATION OF ALL EXISTING UTILITIES PRIOR TO CONSTRUCTION AND NOTIFY ENGINEER IMMEDIATELY OF ANY DISCREPANCIES OF EXISTING OR PROPOSED UTILITIES. CONTRACTOR WILL PROVIDE ALL NECESSARY PROTECTIVE MEASURES TO SAFEGUARD EXISTING UTILITIES FROM DAMAGE DURING CONSTRUCTION OF THIS PROJECT. ALL REMOVAL AND/OR RELOCATION OF UTILITIES SHALL BE COORDINATED WITH THE RESPECTIVE UTILITY COMPANIES

DEMOLITION LEGEND

- DEMOLISH STRUCTURE
- DEMOLISH PAVEMENT
- DEMOLISH LINEAR OBJECT
- DEMOLISH OBJECT

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121111
12/31/2026

DOLLAR GENERAL
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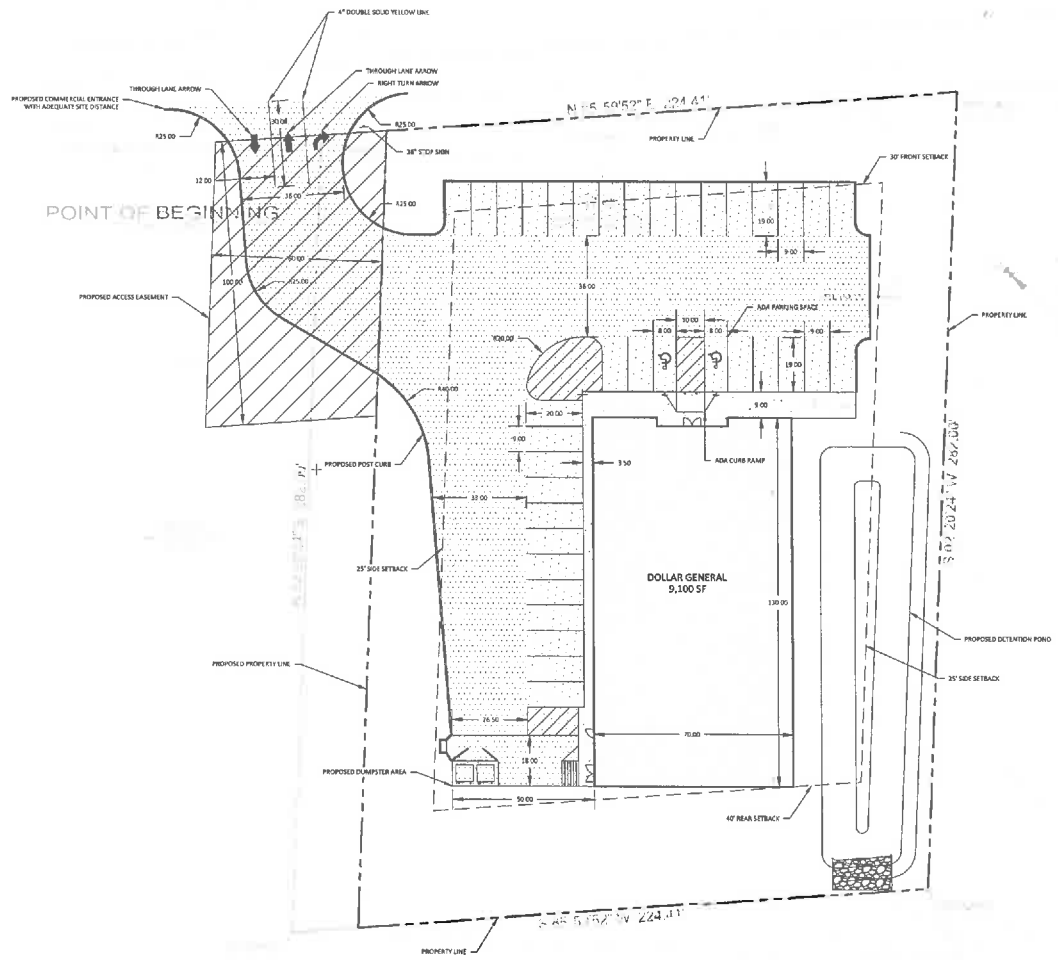
TURNER AND ASSOCIATES

REVISIONS		
NUMBER	DESCRIPTION	DATE

PROJECT #	1082002
DESIGNED BY	CJM
DRAWN BY	CJM
DATE	06/14/2025

EXISTING CONDITIONS

C1.0



SITE DATA TABLE

SITE ADDRESS:	HIGHWAY 25E SPRINGFIELD, TN 37172
OWNER:	TURNER & ASSOCIATES REALTY, LLC
PARCEL ID:	TAX MAP 069 PARCEL 66.00
COUNCIL WARD: COUNCIL MEMBER:	
SITE AREA:	+/- 1.29 ACRES (56,409 SF)
EXISTING IMPERVIOUS AREA: PROPOSED IMPERVIOUS AREA:	0.00 ACRES (0 SF) 0.88 ACRES (38,361 SF)
TOTAL DISTURBANCE:	+/- 1.55 ACRES (67,667 SF)
EXISTING ZONING:	C-1
EXISTING USE: PROPOSED USE:	VACANT LOT COMMERCIAL RETAIL
MINIMUM SETBACKS: FRONT: REAR: SIDE:	 30 FT 40 FT (NO FIRE PROTECTION) 25 FT (NO FIRE PROTECTION)
EXISTING BLDG AREA: PROPOSED ADDED BLDG AREA: PROPOSED TOTAL BLDG AREA:	0 SF 9,100 SF 9,100 SF
PROPOSED BLDG HEIGHT:	35 FT MAX
MAX BLDG COVERAGE: PROPOSED LOT COVERAGE:	60.0% (33,845 SF) 16.1% (9,100 SF)
MINIMUM LOT WIDTH AT BLDG SETBACK:	100 FT (REQUIRED) 200 FT (PROVIDED)
PARKING REQUIRED: GENERAL RETAIL:	 1 SPACE / 250 SF (37 SPACES)
PARKING PROVIDED:	37 SPACES (2 ADA)

NOTES

1. EXISTING SURVEY INFORMATION IS DERIVED FROM A BOUNDARY AND TOPOGRAPHIC SURVEY PROVIDED BY BRIAN REPSCHNEIDER, DATED 06/05/2025
2. NO PORTION OF THIS PROPERTY IS LOCATED IN A SPECIAL FLOOD AREA AS PER F.I.R.M. MAP NO. 47147C0317C, DATED 4/16/2006

PAVEMENT LEGEND

PROPOSED CONCRETE

PROPOSED LIGHT DUTY ASPHALT

PROPOSED HEAVY DUTY ASPHALT

9 0 20 40 Feet

615 DESIGN GROUP

SCOTT J. MURRAY
REGISTERED ENGINEER
STATE OF TENNESSEE

DOLLAR GENERAL
0 HWY 25E, SPRINGFIELD TN
TURNER AND ASSOCIATES

REVISIONS		
NUMBER	DESCRIPTION	DATE

PROJECT #:	108.2002
DESIGNED BY:	CJM
DRAWN BY:	CJM
DATE:	08/14/2025

SITE PLAN

C2.0

1. SWPPP REQUIREMENTS (3.0)

1.1.HAS THE SWPPP BEEN PREPARED BY AN INDIVIDUAL THAT HAS THE FOLLOWING CERTIFICATIONS (3.1.1) ?
YES ■ NO □
(CHECK ALL THAT APPLY BELOW)
1.1.1. □ CERTIFIED PROFESSIONAL IN EROSION AND SEDIMENT CONTROL; OR
1.1.2. ■ TDEC LEVEL II CERTIFICATION

1.2.DO THE EPSC PLANS INCLUDE SEDIMENT BASINS OR OTHER SEDIMENT CONTROLS INVOLVING STRUCTURAL, HYDRAULIC, HYDROLOGIC OR OTHER ENGINEERING CALCULATIONS (3.1.1)?
YES ■ NO □
IF YES, HAVE THE EPSC PLANS BEEN PREPARED, STAMPED AND CERTIFIED BY A LICENSED PROFESSIONAL ENGINEER OR LANDSCAPE ARCHITECT (3.1.1)?
YES ■ NO □

1.3.DO THE PROJECT STORMWATER OUTFALLS DISCHARGE INTO THE FOLLOWING (5.4.1)?
YES □ NO ■
(CHECK ALL THAT APPLY BELOW)
1.3.1. □ IMPAIRED WATERS (303D FOR SILTATION OR HABITAT ALTERATION)
1.3.2. □ TENNESSEE KNOWN EXCEPTIONAL WATERS
IF YES, HAVE THE EPSC MEASURES BEEN DESIGNED TO CONTROL STORM RUNOFF GENERATED BY A 5-YR, 24-HR STORM EVENT (5.4.1.A)? YES □ NO □
IF YES, HAVE THE EPSC PLANS BEEN PREPARED BY AN INDIVIDUAL WHO HAS COMPLETED TDEC LEVEL II (5.4.1.B)? YES □ NO □
IF YES, HAS THE SWPPP BEEN PREPARED BY AN INDIVIDUAL WHO HAS COMPLETED TDEC LEVEL II (5.4.1.B)?
YES □ NO □

2. SITE DESCRIPTION (3.5.1)

2.1.SITE MAP(S) (2.6.2):
USGS QUAD MAP IS INCLUDED AS THE FIRST PAGE OF THIS SWPPP.
LATITUDE: [illegible]
LONGITUDE: [illegible]

2.2 DESCRIPTION OF ALL CONSTRUCTION ACTIVITY AT THE SITE (3.5.1.A):
CONSTRUCTION OF COMMERCIAL RETAIL DEVELOPMENT WITH ASSOCIATED PARKING.

2.3.MAJOR SOIL DISTURBING ACTIVITIES (3.5.1.B):
(CHECK ALL THAT APPLY)
2.3.1. ■CLEARING AND GRUBBING
2.3.2. ■EXCAVATION
2.3.3. ■CUTTING AND FILLING
2.3.4. ■UTILITY TRENCHING
2.3.5. ■FINAL GRADING AND SHAPING

2.4.TOTAL PROJECT AREA (3.5.1.C):
2.4.1. TOTAL PROJECT: [illegible] ACRES ±
2.4.2. MITIGATION SITE (IF APPLICABLE): N/A

2.5.TOTAL AREA TO BE DISTURBED (3.5.1.C): 1.55 ACRES ±
2.5.1. TOTAL PROJECT: 1.55 ACRES ±
2.5.2. MITIGATION SITE (IF APPLICABLE): N/A
IF GREATER THAN 50 ACRES, IS THE CONSTRUCTION PHASED TO KEEP THE TOTAL DISTURBED AREA LESS THAN 50 ACRES AT ANY ONE TIME (3.5.1.M, 3.5.3.1.K)?
YES □ NO □

2.6 DESCRIPTION OF EXISTING SITE TOPOGRAPHY (3.5.1.D):
REFER TO THE QUAD MAP AND EROSION CONTROL PLAN SHEETS INCLUDED.
SITE HAS A GRADUAL SLOPE THAT STARTS IN THE NORTHEAST AND FLOWS SOUTH/SOUTHEAST

2.7 PROPOSED CONSTRUCTION AREA (3.5.1.G): SEE THE FOLLOWING ENCLOSED PLANS.
C1.0 EXISTING CONDITIONS PLAN
C3.1 EROSION CONTROL PLAN - INITIAL
C3.2 EROSION CONTROL PLAN - INTERMEDIATE
C3.3 EROSION CONTROL PLAN - FINAL

2.8 ARE ANY DISCHARGES ASSOCIATED WITH INDUSTRIAL (NON-CONSTRUCTION STORMWATER) ACTIVITY EXPECTED (3.5.1.H)? YES □ NO ■
IF YES, SPECIFY THE LOCATION OF THE ACTIVITY AND ITS PERMIT NUMBER.

2.9.SOIL PROPERTIES ON SITE (3.5.1.E, 4.1.1):

SOIL NAME	HSG	% OF SITE
Sa SANGO SILT LOAM (0-2% SLOPES)	C/D	100.0

2.10. PROJECT RUNOFF COEFFICIENTS AND AREA PERCENTAGES (3.5.1.F):

EXISTING CONDITIONS:

AREA TYPE	AREA (AC)	C FACTOR
GRASS	[illegible]	[illegible]
GRAVEL	[illegible]	[illegible]
IMPERVIOUS	[illegible]	[illegible]
COMPOSITE C FACTOR:		[illegible]

PROPOSED CONDITIONS:

AREA TYPE	AREA (AC)	C FACTOR
GRASS	0.83	[illegible]
GRAVEL	0.00	[illegible]
IMPERVIOUS	0.66	[illegible]
COMPOSITE C FACTOR:		[illegible]

3. ORDER OF CONSTRUCTION ACTIVITIES (3.5.1.B, 3.5.2.A)

3.1.INSTALLATION OF CONSTRUCTION EXIT AND PERIMETER EROSION CONTROL MEASURES PER THE INITIAL EROSION CONTROL PLAN.
3.2.CLEARING AND GRUBBING OF SITE.
3.3.STRIPPING AND STOCKPILING OF TOPSOIL.
3.4.ROUGH GRADING OF THE SITE.
3.5.INSTALLATION OF STORM DRAINAGE INCLUDING ADDITIONAL EROSION CONTROL MEASURES SUCH AS INLET PROTECTION AND TEMPORARY SEEDING, WHERE REQUIRED.
3.6.INSTALLATION OF UNDERGROUND UTILITIES.
3.7.INSTALLATION OF EROSION CONTROL BLANKETS AND TEMPORARY SEEDING AND MULCHING AS NEEDED THROUGHOUT GRADING OPERATIONS.
3.8.INSTALLATION OF CURB AND GUTTER.
3.9.PLACEMENT OF BASE STONE AND BINDER ASPHALT COURSE FOR ROADWAYS.
3.10. BACKFILLING OF PAVEMENT AND CURBS.
3.11. CONSTRUCTION OF VERTICAL STRUCTURES.
3.12. PLACEMENT OF TOPSOIL, FINAL SEEDING, AND LANDSCAPING.

4. STREAM, OUTFALL, WETLAND, TMDL AND ENDANGERED SPECIES INFORMATION

4.1.STREAM INFORMATION
WILL CONSTRUCTION AND/OR EROSION PREVENTION AND SEDIMENT CONTROLS IMPACT ANY STREAMS?
YES □ NO ■
4.1.1. RECEIVING STREAMS (3.5.1.J)
4.1.1.1. STREAM NAME: BEAVER DAM CREEK
4.1.1.2. IMPAIRED FOR SILTATION OR HABITAT ALTERATION? YES □ NO ■
4.1.1.3. KNOWN EXCEPTIONAL QUALITY WATERS? YES □ NO ■
4.1.2. ARE BUFFER ZONES REQUIRED ON SITE (3.5.1.K, 4.1.2, 5.4.2)? YES □ NO ■
IF YES, ARE THEY SHOWN ON THE PLAN SHEETS? YES □ NO ■
IF YES, WHICH SIZE IS APPLICABLE?
□ 60-FEET FOR IMPAIRED AND EXCEPTIONAL WATERS (AVERAGE WIDTH PER SIDE WITH A MINIMUM OF 30-FEET)
□ 30-FEET FOR ALL OTHER STREAMS (AVERAGE WIDTH PER SIDE WITH A MINIMUM OF 15-FEET)
4.1.3. ARE THERE BUFFER ZONE EXEMPTIONS (4.1.2.1)? YES □ NO ■

4.2.OUTFALL INFORMATION (3.5.1.D):

OUTFALL	DRAINAGE AREA	SEDIMENT BASIN	RECEIVING STREAM
1 - SOUTH	1.29	NO	BEAVER DAM CREEK

4.2.1. HAVE ALL OUTFALLS BEEN LABELED ON THE EPSC PLAN SHEETS (3.5.1.G, 5.4.1.F)?
YES ■ NO □

4.2.2. HAVE ALL OUTFALLS BEEN LABELED ON THE USGS TOPOGRAPHIC MAP (2.6.2)?
YES ■ NO □

4.2.3. SEDIMENT BASIN OR EQUIVALENT MEASURE(S):
4.2.3.1.1. A SEDIMENT BASIN OR EQUIVALENT MEASURE(S) WILL BE PROVIDED FOR ANY OUTFALL DRAINAGE AREA PER THE FOLLOWING:
4.2.3.1.2. TEN ACRES OR MORE FOR AN OUTFALL THAT DOES NOT DISCHARGE TO AN IMPAIRED STREAM OR KNOWN EXCEPTIONAL QUALITY WATER (3.5.3.3).
4.2.3.1.3. OF FIVE ACRES OR MORE FOR AN OUTFALL THAT DISCHARGES TO AN IMPAIRED STREAM OR KNOWN EXCEPTIONAL QUALITY WATER (5.4.1.F)
4.2.3.2. ARE EQUIVALENT MEASURES BEING SUBSTITUTED FOR A SEDIMENT BASIN?
YES ■ NO □ N/A □
IF SO, DESCRIBE: SILT FENCE OUTLETS, AND PERIMETER SILT FENCE ARE BEING UTILIZED IN SUB-WATERSHEDS WITHIN THE OUTFALL WATERSHEDS.
4.2.3.3. WHERE POSSIBLE, HAS NON-PROJECT RUN-ON BEEN DIVERTED THROUGH THE PROJECT SO THAT THE OFF-SITE RUN-ON WILL NOT FLOW OVER DISTURBED AREAS WITHIN THE PROJECT AREA, THUS SEPARATING NON-PROJECT RUN-ON FROM PROJECT RUN-OFF THEREBY REDUCING THE DRAINAGE AREA TO ANY ONE OUTFALL (3.5.3.3, 5.4.1.F) YES ■ NO □ N/A □

4.3.WETLAND INFORMATION
WILL CONSTRUCTION AND/OR EROSION AND SEDIMENT CONTROLS IMPACT ANY WETLANDS? YES □ NO ■
4.3.1. IMPACTED WETLANDS:

LABEL LOCATION	TEMP. IMPACTS (AC)	PERMANENT IMPACTS (AC)

4.4.TOTAL MAXIMUM DAILY LOADS (TMDL) INFORMATION (3.5.10):
4.4.1. IS THIS PROJECT LOCATED IN A WATERSHED THAT MAINTAINS AN EPA APPROVED TMDL FOR SILTATION? YES □ NO ■

4.5.ENDANGERED SPECIES INFORMATION (3.5.5.E):
IS THERE STATE OR FEDERALLY LISTED SPECIES LOCATED WITHIN THE PROJECT AREA? SPECIAL NOTES ARE REQUIRED TO DESCRIBE MEASURES NECESSARY TO PREVENT "TAKING" OF LEGALLY PROTECTED STATE OR FEDERALLY LISTED THREATENED OR ENDANGERED AQUATIC FAUNA AND/OR CRITICAL HABITAT.
YES □ NO ■
IF YES, LIST ALL PLAN SHEETS WHERE SPECIAL NOTES HAVE BEEN ADDED.

5. EROSION PREVENTION AND SEDIMENT CONTROL (EPSC) MEASURES (3.5.3)

5.1.EPSC MEASURES MUST BE DESIGNED, INSTALLED AND MAINTAINED TO CONTROL STORMWATER VOLUME AND VELOCITY WITHIN THE SITE TO MINIMIZE EROSION (4.1.1).

5.2.EPSC MEASURES MUST CONTROL STORMWATER DISCHARGES, INCLUDING BOTH PEAK FLOWS AND TOTAL STORMWATER VOLUME, TO MINIMIZE EROSION AT OUTLETS, STREAM CHANNELS AND STREAM BANKS (4.1.1).

5.3.THE EPSC MEASURES HAVE, AT A MINIMUM, BEEN DESIGNED FOR THE:
□ 2-YEAR, 24 HOUR STORM EVENT WHEN RECEIVING WATER IS NOT LISTED ON THE 303D LIST DUE TO SILTATION OR HABITAT ALTERATION
■ 5-YEAR, 24 HOUR STORM EVENT WHEN RECEIVING WATER IS LISTED ON THE 303D LIST DUE TO SILTATION OR HABITAT ALTERATION

5.4.HAVE PHASED EPSC PLANS BEEN PREPARED FOR THE PROJECT (3.5.2)?
YES ■ NO □ (IF YES, CHECK THE APPLICABLE BOX BELOW).
5.4.1. □ PROJECT DISTURBED AREA IS LESS THAN 5 ACRES (MINIMUM OF TWO PHASES OF EPSC PLANS REQUIRED)
5.4.2. ■ PROJECT DISTURBED AREA IS GREATER THAN 5 ACRES (MINIMUM OF THREE PHASES OF EPSC PLANS REQUIRED)

5.5.HAVE STEEP SLOPES (GREATER THAN 35%) BEEN MINIMALLY DISTURBED AND/OR PROTECTED BY CONVEYING RUNOFF NON-EROSIVELY AROUND OR OVER THE SLOPE (3.5.3.2, 10 "STEEP SLOPE")?
YES ■ NO □ N/A □

5.6.IS ADDITIONAL PHYSICAL OR CHEMICAL TREATMENT OF STORMWATER RUNOFF NECESSARY (5.4.1.a)?
YES □ NO ■

5.7.ALL PHYSICAL AND/OR CHEMICAL TREATMENT WILL BE RESEARCHED, APPLIED IN ACCORDANCE WITH MANUFACTURER'S GUIDELINES AND FULLY DESCRIBED ON THE EPSC PLANS. IF CHEMICAL TREATMENT IS NECESSARY, THE SWPPP WILL BE MODIFIED (3.5.3.1.B).

5.8.ARE THE LIMITS OF DISTURBANCE CLEARLY MARKED IN THE SWPPP (3.5.1.N)?
YES ■ NO □

5.9.EPSC MEASURES WILL NOT BE INSTALLED IN STREAMS OR WETLANDS WITHOUT FIRST OBTAINING US COE SECTION 404, TDEC ARAP, AND TVA PERMITS AS APPLICABLE (3.5.3.3)

5.10. DISCHARGES FROM DEWATERING ACTIVITIES ARE PROHIBITED UNLESS MANAGED BY APPROPRIATE CONTROLS (4.1.4). FILTER BAGS ARE TO BE USED DURING ANY DEWATERING OPERATIONS.

5.11. OFF-SITE VEHICLE TRACKING OF SEDIMENTS AND THE GENERATION OF DUST SHALL BE MINIMIZED. A STABILIZED CONSTRUCTION EXIT SHALL BE USED TO REDUCE THE TRACKING OF MUD AND/OR DIRT ONTO PUBLIC ROADS BY CONSTRUCTION VEHICLES (3.5.3.1.N).

5.12. STABILIZATION PRACTICES
5.12.1. PRE-CONSTRUCTION VEGETATIVE GROUND COVER WILL NOT BE DESTROYED, REMOVED OR DISTURBED MORE THAN 14 DAYS PRIOR TO GRADING OR EARTH MOVING UNLESS THE AREA WILL RECEIVE TEMPORARY SEED AND/OR MULCH OR OTHER TEMPORARY COVER IS INSTALLED (3.5.3.1.H).
5.12.2. STABILIZATION MEASURES WILL BE INITIATED AS SOON AS POSSIBLE WHEN CONSTRUCTION ACTIVITIES HAVE TEMPORARILY PERMANENTLY CEASED. TEMPORARY OR PERMANENT STABILIZATION WILL BE COMPLETED WITHIN 14 DAYS AFTER ACTIVITY HAS TEMPORARILY OR PERMANENTLY CEASED IN THAT AREA. PERMANENT STABILIZATION WILL REPLACE TEMPORARY MEASURES AS SOON AS PRACTICABLE (3.5.3.2).
5.12.3. STEEP SLOPES ARE DEFINED AS A NATURAL OR CREATED SLOPE OF 35% GRADE OR STEEPER REGARDLESS OF HEIGHT. STEEP SLOPES SHALL BE TEMPORARILY STABILIZED NO LATER THAN 7 DAYS AFTER CONSTRUCTION ACTIVITY ON THE SLOPE HAS TEMPORARILY OR PERMANENTLY CEASED (3.5.3.2, 10 "STEEP SLOPE").

5.13. A RAIN GAUGE AND DAILY RAINFALL RECORDS SHALL BE MAINTAINED AT THE SITE, OR A REFERENCE SITE WILL BE USED TO RECORD THE DAILY AMOUNT OF PRECIPITATION (3.5.3.1.O).

6. CONSTRUCTION SUPPORT ACTIVITIES

6.1.MATERIAL DISPOSAL (1.2.2, 3.5.3.1.G)
WASTE MATERIAL (EARTH, ROCK, ASPHALT, CONCRETE, ETC.) NOT REQUIRED FOR THE CONSTRUCTION OF THE PROJECT WILL BE DISPOSED OF BY THE CONTRACTOR. THE CONTRACTOR WILL OBTAIN ANY AND ALL NECESSARY PERMITS INCLUDING, BUT NOT LIMITED TO NPDES, AQUATIC RESOURCES ALTERATION PERMIT(S), CORPS OF ENGINEERS SECTION 404 PERMITS, AND TVA SECTION 26A PERMITS TO DISPOSE OF WASTE MATERIALS.

7. MAINTENANCE AND INSPECTION

7.1.INSPECTION PRACTICES (3.5.8)
7.1.1. INSPECTORS MUST HAVE SUCCESSFULLY COMPLETED THE TDEC "FUNDAMENTALS OF EROSION PREVENTION AND SEDIMENT CONTROL LEVEL 1" COURSE (TDEC LEVEL 1), AND THEY MUST MAINTAIN THE CERTIFICATION. A COPY OF THE INSPECTOR'S CERTIFICATION SHOULD BE MAINTAINED ON SITE WITH THE SWPPP (3.5.8.1).
7.1.2. THE INSPECTOR SHALL CONDUCT PRE-CONSTRUCTION INSPECTIONS TO VERIFY AREAS NOT TO BE DISTURBED HAVE BEEN MARKED IN THE SWPPP AND IN THE FIELD BEFORE LAND DISTURBANCE ACTIVITIES BEGIN AND INITIAL MEASURE HAVE BEEN INSTALLED (3.5.1.N, 10 "INSPECTOR").
7.1.3. INSPECTIONS WILL BE CONDUCTED AT LEAST TWICE EVERY CALENDAR WEEK AND AT LEAST 72 HOURS APART (3.5.8.2.A).
7.1.4. WHERE SITES OR PORTION(S) OF CONSTRUCTION SITES HAVE BEEN TEMPORARILY STABILIZED, OR RUNOFF IS UNLIKELY DUE TO WINTER CONDITIONS (I.E. COVERED WITH SNOW OR ICE) OR DUE TO EXTREME DROUGHT, THE FREQUENCY OF INSPECTIONS MAY BE REDUCED TO MONTHLY WITH WRITTEN NOTIFICATION TO TDEC (3.5.8.2.A).
7.1.5. ALL DISTURBED AREAS OF THE SITE THAT HAVE NOT BEEN FINALLY STABILIZED, AREAS USED FOR MATERIAL STORAGE THAT ARE EXPOSED TO PRECIPITATION, STRUCTURAL CONTROL MEASURES, AND LOCATIONS WHERE VEHICLES ENTER OR EXIT THE SITE, AN EACH OUTFALL SHALL BE INSPECTED (3.5.8.2.B)
7.1.6. THE INSPECTOR SHALL OVERSEE THE REQUIREMENTS OF OTHER CONSTRUCTION-RELATED WATER QUALITY PERMITS (I.E. TDEC ARAP, US COE AND TVA SECTION 26A PERMITS) FOR CONSTRUCTION ACTIVITIES AROUND WATERS OF THE STATE (10 "INSPECTOR")
7.1.7. THE SWPPP WILL BE REVISED AS NECESSARY BASED ON THE RESULTS OF THE INSPECTION. REVISION(S) WILL BE RECORDED WITHIN 7 DAYS OF THE INSPECTION. REVISION(S) WILL BE IMPLEMENTED WITHIN 14 DAYS OF THE INSPECTION (3.8.5.2.F).
7.1.8. INSPECTIONS WILL BE DOCUMENTED ON THE CONSTRUCTION STORMWATER INSPECTION CERTIFICATION FORM PROVIDED IN APPENDIX C OF THE CGP (3.5.8.2.G)
7.1.9. TRAINED CERTIFIED INSPECTORS SHALL COMPLETE INSPECTION DOCUMENTATION TO THE BEST OF THEIR ABILITY. FALSIFYING INSPECTION RECORDS OR OTHER DOCUMENTATION OR FAILURE TO COMPLETE INSPECTION DOCUMENTATION SHALL RESULT IN A VIOLATION OF THIS PERMIT AND ANY OTHER APPLICABLE ACTS OR RULES (3.5.8.2.H).
7.1.10. DOCUMENTATION OF INSPECTIONS WILL BE MAINTAINED ON SITE WITH THE SWPPP (3.5.8.2.G).

7.2.MAINTENANCE PRACTICES
7.2.1. ALL CONTROLS WILL BE MAINTAINED IN GOOD AND EFFECTIVE OPERATING ORDER. NECESSARY REPAIRS OR MAINTENANCE WILL BE ACCOMPLISHED BEFORE THE NEXT RAIN EVENT AND IN NO CASE MORE THAN 7 DAYS AFTER THE NEED IS IDENTIFIED (3.5.8.2.E, 3.5.7).
7.2.2. ALL CONTROLS WILL BE MAINTAINED IN ACCORDANCE WITH GOOD ENGINEERING PRACTICES AND AT A MINIMUM BE CONSISTENT WITH STANDARD DETAILS CONTAINED IN THIS SWPPP AND MANUFACTURER'S SPECIFICATIONS (3.5.3.1.B).
7.2.3. SEDIMENT WILL BE REMOVED FROM SEDIMENT TRAPS, SILT FENCE, SEDIMENT BASINS, AND OTHER CONTROLS WHEN THE DESIGN CAPACITY HAS BEEN REDUCED BY 50% (3.5.3.1.E).
7.2.4. LITTER, CONSTRUCTION DEBRIS, AND CONSTRUCTION CHEMICALS EXPOSED TO STORMWATER WILL BE PICKED UP AND REMOVED FROM STORMWATER EXPOSURE PRIOR TO ANTICIPATED STORM EVENTS OR BEFORE BEING CARRIED OFF OF THE SITE BY WIND, OR OTHERWISE PREVENTED FROM BECOMING A POLLUTANT SOURCE FOR STORMWATER DISCHARGES. AFTER USE, MATERIALS USED FOR EROSION CONTROL WILL BE REMOVED (3.5.3.1.F).

8. SITE ASSESSMENTS

8.1.ARE SITE ASSESSMENTS REQUIRED (3.1.2)? YES □ NO ■
8.2.THE SITE ASSESSMENT SHALL BE PERFORMED IN ACCORDANCE TO THE CONDITIONS PRESCRIBED IN SECTION 3.1.2 OF THE CONSTRUCTION GENERAL PERMIT.
8.3.AN INDIVIDUAL MEETING THE QUALIFICATIONS PRESCRIBED IN SECTION 3.1.2 OF THE CONSTRUCTION GENERAL PERMIT SHALL CONDUCT THE SITE ASSESSMENT.
8.4.THE SITE ASSESSMENT MUST BE DOCUMENTED ON THE REPORT FORM IN APPENDIX C OF THE CONSTRUCTION GENERAL PERMIT AND A COPY KEPT WITH THE SWPPP.

9. STORMWATER MANAGEMENT

9.1.STORMWATER MANAGEMENT SHALL BE HANDLED BY TEMPORARY CONTROLS OUTLINED IN THIS SWPPP AND ANY PERMANENT CONTROLS NEEDED TO MEET PERMANENT STORMWATER MANAGEMENT NEEDS IN THE POST CONSTRUCTION PERIOD. PERMANENT CONTROLS ARE SHOWN ON THE PLANS AND NOTED AS PERMANENT (3.5.4).

9.2.DESCRIBE ANY SPECIFIC POST-CONSTRUCTION MEASURES THAT WILL CONTROL VELOCITY, POLLUTANTS, AND/OR EROSION (3.5.4):

9.3.OTHER ITEMS NEEDING CONTROL
9.3.1. CONSTRUCTION MATERIALS (3.5.5.C) THE FOLLOWING MATERIALS OR SUBSTANCES ARE EXPECTED TO BE PRESENT ON THE SITE DURING THE CONSTRUCTION PERIOD (CHECK ALL THAT APPLY).
9.3.1.1. ■ BUILDING MATERIALS
9.3.1.2. ■ CONCRETE WASHOUT
9.3.1.3. ■ CONCRETE, METAL OR PLASTIC PIPES
9.3.1.4. ■ DIESEL AND GASOLINE
9.3.1.5. ■ FERTILIZERS AND LIME
9.3.1.6. ■ MACHINERY LUBRICANTS (OIL AND GREASE)
9.3.1.7. ■ MINERAL AGGREGATES, ASPHALT
9.3.1.8. ■ EARTH
9.3.1.9. ■ LIQUID TRAFFIC STRIPING MATERIALS, PAIN
9.3.1.10. ■ PESTICIDES AND/OR HERBICIDES
9.3.1.11. ■ ROCK AND CRUSHED STONE
9.3.1.12. ■ CURING COMPOUND
9.3.1.13. □ EXPLOSIVES
THESE MATERIALS WILL BE HANDLED AS NOTED IN THIS SWPPP.
9.3.2. HAZARDOUS WASTE (3.5.5.C, 7.9) ANY AND ALL HAZARDOUS WASTE MATERIALS WILL BE DISPOSED OF IN A MANNER WHICH IS COMPLIANT WITH LOCAL OR STATE REGULATIONS.
9.3.3. SANITARY WASTE (1.5.1, 3.5.5.B) IF NECESSARY, PORTABLE SANITARY WASTE UNITS WILL BE PROVIDED ON SITE. THESE UNITS WILL BE LOCATED AWAY FROM STORM DRAIN INLETS, STREAMS AND WETLANDS.

10. NON-STORMWATER DISCHARGES (1.2.3, 3.5.9)

10.1. THE FOLLOWING NON-STORMWATER DISCHARGES ARE ANTICIPATED DURING THE COURSE OF THIS PROJECT (CHECK ALL THAT APPLY):
10.1.1. ■ DEWATERING OF WORK AREAS OF COLLECTED STORMWATER AND GROUND WATER
10.1.2. ■ WATERS USED TO WASH VEHICLES (OF DUST AND SOIL) WHERE DETERGENTS ARE NOT USED AND DETENTION AND/OR FILTERING IS PROVIDED BEFORE THE WATER LEAVES SITE
10.1.3. ■ WATER USED TO CONTROL DUST
10.1.4. ■ POTABLE WATER SOURCES INCLUDING WATERLINE FLUSHINGS FROM WHICH CHLORINE HAS BEEN REMOVED TO THE MAXIMUM EXTENT PRACTICABLE
10.1.5. ■ ROUTINE EXTERNAL BUILDING WASHDOWN THAT DOES NOT USE DETERGENTS OR OTHER CHEMICALS
10.1.6. ■ UNCONTAMINATED GROUNDWATER OR SPRING WATER
10.1.7. ■ FOUNDATION OR FOOTING DRAINS WHERE FLOWS ARE NOT CONTAMINATED WITH POLLUTANTS

10.2. ALL ALLOWABLE NON-STORMWATER DISCHARGES WILL BE DIRECTED TO STABLE DISCHARGE STRUCTURES PRIOR TO LEAVING THE SITE. FILTERING OR CHEMICAL TREATMENT MAY BE NECESSARY PRIOR TO DISCHARGE.

10.3. WASH DOWN OR WASTE DISCHARGE OF CONCRETE TRUCKS WILL NOT BE PERMITTED ON SITE UNLESS APPROPRIATE CONTROLS ARE PROVIDED IN ACCORDANCE WITH BOTH STATE AND FEDERAL REGULATIONS (4.1.6).

11. SPILL PREVENTION, MANAGEMENT AND NOTIFICATION (3.5.5.C, 5.1)

11.1.SPILL PREVENTION (3.5.5.C)
11.1.1. MATERIAL MANAGEMENT
11.1.1.1. HOUSEKEEPING: MATERIALS STORED ON SITE SHALL BE KEPT NEAT AND ORDERLY. CHEMICALS SHALL BE COVERED OR PROVIDED WITH SECONDARY CONTAINMENT.
11.1.1.2. HAZARDOUS MATERIALS (IF APPLICABLE):
11.1.1.2.1. PRODUCTS WILL BE KEPT IN ORIGINAL CONTAINERS UNLESS THE CONTAINER IS NOT RESEALABLE. ORIGINAL LABELS AND MATERIAL SAFETY DATA SHEETS WILL BE RETAINED IN A SAFE PLACE TO RELAY IMPORTANT PRODUCT INFORMATION. IF SURPLUS PRODUCT MUST BE DISPOSED OF, MANUFACTURER'S DIRECTIONS FOR DISPOSAL WILL BE FOLLOWED
11.1.1.2.2. MAINTENANCE AND REPAIR OF ALL EQUIPMENT AND VEHICLES INVOLVING OIL CHANGES, HYDRAULIC SYSTEM DRAIN DOWN, DE-GREASING OPERATIONS, FUEL TANK DRAIN DOWN AND REMOVAL, AND OTHER ACTIVITIES WHICH MAY RESULT IN THE ACCIDENTAL RELEASE OF CONTAMINANTS WILL BE CONDUCTED ON AN IMPERVIOUS SURFACE AND UNDER COVER DURING WET WEATHER TO PREVENT THE RELEASE OF CONTAMINANTS ONTO THE GROUND.
11.1.1.2.3. POTENTIAL PH-MODIFYING MATERIALS SUCH AS BULK CEMENT, CEMENT KILN DUST, FLY ASH, NEW CONCRETE WASHINGS AND CURING WATERS, CONCRETE PUMPING, AND MIXER WASHOUT WATERS WILL BE COLLECTED ON SITE AND MANAGED TO PREVENT CONTAMINATION OF STORMWATER RUNOFF.
11.1.1.3. PRODUCT SPECIFIC PRACTICES (IF APPLICABLE):
11.1.1.3.1. PETROLEUM PRODUCTS: ALL ON SITE VEHICLES WILL BE MONITORED FOR LEAKS AND RECEIVE REGULAR PREVENTATIVE MAINTENANCE TO REDUCE THE CHANCE OF LEAKAGE. PETROLEUM PRODUCTS WILL BE STORED IN TIGHTLY SEALED CONTAINERS WHICH ARE CLEARLY LABELED.
11.1.1.3.2. FERTILIZERS WILL BE APPLIED ONLY IN THE AMOUNTS SPECIFIED BY THE MANUFACTURER. ONCE APPLIED, FERTILIZERS WILL BE WORKED IN TO THE SOIL TO LIMIT THE EXPOSURE TO STORMWATER. FERTILIZERS WILL BE STORED IN AN ENCLOSED AREA UNDER COVER. THE CONTENTS OF PARTIALLY USED FERTILIZER BAGS WILL BE TRANSFERRED TO SEALABLE CONTAINERS TO AVOID SPILLS.
11.1.1.3.3. PAINTS: ALL CONTAINERS WILL BE TIGHTLY SEALED AND STORED WHEN NOT REQUIRED FOR USE. THE EXCESS WILL BE DISPOSED OF ACCORDING TO THE MANUFACTURER'S INSTRUCTIONS AND APPLICABLE STATE AND LOCAL REGULATIONS.
11.1.1.3.4. CONCRETE TRUCKS: CONTRACTOR WILL PROVIDE A DESIGNATED TRUCK WASHOUT AREA ON THE SITE. THIS AREA MUST BE SELF-CONTAINED AND NOT CONNECTED TO ANY STORMWATER OUTLET OF THE SITE. UPON COMPLETION OF CONSTRUCTION, WASHOUT AREAS WILL BE PROPERLY STABILIZED.

11.2. SPILL MANAGEMENT
11.2.1. IN ADDITION TO THE PREVIOUS HOUSEKEEPING AND MANAGEMENT PRACTICES, THE FOLLOWING PRACTICES WILL BE FOLLOWED FOR SPILL PREVENTION AND CLEANUP IN NECESSARY
11.2.2. FOR ALL HAZARDOUS MATERIALS STORED ON SITE, THE MANUFACTURER'S RECOMMENDATION METHODS FOR SPILL CLEAN UP WILL BE CLEARLY POSTED. SITE PERSONNEL WILL BE MADE AWARE OF THE PROCEDURES AND THE LOCATIONS OF THE INFORMATION AND CLEANUP SUPPLIES
11.2.3. APPROPRIATE CLEANUP MATERIALS AND EQUIPMENT SHALL BE MAINTAINED BY THE CONTRACTOR IN THE MATERIALS STORAGE AREA ON SITE AND UNDER COVER. AS APPROPRIATE, EQUIPMENT AND MATERIALS MAY INCLUDE ITEMS SUCH AS BROOMS, DUST PANS, MOPS, RAGS, GLOVES, GOGGLES, KITTY LITTER, SAND, SAWDUST, AND PLASTIC AND METAL TRASH CONTAINERS SPECIFICALLY FOR CLEAN UP PURPOSES.
11.2.4. ALL SPILLS WILL BE CLEANED IMMEDIATELY AFTER DISCOVERY AND THE MATERIALS DISPOSED OF PROPERLY. THE SPILL AREA WILL BE KEPT WELL VENTILATED AND PERSONNEL WILL WEAR APPROPRIATE PROTECTIVE CLOTHING TO PREVENT INJURY FROM CONTACT WITH A HAZARDOUS SUBSTANCE.
11.2.5. THE CONTRACTORS SITE SUPERINTENDENT WILL BE THE SPILL PREVENTION AND CLEANUP COORDINATOR. THE CONTRACTOR IS RESPONSIBLE FOR ENSURING THE SITE SUPERINTENDENT HAS HAD APPROPRIATE TRAINING FOR HAZARDOUS MATERIALS HANDLING, SPILL MANAGEMENT, AND CLEANUP.
11.2.6. IF SPILLS REPRESENT AN IMMINENT THREAT OF ESCAPING THE SITE AND ENTERING RECEIVING WATERS, PERSONNEL WILL RESPOND IMMEDIATELY TO CONTAIN THE RELEASE AND NOTIFY THE SUPERINTENDENT AFTER THE SITUATION HAS BEEN STABILIZED.
11.2.7. IF OIL SHEEN IS OBSERVED ON SURFACE WATER (E.G. SETTLING PONDS, DETENTION PONDS, SWALES), ACTION WILL BE TAKEN IMMEDIATELY TO REMOVE THE MATERIAL CAUSING THE SHEEN. THE CONTRACTOR WILL USE APPROPRIATE MATERIALS TO CONTAIN AND ABSORB THE SPILL. THE SOURCE OF THE OIL SHEEN WILL ALSO BE IDENTIFIED AND REMOVED OR REPAIRED AS NECESSARY TO PREVENT FURTHER RELEASES.
11.2.8. SPILL RESPONSE EQUIPMENT WILL BE INSPECTED AND MAINTAINED BY THE CONTRACTOR AS NECESSARY TO REPLACE ANY MATERIALS USED IN SPILL RESPONSE ACTIVITIES.
11.3. SPILL NOTIFICATION (5.1)
WHERE A RELEASE CONTAINING A HAZARDOUS SUBSTANCE IN AN AMOUNT EQUAL TO OR IN EXCESS OF A REPORTABLE QUANTITY ESTABLISHED UNDER EITHER 40 CFR 117 OR 40 CFR 302 OCCURS DURING A 24 HOUR PERIOD, NOTIFICATIONS WILL BE MADE AS OUTLINED IN THE CGP.

12. RECORD KEEPING

12.1. REQUIRED RECORDS: THE FOLLOWING RECORDS OF CONSTRUCTION ACTIVITIES WILL BE MAINTAINED AT THE SITE (3.5.3.1.m, 6.2.1)
12.1.1. THE DATES WHEN MAJOR GRADING ACTIVITIES OCCUR
12.1.2. THE DATES WHEN CONSTRUCTION ACTIVITIES TEMPORARILY OR PERMANENTLY CEASE ON A PORTION OF THE SITE.
12.1.3 THE DATES WHEN STABILIZATION MEASURES ARE INITIATED
12.1.4. RAINFALL RECORDS
12.1.5. COPY OF TWICE WEEKLY EPSC INSPECTION REPORT
12.1.6. DOCUMENTATION OF QUALITY ASSURANCE SITE ASSESSMENTS
12.1.7. COPY OF SITE EPSC INSPECTOR'S TDEC LEVEL 1 CERTIFICATION
12.2. KEEPING PLANS CURRENT (3.4): THIS SWPPP SHALL BE MODIFIED AND UPDATED WHEN ANY OF THE FOLLOWING CONDITIONS APPLY:
12.2.1. ANY CHANGE IN THE SCOPE OF THE PROJECT THAT WOULD BE EXPECTED TO HAVE A SIGNIFICANT EFFECT ON THE DISCHARGE OF POLLUTANTS TO THE WATERS OF THE STATE AND WHICH HAS NOT OTHERWISE BEEN ADDRESSED IN THE SWPPP. IF APPLICABLE, THE SWPPP MUST BE MODIFIED OR UPDATED WHENEVER THERE IS A CHANGE IN CHEMICAL TREATMENT METHODS, INCLUDING THE USE OF DIFFERENT TREATMENT CHEMICAL, DIFFERENT DOSAGE OR APPLICATION RATE, OR DIFFERENT AREA OF APPLICATION.
12.2.2. WHENEVER INSPECTIONS OR INVESTIGATIONS BY SITE OPERATORS, LOCAL, STATE, OR FEDERAL OFFICIALS INDICATE THE SWPPP IS PROVING INEFFECTIVE IN ELIMINATING OR SIGNIFICANTLY MINIMIZING POLLUTANTS FROM CONSTRUCTION ACTIVITY SOURCES, OR IS OTHERWISE NOT ACHIEVING THE GENERAL OBJECTIVES OF CONTROLLING POLLUTANTS IN STORMWATER DISCHARGES ASSOCIATED WITH CONSTRUCTION ACTIVITY. WHERE LOCAL, STATE, OR FEDERAL OFFICIALS DETERMINE THE SWPPP IS INEFFECTIVE IN ELIMINATING OR SIGNIFICANTLY MINIMIZING POLLUTANT SOURCES, A COPY OF ANY CORRESPONDENCE TO THAT EFFECT MUST BE RETAINED IN THE SWPPP.
12.2.3. TO IDENTIFY ANY NEW OPERATOR AS NEEDED TO REFLECT OPERATIONAL OR DESIGN CONTROL THAT WILL IMPLEMENT A MEASURE OF THE SWPPP.
12.2.4. TO INCLUDE MEASURES NECESSARY TO PREVENT A NEGATIVE IMPACT TO LEGALLY PROTECTED STATE OR FEDERALLY LISTED OR PROPOSED THREATENED OR ENDANGERED FAUNA OR FLORA.
12.2.5. WHEN THERE IS A CHANGE IN CHEMICAL TREATMENT METHODS INCLUDING: USE OF DIFFERENT TREATMENT CHEMICALS, DIFFERENT DOSAGE OR APPLICATION RATES OR A DIFFERENT AREA OF APPLICATION NOT SPECIFIED ON THE EPSC PLANS.
12.2.6. WHENEVER A TMDL IS DEVELOPED FOR THE RECEIVING WATERS FOR A POLLUTANT OF CONCERN (SILTATION AND/OR HABITAT ALTERATION).
12.3. MAKING PLANS ACCESSIBLE
12.3.1. A COPY OF THIS SWPPP (INCLUDING A COPY OF THE "DOCUMENTATION AND PERMITS" BINDER) SHALL BE RETAINED AT THE CONSTRUCTION SITE (OR OTHER LOCAL LOCATION ACCESSIBLE TO TDEC AND THE PUBLIC) FROM THE DATE CONSTRUCTION COMMENCES UNTIL FINAL STABILIZATION IS COMPLETE (6.2).
12.3.2. A COPY OF THIS SWPPP SHALL BE AVAILABLE AT A CENTRAL LOCATION ON SITE FOR THE USE OF ALL OPERATORS AND THOSE IDENTIFIED AS HAVING RESPONSIBILITIES UNDER THE PLAN WHENEVER THEY ARE ON THE CONSTRUCTION SITE (6.2).
12.3.3. FROM THE DATE CONSTRUCTION COMMENTS UNTIL FINAL STABILIZATION IS COMPLETE A NOTICE SHALL BE POSTED NEAR THE MAIN ENTRANCE OF THE CONSTRUCTION SITE WITH THE FOLLOWING INFORMATION (3.3.3, 6.2.1)
12.3.3.1. A COPY OF THE NOTICE OF COVERAGE (NOC) WITH THE NPDES PERMIT NUMBER FOR THE CONSTRUCTION PROJECT.
12.3.3.2. THE INDIVIDUAL NAME, COMPANY NAME, EMAIL ADDRESS, TELEPHONE NUMBER AND ADDRESS OF THE PROJECT SITE OWNER/OPERATOR OR LOCAL CONTACT.
12.3.3.3. A BRIEF DESCRIPTION OF THE PROJECT.
12.3.3.4. THE LOCATION OF THE SWPPP.
12.3.4. ALL INFORMATION DESCRIBED IN SECTION 12.3.3 MUST BE MAINTAINED IN LEGIBLE CONDITION. IF POSTING THIS INFORMATION NEAR A MAIN ENTRANCE IS INFEASIBLE DUE TO SAFETY CONCERNS, OR NOT ACCESSIBLE TO THE PUBLIC, THE NOTICE SHALL BE POSTED IN A LOCAL BUILDING (6.2.1).

13. ENVIRONMENTAL PERMITS (9.0)

LIST ALL ENVIRONMENTAL PERMITS AND EXPIRATION DATES FOR THIS PROJECT:

PERMIT	REQUIRED	TRACKING NUMBER	EXPIRATION DATE
TDEC CGP	YES	TNR	
ARAP	YES	NR2404.008 / NR2404.009	

615 DESIGN GROUP
1567 HAWS CLUB BLVD, SUITE 300, GALLATIN TN 37066
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COLTYN J. MURRAY
REGISTERED ENGINEER
No. 121177
STATE OF TENNESSEE

DOLLAR GENERAL
0 HWY 25E, SPRINGFIELD TN
TURNER AND ASSOCIATES

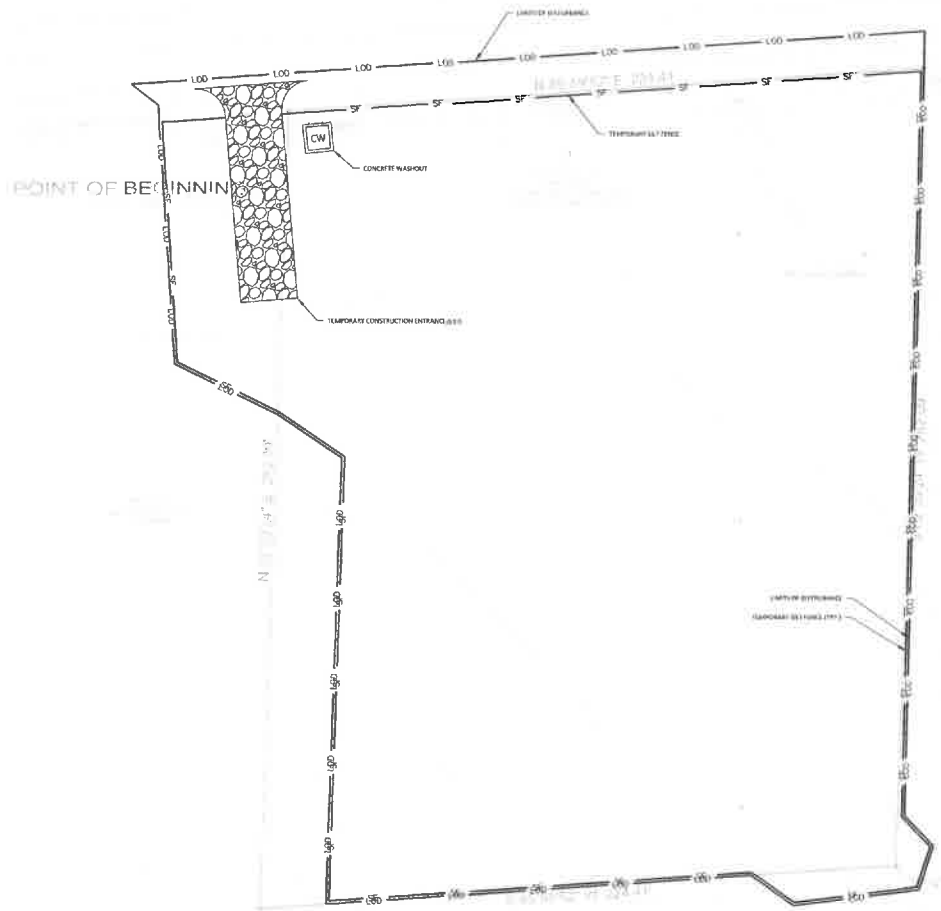
REVISIONS

NUMBER	DESCRIPTION	DATE

PROJECT #:	1082002
DESIGNED BY	####
DRAWN BY:	####
DATE	####

SWPPP

C3.0



EROSION CONTROL NOTES

1. EROSION CONTROL MEASURES TO BE INSTALLED PRIOR TO CONSTRUCTION AND MUST BE MAINTAINED THROUGHOUT THE ENTIRE CONSTRUCTION PROCESS.
2. ALL CONTROL MEASURES MUST BE PROPERLY INSTALLED AND MAINTAINED ACCORDING TO LOCAL STANDARDS
3. TEMPORARY CONSTRUCTION ACCESS MUST BE PROVIDED AT ALL POINTS WHERE CONSTRUCTION VEHICLES EXIT THE CONSTRUCTION AREA. CONTRACTOR TO MAINTAIN ALL PUBLIC ROADWAYS AND KEEP FREE FROM TRACKED MUD AND DIRT
4. CONTRACTOR NOT TO DISTURB VEGETATION EXCEPT WHEN NECESSARY FOR GRADING PURPOSES
5. WHERE VEGETATION COVER IS USED AS A CONTROL MEASURE, THE PLANTING OF THE VEGETATION COVER DURING WINTER OR DRY MONTHS SHOULD BE AVOIDED
6. CONSTRUCTION DEBRIS EXPOSED TO STORM WATER SHALL BE PICKED UP PRIOR TO ANTICIPATED STORM EVENTS AND PREVENTED FROM BECOMING A POLLUTANT SOURCE FOR STORM WATER DISCHARGES
7. BMP CONTROLS SHALL BE INSPECTED AT LEAST TWICE PER CALENDAR WEEK AND SHALL BE REPAIRED AT LEAST 72 HOURS APART. ANY INADEQUATE CONTROL MEASURE THAT IS NOT FUNCTIONING CORRECTLY SHALL BE REPLACED OR REPAIRED PRIOR TO THE NEXT RAIN EVENT AND IN NO CASE MORE THAN 7 DAYS AFTER THE NEED FOR REPAIR OR REPLACEMENT IS IDENTIFIED
8. MULCH AND SEED ALL DISTURBED AREAS WITHIN 14 DAYS FROM WHEN FINAL GRADING IS COMPLETED. STEEP SLOPES GREATER THAN 3:1 SHALL BE STABILIZED WITHIN 7 DAYS AFTER FINAL GRADING IS COMPLETED
9. CONTRACTOR TO MAINTAIN PUBLIC ROADWAYS AND KEEP THEM CLEAR OF TRACKED MUD AND DIRT.
10. THE EROSION CONTROL MEASURES FOR THIS SITE WERE DESIGNED TO HANDLE A 2-YEAR STORM EVENT
11. CONTRACTOR SHALL PROVIDE AN AREA FOR CONCRETE WASH DOWN AND EQUIPMENT FUELING. CONTRACTOR TO COORDINATE EXACT LOCATION WITH NPDES DEPARTMENT DURING PRE-CONSTRUCTION MEETING. CONTROL OF OTHER SITE WASTES SUCH AS DISCARDED BUILDING MATERIALS, CHEMICALS, LITTER, AND SANITARY WASTES THAT MAY CAUSE ADVERSE IMPACTS TO WATER QUALITY IS ALSO REQUIRED BY THE GRADING PERMITTEE
12. ADDITIONAL EPSC MEASURES, SUCH AS SILT FENCES, SWALES, AND/OR DIVERSION DITCHES MAY BE REQUIRED AS FIELD CHANGES AT THE REQUEST OF THE CITY OF GALLATIN STORMWATER TECHNICIAN
13. INSPECTION AND MAINTENANCE OF EROSION CONTROL DEVICES WILL BE PERFORMED ON A REGULAR BASIS AND AFTER EACH STORM EVENT.
14. EROSION AND SEDIMENT CONTROLS MUST BE IN PLACE AND INSPECTED BY THE ENGINEERING DIVISION
15. ADDITIONAL EPSC MEASURES, SUCH AS SILT FENCES, SWALES, AND/OR DIVERSION DITCHES MAY BE REQUIRED DURING THE PRE-CONSTRUCTION MEETING OR AS FIELD CHANGES AT THE REQUEST OF THE CITY OF SPRINGFIELD
16. A COPY OF THE FOLLOWING DOCUMENTS, AS REQUIRED BY TDEC AND/OR THE USACE, SHALL BE PROVIDED TO THE CITY OF GALLATIN SITE ASSESSMENTS, NOTICES OF VIOLATIONS (NOV), AND/OR CORRECTIVE ACTIONS PLANS (CAP)

TDEC NOTICE OF COVERAGE NOTE

THIS SITE DISTURBS MORE THAN 1 ACRE AND THEREFORE REQUIRES COVERAGE UNDER A TENNESSEE CONSTRUCTION GENERAL PERMIT. THE TOTAL DISTURBED AREA IS: 1.55 +/- ACRES

EPSC DATA TABLE

TOTAL LIMIT OF DISTURBANCE:	+/- 1.55 AC
TOTAL SILT FENCE:	+/- 1,062 LF
EXISTING IMPERVIOUS AREA:	0.00 AC
PROPOSED IMPERVIOUS AREA:	0.66 AC

GRADING PERMIT NOTE

ALL INITIAL EPSC MEASURES MUST BE INSTALLED PRIOR TO ISSUANCE OF GRADING PERMIT

EROSION CONTROL LEGEND

- LOD — LIMIT OF DISTURBANCE
- SF — SILT FENCE
- TP — TREE PROTECTION
- > — DIVERSION DITCH
- WOOD MULCH BERM
- OUTLET PROTECTION
- CW — CONCRETE WASHOUT
- INLET PROTECTION

0 20 40 Feet

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217 North Gay Street, Suite 306, Knoxville, TN 37902
865.851.0615
www.615designgroup.com

EVELYN J. MURRAY
REGISTERED ENGINEER
No. 127171
STATE OF TENNESSEE

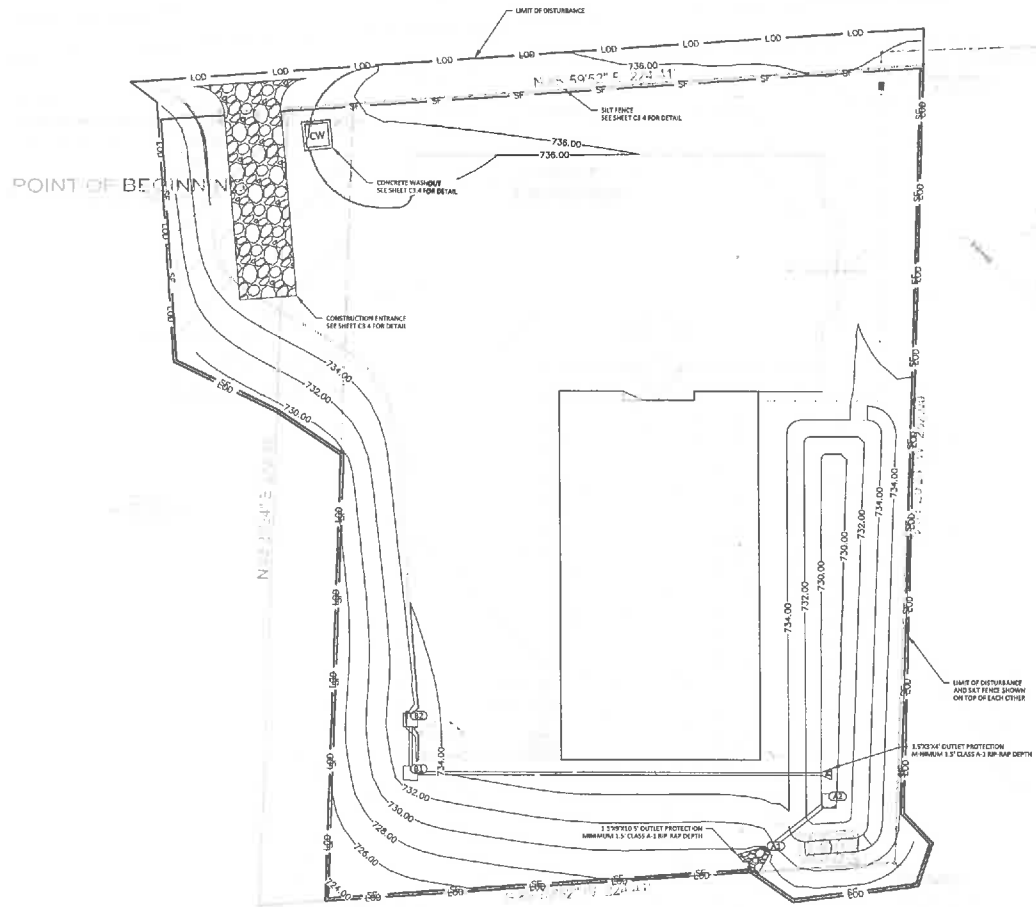
DOLLAR GENERAL
0 HWY 25E, SPRINGFIELD TN
TURNER AND ASSOCIATES

REVISIONS		
NUMBER	DESCRIPTION	DATE

PROJECT #:	1082002
DESIGNED BY	CJM
DRAWN BY:	CJM
DATE	08/14/2025

EROSION CONTROL PLAN - INITIAL

C3.1



EROSION CONTROL NOTES

1. EROSION CONTROL MEASURES TO BE INSTALLED PRIOR TO CONSTRUCTION AND MUST BE MAINTAINED THROUGHOUT THE ENTIRE CONSTRUCTION PROCESS.
2. ALL CONTROL MEASURES MUST BE PROPERLY INSTALLED AND MAINTAINED ACCORDING TO LOCAL STANDARDS.
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4. CONTRACTOR NOT TO DISTURB VEGETATION EXCEPT WHEN NECESSARY FOR GRADING PURPOSES.
5. WHERE VEGETATION COVER IS USED AS A CONTROL MEASURE, THE PLANTING OF THE VEGETATION COVER DURING WINTER OR DRY MONTHS SHOULD BE AVOIDED.
6. CONSTRUCTION DEBRIS EXPOSED TO STORM WATER SHALL BE PICKED UP PRIOR TO ANTICIPATED STORM EVENTS AND PREVENTED FROM BECOMING A POLLUTANT SOURCE FOR STORM WATER DISCHARGES.
7. BMP CONTROLS SHALL BE INSPECTED AT LEAST TWICE PER CALENDAR WEEK AND SHALL BE PERFORMED AT LEAST 72 HOURS APART. ANY INADEQUATE CONTROL MEASURE THAT IS NOT FUNCTIONING CORRECTLY SHALL BE REPLACED OR REPAIRED PRIOR TO THE NEXT RAIN EVENT AND IN NO CASE MORE THAN 2 DAYS AFTER THE NEED FOR REPAIR OR REPLACEMENT IS IDENTIFIED.
8. MULCH AND SEED ALL DISTURBED AREAS WITHIN 14 DAYS FROM WHEN FINAL GRADING IS COMPLETED. STEEP SLOPES GREATER THAN 3:1 SHALL BE STABILIZED WITHIN 7 DAYS AFTER FINAL GRADING IS COMPLETED.
9. CONTRACTOR TO MAINTAIN PUBLIC ROADWAYS AND KEEP THEM CLEAR OF TRACKED MUD AND DIRT.
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- WOOD MULCH BERM
- OUTLET PROTECTION
- CW — CONCRETE WASHOUT
- INLET PROTECTION

0 30 60 Feet

615 DESIGN GROUP
1517 MARTIN CLUB ROAD, SUITE 300, MURFREESBORO, TN 37130
615designgroup.com

CLAYTON J. MURRAY
REGISTERED LANDSCAPE ARCHITECT
No. 733
STATE OF TENNESSEE
2025

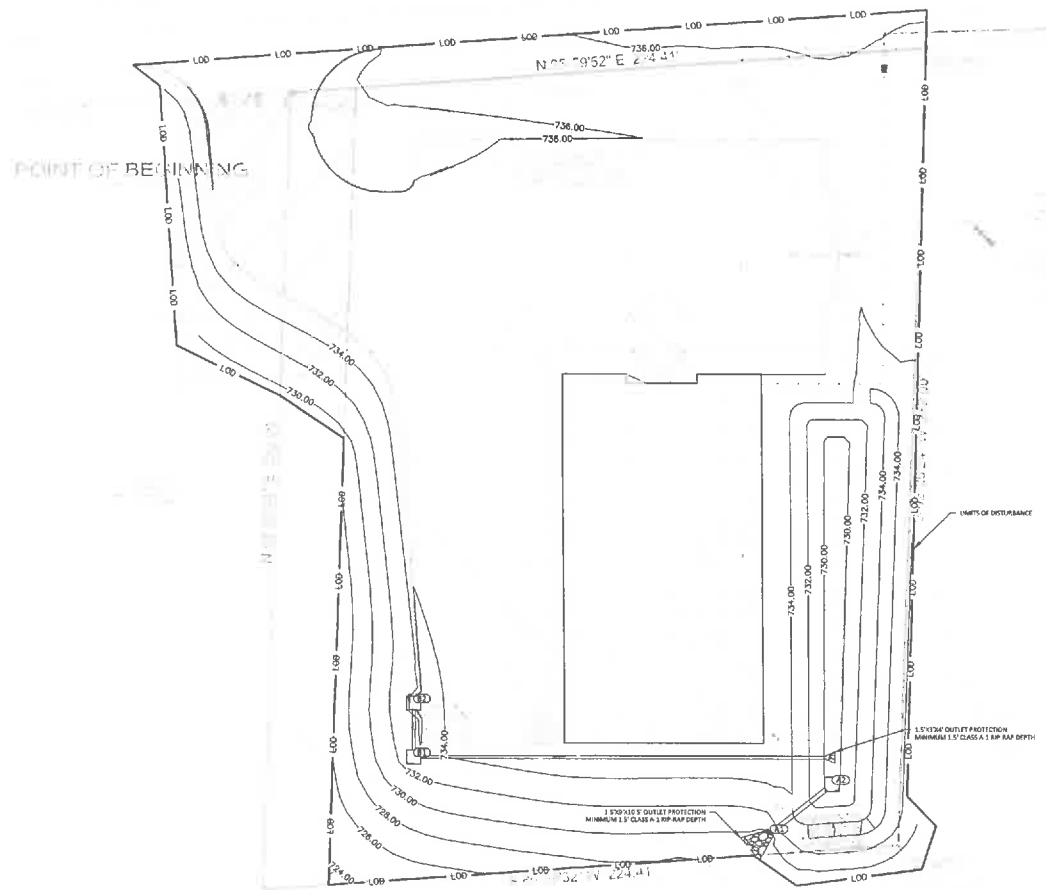
DOLLAR GENERAL
0 HWY 25E, SPRINGFIELD TN
TURNER AND ASSOCIATES

REVISIONS		
NUMBER	DESCRIPTION	DATE

PROJECT #:	1082002
DESIGNED BY:	CJM
DRAWN BY:	CJM
DATE:	08/14/2025

EROSION CONTROL PLAN - INTERMEDIATE

C3.2



EROSION CONTROL NOTES

1. EROSION CONTROL MEASURES TO BE INSTALLED PRIOR TO CONSTRUCTION AND MUST BE MAINTAINED THROUGHOUT THE ENTIRE CONSTRUCTION PROCESS
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EPSC DATA TABLE

TOTAL LIMIT OF DISTURBANCE:	+/- 1.95 AC
TOTAL SILT FENCE:	+/- 1,062 LF
EXISTING IMPERVIOUS AREA	0.00 AC
PROPOSED IMPERVIOUS AREA:	0.66 AC

GRADING PERMIT NOTE

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EROSION CONTROL LEGEND

LOD	LIMIT OF DISTURBANCE
SF	SILT FENCE
TP	TREE PROTECTION
>	DIVERSION DITCH
	WOOD MULCH BERM
OP	OUTLET PROTECTION
CW	CONCRETE WASHOUT
	INLET PROTECTION

0 20 40 Feet

615 DESIGN GROUP
3363 MAINT DAVIS BLVD, SUITE 1000, GALLATIN, TN 37066
www.615designgroup.com



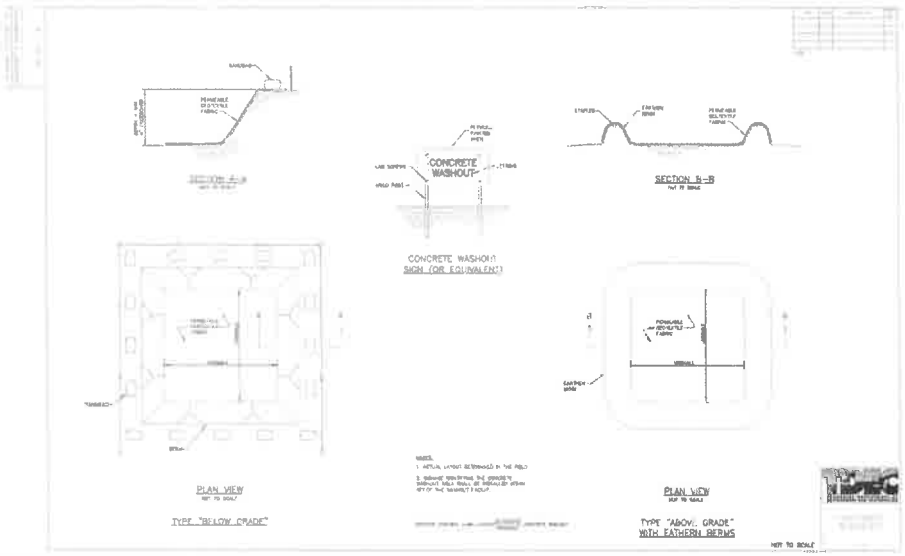
DOLLAR GENERAL
0 HWY 25E, SPRINGFIELD TN
TURNER AND ASSOCIATES

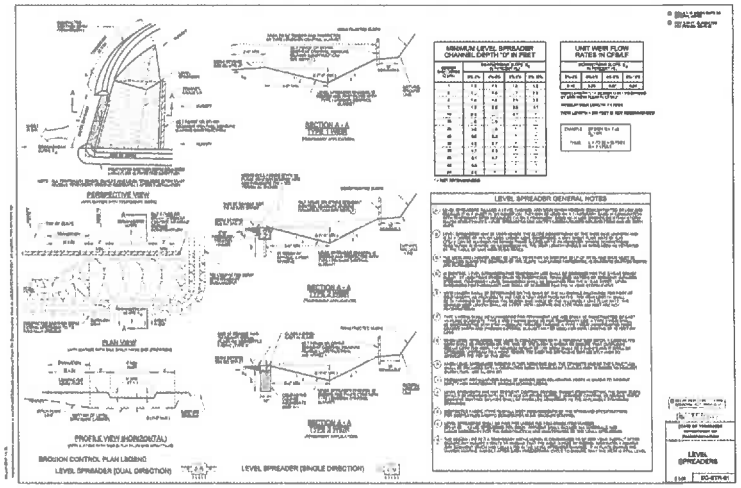
REVISIONS		
NUMBER	DESCRIPTION	DATE

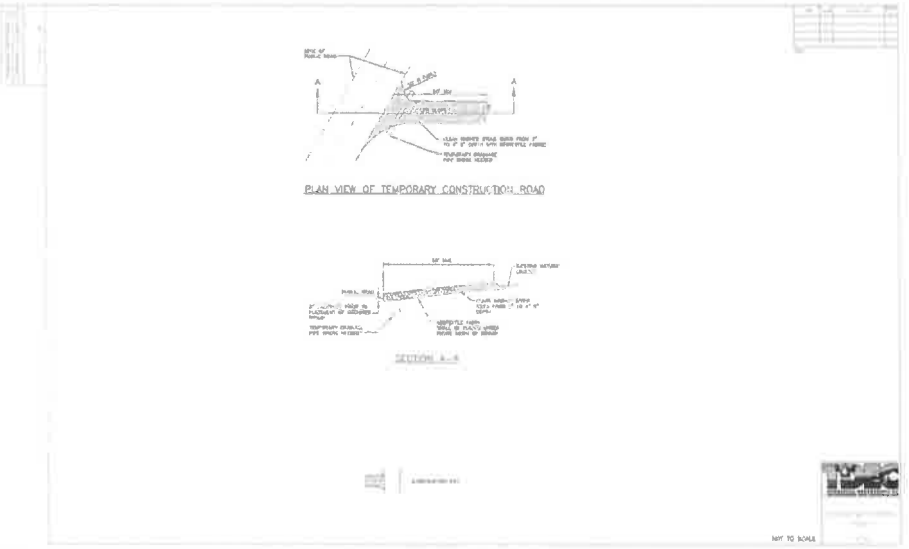
PROJECT #:	1082002
DESIGNED BY:	CJM
DRAWN BY:	CJM
DATE	08/14/2025

EROSION CONTROL PLAN - FINAL

C3.3







615 DESIGN GROUP
1021 PLANT CENTER DRIVE, SUITE 200 GALLATIN, TN 37066
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CALVIN J. MURRAY
REGISTERED ENGINEER
121177
STATE OF TENNESSEE

DOLLAR GENERAL
0 HWY 25E, SPRINGFIELD TN
TURNER AND ASSOCIATES

REVISIONS		
NUMBER	DESCRIPTION	DATE

PROJECT #	108700.2
DESIGNED BY	####
DRAWN BY	####
DATE	####

EROSION CONTROL DETAILS

C3.4

REVISIONS		
NUMBER	DESCRIPTION	DATE

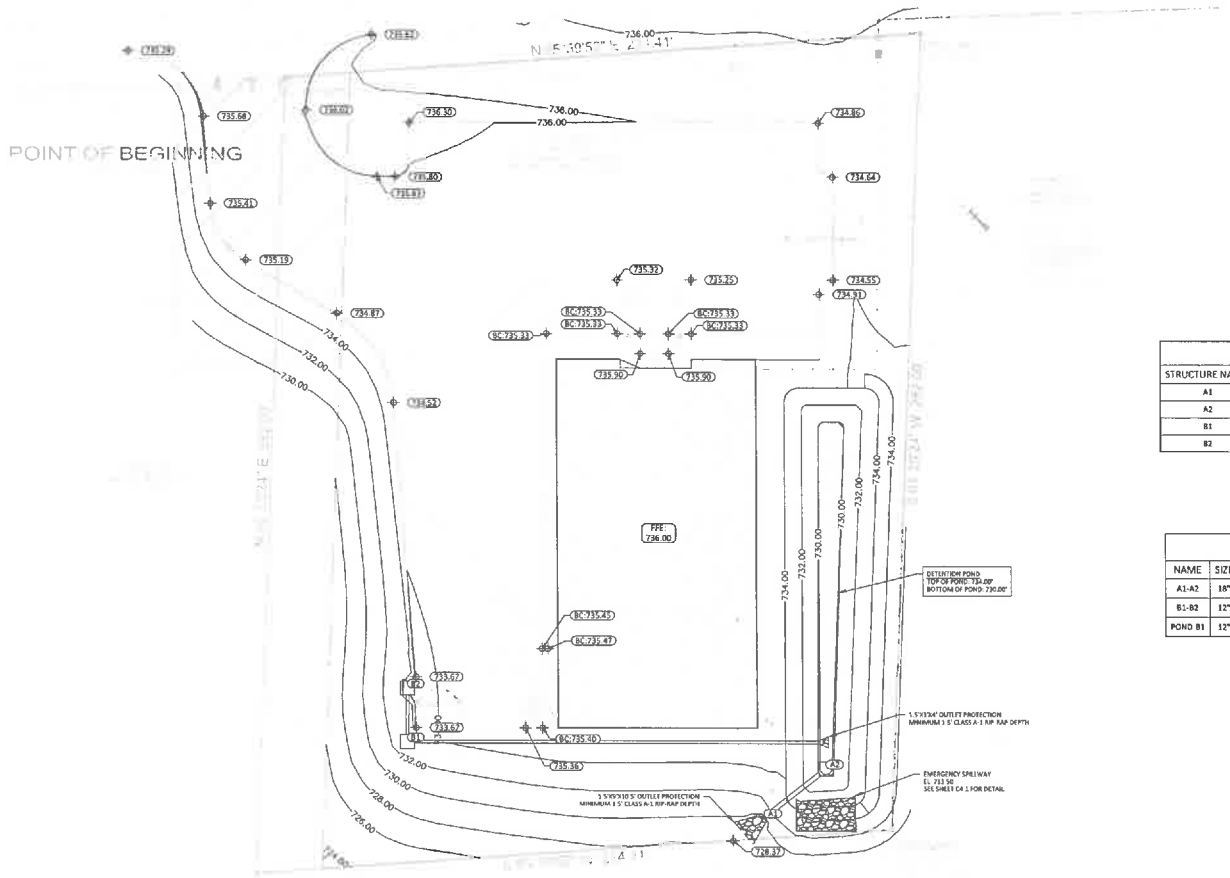
DOLLAR GENERAL
0 HWY 25E, SPRINGFIELD TN
TURNER AND ASSOCIATES

615 DESIGN GROUP
1417 MAIN CLUB BLVD. SUITE 200 MURFREESBORO, TN 37130
(615) 625-6888
www.615designgroup.com

PROJECT #	2020052
DESIGNED BY	#####
DRAWN BY	#####
DATE	#####

EROSION CONTROL DETAILS

C3.5



STRUCTURE TABLE		
STRUCTURE NAME:	DESCRIPTION	TOP OF CASTING
A1	HEADWALL	N/A
A2	OUTLET STRUCTURE	732.21
B1	JUNCTION BOX	733.61
B2	DOUBLE 2'X2' NYLOPLAST INLET	733.58

Pipe Table				
NAME	SIZE	LENGTH	SLOPE	MATERIAL
A1-A2	18"	28.18'	1.00%	Reinforced Concrete Pipe
B1-B2	12"	19.00'	1.00%	HDPE
POND B1	12"	145.13'	0.50%	HDPE

0 20 40 Feet

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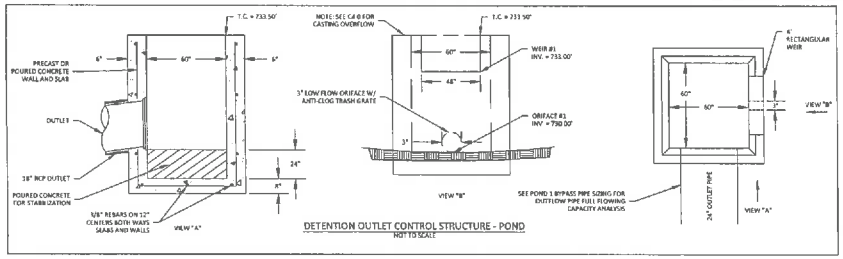
DOLLAR GENERAL
0 HWY 25E, SPRINGFIELD TN
TURNER AND ASSOCIATES

REVISIONS		
NUMBER	DESCRIPTION	DATE

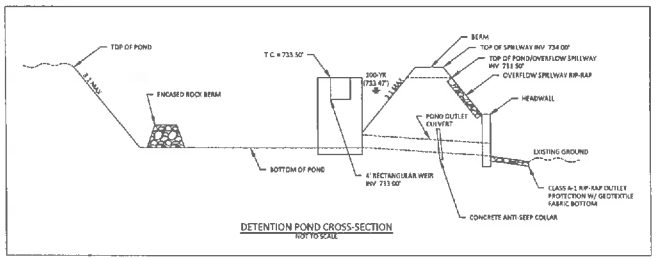
PROJECT #	1082002
DESIGNED BY:	CJM
DRAWN BY:	CJM
DATE:	08/14/2025

GRADING AND DRAINAGE PLAN

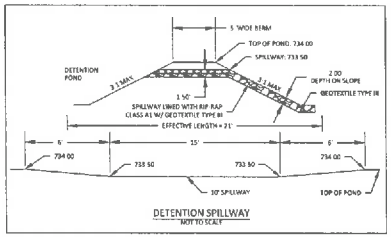
C4.0



DETENTION OUTLET CONTROL STRUCTURE - POND
NOT TO SCALE



DETENTION POND CROSS-SECTION
NOT TO SCALE



DETENTION SPILLWAY
NOT TO SCALE

GRADING & DRAINAGE DATA CHART

STORM	PRE-DEV (CFS)	POST-DEV (CFS)
2-YEAR	3.27	1.37
5-YEAR	4.49	1.77
10-YEAR	5.53	2.12
25-YEAR	6.97	2.61
50-YEAR	8.17	4.36
100-YEAR	9.43	6.68

POND 1 BYPASS PIPE SIZING	
D	1.5 ft
n	0.013
A	1.77 ft^2
P	4.71 ft
R/n	0.375 ft^2/ft
S	0.0075 ft/ft
Q	9.12 ft^3
# OF PIPES	1
FULL CAP	9.12 ft^3

Rectangular Contracted Weir

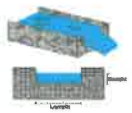
This calculates the water flow rate over a rectangular contracted weir. This weir has a rectangular opening where the sides are straight up and down. A contracted weir means that the ditch or canal leading up to the weir is wider than the weir opening itself. The water before the weir should be held in a relatively calm and smooth pool. There should be set cross-sectional area from the water before the weir. The Length is the bottom width of the weir. The height is measured from the bottom of the weir opening to the top of the weirs level pointed behind the weir that the water level right as it leaves the weir. Learn more about the weirs used on this page.

Length
21 ft

Height
0.5 ft

Calculate

Flow Rate
24.34 cfs



Note: 1 point = 1/100 ft.

The Equation

The Equation used to determine the flow rate (Q) of a Rectangular Contracted Weir is

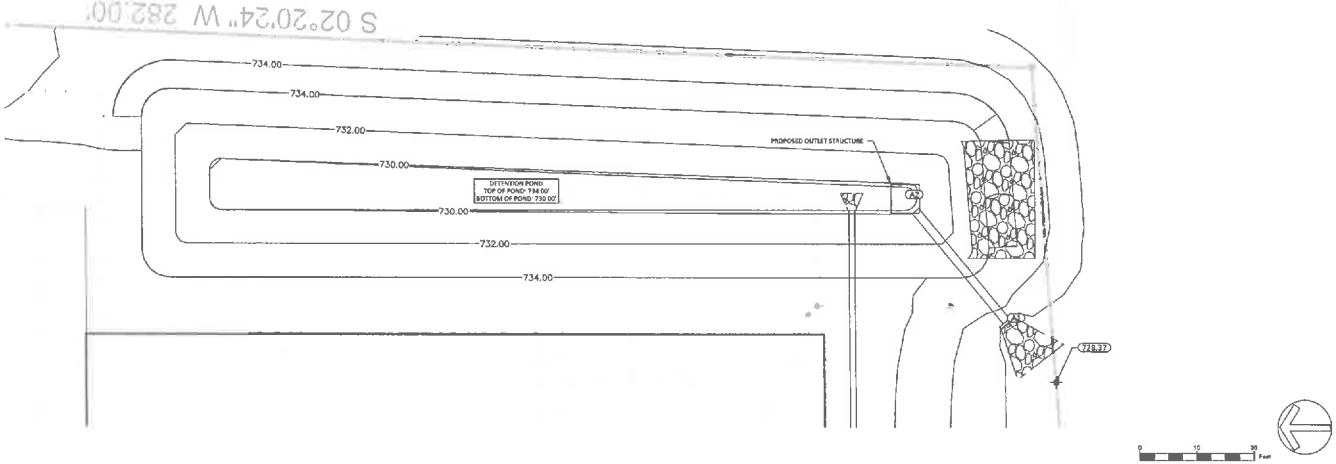
$$Q = 3.27 \cdot L \cdot H^{1.5} - \frac{0.5 \cdot H^{1.5}}{1 + 2 \cdot L^{1.5}}$$

Where

Q = flow rate in cfs

L = Bottom width of the weir in feet

H = Height of the upstream water above the weir crest in feet.



615 DESIGN GROUP
157 Front Street, Suite 200, Brentwood, TN 37027
www.615designgroup.com



DOLLAR GENERAL
0 HWY 25E, SPRINGFIELD TN

TURNER AND ASSOCIATES

REVISIONS		
NUMBER	DESCRIPTION	DATE

PROJECT #	1082002
DESIGNED BY	CJM
DRAWN BY	CJM
DATE	06/14/2023

DETENTION POND DETAILS

C4.1



UTILITY NOTES

1. CONTRACTOR RESPONSIBLE FOR VERIFYING EXISTING ELEVATIONS COMPARED TO THOSE SHOWN ON PLAN PRIOR TO GRADING. NOTIFY OWNER'S REPRESENTATIVE IF DISCREPANCIES ARE FOUND.
2. ALL WATER AND SEWER MATERIALS AND CONSTRUCTION SHALL BE BY COMPLIANCE WITH WHITE HOUSE UTILITY DISTRICT STANDARD SPECIFICATIONS.
3. MAINTAIN MINIMUM 10 FEET HORIZONTAL SEPARATION BETWEEN WATER & SANITARY SEWER OR 18" VERTICAL SEPARATION AT CROSSING LOCATIONS.
4. REFER TO WHITE HOUSE UTILITY DISTRICT STANDARD SPECIFICATIONS FOR PIPE BEDDING REQUIREMENTS.
5. ALL WATER VALVES TO BE LOCATED OUTSIDE OF PAVED AREAS WHERE POSSIBLE.

WHUD WATER & SEWER GENERAL NOTES

1. THE CONTRACTOR SHALL NOT PROCEED WITH ANY PIPE INSTALLATION WORK UNTIL A PRE-CONSTRUCTION MEETING HAS BEEN HELD AND THEY HAVE BEEN NOTIFIED BY THE WHITE HOUSE UTILITY DISTRICT TO PROCEED WITH THE WORK. THE CONTRACTOR WILL ALSO NEED TO PROVIDE A WHUD BUNDLER LETTER FOR APPROVAL BEFORE PIPE INSTALLATION WILL TAKE PLACE.
2. THE LOCATIONS AND SIZES OF EXISTING UTILITIES, INCLUDING SERVICE LATERALS, AND DRAINAGE STRUCTURES SHOWN ON THE PLANS ARE APPROXIMATE ONLY. THE CONTRACTOR SHALL VERIFY THE EXACT LOCATION AND DEPTHS OF UNDERGROUND UTILITIES AT LEAST 48 HOURS PRIOR TO CONSTRUCTION WHERE SHOWN ON PLANS OR NOTE, AND TO PROTECT THE SAME DURING CONSTRUCTION.
3. THE CONTRACTOR WILL BE RESPONSIBLE FOR RESTORING TO ITS ORIGINAL OR BETTER CONDITION FROM DAMAGE DONE TO EXISTING UTILITIES ET ALL TIMES DURING CONSTRUCTION.
4. NO SAW CUTS SHALL BE SET IN DRIVEWAYS. ANY METER BOXES SET IN DRIVEWAYS WILL BE RELOCATED AT THE CONTRACTOR'S AND/OR DEVELOPER'S EXPENSE.
5. THE CONTRACTOR SHALL MAINTAIN SERVICE TO EXISTING UTILITIES AT ALL TIMES DURING CONSTRUCTION.
6. ALL WATER MAINS GREATER THAN TWO (2) INCHES IN DIAMETER SHALL BE DUCTILE IRON CLASS 52 PIPE.
7. ALL WATER MAINS SHALL BE INSTALLED AT A MINIMUM DEPTH OF 36 INCHES UNLESS OTHERWISE NOTED ON THE CONSTRUCTION PLANS.
8. ALL BENDS, TEES, FITTINGS, ETC. TO BE ADDED ON ALL TEES, VALVES, BENDS, AND HYDRANTS (MEGA-LUG TYPE). A MINIMUM OF 40 FT LENGTH OF RESTRAINED JOINT PIPE SHALL BE ON EACH SIDE OF ALL VALVES AND TEE MAINS.
9. RESTRAINED JOINT PIPE WILL BE EITHER C-900 FIELD INSTALLED LOCKING GASKET.
10. ALL DEAD END LINES WILL RECEIVE A MINIMUM OF 40 FT OF RESTRAINED JOINT PIPE AT 6 MJG.
11. ALL BENDS 45 DEGREES AND GREATER WILL RECEIVE RESTRAINED JOINT PIPE 40 FT UP & DOWNSTREAM.
12. ALL 90 DEGREE BENDS WILL RECEIVE RESTRAINED JOINT PIPE 80 FT UP & DOWNSTREAM.
13. WATER MAINS AND SEWER MAINS MUST MAINTAIN A MINIMUM OF 10 (10) FOOT HORIZONTAL CLEARANCE AND/OR EIGHTEEN (18) INCHES VERTICAL CLEARANCE AT ALL TIMES.
14. THE CONTRACTOR WILL KEEP THE AREA ON TOP OF AND AROUND WHUD METER BOX FREE OF ALL OBJECTS AND DEBRIS.
15. ALL TESTING WILL BE DONE IN ACCORDANCE WITH THE MOST RECENT WHITE HOUSE UTILITY DISTRICT STANDARDS.
16. IN NO CASE ARE VALVES TO BE LOCATED IN PAVED AREAS OF DRIVES.
17. THE OWNER WILL BE RESPONSIBLE FOR THE INSPECTION AND MAINTENANCE OF METER VAULTS, BALL CURB PREVENTION ASSEMBLIES AND WATER MAINS.
18. CONTRACTOR IS RESPONSIBLE FOR REMOVAL OF ALL WASTE MATERIALS UPON PROJECT COMPLETION. THE CONTRACTOR SHALL NOT PERMANENTLY PLACE AND WASTE MATERIALS IN THE FLOOD PLAIN WITHOUT FIRST OBTAINING REQUIRED PERMITS.
19. ALL TEMPORARY EROSION AND SEDIMENTATION CONTROLS SHALL BE REMOVED BY THE CONTRACTOR AT FINAL ACCEPTANCE OF THE PROJECT BY THE WHITE HOUSE UTILITY DISTRICT.
20. WHERE ALLOWABLE, BLASTING SHALL BE PERFORMED IN ACCORDANCE WITH THE APPROPRIATE CRITERIA ESTABLISHED BY THE NATIONAL FIRE PROTECTION ASSOCIATION OR APPLICABLE LOCAL CODES.
21. WHERE BLASTING IS ALLOWING, BLASTING FOR SEWER LINES EXCAVATION MUST BE DONE IN SUCH A MANNER AS MINIMIZE THE FRACTURING OF ROCK BEYOND THE REQUIRED EXCAVATION. THE CONTRACTOR SHALL CONSIDER THE ELEVATION OF THE EXISTING WATER MAIN IN RELATION TO THE BLASTING CHANGE AND THE RELATIVE DIRECTION OF EXISTING AND PROPOSED TRENCHES. BLASTING WITHIN 100' AND IN SHALL BE ACCOMPLISHED ONLY BY QUALIFIED BLASTING CONTRACTORS WHO HOLD BLASTING LICENSES FROM A QUALIFIED AGENCY. ANY DAMAGE TO EXISTING WATER MAINS AND/OR EXISTING SEWER ANY SERVICE RESULTING FROM BLASTING SHALL BE REPAIRED AND BE PAID BY THE CONTRACTOR AT NO COST TO WHUD.
22. WORK COMPLETED BY THE CONTRACTOR WHICH HAS NOT RECEIVED A NOTICE TO PROCEED BY THE WHITE HOUSE UTILITY DISTRICT WILL BE SUBJECT TO REMOVAL AND REPLACEMENT BY AND AT THE EXPENSE OF THE CONTRACTOR.
23. ALL RESIDENTIAL GRAVITY FED SEWER SERVICE LATERALS SHALL BE EXTENDED TO THE PROPERTY LINE AND CAPPED AND SEALED.
24. ON ALL MANHOLES TO BE ABANDONED, THE INVERT AND COVER SHALL BE DAMAGED IN ACCORDANCE WITH THE MOST CURRENT WHITE HOUSE UTILITY DISTRICT STANDARDS. THE HOLE SHOULD BE BACKFILLED TO THE SATISFACTION OF THE INSPECTOR.
25. CONTRACTOR IS RESPONSIBLE FOR REMOVAL OF ALL WASTE MATERIALS UPON PROJECT COMPLETION. THE CONTRACTOR SHALL NOT PERMANENTLY PLACE ANY WASTE MATERIALS IN THE FLOOD PLAIN WITHOUT FIRST OBTAINING REQUIRED PERMITS.
26. AFTER CONSTRUCTION IS COMPLETE, TESTING WILL BE DONE BY TV CAMERA BY THE CONTRACTOR AND OBSERVED BY THE INSPECTOR, AS SUCH MAINLINE IS PUSH THROUGH ALL LINES FOR ANY ABNORMALITIES, SUCH AS BROKEN PIPE, MISALIGNED JOINTS, OR ANY OTHER DEFECTIVE PIPE. THESE WILL BE REPLACED BY THE CONTRACTOR AT HIS EXPENSE. ALL TESTING WILL BE DONE IN ACCORDANCE WITH THE MOST RECENT WHITE HOUSE UTILITY DISTRICT STANDARDS.

UTILITY CONTACTS

SEWER:

PRIVATE SEPTIC SYSTEM

WATER:

WHITE HOUSE UTILITY DISTRICT
3301 HWY 31W
WHITE HOUSE, TN 37188
615-672-4310
WHUDEngineering@whud.org

ELECTRIC:

CUMBERLAND ELECTRIC MEMBERSHIP CO.
19040 MADISON EXTENSION
CLARKSVILLE, TN 37043
931-672-4330

615 DESIGN GROUP
330 FRANKLIN ROAD, SUITE 135A-9 FRANKLIN, TN 37064
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CALVIN J. MURRELL
REGISTERED ENGINEER
STATE OF TENNESSEE
120179
12/31/2025

DOLLAR GENERAL
0 HWY 25E, SPRINGFIELD TN

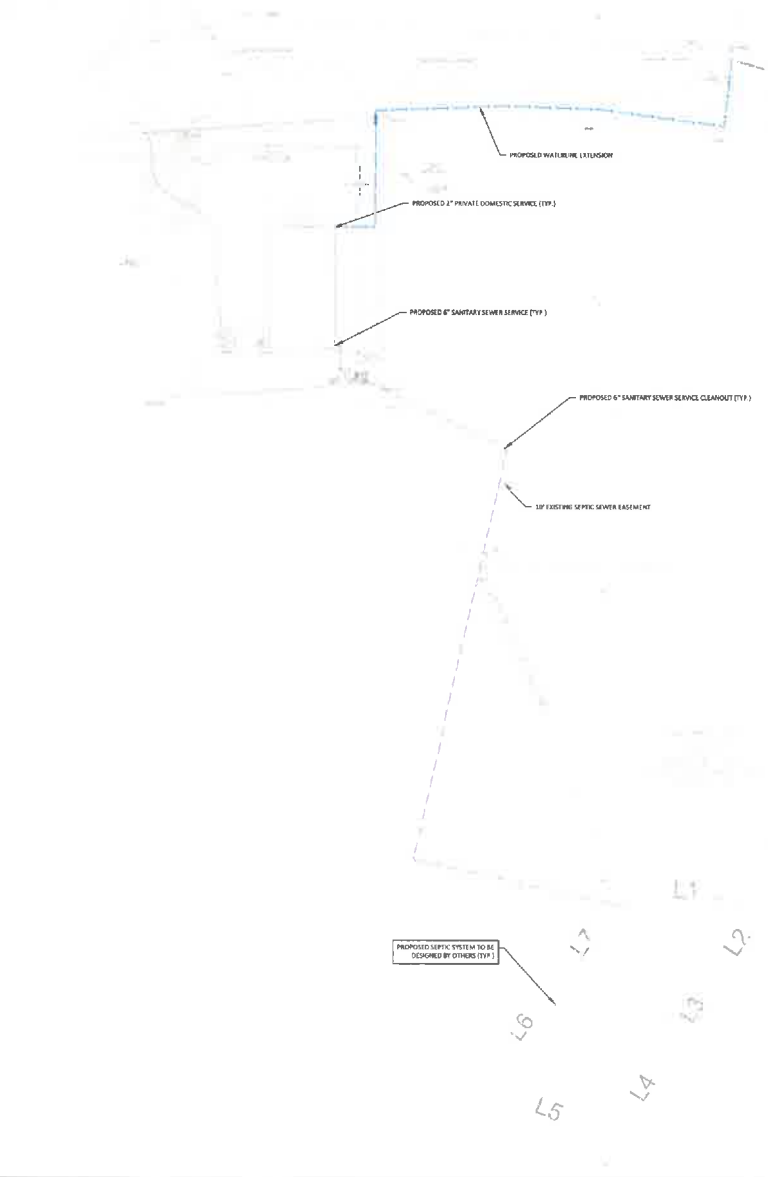
TURNER AND ASSOCIATES

REVISIONS		
NUMBER	DESCRIPTION	DATE

PROJECT #:	1082002
DESIGNED BY	CBM
DRAWN BY:	CBM
DATE	08/14/2025

UTILITY PLAN

C5.0



UTILITY NOTES

1. CONTRACTOR RESPONSIBLE FOR VERIFYING EXISTING ELEVATIONS COMPARED TO THOSE SHOWN ON PLAN PRIOR TO GRADING. NOTIFY OWNER'S REPRESENTATIVE IF DISCREPANCIES ARE FOUND
2. ALL WATER AND SEWER MATERIALS AND CONSTRUCTION SHALL BE IN COMPLIANCE WITH WHITE HOUSE UTILITY DISTRICT STANDARD SPECIFICATIONS
3. MAINTAIN MINIMUM 10 FEET HORIZONTAL SEPARATION BETWEEN WATER & SANITARY SEWER OR 18" VERTICAL SEPARATION AT CROSSING LOCATIONS
4. REFER TO WHITE HOUSE UTILITY DISTRICT STANDARD SPECIFICATIONS FOR PIPE BEDDING REQUIREMENTS
5. ALL WATER VALVES TO BE LOCATED OUTSIDE OF PAVED AREAS WHERE POSSIBLE

WHUD WATER & SEWER GENERAL NOTES

1. THE CONTRACTOR SHALL NOT PROCEED WITH ANY PIPE INSTALLATION WORK UNTIL A PRE-CONSTRUCTION MEETING HAS BEEN HELD AND THEY HAVE BEEN NOTIFIED BY THE WHITE HOUSE UTILITY DISTRICT TO PROCEED WITH THE WORK. THE CONTRACTOR WILL ALSO NEED TO PROVIDE A WHUD SUBGRADE LETTER FOR APPROVAL BEFORE PIPE INSTALLATION WILL TAKE PLACE
2. THE LOCATIONS AND DEPTHS OF EXISTING WATER LINES, BUILDING SERVICE LATERALS, AND DRAINAGE STRUCTURES SHOWN ON THE PLANS ARE APPROXIMATE ONLY. THE CONTRACTOR SHALL VERIFY THE EXACT LOCATION AND DEPTHS OF UNDERGROUND UTILITIES AT LEAST 48 HOURS PRIOR TO CONSTRUCTION WHETHER SHOWN ON PLANS OR NOT, AND TO PROTECT THE SAME DURING CONSTRUCTION
7. THE CONTRACTOR WILL BE RESPONSIBLE FOR RESTORING TO ITS ORIGINAL OR BETTER CONDITION FROM DAMAGE DONE TO EXISTING FENCES, CURBS, STREETS, DRIVEWAYS, LANDSCAPING, AND STRUCTURES
4. NO METER BOXES TO BE SET IN DRIVEWAYS. ANY METER BOXES SET IN DRIVEWAYS WILL BE RELOCATED AT THE CONTRACTOR'S AND/OR DEVELOPER'S EXPENSE
5. THE CONTRACTOR SHALL MAINTAIN ACCESS TO EXISTING STRUCTURES AT ALL TIMES DURING CONSTRUCTION
6. ALL WATER MAINS GREATER THAN TWO (2) INCHES IN DIAMETER SHALL BE DUCTILE IRON CLASS 52 MIN.
7. ALL WATER MAINS SHALL BE INSTALLED AT A MINIMUM DEPTH OF 36 INCHES UNLESS OTHERWISE NOTED ON THE CONSTRUCTION PLANS
8. MECHANICAL JOINT RESTRAINTS ARE TO BE ADDED ON ALL TEES, VALVES, BENDS, AND HYDRANTS (MEGA-LUG TYPE) A MINIMUM OF 80 FT (SPACY OF RESTRAINED JOINT PIPE SHALL BE CONSIDERED ON ALL VALVES AND FITTINGS
9. RESTRAINED JOINT PIPE WILL BE BE CLOSED WITH FIELD INSTALLED LOCKING GASKETS
10. ALL DEAD END LINES WILL RECEIVE A MINIMUM OF 80 FT OF RESTRAINED JOINT PIPE AT ENDS
11. ALL BENDS 45 DEGREES AND UNDER WILL RECEIVE RESTRAINED JOINT PIPE 40 FT UP & DOWNSTREAM
12. ALL 90 DEGREE BENDS WILL RECEIVE RESTRAINED JOINT PIPE 60 FT UP & DOWNSTREAM
13. WATER MAINS AND SEWER MAINS MUST MAINTAIN A MINIMUM OF TEN (10) FOOT HORIZONTAL CLEARANCE AND/OR EIGHTEEN (18) INCHES VERTICAL CLEARANCE AT ALL TIMES
14. THE CONTRACTOR WILL KEEP RWE AREA ON TOP OF AND AROUND WATER METER BOX FREE OF ALL OBJECTS AND DEBRIS
15. ALL TESTING WILL BE DONE IN ACCORDANCE WITH THE MOST RECENT WHITE HOUSE UTILITY DISTRICT STANDARDS
16. ALL BACKFLOW DEVICES SHALL BE INSTALLED AT WATER METER LOCATIONS
17. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE INSTALLATION AND MAINTENANCE OF WATER VALVES, BACKFLOW PREVENTION ASSEMBLIES AND WYE'S AS NEEDED
18. CONTRACTOR IS RESPONSIBLE FOR REMOVAL OF ALL WASTE MATERIALS UPON PROJECT COMPLETION. THE CONTRACTOR SHALL NOT PERMANENTLY PLACE ANY WASTE MATERIALS IN THE FLOOD PLAIN WITHOUT FIRST OBTAINING REQUIRED PERMITS
19. ALL TEMPORARY EROSION AND SEDIMENTATION CONTROLS SHALL BE REMOVED BY THE CONTRACTOR AT FINAL ACCEPTANCE OF THE PROJECT BY THE WHITE HOUSE UTILITY DISTRICT
20. WHEN ALLOWABLE, BLASTING SHALL BE PERFORMED IN ACCORDANCE WITH THE APPROPRIATE CODES AS ESTABLISHED BY THE NATIONAL FIRE PROTECTION ASSOCIATION OR APPLICABLE LOCAL CODES
21. WHEN BLASTING IS ALLOWABLE, BLASTING FOR SEWER LINES EXCAVATION MUST BE DONE IN SUCH A MANNER AS TO AVOID THE FRACTURING OF ROCK BEYOND THE REQUIRED EXCAVATION. THE CONTRACTOR SHALL CONSIDER THE ELEVATION OF THE EXISTING WATER MAIN IN RELATION TO THE BLASTING CHARGE AND THE RELATIVE DIRECTION OF LOCATIONS AND PROPOSED TRENCHES. BLASTING WITHIN 25 FEET OF EXISTING WATER MAINS SHALL BE PERFORMED BY HAND. CONTRACTORS WHO HOLD BLASTING LICENSES FROM A GOVERNED AGENCY ANY DAMAGE TO EXISTING WATER MAINS AND/OR EXISTING SANITARY SEWERS RESULTING FROM BLASTING SHALL BE REPAIRED AND RESTORED BY THE CONTRACTOR, AT HIS OWN EXPENSE
22. WORK COMPLETED BY THE CONTRACTOR WHICH HAS NOT BEEN WELL NOTICE TO PROCEED BY THE WHITE HOUSE UTILITY DISTRICT WILL BE SUBJECT TO REMOVAL AND REPLACEMENT BY AND AT THE EXPENSE OF THE CONTRACTOR
23. ALL RESIDENTIAL SANITARY SEWER SERVICE LATERALS SHALL BE EXTENDED TO THE PROPERTY LINE AND CAPPED AND SEALED
24. ON ALL MANHOLES TO BE ABANDONED, THE RINGS AND COVER SHALL BE SALVAGED IN ACCORDANCE WITH THE MOST CURRENT WHITE HOUSE UTILITY DISTRICT STANDARDS. THE HOLE SHOULD BE BACKFILLED TO THE SATISFACTION OF THE INSPECTOR
25. CONTRACTOR IS RESPONSIBLE FOR REMOVAL OF ALL WASTE MATERIALS UPON PROJECT COMPLETION. THE CONTRACTOR SHALL NOT PERMANENTLY PLACE ANY WASTE MATERIALS IN THE FLOOD PLAIN WITHOUT FIRST OBTAINING REQUIRED PERMITS
26. AFTER CONSTRUCTION IS COMPLETE, TESTING WILL BE DONE BY TV EXAMINA BY THE CONTRACTOR AND OBSERVED BY THE INSPECTOR, AS SHE CAMERA IS RUN THROUGH ALL LINES. ANY ABNORMALITIES, SUCH AS BROKEN PIPE, MISALIGNED JOINTS OR NON-UNIFORM SLOPE, MUST BE REPLACED BY THE CONTRACTOR AT HIS EXPENSE. ALL TESTING WILL BE DONE IN ACCORDANCE WITH THE MOST RECENT WHITE HOUSE UTILITY DISTRICT STANDARDS

UTILITY CONTACTS

SEWER:

PRIVATE SEPTIC SYSTEM

WATER:

WHITE HOUSE UTILITY DISTRICT
3303 HWY 31W
WHITE HOUSE, TN 37188
615-672-4110
WHUDEngineering@whud.org

ELECTRIC:

CUMBERLAND ELECTRIC MEMBERSHIP CO
19040 MADISON EXTENSION
CLARKSVILLE, TN 37043
931-472-4150

0 60 120 Feet

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COLTYN J. MURPHY
LICENSED PROFESSIONAL ENGINEER
STATE OF TENNESSEE
121

DOLLAR GENERAL
0 HWY 25E, SPRINGFIELD TN

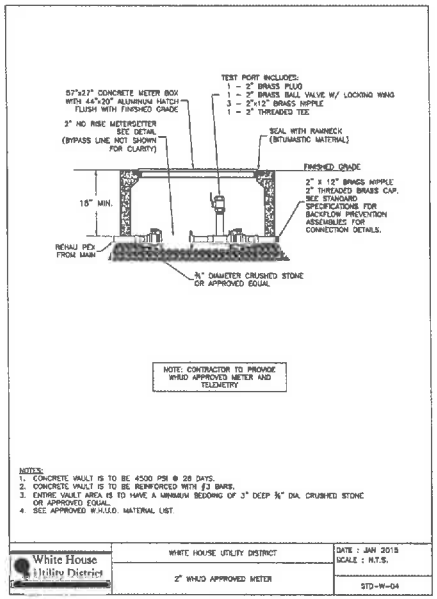
TURNER AND ASSOCIATES

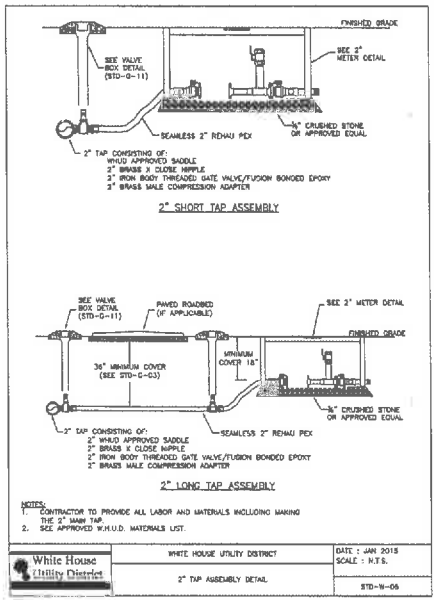
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NUMBER	DESCRIPTION	DATE

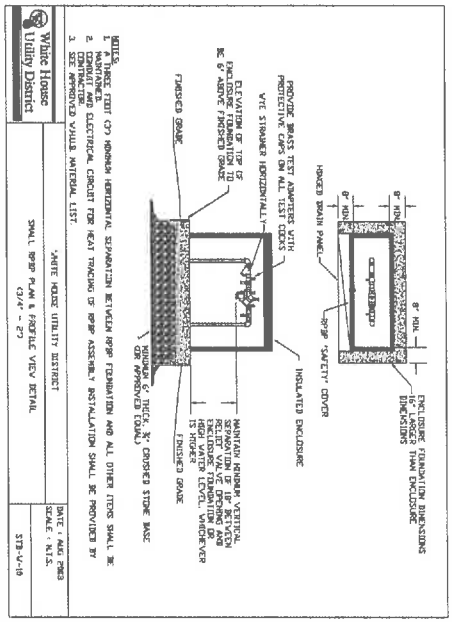
PROJECT #	1062002
DESIGNED BY	CJM
DRAWN BY	CJM
DATE	06/14/2025

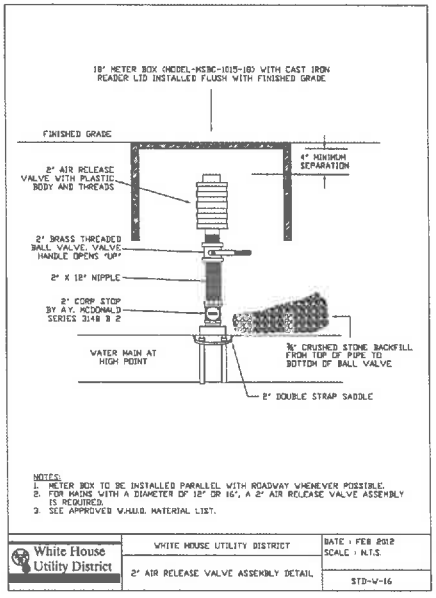
SEWER PLAN

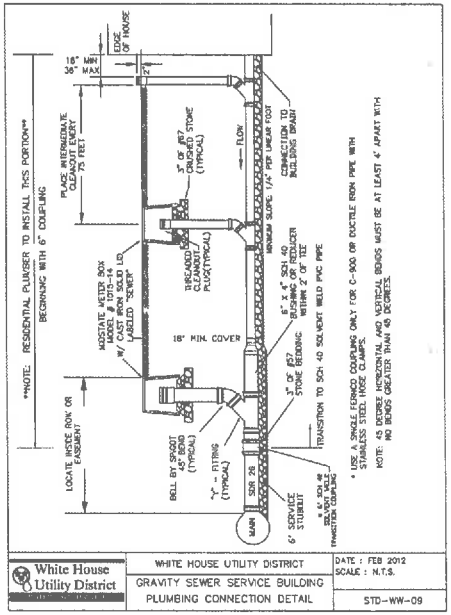
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615 DESIGN GROUP

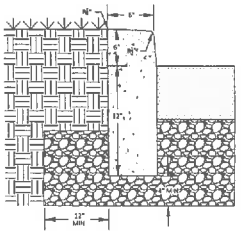
DOLLAR GENERAL
0 HWY 25E, SPRINGFIELD TN
TURNER AND ASSOCIATES

REVISIONS		DATE
NUMBER	DESCRIPTION	

PROJECT #:	108302
DESIGNED BY:	CIM
DRAWN BY:	CIM
DATE:	08/14/2023

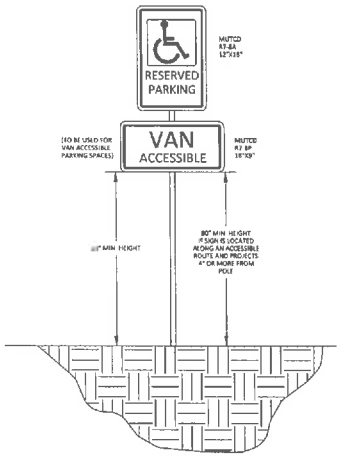
UTILITY DETAILS

C5.2



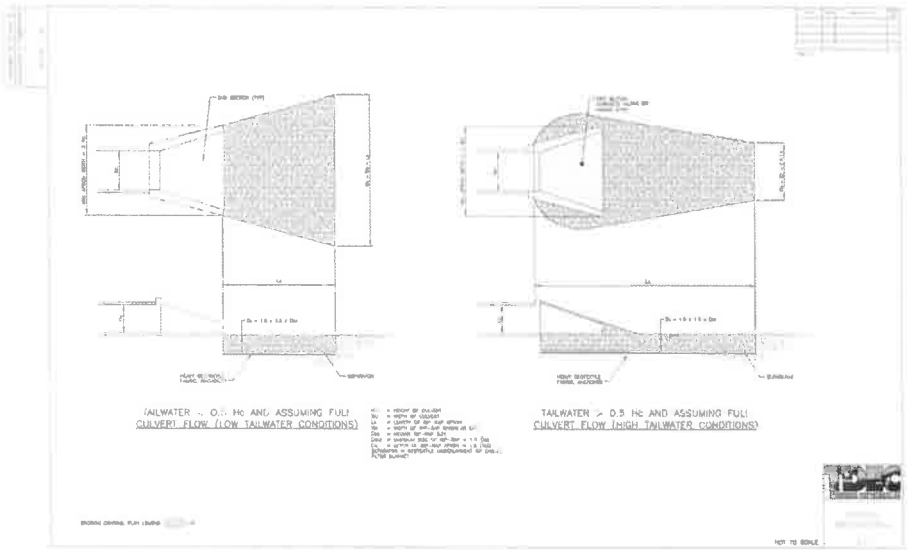
NOTES:
1. CONCRETE CLASS A (3,000 PSI, 6% ENTRAINED AIR).
2. CONTRACTION JOINTS SHALL BE SPACED @ 10' MAX., 5' MIN.
3. EXPANSION JOINTS SHALL BE PLACED AT:
   - 3.1. TANGENT POINTS AT END OF RADIUS
   - 3.2. ABUTTING RIGID OBJECTS
   - 3.3. TRANSITION POINTS (CURB TURN DOWNS, CURB RAMPS, DRIVEWAYS, ETC.)
   - 3.4. MAX SPACING 100'.
4. REFER TO MOST UP-TO-DATE STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION.

6" DETACHED CONCRETE CURB (POST CURB)



NOTES:
REFER TO MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD) LATEST ADDITIONAL FOR FURTHER DETAIL.

ADA PARKING SIGN DETAIL
(NOT TO SCALE)



615 DESIGN GROUP

EVELYN J. MURRAY
REGISTERED ENGINEER
No. 120114
STATE OF TENNESSEE

DOLLAR GENERAL
0 HWY 25E, SPRINGFIELD TN

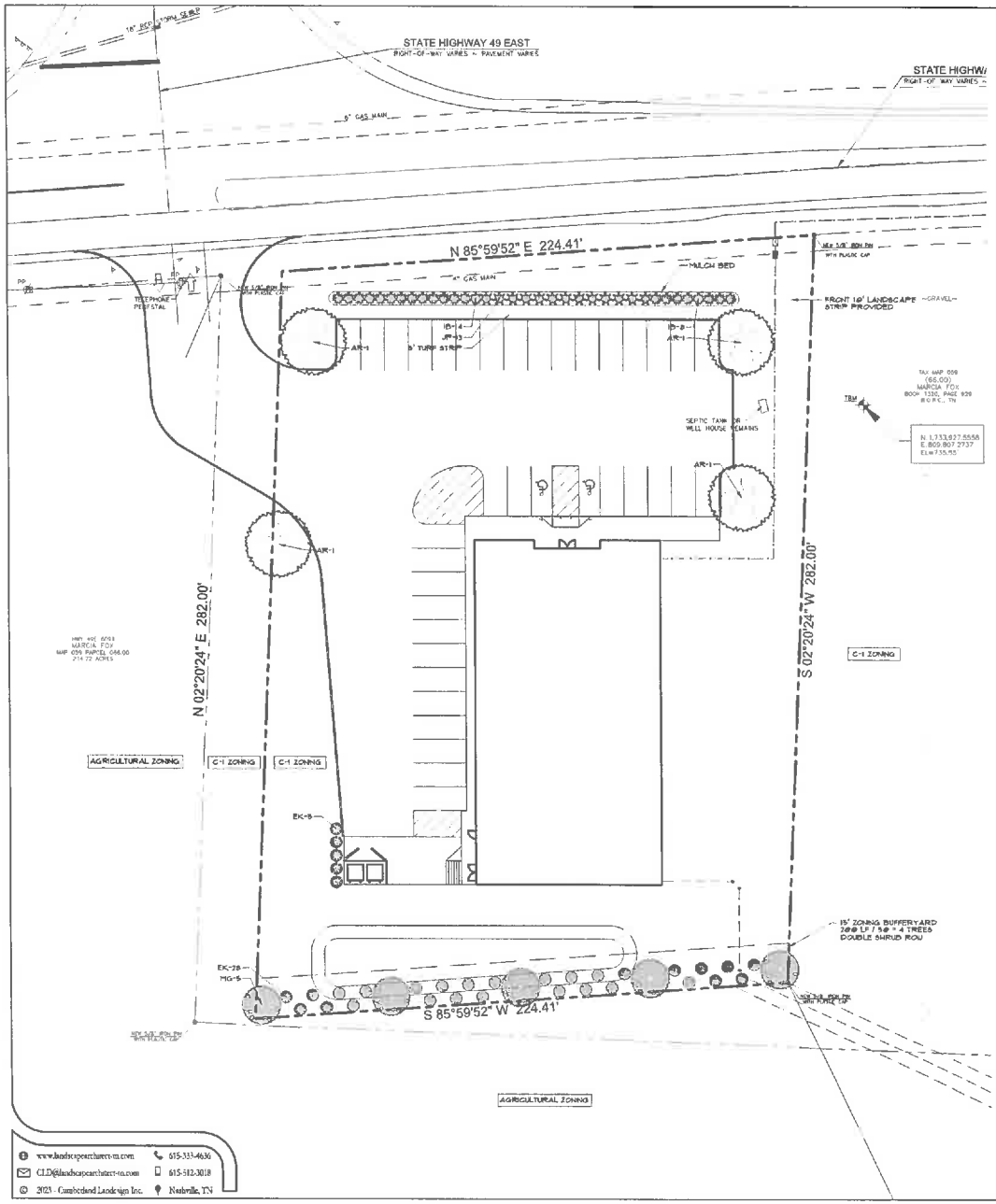
TURNER AND ASSOCIATES

REVISIONS		
NUMBER	DESCRIPTION	DATE

PROJECT #	108J002
DESIGNED BY	CJM
DRAWN BY	CJM
DATE	08/14/2025

SITE DETAILS

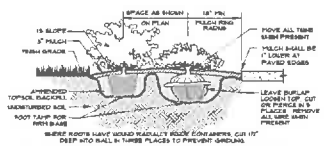
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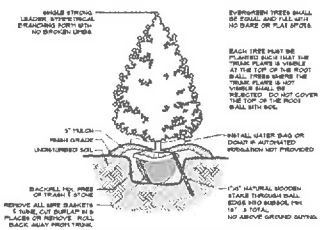
20 10 5 0 20

Scale: 1" = 20'-0"

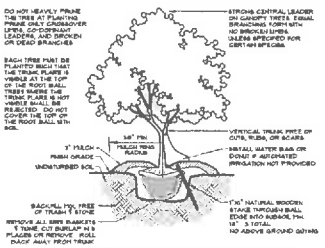
811 CALL BEFORE YOU DIG



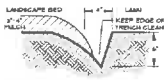
SHRUB PLANTING DETAIL



EVERGREEN TREE PLANTING DETAIL



DECIDUOUS TREE PLANTING DETAIL



MULCH BED EDGE

MATERIALS SCHEDULE

KEY	AMOUNT	SCIENTIFIC NAME/ COMMON NAME	HEIGHT	SPREAD	TRUNK	NOTES
TREES						
AR	4	Acer rubrum/ Red Maple	12'–14'	5'–6'	2.5"	Symmetrical, Full, Matched
MG	5	Magnolia grandiflora/ Southern Magnolia	7' Min.	3'–4'	FTB	
SHRUBS						
EK	33	Euonymus kleutschovicus 'Manhattan'/ Euonymus	24" Min.	18"–24"	F.T.B.	
IB	14	Ilex burfordii 'Nana'/ Dwarf Burford Holly	18" Min.	15"–18"	F.T.B.	
JP	13	Juniperus horizontalis 'Plumosa'/ Andorra Juniper	6" Min.	15"–18"	F.T.B.	
TURF						
SEED		Rebel II Fine Bladed Fescue	Seed at 5 lbs per 1,000 sf Install w/ weed free Straw			

NOTES

FTB = Full To Bottom

THE LANDSCAPE CONTRACTOR SHALL NOT MAKE SUBSTITUTIONS

LANDSCAPE NOTES

PRIOR TO EXCAVATION AND INSTALLATION FIELD VERIFY ALL UTILITIES.

REMOVE STONE OVER 1/4", CLAY POCKETS, & FINE GRADE ALL PLANTING AREAS. NEW PLANTING AREAS SHALL BE FERTILIZED WITH 12# / 1000 S.F. OF 10-10-10 FERTILIZER OR CONTAIN 30% ADDED 'HOLY COW' (OR EQUAL) MIX TOPSOIL AMENDMENT.

NEW PLANTING BEDS SHALL HAVE A MINIMUM OF 3" DEPTH OF SHREDDED BARK MULCH. FINELY GROUND, NO NUGGETS, 1/2" DIAMETER MAX. PIECES. REFUSE & STONE FREE. NO PINE NUGGETS OR SYNTHETIC MULCH.

VERIFY ALL QUANTITIES. IN THE EVENT OF A DISCREPANCY, CONTACT THE DESIGNER. NOTIFY THE LANDSCAPE ARCHITECT OF ANY FEATURES SUCH AS WALKWAYS, WINDOWS, OR BUILT ELEMENTS WHICH CONFLICT WITH THE PLANTING PLAN.

EXISTING TREES TO REMAIN SHALL BE PROTECTED FROM CONSTRUCTION DAMAGE. SELECTIVELY PRUNE DEAD WOOD.

ALL DISTURBED AREAS SHALL BE PLANTED WITH TURF AS INDICATED ON THE MATERIALS SCHEDULE.

NO PLANT MATERIALS SHOULD BE SUBSTITUTED WITHOUT AUTHORIZATION.

WIRE BASKETS SHALL BE COMPLETELY REMOVED, BURLAP SHALL BE CUT TOP TO BOTTOM IN 5 PLACES. BURY NATURAL TWINE. DISPOSE OF SYNTHETIC ROPE AND TRUNK WRAP OFFSITE. SUB-GRADE STAKE TREES IN PLACE PER DETAIL – NO GUYING, NO ABOVE GROUND STAKES.

NO CANOPY TREE SHALL BE LOCATED WITHIN 20' OF AN OVER-HEAD UTILITY, POWER LINE, OR LIGHT POLE (UNLESS SPECIFIC VERTICAL / NARROW CULTIVAR (10')). NO CANOPY TREE SHALL BE LOCATED WITHIN A GAS, WATER, SEWER, UNDERGROUND ELECTRIC, CABLE, FIBER, OR PUBLIC UTILITY EASEMENT WITHOUT SIGNING OF A RELEASE WAIVER AND APPROVAL BY THE EASEMENT HOLDER. LOCATING PLANT MATERIALS WITHIN DRAINAGE IS ACCEPTABLE. MATERIALS SHALL BE NO CLOSER THAN 3' FROM THE CENTER OF FLOWLINE.

REQUIREMENTS

PROPERTY ZONE: C-1
LOT AREA: C-1

REQUIREMENTS

BUFFERYARD AT ZONING
15' PROVIDED AT AGRICULTURAL
FRONT LANDSCAPE STRIP
10' PROVIDED
(INTERIOR TO UTILITY EASEMENT)
LANDSCAPE AREA
10% REQUIRED (5,640 SF)
10% PROVIDED (6,000 SF)
OTHER REQUIREMENTS
NA

www.landscapearchitect-tn.com 615-333-4636
CLD@landscapearchitect-tn.com 615-512-3018
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SOLAR POWERED PLANS

Date: 08-12-2025
Revisions:
00-00-2025

Landscape Compliance Plan
for
Springfield North Dollar General
Highway 49 & 25, Map 059, Parcel 66.00
Robertson County, Tennessee

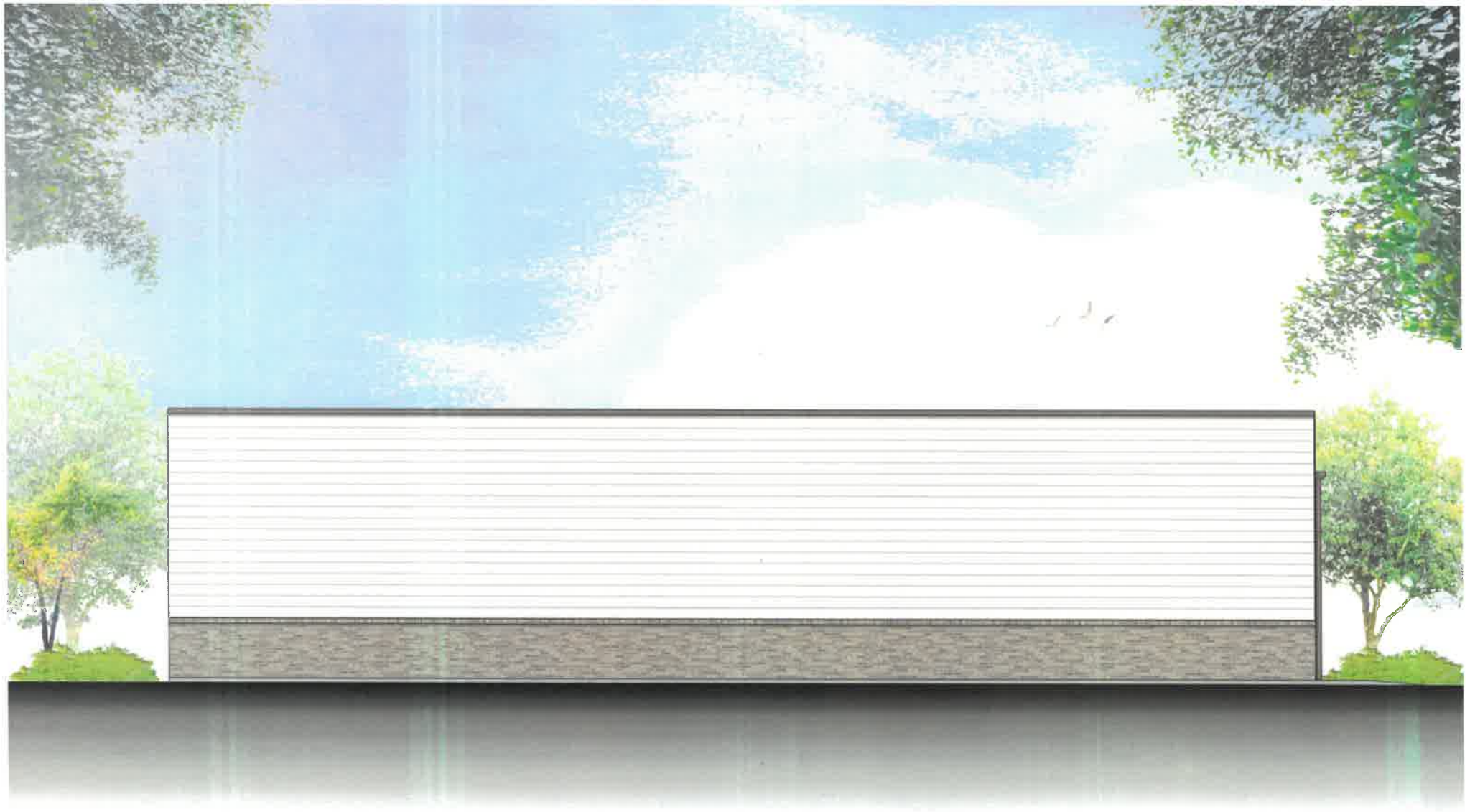
CLD

MATT BRYAN LEA
REGISTERED LANDSCAPE ARCHITECT

25133
Sheet:
L1.0
1 of 1



A1.0



A1.1





STORMWATER REPORT

SPRINGFIELD NORTH DOLLAR GENERAL

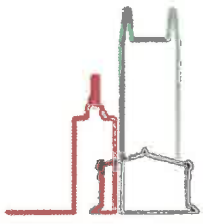
8/14/2025

PREPARED FOR:

TURNER AND ASSOCIATES REALTY, INC

PREPARED BY:





615 DESIGN GROUP

1517 HUNT CLUB BLVD, SUITE 300
GALLATIN, TN 37066

Project Description:

The project is located at the southeast corner of Highway 25 and Highway 49 in Springfield, TN. The project is one commercial buildings with an intended use of general retail located on +/- 1.29 acres.

Existing Conditions:

The existing features of the site include moderate slopes. The existing drainage pattern of the site is from northeast to southwest with a starting elevation of +/- 734 and leaves the site at an ending elevation of +/- 724. The existing site is undisturbed except for an existing gravel drive at the northeast corner. The soils onsite consist primarily of Sango silt loam (0 to 2 percent slopes) which is classified as a Type C/D soil. A detailed summary and description of the soil onsite can be found in Appendix A of this report.

Proposed Conditions:

The proposed development will add approximately 0.66 acres of impervious surface to the site. The post-development flow rates onsite were minimized by the proposed water quality and quantity measures put in place onsite.

Water Quantity Measures

The post-development flow rates onsite were minimized using a low flow orifice for the extended detention ponds. The extended detention systems were implemented into the overall post-development model. The pre-development and post-development flow rates were modeled and calculated using Hydrographs for the 2, 5, 10, 25, 50, and 100-year storm events. A summary of the calculations for each storm event can be found in Appendix C. The pre-development flow rates for the overall drainage area are listed below:

PRE-DEVELOPMENT FLOW RATES (CFS)	
2-YEAR STORM EVENT	3.27
5-YEAR STORM EVENT	4.49
10-YEAR STORM EVENT	5.53
25-YEAR STORM EVENT	6.97
50-YEAR STORM EVENT	8.17
100-YEAR STORM EVENT	9.43

Pre-development Flow Rates (CFS)

The post development flow rates for the site were reduced to below pre-development flow rates for all storm events.

POST-DEVELOPMENT FLOW RATES (CFS)	
1-YEAR STORM EVENT	1.07
2-YEAR STORM EVENT	1.37
5-YEAR STORM EVENT	1.77
10-YEAR STORM EVENT	2.12
25-YEAR STORM EVENT	2.61
50-YEAR STORM EVENT	4.36
100-YEAR STORM EVENT	6.68

Post-development Flow Rates (CFS)

APPENDIX A

SOILS REPORT

United States Department of Agriculture

NRCS

Natural Resources Conservation Service

A product of the National Cooperative Soil Survey, a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local participants

Custom Soil Resource Report for Robertson County, Tennessee



August 7, 2025

Preface

Soil surveys contain information that affects land use planning in survey areas. They highlight soil limitations that affect various land uses and provide information about the properties of the soils in the survey areas. Soil surveys are designed for many different users, including farmers, ranchers, foresters, agronomists, urban planners, community officials, engineers, developers, builders, and home buyers. Also, conservationists, teachers, students, and specialists in recreation, waste disposal, and pollution control can use the surveys to help them understand, protect, or enhance the environment.

Various land use regulations of Federal, State, and local governments may impose special restrictions on land use or land treatment. Soil surveys identify soil properties that are used in making various land use or land treatment decisions. The information is intended to help the land users identify and reduce the effects of soil limitations on various land uses. The landowner or user is responsible for identifying and complying with existing laws and regulations.

Although soil survey information can be used for general farm, local, and wider area planning, onsite investigation is needed to supplement this information in some cases. Examples include soil quality assessments (http://www.nrcs.usda.gov/wps/portal/nrcs/main/soils/health/) and certain conservation and engineering applications. For more detailed information, contact your local USDA Service Center (https://offices.sc.egov.usda.gov/locator/app?agency=nrcs) or your NRCS State Soil Scientist (http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/contactus/?cid=nrcs142p2_053951).

Great differences in soil properties can occur within short distances. Some soils are seasonally wet or subject to flooding. Some are too unstable to be used as a foundation for buildings or roads. Clayey or wet soils are poorly suited to use as septic tank absorption fields. A high water table makes a soil poorly suited to basements or underground installations.

The National Cooperative Soil Survey is a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local agencies. The Natural Resources Conservation Service (NRCS) has leadership for the Federal part of the National Cooperative Soil Survey.

Information about soils is updated periodically. Updated information is available through the NRCS Web Soil Survey, the site for official soil survey information.

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Soil Properties and Qualities 15
Soil Erosion Factors 15
K Factor, Whole Soil 15
Soil Qualities and Features 18
Hydrologic Soil Group 18
References 23

How Soil Surveys Are Made

Soil surveys are made to provide information about the soils and miscellaneous areas in a specific area. They include a description of the soils and miscellaneous areas and their location on the landscape and tables that show soil properties and limitations affecting various uses. Soil scientists observed the steepness, length, and shape of the slopes; the general pattern of drainage; the kinds of crops and native plants; and the kinds of bedrock. They observed and described many soil profiles. A soil profile is the sequence of natural layers, or horizons, in a soil. The profile extends from the surface down into the unconsolidated material in which the soil formed or from the surface down to bedrock. The unconsolidated material is devoid of roots and other living organisms and has not been changed by other biological activity.

Currently, soils are mapped according to the boundaries of major land resource areas (MLRAs). MLRAs are geographically associated land resource units that share common characteristics related to physiography, geology, climate, water resources, soils, biological resources, and land uses (USDA, 2006). Soil survey areas typically consist of parts of one or more MLRA.

The soils and miscellaneous areas in a survey area occur in an orderly pattern that is related to the geology, landforms, relief, climate, and natural vegetation of the area. Each kind of soil and miscellaneous area is associated with a particular kind of landform or with a segment of the landform. By observing the soils and miscellaneous areas in the survey area and relating their position to specific segments of the landform, a soil scientist develops a concept, or model, of how they were formed. Thus, during mapping, this model enables the soil scientist to predict with a considerable degree of accuracy the kind of soil or miscellaneous area at a specific location on the landscape.

Commonly, individual soils on the landscape merge into one another as their characteristics gradually change. To construct an accurate soil map, however, soil scientists must determine the boundaries between the soils. They can observe only a limited number of soil profiles. Nevertheless, these observations, supplemented by an understanding of the soil-vegetation-landscape relationship, are sufficient to verify predictions of the kinds of soil in an area and to determine the boundaries.

Soil scientists recorded the characteristics of the soil profiles that they studied. They noted soil color, texture, size and shape of soil aggregates, kind and amount of rock fragments, distribution of plant roots, reaction, and other features that enable them to identify soils. After describing the soils in the survey area and determining their properties, the soil scientists assigned the soils to taxonomic classes (units). Taxonomic classes are concepts. Each taxonomic class has a set of soil characteristics with precisely defined limits. The classes are used as a basis for comparison to classify soils systematically. Soil taxonomy, the system of taxonomic classification used in the United States, is based mainly on the kind and character of soil properties and the arrangement of horizons within the profile. After the soil

scientists classified and named the soils in the survey area, they compared the individual soils with similar soils in the same taxonomic class in other areas so that they could confirm data and assemble additional data based on experience and research.

The objective of soil mapping is not to delineate pure map unit components; the objective is to separate the landscape into landforms or landform segments that have similar use and management requirements. Each map unit is defined by a unique combination of soil components and/or miscellaneous areas in predictable proportions. Some components may be highly contrasting to the other components of the map unit. The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The delineation of such landforms and landform segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, onsite investigation is needed to define and locate the soils and miscellaneous areas.

Soil scientists make many field observations in the process of producing a soil map. The frequency of observation is dependent upon several factors, including scale of mapping, intensity of mapping, design of map units, complexity of the landscape, and experience of the soil scientist. Observations are made to test and refine the soil-landscape model and predictions and to verify the classification of the soils at specific locations. Once the soil-landscape model is refined, a significantly smaller number of measurements of individual soil properties are made and recorded. These measurements may include field measurements, such as those for color, depth to bedrock, and texture, and laboratory measurements, such as those for content of sand, silt, clay, salt, and other components. Properties of each soil typically vary from one point to another across the landscape.

Observations for map unit components are aggregated to develop ranges of characteristics for the components. The aggregated values are presented. Direct measurements do not exist for every property presented for every map unit component. Values for some properties are estimated from combinations of other properties.

While a soil survey is in progress, samples of some of the soils in the area generally are collected for laboratory analyses and for engineering tests. Soil scientists interpret the data from these analyses and tests as well as the field-observed characteristics and the soil properties to determine the expected behavior of the soils under different uses. Interpretations for all of the soils are field tested through observation of the soils in different uses and under different levels of management. Some interpretations are modified to fit local conditions, and some new interpretations are developed to meet local needs. Data are assembled from other sources, such as research information, production records, and field experience of specialists. For example, data on crop yields under defined levels of management are assembled from farm records and from field or plot experiments on the same kinds of soil.

Predictions about soil behavior are based not only on soil properties but also on such variables as climate and biological activity. Soil conditions are predictable over long periods of time, but they are not predictable from year to year. For example, soil scientists can predict with a fairly high degree of accuracy that a given soil will have a high water table within certain depths in most years, but they cannot predict that a high water table will always be at a specific level in the soil on a specific date.

After soil scientists located and identified the significant natural bodies of soil in the survey area, they drew the boundaries of these bodies on aerial photographs and

identified each as a specific map unit. Aerial photographs show trees, buildings, fields, roads, and rivers, all of which help in locating boundaries accurately.

Soil Map

The soil map section includes the soil map for the defined area of interest, a list of soil map units on the map and extent of each map unit, and cartographic symbols displayed on the map. Also presented are various metadata about data used to produce the map, and a description of each soil map unit.

Custom Soil Resource Report
Soil Map



MAP LEGEND

Area of Interest (AOI)
- Area of Interest (AOI)

Soils
- Soil Map Unit Polygons
- Soil Map Unit Lines
- Soil Map Unit Points

Special Point Features
- Blowout
- Borrow Pit
- Clay Spot
- Closed Depression
- Gravel Pit
- Gravelly Spot
- Landfill
- Lava Flow
- Marsh or swamp
- Mine or Quarry
- Miscellaneous Water
- Perennial Water
- Rock Outcrop
- Saline Spot
- Sandy Spot
- Severely Eroded Spot
- Sinkhole
- Slide or Slip
- Sodic Spot
- Spoil Area
- Stony Spot
- Very Stony Spot
- Wet Spot
- Other
- Special Line Features

Water Features
- Streams and Canals

Transportation
- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

Background
- Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:15,800.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Robertson County, Tennessee
Survey Area Data: Version 22, Sep 12, 2024

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Oct 5, 2024—Dec 6, 2024

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
Sa	Sango silt loam, 0 to 2 percent slopes	1.9	100.0%
Totals for Area of Interest		**1.9**	**100.0%**

Map Unit Descriptions

The map units delineated on the detailed soil maps in a soil survey represent the soils or miscellaneous areas in the survey area. The map unit descriptions, along with the maps, can be used to determine the composition and properties of a unit.

A map unit delineation on a soil map represents an area dominated by one or more major kinds of soil or miscellaneous areas. A map unit is identified and named according to the taxonomic classification of the dominant soils. Within a taxonomic class there are precisely defined limits for the properties of the soils. On the landscape, however, the soils are natural phenomena, and they have the characteristic variability of all natural phenomena. Thus, the range of some observed properties may extend beyond the limits defined for a taxonomic class. Areas of soils of a single taxonomic class rarely, if ever, can be mapped without including areas of other taxonomic classes. Consequently, every map unit is made up of the soils or miscellaneous areas for which it is named and some minor components that belong to taxonomic classes other than those of the major soils.

Most minor soils have properties similar to those of the dominant soil or soils in the map unit, and thus they do not affect use and management. These are called noncontrasting, or similar, components. They may or may not be mentioned in a particular map unit description. Other minor components, however, have properties and behavioral characteristics divergent enough to affect use or to require different management. These are called contrasting, or dissimilar, components. They generally are in small areas and could not be mapped separately because of the scale used. Some small areas of strongly contrasting soils or miscellaneous areas are identified by a special symbol on the maps. If included in the database for a given area, the contrasting minor components are identified in the map unit descriptions along with some characteristics of each. A few areas of minor components may not have been observed, and consequently they are not mentioned in the descriptions, especially where the pattern was so complex that it was impractical to make enough observations to identify all the soils and miscellaneous areas on the landscape.

The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The objective of mapping is not to delineate pure taxonomic classes but rather to separate the landscape into landforms or landform segments that have similar use and management requirements. The delineation of such segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, however, onsite investigation is needed to define and locate the soils and miscellaneous areas.

An identifying symbol precedes the map unit name in the map unit descriptions. Each description includes general facts about the unit and gives important soil properties and qualities.

Soils that have profiles that are almost alike make up a *soil series*. Except for differences in texture of the surface layer, all the soils of a series have major horizons that are similar in composition, thickness, and arrangement.

Soils of one series can differ in texture of the surface layer, slope, stoniness, salinity, degree of erosion, and other characteristics that affect their use. On the basis of such differences, a soil series is divided into *soil phases*. Most of the areas shown on the detailed soil maps are phases of soil series. The name of a soil phase commonly indicates a feature that affects use or management. For example, Alpha silt loam, 0 to 2 percent slopes, is a phase of the Alpha series.

Some map units are made up of two or more major soils or miscellaneous areas. These map units are complexes, associations, or undifferentiated groups.

A *complex* consists of two or more soils or miscellaneous areas in such an intricate pattern or in such small areas that they cannot be shown separately on the maps. The pattern and proportion of the soils or miscellaneous areas are somewhat similar in all areas. Alpha-Beta complex, 0 to 6 percent slopes, is an example.

An *association* is made up of two or more geographically associated soils or miscellaneous areas that are shown as one unit on the maps. Because of present or anticipated uses of the map units in the survey area, it was not considered practical or necessary to map the soils or miscellaneous areas separately. The pattern and relative proportion of the soils or miscellaneous areas are somewhat similar. Alpha-Beta association, 0 to 2 percent slopes, is an example.

An *undifferentiated group* is made up of two or more soils or miscellaneous areas that could be mapped individually but are mapped as one unit because similar interpretations can be made for use and management. The pattern and proportion of the soils or miscellaneous areas in a mapped area are not uniform. An area can be made up of only one of the major soils or miscellaneous areas, or it can be made up of all of them. Alpha and Beta soils, 0 to 2 percent slopes, is an example.

Some surveys include *miscellaneous areas*. Such areas have little or no soil material and support little or no vegetation. Rock outcrop is an example.

Robertson County, Tennessee

Sa—Sango silt loam, 0 to 2 percent slopes

Map Unit Setting

National map unit symbol: 2qh78
Elevation: 590 to 2,090 feet
Mean annual precipitation: 48 to 58 inches
Mean annual air temperature: 57 to 59 degrees F
Frost-free period: 190 to 230 days
Farmland classification: All areas are prime farmland

Map Unit Composition

Sango and similar soils: 90 percent
Minor components: 10 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Sango

Setting

Landform: Broad interstream divides
Landform position (two-dimensional): Summit
Landform position (three-dimensional): Base slope, interfluve
Down-slope shape: Linear
Across-slope shape: Concave, linear
Parent material: Loess over residuum weathered from cherty limestone

Typical profile

Ap - 0 to 1 inches: silt loam
E - 1 to 11 inches: silt loam
E/Bt - 11 to 31 inches: silt loam
Btx - 31 to 66 inches: silt loam
2Bt - 66 to 79 inches: gravelly clay

Properties and qualities

Slope: 0 to 2 percent
Depth to restrictive feature: 26 to 35 inches to fragipan
Drainage class: Moderately well drained
Runoff class: Low
Capacity of the most limiting layer to transmit water (Ksat): Very low to moderately high (0.00 to 0.20 in/hr)
Depth to water table: About 12 to 26 inches
Frequency of flooding: None
Frequency of ponding: None
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Available water supply, 0 to 60 inches: Moderate (about 6.2 inches)

Interpretive groups

Land capability classification (irrigated): 2w
Land capability classification (nonirrigated): 2w
Hydrologic Soil Group: C/D
Ecological site: F122XY023TN - Loess Veneered Thermic Uplands
Hydric soil rating: No

Minor Components

Taft

Percent of map unit: 6 percent
Landform: Broad interstream divides
Landform position (two-dimensional): Summit
Landform position (three-dimensional): Crest, interfluve
Down-slope shape: Linear
Across-slope shape: Linear
Hydric soil rating: No

Guthrie

Percent of map unit: 4 percent
Landform: Broad interstream divides
Landform position (two-dimensional): Summit
Landform position (three-dimensional): Crest, interfluve
Down-slope shape: Linear
Across-slope shape: Concave, linear
Hydric soil rating: Yes

Soil Information for All Uses

Soil Properties and Qualities

The Soil Properties and Qualities section includes various soil properties and qualities displayed as thematic maps with a summary table for the soil map units in the selected area of interest. A single value or rating for each map unit is generated by aggregating the interpretive ratings of individual map unit components. This aggregation process is defined for each property or quality.

Soil Erosion Factors

Soil Erosion Factors are soil properties and interpretations used in evaluating the soil for potential erosion. Example soil erosion factors can include K factor for the whole soil or on a rock free basis, T factor, wind erodibility group and wind erodibility index.

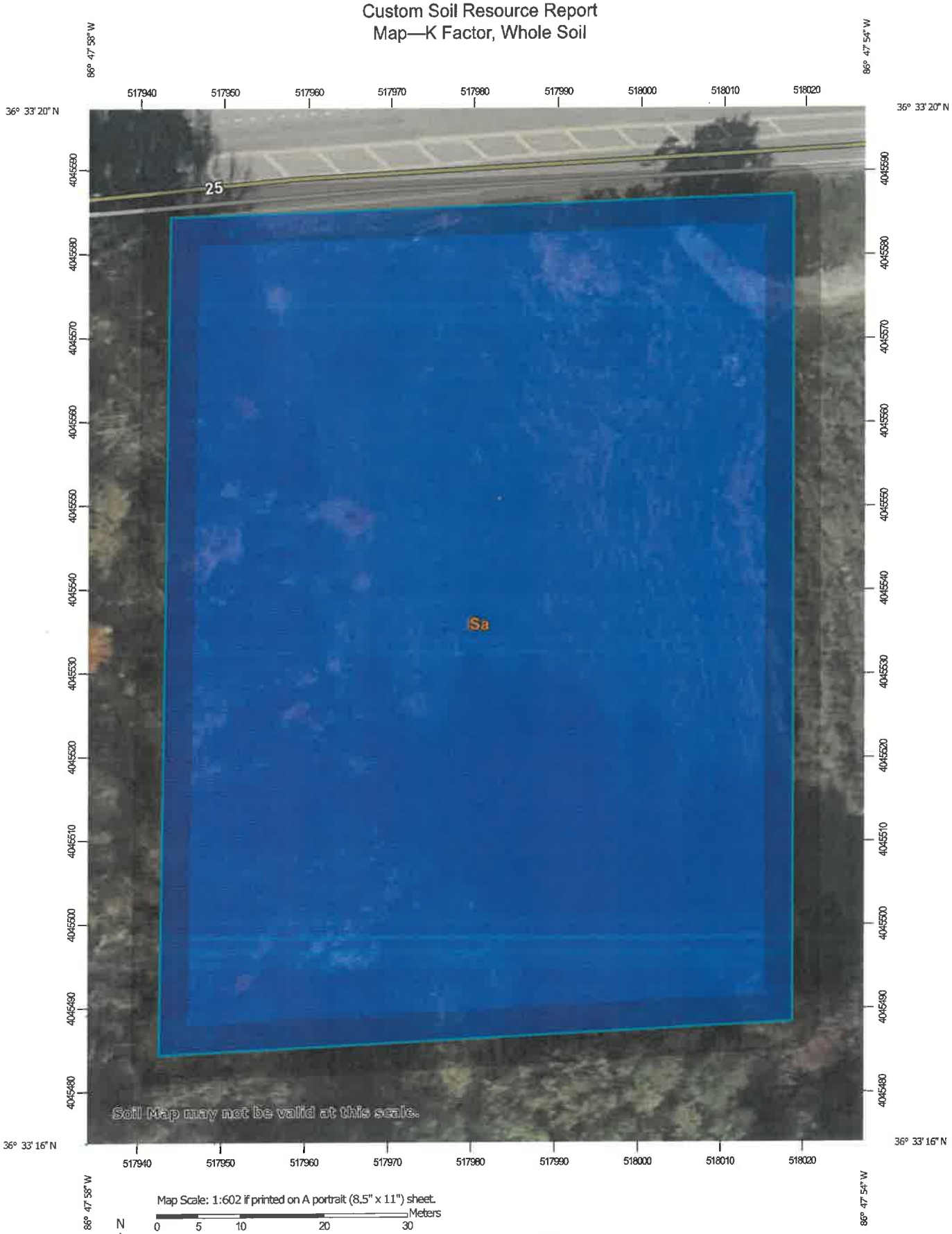
K Factor, Whole Soil

Erosion factor K indicates the susceptibility of a soil to sheet and rill erosion by water. Factor K is one of six factors used in the Universal Soil Loss Equation (USLE) and the Revised Universal Soil Loss Equation (RUSLE) to predict the average annual rate of soil loss by sheet and rill erosion in tons per acre per year. The estimates are based primarily on percentage of silt, sand, and organic matter and on soil structure and saturated hydraulic conductivity (Ksat). Values of K range from 0.02 to 0.69. Other factors being equal, the higher the value, the more susceptible the soil is to sheet and rill erosion by water.

"Erosion factor Kw (whole soil)" indicates the erodibility of the whole soil. The estimates are modified by the presence of rock fragments.

Factor K does not apply to organic horizons and is not reported for those layers.

Custom Soil Resource Report
Map—K Factor, Whole Soil



MAP LEGEND

Area of Interest (AOI)
- Area of Interest (AOI)

Soils

Soil Rating Polygons
- .02
- .05
- .10
- .15
- .17
- .20
- .24
- .28
- .32
- .37
- .43
- .49
- .55
- .64
- Not rated or not available

Soil Rating Lines
- .02
- .05
- .10
- .15
- .17
- .20
- .24
- .28
- .32
- .37
- .43
- .49
- .55
- .64
- Not rated or not available

Soil Rating Points
- .02
- .05
- .10
- .15
- .17
- .20
- .24
- .28
- .32
- .37
- .43
- .49
- .55
- .64
- Not rated or not available

Water Features
- Streams and Canals

Transportation
- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

Background
- Aerial Photography

MAP INFORMATION

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Warning: Soil Map may not be valid at this scale.

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Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

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Survey Area Data: Version 22, Sep 12, 2024

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Date(s) aerial images were photographed: Oct 5, 2024—Dec 6, 2024

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Table—K Factor, Whole Soil

Map unit symbol	Map unit name	Rating	Acres in AOI	Percent of AOI
Sa	Sango silt loam, 0 to 2 percent slopes	.55	1.9	100.0%
Totals for Area of Interest			**1.9**	**100.0%**

Rating Options—K Factor, Whole Soil

Aggregation Method: Dominant Condition

Component Percent Cutoff: None Specified

Tie-break Rule: Higher

Layer Options (Horizon Aggregation Method): Surface Layer (Not applicable)

Soil Qualities and Features

Soil qualities are behavior and performance attributes that are not directly measured, but are inferred from observations of dynamic conditions and from soil properties. Example soil qualities include natural drainage, and frost action. Soil features are attributes that are not directly part of the soil. Example soil features include slope and depth to restrictive layer. These features can greatly impact the use and management of the soil.

Hydrologic Soil Group

Hydrologic soil groups are based on estimates of runoff potential. Soils are assigned to one of four groups according to the rate of water infiltration when the soils are not protected by vegetation, are thoroughly wet, and receive precipitation from long-duration storms.

The soils in the United States are assigned to four groups (A, B, C, and D) and three dual classes (A/D, B/D, and C/D). The groups are defined as follows:

Group A. Soils having a high infiltration rate (low runoff potential) when thoroughly wet. These consist mainly of deep, well drained to excessively drained sands or gravelly sands. These soils have a high rate of water transmission.

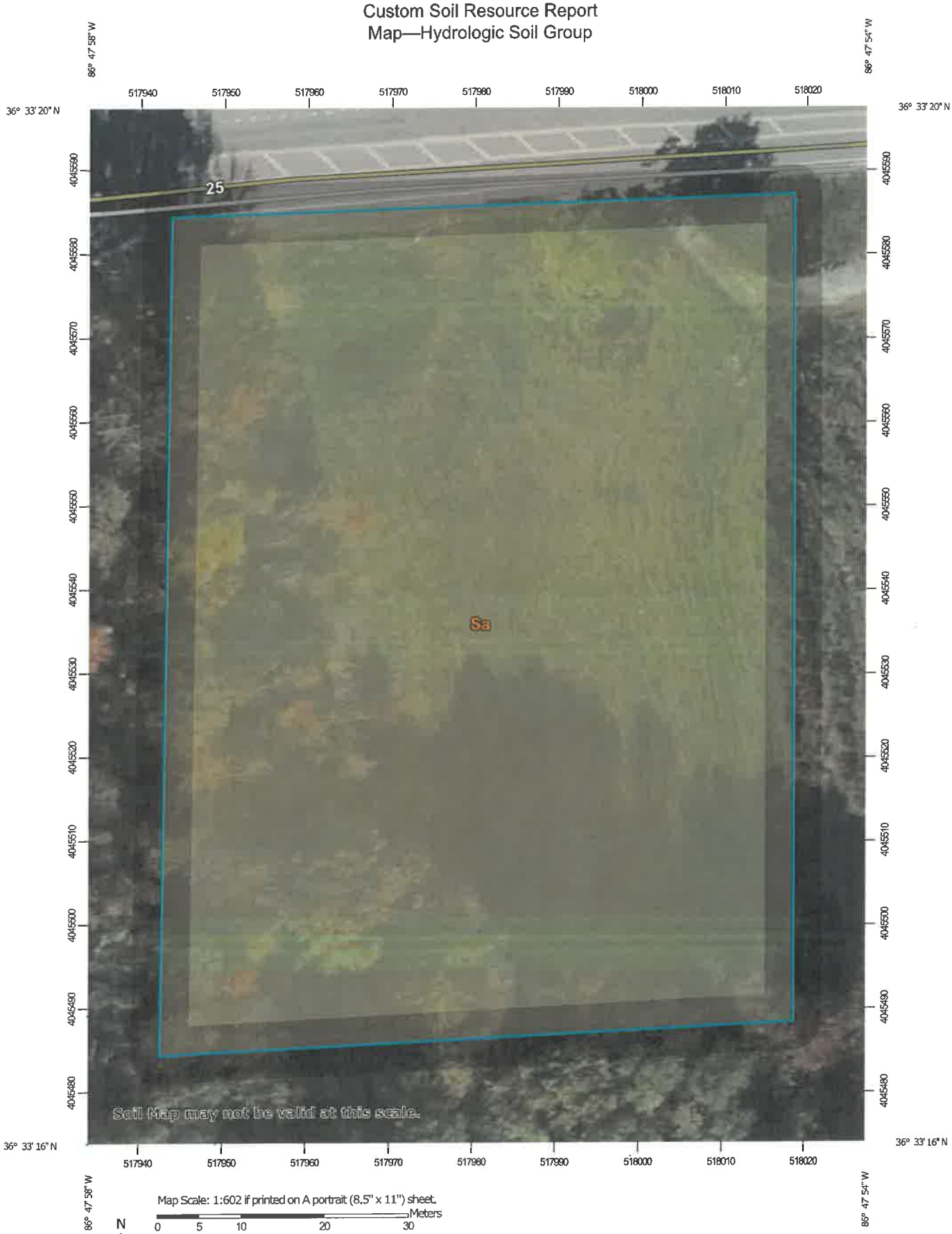
Group B. Soils having a moderate infiltration rate when thoroughly wet. These consist chiefly of moderately deep or deep, moderately well drained or well drained soils that have moderately fine texture to moderately coarse texture. These soils have a moderate rate of water transmission.

Group C. Soils having a slow infiltration rate when thoroughly wet. These consist chiefly of soils having a layer that impedes the downward movement of water or soils of moderately fine texture or fine texture. These soils have a slow rate of water transmission.

Group D. Soils having a very slow infiltration rate (high runoff potential) when thoroughly wet. These consist chiefly of clays that have a high shrink-swell potential, soils that have a high water table, soils that have a claypan or clay layer at or near the surface, and soils that are shallow over nearly impervious material. These soils have a very slow rate of water transmission.

If a soil is assigned to a dual hydrologic group (A/D, B/D, or C/D), the first letter is for drained areas and the second is for undrained areas. Only the soils that in their natural condition are in group D are assigned to dual classes.

Custom Soil Resource Report
Map—Hydrologic Soil Group



MAP LEGEND

Area of Interest (AOI)
- Area of Interest (AOI)

Soils

Soil Rating Polygons
- A
- A/D
- B
- B/D
- C
- C/D
- D
- Not rated or not available

Soil Rating Lines
- A
- A/D
- B
- B/D
- C
- C/D
- D
- Not rated or not available

Soil Rating Points
- A
- A/D
- B
- B/D
- C
- C/D
- D
- Not rated or not available

Water Features
- Streams and Canals

Transportation
- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

Background
- Aerial Photography

MAP INFORMATION

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Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

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Survey Area Data: Version 22, Sep 12, 2024

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Oct 5, 2024—Dec 6, 2024

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Table—Hydrologic Soil Group

Map unit symbol	Map unit name	Rating	Acres in AOI	Percent of AOI
Sa	Sango silt loam, 0 to 2 percent slopes	C/D	1.9	100.0%
Totals for Area of Interest			**1.9**	**100.0%**

Rating Options—Hydrologic Soil Group

Aggregation Method: Dominant Condition

Component Percent Cutoff: None Specified

Tie-break Rule: Higher

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APPENDIX B

HYDROGRAPHS REPORT

615 DESIGN GROUP
DOLLAR GENERAL
0 HWY 25E, SPRINGFIELD TN
TURNER AND ASSOCIATES
REVISIONS
NUMBER
DESCRIPTION
DATE
PROJECT #:
DESIGNED BY:
DRAWN BY:
DATE:
CHECKED:
CJM
CJM
PRE-DEVELOPMENT
DRAINAGE MAP
PRE-DEVELOPMENT ONSITE TO OUTFALL
TOTAL AREA: 1.29 ACRES
PERVIOUS (TC): 1.29 (CN=81.00)
TC: 11.4 MIN
STATE HIGHWAY 25 EAST
RIGHT-OF-WAY VARIES - PAVEMENT VARIES
STATE HIGHWAY 49 EAST
RIGHT-OF-WAY VARIES - PAVEMENT VARIES
N 85°59'52" E 224.41'
S 85°59'52" W 224.41'
S 02°20'24" W 282.00'
N 02°20'24" E 282.00'
POINT OF BEGINNING
(NORTHING = , EASTING =)
P1 (1.37 Ac.)
1.44 ACRES
738.00
735.00
728.00
726.00
(282.00)
(282.00)
(282.33)
N 1,233,827.5558
E 804,307.7707
DU=738.33'
REF.
SEPTIC TANK OR WELL HOUSE REMAINS
GRAVEL
GRASS
TREES AND BRUSH VEGETATION
BRUSH
TREE LINE
SET 5/8" IRON ROD WITH CAP
SET PK NAIL
SET PK NAIL WITH WASHER
SET MAG NAIL
SET MAG NAIL WITH WASHER
SET 1/2" IRON ROD WITH CAP
SET 1/2" IRON PIPE
SET 1/2" IRON PIPE WITH CAP
SET 5/8" IRON ROD
SET 1/2" IRON ROD
FOUND 1/2" IRON ROD
FOUND 1/2" IRON PIPE
FOUND 1/2" IRON PIPE WITH CAP
FOUND 5/8" IRON ROD
FOUND 5/8" IRON ROD WITH CAP
FOUND PK NAIL
FOUND PK NAIL WITH WASHER
FOUND MAG NAIL
FOUND MAG NAIL WITH WASHER
POINT OF BEGINNING
POINT OF COMMENCEMENT
POINT OF TERMINUS
POINT OF REVERSE CURVATURE
POINT OF COMPOUND CURVATURE
POINT OF CURVATURE
POINT OF TANGENCY
POINT OF INTERSECTION
POINT OF REFERENCE
POINT OF BEARING
POINT OF ANGLE
POINT OF DEFLECTION
POINT OF CHANGE
POINT OF CHANGE IN DIRECTION
POINT OF CHANGE IN CURVATURE
POINT OF CHANGE IN TANGENCY
POINT OF CHANGE IN INTERSECTION
POINT OF CHANGE IN REFERENCE
POINT OF CHANGE IN BEARING
POINT OF CHANGE IN ANGLE
POINT OF CHANGE IN DEFLECTION
POINT OF CHANGE IN DIRECTION
POINT OF CHANGE IN CURVATURE
POINT OF CHANGE IN TANGENCY
POINT OF CHANGE IN INTERSECTION
POINT OF CHANGE IN REFERENCE
POINT OF CHANGE IN BEARING
POINT OF CHANGE IN ANGLE
POINT OF CHANGE IN DEFLECTION

Watershed Model Schematic

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2025



Legend

Hyd.	Origin	Description
1	SCS Runoff	<no description>

Hydrograph Return Period Recap

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2025

Hyd. No.	Hydrograph type (origin)	Inflow hyd(s)	Peak Outflow (cfs)								Hydrograph Description
			1-yr	2-yr	3-yr	5-yr	10-yr	25-yr	50-yr	100-yr	
1	SCS Runoff	------	2.399	3.269	-------	4.488	5.529	6.973	8.166	9.428	<no description>

Hydrograph Summary Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2025

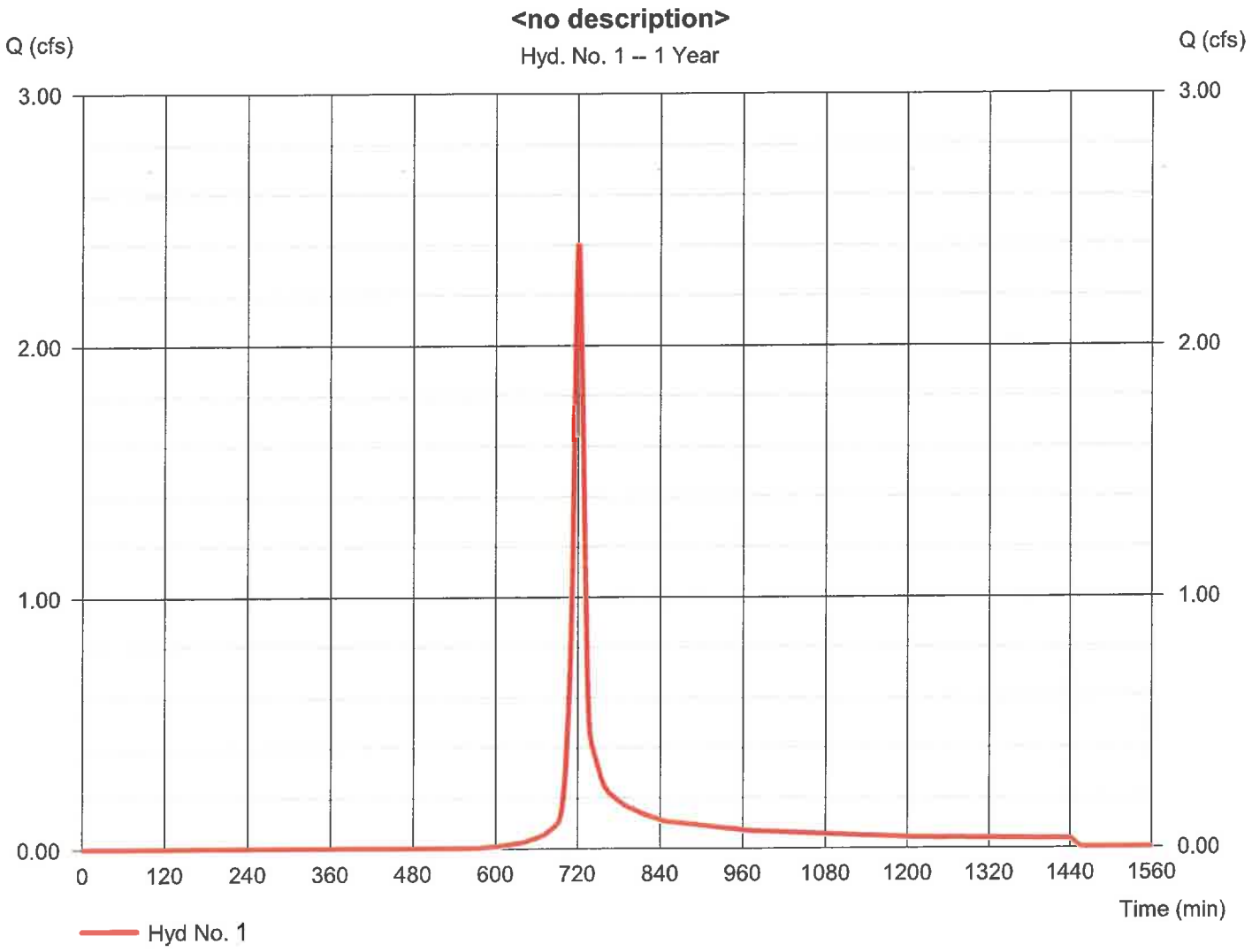
Hyd. No.	Hydrograph type (origin)	Peak flow (cfs)	Time interval (min)	Time to Peak (min)	Hyd. volume (cuft)	Inflow hyd(s)	Maximum elevation (ft)	Total strge used (cuft)	Hydrograph Description
1	SCS Runoff	2.399	2	720	6,269	-----	-----	----	<no description>

Hydrograph Report

Hyd. No. 1

<no description>

Hydrograph type	= SCS Runoff	Peak discharge	= 2.399 cfs
Storm frequency	= 1 yrs	Time to peak	= 720 min
Time interval	= 2 min	Hyd. volume	= 6,269 cuft
Drainage area	= 1.290 ac	Curve number	= 81
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= TR55	Time of conc. (Tc)	= 11.40 min
Total precip.	= 2.98 in	Distribution	= Type II
Storm duration	= 24 hrs	Shape factor	= 484



TR55 Tc Worksheet

Hyd. No. 1

<no description>

Description	A		B		C		Totals
Sheet Flow							
Manning's n-value	= 0.150		0.011		0.011		
Flow length (ft)	= 100.0		0.0		0.0		
Two-year 24-hr precip. (in)	= 3.56		0.00		0.00		
Land slope (%)	= 1.76		0.00		0.00		
Travel Time (min)	**= 9.78**	**+**	**0.00**	**+**	**0.00**	**=**	**9.78**
Shallow Concentrated Flow							
Flow length (ft)	= 280.00		0.00		0.00		
Watercourse slope (%)	= 3.09		0.00		0.00		
Surface description	= Unpaved		Paved		Paved		
Average velocity (ft/s)	=2.84		0.00		0.00		
Travel Time (min)	**= 1.65**	**+**	**0.00**	**+**	**0.00**	**=**	**1.65**
Channel Flow							
X sectional flow area (sqft)	= 0.00		0.00		0.00		
Wetted perimeter (ft)	= 0.00		0.00		0.00		
Channel slope (%)	= 0.00		0.00		0.00		
Manning's n-value	= 0.015		0.015		0.015		
Velocity (ft/s)	=0.00						
			0.00				
					0.00		
Flow length (ft)	({0})0.0		0.0		0.0		
Travel Time (min)	**= 0.00**	**+**	**0.00**	**+**	**0.00**	**=**	**0.00**

Total Travel Time, Tc ..... 11.40 min

Hydrograph Summary Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2025

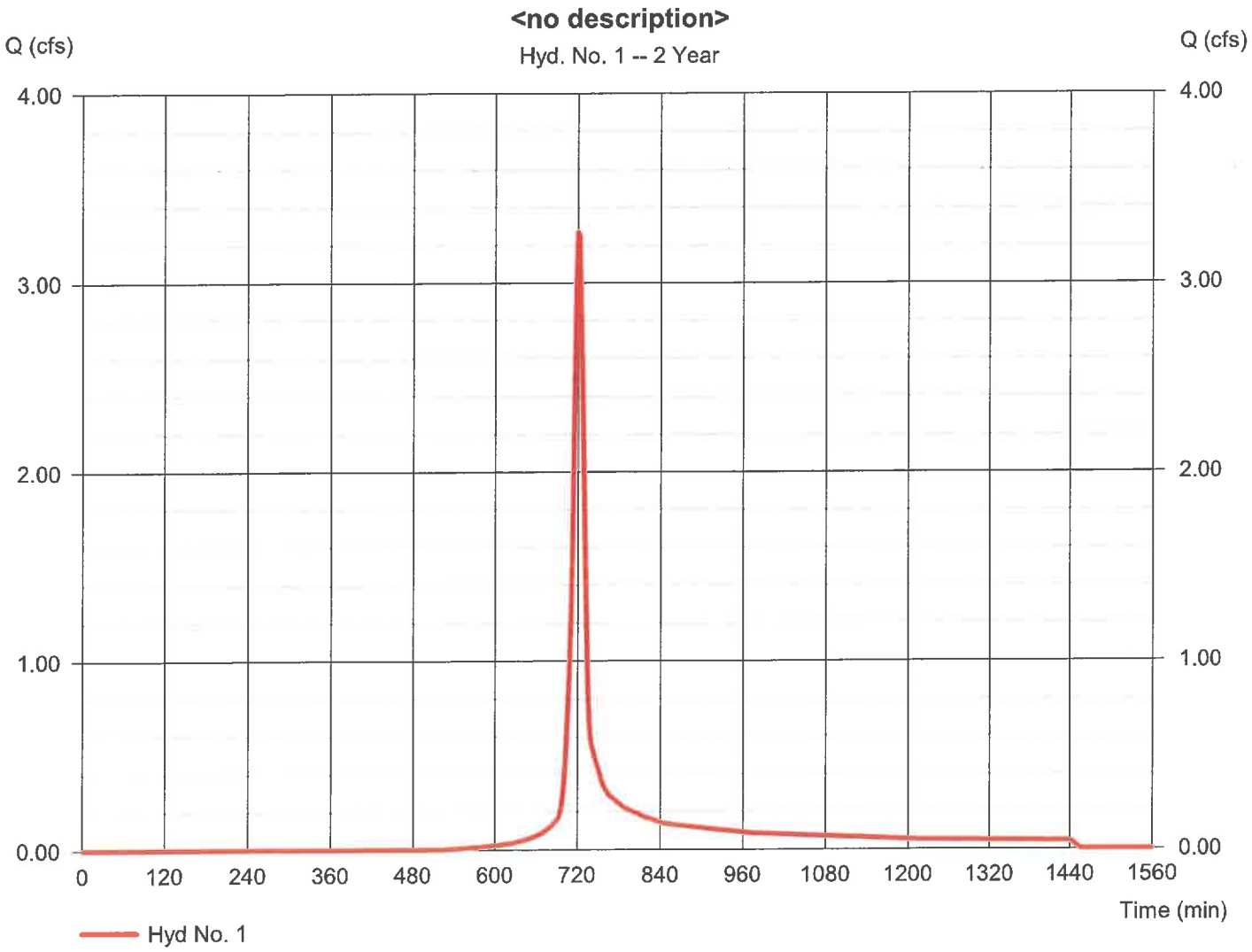
Hyd. No.	Hydrograph type (origin)	Peak flow (cfs)	Time interval (min)	Time to Peak (min)	Hyd. volume (cuft)	Inflow hyd(s)	Maximum elevation (ft)	Total strge used (cuft)	Hydrograph Description
1	SCS Runoff	3.269	2	720	8,486	-----	-----	-----	<no description>

Hydrograph Report

Hyd. No. 1

<no description>

Hydrograph type	= SCS Runoff	Peak discharge	= 3.269 cfs
Storm frequency	= 2 yrs	Time to peak	= 720 min
Time interval	= 2 min	Hyd. volume	= 8,486 cuft
Drainage area	= 1.290 ac	Curve number	= 81
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= TR55	Time of conc. (Tc)	= 11.40 min
Total precip.	= 3.56 in	Distribution	= Type II
Storm duration	= 24 hrs	Shape factor	= 484



Hydrograph Summary Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2025

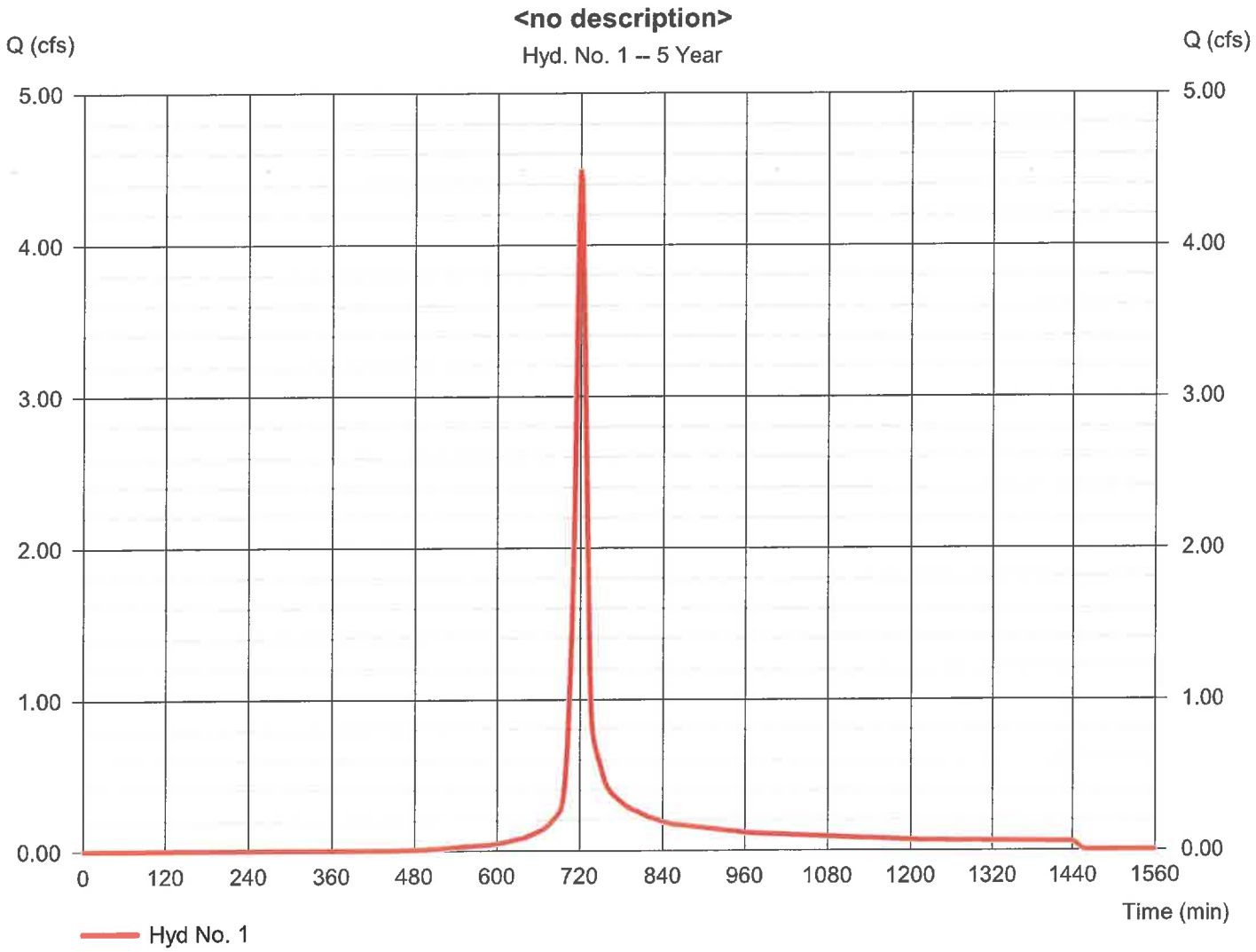
Hyd. No.	Hydrograph type (origin)	Peak flow (cfs)	Time interval (min)	Time to Peak (min)	Hyd. volume (cuft)	Inflow hyd(s)	Maximum elevation (ft)	Total strge used (cuft)	Hydrograph Description
1	SCS Runoff	4.488	2	720	11,639	-----	-----	-----	<no description>

Hydrograph Report

Hyd. No. 1

<no description>

Hydrograph type	= SCS Runoff	Peak discharge	= 4.488 cfs
Storm frequency	= 5 yrs	Time to peak	= 720 min
Time interval	= 2 min	Hyd. volume	= 11,639 cuft
Drainage area	= 1.290 ac	Curve number	= 81
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= TR55	Time of conc. (Tc)	= 11.40 min
Total precip.	= 4.34 in	Distribution	= Type II
Storm duration	= 24 hrs	Shape factor	= 484



Hydrograph Summary Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2025

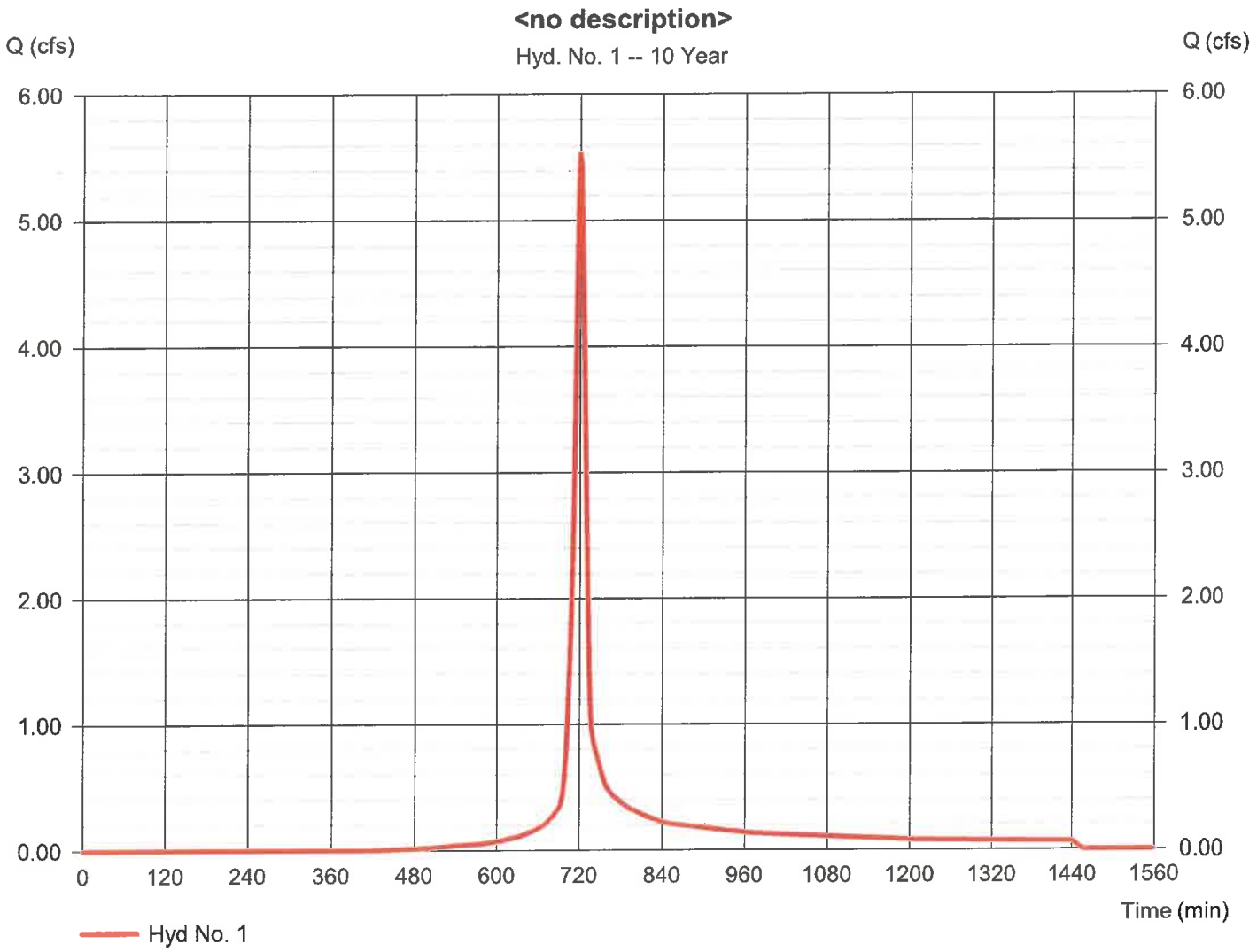
Hyd. No.	Hydrograph type (origin)	Peak flow (cfs)	Time interval (min)	Time to Peak (min)	Hyd. volume (cuft)	Inflow hyd(s)	Maximum elevation (ft)	Total strge used (cuft)	Hydrograph Description
1	SCS Runoff	5.529	2	720	14,374	-----	-----	-----	<no description>

Hydrograph Report

Hyd. No. 1

<no description>

Hydrograph type	= SCS Runoff	Peak discharge	= 5.529 cfs
Storm frequency	= 10 yrs	Time to peak	= 720 min
Time interval	= 2 min	Hyd. volume	= 14,374 cuft
Drainage area	= 1.290 ac	Curve number	= 81
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= TR55	Time of conc. (Tc)	= 11.40 min
Total precip.	= 4.99 in	Distribution	= Type II
Storm duration	= 24 hrs	Shape factor	= 484



Hydrograph Summary Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2025

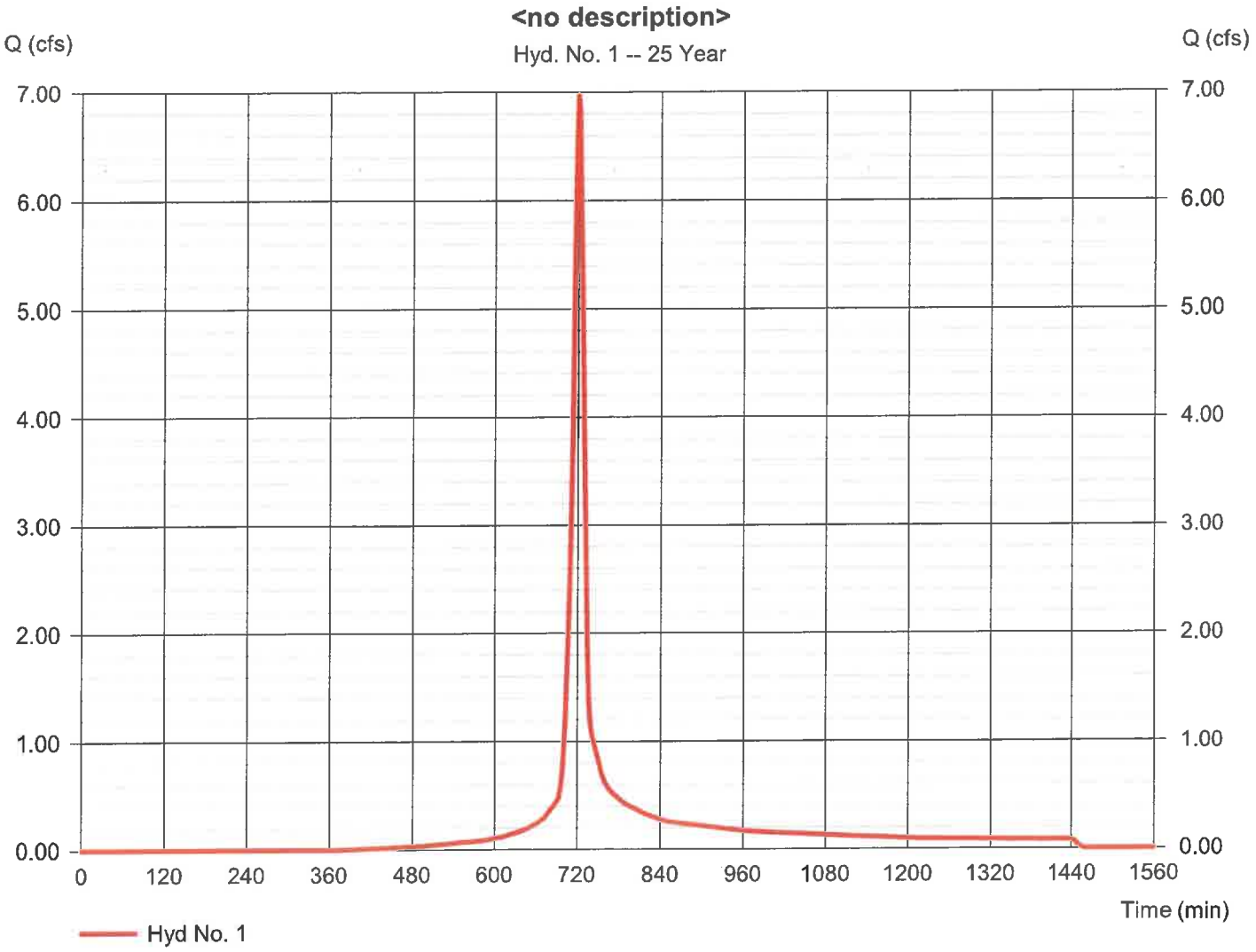
Hyd. No.	Hydrograph type (origin)	Peak flow (cfs)	Time interval (min)	Time to Peak (min)	Hyd. volume (cuft)	Inflow hyd(s)	Maximum elevation (ft)	Total strge used (cuft)	Hydrograph Description
1	SCS Runoff	6.973	2	720	18,227	-----	------	------	<no description>

Hydrograph Report

Hyd. No. 1

<no description>

Hydrograph type	= SCS Runoff	Peak discharge	= 6.973 cfs
Storm frequency	= 25 yrs	Time to peak	= 720 min
Time interval	= 2 min	Hyd. volume	= 18,227 cuft
Drainage area	= 1.290 ac	Curve number	= 81
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= TR55	Time of conc. (Tc)	= 11.40 min
Total precip.	= 5.88 in	Distribution	= Type II
Storm duration	= 24 hrs	Shape factor	= 484



Hydrograph Summary Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2025

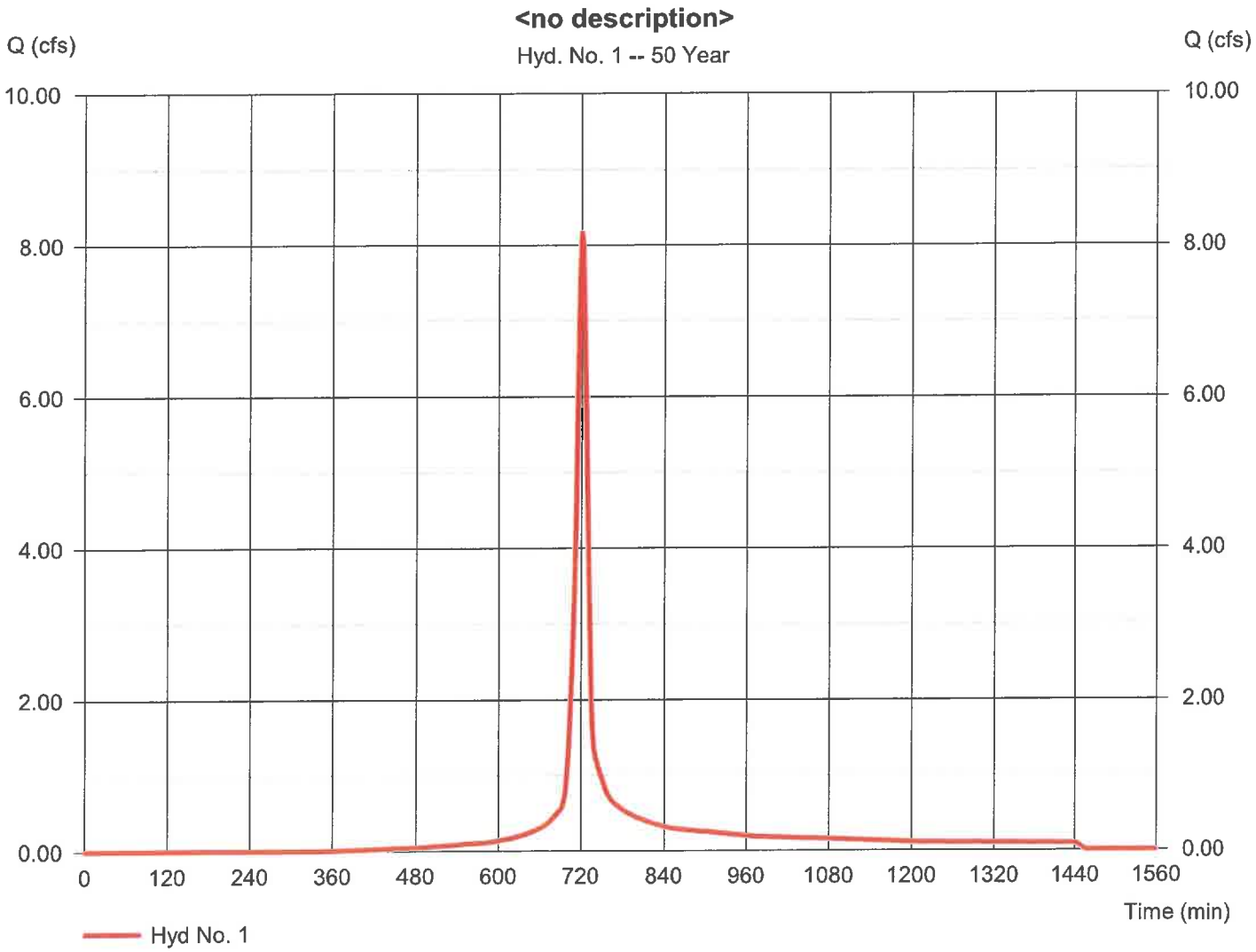
Hyd. No.	Hydrograph type (origin)	Peak flow (cfs)	Time interval (min)	Time to Peak (min)	Hyd. volume (cuft)	Inflow hyd(s)	Maximum elevation (ft)	Total strge used (cuft)	Hydrograph Description
1	SCS Runoff	8.166	2	720	21,458	------	------	------	<no description>

Hydrograph Report

Hyd. No. 1

<no description>

Hydrograph type	= SCS Runoff	Peak discharge	= 8.166 cfs
Storm frequency	= 50 yrs	Time to peak	= 720 min
Time interval	= 2 min	Hyd. volume	= 21,458 cuft
Drainage area	= 1.290 ac	Curve number	= 81
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= TR55	Time of conc. (Tc)	= 11.40 min
Total precip.	= 6.61 in	Distribution	= Type II
Storm duration	= 24 hrs	Shape factor	= 484



Hydrograph Summary Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2025

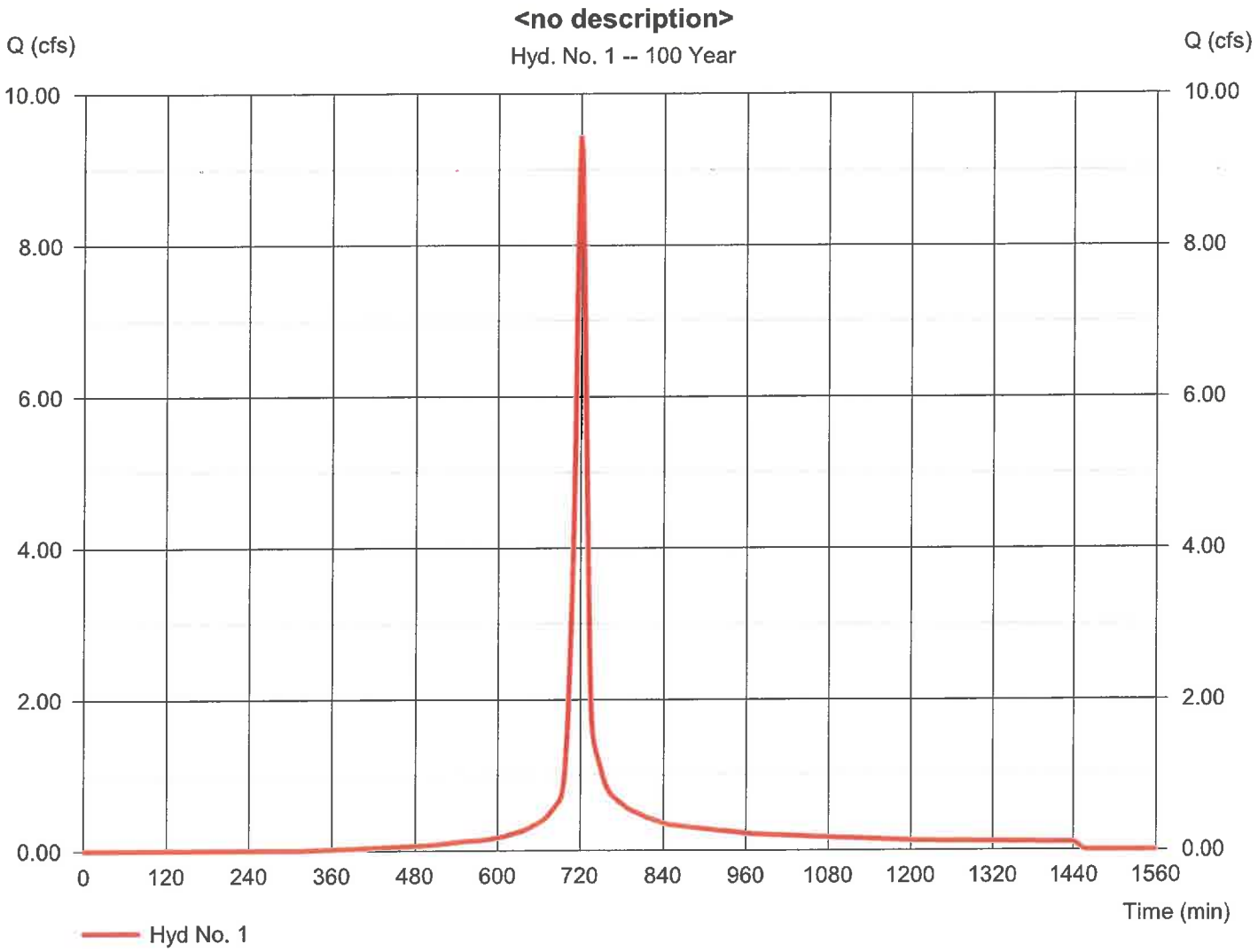
Hyd. No.	Hydrograph type (origin)	Peak flow (cfs)	Time interval (min)	Time to Peak (min)	Hyd. volume (cuft)	Inflow hyd(s)	Maximum elevation (ft)	Total strge used (cuft)	Hydrograph Description
1	SCS Runoff	9.428	2	720	24,916	-----	-----	-----	<no description>

Hydrograph Report

Hyd. No. 1

<no description>

Hydrograph type	= SCS Runoff	Peak discharge	= 9.428 cfs
Storm frequency	= 100 yrs	Time to peak	= 720 min
Time interval	= 2 min	Hyd. volume	= 24,916 cuft
Drainage area	= 1.290 ac	Curve number	= 81
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= TR55	Time of conc. (Tc)	= 11.40 min
Total precip.	= 7.38 in	Distribution	= Type II
Storm duration	= 24 hrs	Shape factor	= 484



Hydraflow Rainfall Report

Return Period (Yrs)	Intensity-Duration-Frequency Equation Coefficients (FHA)			
	B	D	E	(N/A)
1	57.7260	12.6000	0.8871	———
2	63.7983	12.5000	0.8694	———
3	0.0000	0.0000	0.0000	———
5	68.2535	12.8000	0.8390	———
10	63.8459	12.1000	0.7937	———
25	57.7343	11.0000	0.7384	———
50	53.2976	10.1000	0.6975	———
100	48.8954	9.2000	0.6564	———

File name: SPRINGFIELD NORTH DG.IDF

Intensity = B / (Tc + D)^E

Return Period (Yrs)	Intensity Values (in/hr)											
	5 min	10	15	20	25	30	35	40	45	50	55	60
1	4.53	3.63	3.04	2.62	2.31	2.07	1.88	1.72	1.58	1.47	1.37	1.29
2	5.30	4.26	3.58	3.09	2.73	2.45	2.22	2.04	1.88	1.75	1.64	1.54
3	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5	6.10	4.95	4.19	3.65	3.24	2.92	2.66	2.45	2.27	2.12	1.99	1.87
10	6.71	5.47	4.65	4.07	3.63	3.28	3.00	2.77	2.58	2.41	2.27	2.14
25	7.45	6.10	5.21	4.57	4.09	3.72	3.42	3.17	2.96	2.77	2.62	2.48
50	8.02	6.57	5.63	4.96	4.46	4.06	3.74	3.48	3.25	3.06	2.90	2.75
100	8.57	7.03	6.04	5.34	4.81	4.40	4.07	3.79	3.56	3.36	3.18	3.03

Tc = time in minutes. Values may exceed 60.

Group Dropbox\Projects\1082002 - Springfield North DG\2-Design\1-Storm\2-MODEL\SPRINGFIELD NORTH DG.pcp

Storm Distribution	Rainfall Precipitation Table (in)							
	1-yr	2-yr	3-yr	5-yr	10-yr	25-yr	50-yr	100-yr
SCS 24-hour	2.98	3.56	0.00	4.34	4.99	5.88	6.61	7.38
SCS 6-Hr	2.04	2.43	0.00	2.94	3.37	3.97	4.47	4.99
Huff-1st	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Huff-2nd	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Huff-3rd	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Huff-4th	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Huff-Indy	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Custom	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Hydraflow Table of Contents

PRE.gpw

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2025

Wednesday, 08 / 13 / 2025

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1 - Year

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Hydrograph Reports 4

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TR-55 Tc Worksheet 5

2 - Year

Summary Report 6

Hydrograph Reports 7

Hydrograph No. 1, SCS Runoff, <no description> 7

5 - Year

Summary Report 8

Hydrograph Reports 9

Hydrograph No. 1, SCS Runoff, <no description> 9

10 - Year

Summary Report 10

Hydrograph Reports 11

Hydrograph No. 1, SCS Runoff, <no description> 11

25 - Year

Summary Report 12

Hydrograph Reports 13

Hydrograph No. 1, SCS Runoff, <no description> 13

50 - Year

Summary Report 14

Hydrograph Reports 15

Hydrograph No. 1, SCS Runoff, <no description> 15

100 - Year

Summary Report 16

Hydrograph Reports 17

Hydrograph No. 1, SCS Runoff, <no description> 17

IDF Report 18

DOLLAR GENERAL
0 HWY 25E, SPRINGFIELD TN
TURNER AND ASSOCIATES

REVISIONS		
NUMBER	DESCRIPTION	DATE

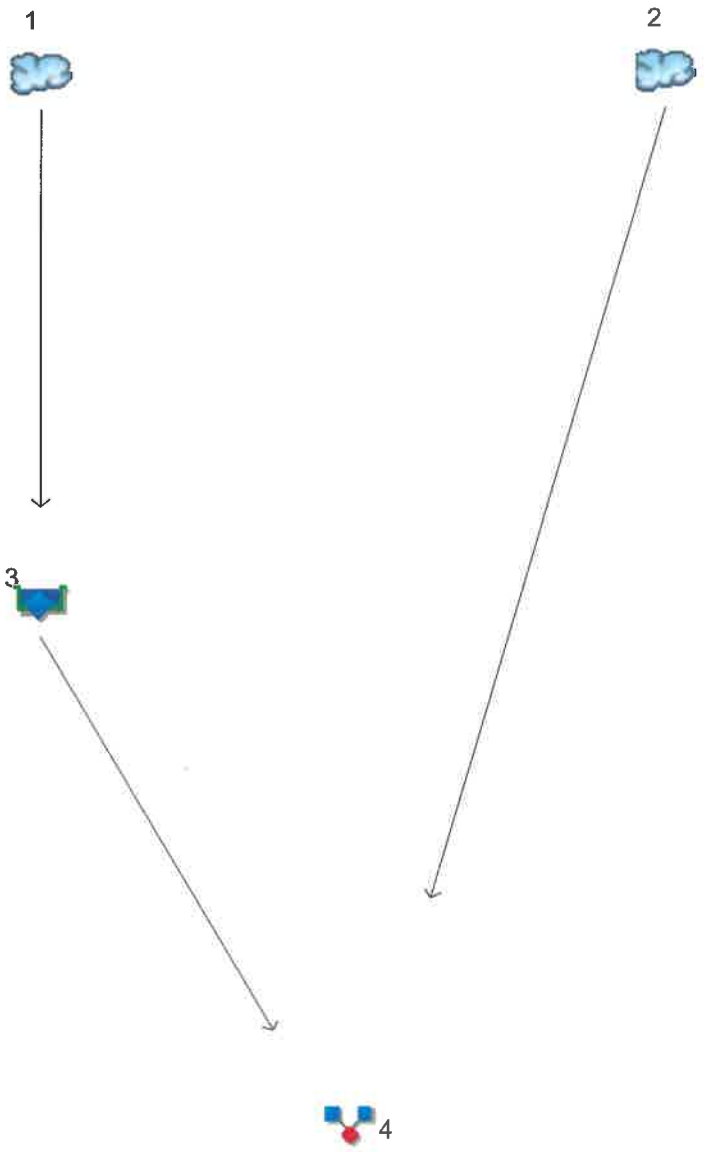
PROJECT #	1908060
DESIGNED BY:	CAM
DRAWN BY:	CAM
DATE:	08/14/2019

POST DEVELOPMENT DRAINAGE MAP

615 DESIGN GROUP

Watershed Model Schematic

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2025



Legend

Hyd.	Origin	Description
1	SCS Runoff	TO POND
2	SCS Runoff	BYPASS
3	Reservoir	DETENTION POND
4	Combine	OUTFALL

Hydrograph Return Period Recap

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2025

Hyd. No.	Hydrograph type (origin)	Inflow hyd(s)	Peak Outflow (cfs)								Hydrograph Description
			1-yr	2-yr	3-yr	5-yr	10-yr	25-yr	50-yr	100-yr	
1	SCS Runoff	-----	3.330	4.104	------	5.138	5.994	7.160	8.112	9.112	TO POND
2	SCS Runoff	-----	0.792	1.066	------	1.456	1.788	2.247	2.626	3.027	BYPASS
3	Reservoir	1	0.310	0.336	------	0.368	0.471	1.583	3.076	4.752	DETENTION POND
4	Combine	2, 3	1.068	1.368	------	1.774	2.124	2.609	4.357	6.682	OUTFALL

Hydrograph Summary Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2025

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	SCS Runoff	3.330	2	716	7,073	-----	-----	-----	TO POND
2	SCS Runoff	0.792	2	718	1,590	-----	-----	-----	BYPASS
3	Reservoir	0.310	2	742	7,067	1	731.96	3,217	DETENTION POND
4	Combine	1.068	2	718	8,657	2, 3	-----	-----	OUTFALL

Hydrograph Report

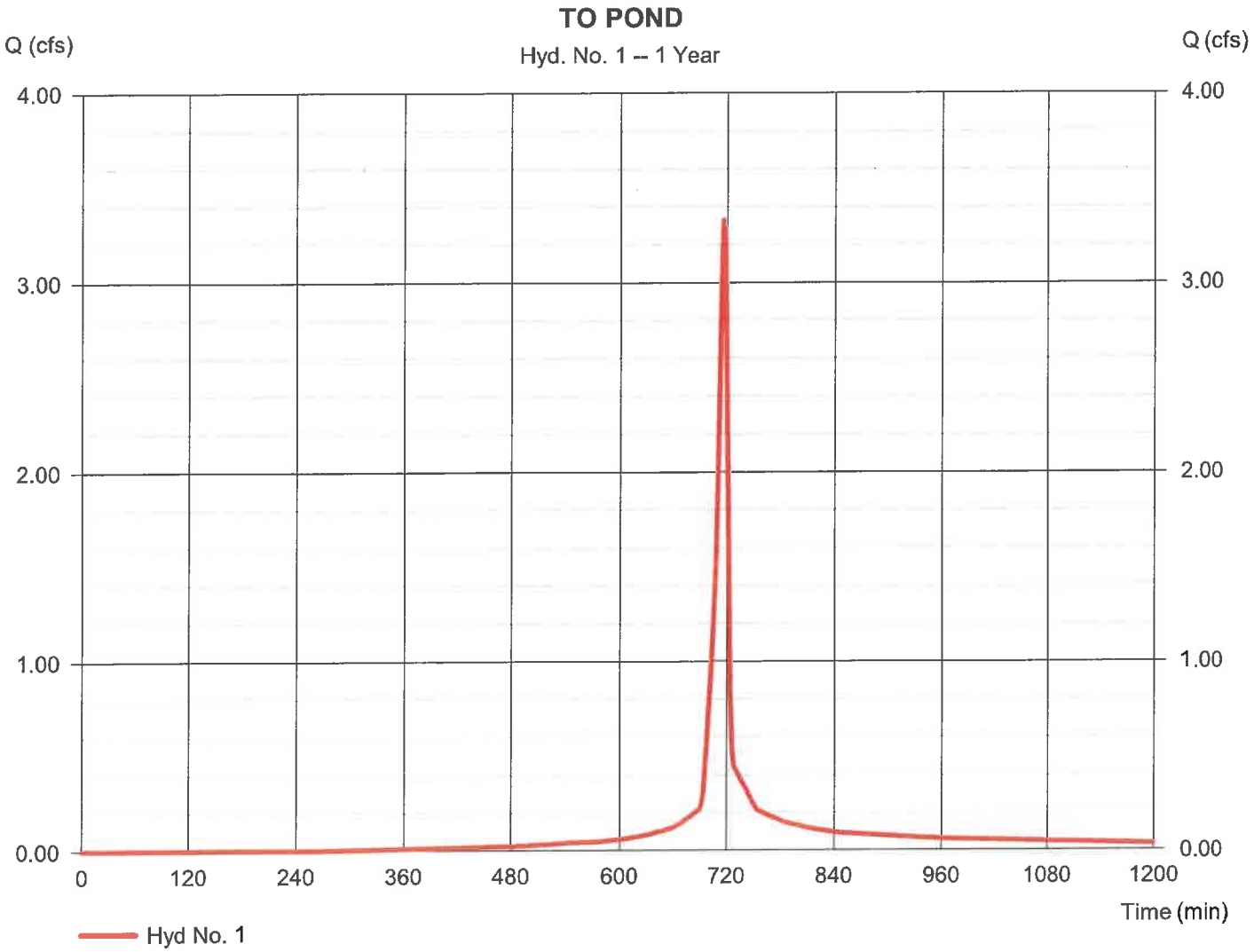
Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2025 Wednesday, 08 / 13 / 2025

Hyd. No. 1

TO POND

Hydrograph type	= SCS Runoff	Peak discharge	= 3.330 cfs
Storm frequency	= 1 yrs	Time to peak	= 716 min
Time interval	= 2 min	Hyd. volume	= 7,073 cuft
Drainage area	= 0.930 ac	Curve number	= 93*
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 5.00 min
Total precip.	= 2.98 in	Distribution	= Type II
Storm duration	= 24 hrs	Shape factor	= 484

* Composite (Area/CN) = [(0.680 x 98) + (0.250 x 81)] / 0.930

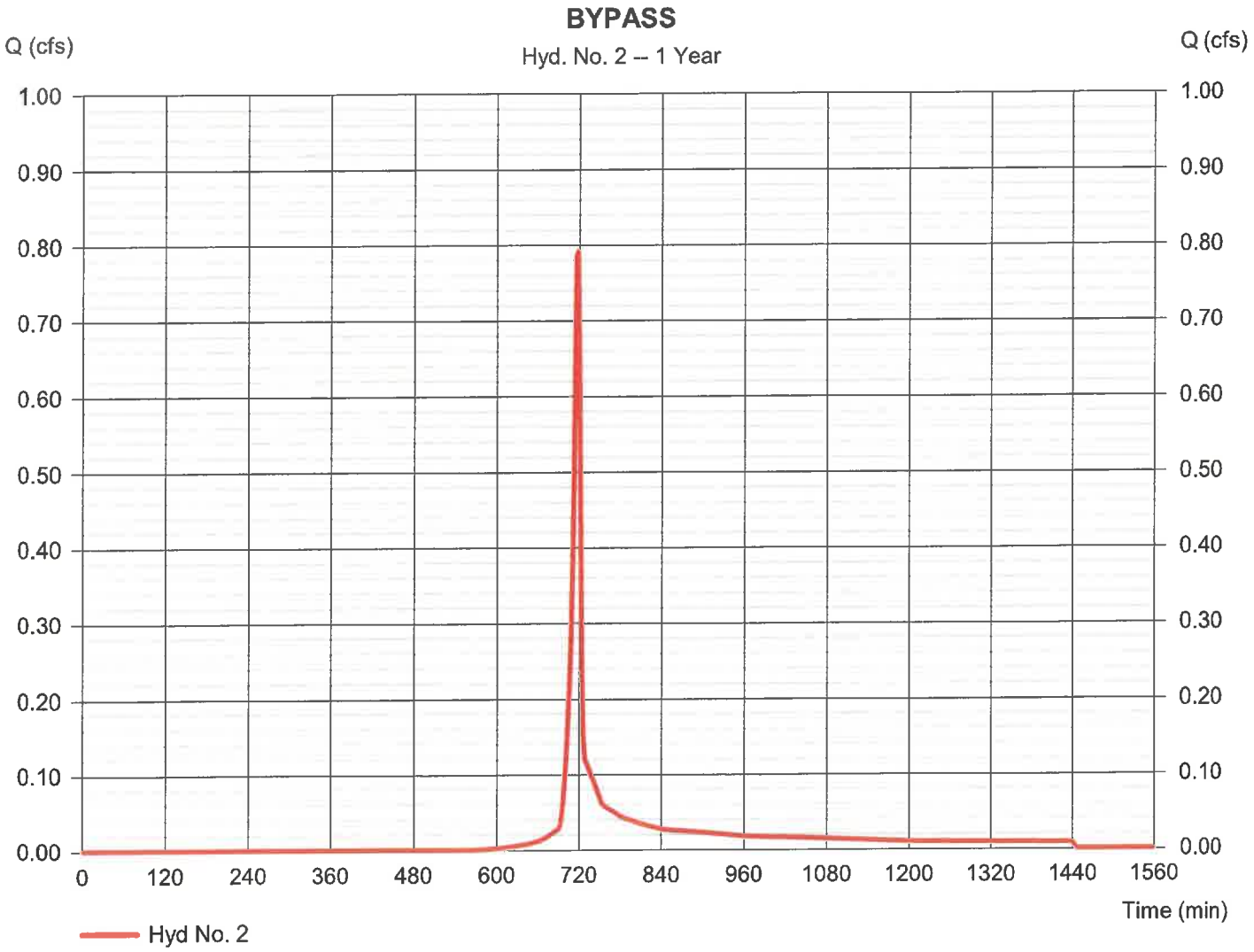


Hydrograph Report

Hyd. No. 2

BYPASS

Hydrograph type	= SCS Runoff	Peak discharge	= 0.792 cfs
Storm frequency	= 1 yrs	Time to peak	= 718 min
Time interval	= 2 min	Hyd. volume	= 1,590 cuft
Drainage area	= 0.360 ac	Curve number	= 81
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 5.00 min
Total precip.	= 2.98 in	Distribution	= Type II
Storm duration	= 24 hrs	Shape factor	= 484



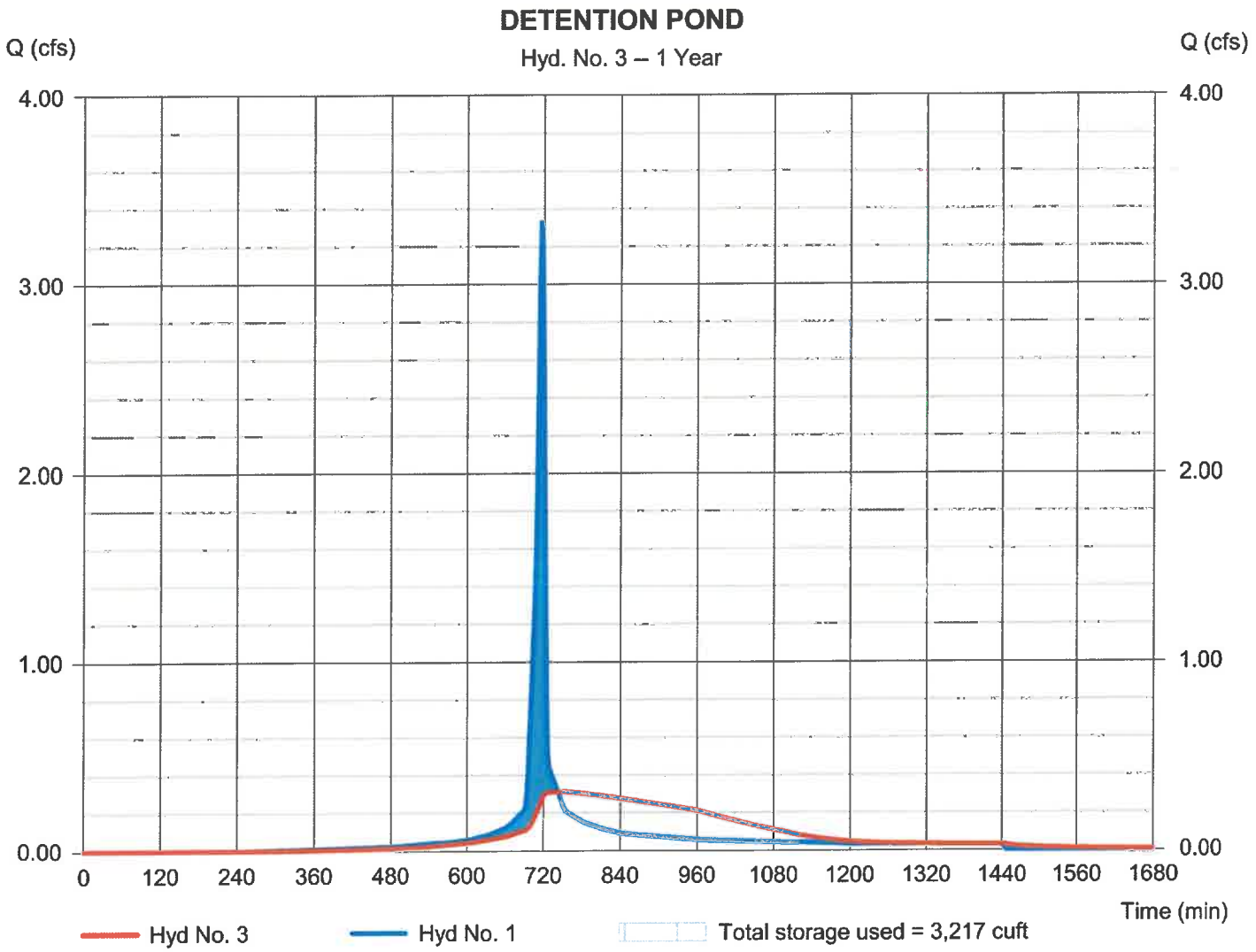
Hydrograph Report

Hyd. No. 3

DETENTION POND

Hydrograph type	= Reservoir	Peak discharge	= 0.310 cfs
Storm frequency	= 1 yrs	Time to peak	= 742 min
Time interval	= 2 min	Hyd. volume	= 7,067 cuft
Inflow hyd. No.	= 1 - TO POND	Max. Elevation	= 731.96 ft
Reservoir name	= DETENTION POND	Max. Storage	= 3,217 cuft

Storage Indication method used.



Pond Report

Pond No. 1 - DETENTION POND

Pond Data

Contours -User-defined contour areas. Average end area method used for volume calculation. Begining Elevation = 730.00 ft

Stage / Storage Table

Stage (ft)	Elevation (ft)	Contour area (sqft)	Incr. Storage (cuft)	Total storage (cuft)
0.00	730.00	811	0	0
1.00	731.00	1,633	1,222	1,222
2.00	732.00	2,527	2,080	3,302
3.00	733.00	3,493	3,010	6,312
4.00	734.00	4,513	4,003	10,315

Culvert / Orifice Structures

	[A]	[B]	[C]	[PrfRsr]
Rise (in)	= 18.00	3.00	0.00	0.00
Span (in)	= 18.00	3.00	0.00	0.00
No. Barrels	= 1	1	0	0
Invert El. (ft)	= 730.00	730.00	0.00	0.00
Length (ft)	= 33.40	0.00	0.00	0.00
Slope (%)	= 1.00	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	Yes	No	No

Weir Structures

	[A]	[B]	[C]	[D]
Crest Len (ft)	= 4.00	0.00	0.00	0.00
Crest El. (ft)	= 733.00	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).

Stage / Storage / Discharge Table

Stage ft	Storage cuft	Elevation ft	Clv A cfs	Clv B cfs	Clv C cfs	PrfRsr cfs	Wr A cfs	Wr B cfs	Wr C cfs	Wr D cfs	Exfil cfs	User cfs	Total cfs
0.00	0	730.00	0.00	0.00	---	---	0.00	---	---	---	---	---	0.000
0.10	122	730.10	0.02 ic	0.02 ic	---	---	0.00	---	---	---	---	---	0.019
0.20	244	730.20	0.06 ic	0.06 ic	---	---	0.00	---	---	---	---	---	0.063
0.30	367	730.30	0.10 ic	0.10 ic	---	---	0.00	---	---	---	---	---	0.097
0.40	489	730.40	0.12 ic	0.12 ic	---	---	0.00	---	---	---	---	---	0.119
0.50	611	730.50	0.14 ic	0.14 ic	---	---	0.00	---	---	---	---	---	0.138
0.60	733	730.60	0.16 ic	0.16 ic	---	---	0.00	---	---	---	---	---	0.156
0.70	855	730.70	0.17 ic	0.17 ic	---	---	0.00	---	---	---	---	---	0.171
0.80	978	730.80	0.19 ic	0.19 ic	---	---	0.00	---	---	---	---	---	0.186
0.90	1,100	730.90	0.20 ic	0.20 ic	---	---	0.00	---	---	---	---	---	0.199
1.00	1,222	731.00	0.22 ic	0.21 ic	---	---	0.00	---	---	---	---	---	0.212
1.10	1,430	731.10	0.23 ic	0.22 ic	---	---	0.00	---	---	---	---	---	0.224
1.20	1,638	731.20	0.24 ic	0.24 ic	---	---	0.00	---	---	---	---	---	0.235
1.30	1,846	731.30	0.25 ic	0.25 ic	---	---	0.00	---	---	---	---	---	0.247
1.40	2,054	731.40	0.27 ic	0.26 ic	---	---	0.00	---	---	---	---	---	0.257
1.50	2,262	731.50	0.27 ic	0.27 ic	---	---	0.00	---	---	---	---	---	0.267
1.60	2,470	731.60	0.29 ic	0.28 ic	---	---	0.00	---	---	---	---	---	0.277
1.70	2,678	731.70	0.29 ic	0.29 ic	---	---	0.00	---	---	---	---	---	0.287
1.80	2,886	731.80	0.30 ic	0.30 ic	---	---	0.00	---	---	---	---	---	0.296
1.90	3,094	731.90	0.31 ic	0.30 ic	---	---	0.00	---	---	---	---	---	0.305
2.00	3,302	732.00	0.31 ic	0.31 ic	---	---	0.00	---	---	---	---	---	0.314
2.10	3,603	732.10	0.33 ic	0.32 ic	---	---	0.00	---	---	---	---	---	0.322
2.20	3,904	732.20	0.33 ic	0.33 ic	---	---	0.00	---	---	---	---	---	0.330
2.30	4,205	732.30	0.34 ic	0.34 ic	---	---	0.00	---	---	---	---	---	0.338
2.40	4,506	732.40	0.36 ic	0.35 ic	---	---	0.00	---	---	---	---	---	0.346
2.50	4,807	732.50	0.36 ic	0.35 ic	---	---	0.00	---	---	---	---	---	0.354
2.60	5,108	732.60	0.36 ic	0.36 ic	---	---	0.00	---	---	---	---	---	0.361
2.70	5,409	732.70	0.38 ic	0.37 ic	---	---	0.00	---	---	---	---	---	0.369
2.80	5,710	732.80	0.38 ic	0.38 ic	---	---	0.00	---	---	---	---	---	0.376
2.90	6,011	732.90	0.38 ic	0.38 ic	---	---	0.00	---	---	---	---	---	0.384
3.00	6,312	733.00	0.41 ic	0.39 ic	---	---	0.00	---	---	---	---	---	0.390
3.10	6,712	733.10	0.41 ic	0.40 ic	---	---	0.42	---	---	---	---	---	0.818
3.20	7,113	733.20	0.41 ic	0.40 ic	---	---	1.19	---	---	---	---	---	1.595
3.30	7,513	733.30	0.41 ic	0.41 ic	---	---	2.19	---	---	---	---	---	2.599
3.40	7,913	733.40	0.43 ic	0.42 ic	---	---	3.37	---	---	---	---	---	3.786
3.50	8,313	733.50	0.43 ic	0.42 ic	---	---	4.71	---	---	---	---	---	5.132
3.60	8,714	733.60	0.43 ic	0.43 ic	---	---	6.19	---	---	---	---	---	6.619
3.70	9,114	733.70	0.44 ic	0.44 ic	---	---	7.80	---	---	---	---	---	8.235

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DETENTION POND

Stage / Storage / Discharge Table

Stage ft	Storage cuft	Elevation ft	Clv A cfs	Clv B cfs	Clv C cfs	PrfRsr cfs	Wr A cfs	Wr B cfs	Wr C cfs	Wr D cfs	Exfil cfs	User cfs	Total cfs
3.80	9,514	733.80	0.46 ic	0.44 ic	---	---	9.53	---	---	---	---	---	9.970
3.90	9,915	733.90	0.46 ic	0.45 ic	---	---	11.37	---	---	---	---	---	11.82
4.00	10,315	734.00	0.46 ic	0.46 ic	---	---	13.32	---	---	---	---	---	13.78

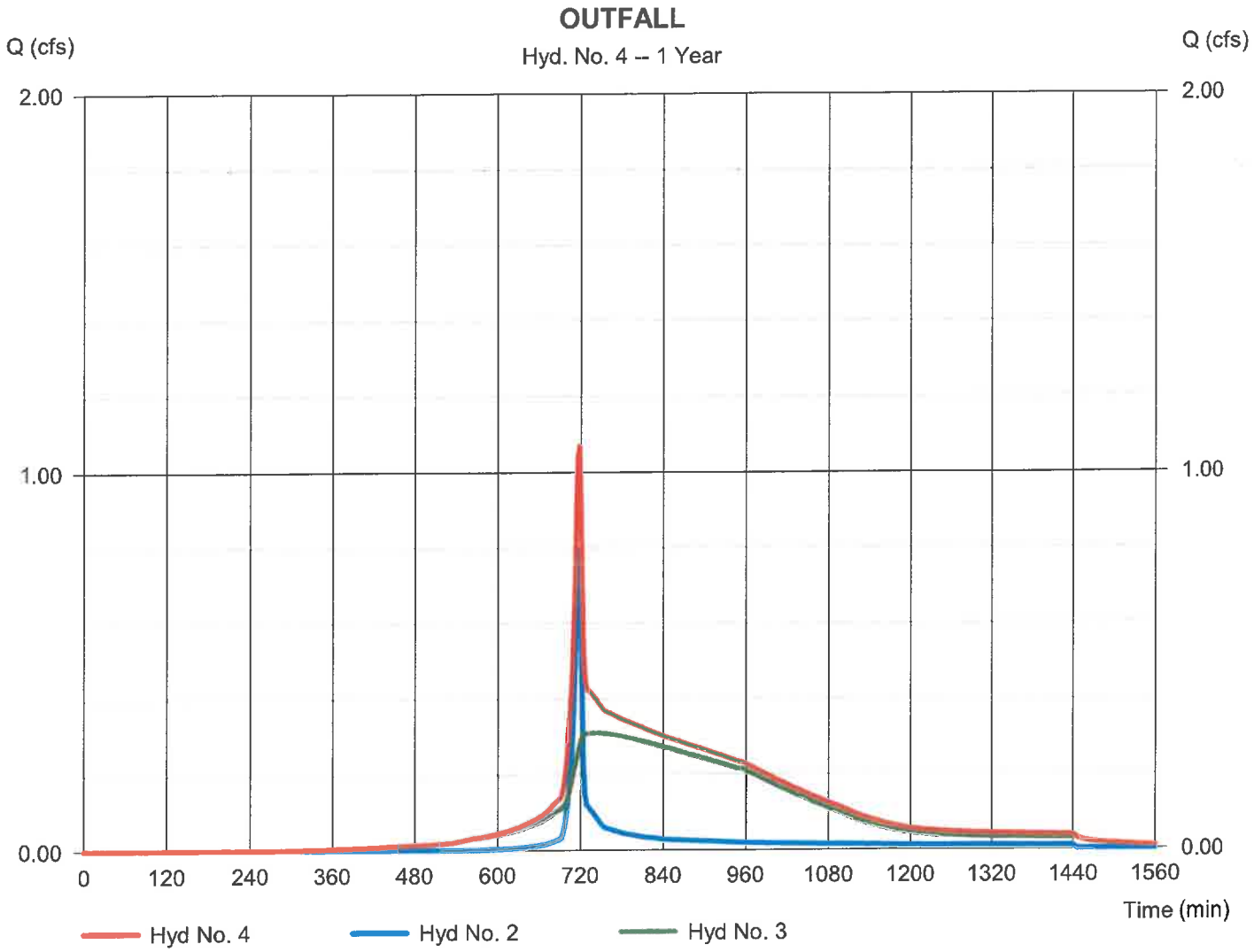
...End

Hydrograph Report

Hyd. No. 4

OUTFALL

Hydrograph type	= Combine	Peak discharge	= 1.068 cfs
Storm frequency	= 1 yrs	Time to peak	= 718 min
Time interval	= 2 min	Hyd. volume	= 8,657 cuft
Inflow hyds.	= 2, 3	Contrib. drain. area	= 0.360 ac



Hydrograph Summary Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2025

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	SCS Runoff	4.104	2	716	8,839	-----	-----	-----	TO POND
2	SCS Runoff	1.066	2	716	2,153	-----	-----	-----	BYPASS
3	Reservoir	0.336	2	746	8,833	1	732.27	4,116	DETENTION POND
4	Combine	1.368	2	718	10,986	2, 3	-----	-----	OUTFALL

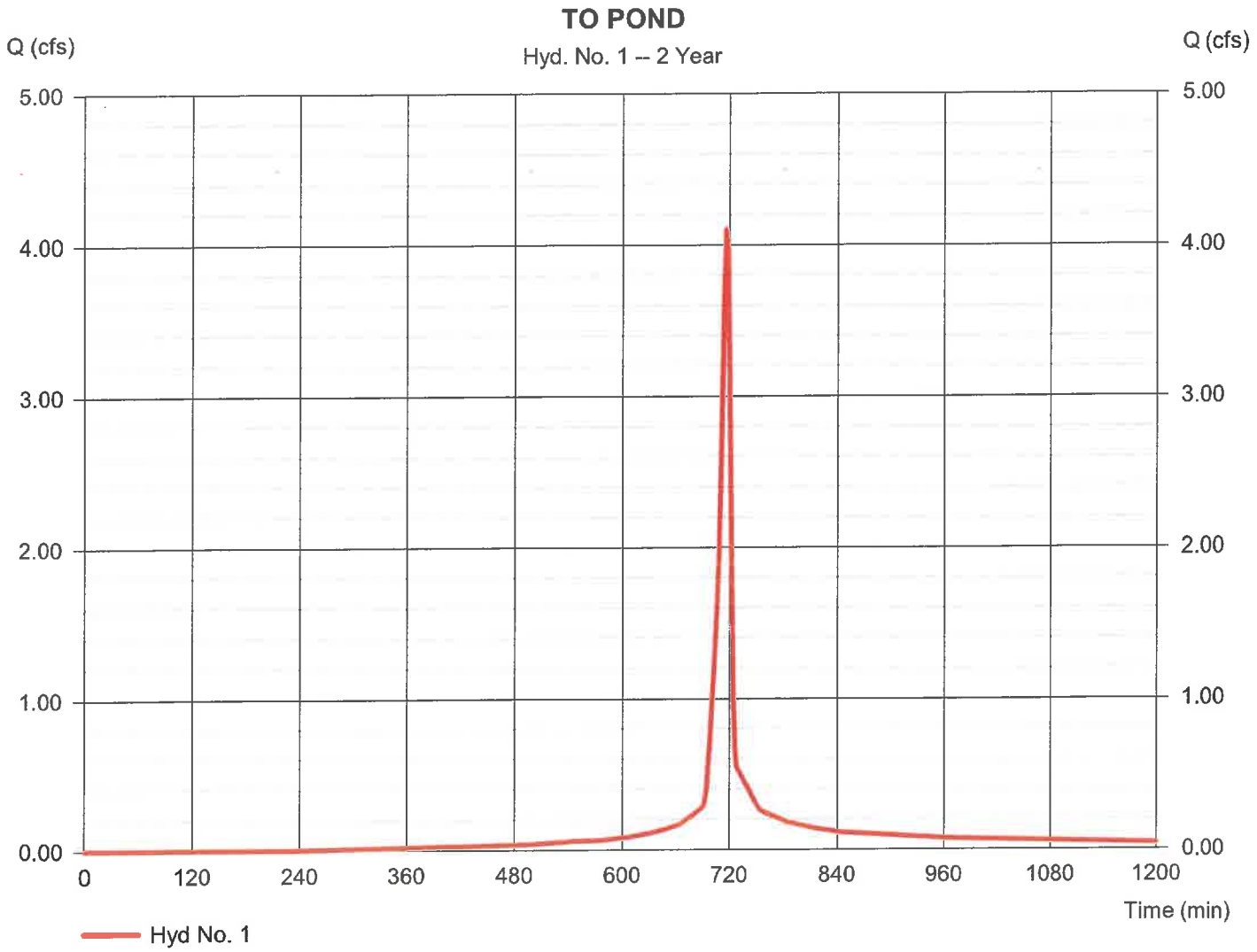
Hydrograph Report

Hyd. No. 1

TO POND

Hydrograph type	= SCS Runoff	Peak discharge	= 4.104 cfs
Storm frequency	= 2 yrs	Time to peak	= 716 min
Time interval	= 2 min	Hyd. volume	= 8,839 cuft
Drainage area	= 0.930 ac	Curve number	= 93*
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 5.00 min
Total precip.	= 3.56 in	Distribution	= Type II
Storm duration	= 24 hrs	Shape factor	= 484

* Composite (Area/CN) = [(0.680 x 98) + (0.250 x 81)] / 0.930

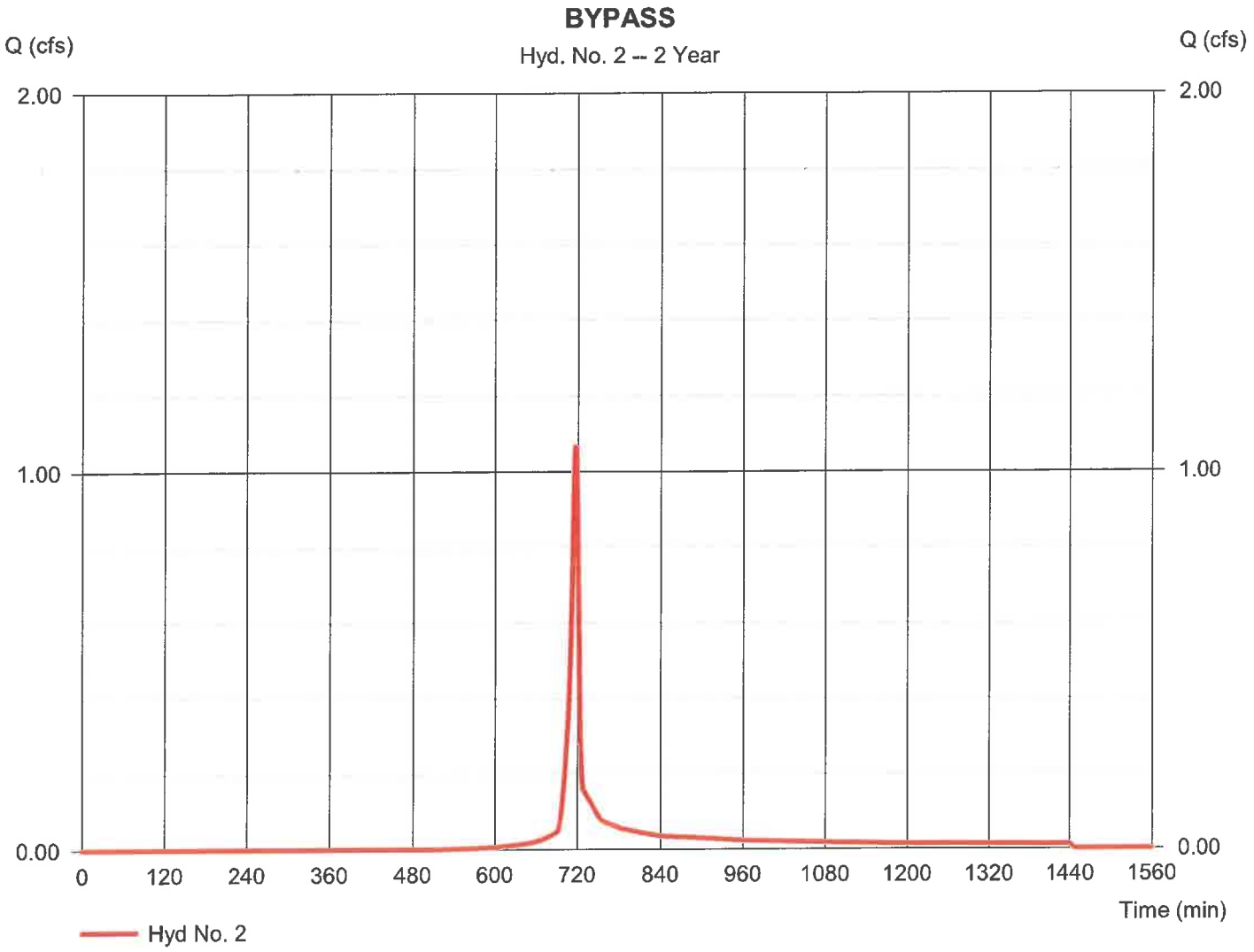


Hydrograph Report

Hyd. No. 2

BYPASS

Hydrograph type	= SCS Runoff	Peak discharge	= 1.066 cfs
Storm frequency	= 2 yrs	Time to peak	= 716 min
Time interval	= 2 min	Hyd. volume	= 2,153 cuft
Drainage area	= 0.360 ac	Curve number	= 81
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 5.00 min
Total precip.	= 3.56 in	Distribution	= Type II
Storm duration	= 24 hrs	Shape factor	= 484



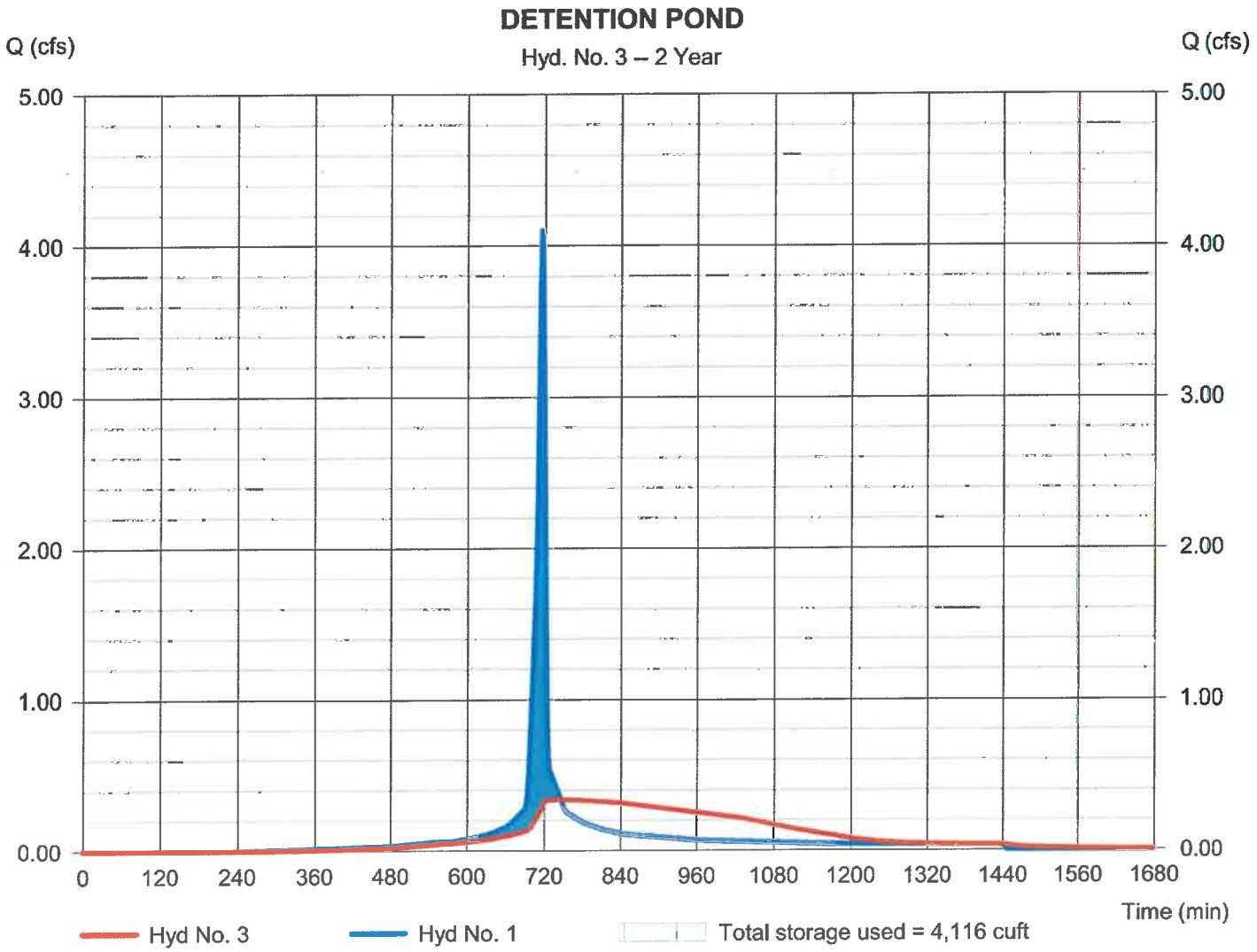
Hydrograph Report

Hyd. No. 3

DETENTION POND

Hydrograph type	= Reservoir	Peak discharge	= 0.336 cfs
Storm frequency	= 2 yrs	Time to peak	= 746 min
Time interval	= 2 min	Hyd. volume	= 8,833 cuft
Inflow hyd. No.	= 1 - TO POND	Max. Elevation	= 732.27 ft
Reservoir name	= DETENTION POND	Max. Storage	= 4,116 cuft

Storage Indication method used.

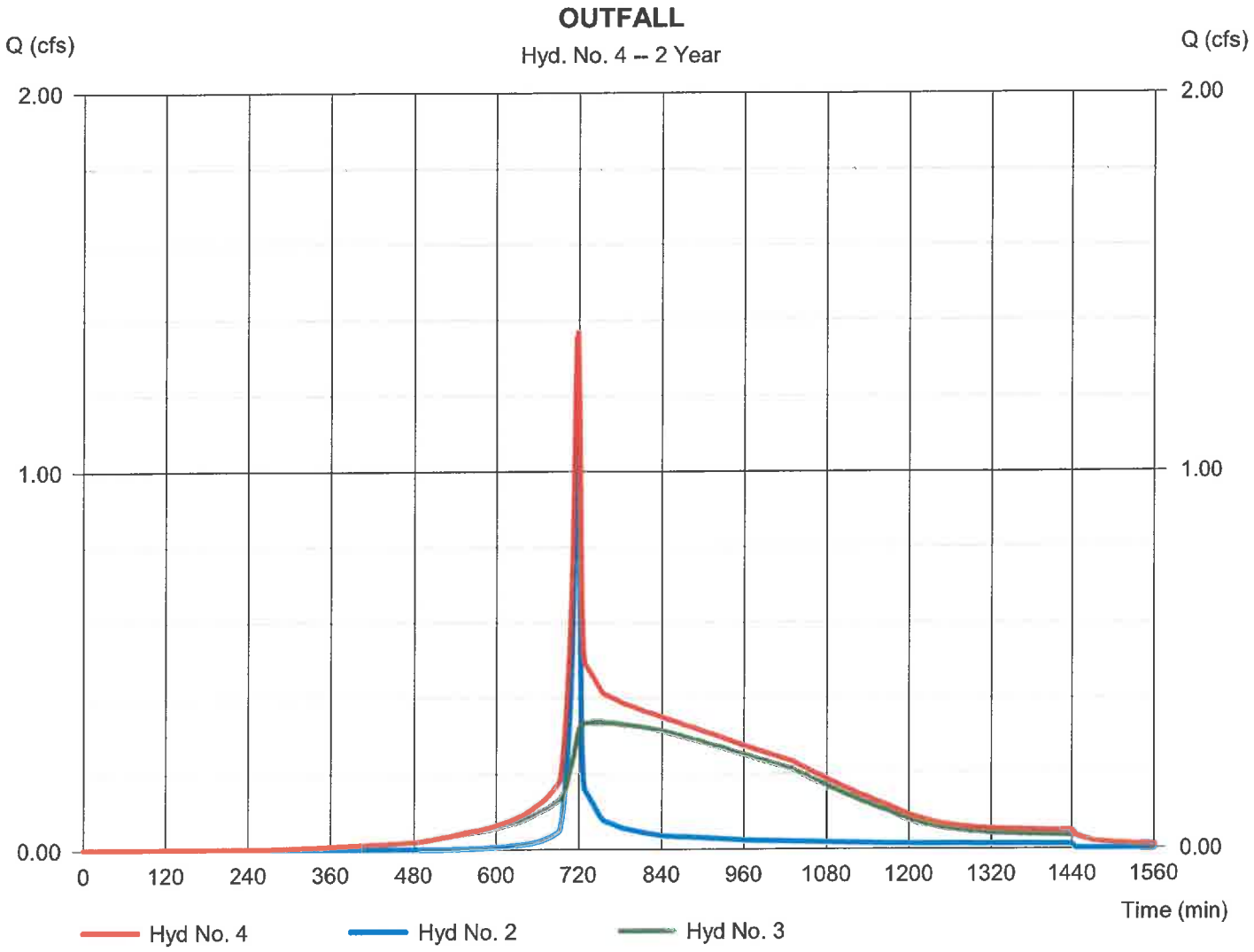


Hydrograph Report

Hyd. No. 4

OUTFALL

Hydrograph type	= Combine	Peak discharge	= 1.368 cfs
Storm frequency	= 2 yrs	Time to peak	= 718 min
Time interval	= 2 min	Hyd. volume	= 10,986 cuft
Inflow hyds.	= 2, 3	Contrib. drain. area	= 0.360 ac



Hydrograph Summary Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2025

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	SCS Runoff	5.138	2	716	11,240	-----	-----	-----	TO POND
2	SCS Runoff	1.456	2	716	2,953	-----	-----	-----	BYPASS
3	Reservoir	0.368	2	750	11,233	1	732.69	5,367	DETENTION POND
4	Combine	1.774	2	716	14,186	2, 3	-----	-----	OUTFALL

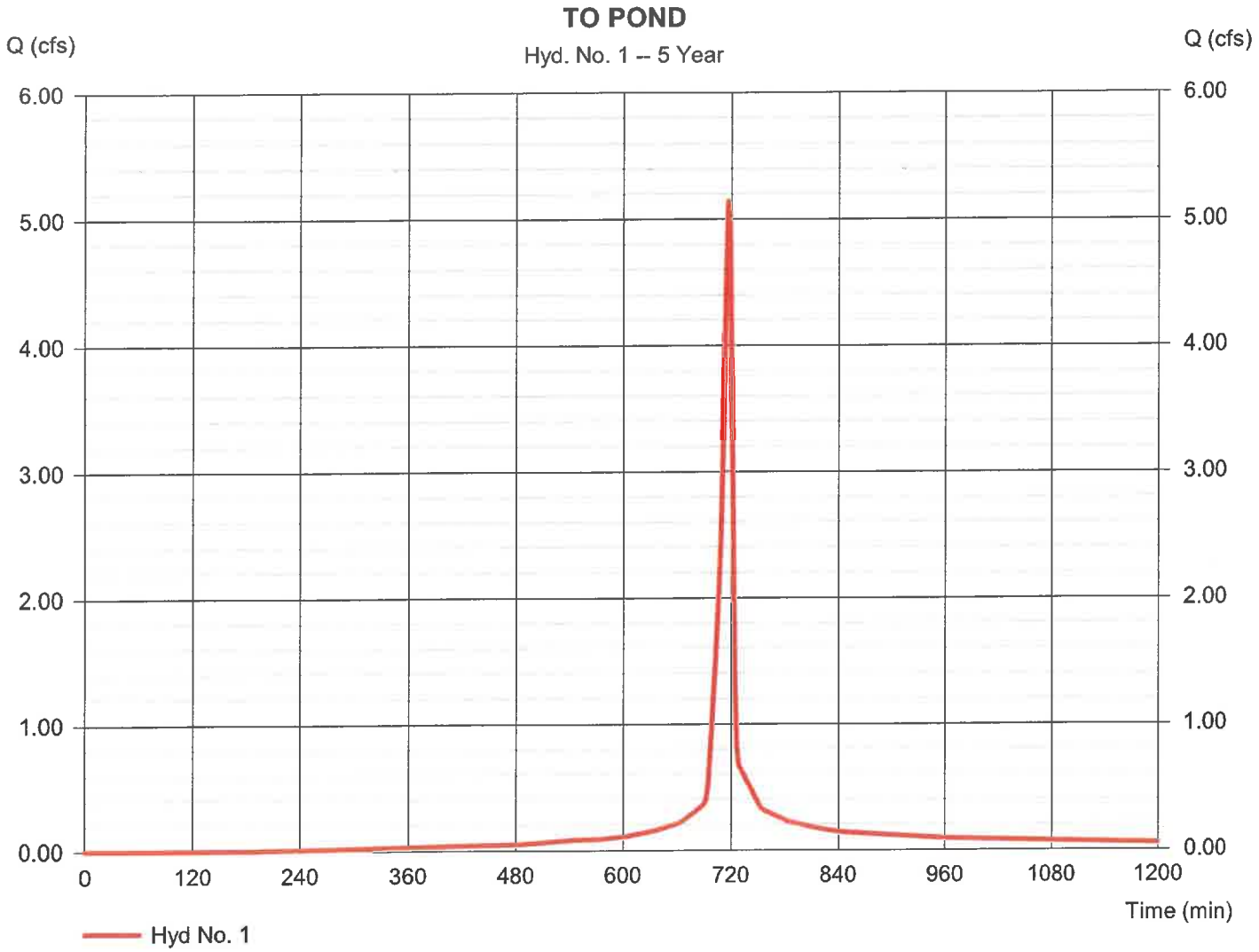
Hydrograph Report

Hyd. No. 1

TO POND

Hydrograph type	= SCS Runoff	Peak discharge	= 5.138 cfs
Storm frequency	= 5 yrs	Time to peak	= 716 min
Time interval	= 2 min	Hyd. volume	= 11,240 cuft
Drainage area	= 0.930 ac	Curve number	= 93*
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 5.00 min
Total precip.	= 4.34 in	Distribution	= Type II
Storm duration	= 24 hrs	Shape factor	= 484

* Composite (Area/CN) = [(0.680 x 98) + (0.250 x 81)] / 0.930

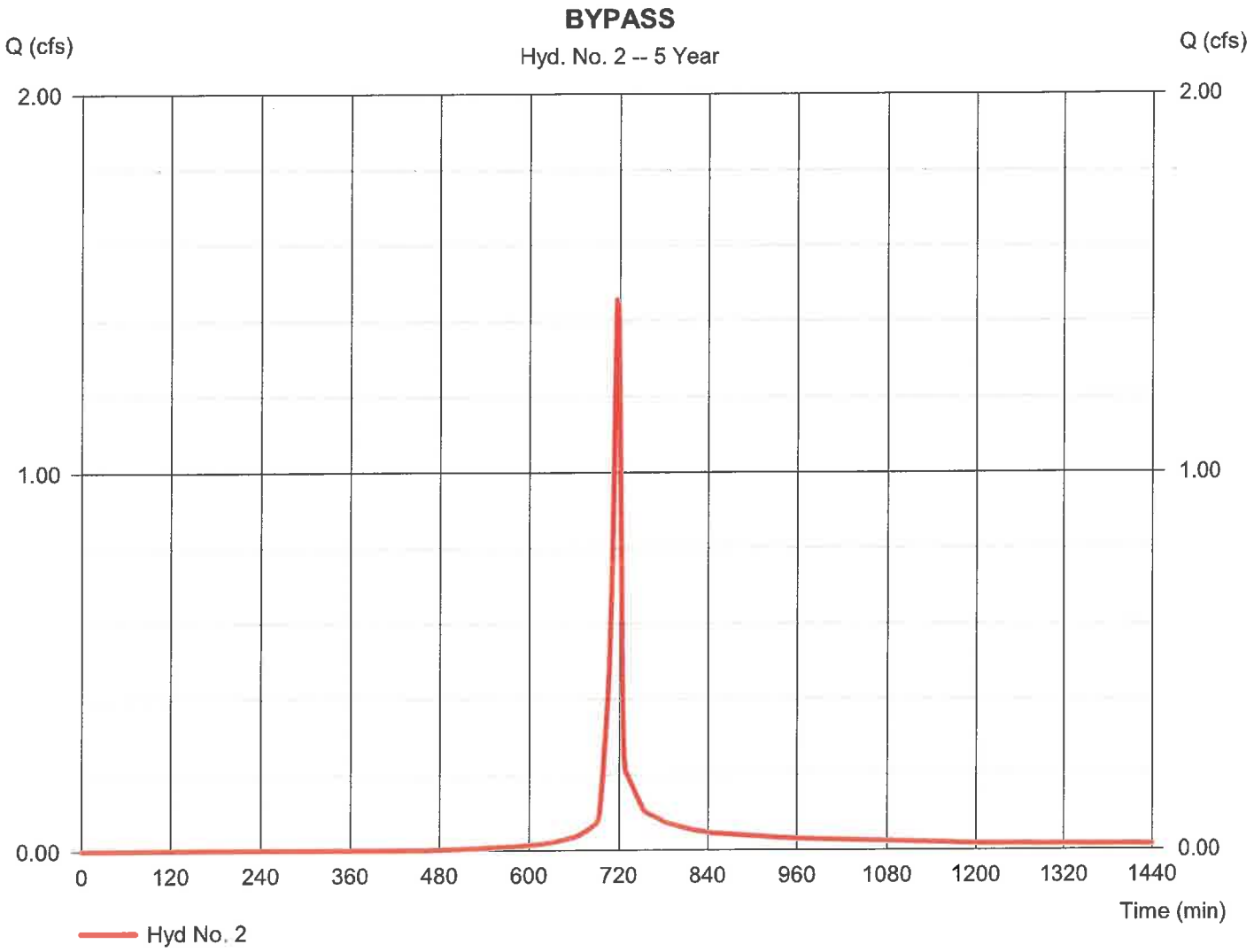


Hydrograph Report

Hyd. No. 2

BYPASS

Hydrograph type	= SCS Runoff	Peak discharge	= 1.456 cfs
Storm frequency	= 5 yrs	Time to peak	= 716 min
Time interval	= 2 min	Hyd. volume	= 2,953 cuft
Drainage area	= 0.360 ac	Curve number	= 81
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 5.00 min
Total precip.	= 4.34 in	Distribution	= Type II
Storm duration	= 24 hrs	Shape factor	= 484



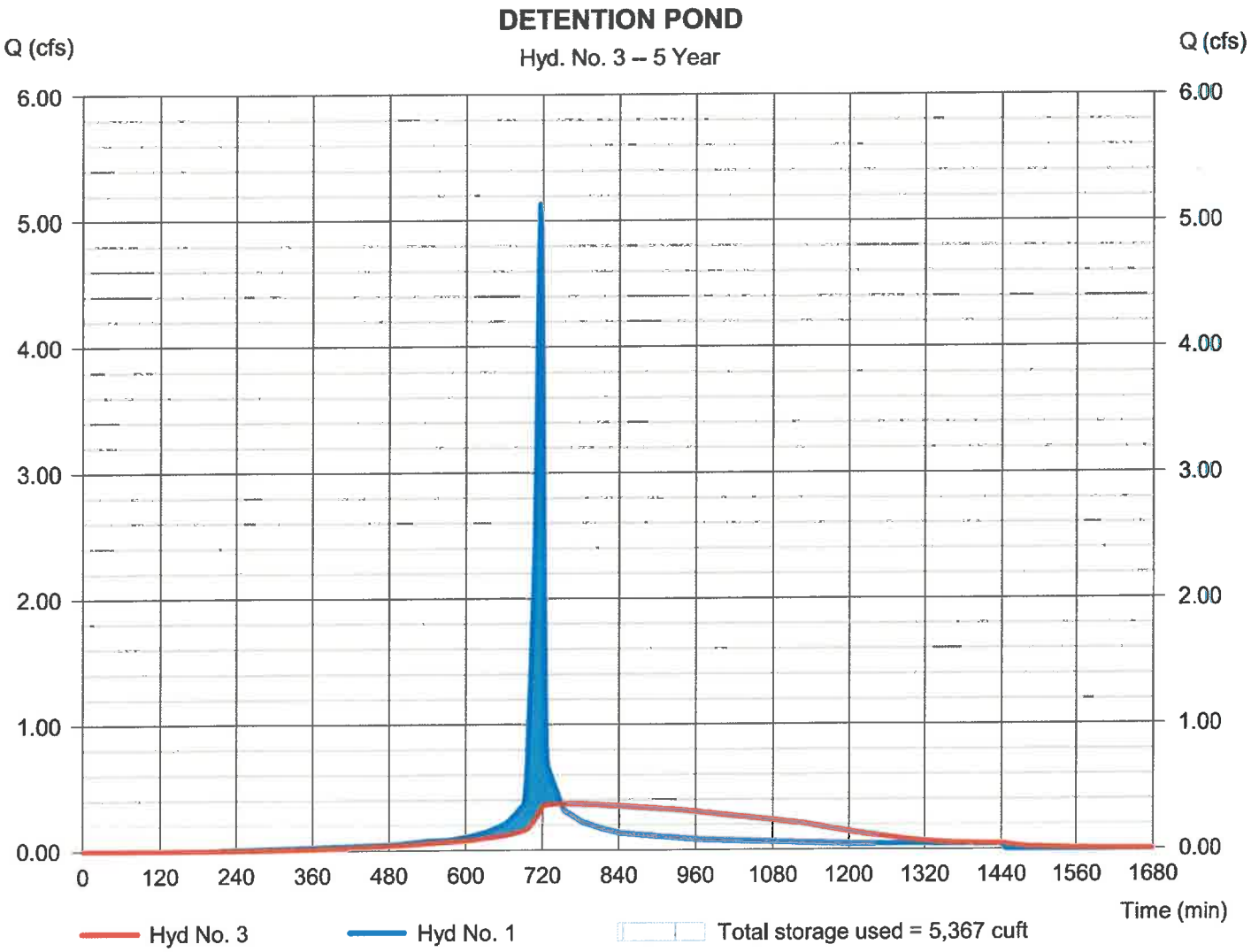
Hydrograph Report

Hyd. No. 3

DETENTION POND

Hydrograph type	= Reservoir	Peak discharge	= 0.368 cfs
Storm frequency	= 5 yrs	Time to peak	= 750 min
Time interval	= 2 min	Hyd. volume	= 11,233 cuft
Inflow hyd. No.	= 1 - TO POND	Max. Elevation	= 732.69 ft
Reservoir name	= DETENTION POND	Max. Storage	= 5,367 cuft

Storage Indication method used.

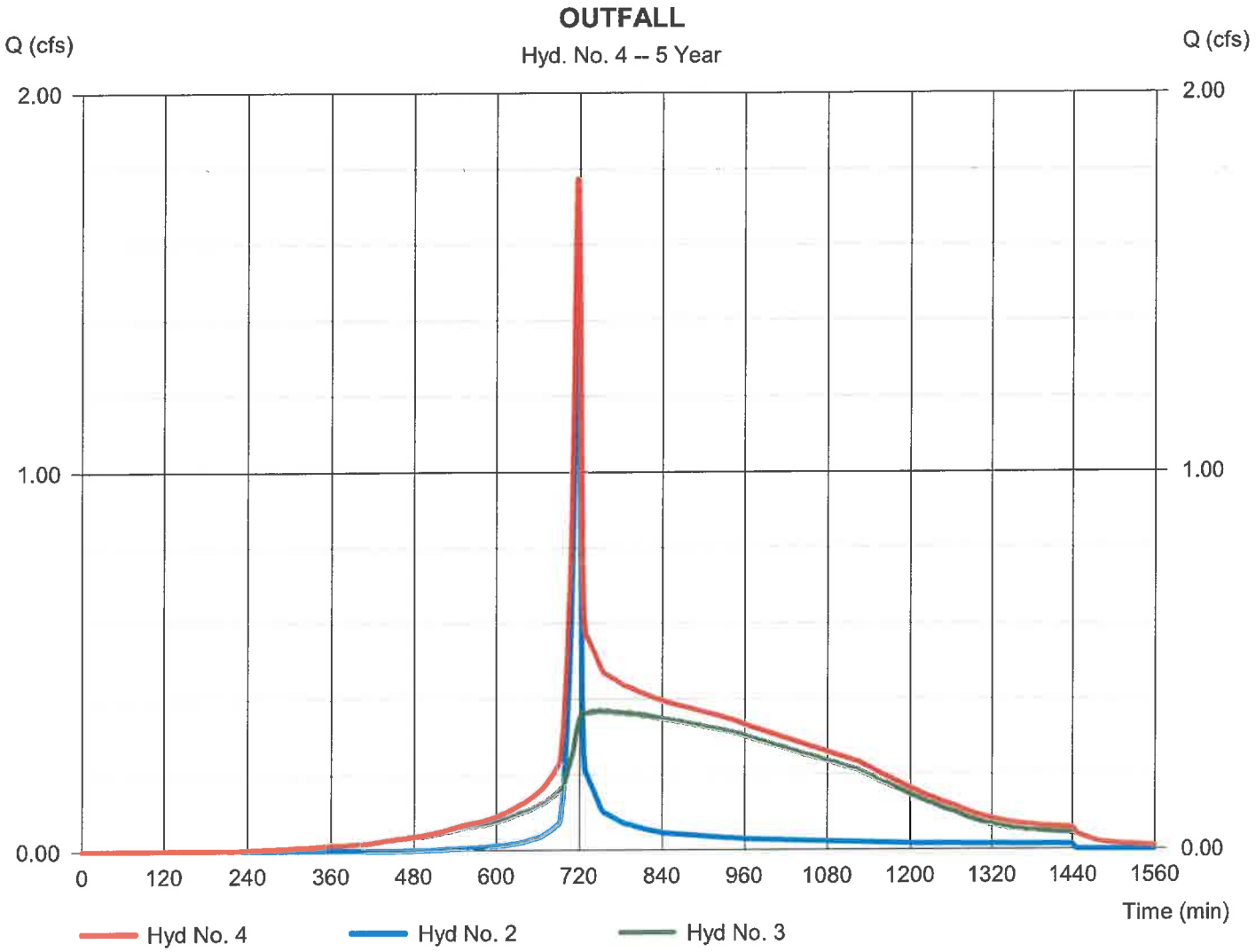


Hydrograph Report

Hyd. No. 4

OUTFALL

Hydrograph type	= Combine	Peak discharge	= 1.774 cfs
Storm frequency	= 5 yrs	Time to peak	= 716 min
Time interval	= 2 min	Hyd. volume	= 14,186 cuft
Inflow hyds.	= 2, 3	Contrib. drain. area	= 0.360 ac



Hydrograph Summary Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2025

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	SCS Runoff	5.994	2	716	13,255	-----	-----	-----	TO POND
2	SCS Runoff	1.788	2	716	3,647	-----	-----	-----	BYPASS
3	Reservoir	0.471	2	748	13,248	1	733.02	6,387	DETENTION POND
4	Combine	2.124	2	716	16,895	2, 3	-----	-----	OUTFALL

Hydrograph Report

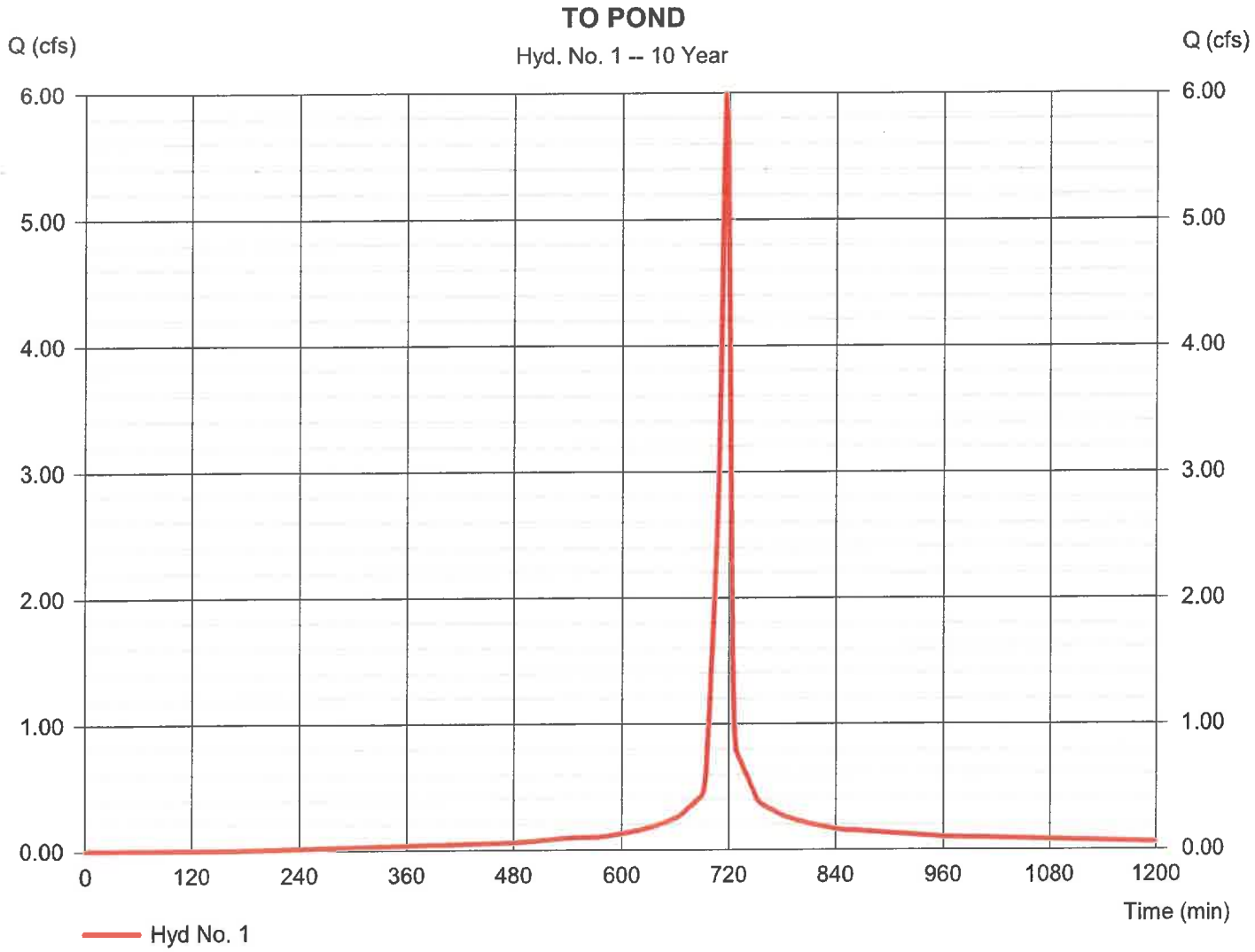
Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2025 Wednesday, 08 / 13 / 2025

Hyd. No. 1

TO POND

Hydrograph type	= SCS Runoff	Peak discharge	= 5.994 cfs
Storm frequency	= 10 yrs	Time to peak	= 716 min
Time interval	= 2 min	Hyd. volume	= 13,255 cuft
Drainage area	= 0.930 ac	Curve number	= 93*
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 5.00 min
Total precip.	= 4.99 in	Distribution	= Type II
Storm duration	= 24 hrs	Shape factor	= 484

* Composite (Area/CN) = [(0.680 x 98) + (0.250 x 81)] / 0.930

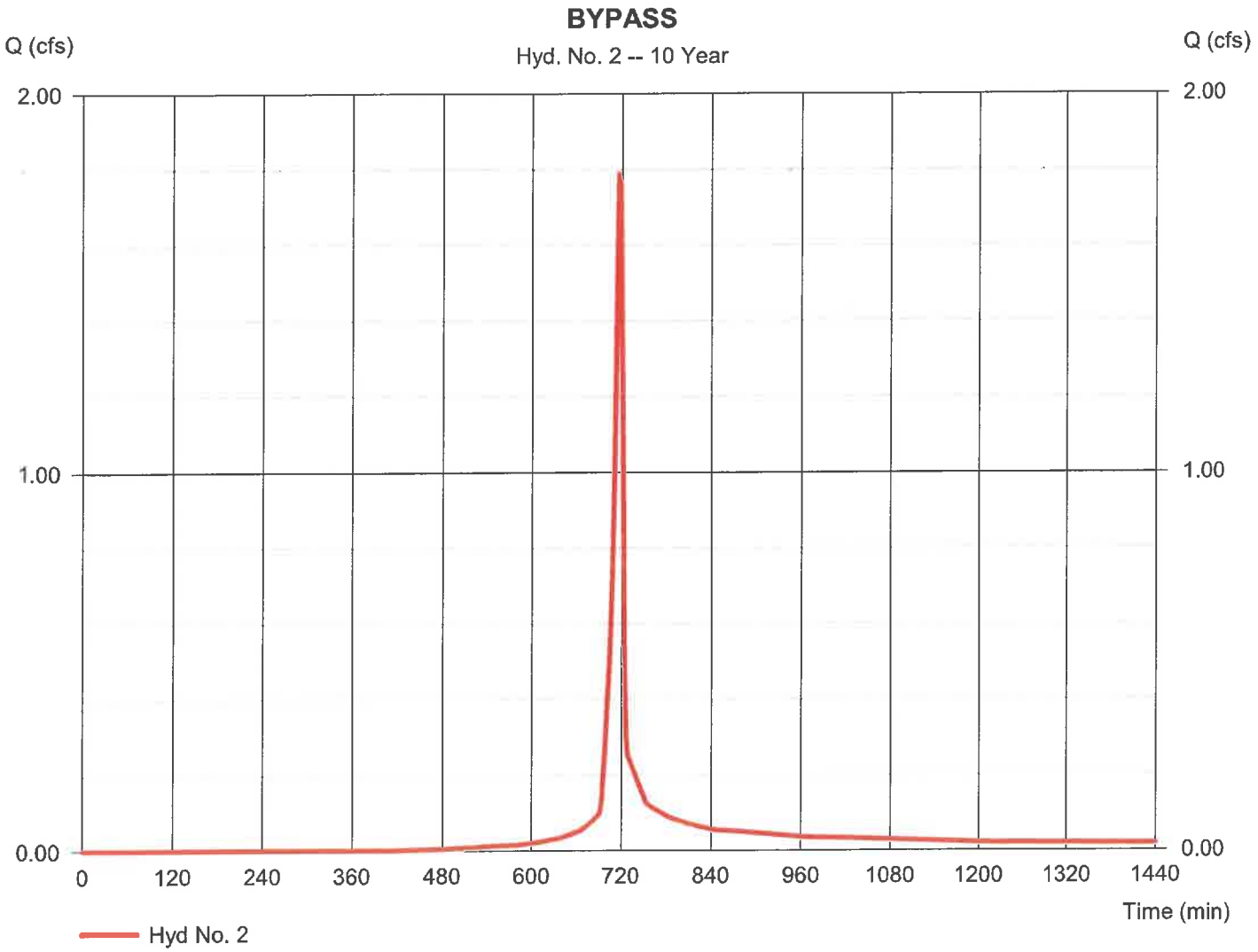


Hydrograph Report

Hyd. No. 2

BYPASS

Hydrograph type	= SCS Runoff	Peak discharge	= 1.788 cfs
Storm frequency	= 10 yrs	Time to peak	= 716 min
Time interval	= 2 min	Hyd. volume	= 3,647 cuft
Drainage area	= 0.360 ac	Curve number	= 81
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 5.00 min
Total precip.	= 4.99 in	Distribution	= Type II
Storm duration	= 24 hrs	Shape factor	= 484



Hydrograph Report

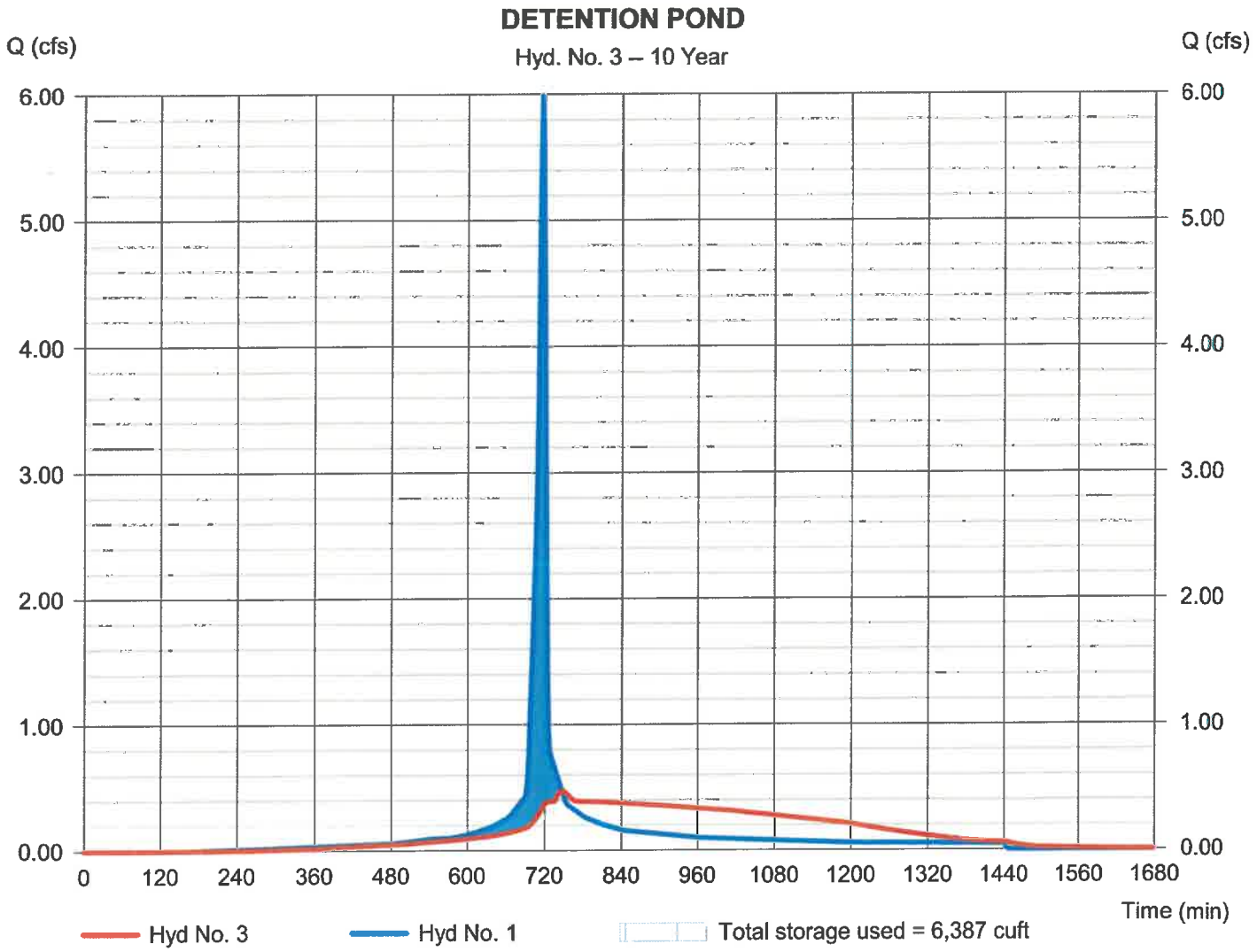
Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2025 Wednesday, 08 / 13 / 2025

Hyd. No. 3

DETENTION POND

Hydrograph type	= Reservoir	Peak discharge	= 0.471 cfs
Storm frequency	= 10 yrs	Time to peak	= 748 min
Time interval	= 2 min	Hyd. volume	= 13,248 cuft
Inflow hyd. No.	= 1 - TO POND	Max. Elevation	= 733.02 ft
Reservoir name	= DETENTION POND	Max. Storage	= 6,387 cuft

Storage Indication method used.

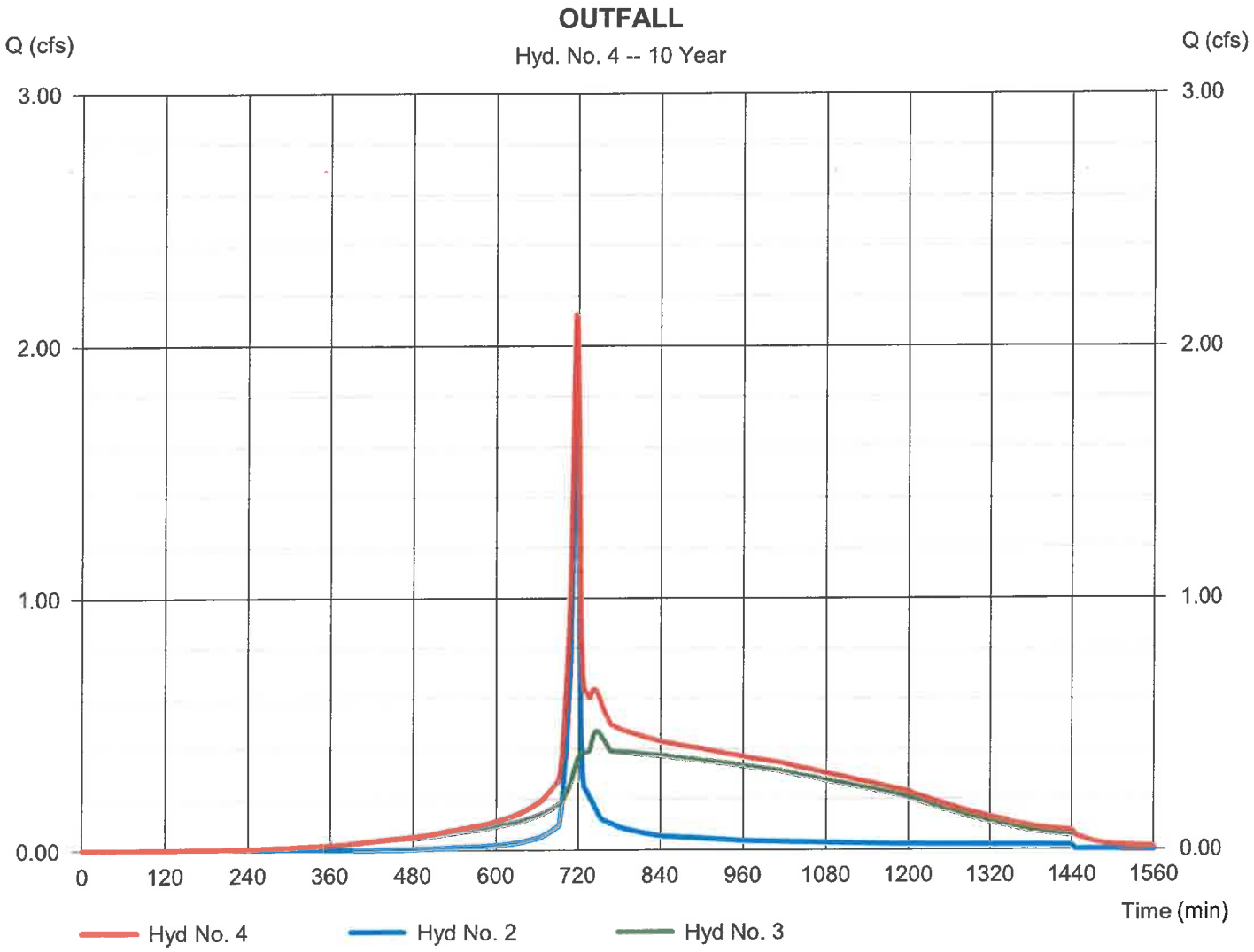


Hydrograph Report

Hyd. No. 4

OUTFALL

Hydrograph type	= Combine	Peak discharge	= 2.124 cfs
Storm frequency	= 10 yrs	Time to peak	= 716 min
Time interval	= 2 min	Hyd. volume	= 16,895 cuft
Inflow hyds.	= 2, 3	Contrib. drain. area	= 0.360 ac



Hydrograph Summary Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2025

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	SCS Runoff	7.160	2	716	16,028	-----	-----	-----	TO POND
2	SCS Runoff	2.247	2	716	4,624	-----	-----	-----	BYPASS
3	Reservoir	1.583	2	724	16,021	1	733.20	7,106	DETENTION POND
4	Combine	2.609	2	716	20,645	2, 3	-----	-----	OUTFALL

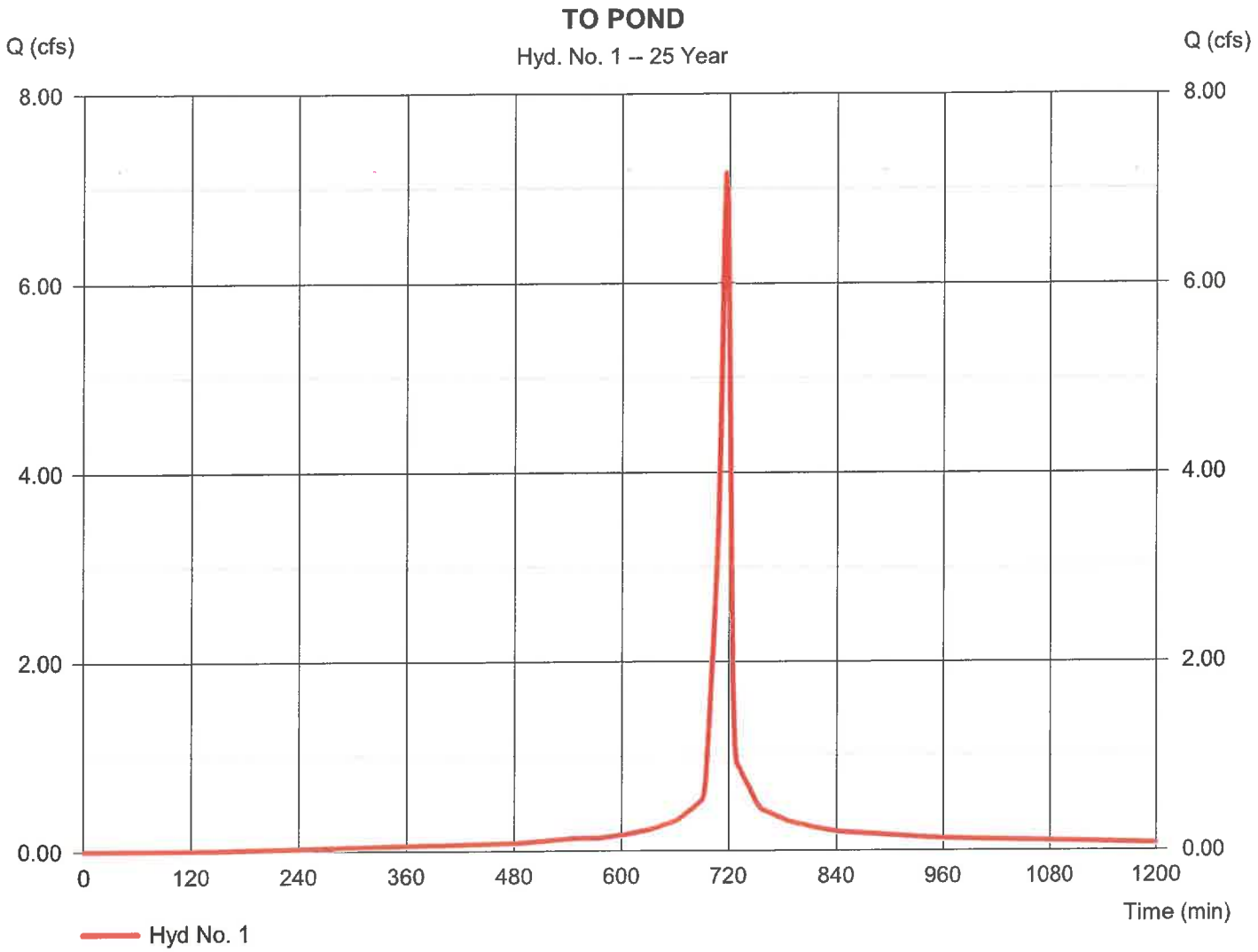
Hydrograph Report

Hyd. No. 1

TO POND

Hydrograph type	= SCS Runoff	Peak discharge	= 7.160 cfs
Storm frequency	= 25 yrs	Time to peak	= 716 min
Time interval	= 2 min	Hyd. volume	= 16,028 cuft
Drainage area	= 0.930 ac	Curve number	= 93*
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 5.00 min
Total precip.	= 5.88 in	Distribution	= Type II
Storm duration	= 24 hrs	Shape factor	= 484

* Composite (Area/CN) = [(0.680 x 98) + (0.250 x 81)] / 0.930

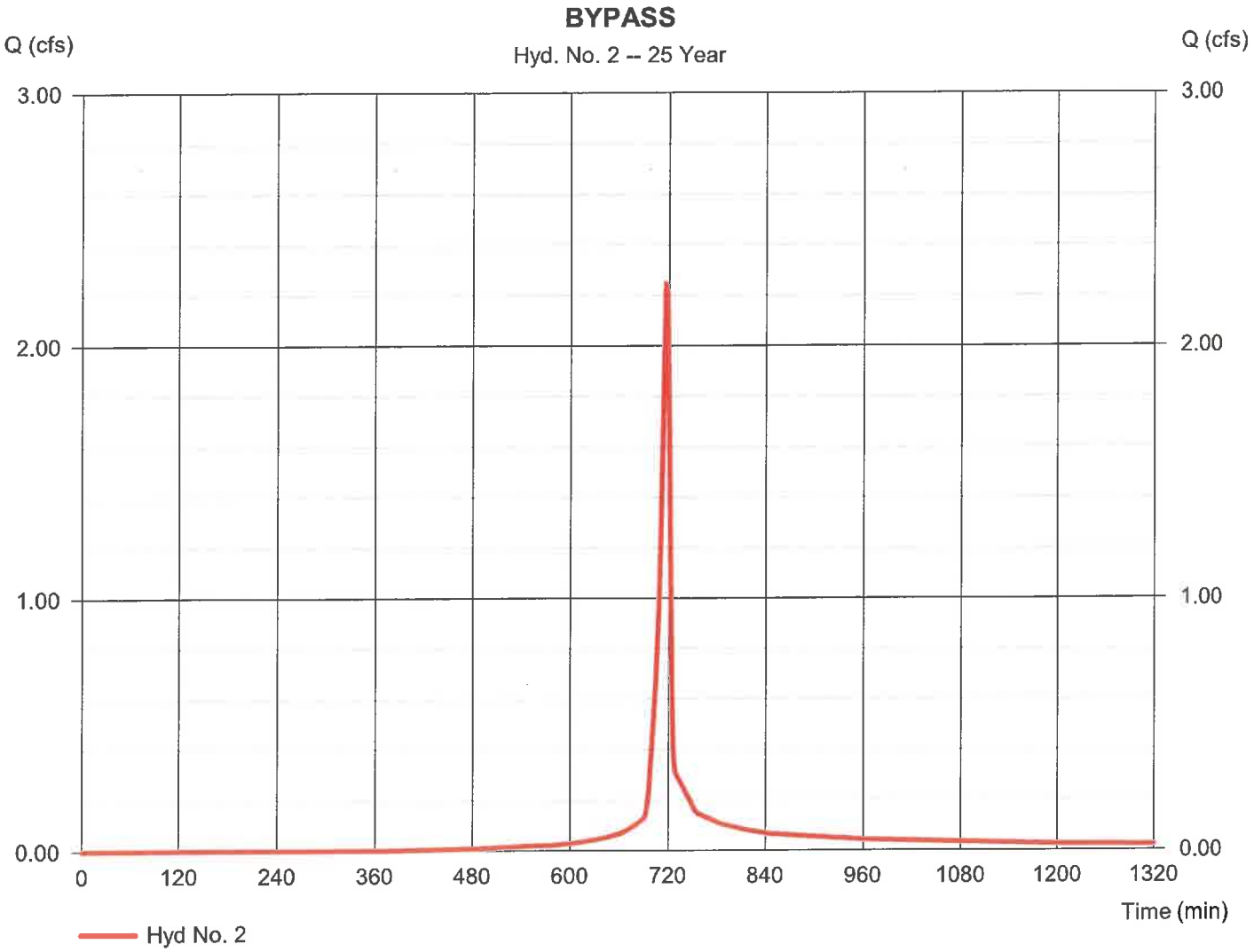


Hydrograph Report

Hyd. No. 2

BYPASS

Hydrograph type	= SCS Runoff	Peak discharge	= 2.247 cfs
Storm frequency	= 25 yrs	Time to peak	= 716 min
Time interval	= 2 min	Hyd. volume	= 4,624 cuft
Drainage area	= 0.360 ac	Curve number	= 81
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 5.00 min
Total precip.	= 5.88 in	Distribution	= Type II
Storm duration	= 24 hrs	Shape factor	= 484



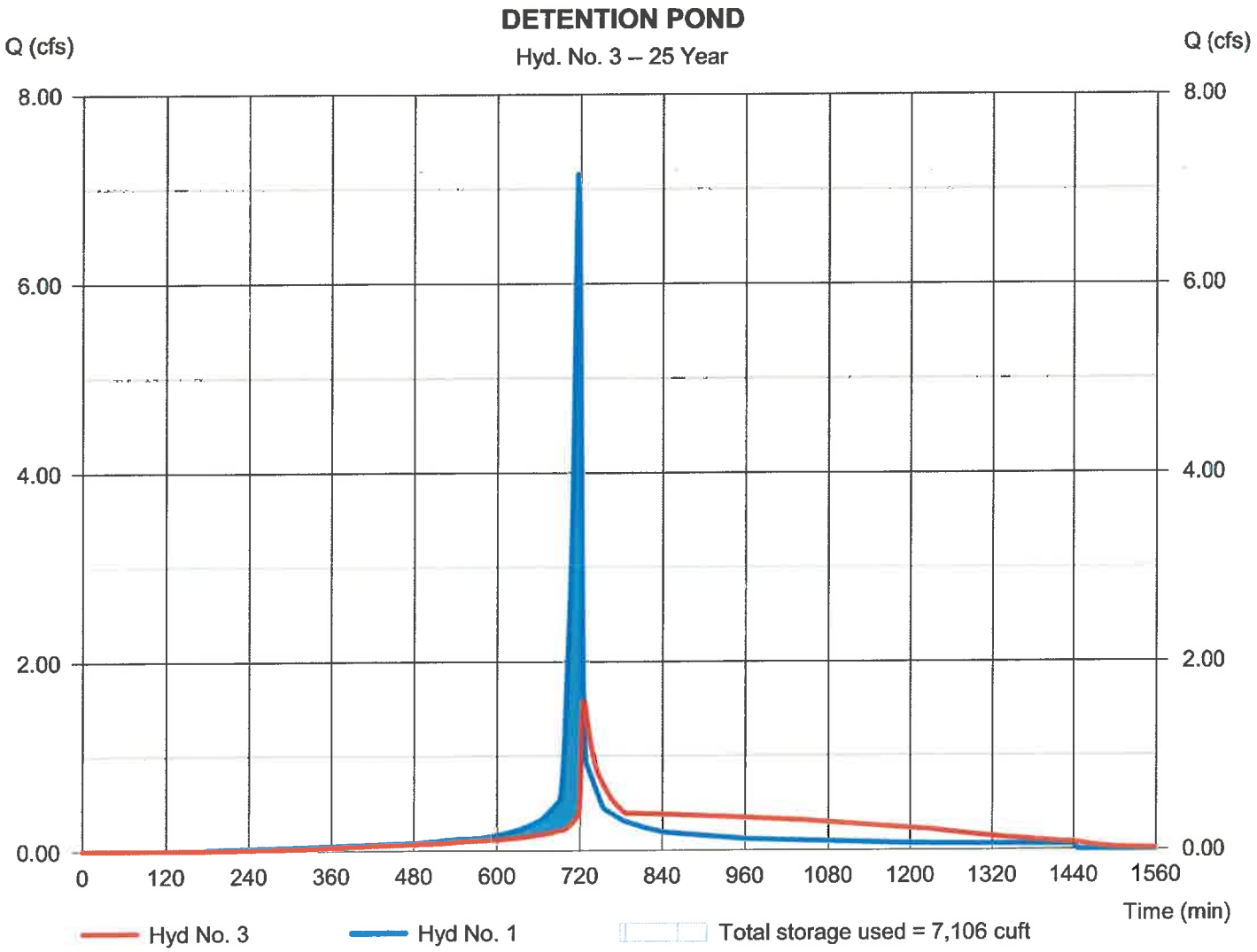
Hydrograph Report

Hyd. No. 3

DETENTION POND

Hydrograph type	= Reservoir	Peak discharge	= 1.583 cfs
Storm frequency	= 25 yrs	Time to peak	= 724 min
Time interval	= 2 min	Hyd. volume	= 16,021 cuft
Inflow hyd. No.	= 1 - TO POND	Max. Elevation	= 733.20 ft
Reservoir name	= DETENTION POND	Max. Storage	= 7,106 cuft

Storage Indication method used.

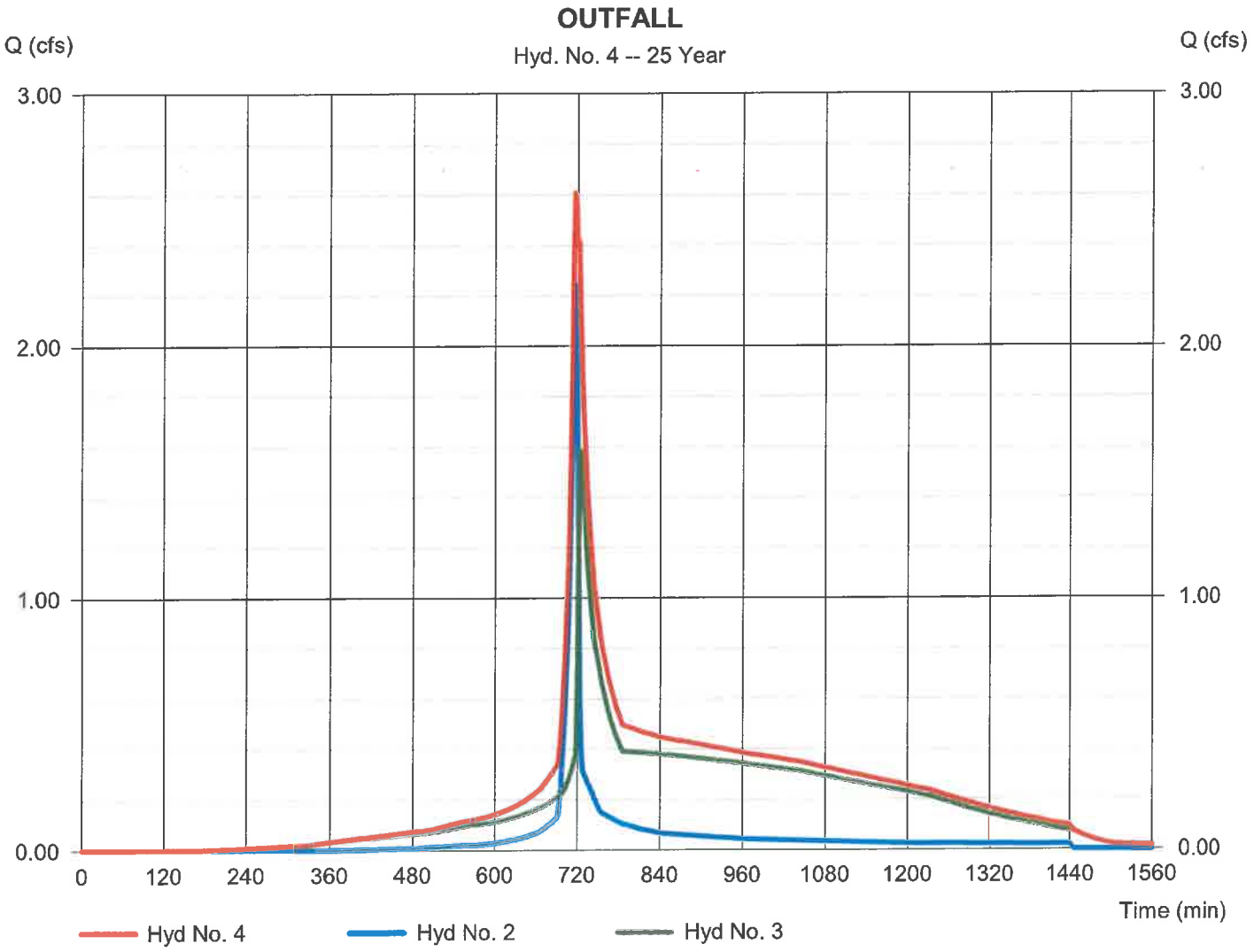


Hydrograph Report

Hyd. No. 4

OUTFALL

Hydrograph type	= Combine	Peak discharge	= 2.609 cfs
Storm frequency	= 25 yrs	Time to peak	= 716 min
Time interval	= 2 min	Hyd. volume	= 20,645 cuft
Inflow hyds.	= 2, 3	Contrib. drain. area	= 0.360 ac



Hydrograph Summary Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2025

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	SCS Runoff	8.112	2	716	18,310	-----	-----	-----	TO POND
2	SCS Runoff	2.626	2	716	5,444	-----	-----	-----	BYPASS
3	Reservoir	3.076	2	722	18,303	1	733.34	7,674	DETENTION POND
4	Combine	4.357	2	720	23,747	2, 3	-----	-----	OUTFALL

Hydrograph Report

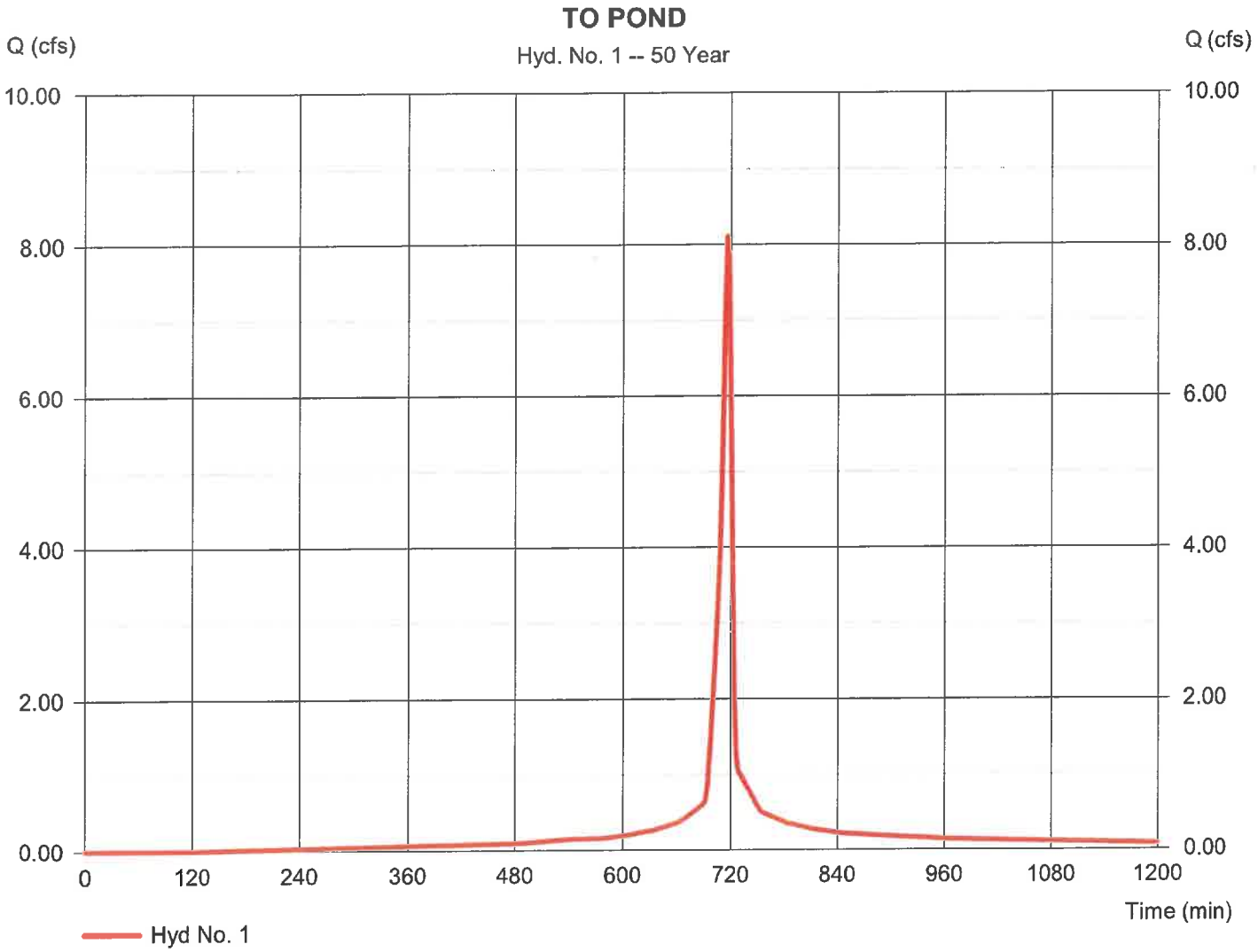
Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2025 — Wednesday, 08 / 13 / 2025

Hyd. No. 1

TO POND

Hydrograph type	= SCS Runoff	Peak discharge	= 8.112 cfs
Storm frequency	= 50 yrs	Time to peak	= 716 min
Time interval	= 2 min	Hyd. volume	= 18,310 cuft
Drainage area	= 0.930 ac	Curve number	= 93*
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 5.00 min
Total precip.	= 6.61 in	Distribution	= Type II
Storm duration	= 24 hrs	Shape factor	= 484

* Composite (Area/CN) = [(0.680 x 98) + (0.250 x 81)] / 0.930

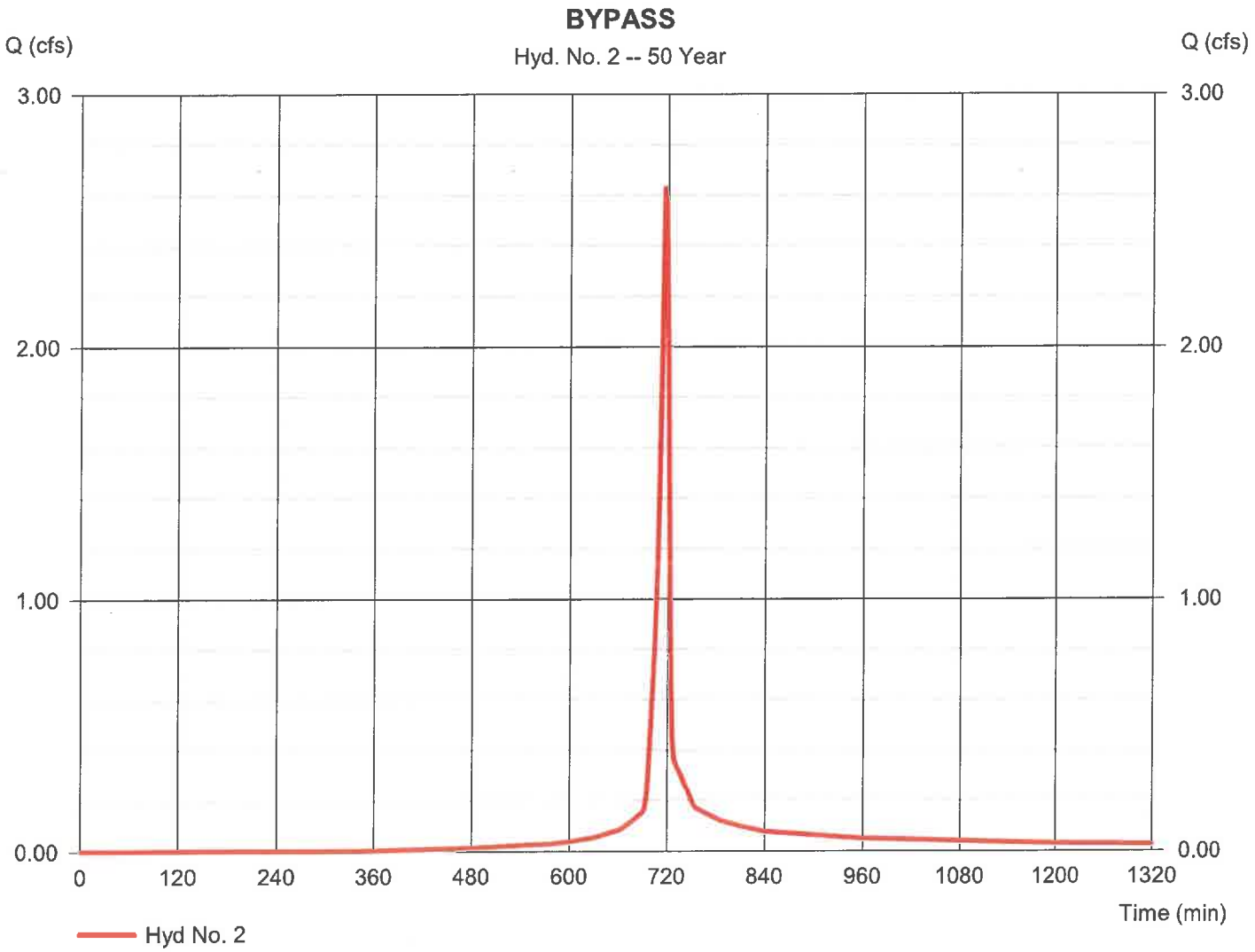


Hydrograph Report

Hyd. No. 2

BYPASS

Hydrograph type	= SCS Runoff	Peak discharge	= 2.626 cfs
Storm frequency	= 50 yrs	Time to peak	= 716 min
Time interval	= 2 min	Hyd. volume	= 5,444 cuft
Drainage area	= 0.360 ac	Curve number	= 81
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 5.00 min
Total precip.	= 6.61 in	Distribution	= Type II
Storm duration	= 24 hrs	Shape factor	= 484



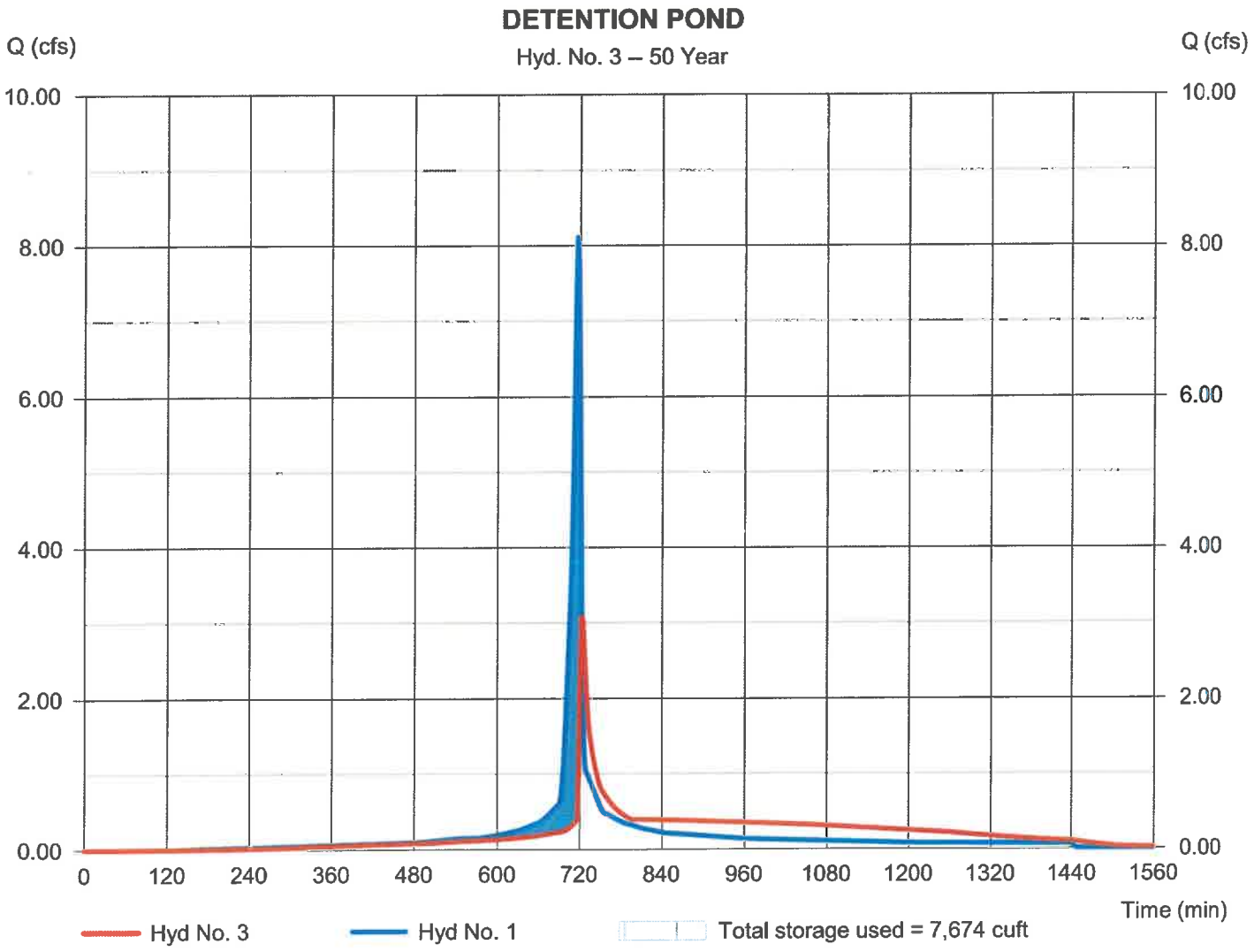
Hydrograph Report

Hyd. No. 3

DETENTION POND

Hydrograph type	= Reservoir	Peak discharge	= 3.076 cfs
Storm frequency	= 50 yrs	Time to peak	= 722 min
Time interval	= 2 min	Hyd. volume	= 18,303 cuft
Inflow hyd. No.	= 1 - TO POND	Max. Elevation	= 733.34 ft
Reservoir name	= DETENTION POND	Max. Storage	= 7,674 cuft

Storage Indication method used.

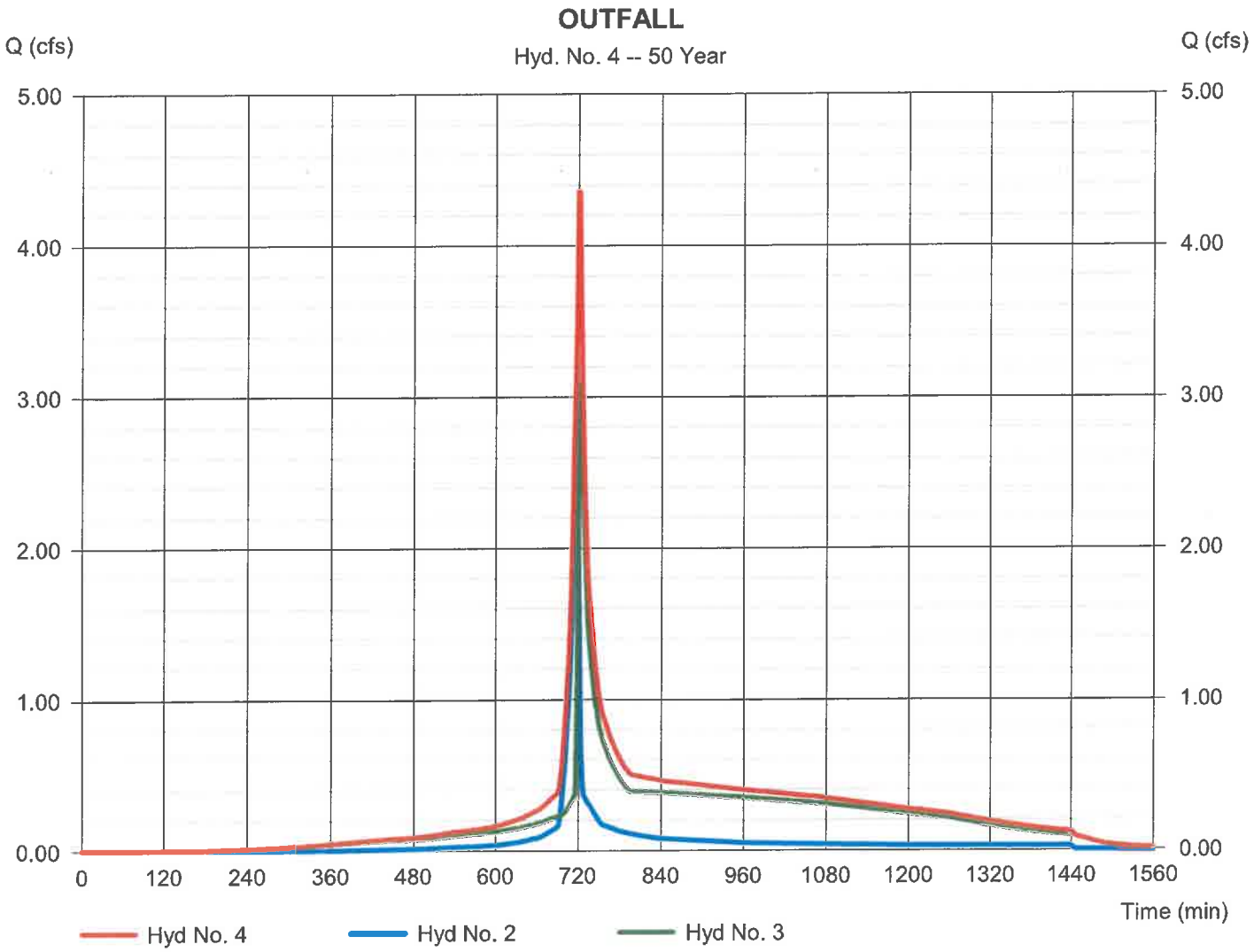


Hydrograph Report

Hyd. No. 4

OUTFALL

Hydrograph type	= Combine	Peak discharge	= 4.357 cfs
Storm frequency	= 50 yrs	Time to peak	= 720 min
Time interval	= 2 min	Hyd. volume	= 23,747 cuft
Inflow hyds.	= 2, 3	Contrib. drain. area	= 0.360 ac



Hydrograph Summary Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2025

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	SCS Runoff	9.112	2	716	20,723	-----	-----	-----	TO POND
2	SCS Runoff	3.027	2	716	6,321	-----	-----	-----	BYPASS
3	Reservoir	4.752	2	722	20,716	1	733.47	8,201	DETENTION POND
4	Combine	6.682	2	720	27,038	2, 3	-----	-----	OUTFALL

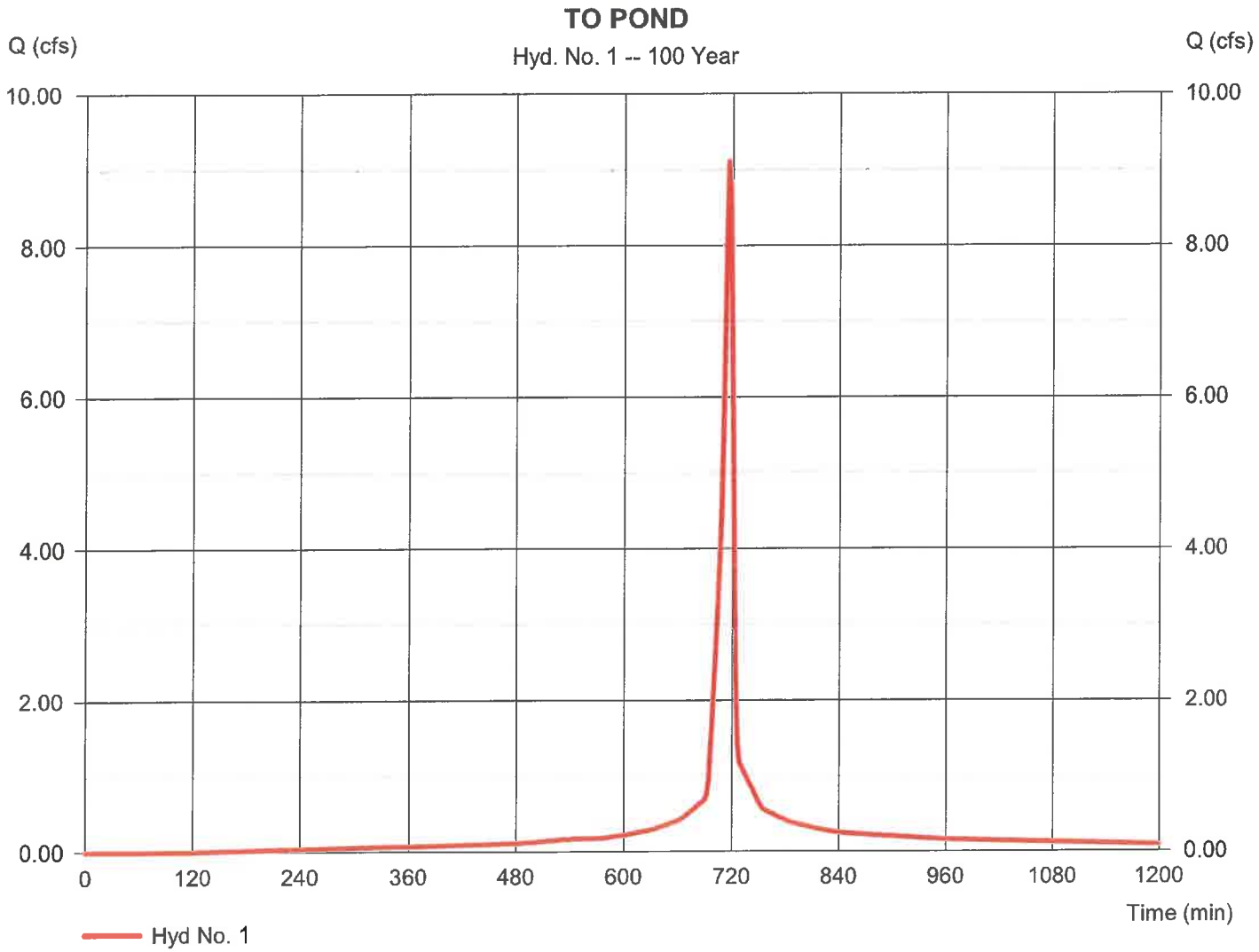
Hydrograph Report

Hyd. No. 1

TO POND

Hydrograph type	= SCS Runoff	Peak discharge	= 9.112 cfs
Storm frequency	= 100 yrs	Time to peak	= 716 min
Time interval	= 2 min	Hyd. volume	= 20,723 cuft
Drainage area	= 0.930 ac	Curve number	= 93*
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 5.00 min
Total precip.	= 7.38 in	Distribution	= Type II
Storm duration	= 24 hrs	Shape factor	= 484

* Composite (Area/CN) = [(0.680 x 98) + (0.250 x 81)] / 0.930

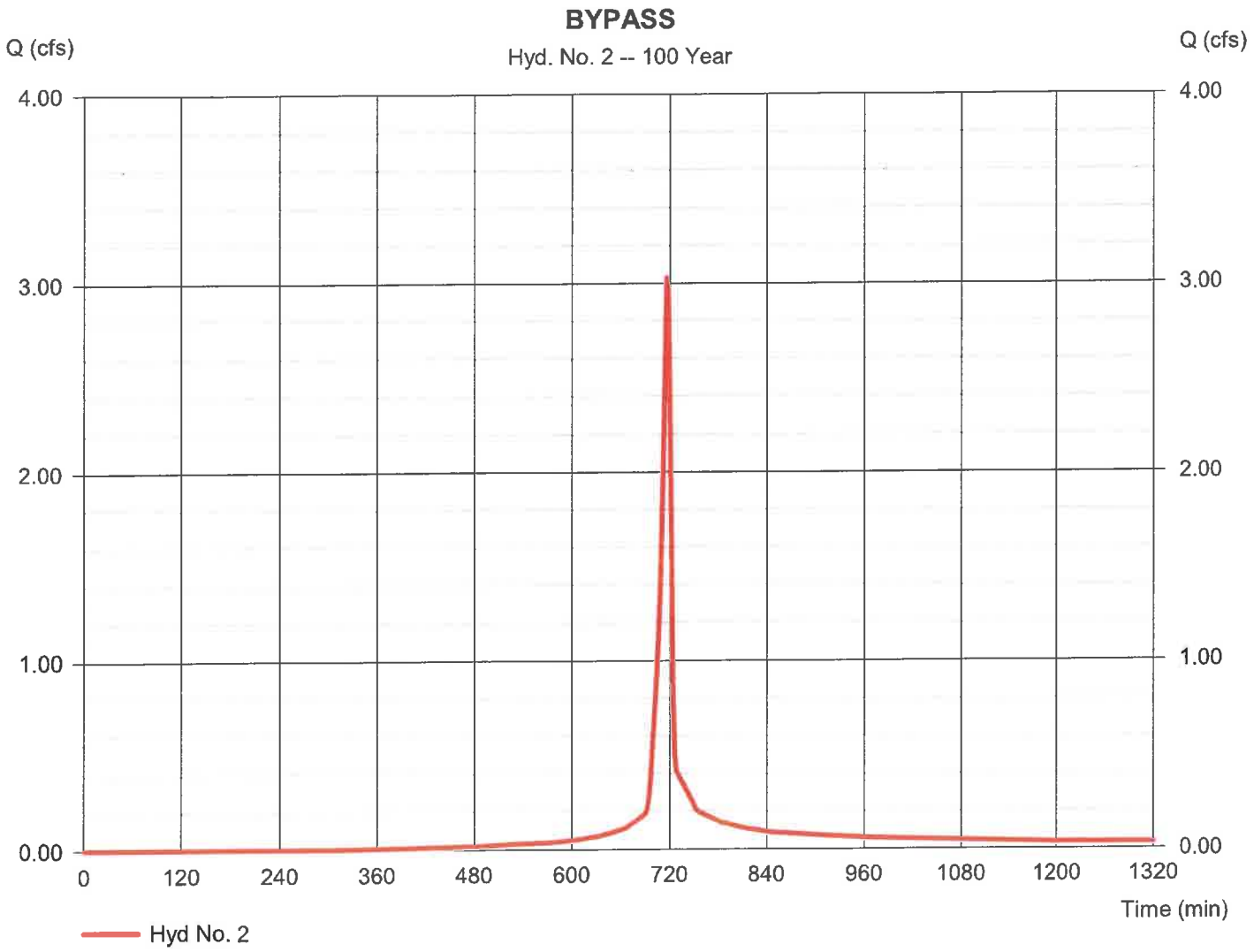


Hydrograph Report

Hyd. No. 2

BYPASS

Hydrograph type	= SCS Runoff	Peak discharge	= 3.027 cfs
Storm frequency	= 100 yrs	Time to peak	= 716 min
Time interval	= 2 min	Hyd. volume	= 6,321 cuft
Drainage area	= 0.360 ac	Curve number	= 81
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 5.00 min
Total precip.	= 7.38 in	Distribution	= Type II
Storm duration	= 24 hrs	Shape factor	= 484



Hydrograph Report

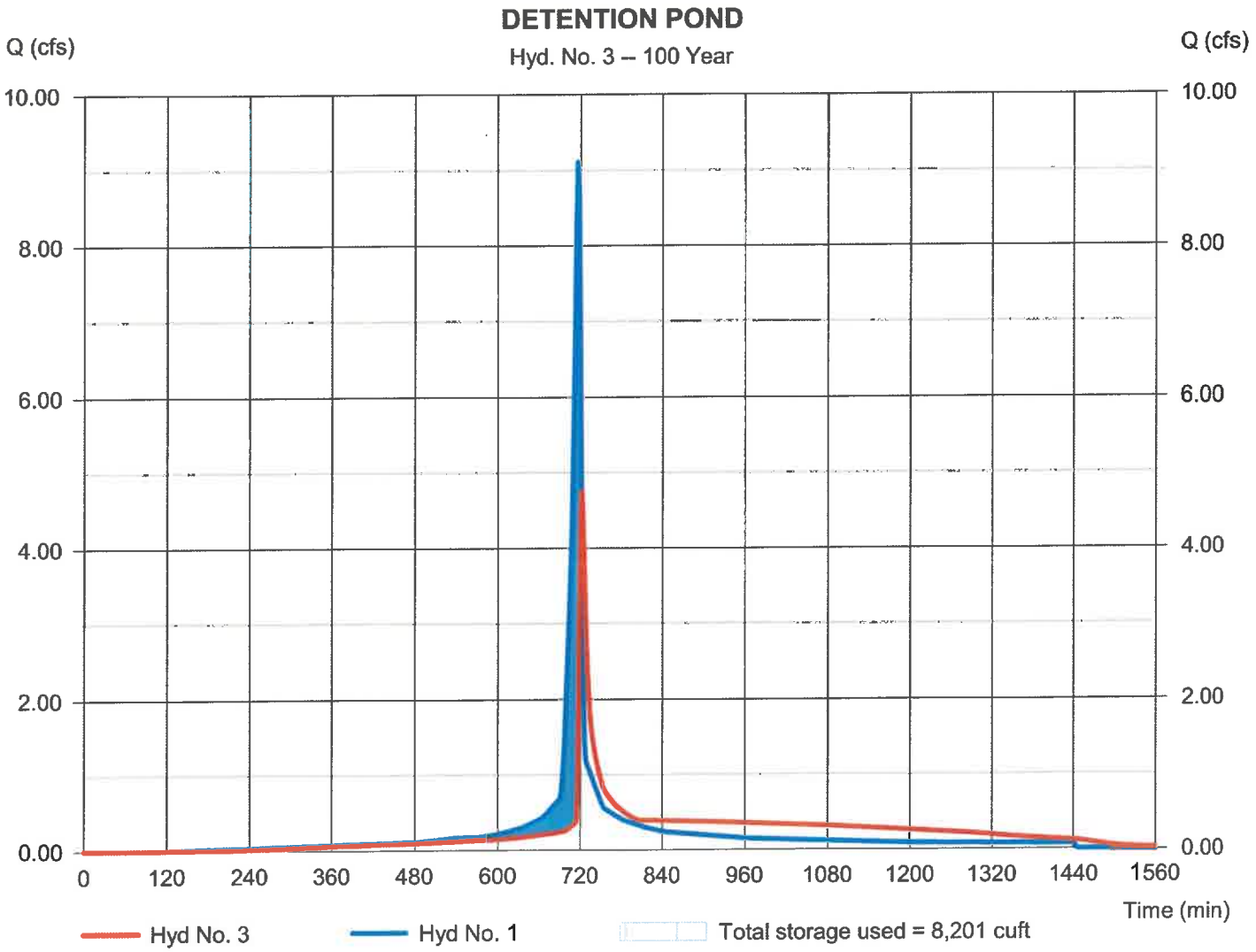
Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2025 Wednesday, 08 / 13 / 2025

Hyd. No. 3

DETENTION POND

Hydrograph type	= Reservoir	Peak discharge	= 4.752 cfs
Storm frequency	= 100 yrs	Time to peak	= 722 min
Time interval	= 2 min	Hyd. volume	= 20,716 cuft
Inflow hyd. No.	= 1 - TO POND	Max. Elevation	= 733.47 ft
Reservoir name	= DETENTION POND	Max. Storage	= 8,201 cuft

Storage Indication method used.

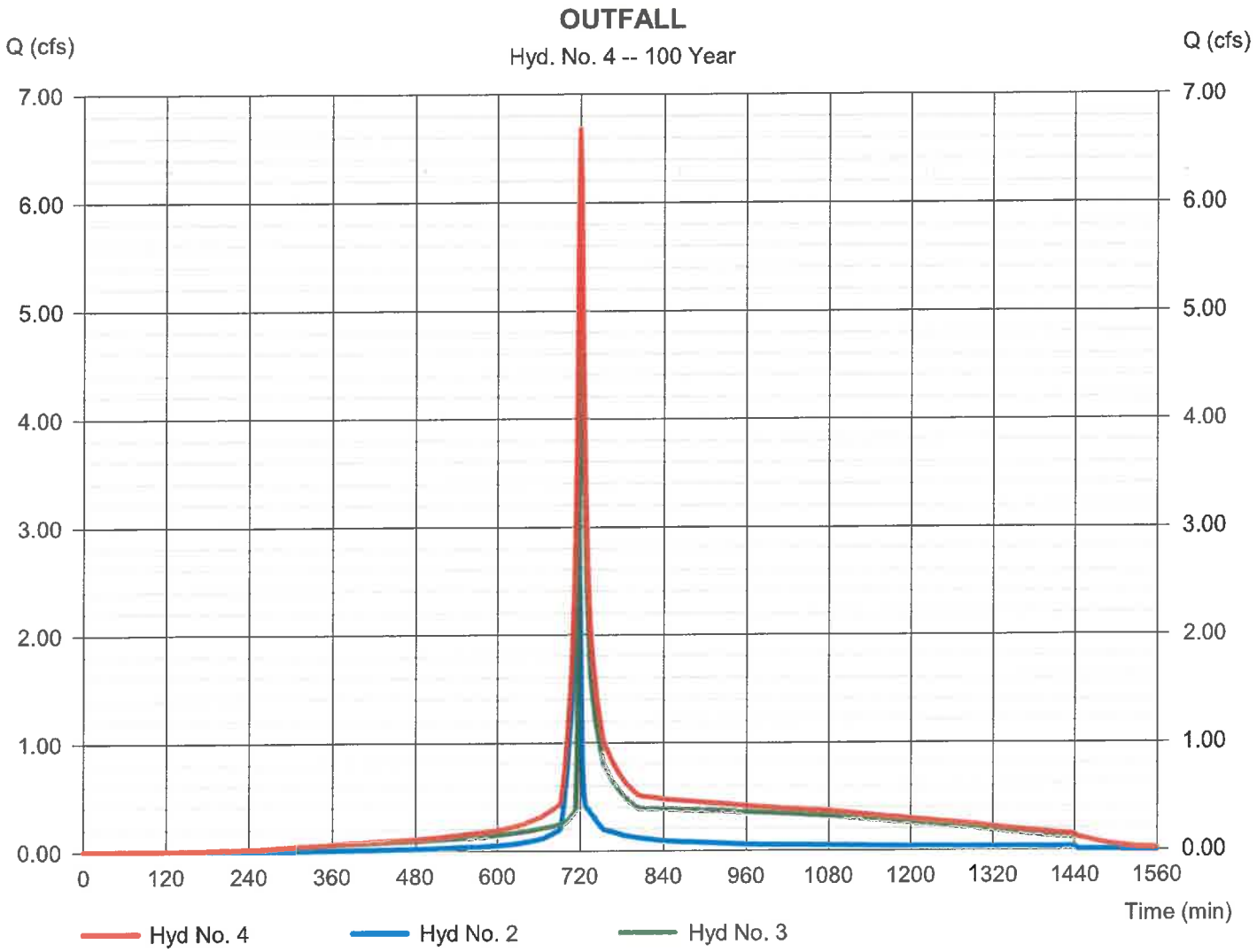


Hydrograph Report

Hyd. No. 4

OUTFALL

Hydrograph type	= Combine	Peak discharge	= 6.682 cfs
Storm frequency	= 100 yrs	Time to peak	= 720 min
Time interval	= 2 min	Hyd. volume	= 27,038 cuft
Inflow hyds.	= 2, 3	Contrib. drain. area	= 0.360 ac



Hydraflow Rainfall Report

Return Period (Yrs)	Intensity-Duration-Frequency Equation Coefficients (FHA)			
	B	D	E	(N/A)
1	57.7260	12.6000	0.8871	------
2	63.7983	12.5000	0.8694	------
3	0.0000	0.0000	0.0000	------
5	68.2535	12.8000	0.8390	------
10	63.8459	12.1000	0.7937	------
25	57.7343	11.0000	0.7384	------
50	53.2976	10.1000	0.6975	------
100	48.8954	9.2000	0.6564	------

File name: SPRINGFIELD NORTH DG.IDF

Intensity = B / (Tc + D)^E

Return Period (Yrs)	Intensity Values (in/hr)											
	5 min	10	15	20	25	30	35	40	45	50	55	60
1	4.53	3.63	3.04	2.62	2.31	2.07	1.88	1.72	1.58	1.47	1.37	1.29
2	5.30	4.26	3.58	3.09	2.73	2.45	2.22	2.04	1.88	1.75	1.64	1.54
3	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5	6.10	4.95	4.19	3.65	3.24	2.92	2.66	2.45	2.27	2.12	1.99	1.87
10	6.71	5.47	4.65	4.07	3.63	3.28	3.00	2.77	2.58	2.41	2.27	2.14
25	7.45	6.10	5.21	4.57	4.09	3.72	3.42	3.17	2.96	2.77	2.62	2.48
50	8.02	6.57	5.63	4.96	4.46	4.06	3.74	3.48	3.25	3.06	2.90	2.75
100	8.57	7.03	6.04	5.34	4.81	4.40	4.07	3.79	3.56	3.36	3.18	3.03

Tc = time in minutes. Values may exceed 60.

Group Dropbox\Projects\1082002 - Springfield North DG\2-Design\1-Storm\2-MODEL\SPRINGFIELD NORTH DG.pcp

Storm Distribution	Rainfall Precipitation Table (in)							
	1-yr	2-yr	3-yr	5-yr	10-yr	25-yr	50-yr	100-yr
SCS 24-hour	2.98	3.56	0.00	4.34	4.99	5.88	6.61	7.38
SCS 6-Hr	2.04	2.43	0.00	2.94	3.37	3.97	4.47	4.99
Huff-1st	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Huff-2nd	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Huff-3rd	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Huff-4th	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Huff-Indy	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Custom	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

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